

# EUROCORR 2019

## The annual event of the European Federation of Corrosion

EFC Event number 445

New times, new materials, new corrosion challenges

Seville (Spain) September 9-13 2019



## LECTURES

[www.eurocorr2019.org](http://www.eurocorr2019.org)



MONDAY, SEPTEMBER 9, 2019: LECTURES

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**Presentation time:** 18:15:00 PM

**Plenary Session:** Opening Ceremony: Juan de Damborenea, Chair of EUROCORR 2019, Arjan Mol, EFC President

**Presentation time:** 18:45:00 PM

**Plenary Session:** European Corrosion Medal Award Ceremony

**Presentation time:** 18:55:00 PM

**Plenary Session:** European Corrosion Medal Award Lecture

**Presentation time:** 19:40:00 PM

**Plenary Session:** EFC Honorary Fellow Award Ceremony

**Room and situation:** Foyer, Floor 0 (foyer) and Atrio III (Floor -1)

**19:45:00 PM - Welcome Reception and exhibition Party**

TUESDAY, SEPTEMBER 10, 2019: LECTURES

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**Presentation time:** 09:00:00 AM

**Plenary Session:** Plenary Lecture: Prof. Manuel Morcillo - "Mechanisms of atmospheric corrosion of steels"

**09:45 – 10:15 Break to visit Exhibitors**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 228361, Electrochemical role of Si phases in novel metallic coatings based on ZnAlMg

**Presenting author:** Vaclav Sefl

**Authors:** Vaclav Sefl (University of Chemistry and Technology in Prague, Prague, Czech Republic) / Tomas Prosek (University of Chemistry and Technology in Prague, Prague, Czech Republic) / Jan Svadlena (University of Chemistry and Technology in Prague, Prague, Czech Republic)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 186594, In-situ atmospheric corrosion behavior of Zn-Mg-Al alloy plating layer measured by SKPFM

**Presenting author:** Sho Katsura

**Authors:** Sho Katsura (Kobe Steel, Ltd., Kobe Hyogo, Japan) / Michael Rohwerder (Max Planck Institut für Eisenforschung, Düsseldorf)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 175913, Structural and chemical changes of ZnMgAl surfaces treated by atmospheric pressure plasma

**Presenting author:** Jiri Duchosla

**Authors:** Jiri Duchoslav (Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH (CEST), Wiener Neustadt, Austria) / Matthias Kehrer (Fronius International , Thalheim, Austria) / Tia Truglas (ZONA, JKU, Linz, Austria) / Heiko Groiß (ZONA, JKU, Linz, Austria) / Markus Nadlinger (CEST, Wiener Neustadt, Austria) / Laura Hader-Kregl (CEST, Wiener Neustadt, Austria) / Christian Karl Riener (voestalpine Stahl, Linz, Austria) / Martin Arndt (voestalpine Stahl , Linz, Austria) / Karl-Heinz Stellnberger (voestalpine Stahl , Linz, Austria) / Gerald Luckeneder (voestalpine Stahl , Linz, Austria) / Gerhard Angeli (voestalpine Stahl , Linz, Austria) / Thomas Stehrer (Fronius International , Thalheim, Austria) / David Stifter (ZONA, JKU, Linz, Austria)

**11:15 - 11:45 Coffee break**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 174362, Corrosion Resistance of Zn-Al-Mg Alloys with Hypoeutectic Microstructure

**Presenting author:** guangrui jiang

**Authors:** guangrui jiang (Shougang Research Institute of Technology, Beijing, China PR) / Ting Shang (Shougang Group Co., Ltd, Research Institute of Technology, Beijing, China PR) / Jiajie Chen (The Pan Asia Technical Automotive Center Co., Ltd. , Shanghai, China PR) / guanghai liu (Shougang Group Co., Ltd, Research Institute of Technology, Beijing, China PR)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 198441, Electrochemical corrosive behaviors of Fe-Based Amorphous coating prepared by HVOF-sprayed

**Presenting author:** Jifu Zhang

**Authors:** Jifu Zhang (Guangdong Institute of New Materials, Guangzhou, China PR) / Songsheng Lin (Guangdong Institute of New Materials, Guangzhou, China PR) / Chunming Deng (Guangdong Institute of New Materials, Guangzhou, China PR) / Min Liu (National Engineering Laboratory for Modern Materials Surface Engineering Technology, Guangzhou, China PR) / Kesong Zhou (Guangdong Institute of New Materials, Guangzhou, China PR)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: F. Andreatta, S. Rossi.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 217482, Durability of metallic coatings in harsh environments: a comparative study

**Presenting author:** Philippe Verpoort

**Authors:** Philippe Verpoort (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Beril Çorlu (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Joost De Strycker (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Corinne Dieu (ArcelorMittal Global R&D, Flémalle, Belgium)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session:** WP14 Meeting

**Presentation time:** 12:45:00 PM

**13:05 - 14:00 Lunchtime**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 225853, Microstructure, mechanical properties and tribo-corrosion behaviour of electroless Ni-P functional multilayers

**Presenting author:** Eva García-Lecina

**Authors:** Eva García-Lecina (Fundación CIDETEC, San Sebastián, Spain) / Asier Salicio-Paz (Fundación Cidetec, San Sebastián, Spain) / Vanesa Martínez-Nogués (Fundación Cidetec, San Sebastián, Spain) / Jordina Fornell (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Eva Pellicer (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Jordi Sort (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Ruben Offoiaich (University of Udine, Udine, Italy) / Maria Lekka (University of Udine, Udine, Italy)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 177420, Corrosion resistance of electroless Ni-B-Sn alloys

**Presenting author:** Véronique Vitry

**Authors:** Véronique Vitry (UMONS, Mons, Belgium) / Luiza Bonin (Ghent University, Ghent, Belgium) / Fabienne Delaunois (UMONS, Mons, Belgium)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 190004, Effects of the composition and structure of mesoporous Ni-Pt films on their corrosion behaviour in acidic media used for hydrogen evolution reaction

**Presenting author:** Konrad Eiler

**Authors:** Konrad Eiler (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Halina Krawiec (AGH University of Science and Technology, Krakow, Poland) / Iryna Kozina (AGH University of Science and Technology, Krakow, Poland) / Jordi Sort (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Eva Pellicer (Universitat Autònoma de Barcelona, Bellaterra, Spain) / Jordi Sort (Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 214468, Nickel release from nanocrystalline nickel and its alloys in artificial sweat solution

**Presenting author:** Matilda Zemanova

**Authors:** Matilda Zemanova (Slovak University of Technology, Bratislava, Slovakia) / Jakub Druga (Slovak University of Technology, Bratislava, Slovakia) / Maroš Ábel (Slovak University of Technology, Bratislava, Slovakia) / Edmund Dobročka (Slovak Academy of Sciences, Bratislava, Slovakia) / Marek Bujdoš (Comenius University in Bratislava, Bratislava, Slovakia)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 209540, Electrochemical Characterization of Zinc Flake Coatings

**Presenting author:** Ralf Feser

**Authors:** Ralf Feser (University of applied sciences South Westphalia, Iserlohn) / Heike Jost (University of applied sciences South Westphalia, Iserlohn) / Eva Tarfeld (University of applied sciences South Westphalia, Iserlohn)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 220639, Corrosion properties of electrodeposited zinc-iron coatings on steel substrate

**Presenting author:** Céline Arrighi

**Authors:** Céline Arrighi (LaSIE UMR 7356 CNRS, La Rochelle Université - Materials Science Department, Faculty of Engineering, University of Mons, La Rochelle, France) / Catherine Savall (LaSIE UMR 7356 CNRS, La Rochelle Université, La Rochelle, France) / Marie-Georges Olivier (Materials Science Department, Faculty of Engineering, University of Mons, Mons, Belgium) / Juan Creus (LaSIE UMR 7356 CNRS, La Rochelle Université, La Rochelle, France)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 199750, Development of a new Zinc-Iron-Tungsten electroplating bath for steel corrosion protection

**Presenting author:** Gregory Guilbert

**Authors:** Gregory Guilbert (Materianova, MONS, Belgium) / Mireille Poelman (Matérianova, Mons, Belgium) / Marie-Eve Druart (Matérianova, Mons, Belgium) / Marjorie Olivier (Service de Science des Matériaux University of Mons, Mons, Belgium)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 224819, Electrochemical investigations on the corrosion behavior of 316 stainless steel coatings on ZE41 magnesium alloy in different environments

**Presenting author:** Sonia Garcia Rodriguez

**Authors:** Sonia Garcia Rodriguez (Rey Juan Carlos University, Móstoles, Spain) / Belén Torres (Rey Juan Carlos University, Móstoles, Spain) / Antonio Julio López (Rey Juan Carlos University, Móstoles, Spain) / Enrique Otero Huerta (Universidad Rey Juan Carlos, Móstoles, Spain) / Joaquín Rams Ramos (Rey Juan Carlos University, Móstoles, Spain)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Metallic Coatings (WP14)/Chair: R. Feser , M. Lekka.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 225809, Aluminum Cladded Steel (ACS) for DWP energy cables

**Presenting author:** Giusi Boffa

**Authors:** Giusi Boffa (Prysmian S.p.A, Milan, Jersey) / Elisa Mora (Prysmian S.p.A, Milan, Italy) / Lidia Terruzzi (Prysmian S.p.A, Milano, Italy)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 232112, Unravelling the atomic structure of passive oxide films on FeCr Alloys

**Presenting author:** Camilla Stitt

**Authors:** Camilla Stitt (Imperial College London, SW7 2BP London UK, United Kingdom) / Donata Passarello (Stanford Synchrotron Radiation Lightsource, Stanford, United States of America) / Michael Toney (Stanford Synchrotron Radiation Lightsource, Stanford, Menlo Park, United States of America) / Mary Ryan (Imperial College London, London, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 199684, Characteristics of corundum-type surface oxides formed during the early oxidation stages of stainless steel 316L

**Presenting author:** Andreas Undisz

**Authors:** Andreas Undisz (Friedrich-Schiller-Universität, Jena) / Robert Wonneberger (Friedrich-Schiller-Universität, Jena) / Katharina Freiberg (Friedrich-Schiller-Universität, Jena) / Martin Seyring (Friedrich-Schiller-Universität, Jena) / Markus Rettenmayr (Friedrich-Schiller-Universität, Jena)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 183481, Oxidation mechanisms of austenitic stainless steel at small time and space scales

**Presenting author:** Vincent Maurice

**Authors:** Vincent Maurice (CNRS - Chimie ParisTech, Paris, France) / Li Ma (CNRS - Chimie ParisTech, Paris, France) / Frédéric Wiame (CNRS - Chimie ParisTech, Paris, France) / Philippe Marcus (CNRS - Chimie ParisTech, Paris, France)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Marcus.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 228812, New Model for Pit Stability

**Presenting author:** Gerald S. Frankel

**Authors:** Gerald S. Frankel (The Ohio State University, Columbus, United States of America) / Tianshu Li (The Ohio State University, Columbus, OH, United States of America) / John Scully (University of Virginia, Charlottesville, VA, United States of America)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Marcus.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 177585, Revisiting the Effect of Gravity on Pit Growth Kinetics in Austenitic Stainless Steel

**Presenting author:** Yiqi Zhou

**Authors:** Yiqi Zhou (University of Manchester, Manchester, United Kingdom) / Dirk Engelberg (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Marcus.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 173196, Effect of Molybdenum on Pit Initiation Process at MnS Inclusions in Stainless Steel

**Presenting author:** Masashi Nishimoto

**Authors:** Masashi Nishimoto (Tohoku University, Sendai, Japan) / Izumi Muto (Tohoku University, Sendai, Japan) / Yu Sugawara (Tohoku University, Sendai, Japan) / Nobuyoshi Hara (Tohoku University, Sendai, Japan)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Pan.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 173779, Unmasking chloride attack on the passive film of metals

**Presenting author:** Bo Zhang

**Authors:** Bo Zhang (Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Jing Wang (Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Xiuliang Ma (Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Pan.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 199937, Manganese as a tracer element for assessing the early oxidation stages of stainless steel 316L

**Presenting author:** Robert Wonneberger

**Authors:** Robert Wonneberger (Friedrich-Schiller-Universität, Jena) / Andreas Undisz (Friedrich-Schiller-Universität, Jena) / Katharina Freiberg (Friedrich-Schiller-Universität, Jena) / Martin Seyring (Friedrich-Schiller-Universität, Jena) / Markus Rettenmayr (Friedrich-Schiller-Universität, Jena)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Pan.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 215524, Influence of mechanical surface finishing on the properties of passive film formed on stainless steel in borate buffer solution

**Presenting author:** Kathleen Jaffre

**Authors:** Kathleen Jaffre (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510/Tohoku University, QSE laboratory/ELyTMaX UMI3757, CNRS, Tohoku university, Université de Lyon, Villeurbanne, France) / Benoît Ter-Ovanesian (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France) / Bernard Normand (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France) / Nicolas Mary (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510/ELyTMaX UMI3757, CNRS, Tohoku university, Université de Lyon, Sendai, Japan) / Hiroshi Abe (Tohoku University, QSE laboratory, Sendai, Japan) / Yutaka Watanabe (Tohoku University, QSE laboratory, Sendai, Japan)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Pan.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 204634, Passivation-induced physicochemical alterations of the native surface oxide film on 316L austenitic stainless steel

**Presenting author:** Zuo Cheng Wang

**Authors:** Zuo Cheng Wang (CNRS-Chimie ParisTech, Paris, France) / Francesco Di-Franco (CNRS-Chimie ParisTech, Paris, France) / Antoine Seyeux (CNRS-Chimie ParisTech, Paris, France) / Sandrine Zanna (CNRS-Chimie ParisTech, Paris, France) / Vincent Maurice (CNRS-Chimie ParisTech, Paris, France) / Philippe Marcus (CNRS-Chimie ParisTech, Paris, France)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Maurice.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 189388, Effect of dislocation density on passive layer properties of IF ferritic steels in alkaline environment

**Presenting author:** AYTAC Yilmaz

**Authors:** AYTAC Yilmaz (Delft University of Technology, DELFT, Netherlands) / Konstantina Traka (Delft University of Technology, Delft, Netherlands) / Sven Pletinx (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Tom Hauffman (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Jilt Sietsma (Delft University of Technology, Delft, Netherlands) / Yaiza Gonzalez-Garcia (Delft University of Technology, Delft, Netherlands)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Maurice.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 201114, Effect of stress on polarization curve of mechanically damaged oxide film of stainless steel in sodium chloride solution

**Presenting author:** Osamu Kuwazuru

**Authors:** Osamu Kuwazuru (University of Fukui, Fukui, Japan) / Aruto Kawakami (University of Fukui, Fukui, Japan) / Koichi Hira (University of Fukui, Fukui, Japan) / Alain Kassab (University of Central Florida, Orlando, United States of America) / Eduardo Divo (Embry-Riddle Aeronautical University, Daytona Beach, United States of America)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Maurice.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 191830, Influence of hydrogen on corrosion behaviour of a 316LN stainless steel

**Presenting author:** Malo Duportal

**Authors:** Malo Duportal (University of La Rochelle, La Rochelle, France) / Feaugas Xavier (University of La Rochelle, La Rochelle, France) / Abdelali Oudriss (University of La Rochelle, La Rochelle, France) / Catherine Savall (University of La Rochelle, La Rochelle, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Maurice.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 188816, The effect of enriched manganese in the passive film on the corrosion behaviour of high manganese and nitrogen alloyed austenitic stainless steels

**Presenting author:** Stephan Trattner

**Authors:** Stephan Trattner (Competence Center for Electrochemical Surface Technologies, Wiener Neustadt, Austria) / Peter Velicsanyi (Competence Center of Electrochemical Surface Technologies, Wiener Neustadt, Austria) / Jürgen Schodl (Competence Center of Electrochemical Surface Technologies, Wiener Neustadt, Austria) / Rainer Fluch (voestalpine Böhler Edelstahl GmbH & CoKG, Kapfenberg, Austria) / Günther Faflek (TU Wien, Vienna, Austria)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Maurice.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 197451, Controversies on intergranular corrosion evaluation practices

**Presenting author:** Sudesh Wijesinghe

**Authors:** Yan Han Liew (NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, Singapore) / Fern Lan Ng (Singapore Institute of Manufacturing Technology (SIMTech), Singapore, Singapore) / Daniel J Blackwood (Department of Materials Science and Engineering, National University of Singapore, Singapore, Singapore) / Sudesh Wijesinghe (Singapore Institute of Manufacturing Technology (SIMTech) and National University of Singapore, Singapore, Singapore)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 193623, Sanicro 35, a novel structurally stable 6.5 Mo superaustenitic alloy with PRE 52

**Presenting author:** Ulf Kivisakk

**Authors:** Ulf Kivisakk (AB Sandvik Materials Technology, SANDVIKEN, Sweden) / Robert Mattsson (AB Sandvik Materials Technology, Sandviken, Sweden) / Andreas Rahm Yhr (AB Sandvik Materials Technology, Sandviken, Sweden)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 199189, Evaluation of mechanical properties and corrosion resistance of G3 seamless tubes for oil and gas production

**Presenting author:** Pilar Esteban

**Authors:** Pilar Esteban (Tubacex, Derio, Spain) / Victoria Astigarraga (Tubacex, Derio, Spain) / Beatriz Calleja (Tubacex, Derio, Spain) / Alejandra Lopez (Tubacex, Derio, Spain)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 231089, Comparative studies of the corrosion behaviour of super austenitic steel grades

**Presenting author:** Rainer Fluch

**Authors:** Rainer Fluch (voestalpine Böhler Edelstahl GmbH & Co KG, Kapfenberg, Austria) / Kapp Marianne (voestalpine Böhler Edelstahl GmbH & Co KG, Kapfenberg, Austria) / Ernst Plesiutchnig (voestalpine Böhler Edelstahl GmbH & Co KG, Kapfenberg, Austria) / Clemens Vichytil (voestalpine Böhler Bleche GmbH & Co KG, Mürtzschlag, Austria) / Gregor Mori (Montanuniversität Leoben, Leoben, Austria) / Mathias Truschner (Montanuniversität Leoben, Leoben, Austria)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 226788, Evaluation of Iron Dilution on Corrosion Performance of Nickel-Alloy Cladding

**Presenting author:** Tatiana C. Almeida

**Authors:** Tatiana C. Almeida (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Rogaciano M. Moreira (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Merlin C.E. Bandeira (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Flávia M.F. Guedes (CENPES / Petrobras, Rio de Janeiro, Brazil) / Ilson P. Baptista (CENPES / Petrobras, Rio de Janeiro, Brazil) / Oscar R. Mattos (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 227294, Developing IOWs for SCC of 316L SS Exposed to Aqueous H2S

**Presenting author:** Peter Wilson

**Authors:** Peter Wilson (Nuffield Group, Melbourne, Australia)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 201213, Re-passivation of Duplex Stainless Steel UNS S82551 in Treated Seawater Injection Service

**Presenting author:** Dominique Thierry

**Authors:** Nicolas Larché (Institut de la Corrosion, Brest, France) / Perry Ian Nice (Equinor, Stavanger, Norway) / Hisashi Amaya (Nippon Steel & Sumitomo Metal Corp., Wakayama, Japan) / Yuya Matsuda (Nippon Steel & Sumitomo Metal Corp., Wakayama, Japan) / Lucrezia Scoppio (Pipe Team, Milano, Italy) / Matteo Fiocchi (S&L Consulting SA, Villars-sur-Glâne, Switzerland) / Dominique Thierry (Institut de la Corrosion, Brest, France)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 172206, An investigation of transverse cracks and pitting on the weldment and heat affected zone of AISI321 acid gas transmission pipeline in south Pars gas Complex

**Presenting author:** Askar Soltani

**Authors:** Askar Soltani (South Pars Gas Complex, Asaluyeh, Iran) / Reza Zareie (South Pars Gas Complex, Asaluyeh, Iran) / Koorosh Farzanfar (South Pars Gas Complex, Asaluyeh, Iran)

13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 189696, Reduction of conservatism in SSC testing for well tubulars

**Presenting author:** Marc Wilms

**Authors:** Marc Wilms (Shell Projects & Technology, Amsterdam, Netherlands) / Daniela Garcia (Vallourec, Aulnoye-Aymeries, France) / Johan Smit (Shell Projects & Technology, Amsterdam, Netherlands) / Edmund Dickinson (National Physical Laboratory, Teddington, United Kingdom) / Harold Evin (Vallourec, Aulnoye-Aymeries, France) / Willem Maarten Van Haaften (Shell Projects & Technology, Amsterdam, Netherlands) / Michel Bonis (Total, Pau, France) / Herve Marchebois (Total, Pau, France) / Gareth Hinds (National Physical Laboratory, Teddington, United Kingdom)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 194283, Fast screening of Sulfide Stress Corrosion resistance of Supermartensitic Stainless Steel through alternative test methods

**Presenting author:** Martien DEFFO

**Authors:** Martien DEFFO (Vallourec Research Center France, Aulnoye Aymeries, France) / Cécile MILLET (Vallourec Research Center France, Aulnoye Aymeries, France) / Daniela GARCIA (Vallourec Research Center France, Aulnoye Aymeries, France) / Harold EVIN (Vallourec Research Center France, Aulnoye Aymeries, France) / Guillaume NEEL (Vallourec Oil&Gas France, Aulnoye Aymeries, France)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 179455, Sour Service limits for Super Martensitic Stainless Steel bar-stock: influence of testing approaches on materials performance

**Presenting author:** Roberta Prencipe

**Authors:** Roberta Prencipe (RINA Consulting- Centro Sviluppo Materiali S.p.A, Rome, Italy) / Luciana Intiso (RINA Consulting- Centro Sviluppo Materiali S.p.A, Rome, Italy) / Roberto Morana (BP Exploration Operating Company Limited, Sunbury-on-Thames, United Kingdom) / Lee Smith (BP Exploration Operating Company Limited, Sunbury-on-Thames, United Kingdom)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 175605, Environmentally-Assisted Cracking (EAC) resistance by load-applied autoclave test for martensite-based stainless steel OCTG materials at high temperature to room temperature.

**Presenting author:** Yasuhide Ishiguro

**Authors:** Yasuhide Ishiguro (JFE Steel Corporation, Handa, Aichi, Japan) / Taro Kanayama (JFE Steel Corporation, Handa, Japan) / Yusuke Mizuno (JFE Steel Corporation, Handa, Aichi, Japan)

15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 229967, On acidizing jobs – chemical activation and repassivation of stainless steel as a function of pH

**Presenting author:** Emir Mujanović

**Authors:** Emir Mujanović (ZAG - Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Bojan Zajec (ZAG - Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Tadeja Kosec (ZAG - Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Gregor Mori (Montanuniversität Leoben, Leoben, Austria) / Stefan Hönig (OMV Austria Exploration & Production GmbH, Gänserndorf, Austria) / Gerald Zehethofer (OMV Austria Exploration & Production GmbH, Gänserndorf, Austria)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 206790, A comparison of flow velocity influence on localized corrosion of 13Cr, S13Cr and Super Duplex stainless steel on oil production condition

**Presenting author:** Merlin C. E. Bandeira

**Authors:** Merlin C. E. Bandeira (LNDC/COPPE/UF RJ, Rio De Janeiro, Brazil) / Bryan de Barros Soares (LNDC/COPPE/UF RJ, Rio de Janeiro, Brazil) / Rogaciano M. Moreira (LNDC/COPPE/UF RJ, Rio de Janeiro, Brazil) / Oscar R. Mattos (LNDC/COPPE/UF RJ, Rio de Janeiro, Brazil)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 179873, A Review of Fit-for-Purpose Sour Tests of Low Alloy Steels: Effects of Buffer Chemistry and Purge Gas Composition

**Presenting author:** Brian Chambers

**Authors:** Brian Chambers (Shell Global Solutions US, Inc., Houston, United States of America) / Manuel Gonzalez (Shell Global Solutions US, Inc., Houston, United States of America)



**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 215007, Effect of HCO<sub>3</sub><sup>-</sup> on the passivation and pitting behavior of super 13Cr martensitic stainless steel

**Presenting author:** Naixin Lv

**Authors:** Naixin Lv (CNPC Tubular Goods Research Institute, Xi'an, China PR)

**Room and situation:** Andalucía 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Cristiani, Refait.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 208649, Microbial Influenced Corrosion and Biofouling on Stainless Steel Coupons Exposed to Off-shore Conditions

**Presenting author:** Ignacio Vargas

**Authors:** Ignacio Vargas (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Camila Canales (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Francisca Rubio (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Carlos Galarce (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Ramón Barros (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Javiera Anguita (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Mirtala Parragué (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Leslie Daille (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Francisco Armijo (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Magdalena Walczak (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Rodrigo de la Iglesia (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Gonzalo Pizarro (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Sergio Navarrete (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile)

**Room and situation:** Andalucía 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Cristiani, Refait.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 202665, Microbial corrosion assessment of stainless steel in anaerobic saline solutions

**Presenting author:** Leonardo Iannucci

**Authors:** Leonardo Iannucci (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Régine Basséguy (Laboratoire de Génie Chimique - Université de Toulouse, CNRS, INPT, UPS, Toulouse, France) / Pierangela Cristiani (Ricerca sul Sistema Energetico (RSE SpA), Milano, Italy) / Marco Parvis (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Emma Angelini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Sabrina Grassini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy)

**Room and situation:** Andalucía 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Cristiani, Refait.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 175473, Preparation and performance evaluation of natural products for marine antifouling

**Presenting author:** Cunguo Lin

**Authors:** Cunguo Lin (State key laboratory for marine corrosion and protection, Qingdao branch of Luoyang Ship Material Research Institute, Qingdao, Shandong, China PR) / Li Wang (State key laboratory for marine corrosion and protection, Qingdao branch of Luoyang ship material research institute, Qingdao, China PR) / Jiyong Zheng (State key laboratory for marine corrosion and protection, Qingdao branch of Luoyang ship material research institute, Qingdao, China PR) / Jinwei Zhang (State key laboratory for marine corrosion and protection, Qingdao branch of Luoyang ship material research institute, Qingdao, China PR) / Zhiyong Sun (State key laboratory for marine corrosion and protection, Qingdao branch of Luoyang ship material research institute, Qingdao, China PR)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucía 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Basseguy, Paul.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 180038, Conditions leading to severe MIC of FPSO mooring chains

**Presenting author:** Robert Melchers

**Authors:** Robert Melchers (University of Newcastle, Callaghan, Australia) / Andrew Potts (AMOG Consulting, Melbourne, Australia)

**Room and situation:** Andalucía 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Basseguy, Paul.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 221079, Impact of Biomineralization in Marine Corrosion Protection of Aluminum Alloys

**Presenting author:** Régine Basséguy

**Authors:** Maria João Marques (LMR – Laboratório de Materiais e Revestimentos, LNEG – Laboratório Nacional de Energia e Geologia, Lisboa, Portugal) / Julien Jaume (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France) / Teresa Diamantino (LMR – Laboratório de Materiais e Revestimentos, LNEG – Laboratório Nacional de Energia e Geologia, Lisboa, Portugal) / Régine Basséguy (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Basseguy, Paul.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 220111, Corrosion of Al-Mg alloys in Marine Environment - Influence of Microbial Activity

**Presenting author:** Julien Jaume

**Authors:** Julien Jaume (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France) / Marie-Line Déla (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France) / Maria Joao Marques (LMR – Laboratório de Materiais e Revestimentos, LNEG – Laboratório Nacional de Energia e Geologia, Lisboa, Portugal) / Régine Basséguy (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Microbial C. in Marine Environment (WP9 + WP10)/Chair: Basseguy, Paul.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 183338, The Corrosion Behavior and Mechanism of X65 Pipeline Steel Induced by Iron-Oxidizing Bacteria in Natural Seawater

**Presenting author:** Min Du

**Authors:** Min Du (Ocean University of China, Qingdao, China PR) / Yongyong Yue (Ocean University of China, Qingdao, China PR) / Meiyong Lv (Ocean University of China, Qingdao, China PR)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion(WP9)/Chairs: Refait/Paul.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 194492, Evaluation of the effects of highly saline and warm seawaters on corrosivity of marine assets

**Presenting author:** Muntazir Abbas

**Authors:** Muntazir Abbas (Cranfield University, Bedford, United Kingdom) / Nigel Simms (Cranfield University, Bedfordshire, United Kingdom) / Ali Sarfaraz Syed (PNEC, National University of Science and Technology, Karachi, Pakistan) / Owais Ahmed Malik (PNEC, National university of Science and Technology, Karachi, Pakistan)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion(WP9)/Chairs: Refait/Paul.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 221255, Pathologies on ferroconcrete constructions in marine environments – Vitoria Island

**Presenting author:** Marília Bolsanello

**Authors:** Marília Bolsanello (Instituto de Pesquisas Energéticas e Nucleares, São Paulo, Brazil) / Erika Almeida (MULTIVIX, Vitória, Brazil) / Pedro Bolsanello (Universidade Federal de Minas Gerais, Belo Horizonte, Brazil) / Artur Rodrigues (Multivix, Vitória, Brazil)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion(WP9)/Chairs: Refait/Paul.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 228482, The effect of environmental variables on early corrosion of high-strength low-alloy mooring steel immersed in seawater

**Presenting author:** Isabel Martinez Sierra

**Authors:** Isabel Martinez Sierra (CSIC, MADRID, Spain) / ROMAN NEVSHUPA (EDUARDO TORROJA INSTITUTE, SPANISH NATIONAL RESEARCH COUNCIL, MADRID, Spain) / Alberto Arredondo (VICINAY MARINE INNOVATION, BILBAO, Spain)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion(WP9)/Chairs: Refait/Paul.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 185208, HarshLab1.0: one-year testing materials and components in the first offshore floating laboratory in Europe.

**Presenting author:** Pablo Benguria

**Authors:** Pablo Benguria (Tecnalia Research & Innovation, Derio, Spain) / Jean Baptiste Jorcin (Tecnalia Research & Innovation, Donostia-San Sebastián, Spain) / Aiala Urbegain (Tecnalia Research & Innovation, Donostia-San Sebastián, Spain) / Andrés del Barrio (Tecnalia Research & Innovation, Donostia-San Sebastián, Spain) / Iñigo Santos (Tecnalia Research & Innovation, Donostia-San Sebastián, Spain)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chairs: Refait/Paul.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 181050, Crevice Corrosion of Grades 2101 and 2205 Duplex Stainless Steel in Seawater Environment

**Presenting author:** So Aoki

**Authors:** So Aoki (Japan Atomic Energy Agency, Tokai-mura Ibaraki, Japan) / Dirk Engelberg (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chairs: Refait/Paul.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 180313, Effect of inclusion and matrix on micro-electrochemical behavior and pitting initiation of duplex stainless steel

**Presenting author:** Qian Hu

**Authors:** Yaohua Zhang (The state key laboratory of refractories and metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Jing Liu (The state key laboratory of refractories and metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Qian Hu (The

state key laboratory of refractories and metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Feng Huang (The state key laboratory of refractories and metallurgy, Wuhan University of Science and Technology, Wuhan, China PR)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chairs: Refait/Paul.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 208154, Saline resistant weathering steel for offshore and naval: corrosion testing?

**Presenting author:** Krista Van Den Bergh

**Authors:** Krista Van Den Bergh (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Lucia Fernandez Macia (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Joost De Strycker (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Martin Liebeherr (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Xavier Veys (ArcelorMittal Global R&D Gent, Zelzate, Belgium) / Özlem Esmâ Ayas Güngör (ArcelorMittal Global R&D Gent, Zelzate, Belgium)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chairs: Refait/Paul.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 195922, Corrosion of Fe-Cr (0.3-1 at.% Cr) coated carbon steel in marine environments

**Presenting author:** Philippe Refait

**Authors:** Philippe Refait (University of La Rochelle, La Rochelle, France) / Sergey Ershov (Luxembourg Institute of Science and Technology, Esch sur Alzette, Luxembourg) / Patrick Choquet (Luxembourg Institute of Science and Technology, Esch sur Alzette, Luxembourg) / Thomas Gaulain (Luxembourg Institute of Science and Technology, Esch sur Alzette, Luxembourg) / René Sabot (University of La Rochelle, La Rochelle, France) / Marc Jeannin (University of La Rochelle, La Rochelle, France) / Thomas Urios (ArcelorMittal Global Research&Development, Esch sur Alzette, Luxembourg)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chairs: Refait/Paul.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 192545, Crevice corrosion testing of C276 material in chlorinated seawater at high temperatures for a heat exchanger system

**Presenting author:** Maria Eleni Mitzithra

**Authors:** Maria Eleni Mitzithra (TWI Ltd, Cambridge, United Kingdom)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 236237, Desiccated corrosion control of the 324 feet long wrought iron hull of ss Great Britain: theory and operational realities 10 years on

**Presenting author:** David Edward Watkinson

**Authors:** David Edward Watkinson (Cardiff University, Cardiff, United Kingdom) / Nicola Emmerson (Cardiff University, Cardiff, United Kingdom)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 176947, The corrosion of iron, a major issue in the conservation of archaeological waterlogged composite wood-iron assemblies extracted from sulfide-containing environments

**Presenting author:** Celine Remazeilles

**Authors:** Celine Remazeilles (Université de La Rochelle, La Rochelle, France) / François Lévêque (University of La Rochelle, La Rochelle, France) / Egle Conforto (University of La Rochelle, La Rochelle, France) / Philippe Refait (University of La Rochelle, La Rochelle, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 185813, Synthesised and naturally formed Akaganéite: impact on the corrosion of iron

**Presenting author:** Nicola Emmerson

**Authors:** David Watkinson (Cardiff University, Cardiff, United Kingdom) / Kimberly Roche (Cardiff University, Cardiff, United Kingdom) / Nicola Emmerson (Cardiff University, Cardiff, United Kingdom)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Watkinson.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 180170, Corrosion phenomena of ancient Roman Iron Coins coated with Bronze

**Presenting author:** Roland Haubner

**Authors:** Roland Haubner (TU Wien, Wien, Austria) / Susanne Strobl (TU Wien, Vienna, Austria)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Watkinson.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 213489, Protective effect of organosilane coatings on bronze exposed to synthetic acidic rain

**Presenting author:** Andrea Balbo

**Authors:** Andrea Balbo (Corrosion and Metallurgy Study Centre, Department of engineering, University of Ferrara, Ferrara, Italy) / Vincenzo Grassi (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy) / Federica Zanotto (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy) / Cecilia Monticelli (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Watkinson.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 210937, Organic Corrosion Inhibitors for copper-based artefacts: investigating the mechanism of interaction with an historical corrosion layer

**Presenting author:** Erika Ferrari

**Authors:** Erika Ferrari (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France) / Delphine Neff (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France) / Marine Bayle (A-CORROS Expertise Pôle économique et technologique ARCHEOMED©, Arles, France) / Eddy Foy (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France) / Jean-Paul Gallien (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France) / Florence Mercier (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France) / Philippe de Vivies (A-CORROS Expertise Pôle économique et technologique ARCHEOMED©, Arles, France) / Jean-Bernard Memet (A-CORROS Expertise Pôle économique et technologique ARCHEOMED©, Arles, France) / Nicolas Nuns (Univ. Lille, CNRS, INRA, Centrale Lille, ENSCL, Univ. Artois, FR 2638 - IMEC - Institut Michel-Eugène Chevreul, Lille, France) / Ludovic Bellot-Gurlet (Sorbonne Université, MONARIS, UMR 8233, Paris, France) / Céline Paris (Sorbonne Université, MONARIS, UMR 8233, Paris, France) / Philippe Dillmann (Laboratoire Archéomatériaux et Prévission de l'Altération, LAPA, NIMBE – IRAMAT, CEA/CNRS, Université Paris Saclay, UMR 3685, Gif-sur-Yvette, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Watkinson.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 198639, Atmospheric corrosion of bronze artefacts in museum indoor environments

**Presenting author:** Sabrina Grassini

**Authors:** Emma Angelini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Venice Gouda (National Research Centre, Cairo, Egypt) / Leila Es Sebar (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Leonardo Iannucci (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Alessio Gullino (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Sabrina Grassini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Luca Lombardo (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Marco Parvis (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy) / Ahmed Awad (National Research Centre, Cairo, Italy) / Mohamed Shehata (National Research Centre, Cairo, Egypt) / Panayota Vassiliou (National Technical University of Athens, School of Chem. Eng., Athens, Greece)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Grassini, Watkinson.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 232783, Acoustic emission methods for the monitoring of corrosion in historical vehicles engines

**Presenting author:** Stefano Mischler

**Authors:** Laura Brambilla (Haute Ecole Arc Conservation-restauration, Neuchâtel, Switzerland) / Alejandro Roda-Buch (Haute Ecole Arc Conservation-restauration, Neuchâtel, Switzerland) / Emilie Cornet (Haute Ecole Arc Conservation-restauration, Neuchâtel, Switzerland) / Guillaume Rapp (Haute Ecole Arc Conservation-restauration, Neuchâtel, Switzerland) / Brice Chalancon (Association de Gestion du Musée National de l'Automobile, Mulhouse, France) / Stefano Mischler (EPFL, Lausanne, Switzerland)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Grassini, Watkinson.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 198518, An in situ and non-destructive corrosion assessment of metallic works of art

**Presenting author:** Leila Es Sebar

**Authors:** Leila Es Sebar (Department of Electronics and Telecommunication, Politecnico di Torino, Torino, Italy) / Alessandro Re (Physics Department, Università di Torino and INFN, Sezione di Torino, Torino, Italy) / Sabrina Grassini (Department of Applied Science and Tecnology, Politecnico di Torino, Torino, Italy) / Marco Parvis (Department of Electronics and Telecommunication, Politecnico di Torino, Torino, Italy) / Emma Angelini (Department of Applied Science and Tecnology, Politecnico di Torino, Torino, Italy)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Grassini, Watkinson.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 195779, Restoration of a German brass conductor lantern involving use of nonwoven polyamide nanofabric Nanopith Surface Nano membrane

**Presenting author:** Jan Ruzicka

**Authors:** Jan Ruzicka (National Technical Museum Prague, Prague, Czech Republic)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 226942, Characterising the corrosion products and composition of archaeological copper alloys from central Italy

**Presenting author:** Manuel Peters

**Authors:** Manuel Peters (Politecnico di Torino, Torino, Italy) / José Mirão (University of Evora, Evora, Portugal) / Emma Angelini (Politecnico di Torino, Torino, Italy)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 195427, Survey of copper base alloys used in ancient Egypt

**Presenting author:** Ahmed Awad Abouelata

**Authors:** Venice Gouda (National Research Centre, Dokki, Egypt) / Emma Angelini (Politecnico di Torino, Torino, Italy) / Ahmed Awad Abouelata (National Research Centre, Dokki, Egypt) / Mohamed Shehata (National Research Centre, Dokki, Egypt) / Sabrina Grassini (Politecnico di Torino, Torino, Italy)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 216767, Evaluation of techniques for measurement of lead corrosion rate

**Presenting author:** Jan Svadlena

**Authors:** Jan Svadlena (UCT Prague, Prague, Czech Republic) / Kristyna Charlotte Strachotova (UCT Prague, Prague, Czech Republic) / Tomas Prosek (UCT Prague, Prague, Czech Republic) / Milan Kouril (UCT Prague, Prague, Czech Republic)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 217625, Corrosion protection of copper and bronze statuary by carboxylates-doped sol-gel coatings

**Presenting author:** Siliva Lob

**Authors:** Siliva Lob (CEA/NIMBE-LAPA (Laboratoire Archéomatériaux et Préviation de l'Altération), Gif-sur-Yvette, France) / Thu-hoa Tran-thi (CEA/NIMBE-LEDNA (Laboratoire Edifices Nanométriques), Gif-sur-Yvette, France) / Aurélie Azéma (Ministère de la Culture/LRMH (Laboratoire de Recherche des Monuments Historiques), Champs-sur-Marne, France) / Christine Richter (Université Cergy Pontoise / LPMS (Laboratoire de Physique des Matériaux et des Surfaces), Cergy, France) / Delphine Neff (CEA/NIMBE-LAPA (Laboratoire Archéomatériaux et Préviation de l'Altération), Gif-sur-Yvette, France) / Philippe Dillmann (CEA/NIMBE-LAPA (Laboratoire Archéomatériaux et Préviation de l'Altération), Gif-sur-Yvette, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Archaeological and Historical Artefacts (WP21)/Chairs: Neff, Grassini.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 176507, Experimental study of Gap Filling of Ancient Completely corroded Copper bowl via New polymers

**Presenting author:** Saleh Ahmed

**Authors:** Saleh Ahmed (Faculty of Archaeology, 6 October, Egypt) / Mohamed Abdel Alber (Damietta University, Damietta, Egypt)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion Education (WP7)/Chair: Zander.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 172492, Corrosion Under Insulation on industrial piping - a holistic approach to insulation system design

**Presenting author:** Mark Swift

**Authors:** Mark Swift (Armcell Engineered Systems, Oldham, United Kingdom)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion Education (WP7)/Chair: Zander.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 177750, Standards as the basis for a corrosion education inside and outside of the EFC. A new view on the person certification.

**Presenting author:** Agatha Swierczynski

**Authors:** Agatha Swierczynski (DIN CERTCO GmbH, Berlin)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion Education (WP7)/Chair: Zander.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 203226, Soil Corrosivity Testing for General Building Materials

**Presenting author:** Eduardo Hernandez

**Authors:** Eduardo Hernandez (Project X Corrosion Engineering, Murrieta, United States of America)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session:** WP7 Business Meeting

**Presentation time:** 11:45:00 AM

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 216558, Barrier properties of solvent-based and water-based epoxy coatings for the corrosion protection of carbon steel in aggressive environments

**Presenting author:** Laura Villareal

**Authors:** Laura Villareal (CIRIMAT / CNRS, Toulouse, France) / Aurélien Roggero (CIRIMAT / CNRS, Toulouse, France) / Audrey Santos (Peintures Maestria, Pamiers, France) / Nicolas Caussé (CIRIMAT / CNRS, Toulouse, France) / Nadine Pébère (CIRIMAT / CNRS, Toulouse, France)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 195240, Investigating the long term effects of immersion in salt solution on the protective properties of bio-content polyurethane coatings

**Presenting author:** Douglas Mills

**Authors:** Douglas Mills (University of Northampton, Northampton, United Kingdom) / Tomasz Wityk (Dept of Polymer Technology, Gdansk University of Technology, Gdansk, Poland) / Lucasz Piszczyk (Dept of Polymer Technology, Gdansk University of Technology, Gdansk, Poland)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 180654, Incorporation of Corrosion Inhibitors into a coating system for the protection of a carbon steel substrate

**Presenting author:** Ana Suarez Vega

**Authors:** Ana Suarez Vega (IFM, Deakin University, Burwood Campus, Australia) / Cecilia Agustin Saenz (TECNALIA, Materials and Processes, Donostia-San Sebastian, Spain) / Fabiola Brusciotti (TECNALIA, Materials and Processes, Donostia-San Sebastian, Spain) / Anthony Somers (IFM, Deakin University, Burwood Campus, Australia) / Maria Forsyth (IFM, Deakin University, Burwood Campus, Australia)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 175198, Inhibition of local dissolution of metals by compositions based on organosilanes.

**Presenting author:** Natalia Gladkikh

**Authors:** Natalia Gladkikh (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Yuriy Makarychev (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Marina Maleeva (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Maxim Petrunin (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Ludmila Maksaeva (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Alevtina Rybkina (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia) / Andrey Marshakov (A.N. Frumkin Institute of Physical chemistry and Electrochemistry Russian academy of sciences (IPCE RAS), Moscow, Russia)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 209001, FTIR imaging investigation of automotive coating degradation after accelerated exposure

**Presenting author:** Camilla Edvinsson

**Authors:** Camilla Edvinsson (RISE Research Institutes of Sweden, Kista, Sweden) / Anna Andersson (Scania AB, Södertälje, Sweden) / Meron Solomon (Scania AB, Södertälje, Sweden) / Oscar Sångberg (RISE Research Institutes of Sweden, Stockholm, Sweden) / Dan Persson (RISE Research Institutes of Sweden, Södertälje, Sweden)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 219858, Graphene-polymer nanocomposites Coatings for Corrosion Inhibition of Mg

**Presenting author:** Özlem Özcan

**Authors:** Chayanika Das (Bundesanstalt für Materialforschung und Prüfung (BAM) Berlin, Berlin) / Julia Witt (Bundesanstalt für Materialforschung und Prüfung, Berlin) / Eleni Kastania (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Özlem Özcan (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 217724, Investigation of Mussel Adhesive Protein and Graphene composite film for solid lubrication and corrosion protection

**Presenting author:** Fan Zhang

**Authors:** Fan Zhang (KTH - Royal Institute of Technology, Stockholm, Sweden) / Sulin Chen (School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China PR) / Bin Shen (School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China PR) / Jinshan Pan (KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Polymers in Organic Coatings (WP14 + WP19)/Chairs: Heinemann, Fürbeth.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 189080, Corrosion protection of Al substrates with nanofibers reinforced coatings

**Presenting author:** Norica Carmen Godja

**Authors:** Ioana Carmen Vladu (Centre of Electrochemical Surface Technology (CEST), Wiener Neustadt, Austria) / Michael Sinnabell (Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria) / Andreas Laskos (Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria) / Andreas Schindel (Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria) / Andje Stankovic (Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria) / Norica Carmen Godja (CEST GmbH, Wiener Neustadt, Austria)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: C. in Concrete and Cathodic Protection (WP11 + WP16)/Chairs: Crouzillac, Raupach.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 185505, NEW COASTAL ROAD UNDER CATHODIC PREVENTION

**Presenting author:** Xavier Hallopeau

**Authors:** Xavier Hallopeau (Freysinet International & Cie, Rueil Malmaison Cedex, France) / Arnaud Meillier (Freysinet International & Cie, Rueil Malmaison, France) / Olivier Lesieutre (Freysinet International & Cie, Rueil Malmaison, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: C. in Concrete and Cathodic Protection (WP11 + WP16)/Chairs: Crouzillac, Raupach.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 173614, Grout Acidification of Ribbon Anode in Impressed Current Cathodic Protection Systems in Concrete Structures

**Presenting author:** Martin Cheytani

**Authors:** Martin Cheytani (University of New South Wales, Sydney, Australia) / Sammy Lap Ip Chan (University of New South Wales, Sydney, Australia)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** JS Corrosion in Concrete and Cathodic Protection (WP11+16)/Chairs: Crouzillac / Raupach.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 185417, USE OF CATHODIC PROTECTION PART OF A REPAIR SOLUTION FOR CARPARK

**Presenting author:** Xavier Hallopeau

**Authors:** Xavier Hallopeau (Freysinet International & Cie, Rueil Malmaison Cedex, France) / Arnaud Meillier (Freysinet International & Cie, Rueil-Malmaison, France) / Ruud Meijer (Freysinet Nederland B.V., Oudenbosch, Netherlands) / Olivier Lesieutre (Freysinet International & Cie, Rueil-Malmaison, France) / Eugène Moucadeau (Freysinet International & Cie, Rueil Malmaison, France)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: C. in Concrete and Cathodic Protection (WP11 + WP16)/Chairs: Crouzillac, Raupach.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 211498, Anode Reactive Behaviour in Galvanic Protection of Reinforced Concrete

**Presenting author:** Christian Stone

**Authors:** Christian Stone (CPT, Nottingham, United Kingdom) / Christian Christodoulou (AECOM, Birmingham, United Kingdom) / Wagne Dodds (AECOM, Loughborough, United Kingdom) / Nigel Davison (CPT, Nottingham, United Kingdom)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: C. in Concrete and Cathodic Protection (WP11 + WP16)/Chairs: Crouzillac, Raupach.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 185615, ZINC LAYER ANODE APPLIED ON RESORT CARPARK STRUCTURES

**Presenting author:** Xavier Hallopeau

**Authors:** Xavier Hallopeau (Freysinet International & Cie, Rueil Malmaison Cedex, France) / Olivier Lesieutre (Freysinet International & Cie, Rueil Malmaison, France) / Eugène Moucadeau (Freysinet International & Cie, Rueil Malmaison, France) / Arnaud Meillier (Freysinet International & Cie, Rueil Malmaison, France) / Camille Annede Villeau (Freysinet International & Cie, Rueil Malmaison, France) / Roberto Giorgini (CorrPRE, Reeuwijk, Netherlands)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 189025, EIS Study on Depassivation of Steel Rebar in Water Simulating Concrete Environment

**Presenting author:** Masayuki Itagaki

**Authors:** Masayuki Itagaki (Tokyo University of Science, Chiba, Japan) / Shuhei Watanabe (Tokyo University of Science, Chiba, Japan) / Yoshinao Hoshi (Tokyo University of Science, Chiba, Japan) / Isao Shitanda (Tokyo University of Science, Chiba, Japan)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 198199, A coupled experimental and numerical investigation of ICCP efficiency

**Presenting author:** Adessina Ayodele

**Authors:** AYODELE ADESSINA (Cerema, Project-team DIMA, 110 Rue de Paris, BP 214, 77487 Provins Cedex, Provins, France) / Jean-François BARTHELEMY (Cerema, Project-team DIMA, 110 Rue de Paris, BP 214, 77487 Provins Cedex, Provins, France) / Juan José CARPIO-PEREZ (Cerema, Project-team DIMA, 110 Rue de Paris, BP 214, 77487 Provins Cedex, Provins, France) / Alexandre PAVOINE (Cerema, Project-team DIMA, 110 Rue de Paris, BP 214, 77487 Provins Cedex, Provins, France) / Eric LOZINGUEZ (Cerema, Project-team DIMA, 110 Rue de Paris, BP 214, 77487 Provins Cedex, Provins, France)

13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 199805, DEVELOPMENT OF METHOD FOR THE INHIBITOR EFFICIENCY ASSESSMENT IN THE CONCRETE REINFORCEMENT BASED ON EIS

**Presenting author:** Ivana Soic

**Authors:** Ivana Soic (University of Zagreb, Faculty of Chemical Engineering and Technology, Zagreb, Croatia) / Sanja Martinez (University of Zagreb, Faculty of Chemical Engineering and Technology, Zagreb, Croatia)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 203633, Use of nitrates as corrosion inhibitors against carbonation induced corrosion of rebars in concrete

**Presenting author:** Fabio Maria Bolzoni

**Authors:** Fabio Maria Bolzoni (Politecnico di Milano, Dipartimento di Chimica, materiali e ingegneria chimica, Milano, Italy) / Maria Vittoria Diamanti (1Politecnico di Milano, Dipartimento di Chimica, Materiali e Ingegneria Chimica, 20131 Milano, Italy) / MariaPia Pedferri (Politecnico di Milano, Dipartimento di Chimica, Materiali e Ingegneria Chimica, 20131 Milano, Italy) / Marco Ormellese (Politecnico di Milano, Dipartimento di Chimica, Materiali e Ingegneria Chimica G. Natta, 20131 Milano, Italy) / Giuseppe Cilluffo (Yara Italia, 20159 Milano, Italy) / Wolfram Franke (Yara industrial holding, 3905 Porsgrunn, Norway)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 199629, Sulphate-induced corrosion of carbon steel in fresh calcium sulphoaluminate cementitious materials

**Presenting author:** Yegor Morozov

**Authors:** Yegor Morozov (Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal) / Simone Pellegrini (Security Building Service S.R.L., Via Santi Filippo e Giacomo, Covo (Bergamo), Italy) / Sergio Lorenzi (Department of Engineering, University of Bergamo, Bergamo, Italy) / Fátima Montemor (Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 177541, Inhibition of hydrogen evolution on galvanized reinforcement in fresh concrete by addition of potassium permanganate

**Presenting author:** Gino Ebell

**Authors:** Gino Ebell (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Jürgen Mietz (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Andreas Burkert (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin)

15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 178520, Stress Corrosion Cracking Behaviour of Lean-Duplex Stainless Steel Reinforcements in Chloride Contaminated Concrete Pore Solution

**Presenting author:** David M. Bastidas

**Authors:** David M. Bastidas (The University of Akron, AKRON, United States of America) / U Martin (The University of Akron, Akron, United States of America) / J Ress (The University of Akron, Akron, United States of America)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 182843, Stainless steel: an alternative solution to carbon steel for reinforced concrete exposed to severe chloride environments

**Presenting author:** Veronique BOUTEILLER

**Authors:** Veronique BOUTEILLER (Université Paris-Est, MAST, EMGCU, IFSTTAR, MARNE LA VALLEE Cedex 2, France) / Thierry CHAUSADENT (Université Paris-Est, MAST, CPDM, IFSTTAR, F-77447 Marne-la-Vallée, France) / Eric CHAUVEAU (UGITECH, UGINE, France) / Lucas ADELAIDE (Université Paris-Est, MAST, EMGCU, IFSTTAR, F-77447 Marne-la-Vallée, France) / Adam OUMAROU (Université Paris-Est, MAST, EMGCU, F-77447 Marne-la-Vallée, France) / Nina COULATY-CHIN (Université Paris-Est, MAST, EMGCU, IFSTTAR, F-77447 Marne-la-Vallée, France) / Nadia DOMINIQUE (Université Paris-Est, MAST, CPDM, IFSTTAR, F-77447 Marne-la-Vallée, France) / Amandine BONNET (Université Paris-Est, MAST, EMGCU, F-77447 Marne-la-Vallée, France) / Renaud-Pierre MARTIN (Université Paris-Est, MAST, EMGCU, IFSTTAR, F-77447 Marne-la-Vallée, France) / Philippe MAUGER (UGITECH, UGINE, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 183228, Performance test to estimate the chloride threshold of stainless steels in concrete

**Presenting author:** Sylvia Keßler

**Authors:** Sylvia Keßler (Technische Universität München, München) / Elke Ziehensack (Technical University of Munich, Munich) / Christoph Gehlen (Technical University of Munich, Munich)



**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 203952, Long-term corrosion performance of lean duplex stainless steel corrugated bars in mortar with chlorides: influence of carbonation

**Presenting author:** Francisco Velasco

**Authors:** Asuncion Bautista (Carlos III University of Madrid, Leganés, Spain) / Francisco Velasco (Universidad Carlos III de Madrid, Leganes, Spain) / Sandra Milena Alvarez (Universidad Carlos III de Madrid, Leganes, Spain)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 226491, Effects of further chloride penetration on RC specimens made with chloride contaminated raw-materials and stainless steel bars

**Presenting author:** Federica Lollini

**Authors:** Federica Lollini (Politecnico di Milano, Milano, Italy) / Maddalena Carsana (Politecnico di Milano, Milan, Italy) / Matteo Gastaldi (Politecnico di Milano, Milano, Italy) / Elena Redaelli (Politecnico di Milano, Milano, Italy)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 177772, FLOW-ACCELERATED CORROSION IN POWER PLANTS: THE INFLUENCE OF CORROSION-PRODUCT OXIDES

**Presenting author:** Derek Lister

**Authors:** Derek Lister (University of New Brunswick, Fredericton, NB, Canada)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 183151, Inhibitor performance on carbon steel in high saline geothermal brine related to the Upper Rhine Graben (URG)

**Presenting author:** Petra Huttenloch

**Authors:** Petra Huttenloch (European Institute for Energy Research, Karlsruhe) / Roman Zorn (European Institute for Energy Research, Karlsruhe) / Linda Makni (European Institute for Energy Research, Karlsruhe) / Hagen Steger (KIT - Institute for Applied Geoscience, Karlsruhe) / Frank Schilling (KIT - Institute for Applied Geoscience, Karlsruhe) / Wolfgang Hater (Kurita Europe GmbH, Ludwigshafen)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 210717, Chestnut extracts as a green corrosion inhibitor for bronze

**Presenting author:** Javier Izquierdo

**Authors:** Javier Izquierdo (University of La Laguna, La Laguna, Spain) / Giada Caniglia (University of La Laguna, La Laguna, Spain) / Ricardo M. Souto (University of La Laguna, La Laguna, Spain) / Roxana Bostan (Universitatea "1 Decembrie 1918" Alba Iulia, Alba Iulia, Romania) / Luiza Găină (Babeş-Bolyai University, Cluj-Napoca, Cluj-Napoca, Romania) / Simona Varvara (Universitatea "1 Decembrie" Alba Iulia, Alba Iulia, Romania)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 184988, Field Experience with a new corrosion inhibitor for cooling systems - Corrsave 100 -

**Presenting author:** Wolfgang Hater

**Authors:** Wolfgang Hater (Kurita Europe GmbH, Düsseldorf) / Juergen Matheis (Kurita Europe GmbH, Duesseldorf) / Christian zum Kolk (Kurita Europe GmbH, Duesseldorf) / Florian Wolf (Kurita Europe GmbH, Ludwigshafen)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 206724, Surface Enhanced Raman Spectroscopy (SERS) and Electrochemical Investigation of the Adsorption and Corrosion Inhibition Performance of 4-methylimidazole on Copper Corrosion in Chloride Media

**Presenting author:** Merlin C. E. Bandeira

**Authors:** Merlin C. E. Bandeira (LNDC/COPPE/UFRJ, Rio De Janeiro, Brazil) / Elaine F. Silva (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil) / Julio S. Wyzard (Depto Química Inorgânica/Instituto de Química/UFRJ, Rio de Janeiro, Brazil) / Wagner A. Alves (Depto Química Inorgânica/Instituto de Química/UFRJ, Rio de Janeiro, Brazil) / Oscar R. Mattos (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 178333, Anti-corrosion performance of 304 stainless steel and carbon steel in high concentrated cooling water

**Presenting author:** Hong-Hua Ge

**Authors:** Hong-Hua Ge (Shanghai University of Electric Power, Shanghai, China PR) / Jia-Hui Yao (Shanghai University of Electric Power, Shanghai, China PR)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 175847, Utilization of A Diallylmethylamine-Based Cyclopolymer for Low Carbon Steel Corrosion Control in Strong Acid Medium

**Presenting author:** Saviour Umoren

**Authors:** Saviour Umoren (King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 177464, Inhibition effect and theoretical investigation of dicarboxylic acid derivatives as corrosion inhibitor for aluminium alloy

**Presenting author:** Daquan Zhang

**Authors:** Daquan Zhang (Shanghai University of Electric Power, Shanghai, China PR) / Hanxue Yang (Shanghai University of Electric Power, Shanghai, China PR)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 206526, A potential corrosion inhibitor with low toxicity profile for sweet corrosion mitigation of API X 60 steel under hydrodynamic condition

**Presenting author:** Ime Obot

**Authors:** Ime Obot (King Fahd University of Petroleum and Minerals, DHAHRAN, Saudi Arabia) / IKENNA ONYEACHU (King Fahd University of Petroleum and Minerals, DHAHRAN, Saudi Arabia)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 188376, Investigation of anticorrosive properties of some ionic liquids on mild steel in hydrochloric acid

**Presenting author:** Lutendo Chester Murulana

**Authors:** Lutendo Chester Murulana (University of Venda, Thohoyandou, South Africa) / Anitah Nkuna (University of Venda, University Road, South Africa)

**15:20 - 15:50 - Coffee break**

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 204854, Development of a New Inhibitor for CO<sub>2</sub> Corrosion at High Temperature, High Shear and High Salinity Environments

**Presenting author:** Tracey Jackson

**Authors:** Zhengwei Liu (Baker Hughes, Sugar Land, United States of America) / Sunder Ramachandran (Baker Hughes, Sugar land, United States of America) / Carlos Menendez (Baker Hughes, Sugar Land, United States of America) / Calvin Larson (Baker Hughes, Sugar Land, United States of America) / Brian Nelson (Baker Hughes, Sugar Land, United States of America) / Tracey Jackson (Baker Hughes, Sugar Land, United States of America)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 213962, Comparative study of the corrosion inhibition of wild growing Allium species on Cor-Ten steel in acidic solution

**Presenting author:** Maria Pia Casaletto

**Authors:** Maria Pia Casaletto (Consiglio Nazionale delle Ricerche-Istituto per lo Studio dei Materiali Nanostrutturati, Palermo, Palermo, Italy) / Viviana Figa' (Consiglio Nazionale delle Ricerche-Istituto per lo Studio dei Materiali Nanostrutturati, Palermo, Palermo, Italy) / Maurizio Bruno (Università degli Studi di Palermo, Dipartimento di Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche, Palermo, Italy) / Stefania Sut (Università degli Studi di Padova, Dipartimento di Agronomia, Animali, Alimenti, Risorse naturali e Ambiente, Padova, Italy) / Stefano Dall'Acqua (Università degli Studi di Padova, Dipartimento di Scienze del Farmaco, Padova, Italy)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 199123, Investigation of corrosion inhibition mechanism on mild carbon steel in sweet conditions

**Presenting author:** Shivangi Gupta

**Authors:** Shivangi Gupta (Technical University of Denmark, Copenhagen, Denmark) / Magdalena Rogowska (Technical University of Denmark, Copenhagen, Denmark) / Rajan Ambat (Technical University of Denmark, Copenhagen, Denmark) / Kapil Kumar Gupta (Technical University of Denmark, Copenhagen, Denmark)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session:** WP1 Meeting

**Presentation time:** 4:50:00 PM

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 200201, Tribocorrosion of passive metals in oxygen free media

**Presenting author:** Nuria Espallargas

**Authors:** Nuria Espallargas (NTNU, Trondheim, Norway) / Hector Maicas (NTNU, Trondheim, Norway) / Cristian Torres (NTNU, Trondheim, Norway)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 196538, Contribution of the in situ determination of the wear surface, volumes and kinetic of repassivation in the understanding of the tribocorrosion behaviour of a ferrite stainless steel.

**Presenting author:** Nicolas Mary

**Authors:** Nicolas Mary (ELYTMaX, CNRS Tohoku University, Université de Lyon ELYTMaX, CNRS Tohoku, sendai, Japan) / Vincent Dalbert (MATEIS, INSA Lyon, villeurbanne, France) / Bernard Normand (MATEIS, INSA Lyon, villeurbanne, France) / Catherine Verdu (MATEIS INSA Lyon, villeurbanne, France) / Saghi Saedlou (APERAM Research Center, Isbergues, France)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 223026, Modeling the tribocorrosion wear. Electrochemical characterization of the re-passivation phenomenon in a single scratch experiment

**Presenting author:** Javier NAVARRO-LABOULAIS

**Authors:** Nicolas MARY (INSA-Lyon/Université de Lyon/Tohoku University, Lyon, France) / Bernard NORMAND (INSA-Lyon/Université de Lyon, Lyon, France) / Andrés ROVIRA (UPV, Valencia, Spain) / Alba DALMAU (UPV, Valencia, Spain) / Anna IGUAL-MUÑOZ (EPFL, Lausanne, Switzerland) / Alejandro RODA-BUCH (EPFL, Lausanne, Switzerland) / Javier NAVARRO-LABOULAIS (UPV, Valencia, Spain)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 197044, Elucidating wear mechanisms of alumina / metal tribocorrosion pairs: sometimes it wears and sometimes it does not

**Presenting author:** Anna Igual Muñoz

**Authors:** Alba Dalmau (SIRYM, Universitat Politècnica de València, Valencia, Spain) / Alejandro Roda Buch (TIC, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland) / Anna Igual Muñoz (TIC, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland) / Stefano Mischler (TIC, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 185472, Strain rate influence on the tribo-corrosion properties of Ti6Al4V alloy

**Presenting author:** Righdan Namus

**Authors:** Righdan Namus (University of Sheffield, Sheffield, United Kingdom) / Mark Rainforth (The University of Sheffield, Sheffield, United Kingdom)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 184526, Tribological response of corrosion inhibitor containing PEO coatings

**Presenting author:** Yue Guo

**Authors:** Yue Guo (The University of Manchester, Manchester, United Kingdom) / Mingo Beatriz (The University of Manchester, Manchester, United Kingdom) / Allan Matthews (The University of Manchester, Manchester, United Kingdom) / Aleksey Yerokhin (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Mischler, Igual.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 217779, Effect of Water on the Tribological Performance of Ester Based Lubricants

**Presenting author:** Nuria Espallargas

**Authors:** Gaute Stenerud (Norwegian University of Science and Technology (NTNU), Trondheim, Norway) / Szymon Bernat (SINTEF, Trondheim, Norway) / Nuria Espallargas (Norwegian University of Science and Technology (NTNU), Trondheim, Norway)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 219770, Role of tribocorrosion on metal ion release during sliding of a CoCrMo alloy against articular cartilage

**Presenting author:** Manel Rodriguez Ripoll

**Authors:** Bojana Stojanovic (AC2T research GmbH, Wiener Neustadt, Austria) / Christoph Bauer (Danube University Krems, Krems, Austria) / Christoph Stotter (Danube University Krems, Krems, Austria) / Thomas Klestil (Danube University Krems, Krems, Austria) / Stefan Nehrer (Danube University Krems, Krems, Austria) / Friedrich Franek (AC2T research GmbH, Wiener Neustadt, Austria) / Manel Rodriguez Ripoll (AC2T research GmbH, Wiener Neustadt, Austria)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 222124, High normal load involves high wear in solution (bovine serum)? Ti-6Al-4V against Ti-6Al-4V under fretting corrosion solicitations: Not sure....

**Presenting author:** Jean Geringer

**Authors:** Jean Geringer (Mines Saint-Etienne Unité INSERM U1059, Saint Etienne, France) / Albert Boyer (Mines Saint-Etienne, Saint-Etienne, France) / Vincent Fridrici (Ecole Centrale de Lyon LTDS UMR CNRS 5513, Ecully, France) / Philippe Kapsa (Ecole Centrale de Lyon LTDS UMR CNRS 5513, Ecully, France) / Tahlita Taylor (University of Johannesburg, Johannesburg, South Africa) / Lerato Semetse (University of Johannesburg, Johannesburg, South Africa) / Peter Olubambi (University of Johannesburg, Johannesburg, South Africa)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion/Chairs: Geringer/Mathew.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 239185, Relevance of Tribocorrosion for Total Hip Arthroplasties

**Presenting author:** Claude Rieker

**Authors:** Claude Rieker (Zimmer Biomet EMEA, Winterthur, Switzerland)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 224951, THIRD BODY LAYERS CHARACTERIZATION FORMED UNDER FRETTING-CORROSION CONDITIONS IN RETRIEVED MODULAR IMPLANTS

**Presenting author:** Angela Bermudez-castañeda

**Authors:** Angela Bermudez-castañeda (Escuela Colombiana de Ingeniería Julio Garavito, BOGOTÁ, Colombia) / SOFIA VALENTINA VARGAS PABON (ESCUELA COLOMBIANA DE INGENIERIA JULIO GARAVITO, BOGOTÁ, Colombia) / JOHANNA ESGUERRA ARCE (ESCUELA COLOMBIANA DE INGENIERÍA JULIO GARAVITO, BOGOTÁ, Colombia) / ADRIANA ESGUERRA ARCE (ESCUELA COLOMBIANA DE INGENIERIA JULIO GARAVITO, BOGOTÁ, Colombia) / DAVID LEONARDO BLANCO ESTUPIÑAN (ESCUELA COLOMBIANA DE INGENIERIA JULIO GARAVITO, BOGOTÁ, Colombia) / JUAN GUILLERMO ORTIZ MARTINEZ (CLINICA UNIVERSIDAD LA SABANA, CHIA, Colombia) / CRISTIAN PEREZ (CLINICA UNIVERSIDAD LA SABANA, CHIA, Colombia) / JUAN GUILLERMO CASTAÑO GONZALEZ (UNIVERSIDAD DE ANTIOQUIA, MEDELLIN, Colombia) / STEFANO MISCHLER (ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE, LAUSANNE, Switzerland)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 220573, Bio-tribocorrosion evaluation of HiPIMS-PVD coated tribopairs

**Presenting author:** Antonino Mazzonello

**Authors:** Antonino Mazzonello (University of Malta, Msida, Malta) / Lars Pleth Nielsen (Danish Technological Institute, Aarhus, Denmark) / Andreas Karl (Bodycote Specialist Technologies GmbH, Landsberg) / Joseph Buhagiar (University of Malta, Msida, Malta) / Bertram Mallia (University of Malta, Msida, Malta)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 209793, Corrosion and tribocorrosion behavior of anodic treated Ti-Nb and Ti-Nb-Fe alloys for biomedical implant applications

**Presenting author:** Ihsan Caha

**Authors:** Ihsan Caha (University of Minho, Guimarães, Portugal) / Alexandra Alves (Universidade do Minho, Guimarães, Portugal) / Caterina Chirico (Universidad Carlos III de Madrid, Leganés, Spain) / Ana Pinto (Universidade do Minho, Guimarães, Portugal) / Sofia Tspas (Universidad Carlos III de Madrid, Leganés, Spain) / Elena Gordo (Universidad Carlos III de Madrid, Leganés, Spain) / Fatih Toptan (Universidade do Minho, Guimarães, Portugal)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 189597, Tribocorrosion evaluation of TiO<sub>2</sub> bioactive surfaces doped with Sr intended for orthopaedic applications

**Presenting author:** Ana Costa

**Authors:** Ana Costa (CMEMS-UMinho Center of MicroElectroMechanical Systems - Universidade do Minho, Guimarães, Portugal) / Alexandra Alves (CMEMS-UMinho Center of MicroElectroMechanical Systems Universidade do Minho, Guimarães, Portugal) / Ana Pinto (DEM Department of Mechanical Engineering Universidade do Minho, Guimarães, Portugal) / Fatih Toptan (DEM Department of Mechanical Engineering Universidade do Minho, Guimarães, Portugal)

**Room and situation:** Andalucía 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 192919, Tribocorrosion behavior of bio-functionalized in-situ Ti-TiB-TiC composites by anodic treatment

**Presenting author:** Luís Sousa

**Authors:** Luís Sousa (CMEMS-UMinho Center of MicroElectroMechanical Systems Universidade do Minho, Campus de Azurém, Guimarães, Portugal) / Alexandra C. Alves (CMEMS-UMinho Center of MicroElectroMechanical Systems Universidade do Minho, Campus de Azurém, Guimarães, Portugal) / André Linhares Rossi (Brazilian Center for Research in Physics (CBPF), Dr. Xavier Sigaud, 150, Rio de Janeiro, Brazil) / Natália de Araújo Costa (São Paulo State University UNESP, Av. Eng. Luiz Edmundo Carrijo Coube, 17033-360 Bauru, São Paulo, Brazil) / Sónia Simões (CEMPRE, Department of Metallurgical and Materials Engineering, University of Porto, R. Dr. Roberto Frias, Porto, Portugal) / Ana Maria Pinto (CMEMS-UMinho Center of MicroElectroMechanical Systems Universidade do Minho, Campus de Azurém, Guimarães, Portugal) / Fatih Toptan (CMEMS-UMinho Center of MicroElectroMechanical Systems Universidade do Minho, Campus de Azurém, Guimarães, Portugal)

**Room and situation:** Andalucía 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chairs: Geringer, Mathew.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 199167, Passivation Charge Density of CoCrMo Alloy in Different Aqueous Solutions

**Presenting author:** Yueyue Bao

**Authors:** Yueyue Bao (EPFL Lausanne, Lausanne, Switzerland) / Stefano Mischler (EPFL, Lausanne, Switzerland) / Anna Igualmunoz@epfl.ch (EPFL, Lausanne, Switzerland) / Shoufan Cao (EPFL, Lausanne, Switzerland) / Tomohiro Kudo (EPFL, Lausanne, Switzerland)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: S. Ritter, L. Martinelli.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 239042, Some insights into the use of low pressure hydrogenated steam and supercritical water as subrogated environments of PWR primary water.

**Presenting author:** Dolores Gomez-Briceño

**Authors:** Dolores Gomez-Briceño (CIEMAT, Madrid, Spain) / Francisco Javier Perosanz (CIEMAT, Madrid, Spain)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: S. Ritter, L. Martinelli.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 186957, Stress Corrosion Cracking Growth Rate of Cold Rolled Thermally Treated Alloy 690 and Solution Annealed Alloy 690 and their Mechanisms in Simulated PWR Primary Water

**Presenting author:** Toshio Yonezawa

**Authors:** Toshio Yonezawa (Tohoku University, Sendai, Japan) / Atsushi Hashimoto (Kobe Material Testing Laboratory Co., Ltd., Kakogun, Japan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: S. Ritter, L. Martinelli.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 182040, Stress corrosion cracking and surface oxidation behavior of Ni-base alloys exposed to simulated PWR primary water

**Presenting author:** Yun Soo Lim

**Authors:** Yun Soo Lim (Korea Atomic Energy Research Institute, Daejeon, Korea, South) / Dong Jin Kim (Korea Atomic Energy Research Institute, Daejeon, Korea, South) / Seong Sik Hwang (Korea Atomic Energy Research Institute, Daejeon, Korea, South) / Sung Woo Kim (Korea Atomic Energy Research Institute, Daejeon, Korea, South) / Hong Pyo Kim (Korea Atomic Energy Research Institute, Daejeon, Korea, South)

#### 11:15 - 11:45 Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: D. Féron, T. Yonezawa.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 181193, Impact of the startup temperature and primary chemistry program on the oxidation and release of corrosion products from alloy 690 steam generator

**Presenting author:** Julie Flambard

**Authors:** Julie Flambard (EDF R&D, Moret-sur-Loing, France) / Carole Monchy-Leroy (EDF-R&D, Moret-Sur-Loing, France) / Carrette Florence (EDF R&D, Moret-Sur-Loing, France) / Eric Andrieu (CIRIMAT UMR CNRS 5085, ENSIACET, Toulouse, France) / Lydia Laffont (CIRIMAT UMR CNRS 5085, ENSIACET, Toulouse, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: D. Féron, T. Yonezawa.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 176661, Crevice Corrosion Characteristics of Alloy 690 in High-Temperature Pure Water

**Presenting author:** Xinqiang Wu

**Authors:** Xinqiang Wu (CAS Key Laboratory of Nuclear Materials and Safety Assessment, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Fangqiang Ning (CAS Key Laboratory of Nuclear Materials and Safety Assessment, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / En-Hou Han (CAS Key Laboratory of Nuclear Materials and Safety Assessment, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Wei Ke (CAS Key Laboratory of Nuclear Materials and Safety Assessment, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: D. Féron, T. Yonezawa.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 216492, IRRADIATION EFFECTS ON THE OXIDATION FIRST STAGES of a 316L austenitic stainless steel in simulated primary environment

**Presenting author:** Lydia Laffont

**Authors:** Lydia Laffont (CIRIMAT-ENSIACET, TOULOUSE, France) / Marylou BOISSON (CIRIMAT/EDF, Toulouse, France) / Laurent LEGRAS (EDF, Moret sur Loing, France) / Florence CARRETTE (EDF, Moret sur Loing, France) / Eric Andrieu (CIRIMAT-ENSIACET, Toulouse, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Symposium in Honour of Lola Gómez-Briceño (Nuclear Corrosion)/Chairs: D. Féron, T. Yonezawa.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 210365, SCC initiation in as-welded and thermally aged alloy 182 weld metal under simulated BWR/HWC conditions

**Presenting author:** Siddharth Suman

**Authors:** Siddharth Suman (Paul Scherrer Institute, Villigen PSI, Switzerland) / Hans-Peter Seifert (Paul Scherrer Institute, Villigen, Switzerland) / Stefan Ritter (Paul Scherrer Institute, Villigen, Switzerland) / Aleksandra Treichel (Paul Scherrer Institute, Villigen, Switzerland)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: L. Gómez-Briceño, J. Piippo.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 172855, Immersion Corrosion Testing of Iron-Chromium-Aluminium Tubes under Simulated Light Water Nuclear Reactors Normal Operation Conditions

**Presenting author:** Raúl B. Rebak

**Authors:** Raúl B. Rebak (GE Global Research, Schenectady, United States of America) / Timothy B. Jurewicz (GE Global Research, Schenectady, United States of America) / Kan Sakamoto (Nippon Nuclear Fuel Development, Ibaraki-Ken, Japan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: L. Gómez-Briceño, J. Piippo.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 172371, Localized Corrosion Behaviour of FeCrAl Nuclear Fuel Cladding in Pool Storage

**Presenting author:** Raúl B. Rebak

**Authors:** Raúl B. Rebak (GE Global Research, Schenectady, United States of America) / Richard J. Blair (GE Global Research, Schenectady, United States of America)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: L. Gómez-Briceño, J. Piippo.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 204568, SiCf/SiC cladding for LWR: Assessment of flow accelerated corrosion

**Presenting author:** Marion LE FLEM

**Authors:** Brice BOURDILIAU (CEA, Den-SERVICE de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), Gif-sur-Yvette, France) / Frédéric DATCHARRY (CEA, Den-SERVICE de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), Gif-sur-Yvette, France) / Max Hélie (CEA, Den-SERVICE de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), Gif-sur-Yvette, France) / Marion LE FLEM (CEA, Den-SERVICE de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), Gif-sur-Yvette, France) / Christophe LORRETTE (CEA, Den-SERVICE de Recherches Métallurgiques Appliquées (SRMA), Gif-sur-Yvette, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: L. Gómez-Briceño, J. Piippo.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 232882, Intergranular corrosion by sodium of yttria doped thoria used as solid electrolyte of oxygen sensors in Sodium Fast Reactors

**Presenting author:** Laurent Brissonneau

**Authors:** Laurent Brissonneau (CEA Cadarache, Saint Paul lez Durance, France) / Yanis Cherkaski (CEA Cadarache, Saint Paul lez Durance, France) / Nicolas Clavier (DNRS / ICSM, Bagnols sur Cèze, France) / Nicolas Dacheux (Université de Montpellier / ICSM, Bagnols sur Cèze, France)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: M. Le Flem, R. Rebak.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 214028, Corrosion behaviour of Fe-Si-Zr and Si-Zr thin films on Zr1Nb alloy.

**Presenting author:** Michal Novák

**Authors:** Michal Novák (Power Engineering Department, University of Chemistry and Technology, Prague, Czech Republic) / Lukáš Tůma (Power Engineering Department, University of Chemistry and Technology, Prague, Czech Republic) / Marie Kudrnová (Power Engineering Department, University of Chemistry and Technology, Prague, Czech Republic) / Stanislav Cichoň (Institute of Physics, Czech Academy of Sciences, Prague, Czech Republic) / Ladislav Lapčák (Central Laboratories, University of Chemistry and Technology, Prague, Czech Republic) / Zdeněk Weiss (Institute of Physics, Czech Academy of Sciences, Prague, Czech Republic) / Vladimír Cháb (Institute of Physics, Czech Academy of Sciences, Prague, Czech Republic) / Magdaléna Hromadová (J. Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czech Republic) / Petr Sajdl (Power Engineering Department, University of Chemistry and Technology, Prague, Czech Republic) / Jan Macák (Power Engineering Department, University of Chemistry and Technology, Prague, Czech Republic)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: M. Le Flem, R. Rebak.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 211553, Corrosion characterization of chromium film sputtered on zirconium alloys

**Presenting author:** Lukas Tuma

**Authors:** Lukas Tuma (UCT Prague, Praha, Czech Republic) / Jan Macak (UCT Prague, Prague, Czech Republic) / Michal Novak (UCT Prague, Prague, Czech Republic) / Radek Novotny (JRC Petten, Petten, Netherlands)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: M. Le Flem, R. Rebak.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 230924, Effect of Cr content on flow-accelerated corrosion rate and its correlation with oxide layer characteristics

**Presenting author:** Hiroshi Abe

**Authors:** Hiroshi Abe (Tohoku University, Sendai, Japan) / Kazuki Kushida (Tohoku University, Sendai, Japan) / Yutaka Watanabe (Tohoku University, Sendai, Japan) / Takamichi Miyazaki (Tohoku University, Sendai, Japan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: M. Le Flem, R. Rebak.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 197825, Effect of Cr concentration of carbon steel on flow-accelerated corrosion

**Presenting author:** Kazutoshi Fujiwara

**Authors:** Kazutoshi Fujiwara (Central Research Institute of Electric Power Industry, Yokosuka-shi Kanagawa-ken, Japan) / Yuta Uchiyama (Central Research Institute of Electric Power Industry, Yokosuka, Japan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chairs: M. Le Flem, R. Rebak.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 214611, Study on redox stability of iron oxide-based corrosion products formed in the secondary circuit of Pressurized Water Reactors

**Presenting author:** Zimin Li

**Authors:** Zimin Li (EDF, Moret-sur-Loing, France) / Grégory Lefèvre (CNRS, Paris, France) / Corinne Chanéac (Sorbonne Universités, Paris, France) / Gilles Berger (CNRS, Toulouse, France) / Sophie Delaunay (EDF, Paris, France) / Anaïs Graff (EDF, Moret-sur-Loing, France) / Jonathan Tireau (EDF, Moret-sur-Loing, France)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 212719, Novel PEO coatings obtained on titanium in acid electrolytes

**Presenting author:** Krzysztof Rokosz

**Authors:** Krzysztof Rokosz (Technical University of Koszalin, Koszalin, Poland) / Tadeusz Hryniewicz (Koszalin University of technology, Koszalin, Poland) / Łukasz Dudek (Koszalin University of Technology, Koszalin, Poland) / Kornel Pietrzak (Koszalin University of Technology, Koszalin, Poland) / Steinar Raaen (Norwegian University of Science and Technology (NTNU), Trondheim, Norway) / Sofia Gaiaschi (HORIBA FRANCE S.A.S., Palaiseau, France) / Patrick Chapon (HORIBA FRANCE S.A.S., Palaiseau, France) / Winfried Malorny (Hochschule Wismar, Wismar) / Dalibor Matysek (VŠB—Technical University of Ostrava, Ostrava, Czech Republic)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 188035, Titanium duty cycle plasma electrolytic oxidation, influence on film porosity and corrosion resistance

**Presenting author:** Luca Casanova

**Authors:** Davide Prando (Politecnico di Milano, Milano, Italy) / Luca Casanova (Politecnico di Milano, Milano, Italy) / Maria Vittoria Diamanti (Politecnico di Milano, Milano, Italy) / Maria Pia Pedferri (Politecnico di Milano, Milano, Italy) / Marco Ormellese (Politecnico di Milano, Milano, Italy)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 202324, Corrosion and Wear Resisting Surfaces on Al Alloys by PEO - Performance Design by Optimized Electrical Regime

**Presenting author:** Anna Buling

**Authors:** Anna Buling (ELB Eloalwerk Ludwigsburg Helmut Zerrer GmbH, Ludwigsburg) / Jörg Zerrer (ELB Eloalwerk Ludwigsburg Helmut Zerrer GmbH, Ludwigsburg)

**11:15 - 11:45 Coffee break**

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 180830, MICROSTRUCTURAL AND CORROSION PROPERTIES OF PEO COATED ZINC-ALUMINIZED (ZA) STEEL

**Presenting author:** Luca Pezzato

**Authors:** Luca Pezzato (Universita di Padova, Padova, Italy) / Alessio Giorgio Settini (University of Padova, Padova, Italy) / Pietrogiovanni Cerchier (University of Padova, Padova, Italy) / Claudio Gennari (University of Padova, Padova, Italy) / Katya Brunelli (University of Padova, Padova, Italy) / Manuele Dabalà (University of Padova, Padova, Italy)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 215161, Formation of multi-functional PEO Coatings on Mg alloy

**Presenting author:** Xiaopeng Lu

**Authors:** Xiaopeng Lu (Northeastern University, Shenyang, China PR) / Tao Zhang (Northeastern University, Shenyang, China PR) / Fuhui Wang (Northeastern University, Shenyang, China PR) / Carsten Blawert (Helmholtz-Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Geesthacht)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 184779, Corrosion inhibitor containing sealings for PEO coatings on magnesium alloys

**Presenting author:** Mingo Beatriz

**Authors:** Mingo Beatriz (The University of Manchester, Manchester, United Kingdom) / Yue Guo (The University of Manchester, Manchester, United Kingdom) / Allan Matthews (The University of Manchester, Manchester, United Kingdom) / Aleksey Yerokhin (The University of Manchester, Manchester, United Kingdom) / Rafael Leiva-garcia (The University of Manchester, Manchester, United Kingdom) / Brian Connolly (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chairs: B. Normand, J. Fernandes.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 210618, DEVELOPMENT OF AN ANTI-CORROSIVE COATING BASED ON A CERAMIC NANOPIGMENT

**Presenting author:** María Fernanda Gazulla

**Authors:** María Fernanda Gazulla (Instituto de Tecnología Cerámica, Castellón, Spain) / Marta Rodrigo (Instituto de Tecnología Cerámica, Castellón, Spain) / María Jesús Ventura (Instituto de Tecnología Cerámica, Castellón, Spain) / María Pilar Gómez (Instituto de Tecnología Cerámica, Castellón, Spain)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 178982, Novel self-healing coatings for corrosion protection of epoxy-coated steel substrates

**Presenting author:** M. Fatima Montemor

**Authors:** M. Fatima Montemor (IST - Instituto Superior Tecnico, Lisboa, Portugal) / Yegor Morozov (Instituto Superior Tecnico, Lisboa, Portugal) / Roma Raj (INSTITUTO SUPERIOR TECNICO, Lisboa, Portugal) / MAHBOOBEH ATTAEI (INSTITUTO SUPERIOR TÉCNICO, LISBOA, Portugal) / Ana Marques (INSTITUTO SUPERIOR TECNICO, LISBOA, Portugal) / r. Shakoor (Qatar University, Doha, Qatar) / R. Kahraman (QATAR UNIVERSITY, Doha, Qatar)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 187364, Multifunctional self-healing protective coatings with improved adhesion properties and corrosion-sensing abilities

**Presenting author:** Dawei Zhang

**Authors:** Dawei Zhang (University of Science and Technology Beijing, Beijing, China PR) / Yao Huang (University of Science and Technology Beijing, Beijing, China PR) / Lingwei Ma (University of Science and Technology Beijing, Beijing, China PR) / Lin Lu (University of Science and Technology Beijing, Beijing, China PR) / Herman Terryn (Vrije Universiteit Brussel, Brussels, Belgium) / Arjan Mol (Delft University of Technology, Delft, Netherlands) / Xiaogang Li (University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 189839, Synthesis and Properties of Polyelectrolyte Multilayered Microcapsules Reinforced Smart Coatings

**Presenting author:** Abdul Shakoor

**Authors:** Abdul Shakoor (Qatar University, 2713, Qatar) / Adnan Khan (Qatar University, Doha, Qatar) / Fareeha Ubaid (Qatar University, Doha, Qatar) / Zubair Ahmad (Qatar University, Doha, Qatar) / Ramazan Kahraman (qatar University, Doha, Qatar) / Fatima Montemor (Qatar University, Doha, Qatar)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 202280, Preparation and property study of smart protective coating

**Presenting author:** ying li

**Authors:** ying li (INDTITUTE OF METAL RESEARCH, SHENYANG, China PR) / DEMIAN NJOKU (iNSTITUTE OF METAL RESEARCH,CAS, SHENYANG , China PR) / MIAOMIAO CUI (INSTITUTE OF METAL RESEARCH,CAS, SHENYANG, China PR)

#### 15:20 - 15:50 - Coffee break



**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 208550, Chelating agent-assisted in situ LDH growth on bare and PEO treated magnesium alloy

**Presenting author:** Maria Serdechnova

**Authors:** Maria Serdechnova (Helmholtz Zentrum Geesthacht, Geesthacht) / Tatsiana Shulha (Helmholtz Zentrum Geesthacht, Geesthacht) / Sviatlana Lamaka (Helmholtz Zentrum Geesthacht, Geesthacht) / Florian Wieland (Helmholtz Zentrum Geesthacht, Geesthacht) / Konstantin Lapko (Belarusian State University, Minsk, Belarus) / Carsten Blawert (Helmholtz Zentrum Geesthacht, Geesthacht) / Elena Petrova (Belarusian State University, Minsk, Belarus) / Mikhail Zheludkevich (Helmholtz Zentrum Geesthacht, Geesthacht)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 185549, Corrosion inhibition of AISI 1010 carbon steel coated with epoxy resin systems with 5% LDH-Zn-Al microcontainers.

**Presenting author:** Anelize Seniski

**Authors:** Anelize Seniski (Lactec-UFPR, Curitiba, Brazil) / Tassiane Oliveira (Lactec-UFPR, Curitiba, Brazil) / Mariana Bragança (Lactec-UFPR, Curitiba, Brazil) / Gilberto Carrera (Celpa, Belem, Brazil) / Kleber Portella (Lactec-UFPR, Curitiba, Brazil)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 192677, In-situ growth of MgAl-layered double hydroxide on PEO treated AZ31 Mg alloy towards active corrosion protection

**Presenting author:** Gen Zhang

**Authors:** Gen Zhang (Chongqing university, Chongqing, China PR) / Liang Wu (Chongqing University, Chongqing, China PR) / Maria Serdechnova (Helmholtz-Zentrum Geesthacht, Geesthacht) / Aitao Tang (Chongqing University, Chongqing, China PR) / Carsten Blawert (Helmholtz-Zentrum Geesthacht, Geesthacht) / Andrej Atrens (The University of Queensland, Queensland, Australia) / Fusheng Pan (Chongqing University, Chongqing, China PR) / Mikhail L. Zheludkevich (Helmholtz-Zentrum Geesthacht, Geesthacht)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 223576, Inhibition of Corrosion Driven Coating Delamination on Iron Using Smart Release Hydrotalcite-Salicylaldehyde Exchanged Pigments

**Presenting author:** Philip Ansell

**Authors:** Philip Ansell (Swansea University, Swansea, United Kingdom) / Natalie Wint (Swansea University, Swansea, United Kingdom) / Hamilton McMurray (Swansea University, Swansea, United Kingdom) / Geraint Williams (Swansea University, Swansea, United Kingdom)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chairs: F. Montemor, M. Mohedano.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 180984, Smart self-healing coating additives for corrosion protection of magnesium alloys

**Presenting author:** Lénia Calado

**Authors:** Lénia Calado (Instituto Superior Técnico, Lisboa, Portugal) / Maryna Taryba (Instituto Superior Técnico, Lisboa, Portugal) / Yegor Morozov (Instituto Superior Técnico, Lisboa, Portugal) / Maria João Carmezim (Instituto Politécnico de Setúbal, Setúbal, Portugal) / M. Fátima Montemor (Instituto Superior Técnico, Lisboa, Portugal)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 235885, Progress in chromate free replacements for aeronautical applications

**Presenting author:** Martin Beneke

**Authors:** Martin Beneke (Airbus Deutschland GmbH, Bremen)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 225666, Corrosion behaviour and surface modifications of the AA2050-T8 aluminium alloy in mild and aggressive electrolytes

**Presenting author:** Meicheng Li

**Authors:** Meicheng Li (PSL Research University, Institut de Recherche de Chimie Paris, CNRS – Chimie ParisTech, Paris, France) / Antoine Seyeux (PSL Research University, Institut de Recherche de Chimie Paris, CNRS – Chimie ParisTech, Paris, France) / Sandrine Zanna (PSL Research University, Institut de Recherche de Chimie Paris, CNRS – Chimie ParisTech, Paris, France) / Philippe Marcus (PSL Research University, Institut de Recherche de Chimie Paris, CNRS – Chimie ParisTech, Paris, France) / Jolanta Swiatowska (PSL Research University, Institut de Recherche de Chimie Paris, CNRS – Chimie ParisTech, Paris, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 195867, Environmental and Mechanical Effects Testing for an Aerospace Coating System

**Presenting author:** Fritz Friedersdorf

**Authors:** Fritz Friedersdorf (Luna Innovations Incorporated, VA 22903, United States of America) / Brandi Clark (Luna Innovations, Charlottesville, United States of America) / Jacob Wright (Luna Innovations, Charlottesville, United States of America) / Liam Agnew (Luna Innovations, Charlottesville, United States of America) / Karen Schultz (Boeing Research and Technology, Seattle, United States of America) / Kristen Williams (Boeing Research and Technology, Huntsville AL, United States of America)

11:15 - 11:45 Coffee break

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 211905, Li depletion monitoring to understand long-term active corrosion protection of aluminium alloys by lithium-leaching coatings

**Presenting author:** Peter Visser

**Authors:** Peter Visser (AkzoNobel, Sassenheim, Netherlands) / Jamie Laird (University of Melbourne, Melbourne, Australia) / Anthony Hughes (CSIRO, Clayton, Australia) / Tomas Verhallen (Delft University of Technology, Delft, Netherlands) / Marnix Wagemaker (Delft University of Technology, Delft, Netherlands) / Herman Terryn (Vrije Universiteit Brussel, Brussel, Belgium) / Arjan Mol (Delft University of Technology, Delft, Netherlands)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 189245, The effect of polymeric matrix and inhibitor solubility on the leaching behaviour of anti-corrosion species for long-term active corrosion protection on AA2024-T3 alloy

**Presenting author:** Ander Cervellera-Dominguez

**Authors:** Ander Cervellera-Dominguez (University of Manchester, Manchester, United Kingdom) / Peter Visser (AkzoNobel, Sassenheim, Netherlands) / Xiaorong Zhou (University of Manchester, Manchester, United Kingdom) / Carlos Avendano (University of Manchester, Manchester, United Kingdom) / Simon Gibbon (AkzoNobel, Felling, United Kingdom)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 186253, The Role of pH on the Kinetics and Mechanism of Lithium Salts Corrosion Inhibition on Al-Li Alloys

**Presenting author:** Emmanouela Michailidou

**Authors:** Emmanouela Michailidou (Delft University of Technology, Delft, Netherlands) / Peter Visser (Akzo Nobel, Sassenheim, Netherlands) / J. M. C. Mol (Delft University of Technology, Delft, Netherlands) / Yaiza Gonzalez-Garcia (Delft University of Technology, Delft, Netherlands)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 207879, Towards long term corrosion protection: from nano- to micro- carriers

**Presenting author:** Santiago J. García

**Authors:** Santiago J. García (Novel Aerospace Materials group, Faculty of Aerospace Engineering, Delft, Netherlands) / Paul J. Denissen (Novel Aerospace Materials group, Faculty of Aerospace Engineering, Delft, Netherlands)

13:05 - 14:00 Lunchtime

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 193370, Flash-PEO coatings for corrosion protection of Mg alloys

**Presenting author:** Endzhe Matykina

**Authors:** Ewa Wierzbicka (Universidad Complutense de Madrid, Madrid, Spain) / Marta Mohedano (Universidad Complutense de Madrid, Madrid, Spain) / Bahram Vaghefinazari (Helmholtz-Zentrum Geesthacht, Geesthacht) / Sviatlana Lamaka (Helmholtz-Zentrum Geesthacht, Geesthacht) / Raul Arrabal (Universidad Complutense de Madrid, Madrid, Spain) / Endzhe Matykina (Universidad Complutense de Madrid, Madrid, Spain)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 222553, Duplex anodised aluminium for aerospace applications

**Presenting author:** Brendan Duffy

**Authors:** Brendan Duffy (TU Dublin, Dublin, Ireland) / Rihana Moussa (CREST, TU Dublin, Dublin, Ireland) / Susan Warren (CREST, TU Dublin, Dublin, Ireland) / Daniela Romonti (CREST, TU Dublin, Dublin, Ireland) / Ann Hopper (CREST, TU Dublin, Dublin, Ireland) / Mohamed` Oubaha (CREST, TU Dublin, Dublin, Ireland)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 194107, Ce-containing TSAA for corrosion protection of 2024-T3 aluminium alloy

**Presenting author:** Ruben del Olmo

**Authors:** Ruben del Olmo (Departamento de Ingeniería Química y de Materiales, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, 28040, Madrid, Madrid, Spain) / Raúl Arrabal (Departamento de Ingeniería Química y de Materiales, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, 28040, Madrid, Madrid, Spain) / Marta Mohedano (Departamento de Ingeniería Química y de Materiales, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, 28040, Madrid, Madrid, Spain) / Alicia Rodríguez (Fundación Cidaut, Parque Tecnológico de Boecillo, 47151 Boecillo, Valladolid, Valladolid, Spain) / Angel Pardo (Departamento de Ingeniería Química y de Materiales, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, 28040, Madrid, Madrid, Spain) / Peter Visser (AkzoNobel, Sassenheim, Sassenheim, Netherlands) / Endzhe Matykina (Departamento de Ingeniería Química y de Materiales, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, 28040, Madrid, Madrid, Spain)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 229747, Influence of the PSA process settings on the structure of anodic oxide and its durability performance

**Presenting author:** Yulia Meteleva

**Authors:** Yulia Meteleva (GKN Fokker Aerostructures, Papendrecht, Netherlands) / Vincent Van den Heuvel (GKN Fokker Aerostructures, Papendrecht, Netherlands) / Arnold Langeveld (GKN Fokker Aerostructures, Papendrecht, Netherlands) / John De Kok (GKN Fokker Aerostructures, Papendrecht, Netherlands)

**15:20 - 15:50 - Coffee break**

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 213280, Environment friendly surface preparation of aerospace aluminium alloys for application of functional polymer pretreatment

**Presenting author:** Ilya Ostrovsky

**Authors:** Ilya Ostrovsky (Chemetall GmbH, Frankfurt am Main) / Joerg Huebscher (Institut fuer Korrosionsschutz, Dresden)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 207219, Functional polymers as chromium-free pretreatment approach for aerospace specific anti-corrosion coatings on copper containing aluminium alloys

**Presenting author:** Jörg Hübscher

**Authors:** Jörg Hübscher (Institut für Korrosionsschutz Dresden GmbH, Dresden) / Frank Simon (Leibniz-Institut für Polymerforschung Dresden, Dresden) / Ralf Frenzel (Leibniz-Institut für Polymerforschung Dresden, Dresden)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 218791, Aluminium alloys surface preparation for new Chromate-Free Conversion Coatings

**Presenting author:** Camille Trinidad

**Authors:** Camille Trinidad (CNRS - Chimie ParisTech, Paris, France) / Jolanta Światowska (CNRS - Chimie ParisTech, Paris, France) / Antoine Seyeux (CNRS - Chimie ParisTech, Paris, France) / Sandrine Zanna (CNRS - Chimie ParisTech, Paris, France) / Dimitri Mercier (CNRS - Chimie ParisTech, Paris, France) / Rémi Viroulaud (IRT-M2P, Metz, France) / Philippe Marcus (CNRS - Chimie ParisTech, Paris, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 214820, Local analysis of the Cu-rich coarse intermetallics reactivity to explain the protective properties of trivalent chromium conversion layer formed on 2024 aluminium alloy

**Presenting author:** Christine Blanc

**Authors:** Christine Blanc (CIRIMAT, Toulouse, France) / Romain Saillard (CIRIMAT, Toulouse, France) / Matthew Glenn (CSIRO, Victoria, Australia) / Bernard Viguier (CIRIMAT, Toulouse, France) / Grégory Odemer (CIRIMAT, Toulouse, France) / Benoît Fori (Mecaprotec Industries, Muret, France) / Anthony E. Hughes (CSIRO, Victoria, Australia)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Control in Aerospace (WP22)/Chairs: Hack, Zeludkevich.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 224137, Corrosion characterization of Al-Cu-Mg (AA2024) and Al-Cu-Mg-Li (AA2198) sheet alloys coated with a trivalent chromium conversion

**Presenting author:** Lionel Peguet

**Authors:** Lionel Peguet (Constellium, Voreppe, France) / Florian Monnier (Constellium, Voreppe, France) / Benoit Fori (Mecaprotec, Muret, France)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Prosek.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 184438, Atmospheric corrosion and environmental aspects of metals and alloys in outdoor architecture: a 25-year perspective

**Presenting author:** Inger Odnevall Wallinder

**Authors:** Inger Odnevall Wallinder (KTH, Royal Institute of Technology, Div. Surface and Corrosion Science, 100 44 Stockholm, Sweden) / Christofer Leygraf (KTH Royal Institute of Technology, Div. Surface and Corrosion Science, 100 44 Stockholm, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Prosek.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 225644, Progress to understanding the atmospheric corrosion of zinc and challenges to overcome.

**Presenting author:** Ivan Cole

**Authors:** Ivan Cole (RMIT university, Melbourne, Australia)

11:15 - 11:45 Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Wallinder.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 193095, Experimental validation of Dynamic Electrolyte Film Model for atmospheric corrosion modelling

**Presenting author:** Nils Van den Steen

**Authors:** Koushik Bangalore Gangadharacharya (Vrije Universiteit Brussel, Brussels, Belgium) / Nils Van den Steen (Vrije Universiteit Brussel, Brussels, Belgium) / Daan De Wilde (Vrije Universiteit Brussel, Brussels, Belgium) / Darja Pecko (Vrije Universiteit Brussel, Brussels, Belgium) / Raf Claessens (Vrije Universiteit Brussel, Brussels, Belgium) / Herman Terry (Vrije Universiteit Brussel, Brussels, Belgium)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Wallinder.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 193282, Modelling atmospheric corrosion of ZnAlMg coated steels

**Presenting author:** Christian Allely

**Authors:** Christian Allely (ArcelorMittal Maizières Research (France), Maizières-les-Metz, France) / Tiago Machado Amorim (ArcelorMittal Maizières Research, Maizières-les-Metz, France)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Wallinder.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 196604, A Finite Element Model for Damaged Zinc Coatings Based on Real Time Corrosion Data Collected in the Tropical Marine Atmospheric of Singapore

**Presenting author:** Mohsen Saeedikhani

**Authors:** Mohsen Saeedikhani (National University of Singapore (NUS), Singapore, Singapore) / Sudesh Wijesinghe (Singapore Institute of Manufacturing Technology (SIMTech), Singapore) / Daniel J. Blackwood (National University of Singapore (NUS), Singapore, Singapore)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Wallinder.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 182722, Prediction of durability and lifetime of the organic coated metals under long-term environmental corrosion

**Presenting author:** Herman Terry

**Authors:** Darja Pecko (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Daan De Wilde (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Nils Van Den Steen (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Tom Hauffman (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Guy Van Assche (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Physical Chemistry and Polymer Science, Brussels, Belgium) / Ehsan Jalilian (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Physical Chemistry and Polymer Science, Brussels, Belgium) / Michael Rohwerder (Max-Planck-Institut für Eisenforschung, Interface Chemistry and Surface Engineering, Dusseldorf) / Johan Deconinck (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Annick Hubin (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium) / Herman Terry (Vrije Universiteit Brussel, Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Brussels, Belgium)

13:05 - 14:00 Lunchtime

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Cole.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 202071, Using simulation to predict and understand corrosion during chamber tests

**Presenting author:** Siva Palani

**Authors:** Siva Palani (Corrdesa LLC, Tyrone, GA, United States of America) / Julio Mendez (Corrdesa LLC, Tyrone, GA, United States of America) / Keith Legg (Corrdesa LLC, Tyrone, GA, United States of America) / Alan Rose (Corrdesa LLC, Tyrone, GA, United States of America)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Cole.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 196428, Wet/Dry cyclic salt spray tests: reproducibility problems and solutions

**Presenting author:** Sean Fowler

**Authors:** Sean Fowler (Q-Lab Corporation, Westlake Ohio, United States of America)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Cole.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 188926, The Effect of Salt Spraying Condition on the Result of the Accelerated Cyclic Corrosion Test of Stainless Steel

**Presenting author:** Shuji Nishida

**Authors:** Shuji Nishida (JFE Steel Corporation, Chiba, Japan) / Tomohiro Ishii (JFE Steel Corporation, Chiba, Japan) / Mitsuyuki Fujisawa (JFE Steel Corporation, Chiba, Japan) / Reiko Sugihara (JFE Steel Corporation, Chiba, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Cole.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 234136, Atmospheric Corrosion in Thailand – From Field Test to Laboratory Accelerated Chamber

**Presenting author:** Namurata Palsson

**Authors:** Namurata Palsson (National Metal & Materials Technology Center, Klong Luang, Thailand) / Pitichon Klomjit (National Metal and Materials Technology Center, Klong Luang, Thailand) / Sikharin Sorachot (National Metal and Materials Technology Center, Klong Luang, Thailand) / Witsanupong Khonreang (National Metal and Materials Technology Center, Klong Luang, Thailand) / Piya Khumsuk (National Metal and Materials Technology Center, Klong Luang, Thailand) / Ekkarut Viyanit (National Metal and Materials Technology Center, Klong Luang, Thailand) / Wanida Pongsaksawad (National Metal and Materials Technology Center, Klong Luang, Thailand)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Engelberg.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 203578, Atmospheric corrosion behaviour of carbon and galvanised steel: comparison between ISO standard and real exposure data

**Presenting author:** Fabio Maria Bolzoni

**Authors:** Fabio Maria Bolzoni (Politecnico di Milano, Milano, Italy) / Silvia Beretta (Politecnico di Milano, Dipartimento di Chimica, materiali e ingegneria chimica, 20131 Milano, Italy) / Omar Fusco (Maccaferri innovation center, 39100 Bolzano, Italy) / Nicola Mazzon (Maccaferri innovation center, 39100 Bolzano, Italy)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Engelberg.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 176452, Height Directional Distribution of Corrosion Rate, Deposited Sea Salt and Time of Wetness on Transmission Towers

**Presenting author:** Teruhisa Tatsuoka

**Authors:** Teruhisa Tatsuoka (Tokyo Electric Power Company Holdings, Inc., Yokohama, Japan) / Akikiyo Kurokawa (TEPCO Holdings, Inc. TEPCO Research Institute, Yokohama, Japan) / Keiichi Yoshino (TEPCO Holdings, Inc. / TEPCO Research Institut, Yokohama, Japan) / Nobuhiro Kishigaki (TEPCO Holdings, Inc. / TEPCO Research Institut, Yokohama, Japan) / Tomoaki Osono (TEPCO Power Grid, Inc., Tokyo, Japan) / Yoshiyuki Saitou (TEPCO Power Grid, Inc., Tokyo, Japan) / Motoyuki Yamazaki (TEPCO Power Grid, Inc., Tokyo, Japan) / Tomoki Kitashima (TEPCO Power Grid, Inc., Tokyo, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Engelberg.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 173361, Field test validation of corrosivity environment analysis based on sensor monitoring in transmission towers

**Presenting author:** Norikazu Fuse

**Authors:** Atsushi Naganuma (Central Research Institute of Electric Power Industry, Yokosuka City, Japan) / Jun-ichi Tani (Central Research Institute of Electric Power Industry, Yokosuka City, Japan) / Yasuhiko Hori (Central Research Institute of Electric Power Industry, Yokosuka City, Japan) / Norikazu Fuse (Central Research Institute of Electric Power Industry, Yokosuka City, Japan) / Yoshiharu Shumuta (Central Research Institute of Electric Power Industry, Yokosuka City, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Engelberg.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 196208, Monitoring Systems and Electrochemical Sensors for Atmospheric Corrosion

**Presenting author:** Fritz Friedersdorf

**Authors:** Fritz Friedersdorf (Luna Innovations Incorporated, VA 22903, United States of America) / Jeff Demo (Luna Innovations, Charlottesville, United States of America) / Nate Brown (Luna Innovations, Charlottesville, United States of America) / Brandi Clark (Luna Innovations, Charlottesville, United States of America)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Engelberg.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 175044, Monitoring of atmospheric corrosion and dewing by comb-like copper sensor

**Presenting author:** Shan Wan

**Authors:** Shan Wan (Huazhong University of Science and Technology, Wuhan, China PR)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** CO<sub>2</sub> Corrosion in Industrial Applications (TF)/Chair: R. Bäßler.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 196010, The effect of free, saturated, and dissolved water on carbon steel corrosion in dense phase CO<sub>2</sub>: a discussion.

**Presenting author:** Bjorn Morland

**Authors:** Bjorn Morland (Institute for Energy Technology, Kjeller, Norway) / Gaute Svenningsen (Institute for Energy Technology, Kjeller, Norway)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** CO2 Corrosion in Industrial Applications (TF)/Chair: R. Bäßler.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 182348, Effect of Elemental Sulfur on the Corrosion Behavior of X80 Steel under a Supercritical CO2 Environment

**Presenting author:** Qingjun Gong

**Authors:** Qingjun Gong (China University of Petroleum (Beijing), Beijing, China PR) / Yong Xiang (China University of Petroleum (Beijing), Beijing, China PR) / Wenguan Li (China University of Petroleum (Beijing), Beijing, China PR) / Zhenlin Li (China University of Petroleum (Beijing), Beijing, China PR)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** CO2 Corrosion in Industrial Applications (TF)/Chair: R. Bäßler.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 190455, Performance of metallic coatings in supercritical CO2

**Presenting author:** Shiladitya Paul

**Authors:** Shiladitya Paul (TWI, Cambridge, United Kingdom)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** CO2 Corrosion in Industrial Applications (TF)/Chair: R. Bäßler.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 200597, On the corrosion behaviour of CO2 injection pipe steels: role of cement

**Presenting author:** Quynh Hoa Le

**Authors:** Quynh Hoa Le (BAM - Federal Institute for Materials Research and Testing, Berlin) / Ralph BÄßLER (BAM - Federal Institute for Materials Research and Testing, Berlin) / Bernadette Nicole SCHILLER (Beuth University of Applied Sciences Berlin, Berlin) / Matthias BECK (Beuth University of Applied Sciences Berlin, Berlin) / Dirk BETTGE (BAM - Federal Institute for Materials Research and Testing, Berlin)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** CO2 Corrosion in Industrial Applications (TF)/Chair: R. Bäßler.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 200245, Effect of CO2 gas on Carbon Steel Corrosion in an Acidic-Saline based Geothermal Fluid

**Presenting author:** Gabriela Aristia

**Authors:** Gabriela Aristia (Freie Universität Berlin, Berlin) / Quynh Hoa Le (BAM - Federal Institute for Materials Research and Testing, Berlin) / Ralph Bäßler (BAM - Federal Institute for Materials Research and Testing, Berlin)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session:** TF Business Meeting

**Presentation time:** 12:25:00 PM

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chairs: Basseguy/Cristiani.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 196384, Use of Multiple Species of Microbes in Microbially Influenced Corrosion Studies: A Review

**Presenting author:** Scott Wade

**Authors:** Scott Wade (Swinburne University, Melbourne, Australia) / Hoang Phan (Swinburne University, Hawthorn, Australia) / Linda Blackall (Melbourne University, Melbourne, Australia)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chairs: Basseguy/Cristiani.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 235214, METABOLOMIC PROFILING AS A TOOL IN MANAGEMENT OF MICROBIALLY-INFLUENCED CORROSION IN OILFIELD INSTALLATIONS

**Presenting author:** iwona beech

**Authors:** iwona beech (Montana State University, Bozeman, United States of America) / Vincent Bonifay (University of Oklahoma, Norman, United States of America) / Turid Liengen (Equinor, Porsgrunn, Norway) / Roberta Amendola (Montana State University, Bozeman, United States of America) / Jan Sunner (CAMEC Ltd, Bozeman, United States of America)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chairs: Basseguy/Cristiani.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 191995, The effect of sulfate reducing bacteria and acetogenic bacteria on the corrosion of carbon steel in crystalline groundwater

**Presenting author:** Leena Carpén

**Authors:** Leena Carpén (VTT Technical Research Centre of Finland Ltd, Espoo, Finland) / Pauliina Rajala (VTT Technical Research Centre of Finland Ltd, Espoo, Finland) / Elisa Isotahdon (VTT Technical Research Centre of Finland Ltd, Tampere, Finland)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 180148, A large-scale metagenomic analysis of microbial communities in corrosive and non-corrosive environmental and cultivated samples

**Presenting author:** Satoshi Wakai

**Authors:** Satoshi Wakai (Kobe University, Kobe, Japan)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 200355, MIC of Submarine Ballast Carbon Steel by SRB Consortium

**Presenting author:** Robert Moorcroft

**Authors:** Robert Moorcroft (University of Manchester, Manchester, United Kingdom) / Rafael Leiva García (University of Manchester, Manchester, United Kingdom) / Robert Akid (University of Manchester, Manchester, United Kingdom) / Nicholas Stevens (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 187023, Analysis of microbiologically influenced corrosion of carbon steel in soil

**Presenting author:** Kazuhiko Miyanaga

**Authors:** Kazuhiko Miyanaga (Tokyo Institute of Technology, Yokohama, Japan) / Ryoma Hayashi (Tokyo Institute of Technology, Yokohama, Japan) / Yasunori Tanji (Tokyo Institute of Technology, Yokohama, Japan)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 178751, Characterization of two sulfate-reducing bacteria *Desulfotignum* sp. and their involvement in biological souring

**Presenting author:** Yasunori Tanji

**Authors:** Yasunori Tanji (Tokyo Institute of Technology, Yokohama, Japan) / Kamarisima Kamarisima (Institut Teknologi Bandung, Bandung, Indonesia) / Kazuhiko Miyanaga (Tokyo Institute of Technology, Yokohama, Japan)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 181149, CORROSION BEHAVIOR OF 1.4313 STEEL IN THE PRESENCE OF MANGANESE OXIDIZING BACTERIUM ISOLATED FROM MURAT RIVER (TURKEY)

**Presenting author:** Polen YILMAZ

**Authors:** Polen YILMAZ (Istanbul University, Faculty of Science, Department of Biology, Istanbul, Turkey) / Nurhan CANSEVER (Yildiz Technical University, Faculty of Chemistry-Metallurgy, Metallurgical and Materials Engineering Department, Istanbul, Turkey) / Esra ILHAN-SUNGUR (Istanbul University, Faculty of Science, Department of Biology, Istanbul, Turkey)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: McMurray.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 210508, Scanning electrochemical microscopy investigation of the negative difference effect on magnesium using ion-selective microelectrode probes

**Presenting author:** Ricardo M. Souto

**Authors:** Dániel Filotás (University of Pécs, Pécs, Hungary) / Bibiana M. Fernández-Pérez (University of La Laguna, La Laguna, Spain) / Livia Nagy (University of Pécs, Pécs, Hungary) / Géza Nagy (University of Pécs, Pécs, Hungary) / Ricardo M. Souto (University of La Laguna, La Laguna, Spain)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: McMurray.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 224764, Surface film evolution on pure magnesium: case of aqueous corrosion inhibition by selected carboxylates

**Presenting author:** Alina Maltseva

**Authors:** Alina Maltseva (Chimie ParisTech, PSL Research University, CNRS, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Sviatlana Lamaka (Magnesium Innovations Centre (MagIC), Helmholtz-Zentrum Geesthacht, Geesthacht) / Grégory Lefèvre (Chimie ParisTech, PSL Research University, CNRS, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Polina Volovitch (Chimie ParisTech, PSL Research University, CNRS, Institut de Recherche de Chimie Paris (IRCP), Paris, France)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: McMurray.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 217196, Control of corrosion behavior of MgZn alloy via micro-alloying with Ge and wrought processing

**Presenting author:** Mikhail Zheludkevich

**Authors:** Pingli Jiang (Helmholtz-Zentrum Geesthacht, Geesthacht) / Carsten Blawert (Helmholtz-Zentrum Geesthacht, Geesthacht) / Jan Bohlen (Helmholtz-Zentrum Geesthacht, Geesthacht) / Ruiqing Hou (Helmholtz-Zentrum Geesthacht, Geesthacht) / Nico Scharnagl (Helmholtz-Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Magnesium Innovation Centre (MagIC), Helmholtz-Zentrum Geesthacht, Geesthacht)

11:15 - 11:45 Coffee break

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Lamaka.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 195702, Effect of heat treatment on the corrosion behaviour of Mg-10Gd alloy in 0.5% NaCl solution

**Presenting author:** Carsten Blawert

**Authors:** Maria del Rosario Silva Campos (1 Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Carsten Blawert (1 Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Chamini L. Mendis (BCAST, Brunel University London, Uxbridge, United Kingdom) / Marta Mohedano (Department of Chemical and Materials Engineering, Universidad Complutense de Madrid, Madrid, Spain) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Karl Ulrich Kainer (Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Tristan Zimmermann (Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Max-Planck-Straße 1, Geesthacht 21502, Germany, Geesthacht) / Daniel Proefrock (Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Max-Planck-Straße 1, Geesthacht 21502, Germany, Geesthacht)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Lamaka.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 179510, Influence of ultrasound parameters on corrosion properties of ultrasound enhanced friction stir welded hybrid joints

**Presenting author:** Sigrid Benfer

**Authors:** Sigrid Benfer (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Darshan Kare Gowda (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Marco Thomä (TU Chemnitz, Chemnitz) / Guntram Wagner (TU Chemnitz, Chemnitz) / Wolfram Fürbeth (DECHEMA-Forschungsinstitut, Frankfurt am Main)

### 13:05 - 14:00 Lunchtime

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Williams.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 195801, Quasi in-situ and in-situ liquid TEM studies of corrosion initiation in aluminium alloys

**Presenting author:** Ali Kosari

**Authors:** Ali Kosari (Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, 2628 CD Delft, The Netherlands, Delft, Netherlands) / Henny Zandbergen (Kavli Institute of Nanoscience, Delft University of Technology, Lorentzweg 1, 2628 CJ Delft, The Netherlands, Delft, Netherlands) / Frans Tichelaar (Kavli Institute of Nanoscience, Delft University of Technology, Lorentzweg 1, 2628 CJ Delft, The Netherlands, Delft, Netherlands) / Peter Visser (Research Development and Innovation, AkzoNobel, 2171 AJ Sassenheim, The Netherlands, Sassenheim, Netherlands) / Herman Terry (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, Belgium, Brussels, Belgium) / Arjan Mol (Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, 2628 CD Delft, The Netherlands, Delft, Netherlands)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Williams.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 223587, Application of atomic force microscopy (AFM) for in situ corrosion studies of thin film covered AA2024-T3 aluminium alloy surface

**Presenting author:** Ozlem Ozcan

**Authors:** Julia Witt (Federal Institute for Materials Research and Testing (BAM), Berlin) / Ahed Almalla (Federal Institute for Materials Research and Testing (BAM), Berlin) / Ozlem Ozcan (Federal Institute for Materials Research and Testing (BAM), Berlin)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Williams.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 174230, In situ microscopic study of the initiation of the crystallographic pitting corrosion on 1050 aluminum

**Presenting author:** Hiroshi Kakinuma

**Authors:** Hiroshi Kakinuma (Department of Materials Science, Tohoku University, Miyagi, Japan) / Izumi Muto (Department of Materials Science, Tohoku University, Miyagi, Japan) / Yu Sugawara (Department of Materials Science, Tohoku University, Miyagi, Japan) / Yoshiyuki Oya (UACJ Corporation Research & Development Division, Aichi, Japan) / Yoshihiko Kyo (UACJ Corporation Research & Development Division, Aichi, Japan) / Nobuyoshi Hara (Department of Materials Science, Tohoku University, Miyagi, Japan)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Williams.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 184174, Monitoring in situ the repassivation of Al in air using SKPFM

**Presenting author:** Reynier Revilla

**Authors:** Reynier Revilla (Vrije Universiteit Brussel, Brussels, Belgium) / Herman Terry (Vrije Universiteit Brussel, Brussels, Belgium) / Iris De Graeve (Vrije Universiteit Brussel, Brussels, Belgium)

### 15:20 - 15:50 - Coffee break



**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Zheludevitch.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 197979, Evaluation of Intermetallics related to Localized Corrosion of AA5083 via Scanning Kelvin Probe Force Microscopy

**Presenting author:** Yan Han Liew

**Authors:** Yan Han Liew (NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, Singapore) / Daniel J Blackwood (Department of Materials Science and Engineering, National University of Singapore, Singapore, Singapore) / Sudesh Wijesinghe (Singapore Institute of Manufacturing Technology (SIMTech) and National University of Singapore, Singapore, Singapore)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Zheludevitch.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 211333, Corrosion response of ultrafine-grained aluminium alloy processed by ECAP

**Presenting author:** Annamaria Viceré

**Authors:** Annamaria Viceré (Università Politecnica delle Marche, Ancona, Italy) / Marcello Cabibbo (Università Politecnica delle Marche, Ancona, Italy) / Gabriella Roventi (Università Politecnica delle Marche, Ancona, Italy) / Tiziano Bellezze (Università Politecnica delle Marche, Ancona, Italy)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Zheludevitch.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 184383, Corrosion and corrosion protection of 3D printed Al-Si alloys

**Presenting author:** Iris De Graeve

**Authors:** Reynier Revilla (Vrije Universiteit Brussel, Brussels, Belgium) / Tim Rubben (Vrije Universiteit Brussel, Brussels, Belgium) / Donovan Verkens (Vrije Universiteit Brussel, Brussels, Belgium) / Iris De Graeve (Vrije Universiteit Brussel, Brussels, Belgium)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Zheludevitch.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 222366, Trace elements influence on filiform corrosion resistance in recycled 6060 aluminum alloys

**Presenting author:** Jan-Olov Nilsson

**Authors:** Jan-Olov Nilsson (Hydro Extruded Solutions, 61281, Sweden)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Zheludevitch.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 190961, The effect of microstructure on the localized aqueous corrosion of a model Zn-Al-Mg alloy

**Presenting author:** NATALIE Wint

**Authors:** NATALIE Wint (Swansea University, SWANSEA, United Kingdom) / James Sullivan (Swansea University, Swansea, United Kingdom) / Nathan Cooze (Swansea University, Swansea, United Kingdom) / Geraint Williams (Swansea University, Swansea, United Kingdom) / Hamilton Neil McMurray (Swansea University, Swansea, United Kingdom)

WEDNESDAY, SEPTEMBER 11, 2019: LECTURES

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**Presentation time:** 09:00:00 AM

**Plenary Session:** Plenary Lecture: Prof. Oscar R. Mattos - "New trends for testing materials for oil and gas industry: Results and Discussion"

**09:45 – 10:15 Break to visit Exhibitors**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 203490, Steel corrosion protection using post-consumer polyethylene terephthalate coatings

**Presenting author:** Michele Fedel

**Authors:** Flavio Deflorian (University of Trento, Trento, Italy) / Elisangela Silva (University of Minas Gerais, Department of Chemical Engineering, Belo Horizonte, Brazil) / Michele Fedel (University of Trento DII, Trento, Italy) / Fernando Cotting (University of Minas Gerais, Department of Chemical Engineering, Belo Horizonte, Brazil) / Vanessa Lins (University of Minas Gerais, Department of Chemical Engineering, Belo Horizonte, Brazil)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 218043, The influence of Length of Alkyl Chain on Chemical Structure and Corrosion Resistance of Hybrid Acrylic Sol-Gel Coatings

**Presenting author:** Damir Hamulić

**Authors:** Damir Hamulić (Institute Jožef Stefan, Ljubljana, Slovenia) / Ingrid Milošev (Institute Jožef Stefan, Ljubljana, Slovenia)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 176309, Studies of Sulfosalicylic Acid Doped Polyaniline Incorporated into Epoxy Organic coatings on Al Alloy

**Presenting author:** Li Liu

**Authors:** Li Liu (Northeastern University, Shenyang, China PR)

**11:15 - 11:45 Coffee break**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 178036, OWEA coating systems: Corrosion protection performance after compression and impact

**Presenting author:** Michael Irmer

**Authors:** Michael Irmer (Fraunhofer-Einrichtung für Großstrukturen in der Produktionstechnik IGP, Rostock) / Tom Marquardt (Muehlhan AG, Hamburg) / Andreas Momber (Muehlhan AG, Hamburg) / Nikolai Glück (Fraunhofer-Einrichtung für Großstrukturen in der Produktionstechnik IGP, Rostock) / Wilko Flügge (Fraunhofer-Einrichtung für Großstrukturen in der Produktionstechnik IGP, Rostock)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 193315, Characteristic of chitosan composite coatings deposited on magnesium alloys

**Presenting author:** Halina Krawiec

**Authors:** Halina Krawiec (AGH University of Science and Technology, Krakow, Poland) / Iryna Kozina (A, K, Poland) / Maria Starowicz (AGH University of Science and Technology, K, Poland) / Magdalena Kawalec (AGH University of Science and Technology, Krakow, Poland)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 217141, Self-assembled layer's for the temporary corrosion protection of Magnesium-AZ31 Alloy

**Presenting author:** Vinodh Kumar Korrapati

**Authors:** Vinodh Kumar Korrapati (Helmholtz Zentrum Geesthacht, Geesthacht) / Nico Scharnagl (Helmholtz Zentrum Geesthacht, Geesthacht) / Dietmar Letzig (Helmholtz Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Helmholtz Zentrum Geesthacht, Geesthacht)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: J. Vogelsang, I. De Graeve.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 223004, Creating Correlation between Accelerated and Live Testing of Fluoropolymer Coatings in a Marine Environment

**Presenting author:** Gareth Berry

**Authors:** Gareth Berry (Whitford Ltd, Runcorn Cheshire, United Kingdom)

**13:05 - 14:00 Lunchtime**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: M. Ferreira, P. Keil.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 183580, How hexagonal boron nitride (h-BN) nanosheets affect protection performance of waterborne epoxy coating

**Presenting author:** Michele Curioni

**Authors:** Reza Emad (The University of Manchester, Manchester, United Kingdom) / Michele Curioni (The University of Manchester, Manchester, United Kingdom) / Jing Li (AECC Beijing Institute of Aeronautical Materials, Beijing, China PR) / Yaoming Wan (AECC Beijing Institute of Aeronautical Materials, Beijing, China PR) / Changrun Cai (The University of Manchester, Manchester, United Kingdom) / Qishi Ai (AECC Beijing Institute of Aeronautical Materials, Beijing, China PR) / Xiaorong Zhou (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: M. Ferreira, P. Keil.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 218186, Investigation of corrosion protection effect new anisotropic manganese-hydrogen-phosphate particles in Nanomer<sup>®</sup> powder coatings on mild steel

**Presenting author:** Carsten Becker-Willinger

**Authors:** Carsten Becker-Willinger (INM - Leibniz Institute for New Materials, Saarbrücken) / Sener Albayrak (INM - Leibniz Institute for New Materials, Saarbrücken) / Marlon Jochum (INM - Leibniz Institute for New Materials, Saarbrücken) / Marek Twardoch (INM - Leibniz Institute for New Materials, Saarbrücken)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: M. Ferreira, P. Keil.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 217537, Investigations on highly structured Nanomer<sup>®</sup> barrier coatings with a combination of organic and inorganic inhibitors for corrosion protection on mild steel

**Presenting author:** Marek Twardoch

**Authors:** Marek Twardoch (INM - Leibniz-Institut für Neue Materialien, Saarbrücken) / Şener Albayrak (INM - Leibniz-Institut für Neue Materialien, Saarbrücken) / Carsten Becker-Willinger (INM - Leibniz-Institut für Neue Materialien, Saarbrücken)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: M. Ferreira, P. Keil.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 205734, Zn containing polymer coatings for AA7475: localized study of anti-corrosion performance

**Presenting author:** Maryna Taryba

**Authors:** J.V. Nardeli (Universidade Estadual Paulista-UNESP, Instituto de Química, Araraquara/SP, Brazil 14800-060, Araraquara, Brazil) / C.S. Fugivara (Universidade Estadual Paulista-UNESP, Instituto de Química, Araraquara/SP, Brazil 14800-060, Araraquara, Brazil) / Maryna Taryba (Centro de Química Estrutural - CQE, DEQ, Instituto Superior Técnico, Universidade de Lisboa, 1049-001 Lisboa, Portugal, Lisboa, Portugal) / M.F. Montemor (Centro de Química Estrutural - CQE, DEQ, Instituto Superior Técnico, Universidade de Lisboa, 1049-001 Lisboa, Portugal, Lisboa, Portugal) / A.V. Benedetti (Universidade Estadual Paulista-UNESP, Instituto de Química, Araraquara/SP, Brazil 14800-060, Araraquara, Brazil)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings/Chair: M. Ferreira, P. Keil.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 183712, Blistering of coatings - a broad ion beam study

**Presenting author:** Ville Saarimaa

**Authors:** Ville Saarimaa (Top Analytika Ltd., Turku, Finland) / Antti Markkula (SSAB Europe Oy, Hämeenlinna, Finland) / Jere Manni (Top Analytika Oy, Turku, Finland)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings/Chair: M. Ferreira, P. Keil.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 194459, Calcium carbonate particles as natural oil carriers in polyurethane primers

**Presenting author:** Shyama Ranade

**Authors:** Shyama Ranade (Indian Institute of Technology Madras, Chennai, India) / Lakshman Neelakantan (Indian Institute of Technology Madras, Chennai, India) / Meet Sagar (Indian Institute of Technology Madras, Chennai, India)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings/Chair: M. Ferreira, P. Keil.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 230099, Novel Inorganic, Layered Aluminum tri-polyposphate (ATP) Intercalated with N-containing inhibitors for Anti-corrosion Applications

**Presenting author:** Chaymae Hejjaj

**Authors:** Chaymae Hejjaj (Mohamed VI polytechnic university, Benguerir, Morocco) / Ahmed Ait Aghzzaf (LASAD, Ecole Normale Supérieure-Abdelmalek Essaadi University, Martil, Morocco., Martil, Morocco) / Mouad dahbi (Materials Science and Nano-engineering Department, University Mohammed VI Polytechnic, Benguerir, Morocco, Benguerir, Morocco) / Rachid Hakkou (LCME, Faculty of Science and Technology - Cadi Ayyad University, Marrakesh, Morocco., Marrakech, Morocco) / Christian Fischer (Department of Physics, University Koblenz- Landau, Koblenz, Germany, koblenz)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings/Chair: M. Ferreira, P. Keil.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 214215, Corrosion Prevention Properties of TiO<sub>2</sub>/PVB-PANI/PVB Hybrid Coating on Stainless Steel

**Presenting author:** Junlei Tang

**Authors:** Junlei Tang (Southwest Petroleum University, Chengdu, China PR)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings/Chair: M. Ferreira, P. Keil.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 176408, Smart Combination of electrochemical (EIS, SKP), spectroscopic and mechanical methods to investigate the diffusion/migration of electrolyte and/ or water along the metal/water-borne organic coating interface

**Presenting author:** Shima Khazraee Sheidaee Mehr

**Authors:** Shima Khazraee Sheidaee Mehr (Niederrhein University of Applied Sciences, Krefeld) / Michael Dornbusch (Niederrhein University of Applied Sciences, Krefeld) / Wolfgang Bremser (Paderborn University, Paderborn)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Renner.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 229857, Corrosion of Single- and Multiphase High Entropy Alloys

**Presenting author:** Gerald S. Frankel

**Authors:** Gerald S. Frankel (The Ohio State University, Columbus, United States of America) / Sarita Sahu (The Ohio State University, Columbus, OH, United States of America) / Tianshu Li (The Ohio State University, Columbus, OH, United States of America) / Anup Panindre (The Ohio State University, Columbus, OH, United States of America) / Babu Viswanathan (The Ohio State University, Columbus, OH, United States of America) / Christopher Taylor (The Ohio State University, Columbus, OH, United States of America) / Angela Gerard (University of Virginia, Charlottesville, VA, United States of America) / John Scully (University of Virginia, Charlottesville, VA, United States of America) / Pin Lu (QuesTek Innovations, Evanston, IL, United States of America)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Renner.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 194041, A new XPS deconvolution approach applied to study the corrosion behaviour of an equiatomic CoCrFeMnNi high-entropy alloy

**Presenting author:** Luntao Wang

**Authors:** Luntao Wang (Chimie ParisTech-CNRS, PSL Research University, Institut de Recherche de Chimie Paris, Paris, France) / Dimitri MERCIER (Chimie ParisTech-CNRS, PSL Research University, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Mickael MASINGARBE (Chimie ParisTech-CNRS, PSL Research University, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Sandrine ZANNA (Chimie ParisTech-CNRS, PSL Research University, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Philippe MARCUS (Chimie ParisTech-CNRS, PSL Research University, Institut de Recherche de Chimie Paris (IRCP), Paris, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Renner.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 181435, Interaction of alloying Cu and Cr on pitting behavior induced by MnS inclusion in low alloy steels

**Presenting author:** Wenting Lv

**Authors:** Wenting Lv (University of Science and Technology Beijing, Beijing, China PR) / Luchun Yan (University of Science and Technology Beijing, Beijing, China PR) / Xiaolu Pang (University of Science and Technology Beijing, Beijing, China PR) / Huisheng Yang (University of Science and Technology Beijing, Beijing, China PR) / Lijie Qiao (University of Science and Technology Beijing, Beijing, China PR) / Yanjing Su (University of Science and Technology Beijing, Beijing, China PR) / Kewei Gao (University of Science and Technology Beijing, Beijing, China PR)

**11:15 - 11:45 Coffee break**

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Normand.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 211729, Spatial variations of air-formed oxide and passive film on super duplex stainless steel revealed by synchrotron hard X-ray photoelectron emission microscopy

**Presenting author:** Jinshan Pan

**Authors:** Jinshan Pan (Royal Institute of Technology, Stockholm, Sweden) / Marie Långberg (KTH Royal Institute of Technology, Stockholm, Sweden) / Cem Örnek (KTH Royal Institute of Technology, Stockholm, Sweden) / Fan Zhang (KTH Royal Institute of Technology, Stockholm, Sweden) / Jie Cheng (KTH Royal Institute of Technology, Stockholm, Sweden) / Min Liu (KTH Royal Institute of Technology, Stockholm, Sweden) / Elin Grånäs (Deutsches Elektronen-Synchrotron (DESY), Hamburg) / Carsten Wiemann (Peter Grünberg Institute (PGI-6), Research Center Jülich, Jülich) / Andrei Hloskovsky (Deutsches Elektronen-Synchrotron (DESY), Hamburg) / Yury Matveev (Deutsches Elektronen-Synchrotron (DESY), Hamburg) / Satishkumar Kulkarni (Deutsches Elektronen-Synchrotron (DESY), Hamburg) / Thomas F. Keller (Deutsches Elektronen-Synchrotron (DESY), Hamburg) / David Lindell Lindell (SWERIM, Stockholm, Sweden) / Ulf Kivisäkk (AB Sandvik Materials Technology, Sandviken, Sweden) / Edvin Lundgren (Lund University, Lund, Sweden) / Andreas Stierle (Universität Hamburg, Hamburg)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Normand.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 213753, Passive Film Characterization of Austenite/Ferrite Phases of Duplex Stainless Steel using Synchrotron HAXPEEM

**Presenting author:** Marie Långberg

**Authors:** Marie Långberg (KTH Royal Institute of Technology, Stockholm, Sweden) / Cem Örneek (Division of Surface and Corrosion Science, KTH Royal Institute of Technology, Stockholm, Sweden) / Fan Zhang (Division of Surface and Corrosion Science, KTH Royal Institute of Technology, Stockholm, Sweden) / Jie Cheng (Division of Surface and Corrosion Science, KTH Royal Institute of Technology, Stockholm, Sweden) / Min Liu (Division of Surface and Corrosion Science, KTH Royal Institute of Technology, Stockholm, Sweden) / Elin Grånäs (Deutsches Elektronen-Synchrotron (DESY), D-22607 Hamburg, Germany, Hamburg) / Carsten Wiemann (Peter Grünberg Institute (PGI-6), Research Center Jülich, D-52425 Jülich, Germany, Jülich) / Andrei Gloskovskii (Deutsches Elektronen-Synchrotron (DESY), D-22607 Hamburg, Germany, Hamburg) / Yury Matveyev (Deutsches Elektronen-Synchrotron (DESY), D-22607 Hamburg, Germany, Hamburg) / Satishkumar Kulkarni (Deutsches Elektronen-Synchrotron (DESY), D-22607 Hamburg, Germany, Hamburg) / Thomas F. Keller (Deutsches Elektronen-Synchrotron (DESY), Physics Department, Universität Hamburg, Hamburg) / David Lindell (SWERIM, SE-16407 Kista, Sweden, Stockholm, Sweden) / Ulf Kivisäkk (AB Sandvik Materials Technology, SE-81181 Sandviken, Sweden, Sandviken, Sweden) / Edvin Lundgren (Division of Synchrotron Radiation Research, Lund University, SE-221 00 Lund, Sweden, Lund, Sweden) / Andreas Stierle (Deutsches Elektronen-Synchrotron (DESY), D-22607 Hamburg, Germany, Hamburg) / Jinshan Pan (Division of Surface and Corrosion Science, KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Normand.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 180951, Time-lapse, In-situ Observation of Crevice Corrosion of Duplex Stainless Steel under Potentiostatic and Galvanostatic Control

**Presenting author:** So Aoki

**Authors:** So Aoki (Japan Atomic Energy Agency, Tokai-mura Ibaraki, Japan) / Dirk Engelberg (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Normand.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 224874, Corrosion behaviour in acid sodium chloride solution of sites containing  $\sigma$  phase in super duplex stainless steel

**Presenting author:** Paulina Erasmus Vignal

**Authors:** Paulina Erasmus Vignal (SATT SAYENS, Dijon, France) / Vincent Vignal (ICB - CNRS, Dijon, France) / Saghi Saedlou (APERAM R&D, Isbergues, France) / Florent Krajcarz (APERAM R&D, Isbergues, France)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 177277, Effects of temperature and applied strain on corrosion of X80 pipeline steel in chloride solutions

**Presenting author:** Wei Yuan

**Authors:** Wei Yuan (aState Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Feng Huang (aState Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Jing Liu (aState Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Qian Hu (aState Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 224555, INFLUENCE OF HEAT TREATMENT ON THE MICROSTRUCTURE AND CORROSION RESISTANCE OF AUSTEMPERED DUCTILE IRON

**Presenting author:** Vincent Vignal

**Authors:** Vincent Vignal (ICB - CNRS, Dijon, France) / Halina Krawiec (AGH University of Science and Technology, Krakow, Poland) / Anna Krystianiak (ICB - CNRS, Dijon, France) / Janusz Lelito (AGH University of Science and Technology, Krakow, Poland) / Edward Tyralla (AGH University of Science and Technology, Krakow, Poland)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 220276, The passive behaviour of binary Ni-Cr alloys by successive electrochemical impedance spectroscopy measurements

**Presenting author:** Zhiheng Zhang

**Authors:** Zhiheng Zhang (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France) / Benoît Ter-Ovanessian (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France) / Sabrina Marcelin (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France) / Bernard Normand (Université de Lyon, INSA-LYON, MATEIS UMR CNRS 5510, Villeurbanne, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Frankel.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 227371, Molybdenum surface enrichment and release during transpassive dissolution of Ni-based alloys

**Presenting author:** Xuejie Li

**Authors:** Xuejie Li (Chimie-ParisTech, PSL Research University, IRCP-CNRS, Paris, France) / Jeffrey Henderson (Department of Chemistry, Western University, London, Canada) / David Shoosmith (Department of Chemistry, Western University, London, Canada) / James Noël (Department of Chemistry, Western University, London, Canada) / Kevin Ogle (Chimie-ParisTech, PSL Research University, IRCP-CNRS, Paris, France)

15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Fushimi.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 219528, Exploring Oilfield Corrosion: A Surface Science Approach

**Presenting author:** Marek Nikiel

**Authors:** Marek Nikiel (University of Manchester, Manchester, United Kingdom) / David Ruiz-Izuriga (University of Manchester, Manchester, United Kingdom) / Hadeel Hussain (University of Manchester, Manchester, United Kingdom) / Matthew Acres (University of Manchester, Manchester, United Kingdom) / Christopher Muryn (University of Manchester, Manchester, United Kingdom) / Robert Lindsay (University of Manchester, Manchester, United Kingdom) / Ehsan Ahmad (Imperial College, London, United Kingdom) / Carlos Rafols-i-Belles (Imperial College, London, United Kingdom) / Nicholas Harrison (Imperial College, London, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Fushimi.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 213313, A combined interpretation of thermal desorption spectra of Fe-C-X alloys: Part I - experimental approach

**Presenting author:** Tom Depover

**Authors:** Tom Depover (Ghent University, Zwijnaarde, Belgium) / Andreas Drexler (Materials Center Leoben, Leoben, Austria) / Werner Ecker (Materials Center Leoben, Leoben, Austria) / Kim Verbeken (Ghent University, Zwijnaarde, Belgium)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Fushimi.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 213368, A combined interpretation of thermal desorption spectra of Fe-C-X alloys Part II - modeling approach

**Presenting author:** Andreas Drexler

**Authors:** Andreas Drexler (Materials Center Leoben Forschung GmbH (MCL), Leoben, Austria) / Tom Depover (Department of Materials, Textiles and Chemical Engineering, Ghent University (UGent), Ghent, Belgium) / Kim Verbeken (Department of Materials, Textiles and Chemical Engineering, Ghent University (UGent), Ghent, Belgium) / Werner Ecker (Materials Center Leoben Forschung GmbH (MCL), Leoben, Austria)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Fushimi.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 182271, Effect of metal cations on hydrogen permeation behavior of steel during wet and dry corrosion tests

**Presenting author:** Masatoshi Sakairi

**Authors:** Masatoshi Sakairi (Faculty of Engineering, Hokkaido University, Sapporo, Japan) / Yusuke Togashi (Graduate School of Engineering, Hokkaido University, Sapporo, Japan)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Fushimi.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 203094, Corrosion behavior of iron in alkaline-deaerated solutions

**Presenting author:** Federico Martinelli-Orlando

**Authors:** Federico Martinelli-Orlando (ETH Zürich, Zürich, Switzerland) / Wei Shi (ETH Zürich, Zürich, Switzerland) / Ueli Angst (ETH Zürich, Zürich, Switzerland)

17:30 - 19:00 Poster Party / Poster Discussion

20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 201939, Calculation of mass transfer coefficients for corrosion prediction in two-phase gas-liquid pipe flow

**Presenting author:** Luciano Paolinelli

**Authors:** Luciano Paolinelli (Ohio University, Institute for Corrosion and Multiphase Technology, Athens OH, United States of America) / Srdjan Nestic (Ohio University, Institute for Corrosion and Multiphase Technology, Athens OH, United States of America)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 176067, The effect of partitioning on effective corrosion mitigation in Oil and Gas production systems

**Presenting author:** Johannes Sonke

**Authors:** Johannes Sonke (Shell, Amersfoort, Netherlands)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 221728, Highly Biodegradable Oxygen Corrosion Inhibitors for Hydro-Testing and Long Term Storage Application

**Presenting author:** Nihal Obeyesekere

**Authors:** Nihal Obeyesekere (Clariant Oil and Mining Services, The Woodlands Texas, United States of America) / Thenuka Ariyaratna (Clariant Oil and Mining Services, The Woodlands, United States of America) / Vivien Reichert (Clariant Oil and Mining Services, The Woodlands) / Jonathan Wylde (Clariant Oil and Mining Services, The Woodlands, United States of America)

11:15 - 11:45 Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 181688, Corrosion inhibition of Bis(2-ethylhexyl) phosphate in a CO<sub>2</sub>-O<sub>2</sub> containing environment

**Presenting author:** Xiankang Zhong

**Authors:** Junying Hu (Southwest Petroleum University, Chengdu, China PR) / Xiankang Zhong (Southwest Petroleum University, Chengdu, China PR)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 225479, The Impact of an Incompatible Carrier Solvent on a Batch Corrosion Inhibitor

**Presenting author:** Lisa Ferris

**Authors:** Lisa Ferris (Baker Hughes, Kirkby, United Kingdom) / Wai Mok (Baker Hughes, Kirkby, United Kingdom) / Tracey Jackson (Baker Hughes, Sugar Land, TX, United States of America) / Zhengwei Liu (Baker Hughes, Sugar Land, TX, United States of America)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 218967, Investigation of the behavior of Amine based corrosion inhibitors in the presence of Mono Ethylene Glycol on API 5L-X65 in a glass cell with rotating cylinder electrode setup

**Presenting author:** Askar Soltani

**Authors:** Askar Soltani (MSc. Student in Materials Science and Engineering ( Science and Research Branch, Islamic Azad University, Tehran, IRAN ), Tehran, Iran) / Alireza Abbasi (University Professor, Tehran, Iran)

### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 187573, Effect of Hydrogen on SSC Susceptibility of Sour Resistant Linepipe

**Presenting author:** Taishi Fujishiro

**Authors:** Taishi Fujishiro (Nippon Steel & Sumitomo Metal Corporation, Amagasaki, Japan) / Takuya Hara (Nippon Steel & Sumitomo Metal Corporation, Amagasaki, Japan) / Yasuhiro Shinohara (Nippon Steel & Sumitomo Metal Corporation, Kashima, Japan) / Masahiko Hamada (Nippon Steel & Sumitomo Metal Corporation, Tokyo, Japan)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 196450, Effect of Microstructure on SSC Resistant Property in Grade X65 UOE Sour Linepipe Steels

**Presenting author:** Junji Shimamura

**Authors:** Daichi Izumi (JFE Steel Corporation, Fukuyama, Japan) / Junji Shimamura (JFE Steel Corporation, Fukuyama, Japan) / Satoshi Igi (JFE Steel Corporation, Fukuyama, Japan) / Nobuyuki Ishikawa (JFE Steel Corporation, Kawasaki, Japan) / Satoshi Ueoka (JFE Steel Corporation, Fukuyama, Japan) / Koichi Ihara (JFE Steel Corporation, Fukuyama, Japan) / Joe Kondo (JFE Steel Corporation, Tokyo, Japan)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 188101, Electrolytic and autoclave testing and characterisation of hydrogen cracking in pipeline steels

**Presenting author:** Thomas Britton

**Authors:** Thomas Britton (Imperial College London, London, United Kingdom) / Jim Hickey (Imperial College London, London, United Kingdom) / Mary Ryan (Imperial, London, United Kingdom) / Ron van Tol (Shell Technology Centre, Amsterdam, Netherlands) / John Wijenberg (Shell Technology Centre, Amsterdam, Netherlands)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 205558, Corrosion and hydrogen permeation of low alloy steel in H<sub>2</sub>S-containing environments: the effect of test buffer solution chemistry

**Presenting author:** Jean Kittel

**Authors:** Jean Kittel (IFP Energies nouvelles, Solaize, France) / Martien Duvall Deffo Ayagou (IFPEN, Solaize, France) / Gaurav Joshi (IFPEN, Solaize, France) / Bernard Tribollet (CNRS, Paris, France) / Thi Tuyet Mai Tran (CNRS, Paris, France) / Christophe Mendibide (Institut de la Corrosion, Fraisses, France)

### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production/Chair: Winning.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 206636, Sulfide Stress Corrosion Cracking of high strength wire grades used in flexible pipes: YS x SSCC susceptibility

**Presenting author:** Merlin C E Bandeira

**Authors:** Merlin C E Bandeira (LNDC/COPPE/UFRJ, Rio De Janeiro, Brazil) / Pedro V. G. da Silva (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil) / Favio V. V. de Sousa (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil) / Cesar G. Camerini (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil) / Rogaciano M. Moreira (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil) / Fabrício P. dos Santos (Cenpes - Petrobras, Rio de Janeiro, Brazil) / Oscar R. Mattos (LNDC/COPPE/UFRJ, Rio de Janeiro, Brazil)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production/Chair: Winning.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 210134, Hydrogen Uptake of Steels at H<sub>2</sub> Partial Pressures up to 100 bar

**Presenting author:** Anton Trautmann

**Authors:** Anton Trautmann (Montanuniversitaet Leoben, Leoben, Austria) / Gregor Mori (Montanuniversitaet Leoben, Leoben, Austria) / Wolfgang Siegl (Montanuniversitaet Leoben, Leoben, Austria) / Mathias Truschner (Montanuniversitaet Leoben, Leoben, Austria) / Josefine Pfeiffer (Montanuniversitaet Leoben, Leoben, Austria) / Markus Oberndorfer (RAG Austria AG, Vienna, Austria) / Stephan Bauer (RAG Austria AG, Vienna, Austria) / Marianne Kapp (voestalpine BOEHLER Edelstahl GmbH & Co KG, Kapfenberg, Austria) / Andreas Keplinger (voestalpine BOEHLER Edelstahl GmbH & Co KG, Kapfenberg, Austria)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production/Chair: Winning.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 191610, On the influence of non-metallic inclusions on HIC susceptibility of low carbon bainitic steels

**Presenting author:** Markus Schürmann

**Authors:** Markus Schürmann (Hüttenwerke Krupp Mannesmann GmbH, Duisburg) / Rosa Peter (Hüttenwerke Krupp Mannesmann GmbH, Duisburg) / Georgi Genchev (Salzgitter Mannesmann Forschung GmbH, Duisburg) / Thomas Haase (Salzgitter Mannesmann Forschung GmbH, Duisburg)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production/Chair: Winning.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 198023, Effect of oxygen contamination on the SSC/HIC resistance of low alloyed steels

**Presenting author:** Christophe Mendibide

**Authors:** Christophe Mendibide (institut de la corrosion, fraisses, France) / jean kittel (IFPEN, Solaize, France) / Claude Duret-Thual (I, Fraisses, France) / Martien Deffo Ayagou (Ins, Fraisses, France)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 198804, Corrosion Damage Effects on the Structural Integrity Assessment of Offshore Structures

**Presenting author:** Sabina Aghasibayli

**Authors:** Sabina Aghasibayli (University of Strathclyde, Glasgow, United Kingdom) / Feargal Brennan (University of Strathclyde, Glasgow, United Kingdom)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 234037, The impact of the revision of ISO 12944 on the design consideration of offshore wind farms – The certifier's overview

**Presenting author:** Lars Lichtenstein

**Authors:** Lars Lichtenstein (DNV GL SE, Hamburg)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 205217, Improving Structural Integrity Assessment of Well Conductors Using Various Inspection Techniques

**Presenting author:** Payam Jamshidi

**Authors:** Payam Jamshidi (TWI Limited, Cambridge, United Kingdom) / Hadi Khalili (NSIRC, Cambridge, United Kingdom)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 231914, Development of an Evaluation Method for Corrosion Prevention Effect in Petrolatum Lining System

**Presenting author:** Ema Kato

**Authors:** Ema Kato (Port and Airport Research Institute, Yokosuka, Japan) / Masahiko Hoshino (Nakabohtec Corrosion Protecting Co.,Ltd, Tokyo, Japan) / Hiroto Tado (Port and Airport Research Institute, Yokosuka, Japan) / Toru Yamaji (Port and Airport Research Institute, Yokosuka, Japan)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 191885, Properties of chromophore-incorporated commercial epoxy coatings

**Presenting author:** Craig Melton

**Authors:** Craig Melton (University of Leicester, Leicester United Kingdom, United Kingdom) / Simon Gill (University of Leicester, Leicester, United Kingdom) / Shiladitya Paul (Technology Welding Institute, Cambridge, United Kingdom)



**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 178839, Synergistic effect between fluid flow and hydrostatic pressure on the failure behaviour of epoxy coating under deep ocean hydrodynamic environment

**Presenting author:** Fandi Meng

**Authors:** Fandi Meng (Northeastern University, Shenyang, China PR) / Li Liu (Northeastern University, Shenyang, China PR) / Yu Cui (Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Rui Liu (Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Fuhui Wang (Northeastern University, Shenyang, China PR)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 231276, Improvement of the carbon steel steel corrosion resistance in seawater by a Ceria/ Magnesium hydroxide coating

**Presenting author:** Marc Jeannin

**Authors:** Marc Jeannin (University of La Rochelle / LaSIE, La Rochelle Cedex 1, France) / Kahina AGGOUN (University of La Rochelle / LaSIE, La Rochelle, France) / Juan CREUS (University of La Rochelle / LaSIE, La Rochelle, France) / Boualem SAIDANI (University of Bejaia, BEJAIA, Algeria) / Lila CHAAL (University of Bejaia, BEJAIA, Algeria)

### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 194679, Thermally sprayed metallic coatings for protection of steel operating in marine environments

**Presenting author:** Berenika Syrek-Gerstenkorn

**Authors:** Berenika Syrek-Gerstenkorn (University of Birmingham, Birmingham, United Kingdom) / Shiladitya Paul (TWI, Cambridge, United Kingdom) / Alison Davenport (University of Birmingham, Birmingham, United Kingdom)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 194723, Influence of mechanical loads on the corrosion behaviour of thermally sprayed ZnAl15

**Presenting author:** Martin Andreas Knoch

**Authors:** Kirsten Bobzin (RWTH Aachen University, Aachen) / Mehmet Öte (RWTH Aachen University, Aachen) / Martin Andreas Knoch (RWTH Aachen University, Aachen)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 236644, Graphene based coatings for Marine applications

**Presenting author:** Karanveer Aneja

**Authors:** Karanveer Aneja (Talga Technologies Ltd., Cambridge, United Kingdom)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session:** WP9 Meeting

**Presentation time:** 3:00:00 PM

### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 226689, CORROSION OF WELDED JOINTS AT AN ANGLE OF FACADE ENCLOSURES

**Presenting author:** Leire Solaberrieta

**Authors:** Leire Solaberrieta (Lortek SCOOP, Ordicia, Spain) / Aitziber Pedrero (Lortek SCOOP, Ordicia, Spain)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Marine Corrosion (WP9)/Chair: Refait, Paul.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 175286, Corrosion rate variation of mooring chain steels with different copper contents and its relationship with the disparity in microbial communities

**Presenting author:** Dun Zhang

**Authors:** Dun Zhang (Institute of Oceanology, Chinese Academy of Sciences, Qingdao, China PR)

17:30 - 19:00 Poster Party / Poster Discussion

20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: M. Galetz.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 206460, High-Temperature Corrosion Behavior of Alloys in Mixed-Gas Environments

**Presenting author:** Brian Gleeson

**Authors:** Brian Gleeson (University of Pittsburgh, Pittsburgh, United States of America) / Satia Soltanattar (University of Pittsburgh, Pittsburgh, United States of America)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: M. Galetz.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 200894, Chemical, structural and electronic properties of oxide scale formed at high temperature under synthetic air on stainless steels

**Presenting author:** Thibault Roy

**Authors:** Thibault Roy (SIMaP, Saint-Martin d'Hères, France) / Yves Wouters (Simap, Saint-Martin d'Hères, France) / Laurence Latu-Romain (Simap, Saint-Martin d'Hères, France) / Ismaël Guillotte (Aperam, Isbergues, France) / Baptiste Latouche (Aperam, Isbergues, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: M. Galetz.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 215293, Comparison of oxidation of chromium steels in air with 10 vol.% water vapor between 500-650°C at atmospheric and elevated pressure

**Presenting author:** Clara Schlereth

**Authors:** Clara Schlereth (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Mathias C. Galetz (DECHEMA-Forschungsinstitut, Frankfurt am Main)

11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 216217, Corrosion behaviour of Hastelloy C-276 in the reactor atmosphere of a thermal utilization process for post-consumer plastics

**Presenting author:** Gregor Mori

**Authors:** Gregor Mori (Montanuniversität Leoben, Leoben, Austria) / Alexander Schmid (Montanuniversität Leoben, Leoben, Austria) / Stefan Hönig (OMV E & P GmbH, Gänserndorf, Austria) / Roland Haubner (Technical University of Vienna, Vienna, Austria)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 181831, DEGRADATION OF SIMPLE AND Si-MODIFIED ALUMINIDE COATINGS IN TYPE II HOT CORROSION CONDITIONS

**Presenting author:** Benjamin Grégoire

**Authors:** Fernando Pedraza (Université de La Rochelle, La Rochelle cedex 1, France) / Benjamin Grégoire (Université de La Rochelle, LA ROCHELLE, France) / Gilles Bonnet (Université de La Rochelle, LA ROCHELLE, France) / Xabier Montero (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Mathias Galetz (DECHEMA-Forschungsinstitut, Frankfurt am Main)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 219715, The impact of water vapor on high-temperature surface degradation by sulfurous gases of ferritic alloys

**Presenting author:** Florian Falk

**Authors:** Christiane Stephan-Scherb (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Juho Lehmusto (Abo Akademi University, Turku, Finland) / Florian Falk (Bundesanstalt für Materialforschung und -prüfung, Berlin) / Bruce A. Pint (Oak Ridge National Laboratory, Oak Ridge)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 199882, Spallation study of chromia scales thermally grown on pure chromium at low and high p(O<sub>2</sub>)

**Presenting author:** Yves Wouters

**Authors:** Yves Wouters (Université Grenoble Alpes, Saint Martin d'Heres, France) / Laurence Latu-Romain (Université Grenoble Alpes, Saint Martin d'Heres, France) / Stéphane Mathieu (University of Lorraine, nancy, France) / Michel Vilasi (University of Lorraine, Nancy, France)

13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 232046, Can the corrosion of components be simulated experimentally with coupons?

**Presenting author:** Axel Kranzmann

**Authors:** Axel Kranzmann (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 212928, Effect of water vapour content on oxidation resistance of martensitic stainless steels at austenitization temperature

**Presenting author:** Valerie Parry

**Authors:** Galy Ingrid Nkou Bouala (SIMAP/SIR, Saint Martin d'Hères, France) / Valerie Parry (SIMAP/SIR, Saint Martin d'Hères, France) / Jean-Denis Mithieux (APERAM, Isbergues, France) / Clément Boissy (APERAM, Isbergues, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 222938, Influence of a chromium deposit on the short time oxidation behavior of AISI 441 ferric stainless steels at 850°C

**Presenting author:** Mohammed Allam

**Authors:** Mohammed Allam (Université Grenoble Alpes, Grenoble INP, CNRS, SIMaP, Saint-Martin d'Hères, France) / Bruno GILLES (Université Grenoble Alpes, Grenoble INP, CNRS, SIMaP, Saint-Martin d'Hères, France) / Céline PASCAL (Université Grenoble Alpes, Grenoble INP, CNRS, SIMaP, Saint-Martin d'Hères, France) / Muriel BRACCINI (Université Grenoble Alpes, Grenoble INP, CNRS, SIMaP, Saint-Martin d'Hères, France) / Valérie PARRY (Université Grenoble Alpes, Grenoble INP, CNRS, SIMaP, Saint-Martin d'Hères, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 192886, Internal oxidation of iron-silicon model alloys during simulated annealing after hot rolling

**Presenting author:** Cauê Corrêa Da Silva

**Authors:** Cauê Corrêa Da Silva (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf) / Michael Rohwerder (Max-Planck-Institut für Eisenforschung, Düsseldorf)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: J. Lehmusto.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 177035, The impact of process dust composition on the SO<sub>2</sub>-to-SO<sub>3</sub> conversion in flash smelting heat recovery boilers

**Presenting author:** Juho Lehmusto

**Authors:** Juho Lehmusto (Abo Akademi University, Turku, Finland) / Tor Lauren (Abo Akademi University, Turku, Finland) / Mari Lindgren (Outotec Research Center, Pori, Finland)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: J. Lehmusto.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 177651, Corrosion behavior of Ti60 alloy under NaCl solution spray at 600 degrees C

**Presenting author:** Rui Li

**Authors:** Rui Li (Northeastern University, Shenyang, China PR) / Li Liu (Northeastern University, Shenyang, China PR) / Zhongfen Yu (Northeastern University, Shenyang, China PR) / Fandi Meng (Northeastern University, Shenyang, China PR) / Fuhui Wang (Northeastern University, Shenyang, China PR)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: J. Lehmusto.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 206317, Corrosion characterization of 304L stainless steel and 5754 aluminum in chloride atmospheres

**Presenting author:** Maria Planells Valencia

**Authors:** Maria Planells Valencia (CEA Grenoble, Grenoble, France) / Romain Soulas (CEA Grenoble, Grenoble, France) / Gilles Meresse (EMTS Sauvetaie, Saint-Victoret, France) / Eric De Vito (CEA Grenoble, Grenoble, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: J. Lehmusto.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 212015, Comparison of roles of water vapor and oxygen during the reaction behavior of Si<sub>3</sub>N<sub>4</sub> fibers

**Presenting author:** Xinmei Hou

**Authors:** Hang Ye (University of Science and Technology Beijing, Beijing, China PR) / Enxia Xu (Zhengzhou University, Zhengzhou, China PR) / Enhui Wang (University of Science and Technology Beijing, Beijing, China PR) / Xinmei Hou (University of Science and Technology Beijing, Beijing, China PR) / Kuochih Chou (University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: J. Lehmusto.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 215634, Performance of aluminium and chromium diffusion coatings under molten salt corrosion in CSP plants

**Presenting author:** Pauline Audigé

**Authors:** Pauline Audigé (National Institute for Aerospace Technology INTA, Torrejón de Ardoz, Spain) / Alina Agüero (National Institute for Aerospace Technology INTA, Torrejón de Ardoz, Spain) / Ceyhun Oskay (DECHEMA Forschungsinstitut, Frankfurt) / Mathias Galetz (DECHEMA Forschungsinstitut, Frankfurt)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Polymers and Advanced Materials (WP19)/Chair: J. Heinemann.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 176760, Compatibility of polymers with heating oil with 20 % biodiesel at different temperatures under static and compressed conditions

**Presenting author:** Margit Weltschew

**Authors:** Margit Weltschew (BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin) / Sina Poetzsch (BAM, Berlin) / Ralph Baessler (BAM, Berlin)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Polymers and Advanced Materials (WP19)/Chair: J. Heinemann.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 212532, Testing and Certification of Pressure Pipes for Alternative Installation Techniques made from PE 100-RC with Enhanced Resistance to Slow Crack Growth

**Presenting author:** Jürgen Heinemann

**Authors:** Jürgen Heinemann (DIN CERTCO Gesellschaft für Konformitätsbewertung mbH, Berlin) / Ina Förster (DIN CERTCO Gesellschaft für Konformitätsbewertung mbH, Berlin) / Joachim Hessel (HESSEL Ingenieurtechnik GmbH, Roetgen) / Jurik Akopjan (HESSEL Ingenieurtechnik GmbH, Roetgen)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** Polymers and Advanced Materials (WP19)/Chair: J. Heinemann.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 202401, Liner Materials for Corrosion Challenges

**Presenting author:** Achim Litzenburger

**Authors:** Achim Litzenburger (Simona AG, Kirn)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session:** WP19 Meeting

**Presentation time:** 12:45:00 PM

**13:05 - 14:00 Lunchtime**

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Pitting C. of Copper in Drinking Water Installations (WP20 + CEOCOR)/Chair: .

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 216822, Pitting Corrosion of Copper in Drinking Water Systems: An Update of the current Situation in Germany and an Outlook on further Investigations

**Presenting author:** Timo Jentzsch

**Authors:** Timo Jentzsch (IWW Water Centre, Mülheim an der Ruhr) / Angelika Becker (IWW Water Centre, Mülheim an der Ruhr) / Ute Ruhrberg (IWW Water Centre, Mülheim an der Ruhr)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Pitting C. of Copper in Drinking Water Installations (WP20 + CEOCOR)/Chair: .

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 174208, Pitting of Copper Pipes in Domestic Water Systems in the UK

**Presenting author:** Phillip Munn

**Authors:** Phillip Munn (Midland Corrosion Services Ltd, Darley Dale Derbyshire, United Kingdom)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Pitting C. of Copper in Drinking Water Installations (WP20 + CEOCOR)/Chair: .

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 189498, Observations of copper pitting corrosion in german tap waters

**Presenting author:** Johann-Wilhelm Erning

**Authors:** Johann-Wilhelm Erning (Federal Institute for Material Research and Testing, Berlin)

**15:20 - 15:50 - Coffee break**

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Protection of Drinking Water Systems (WP20)/Chair: .

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 231507, Analysis of type I pitting corrosion of copper piping by drinking water

**Presenting author:** Alfonso Cristóbal Carcel

**Authors:** Alfonso Cristóbal Carcel (Universitat Politècnica de València, Valencia, Spain) / Paloma Arrué (Universitat Politècnica de València, Valencia, Spain) / Bernabé Cárcel (Universitat Politècnica de València, Valencia, Spain) / Antonio Manuel Romero (Universitat Politècnica de València, Valencia, Spain)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Protection of Drinking Water Systems (WP20)/Chair: .

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 230165, Influence of production route and heat treatments on the corrosion of brass products for water applications

**Presenting author:** Olivier Rod

**Authors:** Olivier Rod (RISE KIMAB, Kista, Sweden) / Charlotta Obitz (RISE KIMAB, Kista, Sweden)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Protection of Drinking Water Systems (WP20)/Chair: .

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 233069, Impact of electrolyte contamination on surface finishing and pitting corrosion of electropolished 304 stainless steel

**Presenting author:** Pawel Lochynski

**Authors:** Pawel Lochynski (Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland) / Sylwia Charazinska (Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland) / Pawel Wiercik (Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland) / Paulina Nieznanska (Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland) / Edyta Lyczkowska-Widlak (Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Protection of Drinking Water Systems (WP20)/Chair: .

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 189465, Susceptibility of 304 stainless steel to crevice corrosion in Electrochemically Active Fluids

**Presenting author:** Johann-Wilhelm Erning

**Authors:** Johann-Wilhelm Erning (Federal Institute for Material Research and Testing, Berlin) / Abinaya Kamaraj (Federal institute for material research and testing, Berlin)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 230319, Steel properties influence in the durability of reinforced concrete

**Presenting author:** M. Joao Correia

**Authors:** M. Joao Correia (LNEC - Laboratorio Nacional de Engenharia Civil, Lisbon, Portugal) / Elsa Vaz Pereira (LNEC, Lisbon, Portugal) / Manuela Salta (LNEC, Lisbon, Portugal)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 201631, Inhibitors for sulphate-induced corrosion of carbon steel in calcium sulphoaluminate binders

**Presenting author:** Yegor Morozov

**Authors:** Yegor Morozov (Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal) / Simone Pellegrini (Security Building Service S.R.L., Via Santi Filippo e Giacomo, Covo (Bergamo), Italy) / Sergio Lorenzi (Department of Engineering, University of Bergamo, Bergamo, Italy) / Fátima Montemor (Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 228174, A test method to determine the corrosion resistance of different types of concrete.

**Presenting author:** Johan Ahlström

**Authors:** Johan Ahlström (RISE KIMAB, Kista, Sweden) / Bror Sederholm (RISE KIMAB, Kista, Sweden) / Jan Trägårdh (RISE CBI, Stockholm, Sweden) / Dimitrios Boubitas (RISE CBI, Borås, Sweden) / Luping Tang (Chalmers, Gothenborg, Sweden)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 233333, Non-contact corrosion monitoring of steel reinforcement

**Presenting author:** Simen Kaasa Hellner

**Authors:** Simen Kaasa Hellner (University of Bergen, Bergen, Norway) / Bodil Holst (University of Bergen, Bergen, Norway) / Eugen Florin Turcu (Norce Research, Bergen, Norway)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 223675, A Bayesian Network for the deduction of corrosion level based on NDT inspection data

**Presenting author:** Sam Ang KEO

**Authors:** Sam Ang KEO (LMDC, INSA Toulouse-UPS, France, Toulouse Cedex 4, France) / Thomas DE LARRARD (LMDC, INSA Toulouse-UPS, France, Toulouse Cedex 4, France) / Frédéric DUPRAT (LMDC, INSA Toulouse-UPS, France, Toulouse Cedex 4, France) / Sandrine GEOFFROY (LMDC, INSA Toulouse-UPS, France, Toulouse Cedex 4, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 230440, Evaluation of online systems for monitoring the degradation of concrete structures in WWTPs, subject to sulfate environments, for inclusion in BIM-Maintenance

**Presenting author:** Pedro Romano

**Authors:** Pedro Romano (Instituto Politécnico de Portalegre, Portalegre, Portugal) / Paulo Brito (Instituto Politécnico de Portalegre, Portalegre, Portugal)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 192501, A database of critical chloride contents for fundamental understanding of corrosion initiation and service life modelling

**Presenting author:** Carolina Boschmann Käthler

**Authors:** Carolina Boschmann Käthler (ETH Zürich, Zurich, Switzerland) / Ueli M. Angst (ETH Zürich, Zurich, Switzerland) / Bernhard Elsener (ETH Zürich, Zurich, Switzerland)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 231023, Melting gels as protective coatings of steel rebars in concrete

**Presenting author:** Mercedes Sánchez-Moreno

**Authors:** Mercedes Sánchez-Moreno (Universidad de Cordoba, Cordoba, Spain) / Jadra Mosa (Instituto de Cerámica y Vidrio (CSIC), Kelsen 5, 28049 Madrid, Spain, Madrid, Spain) / Mario Aparicio (Instituto de Cerámica y Vidrio (CSIC), Kelsen 5, 28049 Madrid, Spain, Madrid, Spain) / Andrei Jitianu (Department of Chemistry, Lehman College, City University New York, Bronx, New York 10468, US, New York, United States of America) / Lisa Klein (Department of Materials Science and Engineering, Rutgers University 607 Taylor Road, Piscataway, NJ 08854, US, Piscataway, United States of America)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 214699, Insights on the use of layered double hydroxides (LDH) to extend the durability of reinforced concrete

**Presenting author:** Joao Tedim

**Authors:** Mário Ferreira (University of Aveiro, Aveiro, Portugal) / Celestino Gomes (Universidade de Aveiro, Aveiro, Portugal) / Rui Sampaio (Universidade de Aveiro, Aveiro, Portugal) / Alexandre Bastos (Universidade de Aveiro, Aveiro, Portugal) / Joao Tedim (Universidade de Aveiro, Aveiro, Portugal) / Zhaid Mir (Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Geesthacht) / Frederico Maia (Smallmatek, Aveiro, Portugal) / Claudia Rocha (Smallmatek, Aveiro, Portugal)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 177079, Investigations of corrosion due to calcium leaching

**Presenting author:** Yves Schiegg

**Authors:** Yves Schiegg (TFB AG, Wildegg, Switzerland) / Stefanie Von Greve-dierfeld (TFB AG, Wildegg, Switzerland)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 237007, Chloride induced corrosion of steel reinforcement in alkali-activated fly ash mortars

**Presenting author:** Gino Ebell

**Authors:** Gino Ebell (Bundesanstalt für Material- forschung und -prüfung (BAM), Berlin) / Petr Hlaváček (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Steffi Reinemann (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Gregor J. G. Gluth (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Jürgen Mietz (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 204304, Evaluation of Steel Corrosion in Blended Cements Using Galvanostatic Pulse and Electrical Resistance Sensors

**Presenting author:** Miha Hren

**Authors:** Miha Hren (Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Tadeja Kosec (Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Andraz Legat (Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. of Steel in Concrete (WP11)/Chair: Raupach, Bastidas.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 180071, Effect of limestone aggregates on durability of reinforcement

**Presenting author:** Igor Chaves

**Authors:** Robert Melchers (University of Newcastle, Callaghan, Australia) / Igor Chaves (The University of Newcastle, Callaghan, Australia) / Goran Simundic (The University of Newcastle, Callaghan, Australia)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session:** WP11 meeting

**Presentation time:** 4:50:00 PM

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater .

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 226645, Anticorrosion properties of two carboxy-substituted triazoles for protection of copper in neutral media

**Presenting author:** Ivan Arkhipushkin

**Authors:** Ivan Arkhipushkin (Institute of Physical Chemistry and Electrochemistry, Moscow, Russia) / Leonid Kazansky (Institute of Physical Chemistry and Electrochemistry, Moscow, Russia) / Yuri Kuznetsov (Institute of Physical Chemistry and Electrochemistry, Moscow, Russia)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater .

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 174560, Suppression of atmospheric corrosion of a number of metals in livestock buildings by volatile inhibitors

**Presenting author:** Liudmila Tsygankova

**Authors:** Liudmila Tsygankova (Derzhavin State University, Tambov, Russia) / Vladimir Vigdorovich (All-Russian Scientific Research Institute of Use of Machinery and Oil Products, Tambov, Russia) / Larisa Knyazeva (All-Russian Scientific Research Institute of Use of Machinery and Oil Products, Tambov, Russia) / Andrei Dorokhov (All-Russian Scientific Research Institute of Use of Machinery and Oil Products, Tambov, Russia) / Evgeniya Shel (Tambov State Technical University, Tambov, Russia)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chairs: Schmitt, Hater .

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 226722, Compatibility of fabrication of superhydrophobic surface and injection of inhibitors for corrosion prevention

**Presenting author:** Ali Davoodi

**Authors:** Amir Hossein Noorbakhsh Nezhad (Materials and Metallurgical Engineering Department, Faculty of Engineering, Ferdowsi University of Mashhad (FUM), Mashhad, Iran) / Rahimi Rahimi (Department of Engineering and Architecture, University of Udine, Via Cotonificio 108, 33100, Udine, Italy) / Reza Arefinia (Chemical Engineering Department, Faculty of Engineering, Ferdowsi University of Mashhad (FUM), Mashhad, Iran) / Saman Hosseinpour (Institute of Particle Technology (LFG), Friedrich-Alexander-Universität-Erlangen-Nürnberg (FAU), Erlangen) / Ali Davoodi (Materials and Metallurgical Engineering Department, Faculty of Engineering, Ferdowsi University of Mashhad (FUM), Mashhad, Iran)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 173999, Mitigation of Metal Sulfide Precipitation and Scaling: Threshold Inhibition and Deposition

**Presenting author:** Konstantinos Demadis

**Authors:** Konstantinos Demadis (University of Crete, Heraklion, Greece) / Argyro Spinthaki (University of Crete, Heraklion, Greece) / Duygu Disci-Zayed (Kurita Europe GmbH, Ludwigshafen) / Juergen Matheis (Kurita Europe GmbH, Ludwigshafen) / Wolfgang Hater (Kurita Europe GmbH, Ludwigshafen)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 206097, New scale inhibitor for the silica scale formed with aluminum in the cooling water systems

**Presenting author:** Takanori Yoshino

**Authors:** Takanori Yoshino (KURITA WATER INDUSTRIES LTD., Shimotsuga-Gun, Japan) / Testuro Sakamura (Kurita Water Industries (Dalian) Co.,Ltd., Shanghai, China PR) / Ikuko Nishida (KURITA WATER INDUSTRIES LTD., Shimotsuga-Gun, Japan)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 173702, A comparison of synthesized corrosion inhibitors with commercial oilfield inhibitor in 15% hydrochloric acid solution for N80 tubing steel

**Presenting author:** AMBRISH Singh

**Authors:** AMBRISH Singh (Southwest Petroleum University, Chengdu, China PR)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 174065, Amorphous Silica: An Idiosyncratic, Water-Born Precipitate/Deposit That Requires Exotic Mitigation Approaches

**Presenting author:** Kostas Demadis

**Authors:** Kostas Demadis (University of Crete, Heraklion, Greece) / Argyro Spinthaki (University of Crete, Heraklion, Greece) / Georgia Skordalou (University of Crete, Heraklion, Greece)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 186000, Susceptibility of 316 to crevice corrosion in sulfonated scale inhibitors

**Presenting author:** Øystein Birketveit

**Authors:** Stipanicev Marko (Schlumberger, Bergen, Norway) / Øystein Birketveit (Schlumberger, Bergen, Norway) / Vincent Gregoire (Equinor ASA, Porsgrunn, Norway)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 225149, Zeolite Film for Metal Protection against Acidic and Salt Corrosion

**Presenting author:** Tseng-Chang Tsai

**Authors:** Tseng-Chang Tsai (University of Kaohsiung, Kaohsiung, Taiwan) / Shang-Tien Tsai (Hawing GemS Technology Corporation, Taichung, Taiwan) / WenChyuan Changlean (Hawing GemS Technology Corporation, Taichung, Taiwan) / Shang-Bin Liu (Hawing GemS Technology Corporation, Taichung, Taiwan)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 174109, Aluminium Silicate Characterization and its Inhibition by Anionic Macromolecules: Relevance to Geothermal Systems

**Presenting author:** ARGYRO Spinthaki

**Authors:** ARGYRO Spinthaki (University of Crete, Heraklion Crete, Greece) / Konstantinos Demadis (University of Crete, Heraklion Crete, Greece) / Duygu Disci-Zayed (Kurita Europe GmbH, Dusseldorf) / Jurgen Matheis (Kurita Europe GmbH, Dusseldorf) / Wolfgang Hater (Kurita Europe GmbH, Dusseldorf) / Michaela Kamaratou (University of Crete, Heraklion Crete, Greece)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 197231, Effect of corrosion products on the inhibition performance of a pyrimidine inhibitor in supercritical CO<sub>2</sub> environment: Experimental and theoretical studies

**Presenting author:** Baoshan Hou

**Authors:** Baoshan Hou (Key Laboratory for Material Chemistry of Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Materials Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P.R. China, Wuhan, China PR) / Yanyan Li (Key Laboratory for Material Chemistry of Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Materials Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P.R. China, Wuhan, China PR) / Qinghua Zhang (Key Laboratory for Material Chemistry of Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Materials Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P.R. China, Wuhan, China PR) / Guoan Zhang (Key Laboratory for Material Chemistry of Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Materials Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P.R. China, Wuhan, China PR)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 201070, The assessment of cationic gemini surfactants as corrosion inhibitors for carbon steel in sodium chloride solution

**Presenting author:** Olga Kaczerewska

**Authors:** Olga Kaczerewska (CICECO-Aveiro Institute of Materials and Department of Materials and Ceramic Engineering, University of Aveiro, Aveiro, Portugal) / Isabel Sousa (CICECO-Aveiro Institute of Materials and Department of Materials and Ceramic Engineering, University of Aveiro, Aveiro, Portugal) / Joao Tedim (CICECO-Aveiro Institute of Materials and Department of Materials and Ceramic Engineering, University of Aveiro, Aveiro, Portugal)



**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** C. & Scale Inhibition (WP1)/Chair: Schmitt, Hater.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 214985, Study on the corrosion inhibitor and the injected technology at the top of atmospheric tower in a refinery plant

**Presenting author:** Lei Fan

**Authors:** Lei Fan (CNPC Tubular Goods Research Institute, Xi'an, China PR)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 202357, Electrochemical and Tribo-electrochemical evaluation of W-doped DLC coatings in glycerol media containing ionic liquid additives

**Presenting author:** Hamid Khanmohammadi

**Authors:** Hamid Khanmohammadi (Norwegian University of Science and Engineering (NTNU), Trondheim, Norway) / Wahyu Wijanarko (Norwegian University of Science and Technology (NTNU), Trondheim, Norway) / Nuria Espallargas (Norwegian University of Science and Technology (NTNU), Trondheim, Norway)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 228988, Tribocorrosion performance of nitride coatings in artificial seawater: A benchmark against DLC

**Presenting author:** Manel Rodriguez Ripoll

**Authors:** Manel Rodriguez Ripoll (AC2T research GmbH, Wiener Neustadt, Austria) / Vladimir Pejakovic (AC2T reserch GmbH, Wiener Neustadt, Austria) / Bernhard Kohlhauser (Institute of Materials Science and Technology, TU Wien, Vienna, Austria) / Paul H. Mayrhofer (Institute of Materials Science and Technology, TU Wien, Vienna, Austria)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 206163, TRIBOCORROSION BEHAVIOUR OF A MODIFIED TSA COATING EMPLOYED IN OFFSHORE SUBMERGED COMPONENTS

**Presenting author:** Ainara Lopez-Ortega

**Authors:** Ainara Lopez-Ortega (IK4 - TEKNIKER, Eibar, Spain) / Gemma Mendoza (IK4 - TEKNIKER, Eibar, Spain) / Raquel Bayón (IK4 - TEKNIKER, Eibar, Spain)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 206867, Development of functionalized oxide films on Al-Si alloys by plasma electrolytic oxidation and study of their tribocorrosion behavior

**Presenting author:** Sofia Alves

**Authors:** Sofia Alves (IK4-TEKNIKER, Eibar, Spain) / Patricia Fernández (IK4-TEKNIKER, Eibar, Spain) / Ainara López-Ortega (IK4-TEKNIKER, Eibar, Spain) / Gemma Mendoza (IK4-TEKNIKER, Eibar, Spain) / Raquel Bayón (IK4-TEKNIKER, Eibar, Spain)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 206284, TRIBOCORROSION OF STEEL AND COATINGS IN OFFSHORE APPLICATIONS

**Presenting author:** Ainara Lopez-Ortega

**Authors:** Ainara Lopez-Ortega (IK4 - TEKNIKER, Eibar, Spain) / Raquel Bayón (IK4 - TEKNIKER, Eibar, Spain)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 217922, Effect of Electrochemical Reduced Graphene Oxide on the wear corrosion behaviour of CoCr alloy

**Presenting author:** Belén Chico González

**Authors:** Belén Chico González (CENIM-CSIC, Madrid, Spain) / Maria Lorenza Escudero Rincón (CENIM-CSIC, Madrid, Spain) / Maria Cristina Garcia-Alonso (CENIM-CSIC, Madrid, Spain)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Espallargas, Mazzonello.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 186143, Corrosion and tribocorrosion behavior of TiN coating film on Ti-Nb alloys for biomedical implant applications

**Presenting author:** Ihsan Caha

**Authors:** Ihsan Caha (Universidade do Minho, Guimarães, Portugal) / Alexandra Alves (Universidade do Minho, Guimaraes, Portugal) / Lucas Afonso (UNESP, Sao paulo, Brazil) / Paulo Lisboa-Filho (UNESP, sao paulo, Brazil) / jose da silva (Unesp, sao paulo, Brazil) / Carlos Grandini (Unesp, Sao paulo, Brazil) / Luis Rocha (Unesp, Sao paulo, Brazil) / Ana Pinto (Universidade do Minho, Guimarães, Portugal) / Fatih Toptan (Universidade do Minho, Guimarães, Portugal)

13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Ripoll, Mischler.  
**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 217702, The effect of binder content on tribocorrosion of hardmetals exposed to an acidic environment

**Presenting author:** Josias Van Der Merwe

**Authors:** Josias Van Der Merwe (University of the Witwatersrand, Johannesburg, South Africa) / Ndivhuwo Nelwalani (University of the Witwatersrand, Johannesburg, South Africa)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Ripoll, Mischler.  
**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 225578, Three-body Tribocorrosion Behaviour of Additively Manufactured 316L Stainless Steel

**Presenting author:** Mobin Salasi

**Authors:** Mobin Salasi (Curtin Corrosion Centre and School of Civil & Mechanical Engineering, Curtin University, Perth Australia, Perth, Australia) / John Sanders (Curtin Corrosion Centre and School of Civil & Mechanical Engineering, Curtin University, Perth Australia, Perth, Australia) / Thunyaluk Pojtanabuntoeng (Curtin Corrosion Centre, Curtin University, Perth, Australia, Perth, Australia) / William Rickard (John de Laeter Centre, Curtin University, Perth, Australia, Perth, Australia) / Zakaria Quadir (John de Laeter Centre, Curtin University, Perth, Australia, Perth, Australia)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Ripoll, Mischler.  
**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 196725, Tribocorrosion behaviour of non-passivating alloys: case examples and approaches to wear-corrosion synergy determination

**Presenting author:** Elina Huttunen-Saarivirta

**Authors:** Elina Huttunen-Saarivirta (VTT Technical Research Centre of Finland Ltd, VTT, Finland) / Aino Mäntyranta (VTT Technical Research Centre of Finland Ltd, Espoo, Finland) / Elisa Isotahdon (VTT Technical Research Centre of Finland Ltd, Espoo, Finland) / Vuokko Heino (VTT Technical Research Centre of Finland Ltd, Espoo, Finland) / Helena Ronkainen (VTT Technical Research Centre of Finland Ltd, Espoo, Finland)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Tribocorrosion (WP18)/Chair: Ripoll, Mischler.  
**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 200718, Tribo-electrochemical behaviour of surface-modified metallic biomaterials by plasma-assisted ion implantation

**Presenting author:** Amadeu Concustell Fargas

**Authors:** Amadeu Concustell Fargas (Eurecat, Centre Tecnològic de Catalunya, Manresa, Spain) / Silvia Molas (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Jaume Caro (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Montserrat Vilaseca (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Giselle Ramirez (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Raul Bonet (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Jordi Orri (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Josep Maria Bassas (Universitat de Barcelona, Barcelona, Spain) / Daniel Casellas (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain)

15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Wolski, H. Sarmiento-Klapper.  
**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 208099, Toward Understanding the Effect of Hydrogen in Duplex Stainless Steel Microstructure

**Presenting author:** Cem Örnek

**Authors:** Cem Örnek (KTH Royal Institute of Technology, Stockholm, Sweden) / Ulf Kivisäkk (Sandvik Materials Technology, Sandviken, Sweden) / Jinshan Pan (KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Wolski, H. Sarmiento-Klapper.  
**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 209287, Multi-scale study of the hydrogen embrittlement susceptibility of nickel-based superalloys

**Presenting author:** Xu Lu

**Authors:** Xu Lu (NTNU University, Trondheim, Norway) / Dong Wang (NTNU University, Trondheim, Norway) / Afrooz Barnoush (NTNU University, Trondheim, Norway)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Wolski, H. Sarmiento-Klapper.  
**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 233135, Studying the impacts of hydrogen on the properties of passive layer and local mechanical properties

**Presenting author:** Mohammad Zamanzade

**Authors:** Mohammad Zamanzade (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307LGF, Centre SMS, Saint-Etienne, France) / Christian Müller (Department of Materials Science, Saarland University, Bldg. D2.2, Saarbrücken) / Christian Motz (Department of Materials Science, Saarland University, Bldg. D2.2, Saarbrücken) / Frederic Christien (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307LGF, Centre SMS, Saint-Etienne, France)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)  
**Session:** WP5 meeting  
**Presentation time:** 4:50:00 PM

17:30 - 19:00 Poster Party / Poster Discussion

20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Robineau.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 220485, Stress corrosion testing of copper in near neutral sulfide solutions

**Presenting author:** Claes Taxén

**Authors:** Claes Taxén (Rise Kimab, Kista Stockholm, Sweden) / Christina Lilja (Swedish Nuclear Fuel and Waste Management Co, Stockholm, Sweden)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Robineau.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 209144, Corrosion morphology of copper in anoxic sulphide environments implications for long term storage of spent nuclear fuel.

**Presenting author:** Andrew Gordon

**Authors:** Andrew Gordon (RISE KIMAB, kista, Sweden) / Johannes Johansson (SKB AB, Stockholm, Sweden)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Robineau.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 202621, Corrosion of copper in geological repository for nuclear waste - The effect of oxic phase on the corrosion behaviour of copper in anoxic environment

**Presenting author:** Elisa Isotahdon

**Authors:** Elisa Isotahdon (VTT Technical Research Centre of Finland, Tampere, Finland) / Leena Carpén (VTT Technical Research Centre of Finland, Espoo, Finland) / Pauliina Rajala (VTT Technical Research Centre of Finland, Espoo, Finland)

#### 11:15 - 11:45 Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Schlegel.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 188640, Corrosion of carbon steel in a specific cement grout in deaerated conditions at 80°C

**Presenting author:** Mathieu Robineau

**Authors:** Mathieu Robineau (University of La Rochelle / Andra, La Rochelle, France) / Valérie Deydier (Andra, Châtenay-Malabry, France) / Sophia Necib (Andra, Châtenay-Malabry, France) / Didier Crusset (Andra, Châtenay-Malabry, France) / Alexandre Bellefleur (EDF Lab, Ecuelles, France) / René Sabot (University of La Rochelle, La Rochelle, France) / Marc Jeannin (University of La Rochelle, La Rochelle, France) / Philippe Refait (University of La Rochelle, La Rochelle, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Schlegel.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 204469, Corrosion of Zn-Al coated carbon steel in conditions simulating deep geological storage of radioactive waste at 80°C

**Presenting author:** Alice Martin

**Authors:** Alice Martin (Université La Rochelle, La Rochelle, France) / Nathalie Texier-Mandoki (Andra, Châtenay-Malabry, France) / Didier Crusset (Andra, Châtenay-Malabry, France) / Régis Aumaitre (CITRA, Limoges, France) / Aurélie Dard (CITRA, Limoges, France) / René Sabot (Université La Rochelle, La Rochelle, France) / Juan Creus (Université La Rochelle, La Rochelle, France) / Philippe Refait (Université La Rochelle, La Rochelle, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Schlegel.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 203281, Assessment of the resistance to stress corrosion cracking (SCC) of C-steel casing and overpack in a cementitious bentonite grout material

**Presenting author:** Nicolas BULIDON

**Authors:** Nicolas BULIDON (Institut de la corrosion, Fraisses, France) / Marion FREGONESE (INSA - MATEIS, Lyon, France) / Claude DURET (Institut de la corrosion, Fraisses, France) / Sophia NECIB (ANDRA - Centre de Meuse-Haute Marne, Bure, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: M. Schlegel.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 189146, Influence of environmental parameters and metal microstructure on the corrosion mechanisms of iron anoxic media.

**Presenting author:** Hélène Lotz

**Authors:** Hélène Lotz (Laboratoire Archéomatériaux et Prévision de l'Altération, UMR 3685 NIMBE IRAMAT, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Delphine Neff (Laboratoire Archéomatériaux et Prévision de l'Altération, UMR 3685 NIMBE IRAMAT, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Florence Mercier (Laboratoire Archéomatériaux et Prévision de l'Altération, UMR 3685 NIMBE IRAMAT, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Christian Bataillon (Den Service de Corrosion et du Comportement des Matériaux dans leurs Environnements (SCCME), CEA, Université Paris-Saclay, F-91191 Gif sur Yvette, France) / Ludovic Torteche (LICSEN, UMR 3685 NIMBE, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Eddy Foy (Laboratoire Archéomatériaux et Prévision de l'Altération, UMR 3685 NIMBE IRAMAT, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Michel L. Schlegel (Den Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay, F-91191 Gif sur Yvette, France) / Philippe Dillmann (Laboratoire Archéomatériaux et Prévision de l'Altération, UMR 3685 NIMBE IRAMAT, CEA/CNRS, Université Paris Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: T. Prosek, F. Legendre.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 216283, Multiscale analyses of carbon steel corrosion in cement grout for radioactive waste disposal

**Presenting author:** Charlotte Carré

**Authors:** Charlotte Carré (CEA Saclay - LAPA, NIMBE, Gif sur Yvette, France) / Philippe Dillman (CEA Saclay - LAPA, NIMBE, Gif sur Yvette, France) / Delphine Neff (CEA Saclay - LAPA, NIMBE, Gif sur Yvette, France) / Valérie Deydier (Andra, Châtenay-Malabry, France) / Yannick Linard (Andra - Meuse/Haute Marne Center, Bure, France) / Sophia Necib (Andra - Meuse/Haute Marne Center, Bure, France) / Michel Schlegel (CEA Saclay - Den - SEARS, Gif sur Yvette, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: T. Prosek, F. Legendre.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 191027, Optimization of ZrO<sub>2</sub> coating deposited on carbon steel by Physical vapor Deposition (PVD) for protection in mildly saline environments.

**Presenting author:** Michel Schlegel

**Authors:** Angélique Chabanon (DEN, Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay,, Gif-sur-Yvette, France) / Michaël Ougier (DEN, Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay,, Gif-sur-Yvette, France) / Alexandre Michau (DEN, Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay,, Gif-sur-Yvette, France) / Jérôme Varlet (DEN, Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay,, Gif-sur-Yvette, France) / Michel Schlegel (DEN, Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay,, Gif sur Yvette, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: T. Prosek, F. Legendre.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 209067, Corrosion kinetics of an API 5L X65 in contact with cement/bentonite at 40°C

**Presenting author:** Mathieu ROBINEAU

**Authors:** Sophia Necib (ANDRA, Bure, France) / Mathieu ROBINEAU (LaSIE, La Rochelle, France) / Christian BATAILLON (CEA, Gif sur Yvette, France) / Yannick LINARD (Andra, Bure, France) / Valérie Deydier (Andra, Chanteany-Malabry, France) / Didier Crusset (Andra, Chatenay-Malabry, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: T. Prosek, F. Legendre.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 183272, Corrosion of ductile iron under saline and elevated temperature conditions.

**Presenting author:** Nikoleta Vozarova

**Authors:** Nikoleta Vozarova (Institute for Nuclear Waste Disposal - Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen) / Nicolas Finck (Institute for Nuclear Waste Disposal - Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen) / Dieter Schild (Institute for Nuclear Waste Disposal - Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen) / Horst Geckeis (Institute for Nuclear Waste Disposal - Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen) / Michel Schlegel (Service d'Etudes Analytiques et de Réactivité des Surfaces (SEARS), CEA, Université Paris-Saclay, Gif sur Yvette, France)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: R. Rebak, S. Gossé.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 218241, Development of an innovative corrosion monitoring methodology for the French radioactive waste disposal application

**Presenting author:** Gouenou Girardin

**Authors:** José Bolivar (CETIM, NANTES, France) / Sophia Necib (ANDRA, Bure, France) / Chloé Comas (INSA de Lyon, Lyon, France) / Marion Fregonese (INSA de Lyon, Lyon, France) / Thomas Monnier (INSA de Lyon, Lyon, France) / Nicolas Bulidon (Institut de la Corrosion, Fraisses, France) / Maxime Valay (Orignalys, Rillieux-La-Pape, France) / Abdelkrim Saidoun (CETIM, Senlis, France) / Gouenou Girardin (CETIM, NANTES, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: R. Rebak, S. Gossé.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 183536, Corrosion behaviour of aluminum alloy 5754 in cement-based matrix simulating nuclear waste disposal conditions

**Presenting author:** Christophe Mendibide

**Authors:** Christophe Mendibide (institut de la corrosion, fraisses, France) / Valerie Deydier (ANDRA, Châtenay-Malabry, France) / Xavier Bourbon (ANDRA, Châtenay-Malabry, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: R. Rebak, S. Gossé.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 182491, Chloride-Induced Stress Corrosion Cracking of Austenitic Stainless Steels Used in Dry Cask Storage Systems in A Simulated Marine Environment

**Presenting author:** Ya-yun Cheng

**Authors:** Ya-yun Cheng (National Tsing Hua University, Hsinchu, Taiwan) / Yu-hsuan Li (Institute of Nuclear Engineering and Science, National Tsing-Hua University, Hsinchu City, Taiwan) / Mei-ya Wang (Nuclear Science and Technology Development Center, National Tsing-Hua University, Hsinchu City, Taiwan) / Tsung-kuang Yeh (Dept. of Engineering and System Science, National Tsing Hua University, Hsinchu City, Taiwan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: R. Rebak, S. Gossé.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 207912, Alpha radiolysis impact on magnesium alloy corrosion in model alkaline solutions

**Presenting author:** Benoist Muzeau

**Authors:** Benoist Muzeau (Den-Service d'Etude du Comportement des Radionucléides (SECR), CEA, Université Paris-Saclay, F-91191, Gif-sur-Yvette, Gif-sur-Yvette, France) / Eric Schmucker (Den-Service de Corrosion et d'étude du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, F-91191, Gif-sur-Yvette, Gif-sur-Yvette, France) / Aurélien Canizarès (CEMHTI - UPR3079 CNRS, 1D avenue de la Recherche Scientifique, F-45071 Orléans Cedex 2, Orléans, France) / Patrick Simon (CEMHTI - UPR3079 CNRS, 1D avenue de la Recherche Scientifique, F-45071 Orléans Cedex 2, Orléans, France) / Nicole Raimboux (CEMHTI - UPR3079 CNRS, 1D avenue de la Recherche Scientifique, F-45071 Orléans Cedex 2, Orléans, France) / Dominique Baux (CEMHTI - UPR3079 CNRS, 1D avenue de la Recherche Scientifique, F-45071 Orléans Cedex 2, Orléans, France) / Thierry Sauvage (CEMHTI - UPR3079 CNRS, 1D avenue de la Recherche Scientifique, F-45071 Orléans Cedex 2, Orléans, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: R. Rebak, S. Gossé.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 205470, Conditioning of Mg-Zr alloy: corrosion in Na-geopolymer and its synthetic pore solution

**Presenting author:** Eric Schmucker

**Authors:** Eric Schmucker (Den-Service de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, 91191 Gif-sur-Yvette, France) / Benoist Muzeau (Den-Service d'Etude du Comportement des Radionucléides (SECR), CEA, Université Paris-Saclay, 91191 Gif-sur-Yvette, France) / Christian Bataillon (Den-Service de Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, 91191 Gif-sur-Yvette, France)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Swiatowska.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 191093, Effect of brazing on the microstructure and corrosion behaviour of a twin roll cast Al-Mn-Fe-Si alloy system

**Presenting author:** Donovan Verkens

**Authors:** Donovan Verkens (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Reynier Revilla (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Ali Kosari (Technische Universiteit Delft (TU Delft), Delft, Netherlands) / Mert Günyüz (Assan Alüminyum A.Ş., Istanbul, Turkey) / Cemil Işıksaçan (Assan Alüminyum A.Ş., Istanbul, Turkey) / Arjan Mol (Technische Universiteit Delft (TU Delft), Delft, Netherlands) / Iris De Graeve (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Herman Terryn (Vrije Universiteit Brussel (VUB), Brussels, Belgium)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Swiatowska.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 196043, Corrosion Properties of Recycled Al-Mg-Si alloys

**Presenting author:** Alexander Lutz

**Authors:** Alexander Lutz (Vrije Universiteit Brussel, Brussels, Belgium) / Iris De Graeve (Vrije, Brussels, Belgium)

**11:15 - 11:45 Coffee break**

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 215392, Corrosion inhibitors for aluminium investigated using integrative experimental-modeling approach: Fabrication and electrochemical study

**Presenting author:** Ingrid Milosev

**Authors:** Ingrid Milosev (Jozef Stefan Institute, Ljubljana, Slovenia) / Dolores Zimerl (Jozef Stefan Institute, Ljubljana, Slovenia) / Balint Menczinger (Eotvos Lorand University, Budapest, Hungary) / Aniko Nemes (Eotvos Lorand University, Budapest, Hungary) / Jozsef Rabai (Eotvos Lorand University, Budapest, Hungary) / Anton Kokalj (Jozef Stefan Institute, Ljubljana, Slovenia) / Philippe Marcus (CNRS, Chimie ParisTech, PSL University, Paris, France)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 209177, Corrosion inhibitors for aluminium investigated using integrative experimental-modeling approach: Surface analytical study.

**Presenting author:** Philippe Marcus

**Authors:** Philippe Marcus (Ecole Nationale Supérieure de Chimie de Paris, Paris Cedex 05, France) / Charly Carrière (CNRS, Paris, France) / Sandrine Zanna (CNRS, Paris, France) / Antoine Seyeux (CNRS, Paris, France) / Dolores Zimerl (Jozef Stefan Institute, Ljubljana, Slovenia) / Aniko Nemes (Eötvös Loránd University, Budapest, Hungary) / Jozsef Rabai (Eötvös Loránd University, Budapest, Hungary) / Anton Kokalj (Jozef Stefan Institute, Ljubljana, Slovenia) / Ingrid Milošev (Jozef Stefan Institute, Ljubljana, Slovenia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 218109, Corrosion inhibitors for aluminium investigated using integrative experimental-modeling approach: A DFT modeling study

**Presenting author:** Matic Poberžnik

**Authors:** Matic Poberžnik (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Fatah Chiter (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Équipe Physico-Chimie des Surfaces, Paris, France) / Dominique Costa (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Équipe Physico-Chimie des Surfaces, 75005 Paris, France) / Philippe Marcus (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Équipe Physico-Chimie des Surfaces, 75005 Paris, France) / Ingrid Milošev (Department of Physical and Organic Chemistry, Jožef Stefan Institute, Ljubljana, Slovenia) / Anton Kokalj (Department of Physical and Organic Chemistry, Jožef Stefan Institute, Ljubljana, Slovenia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 209716, Are alkanolic layers on Al protective against Cl ingress? A DFT study

**Presenting author:** Fatah Chiter

**Authors:** Fatah Chiter (CNRS, Paris, France) / Dominique Costa (CNRS, Paris, France) / Matic Poberžnik (JSI, Ljubljana, Slovenia) / Anton Kokalj (JSI, Ljubljana, Slovenia) / Ingrid Milosev (JSI, Ljubljana, Slovenia) / Philippe Marcus (CNRS, Paris, France)

### 13:05 - 14:00 Lunchtime

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 220518, How silanol headgroups bond to oxidized aluminum surfaces: A DFT modeling study

**Presenting author:** Anton Kokalj

**Authors:** Matic Poberžnik (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Dominique Costa (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Équipe Physico-Chimie des Surfaces, 75005 Paris, France) / Ingrid Milošev (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Anton Kokalj (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 219363, Efficiency of mercapto and phosphonic inhibitors for copper and aluminum as a function of surface preparation

**Presenting author:** Dževad K. Kozlica

**Authors:** Dževad K. Kozlica (Jozef Stefan Institute, Ljubljana, Slovenia) / Anton Kokalj (Jozef Stefan Institute, Ljubljana, Slovenia) / Ingrid Milošev (Jozef Stefan Institute, Ljubljana, Slovenia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 209650, Inhibitors for copper in chloride solution with different functional and side groups studied by electrochemical methods and XPS

**Presenting author:** Ingrid Milosev

**Authors:** Ingrid Milosev (Jozef Stefan Institute, Ljubljana, Slovenia) / Barbara Kapun (Jozef Stefan Institute, Ljubljana, Slovenia) / Peyman Taheri (Delft University of Technology, Delft, Netherlands) / Anton Kokalj (Jozef Stefan Institute, Ljubljana, Slovenia) / J.M.C. Mol (Delft University of Technology, Delft, Netherlands)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling/Chair: Milosev, Kokalj.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 220694, An integrative modeling and experimental approach toward corrosion inhibition: heterocyclic organic molecules as potential corrosion inhibitors for Cu and Zn

**Presenting author:** Anton Kokalj

**Authors:** Anton Kokalj (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Matic Lozinšek (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Barbara Kapun (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Urša Tiringier (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Damir Hamulić (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Peyman Taheri (Department of Materials Science and Engineering, Delft University of Technology, 2628 CD Delft, Netherlands) / Shova Neupane (Instituut voor Materiaalonderzoek (IMO), Universiteit Hasselt, 3590 Diepenbeek, Belgium) / Patricia Losada-Perez (Instituut voor Materiaalonderzoek (IMO), Universiteit Hasselt, 3590 Diepenbeek, Belgium) / Chenyang Xie (Universitat Politècnica de Catalunya/BarcelonaTech, Departament de Física, INTE, Barcelona Res. Center in Multiscale Sci. & Tech., 08930 Barcelona, Spain) / Pere Bruna (Universitat Politècnica de Catalunya/BarcelonaTech, Departament de Física, INTE, Barcelona Res. Center in Multiscale Sci. & Tech., 08930 Barcelona, Spain) / Eloi Pineda (Universitat Politècnica de Catalunya/BarcelonaTech, Departament de Física, INTE, Barcelona Res. Center in Multiscale Sci. & Tech., 08930 Barcelona, Spain) / Stojan Stavber (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia) / Daniel Crespo (Universitat Politècnica de Catalunya/BarcelonaTech, Departament de Física, INTE, Barcelona Res. Center in Multiscale Sci. & Tech., 08930 Barcelona, Spain) / Frank Uwe Renner (Instituut voor Materiaalonderzoek (IMO), Universiteit Hasselt, 3590 Diepenbeek, Belgium) / J. M. C. Mol (Department of Materials Science and Engineering, Delft University of Technology, 2628 CD Delft, Netherlands) / Ingrid Milošev (Department of Physical and Organic Chemistry, Jožef Stefan Institute, 1000 Ljubljana, Slovenia)

### 15:20 - 15:50 - Coffee break

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Chair: Milosev, Kokalj.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 177849, Inhibition properties of imidazole-based compounds on brass

**Presenting author:** Peyman Taheri

**Authors:** Peyman Taheri (Delft University of Technology, Delft, Netherlands) / Ch Xie (Universitat Politècnica de Catalunya, Barcelona, Spain) / D. Cresp (Universitat Politècnica de Catalunya, Barcelona, Spain) / I. Milošev (Jožef Stefan Institute, Ljubljana, Slovenia) / A. Kokalj (Jožef Stefan Institute, Ljubljana, Slovenia) / JMC Mol (Delft University of Technology, Delft, Netherlands)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Chair: Milosev, Kokalj.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 200663, Inhibition of copper corrosion by mercapto-benzimidazole derivatives on the molecular scale

**Presenting author:** Frank Uwe Renner

**Authors:** Shova Neupane (Hasselt University, Diepenbeek, Belgium) / Patricia Losada-Pérez (Université Libre de Bruxelles, Brussels, Belgium) / Anton Kokalj (Jožef Stefan Institute, Ljubljana, Slovenia) / Frank Uwe Renner (Hasselt University, Diepenbeek, Belgium)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Chair: Milosev, Kokalj.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 207593, Inhibition properties of benzimidazole-based compounds on crystalline and amorphous CuZr alloys

**Presenting author:** Chenyang Xie

**Authors:** Chenyang Xie (Universitat Politècnica de Catalunya, Barcelona, Spain) / Pere Bruna (Universitat Politècnica de Catalunya, Barcelona, Spain) / Frank U. Renner (University of Hasselt, Hasselt, Belgium) / Ingrid Milošev (Jožef Stefan Institute, Ljubljana, Slovenia) / Anton Kokalj (Jožef Stefan Institute, Ljubljana, Slovenia) / Daniel Crespo (Universitat Politècnica de Catalunya, Barcelona, Spain)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Chair: Milosev, Kokalj.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 215755, Spectroscopic Characterisation of Inhibited Interfaces

**Presenting author:** Robert Lindsay

**Authors:** Robert Lindsay (University of Manchester, Manchester, United Kingdom) / Kiran Kousar (University of Manchester, Manchester, United Kingdom) / Michael Dowhyj (University of Manchester, Manchester, United Kingdom) / Monika Walczak (University of Manchester, Manchester, United Kingdom)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Chair: Milosev, Kokalj.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 210464, Contributions of scanning electrochemical microscopy to the characterization of a metal-inhibitor system

**Presenting author:** Ricardo M. Souto

**Authors:** Ricardo M. Souto (Universidad de La Laguna, Tenerife La Laguna, Spain) / Javier Izquierdo (University of La Laguna, La Laguna, Spain) / Juan J. Santana (University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain)

**17:30 - 19:00 Poster Party / Poster Discussion**

**20:30 - 21:30 - Social event: Organ concert at Seville Cathedral**

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 231342, Simulation of galvanic effects in automotive structures

**Presenting author:** Tim Froome

**Authors:** Tim Froome (CM BEASY, Ashurst, United Kingdom) / Andres Peratta (CM BEASY, Ashurst, United Kingdom) / John Baynham (CM BEASY, Ashurst, United Kingdom)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 188475, Atmospheric corrosion of a new martensitic stainless steel for automotive applications Study of the galvanic coupling

**Presenting author:** Clément Boissy

**Authors:** Clément Boissy (Aperam, Isbergues, France) / Saghi Saedlou (Aperam, Isbergues, France) / Jesse Paegle (Aperam, Saint-Denis, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 186517, Evaluation of the galvanic pair 7075-T6 Al alloy/dual-phase steel for automotive purposes

**Presenting author:** Vianey Torres

**Authors:** Vianey Torres (Universidad Nacional Autónoma de México, 04510, Mexico) / Juan Genescá (Universidad Nacional Autónoma de México, Mexico City, Mexico) / Francisco J. Rodríguez (Universidad Nacional Autónoma de México, Mexico City, Mexico)

**11:15 - 11:45 Coffee break**

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Chair: Szala, Hannour.  
**Presentation time:** 11:45:00 AM  
**Abstract ID and Title:** 174186, The Influence of Scribing and Evaluation on the Repeatability and Reproducibility of the new Standardized Corrosion Test E DIN 55635 (Statistical Analysis of an Interlaboratory Study)  
**Presenting author:** Josef Hagler  
**Authors:** Heike Rudolph (Daimler AG, Sindelfingen) / Josef Hagler (voestalpine Stahl GmbH, Linz, Austria)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Chair: Szala, Hannour.  
**Presentation time:** 12:05:00 PM  
**Abstract ID and Title:** 223873, Hydrogen detection in high strength dual phase steel using scanning Kelvin probe technique coupled with XPS analyses of the surface oxide film  
**Presenting author:** Flavien Vucko  
**Authors:** Flavien Vucko (Institut de la Corrosion, Brest, France) / Shinji Ootsuka (JFE Steel Corporation, Kawasaki, Japan) / Erwan Diler (Institut de la Corrosion, Brest, France) / Andrej Nazarov (Institut de la Corrosion, Brest, France) / Stéphane Rioual (Univ Brest, Lab-STICC, CNRS, UMR 6285, Brest, France) / Dominique Thierry (Institut de la Corrosion, Brest, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Chair: Szala, Hannour.  
**Presentation time:** 12:25:00 PM  
**Abstract ID and Title:** 179906, Acceleration corrosion test results of Al and Zn coated steel after hot press forming heat treatment  
**Presenting author:** Yonkyun Song  
**Authors:** Yonkyun Song (POSCO, Gwang Yang, Korea, South) / Yunha Yoo (POSCO, Incheon, Korea, South)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Chair: Szala, Hannour.  
**Presentation time:** 12:45:00 PM  
**Abstract ID and Title:** 190829, Investigation of electrochemical behaviour of 22MnB5 steel coated with hot-dip Al-Si before and after hot stamping process by means of SKPFM measurements  
**Presenting author:** Camila Pucci Couto  
**Authors:** Camila Pucci Couto (IPEN - Nuclear and Energy Research Institute, São Paulo, Brazil) / Reynier Revilla (VUB - Vrije Universiteit Brussel, Brussels, Belgium) / Herman Terryn (VUB - Vrije Universiteit Brussel, Brussels, Belgium) / Iris De Graeve (VUB - Vrije Universiteit Brussel, Brussels, Belgium) / Isolda Costa (IPEN - Nuclear and Energy Research Institute, Sao Paulo, Brazil) / Zehbour Panossian (IPT - Institute for Technological Research, Sao Paulo, Brazil) / Jesualdo Rossi (IPEN - Nuclear and Energy Research Institute, Sao Paulo, Brazil)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.  
**Presentation time:** 2:00:00 PM  
**Abstract ID and Title:** 204755, Mechanistic Study of Model Zr-Based Pre-Treatment for 6111 Aluminium Alloys  
**Presenting author:** Niamh Hosking  
**Authors:** Niamh Hosking (Ford Motor Company, Dearborn, United States of America) / Steven Simko (Ford Motor Company, Dearborn, United States of America) / Daniel Freiberg (Ford Motor Company, Dearborn, United States of America) / Mary Lyn Lim (PPG Coatings and Innovation Center, Allison Park, United States of America) / Kevin Sylvester (PPG Coatings and Innovation Center, Allison Park, United States of America) / Brian Okerberg (PPG Coatings and Innovation Center, Allison Park, United States of America) / Reza Rock (PPG Coatings and Innovation Center, Allison Park, United States of America) / Mark Nichols (Ford Motor Company, Dearborn, United States of America)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.  
**Presentation time:** 2:20:00 PM  
**Abstract ID and Title:** 178960, Influence of Processing Parameters on the IGC Susceptibility of Al-Mg-Si-Cu Alloys  
**Presenting author:** Roland Müller-jena  
**Authors:** Roland Müller-jena (RWTH Aachen University, Chair of Corrosion and Corrosion Protection, Aachen) / Joachim Becker (Otto Fuchs KG, Meinerzhagen) / Tobias Beyer (TRIMET Aluminium SE, Essen) / Thomas Hentschel (Hydro Aluminium Rolled Products GmbH, Bonn) / Robert Krakow (Otto Fuchs KG, Meinerzhagen) / Marcel Rosefort (TRIMET Aluminium SE, Essen) / Daniela Zander (RWTH Aachen University, Chair of Corrosion and Corrosion Protection, Aachen)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.  
**Presentation time:** 2:40:00 PM  
**Abstract ID and Title:** 223114, Time-resolved model experiments using atmospheric corrosion sensors in programmable corrosion chambers  
**Presenting author:** Bo Rendahl  
**Authors:** Bo Rendahl (Rise KIMAB, Kista, Sweden) / Mats Ström (Volvo Car Group, Gothenburg, Sweden)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)  
**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.  
**Presentation time:** 3:00:00 PM  
**Abstract ID and Title:** 226139, Corrosion Monitoring of High Strength Steel with Electrical Resistance Sensors  
**Presenting author:** Andrej Kranjc  
**Authors:** Andrej Kranjc (Slovenian National Building And Civil Engineering Institute, Ljubljana, Slovenia) / Tadeja Kosec (Slovenian National Building And Civil Engineering Institute, Ljubljana, Slovenia) / Viljem Kuhar (Slovenian National Building And Civil Engineering Institute, Ljubljana, Slovenia) / Branko Belingar (DMS Data merilni sistemi, d.o.o., Golnik, Slovenia) / Vili Malnarič (TPV d.o.o., Novo Mesto, Slovenia) / Andraž Legat (Slovenian National Building And Civil Engineering Institute, Ljubljana, Slovenia)



15:20 - 15:50 - Coffee break

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 217581, Intergranular corrosion behaviour of different stainless steels in automotive exhaust systems

**Presenting author:** Daniel Hornauer

**Authors:** Daniel Hornauer (Faurecia Emissions Control Technologies, Augsburg , Bay) / Muhammad Yasir (Faurecia Emissions Control Technologies, Augsburg) / Simon Burger (Faurecia Emissions Control Technologies, Augsburg)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 181259, Urea related Corrosion Phenomena of Stainless Steels in Automotive Applications

**Presenting author:** Tassilo Arndt

**Authors:** Tassilo Arndt (Augsburg University of Applied Sciences, Augsburg , Bay) / Helmut Wieser (Augsburg University of Applied Sciences, Augsburg) / Simon Burger (Faurecia Emissions Control Technologies, Augsburg)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 203336, Assessment of the flow induced corrosion behaviour in generic pipe conduits used in modern engine cooling systems

**Presenting author:** Artur Klink

**Authors:** Artur Klink (Technische Universität Darmstadt, Center for Structural Materials (MPA-IfW), Darmstadt) / Rüdiger Reitz (Technische Universität Darmstadt, Center for Structural Materials (MPA-IfW), Darmstadt) / Tom Engler (Technische Universität Darmstadt, Center for Structural Materials (MPA-IfW), Deutschland) / Matthias Oechsner (Technische Universität Darmstadt, Center for Structural Materials (MPA-IfW), Darmstadt)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 197319, Galvanic corrosion behavior at crevice between Al and Zn in Cl- environment

**Presenting author:** Takahiro Momii

**Authors:** Takahiro Momii (UACJ Corporation, Nagoya, Japan) / Takatoshi Shimada (UACJ North America, Inc., Ludington, MI, United States of America) / Yoshiyuki Oya (UACJ Corporation, Nagoya, Japan) / Yoichi Kojima (UACJ Corporation, Nagoya, Japan)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 204711, Selection of corrosion inhibitors for a hot-dip galvanised steel/mild steel galvanic couple exposed to NaCl solution

**Presenting author:** Leonardo Bertolucci Coelho

**Authors:** Leonardo Bertolucci Coelho (Materials Science Department, Faculty of Engineering, University of Mons, 20 Place du Parc, Mons, Belgium) / Enrico B. Fava (Science and Engineering Graduate Program, Federal University of Santa Catarina, P.O. Box 476, Florianópolis, Brazil) / Marie-Georges Olivier (Materials Science Department, Faculty of Engineering, University of Mons, 20 Place du Parc, Mons, Belgium)

17:30 - 19:00 Poster Party / Poster Discussion

20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Leygraf.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 224280, A comprehensive approach to the atmospheric corrosion of zinc and zinc (alloy) coated steel based on the surface chemistry in non-equilibrium gradient conditions

**Presenting author:** Mats Ström

**Authors:** Mats Ström (Volvo Car Group, Göteborg, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Leygraf.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 179708, Long-term Atmospheric Corrosion of Hot-Dip Galvanized Steel and Zn-Al Coated Steel

**Presenting author:** Dominique Thierry

**Authors:** Dominique Thierry (Institut de la Corrosion Technopole de Brest Iroise, Brest, France) / Dan Persson (RIse KIMAB, Stockholm, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Leygraf.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 210090, Conductivity of Zn-Al-Mg Corrosion Products

**Presenting author:** Zdenek Bartak

**Authors:** Zdenek Bartak (SVUOM Ltd., Praha, Czech Republic) / Jan Stouilil (University of Chemistry and Technology, Prague, Czech Republic) / Jiri Oswald (Institute of Physics, Czech Academy of Science, Prague, Czech Republic)

11:15 - 11:45 Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Thierry.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 199365, Galvanized Steel Protective System Assessing: Comparison of Neutral Salt Spray Test and Customized Accelerated Ageing Atmospheric Test

**Presenting author:** Sophie Bosonnet

**Authors:** Sophie Bosonnet (CEA/SACLAY, Gif-Sur-Yvette, France) / Kevin GINESTAR (CEA Saclay, Gif sur Yvette, France) / Lucile BRUN (CORRODYS, CHERBOURG-OCTEVILLE, France) / Stephane HEURTAULT (RTE FRANCE, Courbevois, France)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Thierry.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 223213, Inclusion of cut edges and bending in technical life time assessment of inorganic coatings on carbon steel sheet

**Presenting author:** Johan B Lindén

**Authors:** Johan B Lindén (RISE Research Institutes of Sweden, Borås, Sweden) / Lena Lindman (RISE Research Institutes of Sweden, Borås, Sweden) / Konrad Tarka (RISE Research Institutes of Sweden, Borås, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Thierry.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 182436, FT-IR spectroscopy of corrosion products formed on titanium-zinc under atmospheric conditions

**Presenting author:** Ulrike Langklotz

**Authors:** Ulrike Langklotz (TU Dresden, Dresden) / Martin Babutzka (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Andreas Burkert (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Michael Schneider (Fraunhofer Institute for Ceramic Technologies and Systems, Dresden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Thierry.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 229681, A scanning Kelvin probe investigation of the factors influencing secondary cathodic spreading of chloride-containing water droplets on metallic surfaces

**Presenting author:** Geraint Williams

**Authors:** Geraint Williams (Swansea University, Swansea, United Kingdom) / Alex Nielsen (Swansea University, Swansea, United Kingdom) / Rebecca Waldram (Swansea University, Swansea, United Kingdom) / Nathan Cooze (Swansea University, Swansea, United Kingdom) / Neil McMurray (Swansea University, Swansea, United Kingdom)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Williams.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 176089, A Systematic Exploration of Copper Patina Colour

**Presenting author:** Christofer Leygraf

**Authors:** Christofer Leygraf (KTH - Royal Institute of Technology, Stockholm, Sweden) / Gunilla Herting (KTH Royal Institute of Technology, Stockholm, Sweden) / Tingru Chang (KTH Royal Institute of Technology, Stockholm, Sweden) / Inger Odnevall Wallinder (KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Williams.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 177101, Atmospheric corrosion behavior of copper exposed to various simulated atmospheres

**Presenting author:** Chen Pan

**Authors:** Chen Pan (Institute of Metal Research,, Shenyang, China PR)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Williams.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 182975, A mechanistic study of the role of Sn on atmospheric corrosion of Sn-bronze at chloride-rich conditions

**Presenting author:** Tingru Chang

**Authors:** Tingru Chang (KTH Royal Institute of Technology, Stockholm, Sweden) / Christofer Leygraf (KTH Royal Institute of Technology, Stockholm, Sweden) / Inger Odnevall Wallinder (KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Williams.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 203138, On the Corrosion Mechanism of Aluminium Alloy 6063-T5 with Exposure to Marine Deposits Containing FeCl<sub>3</sub> Corrosion Product Simulants

**Presenting author:** Sultan Mahmood

**Authors:** Sultan Mahmood (University Of Manchester, Manchester, United Kingdom) / Dirk Engelberg (University of Manchester, Manchester, United Kingdom)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Allely.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 173581, Atmospheric Corrosion Resistance of Stainless Steel in Marine environment: Results of a Field Exposure Program in Sweden

**Presenting author:** Sukanya Hägg Mameng

**Authors:** Sukanya Hägg Mameng (Outokumpu Stainless AB, Avesta, Sweden) / Lena Wegrelius (Outokumpu Stainless AB, Avesta, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Allely.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 204238, Atmospheric corrosion of stainless steel 07Cr18Ni10

**Presenting author:** Katerina Kreislova

**Authors:** Katerina Kreislova (SVUOM Ltd., Praha 7, Czech Republic) / Zdenek Bartak (SVUOM Ltd., Prague, Czech Republic) / Libor Turek (SVUOM Ltd., Prague, Czech Republic)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Allely.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 173526, Experience of duplex stainless steels as structural materials for bridges: Results of seven inspections in European environment

**Presenting author:** Sukanya Hägg Mameng

**Authors:** Sukanya Hägg Mameng (Outokumpu Stainless AB, Avesta, Sweden) / Andrew BACKHOUSE (Outokumpu Stainless Ltd, Sheffield, United Kingdom) / Graham Gedge (Arup, London, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Allely.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 199332, Atmospheric corrosion study of stainless steel with different contamination and surface finishes

**Presenting author:** Briony Holmes

**Authors:** Briony Holmes (TWI Ltd, Cambridge, United Kingdom) / Chi Lee (TWI Ltd, Cambridge, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Allely.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 199563, The Impact of Environmental Excursion on Pitting of Turbine Blade Steel

**Presenting author:** Philip Aldhous

**Authors:** Philip Aldhous (The University of Manchester, Manchester, United Kingdom) / Shengqi Zhou (National Physical Laboratory, Teddington, United Kingdom) / Alan Turnbull (National Physical Laboratory, Teddington, United Kingdom) / Robert Akid (The University of Manchester, Manchester, United Kingdom)

#### 17:30 - 19:00 Poster Party / Poster Discussion

#### 20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 187452, Corrosion of X80 pipeline steel influenced by nitrate-reducing bacterium *Bacillus licheniformis* in neutral anaerobic soil solution

**Presenting author:** Jun Li

**Authors:** Jun Li (Institute of Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR) / Zhiyong Liu (Institute of Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR) / Cuiwei Du (Beijing Advanced Innovation Center for Materials Genome Engineering, Institute for Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR) / Xiaogang Li (Beijing Advanced Innovation Center for Materials Genome Engineering, Institute for Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 201180, Microbial destabilization of magnetite and siderite in the context of iron corrosion

**Presenting author:** Marjorie ETIQUÉ

**Authors:** Frederic P.A. JORAND (Université de Lorraine - CNRS, Nancy, France) / Marjorie ETIQUÉ (Université de Lorraine, Nancy, France)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 197418, Microbial influenced corrosion (MIC) of lean duplex stainless steel under various conditions related to waste water treatment

**Presenting author:** Nanni Noël

**Authors:** Nanni Noël (Endures B.V., Den Helder, Netherlands) / Job Klijnstra (Endures B.V., Den Helder, Netherlands)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 207417, Microbial Influenced Corrosion of Carbon Steel Exposed to Desalinated Seawater

**Presenting author:** Javiera Anguita

**Authors:** Javiera Anguita (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Magdalena Walczak (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Rodrigo De la Iglesia (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Gonzalo Pizarro (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Francisco Armijo (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile) / Ignacio Vargas (Marine Energy Research and Innovation Center (MERIC) / Pontificia Universidad Católica de Chile, Santiago, Chile)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 183085, Study of Microbial induced corrosion on the stainless steel in natural underground water

**Presenting author:** Jakub Kokinda

**Authors:** Jakub Kokinda (Research Centre Rez, Prague, Czech Republic) / Tomáš Černoušek (Research Centre Rez, Prague, Czech Republic) / Kateřina Vízelská (Research Centre Rez, Prague, Czech Republic) / Jana Steinová (Technical University of Liberec, Liberec, Czech Republic) / Rojina Shrestha (Technical University of Liberec, Liberec, Czech Republic)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 212279, The influence of Bacillus aerius on initial pitting corrosion of 6061 aluminum alloy in aqueous environment containing organic nitrogen source

**Presenting author:** Ziheng Bai

**Authors:** Ziheng Bai (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Xueming Li (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Yali Feng (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Chaofang Dong (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Dawei Zhang (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Kui Xiao (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR) / Xiaogang Li (Corrosion and Protection Center, University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 178124, The property of sulfate-reducing bacteria influenced crevice corrosion of Q235 carbon steel in artificial oilfield produced water

**Presenting author:** Tiansui Zhang

**Authors:** Tiansui Zhang (Key Laboratory of Material Chemistry for Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Material Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P. R. China, WuHan, China PR) / Junlei Wang (Key Laboratory of Material Chemistry for Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Material Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P. R. China, WuHan, China PR) / Hongfang Liu (Key Laboratory of Material Chemistry for Energy Conversion and Storage, Ministry of Education, Hubei Key Laboratory of Material Chemistry and Service Failure, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, P. R. China, WuHan, China PR)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 200410, Anaerobic corrosion of an aluminum bronze influenced by Geobacter sulfurreducens: the role of metabolites

**Presenting author:** Giorgia Ghiara

**Authors:** Giorgia Ghiara (Università di Genova, Genova, Italy) / Régine Basseguy (CNRS-LGC, Toulouse, France) / Roberto Spotorno (Università di Genova, Genova, Italy) / Paolo Piccardo (Università di Genova, Genova, Italy) / Pierangela Cristiani (RSE, Milano, Italy)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 224489, Effect of cultivation conditions on the electrochemical activity of metal reducing bacteria (MRB) on stainless steel surfaces

**Presenting author:** Ozlem Ozcan

**Authors:** Nina Wurzler (Federal Institute for Materials Research and Testing (BAM), Berlin) / Biwen An (Federal Institute for Materials Research and Testing, Berlin) / Andrea Koerdt (Federal Institute for Materials Research and Testing, Berlin) / Ozlem Ozcan (Federal Institute for Materials Research and Testing, Berlin)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 203424, Effect of surface topography and chemistry on the attachment of bacteria on solid surfaces

**Presenting author:** Jan Schuetter

**Authors:** Jan Schuetter (Federal Institute for Materials Research and Testing, Berlin) / Franziska Pietsch (Federal Institute for Materials Research and Testing, Berlin) / Frank Schreiber (Federal Institute for Materials Research and Testing, Berlin) / Andrea Koerdt (Federal Institute for Materials Research and Testing, Berlin) / Ozlem Ozcan (Federal Institute for Materials Research and Testing, Berlin)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 180115, A novel method for controlling microbial induced sewer corrosion using nitrite

**Presenting author:** Xuan Li

**Authors:** Xuan Li (Advanced Water Management Centre, Brisbane, Australia) / Guangming Jiang (AWMC, Brisbane, Australia) / Zhiguo Yuan (The University of Queensland, Brisbane, Australia)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 194393, Silver-Epoxy nanocomposites for microbial corrosion protection

**Presenting author:** Leonardo Iannucci

**Authors:** Leonardo Iannucci (Politecnico di Torino, Dipartimento di Elettronica e Telecomunicazioni (DET), Torino, Italy, Torino, Italy) / Pierangela Cristiani (Ricerca sul Sistema Energetico (RSE SpA), Milano, Italy) / Marco Sangermano (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Emma Angelini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Sabrina Grassini (Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 195614, Towards a better understanding of corrosion on copper surface in antibacterial efficiency tests

**Presenting author:** Jiaqi Luo

**Authors:** Jiaqi Luo (Saarland University, Saarbruecken) / Christina Hein (Saarland University, Saarbruecken) / Jean-François Pierson (University of Lorraine, Nancy, France) / Frank Mücklich (Saarland University, Saarbruecken)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Cristiani.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 181985, On-site assessment of the risk for MIC in hydropower projects: Results, experiences and new developments.

**Presenting author:** Paul Linhardt

**Authors:** Paul Linhardt (Technische Universität Wien, Inst. f. Chemical Technologies and Analytics, Wien, Austria)

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session:** WP16 business meeting

**Presentation time:** 10:15:00 AM

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session:** WP15 business meeting

**Presentation time:** 2:00:00 PM

#### 17:30 - 19:00 Poster Party / Poster Discussion

#### 20:30 - 21:30 - Social event: Organ concert at Seville Cathedral

THURSDAY, SEPTEMBER 12, 2019: LECTURES

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)  
**Presentation time:** 08:45:00 AM  
**Plenary Session:** Plenary Lecture: Prof. Alicia Valero - "Materials for Circular Economy: facts and limits"

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)  
**Presentation time:** 09:30:00 AM  
**Plenary Session:** Young Scientist Grant Ceremony

**09:45 – 10:15 Break to visit Exhibitors**

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 10:15:00 AM  
**Abstract ID and Title:** 206999, Zinc phosphate automotive conversion of MAX1.2HY, a newly developed group of stainless steel  
**Presenting author:** Mohaddese Nabizadeh  
**Authors:** Mohaddese Nabizadeh (Vrije Universiteit Brussel, Ixelles, Belgium) / Clément BOISSY (Aperam, Isbergues, France) / Herman Terryn (Vrije Universiteit Brussel, Brussels, Belgium) / Tom Hauffman (Vrije Universiteit Brussel, Brussels, Belgium)

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 10:35:00 AM  
**Abstract ID and Title:** 218516, Self-sealing of zirconium based conversion coatings applied on aluminium alloy AlSi7Mg0.3  
**Presenting author:** Gavriilo Šekularac  
**Authors:** Gavriilo Šekularac (Institute Jožef Stefan, Ljubljana, Slovenia) / Janez Kovač (Institute Jožef Stefan, Ljubljana, Slovenia) / Ingrid Milošev (Institute Jožef Stefan, Ljubljana, Slovenia)

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 10:55:00 AM  
**Abstract ID and Title:** 184713, Corrosion protection performance and in-depth composition analysis of hybrid sol-gel coatings based on CeO<sub>2</sub> nanoparticles applied on AA7075  
**Presenting author:** Ursa Tiringier  
**Authors:** Ursa Tiringier (Delft University of Technology, Delft, Netherlands) / Gavriilo Šekularac (Jožef Stefan Institute, Ljubljana, Slovenia) / Janez Kovač (Jožef Stefan Institute, Ljubljana, Slovenia) / J.M.C (Arjan) Mol (Delft University and Technology, Delft, Netherlands) / Ingrid Milošev (Jožef Stefan Institute, Ljubljana, Slovenia)

**11:15 - 11:45 Coffee break**

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 11:45:00 AM  
**Abstract ID and Title:** 174417, Effect of surface chemistry on the bonding mechanisms, strength and durability in steel-epoxy adhesive bonds  
**Presenting author:** Joost van Dam  
**Authors:** Joost van Dam (Delft University of Technology, Delft, Netherlands) / Herman Terryn (Vrije Universiteit Brussel, Brussels, Belgium) / Arjan Mol (Delft University of Technology, Delft, Netherlands)

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 12:05:00 PM  
**Abstract ID and Title:** 182150, Superhydrophobic surfaces on Al 6082 for corrosion resistant applications  
**Presenting author:** Edoardo Proverbio  
**Authors:** Edoardo Proverbio (University of Messina, MESSINA, Italy) / Luigi Calabrese (University of Messina, Messina, Italy) / Amani Khaskhoussi (National Interuniversity Consortium of Materials Science and Technology (INSTM), Florence, Italy)

**Room and situation:** Sevilla 1, Floor 0 (foyer)  
**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.  
**Presentation time:** 12:25:00 PM  
**Abstract ID and Title:** 197363, The effect of VpCl chemical pre-treatment on adhesion of organic coatings  
**Presenting author:** Ivan Stojanovic  
**Authors:** Ivan Stojanovic (University of Zagreb, Zagreb, Croatia) / Vesna Alar (University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia) / Boris A. Miksic (FNACE, Cortecros d.o.o., Zagreb, Croatia) / Ivana Radic Borsic (Ecocortec d.o.o., Beli Manastir, Croatia)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Pretreatments (WP14)/Chair: M. Olivier, M. Fedel.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 216668, The Role of Fluorides in Wet Surface Treatments of Metals and its Influence on Organic Coating Stability

**Presenting author:** Shoshan Abrahami

**Authors:** Shoshan Abrahami (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Brussel, Belgium) / Laura-lynn Fockaert (Department of Materials Science and Engineering, Delft University of Technology, Delft, Netherlands) / Kristof Marcoen (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Brussel, Belgium) / John de Kok (Fokker Aerostructures BV, Papendrecht, Netherlands) / Berend Boelen (Tata Steel IJmuiden B.V., IJmuiden, Netherlands) / Tom Hauffman (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Brussel, Belgium) / Herman Terryn (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Brussel, Belgium) / Johannes Mol (Department of Materials Science and Engineering, Delft University of Technology, Delft, Netherlands)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 186044, Parallel EIS and IR measurements to study formation and destruction of interfacial bonds between polymers and metal oxides

**Presenting author:** Herman Terryn

**Authors:** Herman Terryn (Vrije Universiteit Brussel, Brussels, Belgium) / Sven Pletincx (Vrije Universiteit Brussel, Brussels, Belgium) / Mats Meeusen (TUDelft, Delft, Netherlands) / Kristof Marcoen (Vrije Universiteit Brussel, Brussels, Belgium) / Francesca Cavezza (Vrije Universiteit Brussel, Brussels, Belgium) / Laura\_lynn Fockaert (TUDELFT, Delft, Netherlands) / Arjan Mol (TUDELFT, Delft, Netherlands) / Tom Hauffman (Vrije Universiteit Brussel, Brussels, Belgium)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 226073, Water Uptake in Anti-Corrosion Polymer Coating: Development of Capacitance Measurement Methods

**Presenting author:** Lucas Ollivier-Lamarque

**Authors:** Lucas Ollivier-Lamarque (Graduate School of Engineering, Tohoku University, Sendai, Japan) / Tetsuya Uchimoto (Institute of Fluid Science, Tohoku University, Sendai, Japan) / Nicolas Mary (ELYTMaX UMI3757 CNRS, Université de Lyon, Lyon, France) / Sébastien Livi (IMP@INSA Lyon, Université de Lyon, Villeurbanne, France) / Sabrina Marcelin (Mateis, INSA Lyon, Villeurbanne, France) / Bernard Normand (Mateis, INSA Lyon, Villeurbanne, France) / Benoît Ter-Ovanessian (Mateis, INSA Lyon, Villeurbanne, France)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 199838, IN THE FIELD APPLICATION OF ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY FOR QUALITY AND DURABILITY QUANTIFICATION OF PAINT COATINGS

**Presenting author:** Ivana Soic

**Authors:** Ivana Soic (University of Zagreb, Faculty of Chemical Engineering and Technology, Zagreb, Croatia) / Sanja Martinez (University of Zagreb, Faculty of Chemical Engineering and Technology, Zagreb, Croatia)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 221519, New approach to assess water uptake in protective organic coatings

**Presenting author:** Mehrdad Hoseinpoor

**Authors:** Mehrdad Hoseinpoor (University of chemistry and technology, Prague, Czech Republic) / Tomáš Prošek (University of Chemistry and Technology, Prague, Czech Republic) / Jacky Mallegol (AC&CS – CRM GROUP, Liege, Belgium) / Ludovic Babusiaux (AC&CS – CRM GROUP, Liege, Belgium)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 221189, Investigating water transport processes and stability of a steel-methacrylate based adhesive interface

**Presenting author:** Prakash Venkatesan

**Authors:** Prakash Venkatesan (TU Delft, Delft, Netherlands) / J.M.C Mol (TU Delft, Delft, Netherlands)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terryn, L. Fedrizzi.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 176892, Characterization of water and electrolyte transports in autophoretic corrosion protection coatings by means of optical spectroscopies and electrochemical impedance spectroscopy

**Presenting author:** Tobias Krawczyk

**Authors:** Tobias Krawczyk (Niederrhein University of Applied Sciences, Krefeld) / Michael Dornbusch (Niederrhein University of Applied Sciences, Krefeld) / Jochen S. Gutmann (University Duisburg-Essen, Essen)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: H. Terry, L. Fedrizzi.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 189311, Mapping the Transport Channels in an Epoxy Coating with AFM-IR

**Presenting author:** Simon Gibbon

**Authors:** Suzanne Morsch (University of Manchester, Manchester, United Kingdom) / Stuart Lyon (University of Manchester, Manchester, United Kingdom) / Simon Gibbon (AkzoNobel, Felling, United Kingdom)

#### 20:30 Conference dinner

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 179983, Passivity of pearlite of carbon steel in borate buffer

**Presenting author:** Koji Fushimi

**Authors:** Koji Fushimi (Hokkaido University, Sapporo, Japan) / Ryogo Nakagawa (Hokkaido University, Sapporo, Japan) / Yuichi Kitagawa (Hokkaido University, Sapporo, Japan) / Yasuchika Hasegawa (Hokkaido University, Sapporo, Japan)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 228724, Microstructural and local electrochemical characterization of gr. 91 steel welded joints as a function of Post Weld Heat Treatments.

**Presenting author:** Alex Lanzutti

**Authors:** Alex Lanzutti (Università di Udine, Udine, Italy) / Francesco Andreatta (Università Udine, Udine, Italy) / Michele Magnan (Università Udine, Udine, Italy) / Lorenzo Fedrizzi (Università Udine, Udine, Italy)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 182513, EIS characteristics of zinc covered with native oxides under solution films of various thickness

**Presenting author:** Atsushi Nishikata

**Authors:** Atsushi Nishikata (Tokyo Institute of Technology, Tokyo, Japan) / Chulaluk Somphotch (Tokyo Institute of Technology, Tokyo, Japan) / Azusa Ooi (Tokyo Institute of Technology, Tokyo, Japan) / Eiji Tada (Tokyo Institute of Technology, Tokyo, Japan)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Souto.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 179367, Correlative Nanoscale Scanning Electrochemical Cell Microscopy Combined with DFT to Understand Polycrystalline Zn Dissolution in Acid Media

**Presenting author:** Viacheslav Shkirskiy

**Authors:** Viacheslav Shkirskiy (University of Warwick, Coventry, United Kingdom) / Lewis Yule (University of Warwick, Coventry, United Kingdom) / Enrico Daviddi (University of Warwick, Coventry, United Kingdom) / Cameron Bentley (University of Warwick, Coventry, United Kingdom) / Jolyon Aarons (University of Warwick, Coventry, United Kingdom) / Geoff West (University of Warwick, Coventry, United Kingdom) / Patrick Unwin (University of Warwick, Coventry, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Souto.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 188266, Determining surface modifications in corrosion systems operando using instantaneous electrochemical impedance spectroscopy

**Presenting author:** Annick Hubin

**Authors:** Annick Hubin (Vrije Universiteit Brussel, Brussels, Belgium) / Benny Wouters (Vrije Universiteit Brussel, Brussels, Belgium) / Raf Claessens (Vrije Universiteit Brussel, Brussels, Belgium) / Mats Meeusen (TUDelft, Delft, Netherlands) / Gopal Ji (Vrije Universiteit Brussel, Brussels, Belgium) / Daan De Wilde (Vrije Universiteit Brussel, Brussels, Belgium) / Lucia Fernandez Macia (Vrije Universiteit Brussel, Brussels, Belgium) / Arjan (J.C.M.) Mol (TUDelft, Delft, Netherlands) / Herman Terry (Vrije Universiteit Brussel, Brussels, Belgium)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Souto.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 229802, Revealing the Formation Dynamics of the Electrochemical Double Layer by means of in-situ Rutherford Backscattering Spectrometry

**Presenting author:** Ute Bergmann

**Authors:** Ute Bergmann (TU Dresden, Dresden) / Sabine Apelt (TU Dresden, Dresden) / Nasrin Khojasteh (Helmholtz-Zentrum Dresden-Rossendorf HZDR, Dresden) / René Heller (Helmholtz-Zentrum Dresden-Rossendorf HZDR, Dresden)



**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Souto.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 191665, Applications of quantitative measurement of gas evolution associated to electrochemical and corrosion processes.

**Presenting author:** Michele Curioni

**Authors:** Michele Curioni (University of Manchester, Manchester, United Kingdom) / Fabio Scenini (University of Manchester, Manchester, United Kingdom) / Jeanette Torrescano-Alvarez (University of Manchester, Manchester, United Kingdom) / Peter Skeldon (University of Manchester, Manchester, United Kingdom)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Mol.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 178366, Electrochemical techniques to detect intermetallic phases in duplex stainless steels microstructure

**Presenting author:** Martin Monnot

**Authors:** Martin Monnot (Industeel (ArcelorMittal Group), Le Creusot cedex, France) / Emilie Robin (Industeel (ArcelorMittal Group), Le Creusot, France) / Sandra Le Manchet (Industeel (ArcelorMittal Group), Le Creusot, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Mol.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 232948, Novel Approach for Real-Time Monitoring of Atmospheric Corrosion

**Presenting author:** Michael Strebl

**Authors:** Michael Strebl (University Erlangen-Nürnberg (FAU), Erlangen) / Sannakaisa Virtanen (University Erlangen-Nürnberg (FAU), Erlangen)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Mol.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 188167, Improvement of Sensitivity in Detection System of Hydrogen Absorbed into Pure Iron using WO<sub>3</sub> Thin Film by Optimization of thickness of WO<sub>3</sub> and Pd films

**Presenting author:** Yu Sugawara

**Authors:** Yu Sugawara (Tohoku University, Sendai, Japan) / Haruka Saito (Tohoku University, Sendai, Japan) / Izumi Muto (Tohoku University, Sendai, Japan)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Mol.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 219022, Effect of inhibitor adsorption on readings of microelectrode during SVET measurements

**Presenting author:** Darya Snihirova

**Authors:** Darya Snihirova (Helmholtz-Zentrum Geesthacht, Geesthacht) / Sviatlana V. Lamaka (Magnesium Innovation Centre MagIC, HZG, Geesthacht) / Aytac Yilmaz (Materials Science & Engineering Department, TUDelft, Delft, Netherlands) / Nico Scharnagl (Magnesium Innovation Centre MagIC, HZG, Geesthacht) / Yaiza Gonzalez-Garcia (Materials Science & Engineering Department, TUDelft, Delft, Netherlands) / Fatima Montemor (Centro de Quimica Estrutural, IST, Lisbon, Portugal) / Mikhail L. Zheludkevich (Magnesium Innovation Centre MagIC, HZG/ Faculty of Engineering, Kiel University, Geesthacht/ Kiel)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Montemor.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 194789, Electrochemical noise analysis method based on bilinear time-frequency representation

**Presenting author:** Ivana Jevremovic

**Authors:** Ivana Jevremovic (Department of Material Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway) / Sarah Warloe (Department of Material Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway) / Andreas Erbe (Department of Material Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Montemor.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 177717, Design of a Modified Bipolar Electrochemistry Approach for Corrosion Research and Engineering Application

**Presenting author:** Yiqi Zhou

**Authors:** Yiqi Zhou (University of Manchester, Manchester, United Kingdom) / Dirk Engelberg (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Montemor.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 184317, Tafel-Piontelli model for the calculation of corrosion rate of metals in acidic condition. Validation tests in strong acids

**Presenting author:** Andrea Brenna

**Authors:** Andrea Brenna (Politecnico di Milano, Milano, Italy) / Silvia Baretta (Politecnico di Milano, Milano, Italy) / Fabio Bolzoni (Politecnico di Milano, Milano, Italy) / Marta Melocchi (Politecnico di Milano, Milano, Italy) / Marco Ormellese (Politecnico di Milano, Milano, Italy)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Montemor.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 207835, Visualizing and quantifying early stage corrosion: a combination of real time optics and electrochemical noise

**Presenting author:** Paul J. Denissen

**Authors:** Paul J. Denissen (Novel Aerospace Materials group, Faculty of Aerospace Engineering, Delft University of Technology, Delft, Netherlands) / Axel M. Homborg (Netherlands Defence Academy, Den Helder, Netherlands) / Santiago J. García (Novel Aerospace Materials group, Faculty of Aerospace Engineering, Delft University of Technology, Delft, Netherlands)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Montemor.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 190103, Miniaturization of electrochemical corrosion testing opportunities and practical use

**Presenting author:** Veit Starmühler

**Authors:** Veit Starmühler (Augsburg University of Applied Sciences, Augsburg, Bay) / Helmut Wieser (Augsburg University of Applied Sciences, Augsburg)

#### 20:30 Conference dinner

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 217427, Effects of flow velocity and pH on the degradation of protective corrosion films

**Presenting author:** Adriana Matamoros-Veloza

**Authors:** Adriana Matamoros-Veloza (Institute of Functional Surfaces, School of Mechanical Engineering, University of Leeds, Leeds, LS2 9JT, United Kingdom) / Richard Barker (Institute of Functional Surfaces, School of Mechanical Engineering, University of Leeds, Leeds, United Kingdom) / Silvia M. Vargas (BP America, Inc., Houston, TX 77079, United States of America) / Anne Neville (Institute of Functional Surfaces, School of Mechanical Engineering, University of Leeds, Leeds, United Kingdom)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 190565, Effect of CaCO<sub>3</sub> precipitation on the corrosion resistance of pseudo-passivated mild carbon steel

**Presenting author:** Riccardo Rizzo

**Authors:** Riccardo Rizzo (Technical University of Denmark, Kgs Lyngby, Denmark) / Shivangi Gupta (Technical University of Denmark, Lyngby, Denmark) / Magdalena Rogowska (Technical University of Denmark, Kgs Lyngby, Denmark) / Rajan Ambat (Technical University of Denmark, Kgs Lyngby, Denmark)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 226546, The Influence of Ionic Strength on CO<sub>2</sub> Corrosion of Mild Steel

**Presenting author:** Tatiana C. Almeida

**Authors:** Tatiana C. Almeida (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Rafael F. Garcia (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Merlin C.E. Bandeira (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Rogaciano M. Moreira (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil) / Oscar R. Mattos (LNDC / COPPE / UFRJ, Rio de Janeiro, Brazil)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 202126, 3D X-ray tomographic analysis of the nature and morphology of corrosion scales formed on X65 as a function of environment

**Presenting author:** Rafael Leiva Garcia

**Authors:** Rafael Leiva Garcia (University of Manchester, Manchester, United Kingdom) / Adam Anders (University of Manchester, Manchester, United Kingdom) / Tony Cook (University of Manchester, Manchester, United Kingdom) / Grace Burke (University of Manchester, Manchester, United Kingdom) / Christopher Muryn (University of Manchester, Manchester, United Kingdom) / Mary Ryan (Imperial College of London, London, United Kingdom) / Malte Storm (Diamond light source, Daresbury, United Kingdom) / James Carr (University of Manchester, Manchester, United Kingdom) / Silvia Vargas (BP Exploration Operating Company Limited, Sundbury, United Kingdom) / Sheetal Handa (BP Exploration Operating Company Limited, Sundbury, United Kingdom) / Philip Withers (University of Manchester, Manchester, United Kingdom) / Brian Connolly (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 224093, Understanding the role of aqueous NaCl solutions on corrosivity of carbon steel and FeCO<sub>3</sub> formation

**Presenting author:** Mustafa Alsalem

**Authors:** Mustafa Alsalem (Imperial College London, London, United Kingdom) / Mary Ryan (Imperial College London, London, United Kingdom) / Kyra SEDRANSK CAMPBELL (Imperial College London, London, United Kingdom)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 225204, Metals, Deposits and Microbes: Advancing the understanding and management of internal under-deposit corrosion (UDC) of pipelines

**Presenting author:** Laura L. Machuca

**Authors:** Laura L. Machuca (Curtin University, Perth, Australia) / Katerina Lepkova (Curtin University, Perth, Australia)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 214930, DEVELOPMENT OF DIRECT METAL LASER SINTERED ALLOY 718 FOR OIL AND GAS APPLICATIONS

**Presenting author:** William Howie

**Authors:** William Howie (Weatherford, Houston, United States of America) / Robert Badrak (Weatherford, Houston, United States of America) / Sergey Kolesov (Weatherford, St Petersburg, Russia) / Arturo Delacruz (Weatherford, Houston, United States of America)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 228548, Performance of wear and corrosion resistant coatings during simultaneous sliding and CO<sub>2</sub> corrosion under anoxic conditions

**Presenting author:** Manel Rodriguez Ripoll

**Authors:** Manel Rodriguez Ripoll (AC2T research GmbH, Wiener Neustadt, Austria) / Andreas Trausmuth (AC2T research GmbH, Wiener Neustadt, Austria) / Markus Kronberger (AC2T research GmbH, Wiener Neustadt, Austria) / Serhiy Budnyk (AC2T research GmbH, Wiener Neustadt, Austria) / Ewald Badisch (AC2T research GmbH, Wiener Neustadt, Austria)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 218406, A coating system based on zinc alloy electroplating for dry lubrication of premium OCTG connections: assessing anticorrosion performance

**Presenting author:** Cécile Millet

**Authors:** Alexandre Francois-Heude (VALLOUREC, Aulnoye-Ameries, France) / Cécile Millet (Vallourec, Aulnoye-Aymeries, France)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 226986, Using industry data to compare performance of different risk-based methods for the management of corrosion under insulation

**Presenting author:** Clare Watt

**Authors:** Clare Watt (KAEFER Isoliertechnik GmbH & Co. KG, Bremen) / Chi-Ming Lee (TWI Ltd, Cambridge, United Kingdom) / Stephen Paterson (Arbeadie Consultants Limited, Banchory, United Kingdom) / Antony Jopen (TWI Ltd, Cambridge, United Kingdom)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session:** WP13 Meeting

**Presentation time:** 3:50:00 PM

#### 20:30 Conference dinner

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Cathodic Protection in Marine Environment (WP9 + WP16)/Chair: Crouzillac, Refait.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 204128, Cathodic protection in tidal zone: an in-situ approach to evaluate the efficiency of the protection on emerged carbon steel.

**Presenting author:** Julien Duboscq

**Authors:** Julien Duboscq (University of La Rochelle, La Rochelle, France) / René Sabot (University of La Rochelle, La Rochelle, France) / Marc Jeannin (University of La Rochelle, La Rochelle, France) / Anne-Marie Grolleau (Naval Group Research, Cherbourg-Octeville, France) / Philippe Refait (University of La Rochelle, La Rochelle, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Cathodic Protection in Marine Environment (WP9 + WP16)/Chair: Crouzillac, Refait.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 192171, Cathodic protection modelling of a cover and uncover steel in seawater environment following by electric signature simulations of a ship

**Presenting author:** Marie Minola

**Authors:** Marie Minola (UGA-Grenoble INP/LEPMEI-Electrochimie et Physicochimie des Matériaux et des Interfaces, saint martin d'hères, France) / Virginie Roche (UGA-Grenoble INP/LEPMEI-Electrochimie et physicochimie des matériaux et des interfaces, Grenoble, France) / Margarita Diaz-Ramos (UGA-Grenoble INP/LEPMEI-Electrochimie et physicochimie des matériaux et des interfaces, Grenoble, France) / Jean-Claude Leprêtre (UGA-Grenoble INP/LEPMEI-Electrochimie et physicochimie des matériaux et des interfaces, Grenoble, France) / Cédric Goeau (DGA Techniques Navales, Brest, France) / Olivier Chadebec (UGA-Grenoble INP/G2Elab-Grenoble Electrical Engineering, Grenoble, France) / Laure-Line Rouve (UGA-Grenoble INP/G2Elab-Grenoble Electrical Engineering, Grenoble, France) / Olivier Pinaud (UGA-Grenoble INP/G2Elab-Grenoble Electrical Engineering, Grenoble, France) / Michael Nale (UGA-Grenoble INP/G2Elab-Grenoble Electrical Engineering, Grenoble, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Cathodic Protection in Marine Environment (WP9 + WP16)/Chair: Crouzillac, Refait.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 185714, HOW TO FIGHT AGAINST GALVANIC COUPLING BETWEEN BURIED AND SUBMERGED SIDE OF A STEEL PILE IN SEAWATER

**Presenting author:** Xavier Hallopeau

**Authors:** Xavier Hallopeau (Freyssinet International & Cie, Rueil Malmaison Cedex, France)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Cathodic Protection in Marine Environment (WP9 + WP16)/Chair: Crouzillac, Refait.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 195526, Corrosion Protection of Steel Using Al-Based Alloys

**Presenting author:** Maria del Rosario Silva Campos

**Authors:** Maria del Rosario Silva Campos (Helmholtz-Zentrum Geesthacht Centre for Materials and Coastal Research, Geesthacht) / Carsten Blawert (Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Michael Stoermer (Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Geesthacht)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Cathodic Protection in Marine Environment (WP9 + WP16)/Chair: Crouzillac, Refait.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 183426, Corrosion Due to Direct Electrical Heating of Cathodically-Protected Offshore Oil Pipelines

**Presenting author:** Kemal Nisancioglu

**Authors:** Kemal Nisancioglu (Norwegian University of Science and Technology, Trondheim, Norway) / Kari Forthun (Norwegian University of Science and Technology, Trondheim, Norway) / Sven-Morten Hesjevik (Statoil Research Centre, Trondheim, Norway) / Martin Hoyer-Hansen (SINTEF, Trondheim, Norway)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 179136, Practical application of telluric modelling for pipelines

**Presenting author:** Ken Lax

**Authors:** Ken Lax (Corroconsult UK Ltd, Telford, United Kingdom) / David Boteler (Geomagnetic Laboratory, Natural Resources Canada, Ottawa, Canada) / Charalambos Charalambous (Dept. of Electrical and Computer Engineering, University of Cyprus, Nicosia, Cyprus) / Risto Juhani Pirjola (Geomagnetic Laboratory, Natural Resources Canada, Ottawa, Canada)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 203160, Estimation of the cumulative effects of telluric currents on cathodically protected pipeline

**Presenting author:** Larisa Trichtchenko

**Authors:** Larisa Trichtchenko (Natural Resources Canada, Ottawa, Canada) / Lidia Nikitina (Natural Resources Canada, Ottawa, Canada) / Joyrles Moraes (Universidade de Campina Grande, Campina Grande-Paraiba, Brazil)

**13:05 - 14:00 Lunchtime**

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 176232, HIGHLY EFFICIENT CATHODIC CORROSION PROTECTION SYSTEM

**Presenting author:** Efim Lyublinski

**Authors:** Efim Lyublinski (COR/SCI LLC, Solon, United States of America) / Yakov Roitman (Y&B Delicacies, New York, United States of America) / Vilgelm Kosov (Technical University, Kishinev, Moldova) / Sergey Bogatii (Technical University, Kishinev, Moldova)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 175385, Increase and Stabilization of Magnesium Sacrificial Anodic Alloys Performance Characteristics

**Presenting author:** Efim Lyublinski

**Authors:** Efim Lyublinski (Retired, Solon, United States of America) / Vladimir Kechin (Vladimir State University, Vladimir, Russia) / Nikolay Ivanov (Energoinstroy, Vladimir, Russia)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 186308, Integration of intelligent a.c. mitigation device VCS in online monitoring and management systems for cathodic protection.

**Presenting author:** Tobias Braun

**Authors:** Tobias Braun (DEHN + SÖHNE GmbH + Co.KG., Neumarkt i.d.OPf.)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J.Crouzillac, M. Roche.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 195361, An algorithm for CP effectiveness evaluation: the Italian KT and its possible application in other countries

**Presenting author:** Ivano Magnifico

**Authors:** Ivano Magnifico (AUTOMA srl, Ancona, Italy)

**15:20 - 15:50 - Coffee break**

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Buchler.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 179345, Pipeline corrosion monitoring system

**Presenting author:** Alexey Makarenko

**Authors:** Pavel Revin (The Pipeline Transport Institute (Transneft R&D, LLC), Moscow, Russia) / Alexey Makarenko (The Pipeline Transport Institute (Transneft R&D, LLC), Moscow, Russia)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Buchler.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 178234, Assessing the corrosion risk caused by DC interference on cathodically protected pipelines

**Presenting author:** Markus Büchler

**Authors:** Markus Büchler (Schweizerische Gesellschaft für Korrosionsschutz - SGK, Zürich, Switzerland) / David Joos (SGK, Zürich, Switzerland)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Buchler.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 184471, Cathodic protection and DC non-stationary anodic interference: criteria and electrochemical processes

**Presenting author:** Mehdi Attarchi

**Authors:** Mehdi Attarchi (Politecnico di Milano, Milan, Italy) / Andrea Brenna (Politecnico di Milano, Dipartimento di Chimica, Materiali e Ingegneria Chimica G. Natta, Milan, Italy) / Marco Ormellese (Politecnico di Milano, Dipartimento di Chimica, Materiali e Ingegneria Chimica G. Natta, Milan, Italy)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Buchler.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 212675, Methodological evaluation of hydrogen diffusion in steel by electrochemical permeation

**Presenting author:** Kim Verbeken

**Authors:** Emilie Van den Eeckhout (Ghent University, Ghent, Belgium) / Tom Depover (Ghent University, Ghent, Belgium) / Kim Verbeken (Ghent University, Ghent, Belgium)

**20:30 Conference dinner**

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 228658, Corrosion behavior of commercial Fe- and Ni-based alloys in molten nitrate salt at 600°C

**Presenting author:** Ceyhun Oskay

**Authors:** Ceyhun Oskay (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Tobias M. Meissner (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Ali Solimani (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Alexander Bonk (Deutsches Zentrum fuer Luft- und Raumfahrt (DLR), Stuttgart) / Mathias C. Galetz (DECHEMA-Forschungsinstitut, Frankfurt am Main)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 221398, A study of the corrosion of YSZ coatings in molten salts prepared by flame spray synthesis

**Presenting author:** Melquisedec Vicente Mendoza

**Authors:** Melquisedec Vicente Mendoza (CIITEC IPN, Ciudad de México, Mexico) / Fernando Juárez López (CIITEC, Ciudad de Mexico, Mexico) / Ricardo Cuenca-Álvarez (CIITEC, Ciudad de Mexico, Mexico)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 220045, High temperature oxidation behavior of wrought Co-base alloys Haynes 25 and Haynes 188

**Presenting author:** Timur Galiullin

**Authors:** Timur Galiullin (Forschungszentrum Juelich GmbH, Juelich) / Rishi Pillai (Oak Ridge National Laboratory, Oak Ridge (TN), United States of America) / Egbert Wessel (Forschungszentrum Juelich GmbH, Juelich) / Willem Joe Quadackers (Forschungszentrum Juelich GmbH, Juelich) / Dmitry Naumenko (Forschungszentrum Juelich GmbH, Juelich)

**11:15 - 11:45 Coffee break**

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 234345, Reactivity of CO<sub>2</sub> and H<sub>2</sub>O molecules on 9-12Cr steel surface: impact on the corrosion behaviour

**Presenting author:** FABIEN Rouillard

**Authors:** FABIEN Rouillard (CEA, GIF SUR YVETTE, France) / FREDERIC MISERQUE (CEA, GIF SUR YVETTE, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 187188, The Effect of Molybdenum on High Temperature Oxidation and the Oxide Scale of Chromia-forming Alloy

**Presenting author:** Dae Won Yun

**Authors:** Dae Won Yun (Korea Institute of Materials Science, Changwon, Korea, South) / Y. S. Yoo (Korea Institute of Materials Science, Changwon, Korea, South) / H. W. Jeong (Korea Institute of Materials Science, Changwon, Korea, South) / S. M. Seo (Korea Institute of Materials Science, Changwon, Korea, South)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 225952, Modelling the oxidation transitory regime of Ni-Cr alloys: thermo-kinetic coupling with EKINOX-Open Calphad codes

**Presenting author:** Laure Martinelli

**Authors:** Laure Martinelli (CEA Saclay, Gif-Sur-Yvette, France) / Clara Desgranges (Safran, Châteaufort, France) / Daniel Monceau (CIRIMAT, Université de Toulouse, CNRS, Toulouse, France) / Florence Lequien (CEA, Gif sur Yvette, France) / Bosse Sundman (OpenCalphad, Gif sur Yvette, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** C. by Hot Gases and Combustion Products (WP3)/Chair: .

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 224720, Diffusion transport and Oxidation kinetics of FeCr and FeCrCo model alloys

**Presenting author:** Roman Simkin

**Authors:** Roman Simkin (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Axel Kranzmann (Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin) / Anja Pfennig (Hochschule für Technik und Wirtschaft (HTW Berlin), Berlin)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session:** WP 3 meeting

**Presentation time:** 2:00:00 PM

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Coatings for High Temperatures (WP3 + WP14)/Chair: .

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 196263, Innovative diffusion aluminide coating obtained via electroless pure nickel approach: synthesis, characterization and long term oxidation tests

**Presenting author:** Virgilio Genova

**Authors:** Virgilio Genova (Sapienza University of Rome, Rome, Italy) / Laura Paglia (Sapienza University of Rome, Rome, Italy) / Cecilia Bartuli (Sapienza University of Rome, Rome, Italy) / Giovanni Pulci (Sapienza University of Rome, Rome, Italy) / Francesco Marra (Sapienza University of Rome, Rome, Italy)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Coatings for High Temperatures (WP3 + WP14)/Chair: .

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 213654, Improving the Oxidation Resistance of Cr and its Alloys at Ultra High Temperatures by Applying New Coating Systems Promoting SiO<sub>2</sub> Formation

**Presenting author:** Anke Silvia Ulrich

**Authors:** Anke Silvia Ulrich (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Timo Kaiser (DECHEMA-Forschungsinstitut, 60486 Frankfurt a. M.) / Emanuel Ionescu (TU Darmstadt, 64287 Darmstadt) / Chad Harris (University of Wisconsin-Madison, Madison, WI 53706, United States of America) / Mike Niezgoda (University of Wisconsin-Madison, Madison, WI 53706, United States of America) / Ralf Riedel (TU Darmstadt, 64287 Darmstadt) / John H. Perepezko (University of Wisconsin-Madison, Madison, WI 53706, United States of America) / Mathias Christian Galetz (DECHEMA-Forschungsinstitut, 60486 Frankfurt a.M. )

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Coatings for High Temperatures (WP3 + WP14)/Chair: .

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 219308, High-temperature oxidation behavior of T92 steel pipes coated with Ni-based alloy by HVOF

**Presenting author:** Najib Abu-warda Pérez

**Authors:** Najib Abu-warda Pérez (University Rey Juan Carlos, Móstoles, Spain) / Antonio Julio López (University Rey Juan Carlos, Móstoles, Spain) / María Dolores López (University Rey Juan Carlos, Móstoles, Spain) / María Victoria Utrilla (University Rey Juan Carlos, Móstoles, Spain)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Coatings for High Temperatures (WP3 + WP14)/Chair: .

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 197704, The oxidation behavior of SiAlOC glasses coated ferritic stainless steel in thermal shocks conditions

**Presenting author:** Maciej Bik

**Authors:** Maciej Bik (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Łukasz Mazur (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Piotr Jeleń (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Mirosław Stygar (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Juliusz Dąbrowa (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Elżbieta Długoń (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Krzysztof Mroczka (Pedagogical University of Cracow, Institute of Technology, Cracow, Cracow, Poland) / Jan Wyrwa (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Ewelina Bik (Faculty of Chemistry, Jagiellonian University, Cracow, Cracow, Poland) / Tomasz Brylewski (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland) / Maciej Sitarz (AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Cracow, Poland)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** JS: Coatings for High Temperatures (WP3 + WP14)/Chair: .

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 183668, Thermal shock behavior of the AIP NiCrAlY and metal-enamel nano-composite coatings

**Presenting author:** Minghui Chen

**Authors:** Minghui Chen (Shenyang National Laboratory for Materials Science, Northeastern University, Shenyang, China PR) / Shenglong Zhu (Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, Shenyang, China PR) / Fuhui Wang (Shenyang National Laboratory for Materials Science, Northeastern University, Shenyang, China PR)

### 20:30 Conference dinner

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 233938, New Approach for Sulphidation Prediction in Crude Oil Refineries

**Presenting author:** Philipp Schempp

**Authors:** Philipp Schempp (Shell Deutschland Oil GmbH, Köln) / Silvio Köhler (Shell Deutschland Oil GmbH, Cologne) / Karsten Preuß (Shell Deutschland Oil GmbH, Cologne) / Micha Tröger (Shell Deutschland Oil GmbH, Cologne)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 203776, Preventing the Replacement of Critical Process Vessels Suffering from SSC & HIC

**Presenting author:** Colin Bateman

**Authors:** Colin Bateman (IGS (Integrated Global Services) Inc., Coddington, United Kingdom) / Iain Hall (IGS (Integrated Global Services) Inc., Richmond, United States of America)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 172514, Corrosion Under Insulation on industrial piping - a holistic approach to insulation system design.

**Presenting author:** Mark Swift

**Authors:** Mark Swift (Armaceil Engineered Systems, Oldham, United Kingdom)

### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 175099, Preservation Strategy for Storage Tanks in Capital Projects

**Presenting author:** Sami Al-Ghamdi

**Authors:** Sami Al-Ghamdi (Saudi Aramco Oil Company, Dhahran, Saudi Arabia) / Hendrik Debruyne (Saudi Aramco Oil Company, Dhahran, Saudi Arabia) / Yousef Aldossary (Saudi Aramco Oil Company, Dhahran, Saudi Arabia) / Michael Mottern (Saudi Aramco Oil Company, Dhahran, Saudi Arabia)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 191720, Recommended practice for corrosion management on Power Boilers of medium and high pressure

**Presenting author:** Carlos Lasarte

**Authors:** Carlos Lasarte (Combustión, Energía & Ambiente, C.A., Panama, Panama)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 177618, An Experimental Investigation into the Application of Bipolar Electrochemistry for Acid Corrosion Studies

**Presenting author:** Yiqi Zhou

**Authors:** Yiqi Zhou (University of Manchester, Manchester, United Kingdom) / Dirk Engelberg (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 191456, Highlighting the corrosion of oil/Cu interfaces at nanoscale with scanning electrochemical cell microscopy.

**Presenting author:** Enrico Daviddi

**Authors:** Enrico Daviddi (University of Warwick, Coventry, United Kingdom) / Cameron Bentley (University of Warwick, Coventry, United Kingdom) / Viacheslav Shkirskiy (University of Warwick, Coventry, United Kingdom) / Patrick Unwin (University of Warwick, Coventry, United Kingdom)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 181380, Developing Corrosion Resistant Alloys Using Big Data

**Presenting author:** James Vecchio

**Authors:** James Vecchio (Oerlikon Metco, San Diego, United States of America) / Adolfo Castells (Oerlikon Metco, San Diego, United States of America) / Fred van Rodijnen (Oerlikon Metco, Kelsterbach) / Justin Cheney (Oerlikon Metco, San Diego, United States of America)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 215326, Development of fit-for-purpose Nb bearing austenitic stainless steels with extra low C content

**Presenting author:** Tadashi Kawakami

**Authors:** Yuhei Suzuki (Nippon Steel & Sumitomo Metal Corporation, Hyogo, Japan) / Masahiro Seto (Nippon Steel & Sumitomo Metal Corporation, Hyogo, Japan) / Takahiro Osuki (Nippon Steel & Sumitomo Metal Corporation, Hyogo, Japan) / Tadashi Kawakami (Nippon Steel & Sumitomo Metal Corporation European Office, Dusseldorf) / Hirokazu Okada (Nippon Steel & Sumitomo Metal Corporation, Hyogo, Japan)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 178410, Influence of ferrite content in Heat Affected Zone of duplex stainless steels in sour environment

**Presenting author:** Martin Monnot

**Authors:** Martin Monnot (Industeel (ArcelorMittal Group), Le Creusot, France) / Bastien Chareyre (Industeel (ArcelorMittal Group), Le Creusot, France) / Gilles Passot (Industeel (ArcelorMittal Group), Le Creusot, France) / Sandra Le Manchet (Industeel (ArcelorMittal Group), Le Creusot, France)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 190169, Corrosion of High Pressure Steam Turbines in a Coal-Fired Power Plant

**Presenting author:** Seonyeob Li

**Authors:** Seonyeob Li (Hyundai Engineering & Construction Co., Seoul, Korea, South) / Taek-ki Kang (Hyundai Engineering & Construction Co., Seoul, Korea, South) / Suho Cha (Hyundai Engineering & Construction Co., Seoul, Korea, South)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 205118, Failure analysis of an aluminide coating on alloy 800 exposed to metal dusting condition on an industrial hydrogen production

**Presenting author:** Alina Agüero

**Authors:** Alina Agüero (INTA, Torrejón de Ardoz, Spain) / Raúl Muelas (ISDEFE, Madrid, Spain) / Ignacio Baraibar (INTA, Torrejón de Ardoz, Spain) / Ceyhum Oskay (Dechema, Frankfurt) / Mathias Galetz (Dechema, Frankfurt)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 192391, Resistance of metallic materials exposed to heating oil blends with 10 % and 20 % biodiesel (FAME)

**Presenting author:** Sina Pöttsch

**Authors:** Sina Pöttsch (Federal Institute for Materials Research and Testing, Berlin) / Ralph Bäbler (Federal Institute for Materials Research and Testing, Berlin) / Margit Weltschev (Federal Institute for Materials Research and Testing, Berlin)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 225237, Detection and Location of Coating Defects on Buried Pipelines with Reflectometry Technology

**Presenting author:** Tristan de Servins

**Authors:** Tristan de Servins (Heuristech, Paris, France) / Homero Castaneda (Texas A&M University, College Station, United States of America)



**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 231870, Cracking of SS347H Weldment in Process Plant Root Cause and Mitigation Methods

**Presenting author:** Mabruk Suleiman

**Authors:** Mabruk Suleiman (ADNOC Refining Research Centre, Abu Dhabi, United Arab Emirates) / Mohamed Al Musharfy (ADNOC Refining Research Centre, Abu Dhabi, United Arab Emirates) / Aya Shiraz Al-Masri (ADNOC Refining Research Centre, Abu Dhabi, United Arab Emirates)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 221024, Effect of the molecular structure of reactive sulfur compounds on AISI-317L steel sulfidic corrosion

**Presenting author:** Dionisio Laverde-Cataño

**Authors:** Gerson Conde-Rodríguez (Universidad Industrial de Santander, Bucaramanga, Colombia) / Javier Sanabria-Cala (Universidad Industrial de Santander, Bucaramanga, Colombia) / Dionisio Laverde-Cataño (Universidad Industrial de Santander, Bucaramanga, Colombia) / Darío Peña-Ballesteros (Universidad Industrial de Santander, Bucaramanga, Colombia)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 5:30:00 PM

**Abstract ID and Title:** 173273, Experience with 1st generation Permasense non-intrusive wireless corrosion monitoring system at Equinor Refining Denmark A/S

**Presenting author:** Peter Fischbacher

**Authors:** Anni Visgaard Nielsen (Equinor Kalundborg Refinery, Kalundborg, Denmark) / Jake Davies (Emerson Permasense, Crawley, United Kingdom) / Peter Fischbacher (Emerson, Milan, Italy)

#### 20:30 Conference dinner

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Ambat, Jellesen.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 179268, Electrochemical Corrosion and Thermal Effects at Voltages 12 V in Electronic Systems

**Presenting author:** Hans-jürgen Schreiber

**Authors:** Hans-jürgen Schreiber (Robert Bosch GmbH, Reutlingen) / Sabine Knopke (Robert Bosch GmbH, Reutlingen)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Ambat, Jellesen.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 194833, Investigations of electrochemically formed dendrites on micro-alloyed lead-free SAC alloys

**Presenting author:** Bálint Medgyes

**Authors:** Bálint Medgyes (UNIPCB Ltd., Budapest, Hungary) / László Gál (UNIPCB Ltd., Budapest, Hungary) / Gábor Harsányi (BME, Budapest, Hungary)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Ambat, Jellesen.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 181666, The roles of Ag and Cu in the electrochemical migration of Sn-3Ag-0.5Cu alloy

**Presenting author:** Xiankang Zhong

**Authors:** Xiankang Zhong (Southwest Petroleum University, Chengdu, China PR)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Medgyes.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 191390, Process cleanliness and climate-related effects on reliability issues of electronic devices

**Presenting author:** Rajan Ambat

**Authors:** Kamila Piotrowska (Technical University of Denmark, Kgs. Lyngby, Denmark) / Simone Lagana (Technical University of Denmark, Kgs. Lyngby, Denmark) / Feng Li (Technical University of Denmark, Kgs. Lyngby, Denmark) / Morten Jellesen (Technical University of Denmark, Kgs. Lyngby, Denmark) / Rajan Ambat (Technical University of Denmark, Kgs. Lyngby, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Medgyes.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 235104, Climatic reliability of electronic devices: Failure risk prediction on PCBA using a probabilistic model

**Presenting author:** Sajjad Bahrebar

**Authors:** Sajjad Bahrebar (Center for Electronic Corrosion, Section of Materials and Surface Engineering, Department of Mechanical Engineering, 2800 Lyngby, Denmark) / Rajan Ambat (Center for Electronic Corrosion, Section of Materials and Surface Engineering, Department of Mechanical Engineering, 2800 Lyngby, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Medgyes.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 193502, Iodine Vapor Quality Test for Harmful Gas Resistant Electronics

**Presenting author:** Markus Rainer Meier

**Authors:** Markus Rainer Meier (ZESTRON Europe, Ingolstadt , Donau) / Helmut Schweigart (ZESTRON Europe, Ingolstadt)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Medgyes.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 223312, Study of the degradation of different thermoelectric modules at Teide National Park

**Presenting author:** Leyre Catalán

**Authors:** Leyre Catalán (Public University of Navarre. Institute of Smart Cities, Pamplona, Spain) / Gurutze Pérez (Public University of Navarre. Institute of Smart Cities, Pamplona, Spain) / Carlos Berlanga (Public University of Navarre. Institute for Advanced Materials, Pamplona, Spain) / David Astrain (Public University of Navarre. Institute of Smart Cities, Pamplona, Spain) / Amaia Garacochea (Public University of Navarre, Pamplona, Spain) / Patricia Aranguren (Public University of Navarre. Institute of Smart Cities, Pamplona, Spain) / Miguel Araiz (Public University of Navarre. Institute of Smart Cities, Pamplona, Spain) / Vidal Domínguez (Instituto Volcanológico de Canarias (INVOLCAN), La Laguna, Spain) / Ana Carolina Montañez (Instituto Tecnológico y de Energías Renovables (ITER), Granadilla de Abona, Spain) / Germán D. Padilla (Instituto Tecnológico y de Energías Renovables (ITER), Granadilla de Abona, Spain)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Medgyes, Ambat.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 190620, Test Methods for Understanding the Corrosion Mechanisms of Hearing Aids Subjected to High Humidity and Polluted Environments

**Presenting author:** Abhijeet Yadav

**Authors:** Abhijeet Yadav (Technical University of Denmark, Lyngby, Denmark) / Rajan Ambat (Technical University of Denmark, Lyngby, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Medgyes, Ambat.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 173460, Complementary EIS / FTIR study of the degradation of adhesives in electronic packaging

**Presenting author:** Michael Schneider

**Authors:** Michael Schneider (Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden) / Uta Gierrth (Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden) / Ulrike Langklotz (Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden) / Paul Gierrth (Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden) / Lars Rebenklau (Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Medgyes, Ambat.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 209441, Electrochemical study on etching ability and humidity robustness of organic amines used in the solder flux systems

**Presenting author:** Feng Li

**Authors:** Feng Li (Centre for Electronics Corrosion, Department of Mechanical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark) / Kamila Piotrowska (Centre for Electronics Corrosion, Department of Mechanical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark) / Morten Stendahl Jellesen (Centre for Electronics Corrosion, Department of Mechanical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark) / Rajan Ambat (Centre for Electronics Corrosion, Department of Mechanical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Medgyes, Ambat.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 207087, Study of plasma polymer films for the corrosion protection of Printed Circuit Boards

**Presenting author:** iris De Graeve

**Authors:** iris De Graeve (Vrije Universiteit Brussel, Brussels, Belgium) / Aliakbar Khangholi (Vrije Universiteit Brussel, Brussels, Belgium) / Li Feng (Technical University of Denmark, Lyngby, Denmark) / Kamila Piotrowska (Technical University of Denmark, Lyngby, Denmark) / Kristof Marcoen (Vrije Universiteit Brussel, Brussels , Belgium) / Samir Loulidi (Europlasma, Oudenaarde, Belgium) / Filip Legein (Europlasma, Oudenaarde, Belgium) / Rajan Ambat (Technical University of Denmark, Lyngby, Denmark) / Guy Van Assche (Vrije Universiteit Brussel, Brussels, Belgium) / Annick Hubin (Vrije Universiteit Brussel, brussels , Belgium) / Iris De Graeve (Research group of Electrochemical and Surface Engineering (SURF), Research group of Physical Chemistry and Polymers (FYSC), Department of Materials and Chemistry, Vrije Universiteit Brussel, Brussels, Belgium)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Jellesen.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 218615, Humidity barrier properties of coatings used to protect electronics against corrosion

**Presenting author:** Morten Stendahl Jellesen

**Authors:** Morten Stendahl Jellesen (Technical University of Denmark, Kongens Lyngby, Denmark) / Feng Li (DTU, DK, Denmark) / simone laguna (dtu, kgs lyngby, Denmark) / Rajan Ambat (DTU, lyngby, Cyprus) / Vadimas Verdingovas (DTU, DK, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Jellesen.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 208396, LA-ICP-MS and LIBS: Analytical Techniques for Lateral Resolved Elemental Analysis applied to Corrosion Studies in Semiconductor Devices

**Presenting author:** Lukas Brunnbauer

**Authors:** Lukas Brunnbauer (TU Vienna, Vienna, Austria) / Maximilian Mayr (KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, Villach, Austria) / Maximilian Bonta (TU Vienna, Vienna, Austria) / Walter Mack (Infineon Regensburg, Regensburg) / Harald Preu (Infineon Regensburg, Regensburg) / Carsten Schäffer (Infineon Villach, Villach, Austria) / Silvia Larisegger (KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, Villach, Austria) / Michael Nelhiebel (KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, Villach, Austria) / Andreas Limbeck (TU Vienna, Vienna, Austria)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Jellesen.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 235082, Corrosion of Electronics in Oil-filled submersible pumps

**Presenting author:** Jesper Konge

**Authors:** Jesper Konge (Grundfos A/S, Bjerringbro, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** C. Reliability of Electronic Materials and Devices (WP23)/Chair: Schweigart, Jellesen.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 205327, Practical pitfalls when designing humidity resistant electronic products

**Presenting author:** Kim Albert Schmidt

**Authors:** Kim Albert Schmidt (FORCE Technology, Hoersholm, Denmark)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session:** WP23 Meeting

**Presentation time:** 5:10:00 PM

#### 20:30 Conference dinner

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: C. Alonso.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 229263, Corrosion resistance and cell proliferation of Ti6Al4V alloy manufactured by Selective Laser Melting and processed through High-Pressure Torsion

**Presenting author:** Mengyan Nie

**Authors:** Mengyan Nie (Institute for Materials Discovery, University College London, London, United Kingdom) / Haowen Wang (Institute for Materials Discovery, University College London, London, United Kingdom) / Kwang-Leong Choy (Institute for Materials Discovery, University College London, London, United Kingdom) / Yeol Jin Seong (Institute for Materials Discovery, University College London, London, United Kingdom) / Shahir Mohd Yusuf (Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, United Kingdom) / Chaozong Liu (Institute of Orthopaedics and Musculoskeletal Science, University College London, Stanmore, United Kingdom)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: C. Alonso.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 230671, Tailored Organic-Inorganic Nanocomposite Coatings for Biomedical Applications

**Presenting author:** Federico R. García-Galván

**Authors:** Federico R. García-Galván (Centro Nacional de Investigaciones Metalúrgicas, CENIM (CSIC), Madrid, Spain, Madrid, Spain) / Amir A. El-Hadad (McGill University, Faculty of Dentistry, Montreal, QC, , Canada) / Rodrigo Montoya (Universidad Nacional Autónoma de México (UNAM), Facultad de Química, Polo Universitario de Tecnología Avanzada, Apodaca, N.L., Mexico) / Violeta Barranco (Centro Nacional de Investigaciones Metalúrgicas, CENIM (CSIC), Madrid, Spain) / Antonia Jiménez-Morales (Universidad Carlos III de Madrid, Departamento de Ciencia e Ingeniería de Materiales e Ingeniería Química, Leganés, Madrid, Spain) / Juan Carlos Galván (Centro Nacional de Investigaciones Metalúrgicas, CENIM (CSIC), Madrid, South Georgia and the South Sandwich Islands) / Graham J. Hickman (Nottingham Trent University, Interdisciplinary Biomedical Research Centre, School of Science and Technology, Clifton Lane, Nottingham , United Kingdom) / Carole C. Perry (Nottingham Trent University, Interdisciplinary Biomedical Research Centre, School of Science and Technology, Clifton Lane, Nottingham , United Kingdom)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: C. Alonso.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 216855, An Investigation on Corrosion Behaviour of Colour Anodized Ti6Al4V Alloys

**Presenting author:** Emine Feraye Aydin

**Authors:** Emine Feraye Aydin (Selcuk University, Konya, Turkey) / Mustafa Kocabas (Konya Technical University, Konya, Turkey)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: S. García-Vergara.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 201873, Production and Characterization of nanotubes on Titanium Alloy Ti6Al4V surface

**Presenting author:** Stefano Rossi

**Authors:** Stefano Rossi (Department of Industrial Engineering, University of Trento, Trento, Italy) / Marielle Eyraud (Aix-Marseille Université, CNRS, MADIREL UMR 7246, Marseille, France) / Luciana Volgare (Department of Industrial Engineering, University of Trento, Trento, Italy)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: S. García-Vergara.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 230979, Investigation of TiO<sub>2</sub> Nanotubes Formation on the Surface of Pure Ti and Ti6Al4V Alloy

**Presenting author:** Irem Cemre TURU

**Authors:** Irem Cemre TURU (Yildiz Technical University, Istanbul, Turkey) / Murat DANISMAN (Istanbul Gedik University, Istanbul, Turkey) / Nurhan CANSEVER (Yildiz Technical University, Istanbul, Turkey)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: S. García-Vergara.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 211663, Effect of anodizing conditions on the micro-structure and corrosion resistance of commercially pure Ti and Ti6Al4V alloy

**Presenting author:** Maria Lekka

**Authors:** Maria Lekka (University of Udine, Udine, Italy) / Bruno Filipe Gomes Ribeiro (University of Udine, Udine, Italy) / Ruben Offoiach (University of Udine, Udine, Italy) / Elisa Salatin (LimaCorporate, Villanova di San Daniele del Friuli, Italy) / Lorenzo Fedrizzi (University of Udine, Udine, Italy)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: S. García-Vergara.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 219913, Influence of the sterilization process on the surface state of biomedical alloys

**Presenting author:** Anna Igual Munoz

**Authors:** Jean Ludovic Genilloud (EPFL, Lausanne, Switzerland) / Anna Igual Munoz (EPFL, Lausanne, Switzerland) / Stefano Mischler (EPFL, Lausanne, Switzerland)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: E. Matykina.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 231188, Anodized AZ91 magnesium alloy for temporary implants.

**Presenting author:** Silvia Cere

**Authors:** Silvia Cere (INTEMA- University of Mar del Plata-CONICET, Mar del Plata, Argentina) / Andrea Gomez Sanchez (CITVM – CONICET - National University of Villa María, Villa María., Villa Maria. Cordoba, Argentina) / Josefina Ballarre (INTEMA- CONICET- National University of Mar del Plata, Mar del Plata, Argentina) / Julieta Merlo (INTEMA- CONICET- National University of Mar del Plata, Mar del Plata, Argentina)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: E. Matykina.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 191247, The effect of small-molecule bio-relevant organic components at low concentration on the corrosion of commercially pure Mg and Mg-0.8Ca alloy: An overall perspective

**Presenting author:** Di Mei

**Authors:** Di Mei (Helmholtz-Zentrum Geesthacht, Geesthacht) / Sviatlana Lamaka (Helmholtz-Zentrum Geesthacht, Geesthacht) / Christian Feiler (Helmholtz-Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Geesthacht)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: E. Matykina.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 227184, Microstructure Modification by Electron Beam Processing in Magnesium Alloys to Control the Degradation Rate

**Presenting author:** Fatemeh Iranshahi

**Authors:** Fatemeh Iranshahi (Graz University of Technology, Institute of Materials Science, Joining and Forming, Graz, Austria) / Ricardo Henrique Buzolin (Graz University of Technology, Institute of Materials Science, Joining and Forming, Graz, Austria) / Fernando Gustavo Warchomicka (Graz University of Technology, Institute of Materials Science, Joining and Forming, Graz, Austria) / Christof Sommitsch (Graz University of Technology, Institute of Materials Science, Joining and Forming, Graz, Austria)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: E. Matykina.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 220331, Corrosion behavior of Mg<sub>1</sub>Zn<sub>1</sub>Ca and Mg<sub>3</sub>Zn<sub>0.3</sub>Ca for biomedical applications

**Presenting author:** Nuria Pulido González

**Authors:** Nuria Pulido González (University Rey Juan Carlos, Móstoles - Madrid, Spain) / Belén Torres Barreiro (University Rey Juan Carlos, Móstoles - Madrid, Spain) / Joaquín Rams Ramos (University Rey Juan Carlos, Móstoles - Madrid, Spain)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 216371, Development of functional coatings for the controlled degradation and corrosion protection of biocompatible Mg alloys

**Presenting author:** Joao Tedim

**Authors:** Isabel Sousa (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal) / Cristina Neves (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal) / Adriana Freitas (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal) / Marcela Reyes (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal) / Sonia Fraga (ISPUP, Porto, Portugal) / Nico Scharnagl (Helmholtz-Zentrum Geesthacht, Geesthacht) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Geesthacht) / Mario Ferreira (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal) / Joao Teixeira (ISPUP, Porto, Portugal) / Joao Tedim (CICECO/DEMAC-University of Aveiro, Aveiro, Portugal)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 206845, The effect of chemical modification procedure on corrosion behaviour of pure magnesium in simulated body fluid: A comparison study

**Presenting author:** Husnu Gerengi

**Authors:** Husnu Gerengi (Duzce University, Faculty of Engineering, 81620, Turkey)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 193447, Corrosion study of Mg-Ca and Mg-Zn biomedical alloys in the Hanks solution

**Presenting author:** Iryna Kozina

**Authors:** Iryna Kozina (AGH University of Science and Technology, Krakow, Poland) / Maria Starowicz (AGH University of Science and Technology, Krakow, Poland) / Magdalena Kawalec (AGH University of Science and Technology, Krakow, Poland) / Halina Krawiec (AGH University of Science and Technology, Krakow, Poland)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 226216, Corrosion resistance and in vitro assessment of stainless steel 316L manufactured by selective laser melting and processed through high-pressure torsion

**Presenting author:** Mengyan Nie

**Authors:** Mengyan Nie (Institute for Materials Discovery, University College London, London, United Kingdom) / Hao Zhang (Institute for Materials Discovery, University College London, London, United Kingdom) / Kwang-Leong Choy (Institute for Materials Discovery, University College London, London, United Kingdom) / Xuezheng Wang (Institute for Materials Discovery, University College London, London, United Kingdom) / Shahir Mohd Yusuf (Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, United Kingdom) / Nong Gao (Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, United Kingdom) / Chaozong Liu (Institute of Orthopaedics and Musculoskeletal Science, University College London, Stanmore, United Kingdom)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 220947, Study of the electrochemical behaviour of SLM and traditional CoCrMo alloys in simulated body fluids

**Presenting author:** Mahla Seyedi

**Authors:** Mahla Seyedi (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy) / Andrea Balbo (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy) / Federica Zanotto (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy) / Erica Liverani (Department of Industrial Engineering, University of Bologna, Bologna, Italy) / Alessandro Fortunato (Department of Industrial Engineering, University of Bologna, Bologna, Italy) / Cecilia Monticelli (Corrosion and Metallurgy Study Centre, Department of Engineering, University of Ferrara, Ferrara, Italy)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Corrosion of Biomaterials (SOCIEMAT)/Chair: M.A. Arenas.

**Presentation time:** 5:30:00 PM

**Abstract ID and Title:** 233190, PEO coating on AZ31 magnesium alloy for bone implant applications

**Presenting author:** Joao Fernandes

**Authors:** Joao Fernandes (IST - University of Lisbon, Lisboa, Portugal) / Francisco Albuquerque (IST - University of Lisbon, Lisboa, Portugal)

#### 20:30 Conference dinner

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, D. Engelberg.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 177497, Study of hydrogen diffusion and trapping in 42CrMo4 quenched and tempered steel

**Presenting author:** Alfredo Zafra

**Authors:** Alfredo Zafra (University of Oviedo, Gijón, Spain) / Luis Borja Peral (University of Oviedo, Gijón, Spain) / Zakariae Amghouz (University of Oviedo, Gijón, Spain) / Javier Belzunce (University of Oviedo, Gijón, Spain) / Cristina Rodríguez (University of Oviedo, Gijón, Spain)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, D. Engelberg.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 177211, Effect of sulfide films formed on X65 steel surface on hydrogen permeation in H<sub>2</sub>S environments

**Presenting author:** Feng huang

**Authors:** Feng huang (Wuhan university of science and technology , Wuhan, China PR) / YangYang Dong (Wuhan University of science and technology, Wuhan, China PR) / Pan Cheng (State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Xiaoyu Zhao (State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Jing Liu (State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, D. Engelberg.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 174813, Grain boundary effects on hydrogen-induced blisters initiation in pure iron

**Presenting author:** Xuan Tao

**Authors:** Xuan Tao (Beijing Advanced Innovation Center for Materials Genome Engineering, University of Science and Technology Beijing, Beijing, China PR) / Guocai Lv (Beijing Advanced Innovation Center for Materials Genome Engineering, University of Science and Technology Beijing, Beijing, China PR) / Jiawei Kou (Center for Advanced Materials Performance from the Nanoscale (CAMP-Nano), State Key Laboratory for Mechanical Behavior of Materials, Xian Jiaotong University, Xi'an, China PR) / Xilin Xiong ( Beijing Advanced Innovation Center for Materials Genome Engineering, University of Science and Technology Beijing, Beijing, China PR) / Alex A Volinsky (Department of Mechanical Engineering, University of South Florida, Tampa , United States of America) / Ching-Shun Ku (National Synchrotron Radiation Research Center, Hsinchu , Taiwan) / Kai Chen ( Center for Advanced Materials Performance from the Nanoscale (CAMP-Nano), State Key Laboratory for Mechanical Behavior of Materials, Xian Jiaotong University, Xi'an, China PR) / Yanjing Su (Beijing Advanced Innovation Center for Materials Genome Engineering, University of Science and Technology Beijing, Beijing, China PR)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Verbeken, C. Blanc .

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 214237, Hydrogen trap analysis in heat treated and deformed Armco iron by TDS

**Presenting author:** Wolfgang Siegl

**Authors:** Wolfgang Siegl (Montanuniversitaet Leoben, Leoben, Austria) / Gregor Mori (Montanuniversitaet Leoben, Leoben, Austria) / Anton Trautmann (Montanuniversitaet Leoben, Leoben, Austria) / Gerald Stiedl (Montanuniversitaet Leoben, Leoben, Austria) / Werner Ecker (Materials Center Leoben Forschung GmbH, Leoben, Austria) / Jürgen Klarner (voestalpine Tubulars GmbH & Co KG, Kindberg-Aumuehl, Austria) / Gerald Klösch (voestalpine Stahl Donawitz GmbH, Leoben, Austria) / Holger Schnideritsch (voestalpine Stahl Donawitz GmbH, Leoben, Austria)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Verbeken, C. Blanc .

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 196153, Effect of the presence of a controlled oxide on the hydrogen steel interaction assessed by an electrochemical procedure

**Presenting author:** Tim Rubben

**Authors:** Tim Rubben (Vrije Universiteit Brussel (VUB), Brussels, Belgium) / Kitty Baert (Vrije Universiteit Brussel, Brussels, Belgium) / Iris De Graeve (Vrije Universiteit Brussel , Brussels, Belgium)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Verbeken, C. Blanc .

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 211443, The effect of a constant tensile load on the hydrogen permeation characteristics in dual phase steel

**Presenting author:** Simon Vander Vennet

**Authors:** Simon Vander Vennet (Ghent University (UGent), Ghent, Belgium) / Emilie Van den Eeckhout (Ghent University (UGent), Ghent, Belgium) / Tom Depover (Ghent University (UGent), Ghent, Belgium) / Kim Verbeken (Ghent University (UGent), Ghent, Belgium)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: K. Verbeken, C. Blanc .

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 222850, Hydrogen diffusion in a duplex stainless steel studied using SKPFM. Experiments and modelling

**Presenting author:** Frédéric Christien

**Authors:** Elia Tohme (Mines Saint-Etienne, Saint-Etienne, France) / Frédéric Christien (Mines Saint-Etienne, Saint-Etienne, France) / Vincent Barnier (Mines Saint-Etienne, Saint-Etienne, France) / Cédric Bosch (Mines Saint-Etienne, Saint-Etienne, France) / Krzysztof Wolski (Mines Saint-Etienne, Saint-Etienne, France)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: A. Oudriss, W. Siegl.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 208055, Hydrogen embrittlement of high manganese steel examined by small-scale testing

**Presenting author:** Dong Wang

**Authors:** Dong Wang (Norwegian University of Science and Technology, Trondheim, Norway) / Xu Lu (Norwegian University of Science and Technology, Trondheim, Norway) / Afroz Barnoush (Norwegian University of Science and Technology, Trondheim, Norway)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: A. Oudriss, W. Siegl.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 211080, The effect of strain rate on the interaction between hydrogen and deformation-induced martensite in 304 austenitic stainless steel

**Presenting author:** Lisa Claeys

**Authors:** Lisa Claeys (Ghent University, Zwijnaarde, Belgium) / Amber Coone (Ghent University, Zwijnaarde, Belgium) / Tom Depover (Ghent University, Zwijnaarde, Belgium) / Iris De Graeve (Vrije Universiteit Brussel, Brussels, Belgium) / Kim Verbeken (Ghent University, Zwijnaarde, Belgium)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: A. Oudriss, W. Siegl.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 211234, The hydrogen trapping ability of Ti- and V- based carbides in tempered martensitic steels evaluated by gaseous hydrogen charging at elevated temperature

**Presenting author:** Liese Vandewalle

**Authors:** Liese Vandewalle (Department of Materials, Textiles and Chemical Engineering, Ghent University, Ghent, Belgium) / Vincent Cnockaert (Department of Materials, Textiles and Chemical Engineering, Ghent University, Ghent, Belgium) / Tom Depover (Department of Materials, Textiles and Chemical Engineering, Ghent University, Ghent, Belgium) / Kim Verbeken (Department of Materials, Textiles and Chemical Engineering, Ghent University, Ghent, Belgium)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: A. Oudriss, W. Siegl.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 193172, Effects of Mo and V on the Hydrogen Assisted Cracking of Tempered Martensitic Steels

**Presenting author:** Livia Cupertino-Malheiros

**Authors:** Livia Cupertino-Malheiros (Laboratoire des Sciences de l'Ingénieur pour l'Environnement (LaSIE) / Vallourec Research Center France, La Rochelle, France) / Daniella Guedes (Vallourec Research Center France, Aulnoye-Aymeries, France) / Abdelali Oudriss (Laboratoire des Sciences de l'Ingénieur pour l'Environnement, UMR CNRS 7356, La Rochelle, France) / Stéphane Cohendoz (Laboratoire des Sciences de l'Ingénieur pour l'Environnement, UMR CNRS 7356, La Rochelle, France) / Michel Piette (Vallourec Research Center France, Aulnoye-Aymeries, France) / Florian Thébaud (Vallourec Research Center France, Aulnoye-Aymeries, France) / Jamaa Bouhattate (Laboratoire des Sciences de l'Ingénieur pour l'Environnement, UMR CNRS 7356, La Rochelle, France) / Juan Creus (Laboratoire des Sciences de l'Ingénieur pour l'Environnement, UMR CNRS 7356, La Rochelle, France) / Xavier Feaugas (Laboratoire des Sciences de l'Ingénieur pour l'Environnement, UMR CNRS 7356, La Rochelle, France)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Ornek, F. Christien.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 188981, Effect of interface characteristics of high Mn-TWIP/TRIP steels during hydrogen-induced delayed cracking

**Presenting author:** Hao Fu

**Authors:** Hao Fu (University of Science and Technology Beijing, Beijing, China PR) / Juanping Xu (University of Science and Technology Beijing, Beijing, China PR) / Jinxu Li (University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Ornek, F. Christien.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 230748, Contribution to the understanding of hydrogen-induced cracking of maraging steel 350

**Presenting author:** Cédric Bosch

**Authors:** Elia Tohme (Mines Saint-Etienne, Saint-Etienne Cedex 02, France) / Cédric Bosch (Mines Saint-Etienne, Saint-Etienne, France) / Frédéric Christien (Mines Saint-Etienne, Saint-Etienne, France) / Vincent Barnier (Mines Saint-Etienne, Saint-Etienne, France) / Krzysztof Wolski (Mines Saint-Etienne, Saint-Etienne, France)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Ornek, F. Christien.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 191566, Effect of alloying elements and microstructure on the susceptibility to hydrogen embrittlement of martensitic high strength steels

**Presenting author:** Sören Trollst

**Authors:** Sören Trollst (TU Darmstadt, Center for Structural Materials, Darmstadt) / Holger Hoche (TU Darmstadt, Center for Structural Materials, Darmstadt) / Matthias Oechsner (TU Darmstadt, Center for Structural Materials, Darmstadt)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Ornek, F. Christien.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 173306, Corrosion resistance of 17-4 PH stainless steel fabricated by selective laser melting

**Presenting author:** Michella Alnajjar

**Authors:** Michella Alnajjar (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307 LGF, Centre SMS, Saint-Etienne, France) / Frédéric Christien (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307 LGF, Centre SMS, Saint-Etienne, France) / Krzysztof Wolski (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307 LGF, Centre SMS, Saint-Etienne, France) / Cédric Bosch (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307 LGF, Centre SMS, Saint-Etienne, France) / Vincent Barnier (Mines Saint-Etienne, Univ Lyon, CNRS, UMR 5307 LGF, Centre SMS, Saint-Etienne, France)

**Room and situation:** Andalucía 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Ornek, F. Christien.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 208242, Corrosion and stress corrosion cracking susceptibility of 17-4PH parts obtained by additive manufacturing

**Presenting author:** Nizar Guennouni

**Authors:** Nizar Guennouni (CETIM - CIRIMAT, Toulouse, France) / Dominique Poquillon (CIRIMAT, Toulouse, France) / Daniel Maisonnette (CETIM, Saint-Etienne, France) / Jose Bolivar (CETIM, Nantes, France) / Christine Blanc (CIRIMAT, Toulouse, France)

#### 20:30 Conference dinner

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: A. Sáez-Maderuelo.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 226403, Characterization of the corrosion and tribology under irradiation behaviour of a stainless steel

**Presenting author:** Bernard Normand

**Authors:** Philippe Martinet (INSA Lyon, Villeurbanne, France) / Sabrina Marcelin (INSA Lyon, Villeurbanne, France) / Nicolas Bererd (Université Lyon1, Villeurbanne, France) / Nathalie Moncoffre (IN2P3 - CNRS, Villeurbanne, France) / Benoit Ter-Ovanessian (INSA Lyon, Villeurbanne, France) / Dominique Baux (CNRS-CEMTHI, Orléans, France) / Bernard Normand (INSA Lyon, Villeurbanne, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: A. Sáez-Maderuelo.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 192842, Proton irradiation effects on the electron work function of austenitic stainless steel weld metal

**Presenting author:** Baolong Jiang

**Authors:** Baolong Jiang (University of Science and Technology Beijing, Beijing, China PR) / Lijie Qiao (University of Science and Technology Beijing, Beijing, China PR) / Qunjia Peng (Suzhou Nuclear Power Research Institute, Suzhou, China PR)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: A. Sáez-Maderuelo.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 199024, The impact of Gamma radiation on the corrosion properties of carbon steel and stainless steel

**Presenting author:** Talal Aljohani

**Authors:** Talal Aljohani (KACST, Riyadh, Saudi Arabia) / Abdullah Al-Mayouf (King Saud University, Riyadh, Saudi Arabia) / Mohammed Geesi (Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia) / A Kaiba (Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia) / Fuad Khoshnaw (De Montfort University, Leicester, United Kingdom)

#### 11:15 - 11:45 Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: D. Engelberg, A. Treichel.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 202852, A Study of Stress Corrosion Cracking by High-Speed Atomic Force Microscopy

**Presenting author:** Stacy Moore

**Authors:** Stacy Moore (University of Bristol, Bristol, United Kingdom) / Robert Burrows (National Nuclear Laboratory, Stonehouse, United Kingdom) / Tomas Martin (University of Bristol, Bristol, United Kingdom) / Loren Picco (Virginia Commonwealth University, Richmond, United States of America) / Thomas Scott (University of Bristol, Bristol, United Kingdom) / Oliver Payton (University of Bristol, Bristol, United Kingdom)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: D. Engelberg, A. Treichel.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 215480, Effect of surface preparation on oxidation of austenitic SS 304L in high temperature water

**Presenting author:** Annesha Das

**Authors:** Annesha Das (Homi Bhabha National Institute, Bhabha Atomic Research Centre, Mumbai, India) / Supratik Roychowdhury (Bhabha Atomic Research Centre, Mumbai, India) / Vivekanand Kain (Bhabha Atomic Research Centre, Mumbai, India)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: D. Engelberg, A. Treichel.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 206372, Corrosion protection of a carbon steel in nuclear power plant secondary circuit conditions by film-forming amines: an impedance study

**Presenting author:** Nadine Pèbère

**Authors:** Jordan Baux (University Toulouse, CIRIMAT - ENSIACET, Toulouse, France) / Nicolas Caussé (University Toulouse, CIRIMAT - ENSIACET, Toulouse, France) / Sophie Delaunay (EDF, Moret-sur-Loing, France) / Jonathan Tireau (EDF, Moret-sur-Loing, France) / Marion Roy (DEN - CEA, University Paris-Saclay, Gif-sur-Yvette, France) / Dominique You (DEN - CEA, University Paris-Saclay, Gif-sur-Yvette, France) / Nadine Pèbère (University Toulouse, CIRIMAT - ENSIACET, Toulouse, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: D. Engelberg, A. Treichel.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 214369, STUDY OF THE INFLUENCE OF MICROSTRUCTURE AND INTERGRANULAR CARBIDES ON THE CRACKING BEHAVIOR OF A NICKEL BASE ALLOY 690 TT BY MEANS OF IN SITU TESTS

**Presenting author:** Alberto Sáez-Maderuelo

**Authors:** Alberto Sáez-Maderuelo (CIEMAT, Madrid, Spain) / Hygreeva Namburi (CVR, Rez, Czech Republic) / Patricie Halodova (CVR, Rez, Czech Republic) / Ondrej Libera (CVR, Rez, Czech Republic) / Michal Chocholousek (CVR, Plzn, Czech Republic) / Jan Prochazka (CVR, Rez, Czech Republic) / Francisco Javier Perosanz (CIEMAT, Madrid, Spain) / Dolores Gómez-Briceño (CIEMAT, Madrid, Spain)



13:05 - 14:00 Lunchtime

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: B. Zajec, S. Moore.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 209375, Intergranular corrosion of austenitic stainless steels in oxidizing nitric media

**Presenting author:** Adrien Emery

**Authors:** Adrien Emery (CEA Saclay, Gif-sur-Yvette, France) / Cecilie Duhamel (Mines Paristech, Evry, France) / Vladimir Esin (Mines ParisTech, Evry, France) / Jerome Crepin (Mines ParisTech, Evry, France) / Pierre Laghoutaris (CEA, Saclay, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: B. Zajec, S. Moore.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 187936, Kinetics and mechanisms of Plutonium oxidation at different temperatures

**Presenting author:** Nicolas Favart

**Authors:** Nicolas Favart (CEA, Is-sur-Tille, France) / Brice Ravat (CEA, Is sur Tille, France) / Lionel Jolly (CEA, Is sur Tille, France) / Lilian Berlu (CEA, Is sur Tille, France) / Benoit Oudot (CEA, Is sur Tille, France) / François Delaunay (CEA, Is sur Tille, France) / Ioana Popa (ICB UMR, Dijon, France) / Sébastien Chevalier (ICB UMR, Dijon, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: B. Zajec, S. Moore.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 176540, The accelerated corrosion of carbon steel in air-solution alternating condition

**Presenting author:** Kyohei Otani

**Authors:** Kyohei Otani (Japan Atomic Energy Agency, Ibaraki, Japan) / Takashi Tsukada (Japan Atomic Energy Agency, Tokai-mura, Ibaraki, Japan) / Hiroshi Terakado (Japan Atomic Energy Agency, Tokai-mura, Ibaraki, Japan) / Koei Ebata (Japan Atomic Energy Agency, Tokai-mura, Ibaraki, Japan) / Fumiyo Ueno (Japan Atomic Energy Agency, Tokai-mura, Ibaraki, Japan)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: B. Zajec, S. Moore.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 180720, Passivity breakdown of Ni-Cr-Fe alloys in chloride plus thiosulfate solutions at the open circuit potential

**Presenting author:** Abraham A. Becerra Araneda

**Authors:** Abraham A. Becerra Araneda (National Commission of Atomic Energy of Argentina, Buenos Aires, Argentina) / Mariano A. Kappes (National Commission of Atomic Energy of Argentina, Buenos Aires, Argentina) / Martín A. Rodríguez (National Commission of Atomic Energy of Argentina, Buenos Aires, Argentina) / Ricardo M. Carranza (National Commission of Atomic Energy of Argentina, Buenos Aires, Argentina)

15:20 - 15:50 - Coffee break

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: L. Martinelli, S. Ritter.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 211201, Corrosion evaluation by electrochemical techniques of the liner structure in nuclear power plants: A case study

**Presenting author:** Isabel Martinez Sierra

**Authors:** Isabel Martinez Sierra (CSIC, MADRID, Spain) / ANGEL CASTILLO TALAVERA (CSIC, MADRID, Spain)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: L. Martinelli, S. Ritter.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 198771, Evaluation of Corrosion Attack at homogeneous weld joint of austenitic pipe and flange

**Presenting author:** Dana Tonarová

**Authors:** Dana Tonarová (UJV Rez, a. s., Husinec-Rez, Czech Republic) / Petr Brabec (UJV Rez, a. s., Husinec-Rez, Czech Republic)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** Nuclear Corrosion (WP4)/Chair: L. Martinelli, S. Ritter.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 219638, Corrosion Mechanisms of T91 (Fe-9Cr) Steel in Pb-Bi Eutectic Alloy aided by Thermodynamic Calculations: Effect of Oxygen

**Presenting author:** Stéphane Gossé

**Authors:** Stéphane Gossé (CEA, Gif-sur-Yvette, France) / Laure Martinelli (CEA Saclay, Gif-sur-Yvette, France) / Kevin Ginestar (CEA Saclay, Gif-sur-Yvette, France)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session:** WP4 Meeting

**Presentation time:** 4:50:00 PM

20:30 Conference dinner

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 185736, Model experimental study of the adsorption and corrosion inhibition mechanisms of 2-mercaptobenzothiazole on copper

**Presenting author:** Xiaocui Wu

**Authors:** Xiaocui Wu (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Physical Chemistry of Surfaces Group, Paris, France) / Frédéric Wiame (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Physical Chemistry of Surfaces Group, Paris, France) / Vincent Maurice (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Physical Chemistry of Surfaces Group, Paris, France) / Philippe Marcus (Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris, Physical Chemistry of Surfaces Group, Paris, France)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 213423, Understanding the effects of carboxylate corrosion inhibitors in corrosion inhibition of Mg

**Presenting author:** Kiryl Yasakau

**Authors:** Kiryl Yasakau (CICECO – Aveiro Institute of Materials, DEMaC, University of Aveiro, Aveiro, Portugal) / Aliaksandr Mikhailau (CICECO – Aveiro Institute of Materials, DEMaC, University of Aveiro, Aveiro, Portugal) / Sviatlana Lamaka (Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research GmbH, Geesthacht) / Mikhail Zheludkevich (Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research GmbH, Geesthacht) / Mario Ferreira (CICECO – Aveiro Institute of Materials, DEMaC, University of Aveiro, Aveiro, Portugal)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 232189, Inhibition of galvanic corrosion by synergistic corrosion inhibitor combinations.

**Presenting author:** Silvar Kallip

**Authors:** Silvar Kallip (University of Tartu / Institute of Chemistry, Tartu, Estonia) / Marco P. Oliveira (University of Aveiro / CICECO Aveiro Institute of Materials, Aveiro, Portugal) / Alexandre C. Bastos (University of Aveiro / CICECO Aveiro Institute of Materials, Aveiro, Portugal) / Lauri Sikk (University of Tartu / Institute of Chemistry, Tartu, Estonia) / Kaido Tamm (University of Tartu / Institute of Chemistry, Tartu, Estonia)

#### 11:15 - 11:45 Coffee break

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 189355, Comparative study on the effect of cerium, lanthanum and lithium salts as corrosion inhibitors for protection of AZ31 Magnesium alloy

**Presenting author:** Loïc Prince

**Authors:** Loïc Prince (University of Mons, Mons, Belgium) / Marie-Georges Olivier (University of Mons, Mons, Belgium)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 226084, A comparison between the effectiveness of corrosion inhibitors with distinctive molecular structures in film formation and corrosion inhibition of AA2024-T3

**Presenting author:** Chathumini Samarawickrama

**Authors:** Chathumini Samarawickrama (RMIT University, Melbourne, Australia) / Patrick Keil (BASF Coatings GmbH, Muenster) / Ivan Cole (RMIT University, Melbourne, Australia) / Liam Ward (RMIT University, Melbourne, Australia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Milosev, Kokalj.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 221981, Effect of inhibitor structure on its efficiency on automotive aluminium alloys

**Presenting author:** Steffen Jeschke

**Authors:** Steffen Jeschke (RMIT University, Melbourne, Australia) / Chathumini Samarawickrama (RMIT University, Melbourne, Australia) / Liam Ward (RMIT University, Melbourne, Australia) / Ivan Cole (RMIT University, Melbourne, Australia) / Phillipp Eiden (BASF SE, Ludwigshafen) / Peter Deglmann (BASF SE, Ludwigshafen) / Patrick Keil (BASF Coatings GmbH, Muenster)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Leygraf.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 224698, Delamination of organic coatings: what are the rate determining processes?

**Presenting author:** Michael Rohwerder

**Authors:** Michael Rohwerder (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Leygraf.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 220452, Spectroscopic imaging of the buried substrate / polymer interface upon exposure to corrosive environments

**Presenting author:** Dan Persson

**Authors:** Dan Persson (RISE KIMAB, Stockholm, Sweden) / Dominique Thierry (Institut de la Corrosion, Brest, France)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Leygraf.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 223730, In situ atomic force microscopy (AFM) analysis of materials under combined corrosive and mechanical load

**Presenting author:** Ozlem Ozcan

**Authors:** Julia Witt (Federal Institute for Materials Research and Testing (BAM), Berlin) / Marina Fernandes Jamar (CEFET-MG - Centro Federal de Educação Tecnológica de Minas Gerais, Belo Horizonte, Brazil) / Daniel Stępień (University of Warsaw, Warsaw, Poland) / Ozlem Ozcan (Federal Institute for Materials Research and Testing (BAM), Berlin)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Rohwerder.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 178795, Study of the effect of the addition of Bis(2-hydroxyethyl)ammonium salicylate ionic liquid on the corrosion of Magnesium alloys in saline solutions

**Presenting author:** Ana Eva Jiménez Ballesta

**Authors:** Ana Eva Jiménez Ballesta (Universidad Politécnica de Cartagena, Cartagena, Spain) / Joaquín Arias Pardilla (Universidad Politécnica de Cartagena, Cartagena, Spain) / María Dolores Bermúdez Olivares (Universidad Politécnica de Cartagena, Cartagena, Spain)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Rohwerder.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 209331, Mechanisms by Which Zinc Phosphate Inhibits Cathodic Disbondment in Organically Coated Zinc

**Presenting author:** Hamilton Neil McMurray

**Authors:** Hamilton Neil McMurray (Swansea University, Swansea, United Kingdom) / Geraint Williams (Swansea University, Swansea, United Kingdom) / Christian Griffiths (Swansea University, Swansea, United Kingdom)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Rohwerder.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 195020, Protection of cut edge steel by zinc-55wt. % aluminium coating-influence of magnesium aluminium polyphosphate inhibitor

**Presenting author:** Yanwen Liu

**Authors:** Yanwen Liu (University of Manchester, Manchester, United Kingdom) / Xiaorong Zhou (Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, United Kingdom) / Stuart Lyon (Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, United Kingdom) / Michele Curioni (Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, United Kingdom) / Simon Gibbon (AkzoNobel, AkzoNobel, Gateshead, United Kingdom) / Derek Graham (AkzoNobel, Gateshead, United Kingdom) / Viktoria Slattery (AkzoNobel, Strongsville, United States of America) / Lauren Vilt (AkzoNobel, Strongsville, United States of America) / Jerry Mach (AkzoNobel, Victoria, Australia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Rohwerder.

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 177002, Corrosion mechanisms and protection of Zn-Mg coatings applied on steel

**Presenting author:** Justine Rodriguez

**Authors:** Justine Rodriguez (Faculty of Engineering, University of Mons, Mons, Belgium) / Marie-Georges Olivier (Faculty of Engineering, University of Mons / Materia Nova ASBL, Mons, Belgium)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Rohwerder.

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 197143, EIS analysis of oxygen reduction on sputtered ZnO films

**Presenting author:** Bernard Tribollet

**Authors:** Bernard Tribollet (UMR8235 CNRS UPMC, Paris Cedex 05, France) / Josiane Soares Costa (French Corrosion Institute, Brest, France) / Michel Prestat (French Corrosion Institute, Brest, France) / Dominique Thierry (French Corrosion Institute, Brest, France) / Benoit Lescop (Bretagne Occidentale University, Brest, France) / Stephane Rioual (Bretagne Occidentale University, Brest, France) / Lorenz Holzer (Zurich University of Applied Sciences, Winterthur, Switzerland)

#### 20:30 Conference dinner

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 179741, Fatigue Corrosion of Multimaterial Concepts

**Presenting author:** Nathalie LeBozec

**Authors:** Nathalie LeBozec (French Corrosion Institute, Brest, France) / Flavien Vucko (French Corrosion Institute, Brest, France) / Dominique Thierry (French Corrosion Institute, Brest, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 218703, The impact of corrosion on adhesive bonded aluminium for use within the automotive Industry

**Presenting author:** Carolina Schneiker

**Authors:** Carolina Schneiker (Rise Kimab AB, Kista, Sweden) / Bo Rendahl (Rise Kimab AB, Kista, Sweden)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 204062, Comparison of Test Methods used to Analyze Stress Corrosion Cracking of Differently Tempered 7075 Aluminium Alloy

**Presenting author:** Neeta Magaji

**Authors:** Neeta Magaji (Daimler AG, Sindelfingen) / Robert Mayrhofer (Daimler AG, Sindelfingen) / Benjamin Kröger (Steinbeis-Transferzentrum Werkstoffe Korrosion und Korrosionsschutz GmbH, Friedrichshafen) / Christian Schnatterer (RWTH Aachen University, Aachen) / Dr. Daniela Zander (RWTH Aachen University, Aachen)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 193964, Corrosion Behavior of Embossed Aluminium Surfaces in Inner Grooved tubes

**Presenting author:** Giorgio Zaffaroni

**Authors:** Giorgio Zaffaroni (Technical University of Denmark, Kgs. Lyngby, Denmark) / Rajan Ambat (Technical University of Denmark, Kgs. Lyngby, Denmark) / Simone Laganá (Technical University of Denmark, Kgs. Lyngby, Denmark) / Carsten Gundlach (Technical University of Denmark, Kgs. Lyngby, Denmark) / Visweswara Chakravarthy Gudla (Technical University of Denmark, Kgs. Lyngby, Denmark) / Jan Halvor Nordlien (Norsk Hydro, Håvik, Norway)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 230044, Intergranular corrosion susceptibility for Al-Mn-Cu alloys heat treated after brazing

**Presenting author:** Yoshiyuki Oya

**Authors:** Yoshiyuki Oya (UACJ Corporation, Nagoya, Japan)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 188409, Reliability corrosion test development for air conditioning condenser

**Presenting author:** MARYSE Philippe

**Authors:** MARYSE Philippe (VALEO, La suze sur sarthe, France) / Christian Casenave (VALEO, La Suze sur Sarthe, France) / Alfy Bele Zata (valeo, La verriere, France) / Anne- Gaele Noumet Villeimiane (VALEO, La Verriere, France) / Vincent Renault (VALEO, La Verriere, France)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Nilsson.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 205888, Corrosion behavior of AISI10Mg alloys produced by additive manufacturing for automotive

**Presenting author:** Alessio Gullino

**Authors:** Alessio Gullino (Politecnico di Torino Dipartimento di Elettronica e Telecomunicazioni, Torino, Italy) / Elisabetta Di Francia (Politecnico di Torino Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Sabrina Grassini (Politecnico di Torino Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Elisa Padovano (Politecnico di Torino Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Claudio Badini (Politecnico di Torino Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy) / Emma Angelini (Politecnico di Torino Dipartimento di Scienza Applicata e Tecnologia (DISAT), Torino, Italy)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 222256, Zn flake coatings as high performance corrosion protection in the Automotive Industry

**Presenting author:** Arthur Boidot

**Authors:** Arthur Boidot (NOF METALCOATINGS EUROPE, Creil, France) / Benoit Millet (NOF METALCOATINGS EUROPE, Creil, France) / Pascal Nicolas (NOF METALCOATINGS EUROPE, Creil, France) / Takahiko Ohtani (NOFMETALCOATINGS ASIA PACIFIC, YOKOHAMA, Japan)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 184834, Control of stiction phenomena in brake systems

**Presenting author:** Francesco Andreatta

**Authors:** Francesco Andreatta (University of Udine, Udine, Italy) / Andrea Isoardi (ITT Motion Technology, Barge, Italy) / Agusti Sin (ITT Motion Technology, Barge, Italy) / Lorenzo Fedrizzi (University of Udine, Udine, Italy)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 175638, Generalized Mechanism of pseudo Hydrogen peak often appearing at around 300 to 400 degree Celsius in steel measured by Thermal Desorption Spectroscopy.

**Presenting author:** Yasuhide Ishiguro

**Authors:** Yasuhide Ishiguro (JFE Steel Corporation, Handa, Aichi, Japan) / Katsuya Hoshino (JFE Steel Corporation, Fukuyama, Hiroshima, Japan)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 216943, The effect of thermomechanical treatments on the corrosion resistance of AA 6082 alloy. EIS characterization

**Presenting author:** Sara Valverde Pérez

**Authors:** Sara Valverde Pérez (Universidade de Vigo, Vigo, Spain) / David Álvarez González (Universidade de Vigo, Vigo, Spain) / X. Ramón Nóvoa (Universidade de Vigo, Vigo, Spain) / Salvador Pérez Betanzos (Cie GALFOR, Ourense, Spain) / Manuel Román Caldelas (Cie GALFOR, Ourense, Spain)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 215810, The effect of quench cracks on the interaction between hydrogen and martensitic steels

**Presenting author:** Margot Pinson

**Authors:** Margot Pinson (Ghent University, Ghent, Belgium) / Tom Depover (Ghent University, Ghent, Belgium) / Kim Verbeke (Ghent University, Ghent, Belgium) / Hauke Springer (Max Planck Institut für Eisenforschung, Düsseldorf)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 185362, Investigation of Corrosion property and Dross formation behavior of ZnMgAl Hot-dip galvanized steel sheet

**Presenting author:** Tae Chul Kim

**Authors:** Tae Chul Kim (POSCO, Gwangyang, Korea, South) / Ii-young Sohn (Posco, Gwangyang, Korea, South) / Jong Sang Kim (Posco, Gwangyang, Korea, South) / Ho Jong Lee (Sunchon National University, Suncheon, Korea, South)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Rougier.

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 191786, Galvanic Corrosion Investigation of Aluminum Steel Interference on Automotive Application

**Presenting author:** Ozak Durmus

**Authors:** Ozak Durmus (Ford Otosan, Istanbul, Turkey) / Arda Kucuksari (Ford Otosan, Istanbul, Turkey) / Mustafa Basaran (Ford Otosan, Istanbul, Turkey)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session:** WP17 Meeting

**Presentation time:** 4:50:00 PM

#### 20:30 Conference dinner

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Kreislova.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 193535, Atmospheric corrosion behavior of carbon steel in snowy cold region

**Presenting author:** Hideki Katayama

**Authors:** Hideki Katayama (National Institute for Materials Science, Tsukuba, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Kreislova.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 204975, Influence of Holding time on the corrosion behavior of Hot Rolled Strip in Beijing natural environment

**Presenting author:** Feifan Xu

**Authors:** Feifan Xu (Shougang Research Institute of Technology, Beijing, China PR)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Kreislova.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 181897, Effect of alloy elements on the corrosion resistance of weathering steel using support vector regression

**Presenting author:** Luchun Yan

**Authors:** Luchun Yan (University of Science and Technology Beijing, Beijing, China PR) / Kewei Gao (University of Science and Technology Beijing, Beijing, China PR)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Friedersdorf.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 214160, Influence of the artificial patination on the atmospheric corrosion of Weathering Steel

**Presenting author:** Ana Crespo

**Authors:** Ana Crespo (Centro Nacional de Investigaciones Metalúrgicas (CENIM) - CSIC, Madrid, Spain) / Delphine Neff (Commissariat à l'énergie atomique et aux énergies alternatives, Saclay, France) / Iván Díaz (Centro Nacional de Investigaciones Metalúrgicas (CENIM) - CSIC, Madrid, Spain) / Emilio Cano (Centro Nacional de Investigaciones Metalúrgicas (CENIM) - CSIC, Madrid, Spain)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Friedersdorf.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 179576, Synchrotron X-ray tomography observation of rust layer on weathering steel exposed for 9years at a seaside industrial area

**Presenting author:** Shunichi Tachibana

**Authors:** Shunichi Tachibana (JFE Steel Corporation, Kurashiki, Japan) / Biao Cai (University of Birmingham, Birmingham, United Kingdom) / Alison Davenport (University of Birmingham, Birmingham, United Kingdom) / Shinichi Miura (JFE Steel Corporation, Kurashiki, Japan) / Hongchang Wang (Diamond Light Source Ltd., Didcot, United Kingdom) / Igor Dolbnya (Diamond Light Source Ltd., Didcot, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Friedersdorf.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 178619, Further corrosion behavior of weathering steels after their rust layers damaged

**Presenting author:** Shanwu Yang

**Authors:** Shanwu Yang (University of Science and Technology Beijing, Beijing, China PR) / Lujun Zhou (University of Science and Technology Beijing, Beijing, China PR)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Atmospheric Corrosion (TF)/Chair: Friedersdorf.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 206493, Accelerated corrosion test and long-term exposure test results of steel for painting

**Presenting author:** Fumio Yuse

**Authors:** Fumio Yuse (Materials Research Laboratory, Kobe Steel, LTD., Kobe, HYOGO, , Japan) / Masahiro MATSUSHITA (Steel development section Kakogawa works, Kobe Steel, LTD., Osaka, Osaka, Japan)

#### 13:05 - 14:00 Lunchtime

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 2:00:00 PM

**Abstract ID and Title:** 212587, Classification of atmospheric stress corrosion cracking and general corrosion resistance of climbing anchors

**Presenting author:** Tomas Prosek

**Authors:** Tomas Prosek (University of Chemistry and Technology, Prague, Czech Republic) / Lionel Kiener (International Climbing and Mountaineering Federation (UIAA), Bern, Switzerland)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 2:20:00 PM

**Abstract ID and Title:** 221442, Accelerated AISCC Testing - From Pit Nucleation, Pit-to-Crack Transition, to In-situ Crack Growth Rate Measurements

**Presenting author:** Dirk Engelberg

**Authors:** Dirk Engelberg (The University of Manchester, Manchester, United Kingdom) / Cem Oernek (KTH Royal Institute of Technology, Stockholm, Sweden)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 2:40:00 PM

**Abstract ID and Title:** 203061, Atmospheric Corrosion and Stress Corrosion Cracking of Stainless Steels Understanding the Evolution of Corrosion/Cracking and Threshold Parameters

**Presenting author:** Cem Örneek

**Authors:** Cem Örneek (KTH Royal Institute of Technology, Stockholm, Sweden) / Dirk Lars Engelberg (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 3:00:00 PM

**Abstract ID and Title:** 222410, Small Crack Growth from Pits in 316L Stainless Steel in Simulated Atmospheric Exposure

**Presenting author:** Yue Zhang

**Authors:** Yue Zhang (National Physical Laboratory, Teddington, United Kingdom) / Cristiano Padovani (Wood, Harwell Campus, Oxfordshire, OX11 0QB, United Kingdom) / Angus Cook (Wood, Harwell Campus, Oxfordshire, OX11 0QB, United Kingdom) / Shengqi Zhou (National Physical Laboratory, Teddington, TW11 0LW, United Kingdom) / Alan Turnbull (National Physical Laboratory, Teddington, TW11 0LW, United Kingdom)

#### 15:20 - 15:50 - Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 3:50:00 PM

**Abstract ID and Title:** 199079, Towards Understanding the Effect of Residual Stress on Atmospheric Chloride-Induced Stress Corrosion Cracking of Austenitic Stainless Steels

**Presenting author:** Carlos Sanchez

**Authors:** Carlos Sanchez (The Health and Safety Executive (HSE), Buxton, United Kingdom) / Marianne Loo-Morrey (The Health and Safety Executive (HSE), Buxton, United Kingdom) / Dirk Engelberg (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 4:10:00 PM

**Abstract ID and Title:** 182667, Methods to test accelerated atmospheric chloride-induced stress corrosion cracking in various stainless steels and aluminum alloys

**Presenting author:** Gen Nakayama

**Authors:** Gen Nakayama (Research Laboratory, IHI Corporation, Yokohama, Japan) / Ippei Shinozaki (Research Laboratory, IHI Corporation, Yokohama, Japan) / Tomomi Koketsu (Research Laboratory, IHI Corporation, Yokohama, Japan) / Yohei Sakakibara (Research Laboratory, IHI Corporation, Yokohama, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 4:30:00 PM

**Abstract ID and Title:** 183844, Investigation of hydrogen uptake in corrosive aqueous environment and hydrogen embrittlement susceptibility of galvanized AHSS

**Presenting author:** Andreas Muhr

**Authors:** Gabriela Schimo-Aichhorn (CEST Competence Center for Electrochemical Surface Technology, Linz, Austria) / Andreas Muhr (voestalpine Stahl GmbH, Linz, Austria) / Ines Traxler (CEST Competence Center for Electrochemical Surface Technology, Linz, Austria) / Gerald Luckeneder (voestalpine Stahl GmbH, Linz, Austria) / Hubert Duchaczek (voestalpine Stahl GmbH, Linz, Austria) / Karl-Heinz Stellnberger (voestalpine Stahl GmbH, Linz, Austria) / Josef Faderl (voestalpine Stahl GmbH, Linz, Austria) / Darya Rudomilova (University of Chemistry and Technology Prague, Technopark Kralupy, Kralupy, Czech Republic) / Tomas Prosek (University of Chemistry and Technology Prague, Technopark Kralupy, Kralupy, Czech Republic) / David Stifter (ZONA Zentrum für Oberflächen- und Nanoanalytik, Johannes Kepler University Linz, Linz, Austria) / Sabine Hild (Institute of Polymer Science, Johannes Kepler University Linz, Linz, Austria)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 4:50:00 PM

**Abstract ID and Title:** 223785, Effect of hydrogen induced by localized corrosion on mechanical behavior of new high strength steel for aeronautical application

**Presenting author:** Camille Rousseau

**Authors:** Camille Rousseau (Safran Aircraft Engines, Evry Cedex, France) / Abdelali Oudriss (LaSIE, La Rochelle, France) / Mohamed El May (I2M, Bordeaux, France) / Xavier Feaugas (LaSIE, La Rochelle, France) / Nicolas Saintier (I2M, Bordeaux, France) / Léa Menut-Tournadre (Safran Aircraft Engines, Villaroche, France) / Stéphane Knittel (Safran Aircraft Engines, Evry, France)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 5:10:00 PM

**Abstract ID and Title:** 215986, Influence of cycling humidity and presence of rust layer on hydrogen uptake in high strength steel studied with Scanning Kelvin Probe

**Presenting author:** Darya Rudomilova

**Authors:** Darya Rudomilova (University of Chemistry and Technology Prague, Prague, Czech Republic) / Tomas Prosek (University of Chemistry and Technology Prague, Prague, Czech Republic) / Gabriela Schimo-Aichhorn (CEST Competence Center for Electrochemical Surface Technology, Linz, Austria) / Ines Traxler (CEST Competence Center for Electrochemical Surface Technology, Linz, Austria) / Andreas Muhr (voestalpine Stahl GmbH, Linz, Austria) / Hubert Duchaczek (voestalpine Stahl GmbH, Linz, Austria) / Gerald Luckeneder (voestalpine Stahl GmbH, Linz, Austria)

#### 20:30 Conference dinner

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 233663, Molecular structure of bacterial biofilms involved in iron biocorrosion

**Presenting author:** Florence Mercier-Bion

**Authors:** Florence Mercier-Bion (Laboratoire Archéomatériaux et Prédiction de l'Altération, NIMBE, CEA-CNRS, Université Paris-Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Catherine BERTHOMIEU-HIENE (Laboratoire Interactions Protéine Métal, CEA Cadarache, 13307 Saint-Paul-les-Durance, France) / Virginie CHAPON (Laboratoire Interactions Protéine Métal, CEA Cadarache, 13307 Saint-Paul-les-Durance, France) / Jean-Paul GALLIEN (Laboratoire Archéomatériaux et Prédiction de l'Altération, NIMBE, CEA-CNRS, Université Paris-Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Laurent URIOS (IPREM, Université de Pau et des Pays de l'Adour, 64000 Pau, France) / Delphine NEFF (Laboratoire Archéomatériaux et Prédiction de l'Altération, NIMBE, CEA-CNRS, Université Paris-Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France) / Philippe DILLMANN (Laboratoire Archéomatériaux et Prédiction de l'Altération, NIMBE, CEA-CNRS, Université Paris-Saclay, CEA Saclay, 91191 Gif-sur-Yvette, France)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 227239, Resolving local processes during microbiologically influenced corrosion by means of scanning electrochemical microscopy

**Presenting author:** Marco Hampel

**Authors:** Marco Hampel (Federal Institute for Materials Research and Testing (BAM), Berlin) / Matthias Schenderlein (Federal Institute for Materials Research and Testing (BAM), Berlin) / Matthias Dimper (Federal Institute for Materials Research and Testing (BAM), Berlin) / Ozlem Ozcan (Federal Institute for Materials Research and Testing (BAM), Berlin)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 187298, Quantitative analysis of Prolixibacter, which accommodating with iron-corroding nitrate-reducing bacteria, in microbial mats, brines and seawater.

**Presenting author:** Takao Iino

**Authors:** Takao Iino (RIKEN BioResource Research Center, 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan) / Kimio Ito (Advanced Technology Research Laboratories, Nippon Steel & Sumitomo Metal Corporation, 20-1 Shintomi, Futtsu, Chiba 293-8511, Japan) / Chol Gyu Lee (Japan Collection of Microorganisms, RIKEN BioResource Research Center, 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan) / Toshiyuki Sunaba (Materials & Corrosion Group, Technical Research Center, INPEX Corporation, 9-23-30 Kitakarasuyama, Setagaya, Tokyo 157-0061, Japan) / Moriya Ohkuma (Japan Collection of Microorganisms, RIKEN BioResource Research Center, 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 204370, Microbially Induced Corrosion Phenomena in Danube Cooling Water System

**Presenting author:** Elke Ludwig

**Authors:** Elke Ludwig (Borealis Agrolinz Melamine, Linz, Austria) / Matthias Gierlinger (Borealis Polyolefine, Linz, Austria) / Markus Grossalber (Borealis Polyolefine, Linz, Austria) / Lubomir Krabac (Borealis Polyolefine, Linz, Austria) / Michael Baak (Borealis Agrolinz Melamine, Linz, Austria)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 184086, Relevance of galvanic corrosion for bihydrometallurgical processing

**Presenting author:** Christoph Tanne

**Authors:** Christoph Tanne (Federal Institute for Geosciences and Natural Resources (BGR), Hannover) / Axel Schippers (Federal Institute for Geosciences and Natural Resources (BGR), Hannover)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 225732, Premature Failure of 316L Stainless Steel Pipes Due to MIC

**Presenting author:** Mohammed Al Muaisub

**Authors:** Mohammed Al Muaisub (Saudi Aramco, Dhahran, Saudi Arabia) / Akram Alfantazi (Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates) / Edouard Asselin (The University of British Columbia, Vancouver, Canada)

**Room and situation:** Cartuja, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Microbial Corrosion (WP10)/Chair: Basseguy.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 233751, Application of ToF-SIMS for sulfur isotopic fractionation in sulfide phases of iron corrosion layers: determination of bacterial impact on the formation of these phases

**Presenting author:** Florence Mercier-Bion

**Authors:** Florence Mercier-Bion (Laboratoire Archéomatériaux et Prévision de l'Altération/NIMBE-UMR 3685 CEA-CNRS, CEA Saclay, 91191 Gif-sur-Yvette, France) / Nicolas NUNS (Univ. Lille, CNRS, INRA, Centrale Lille, ENSCL, Univ. Artois, FR 2638 - IMEC - Institut Michel-Eugène Chevreul, Lille, France) / Delphine NEFF (Laboratoire Archéomatériaux et Prévision de l'Altération/NIMBE-UMR 3685 CEA-CNRS, CEA Saclay, 91191 Gif-sur-Yvette, France) / Laurent URIOS (IPREM, Univ. de Pau et des Pays de l'Adour, 64000 Pau, France) / Jean-Paul GALLIEN (Laboratoire Archéomatériaux et Prévision de l'Altération/NIMBE-UMR 3685 CEA-CNRS, CEA Saclay, 91191 Gif-sur-Yvette, France) / Philippe REFAIT (Laboratoire des Sciences de l'Ingénieur pour l'Environnement (LaSIE) - UMR 7356 Univ. de La Rochelle-CNRS, Pôle Sciences et Technologie, Avenue Michel Crépeau, 17042 La Rochelle Cedex 1, France) / Céline REMAZEILLES (Laboratoire des Sciences de l'Ingénieur pour l'Environnement (LaSIE) - UMR 7356 Univ. de La Rochelle-CNRS, Pôle Sciences et Technologie, Avenue Michel Crépeau, 17042 La Rochelle Cedex 1, France) / Marc JEANNIN (Laboratoire des Sciences de l'Ingénieur pour l'Environnement (LaSIE) - UMR 7356 Univ. de La Rochelle-CNRS, Pôle Sciences et Technologie, Avenue Michel Crépeau, 17042 La Rochelle Cedex 1, France) / René SABOT (Laboratoire des Sciences de l'Ingénieur pour l'Environnement (LaSIE) - UMR 7356 Univ. de La Rochelle-CNRS, Pôle Sciences et Technologie, Avenue Michel Crépeau, 17042 La Rochelle Cedex 1, France) / Philippe DILLMANN (Laboratoire Archéomatériaux et Prévision de l'Altération/NIMBE-UMR 3685 CEA-CNRS, CEA Saclay, 91191 Gif-sur-Yvette, France)

#### 13:05 - 14:00 Lunchtime

#### 15:20 - 15:50 - Coffee break

#### 20:30 Conference dinner

**Room and situation:** Triana 4, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session:** WP18 business meeting

**Presentation time:** 10:15:00 AM



**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**Presentation time:** 09:00:00 AM

**Plenary Session:** Plenary Lecture: Prof. Xose Ramón Novoa- "*Durable reinforced concrete structures. Some electrochemical aspects*"

**09:45 – 10:15 Break to visit Exhibitors**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 203556, Temperature dependent corrosion resistance of water based coatings

**Presenting author:** Bob Luigjes

**Authors:** Bob Luigjes (AkzoNobel, Sassenheim, Netherlands)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 231969, Evaluating the Corrosion protection performance of Epoxy Nanocomposite Coatings through Micro Electrochemical Methods

**Presenting author:** Arumugam Madhan Kumar

**Authors:** Arumugam Madhan Kumar (King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Organic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 218736, Life cycle cost calculation of high durability coating systems considering the ISO 12944 standard

**Presenting author:** Kenichiro Yamauchi

**Authors:** Kenichiro Yamauchi (DNT, Ohtawara, Japan) / Tsuyoshi Miyashita (DNT, Ohtawara, Japan) / Hiroyuki Tanabe (DNT, Ohtawara, Japan) / Svend Johnsen (Johnsen Global Consultant, Copenhagen, Denmark)

**11:15 - 11:45 Coffee break**

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 179653, Sealing of anodized aluminium by ZrO<sub>2</sub> nanoparticles for increased alkali resistance

**Presenting author:** Adrian Anthes

**Authors:** Adrian Anthes (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Wolfram Fürbeth (DECHEMA-Forschungsinstitut, Frankfurt am Main) / Christoph Lämmel (Fraunhofer IKTS, Dresden) / Michael Schneider (Fraunhofer IKTS, Dresden)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 222751, Assessment of hybrid silica coatings (SiO<sub>2</sub>) doped with nano charges used as protective multifunctional barriers against corrosion and wear processes in AZ31B Magnesium alloy

**Presenting author:** Juan Pablo Fernández-Hernán

**Authors:** Juan Pablo Fernández-Hernán (Universidad Rey Juan Carlos, Móstoles, Spain) / Antonio Julio López (Universidad Rey Juan Carlos, Móstoles, Spain) / Belén Torres (Universidad Rey Juan Carlos, Móstoles, Spain) / Joaquín Rams (Universidad Rey Juan Carlos, Móstoles, Spain)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 223994, Corrosion Resistance of Nanostructured Zinc Oxide Films at Adhesive/Zinc Alloy Interfaces

**Presenting author:** Richard Grothe

**Authors:** Richard Grothe (Phd Graduate / Technical and Macromolecular Chemistry, University of Paderborn, Paderborn) / Dennis Meinderink (Phd Graduate / Technical and Macromolecular Chemistry, University of Paderborn, Paderborn) / Jan Striewe (Phd Graduate / Automotive Lightweight Design, University of Paderborn, Paderborn) / Jannik Kowatz (Phd Graduate / Material and Joining Technology, University of Paderborn, Paderborn) / Thomas Tröster (Head of Automotive Lightweight Design, University of Paderborn, Paderborn) / Gerson Meschut (Head of Material and Joining Technology, University of Paderborn, Paderborn) / Guido Grundmeier (Head of Technical and Macromolecular Chemistry, University of Paderborn, Paderborn)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 229043, Shipbuilding: Welding Aspects in the Presence of Shop Primer

**Presenting author:** Isabel Margarit-Mattos

**Authors:** Alexandre Marinho (UFRJ, Rio de Janeiro, Brazil) / Isabel Margarit-Mattos (UFRJ, Rio de Janeiro, Brazil) / Kioshy Assis (UFRJ, Rio de Janeiro, Brazil) / Douglas Fortunato (UFRJ, Rio de Janeiro, Brazil) / Sebastião Alves (Tintas Vinci, Rio de Janeiro, Brazil)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 227668, ALD films deposited on metallic substrates for corrosion protection

**Presenting author:** Marco Oliveira

**Authors:** Marco Oliveira (University of Aveiro, Aveiro, Portugal) / Tiago Silva (University of Aveiro, Aveiro, Portugal) / Ricardo Silva (University of Aveiro, Aveiro, Portugal) / Kiryl Yasakau (University of Aveiro, University of Aveiro, Portugal) / Alexandre Bastos (University of Aveiro, University of Aveiro, Portugal) / Silvar Kallip (University of , Tartu, Estonia) / Augusto Lopes (University of Aveiro, University of Aveiro, Portugal) / Rui Silva (University of Aveiro, Aveiro, Portugal) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht , Geesthacht) / Mário Ferreira (University of Aveiro, Aveiro, Portugal)

**Room and situation:** Sevilla 1, Floor 0 (foyer)

**Session and Chair(s):** Inorganic Coatings (WP14)/Chair: W. Fürbeth, R. Novoa.

**Presentation time:** 1:25:00 PM

**Abstract ID and Title:** 192435, FUNDAMENTAL MECHANISM OF METAL DEPOSITION MEDIATED BY POLYAMIDES

**Presenting author:** Gastelle F. Tiétcha

**Authors:** Gastelle F. Tiétcha (Dörken MKS-Systeme GmbH & Co. KG, Herdecke , Ruhr) / Laura Mears (Technische Universität Wien, Institute of Applied Physics, Vienna, Austria) / Ingo Klüppel (Dörken MKS-Systeme GmbH & Co. KG, Herdecke) / Marcel Roth (Dörken MKS-Systeme GmbH & Co. KG, Herdecke) / Markus Valtiner (Technische Universität Wien, Institute of Applied Physics, Vienna, Austria)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: De Graeve.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 207703, Correlation between microstructure and corrosion behaviour of power bed laser beam melting 17-4PH stainless steel

**Presenting author:** Adrien Barroux

**Authors:** Adrien Barroux (CIRIMAT, Université de Toulouse, CNRS, ENSIACET, Toulouse, France) / Nadège Ducommun (CETIM, Pôle Matériaux Métalliques et Surfaces, Nantes, France) / Eric Nivet (CETIM, Pôle Matériaux Métalliques et Surfaces , Nantes, France) / Lydia Laffont (CIRIMAT, Université de Toulouse, CNRS, ENSIACET, Toulouse, France) / Christine Blanc (CIRIMAT, Université de Toulouse, CNRS, ENSIACET, Toulouse, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: De Graeve.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 230374, Corrosion behaviour of stainless steel 420 manufactured by Selective Laser Melting

**Presenting author:** Mengyan Nie

**Authors:** Mengyan Nie (Institute for Materials Discovery, University College London, London, United Kingdom) / Xiao Zhao (Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, United Kingdom) / Kwang-Leong Choy (Institute for Materials Discovery, University College London, London, United Kingdom) / Muhammed Shariq Enver (Institute for Materials Discovery, University College London, London, United Kingdom) / Shijie Zhang (Institute for Materials Discovery, University College London, London, United Kingdom)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: De Graeve.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 184273, Effect of heat treatment on microstructure, mechanical properties and corrosion behavior of selective laser melted 15-5PH steel

**Presenting author:** Li Wang

**Authors:** Li Wang (University of Science and Technology Beijing, Beijing, China PR) / Chaofang Dong (University of Science and Technology Beijing, Beijing, China PR) / Xiaogang Li (University of Science and Technology Beijing, Beijing, China PR)

**11:15 - 11:45** Coffee break

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Vignal.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 185098, Effect of thermal treatment on microstructure and corrosion behaviour of 316L stainless steel manufactured by selective laser melting

**Presenting author:** Lorenzo Fedrizzi

**Authors:** Francesco Andreatta (University of Udine, Udine, Italy) / Reynier Inocente Revilla Castillo (Vrije Univesiteit Brussel, Brussel, Belgium) / Alex Lanzutti (University of Udine, Udine, Italy) / Emanuele Vaglio (University of Udine, Udine, Italy) / Luca Clocchiatti (University of Udine, Udine, Italy) / Giovanni Totis (University of Udine, Udine, Italy) / Marco Sortino (University of Udine, Udine, Italy) / Iris De Graeve (Vrije Universiteit Brussel, Brussel, Belgium) / Lorenzo Fedrizzi (University of Udine, Udine, Italy)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Vignal.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 181083, Influence of additive manufacturing on corrosion resistance of 316L stainless steel

**Presenting author:** Françoise Liautaud

**Authors:** Tiphaine Schott (Cetim Grand Est, Mulhouse, France) / Romaric Maillard (Cetim Grand Est, Mulhouse, France) / Christophe Grosjean (Cetim, Saint-Etienne, France) / Jérôme Thabourey (Cetim Grand Est, Mulhouse, France) / Françoise Liautaud (Cetim Grand Est, Mulhouse, France)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Vignal.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 210673, Corrosion study of 3D printed maraging steel

**Presenting author:** Caterina Zanella

**Authors:** Donya Ahmadkhaniha (Jönköping University, Jönköping, Sweden) / Heinrich Möller (University of Pretoria, Pretoria, South Africa) / Caterina Zanella (Jönköping University, Jönköping, Sweden)

**Room and situation:** Sevilla 2, Floor 0 (foyer)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Vignal.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 221860, Microstructure and Corrosion performance of Inconel 718 manufactured by selective laser melting

**Presenting author:** Mengyan Nie

**Authors:** Mengyan Nie (Institute for Materials Discovery, University College London, London, United Kingdom) / Xiao Zhao (Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, United Kingdom) / Kwang-leong Choy (Institute for Materials Discovery, University College London, London, United Kingdom) / Sirapat Wattanamanont (Institute for Materials Discovery, University College London, London, United Kingdom) / Kaize Teng (Institute for Materials Discovery, University College London, London, United Kingdom)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 191302, Ultrasound solutions for monitoring of advanced corrosion processes in the oil and gas industry

**Presenting author:** Turcu Florin

**Authors:** Turcu Florin (Olympus Europa, Rungis, France) / Victor Chumillas (Olympus Iberia, Madrid, Spain)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 202929, Utilizing Different ILI Technologies to Predict Corrosion Growth Rates

**Presenting author:** Dian Adisty

**Authors:** Dian Adisty (DNV GL, Oslo, Norway) / Michelle Havlock (DNV GL, Columbus, Ohio, United States of America) / Eric Graf (DNV GL, Columbus, Ohio, United States of America) / Anne Britt Høydal (DNV GL, Oslo, Norway) / Pamela Moreno (DNV GL, Katy, Texas, United States of America) / Thomas Bubenik (DNV GL, Columbus, Ohio, United States of America)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Winning.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 186649, APPLICATION EXPERIENCE OF NEW CONTACTLESS METHOD FOR DIAGNOSTIC THE CORROSION CONDITION OF OIL AND GAS PIPELINES INTERNAL AND EXTERNAL SURFACES

**Presenting author:** Efim Lyublinski

**Authors:** Efim Lyublinski (COR/SCI, LLC, Solon, United States of America) / Michael Getmansky (Intercor, Inc, Boston, United States of America) / Boris Verbitsky (Intercor, Inc, Boston, United States of America) / Sergey Nosihin (Intercor, Inc, Boston, United States of America)

**11:15 - 11:45** Coffee break

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 195383, Case study: Polyethylene internal coating failure

**Presenting author:** Monica Da Cunha Marroig

**Authors:** Monica Da Cunha Marroig (PETROBRAS, Rio de Janeiro, Brazil) / Daniela Gomes Schmidt (PETROBRAS, Rio de Janeiro, Brazil) / Alexandre Esteves e Cunha (PETROBRAS, Rio de Janeiro, Brazil)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 194624, CORROSION ASSESSMENT OF CRUDE OIL STORAGE TANKS

**Presenting author:** Vittorio Colombo

**Authors:** Vittorio Colombo (Cescor, Milano, Italy) / Claudio Vailati (Cescor srl, Milan, Italy) / Bruno Bazzoni (Cescor srl, Milan, Italy) / Lucia Torri (ENI SpA, Milan, Italy)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 214336, Causes and prevention of corrosion in crude oil storage and distribution systems

**Presenting author:** Vaclav Sefl

**Authors:** Vaclav Sefl (Technopark Kralupy with UCT Prague, Kralupy nad Vltavou, Czech Republic) / Tomas Prosek (Technopark Kralupy UCT Prague, Kralupy nad Vltavou, Czech Republic)

**Room and situation:** Sevilla 3+4, Floor 0 (foyer)

**Session and Chair(s):** C. in Oil & Gas Production (WP13)/Chair: Wilms.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 172305, GC Fingerprinting to Assist Oil Wells Downhole Corrosion

**Presenting author:** Talal Alghamdi

**Authors:** Talal Alghamdi (Saudi Aramco, Abqaiq, Saudi Arabia)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 190752, New portable temporary coupon in comparison to standard on-site gravimetric coupon in regard to a.c. corrosion risk assessment according to EN ISO 18086 criteria.

**Presenting author:** Alexandre Perrot

**Authors:** Alexandre Perrot (GRTgaz, Saint Denis, France) / Elisabeth Fleury (GRTgaz, Saint-Denis, France) / Romuald Bouaffre (GRTgaz, Saint-Denis, France) / Sylvain Fontaine (GRTgaz, Compiègne, France) / Bernard Masson (GRTgaz, Compiègne, France) / David Sellam (GRTgaz, Compiègne, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 174340, Towards a better understanding of alternating current induced corrosion

**Presenting author:** Mario Markić

**Authors:** Mario Markić (DECHEMA-Forschungsinstitut, Frankfurt)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 187133, A Design Case of Cathodic Protection for Pipelines Inside Subsea Tunnel

**Presenting author:** Song HongSeok

**Authors:** Song HongSeok (Korea Gas Corporation, Ansan, Korea, South) / YoungGeun Kim (Korea Gas Corporation, Ansan, Korea, South) / Hong\_Kyun Sohn (Hongik University, Sejong, Korea, South) / HeeSan Kim (Hongik University, Sejong, Korea, South)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 188882, A complete picture and comparison of successes and failures of two continuous cathodic protection system in two mega complex structured gas refinery

**Presenting author:** Shahabaddin Feghahati

**Authors:** Hamed Aldaghi (POGC, Tehran, Iran) / M. Javad Jafari (POGC, Tehran, Iran) / Shahabaddin Feghahati (Trust Quality Control Engineering Company, Tehran, Iran)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 207516, Effect of survey conditions on the reliability of coating flaw detection of buried pipe

**Presenting author:** Young Sik Kim

**Authors:** Bu-Taek Lim (Andong National University(KEPCO-E&C), Andong, Korea, South) / Ki Tae Kim (Andong National University, Andong, Korea, South) / Hyun Young Chang (KEPCO-E&C, Gimcheon, Korea, South) / Young Sik Kim (Andong National University(Materials Research Center for Energy and Green Technology), Andong, Korea, South) / Min Ki Kim (Andong National University, Andong, Korea, South) / Young Ran Yoo (Andong National University, Andong, Korea, South)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 185692, FEEDBACK ON GALVANIC PROTECTION APPLIED TO BURIED LNG TANKS

**Presenting author:** Xavier Hallopeau

**Authors:** Xavier Hallopeau (Freysinet International & Cie, Rueil Malmaison Cedex, France)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 198881, Upgradation of Cathodic Protection system for aboveground storage tanks

**Presenting author:** Mohammed Alotaibi

**Authors:** Mohammed Alotaibi (Saudi Aramco, Jeddah, Saudi Arabia)

**Room and situation:** Andalucia 1+2, Floor 0 (above Atrio III)

**Session and Chair(s):** Cathodic Protection (WP16)/Chair: J. Crouzillac, Ormellese.

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 201972, Cathodic Protection of Filtration Drums and Condenser Case of Paluel and Blayais Nuclear Power Plants

**Presenting author:** Stephane Trevin

**Authors:** Stephane Trevin (EDF, Grenoble, France)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Feron, M. Yamamoto.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 215865, 3D Cellular Automata modelling of Intergranular Corrosion

**Presenting author:** Simone Guiso

**Authors:** Simone Guiso (Den-Service de la Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, Gif-sur-Yvette, France) / Dung di Caprio (Chimie ParisTech, PSL Research University, CNRS, Institut de Recherche de Chimie Paris (IRCP), Paris, France) / Jacques de Lamare (Den-Service de la Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, Gif-sur-Yvette, France) / Benoit Gwinner (Den-Service de la Corrosion et du Comportement des Matériaux dans leur Environnement (SCCME), CEA, Université Paris-Saclay, Gif-sur-yvette, France)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Feron, M. Yamamoto.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 205646, Cellular Automata simulation of corrosion and scaling processes taking place in CO2 saturated solutions

**Presenting author:** Rafael Leiva Garcia

**Authors:** Rafael Leiva Garcia (University of Manchester, Manchester, United Kingdom) / Jake Andrews (University of Manchester, Manchester, United Kingdom) / Philip Aldhous (University of Manchester, Manchester, United Kingdom) / Robert Akid (University of Manchester, Manchester, United Kingdom)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Feron, M. Yamamoto.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 197858, Numerical Simulation of Internal Corrosion at High Temperatures by Cellular Automata

**Presenting author:** Katrin Jahns

**Authors:** Katrin Jahns (University of Applied Sciences Osnabrück, Osnabrück) / Kamil Balinski (University of Applied Sciences Osnabrück, Osnabrück) / Jürgen Wübbelmann (University of Applied Sciences Osnabrück, Osnabrück) / Ulrich Krupp (RWTH Aachen University, Aachen)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Di Caprio and K. Jahns.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 187804, A Cellular Automata model for the release of corrosion inhibitors from primer coatings

**Presenting author:** Eugenio Bonetti

**Authors:** Eugenio Bonetti (School of Chemical Engineering and Analytical Science, The University of Manchester, Manchester, M13 9PL, England, United Kingdom) / Flor R. Siperstein (School of Chemical Engineering and Analytical Science, The University of Manchester, Manchester, M13 9PL, England, United Kingdom) / Gavin Scott (AkzoNobel Industrial Coatings AB, 205 17 Malmö, Sweden) / Simon R. Gibbon (AkzoNobel, Felling, Gateshead, Tyne & Wear, NE10 0JY England, United Kingdom)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Di Caprio and K. Jahns.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 184581, Modelling of intergranular corrosion using cellular automata-I Characteristics and corrosion rates of stainless steels in modified nuclear reprocessing solution.

**Presenting author:** Masahiro Yamamoto

**Authors:** Masahiro Yamamoto (Japan Atomic Energy Agency, Tokai-mura Ibaraki, Japan) / Eriko Irisawa (Japan Atomic Energy Agency, Tokai-Mura Ibaraki, Japan) / Takahiro Igarashi (Japan Atomic Energy Agency, Tokai-Mura Ibaraki, Japan) / Atsushi Komatsu (Japan Atomic Energy Agency, Tokai-Mura Ibaraki, Japan) / Chiaki Chiaki (Japan Atomic Energy Agency, Tokai-Mura Ibaraki, Japan) / Fumiyoshi Ueno (Japan Atomic Energy Agency, Tokai-Mura Ibaraki, Japan)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Di Caprio and K. Jahns.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 186704, Modelling of intergranular corrosion using cellular automata-II Numerical calculation results and comparison of intergranular corrosion of stainless steels using cellular automata.

**Presenting author:** Takahiro Igarashi

**Authors:** Takahiro Igarashi (Japan Atomic Energy Agency, Ibaraki-ken, Japan) / Eriko Irisawa (Japan Atomic Energy Agency, Ibaraki, Japan) / Atsushi Komatsu (Japan Atomic Energy Agency, Ibaraki, Japan) / Masahiro Yamamoto (Japan Atomic Energy Agency, Ibaraki, Japan) / Fumiyoshi Ueno (Japan Atomic Energy Agency, Ibaraki, Japan)

**Room and situation:** Andalucia 3, Floor 0 (above Atrio III)

**Session and Chair(s):** Modelling of C. using Cellular Automata/Chair: D. Di Caprio and K. Jahns.

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 238481, Cellular automata modelling of localised corrosion.

**Presenting author:** Dung Di Caprio

**Authors:** Dung Di Caprio (CNRS, Chimie ParisTech, Paris, France) / Damien Féron (CEA, Université Paris-Saclay, Saclay, France) / Jacques de Lamare (CEA, Université Paris-Saclay, Saclay, France)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 195669, Corrosiveness analysis of nafta and dilution steam condensate mixture, a case study of corrosion at a petrochemical industry process stream

**Presenting author:** Rodrigo Moraes Kunrath

**Authors:** Rodrigo Moraes Kunrath (Braskem, Novo Hamburgo, Brazil) / Jane Zoppas Ferreira (UFRGS, Porto Alegre, Brazil)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 173427, Stress Relaxation Cracking of TP 347H SS Flange Weld Joints on Reactor Charge Heater Manifold in Propane De-Hydrogenation Unit.

**Presenting author:** Sudharsanan Soundararajan

**Authors:** Sudharsanan Soundararajan (ADNOC-Refining, Al Ruwais, United Arab Emirates) / Tahier Ramadan Hamad (ADNOC-Refining, Al Ruwais, United Arab Emirates)

**Room and situation:** Andalucia 4, Floor 0 (above Atrio III)

**Session and Chair(s):** C. in the Refinery & Petrochemistry Industry (WP15)/Chair: Ropital, Van Roij.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 208308, Grape peel extracts as eco-friendly Corrosion Inhibitors

**Presenting author:** Janaina C. Rocha

**Authors:** Janaina C. Rocha (Federal University of Rio de Janeiro, Rio de Janeiro, Brazil) / Luana B. Furtado (Departamento de Processos Orgânicos, UFRJ, Rio de Janeiro, Brazil) / José Antônio da Cunha Ponciano Gomes (Departamento de Engenharia Metalúrgica e de Materiais, COPPEUFRJ, Rio de Janeiro, Brazil) / Rafaela C. Nascimento (Universidade de Évora-Portugal, Évora, Portugal) / Renata Valeriano Tonon (Embrapa Agroindústria de Alimentos, Rio de Janeiro, Brazil) / Lourdes Maria C. Cabral (Embrapa Agroindústria de Alimentos, Rio de Janeiro, Brazil) / Gabriela Nunes Mattos (Programa de Pós-Graduação em Ciência de Alimentos (Instituto de Química) da UFRJ, Rio de Janeiro, Brazil) / Peter R. Seidl (Departamento de Processos Orgânicos, UFRJ, Rio de Janeiro, Brazil) / Maria Jose De Oliveira C. Guimaraes (Departamento de Processos Orgânicos, UFRJ, Rio de Janeiro, Brazil)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Volovitch, Guillemolles.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 190345, Unveiling Modern Convergencies Between Photovoltaics and Corrosion Science

**Presenting author:** Daniel LINCOT

**Authors:** Daniel LINCOT (Institut Photovoltaïque Ile de France (IPVF), Palaiseau, France) / Arnaud Etcheberry (Institut Lavoisier de Versailles (ILV), Université Paris-Saclay, CNRS - UVSQ, Versailles, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Volovitch, Guillemolles.

**Presentation time:** 10:45:00 AM

**Abstract ID and Title:** 173086, Atmospheric Corrosion. A Summary of Important Physicochemical Processes.

**Presenting author:** Christofer Leygraf

**Authors:** Christofer Leygraf (KTH - Royal Institute of Technology, Stockholm, Sweden)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Lincot, Volovitch.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 210420, Photocorrosion of oxide-covered metals in aqueous electrolytes studied for titanium

**Presenting author:** Håvard Wilson

**Authors:** Håvard Wilson (NTNU, Trondheim, Norway) / Arnoul Van Rooij (NTNU, Trondheim, Norway) / Andreas Erbe (NTNU, Trondheim, Norway)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Lincot, Volovitch.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 194195, Ambient degradation of photovoltaic absorbers: the specific case of Cu(In,Ga)Se<sub>2</sub>

**Presenting author:** Arnaud Etcheberry

**Authors:** Solene Bechu (IPVF, Palaiseau, France) / Anais Loubat (ILV, Versailles, France) / Jackie Vigneron (ILV, Versailles, France) / Daniel Lincot (CNRS-IPVF, Palaiseau, France) / Jean-Francois Guillemoles (CNRS-IPVF, Palaiseau, France) / Muriel Bouttemy (ILV, Versailles, France) / Arnaud Etcheberry (ILV, Versailles, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Lincot, Volovitch.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 206933, Innovative hybrid encapsulation solutions for industrial flexible Cu(In,Ga)Se<sub>2</sub> photovoltaic technology

**Presenting author:** Shan-Ting Zhang

**Authors:** Shan-Ting Zhang (CNRS, Institut Photovoltaïque d'Île-de-France (IPVF), UMR 9006, 30 route départementale 128, 91120, Palaiseau, France) / Nathanaelle Schneider (CNRS, Institut Photovoltaïque d'Île-de-France (IPVF), UMR 9006, 30 route départementale 128, 91120, Palaiseau, France) / Thibaud Hildebrandt (EDF R&D, Institut Photovoltaïque d'Île-de-France (IPVF), 30 route départementale 128, 91120, Palaiseau, France) / Roland Wuerz (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW), Meitnerstraße 1, 70565, Stuttgart) / Oliver Salomon (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW), Meitnerstraße 1, 70565, Stuttgart)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Lincot, Volovitch.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 214908, Stability and Interfaces in Perovskite Solar Cells

**Presenting author:** Philip Schulz

**Authors:** Philip Schulz (CNRS-IPVF, Palaiseau, France)

**Room and situation:** Andalucia 5, Floor 0 (above Atrio III)

**Session and Chair(s):** WS: Durability of Photovoltaic Modules/Chair: Lincot, Volovitch.

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 236270, Defect evolution in ZnO followed by spectroscopic methods

**Presenting author:** Andreas Erbe

**Authors:** Andreas Erbe (NTNU, Norwegian University of Science and Technology, Trondheim, Norway) / Stefanie Tecklenburg (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chair: S. Garcia, R. Souto.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 218351, Smart release of corrosion inhibitor from mesoporous and hollow mesoporous silica nanoparticles

**Presenting author:** Daniel de la Fuente

**Authors:** Daniel de la Fuente (CENIM/CSIC, Madrid, Spain) / Cristina Zea (CENIM/CSIC, Madrid, Spain) / Jenifer Alcántara (CENIM/CSIC, Madrid, Spain) / Rosa Barranco-García (ICTP/CSIC, Madrid, Spain)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chair: S. Garcia, R. Souto.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 213940, A smart anti-corrosion ethyl cellulose based coating with the CO<sub>2</sub>-responsive property

**Presenting author:** Junlei Tang

**Authors:** Junlei Tang (Southwest Petroleum University, Chengdu, China PR)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14)/Chair: S. Garcia, R. Souto.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 227041, Preparation of spheroidal capsules containing healing agents for self-healing coating

**Presenting author:** Makoto Chiba

**Authors:** Makoto Chiba (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan) / Yuki Tsuji (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan) / Haruka Okuyama (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan) / Haruno Yanagimoto (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan) / Atsushi Hyono (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan) / Hideaki Takahashi (National Institute of Technology, Asahikawa College, Asahikawa city, Hokkaido, Japan)

**11:15 - 11:45** Coffee break

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14) /Chair: S. Garcia, R. Souto.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 230473, Localised Electrochemical Techniques for Studying Corrosion of Mg and Mg Alloys / coating systems: Opportunities and Challenges

**Presenting author:** Violeta Barranco

**Authors:** Violeta Barranco (National Centre for Metallurgical Research -CENIM-CSIC, Madrid, Spain) / Federico R. García-Galvan (National Centre for Metallurgical Research (CENIM), Madrid, Spain) / Santiago Fajardo (National Centre for Metallurgical Research (CENIM), Madrid, Spain) / Sebastian Feliu (National Centre for Metallurgical Research (CENIM), Madrid, Spain) / Juan Carlos Galvan (National Centre for Metallurgical Research (CENIM), Madrid, Spain)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14) /Chair: S. Garcia, R. Souto.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 186561, Self-healing abilities of coated steel doped with synthesized silica by one stage process containing encapsulated dodecylamine

**Presenting author:** Brunela Pereira Da Silva

**Authors:** Brunela Pereira Da Silva (Polytechnic School of the University of São Paulo - USP, São Paulo, Brazil) / Idalina Aoki (Polytechnic School of the University of São Paulo - USP, São Paulo, Brazil)

**Room and situation:** Andalucia 6+7, Floor 0 (above Atrio III)

**Session and Chair(s):** Self-healing and Smart Coatings (WP14) /Chair: S. Garcia, R. Souto.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 202423, pH sensitive carriers loaded with corrosion inhibitors for protection of epoxy coated steel for marine applications

**Presenting author:** Roma Raj

**Authors:** Roma Raj (Instituto Superior Técnico, Lisbon, Portugal) / Yegor Morozov (Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal) / Lénia M. Calado (Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal) / Maryna Taryba (Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal) / Ramazan Kahraman (Department of Chemical Engineering, Qatar University, Doha, Qatar) / Abdul Shakoor (Center for Advanced Materials, Qatar University, Doha, Qatar) / Fatima Montemor (Centro de Química Estrutural, Instituto Superior Técnico, Lisbon, Portugal)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: G. Mori, C. Bosch.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 186880, The role of microstructural anisotropy in hydrogen induced stress corrosion cracking of direct-quenched martensitic steel

**Presenting author:** Renata Latypova

**Authors:** Renata Latypova (University of Oulu, Oulu, Finland) / Sakari Pallaspuro (University of Oulu, Oulu, Finland) / Tun Tun Nyo (University of Oulu, Oulu, Finland) / Saara Mehtonen (SSAB Europe, Raahe, Finland) / Hannu Hänninen (Aalto University, Espoo, Finland) / Jukka Kömi (University of Oulu, Oulu, Finland)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: G. Mori, C. Bosch.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 223950, Nucleation of Stress Corrosion Cracking in High-Strength Austenitic CrMn-Stainless Steel exposed to NaCl Solution at Elevated Temperature

**Presenting author:** Bojan Zajec

**Authors:** Bojan Zajec (Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Andraž Legat (Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia) / Helmuth Sarmiento Klapper (Baker Hughes, a GE Company, Celle) / Sebastian Jesse (Baker Hughes, a GE Company, Celle)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: G. Mori, C. Bosch.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 174912, In-situ Observation of Stress Corrosion Cracking in Lean Duplex Stainless Steel

**Presenting author:** Kenichiro Eguchi

**Authors:** Kenichiro Eguchi (JFE Steel Corporation, Handa, Japan) / Timothy Burnett (The University of Manchester, Manchester, United Kingdom) / Dirk Engelberg (The University of Manchester, Manchester, United Kingdom)

#### 11:15 - 11:45 Coffee break

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, A. Oudriss.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 218879, SCC of steam turbine steel in acidic aqueous environment

**Presenting author:** Tim De Seranno

**Authors:** Tim De Seranno (Ghent University, Ghent, Belgium) / Ellen Lambrechts (Ghent University, Ghent, Belgium) / Tom Depover (Ghent University, Ghent, Belgium) / Arne Verliefde (Ghent University, Ghent, Belgium) / Kim Verbeken (Ghent University, Ghent, Belgium)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, A. Oudriss.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 198078, Sensitivity to hydrogen of titanium on cathodic protection in a marine environment : pure titanium T40 (Grade 2) and TA6V ELI (Grade 23)

**Presenting author:** Alexandre Poloni

**Authors:** Alexandre Poloni (Naval Group, Bouguenais, France) / Abdelali Oudriss (LaSIE, La Rochelle, France) / Juan Creus (LaSIE, La Rochelle, France) / Cyril Berziou (LaSIE, La Rochelle, France) / Egle Conforto (LaSIE, La Rochelle, France) / Stéphane Cohendoz (LaSIE, La Rochelle, France) / Simon Frappart (Naval Group, Bouguenais, France) / Thierry Millot (Naval Group, Bouguenais, France) / Aude Mathis (Naval Group, Bouguenais, France) / Xavier Feaugas (LaSIE, La Rochelle, France)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, A. Oudriss.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 190213, Influence of Inclusions on Hydrogen Induced Delayed Cracking in Hot Stamping Steels

**Presenting author:** Jing Liu

**Authors:** Yong Chen (School of Materials and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Jing Liu (School of Materials and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Feng Huang (School of Materials and Metallurgy, Wuhan University of Science and Technology, Wuhan, China PR) / Yanjing Su (Institute for Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR) / Guifeng Zhou (Wuhan Branch of Baosteel Central Research Institute, Wuhan, China PR) / Lin Chen (Institute for Advanced Materials and Technology, University of Science and Technology Beijing, Beijing, China PR)



**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, A. Oudriss.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 175737, Insight into corrosion fatigue initiation and cracking mechanism of E690 steel in SO<sub>2</sub>-polluted marine atmosphere

**Presenting author:** Ma Hongchi

**Authors:** Ma Hongchi (University of Science & Technology Beijing, Beijing, China PR) / Cuiwei Du (University of Science & Technology Beijing, Beijing, China PR) / Xiaogang Li (University of Science & Technology Beijing, Beijing, China PR)

**Room and situation:** Andalucia 8, Floor 0 (above Atrio III)

**Session and Chair(s):** Environment Sensitive Fracture (WP5)/Chair: C. Bosch, A. Oudriss.

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 206207, On the corrosion fatigue mechanism in welded and unwelded duplex stainless steels during very high numbers of load cycles

**Presenting author:** Jan-Stefan Peters

**Authors:** Jan-Stefan Peters (Institute of Materials Design and Structural Integrity, University of Applied Sciences Osnabrück, Osnabrück) / Alexander Giertler (Institute of Materials Design and Structural Integrity, University of Applied Sciences Osnabrück, Osnabrück) / Javad Mola (Institute of Materials Design and Structural Integrity, University of Applied Sciences Osnabrück, Osnabrück) / Rainer Peters (Institute of Materials Design and Structural Integrity, University of Applied Sciences Osnabrück, Osnabrück) / Angela Hamann-Steinmeier (Institute of Process Engineering, University of Applied Sciences Osnabrück, Osnabrück) / Ulrich Krupp (Steel Institute (IEHK), RWTH Aachen University, Aachen)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** JS: Management of Corrosion (WP4, WP9 + WP16)/Chair: Ph. Refait, S. Ritter.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 207395, Establishment of an international guide standard for corrosion management in industry.

**Presenting author:** Agatha Swierczynski

**Authors:** Agatha Swierczynski (DIN CERTCO GmbH, Berlin)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** JS: Management of Corrosion (WP4, WP9 + WP16)/Chair: Ph. Refait, S. Ritter.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 197022, Effective corrosion monitoring recommended parameters and analytical approach

**Presenting author:** Rituraj Mishra

**Authors:** Rituraj Mishra (BHARAT PETROLEUM CORPORATION LIMITED, Mumbai, India)

**Room and situation:** España 1+2, Floor -1 (Atrio III)

**Session and Chair(s):** JS: Management of Corrosion (WP4, WP9 + WP16)/Chair: Ph. Refait, S. Ritter.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 206592, Understanding and mitigating corrosion of carbon steel in aggressive geothermal brines

**Presenting author:** Troels Mathiesen

**Authors:** Troels Mathiesen (FORCE Technology, Brøndby, Denmark) / Jakob Mølholm (FORCE Technology, Esbjerg, Denmark) / Johan Bräuner Nielsen (FORCE Technology, Brøndby, Denmark)

**11:15 - 11:45** Coffee break

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 229582, Visualizing Corrosion Mechanisms on Galvanized Steel

**Presenting author:** Markus Nadlinger

**Authors:** Markus Nadlinger (CEST, Wiener Neustadt, Austria) / Martin Fleischanderl (voestalpine Stahl GmbH, Linz, Austria) / Martin Rosner (voestalpine Stahl GmbH, Linz, Austria) / Gerald Luckeneder (voestalpine Stahl GmbH, Linz, Austria) / Karl-heinz Stellnberger (voestalpine Stahl GmbH, Linz, Austria) / Christian Paulik (JKU Linz, Linz, Austria)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 189652, Analysis of corrosion with electrochemical techniques applied to geothermal power plants in Switzerland

**Presenting author:** Ana Vallejo Vitaller

**Authors:** Ana Vallejo Vitaller (ETH Zurich, Institute for Building Materials, Zurich, Switzerland) / Ueli Angst (ETH Zurich, Institute for Building Materials, Zurich, Switzerland) / Bernhard Elsener (ETH Zurich, Institute for Building Materials, Zurich, Switzerland)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Ogle.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 193777, Statistical analysis and artificial pit studies of hot-dip galvanized steel in simulated soil solution

**Presenting author:** Davood Nakhaie

**Authors:** Davood Nakhaie (The University of British Columbia, Vancouver, Canada) / Edouard Asselin (The University of British Columbia, Vancouver, Canada)

11:15 - 11:45 Coffee break

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Costa.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 229615, First-principles study explaining the mechanism responsible for the enhanced rates of hydrogen evolution on dissolving magnesium in aqueous environments

**Presenting author:** Santiago Fajardo

**Authors:** Santiago Fajardo (CENIM-CSIC, Madrid, Spain) / Jodie Adrian Yuwono (School of Photovoltaics and Renewable Engineering, University of New South Wales, Sydney, Australia) / Christopher Taylor (The Ohio State University, Columbus, United States of America) / Gerald S. Frankel (The Ohio State University, Columbus, United States of America) / Nick Birbilis (Australian National University, Acton, Australia)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Costa.

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 185043, Use of FEM simulation to study corrosion phenomena under macrocell mechanism

**Presenting author:** Marco Ormellese

**Authors:** Marco Ormellese (Politecnico di Milano, Milano, Italy) / Mehdi Attarchi (Politecnico di Milano, Milano, Italy) / Andrea Brenna (Politecnico di Milano, Milano, Italy) / Fabio Bolzoni (Politecnico di Milano, Milano, Italy)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Costa.

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 219110, In silico Discovery of Modulators of Magnesium Dissolution

**Presenting author:** Christian Feiler

**Authors:** Christian Feiler (Helmholtz-Zentrum Geesthacht, Geesthacht) / Sviatlana Lamaka (Helmholtz-Zentrum Geesthacht, Geesthacht) / Di Mei (Helmholtz-Zentrum Geesthacht, Geesthacht) / Tim Würger (Helmholtz-Zentrum Geesthacht, Geesthacht) / Robert Meißner (Helmholtz-Zentrum Geesthacht, Geesthacht) / David Winkler (La Trobe University, Bundoora, Australia) / Mikhail Zheludkevich (Helmholtz-Zentrum Geesthacht, Geesthacht)

**Room and situation:** España 4+5, Floor -1 (Atrio III)

**Session and Chair(s):** C. Mechanisms, Methods & Modelling (WP6+8)/Chair: Costa.

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 225061, Computational and data guided approaches to understand corrosion inhibitors

**Presenting author:** Tiago Galvão

**Authors:** Tiago Galvão (CICECO-Aveiro Institute of Materials, Aveiro, Portugal) / Gerard Novell Leruth (CICECO-Aveiro Institute of Materials, Aveiro, Portugal) / Stanley Udochukwu Ofoegbu (CICECO-Aveiro Institute of Materials, Aveiro, Portugal) / Mikhail L. Zheludkevich (MagIC, Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Geesthacht) / Mário G. S. Ferreira (CICECO-Aveiro Institute of Materials, Aveiro, Portugal) / João Tedim (CICECO-Aveiro Institute of Materials, Aveiro, Portugal) / José R. B. Gomes (CICECO-Aveiro Institute of Materials, Aveiro, Portugal)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

13:55 – 14:15 Closing Remarks

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 236358, Graphene tuned coatings for automotive applications

**Presenting author:** Karanveer Aneja

**Authors:** Karanveer Aneja (Talga Technologies Ltd., Cambridge, United Kingdom)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 191742, Heat Treatment Effect on Corrosion Resistance of Grain Refined Al8Si3Cu Cast Alloy

**Presenting author:** Mustafa Kocabas

**Authors:** Mikdat Gurtaran (Bursa Technical University, Bursa, Turkey) / Mustafa Kocabas (Konya Technical University, Konya, Turkey) / Muhammet Uludağ (Bursa Technical University, Bursa, Turkey)

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 176804, What is PosPVD

**Presenting author:** Young Jin Kwak

**Authors:** Young Jin Kwak (POSCO, Gwangyang-si, Korea, South) / T.Y. Kim (POSCO, gwangyang, Korea, South) / S.H Lee (POSCO, Gwangyang, Korea, South)

11:15 - 11:45 Coffee break

**Room and situation:** Giralda, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** Automotive Corrosion (WP17)/Chair: Szala, Hannour.

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 207769, Experimental Assessment of Electrochemical Cyclic Corrosion Test Method For Automotive Organic-Coated Steels

**Presenting author:** Seung Ho Ahn

**Authors:** Seung Ho Ahn (Hyundai Motor Group, R&D Center, Hwaseong, Korea, South) / Won Seog Yang (Hyundai Steel Company, Dangjin-Si, Korea, South) / Byung Su Kim (Hyundai Motor Group R&D Center, Hwaseong-Si, Korea, South) / Hye Rim Choi (Hyundai Steel Company, Dangjin-Si, Korea, South) / Jin Hwan Park (Pukyong National University, Busan, Korea, South)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)  
**13:55 – 14:15** Closing Remarks

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 10:15:00 AM

**Abstract ID and Title:** 180412, Influence of environmental factors on amount of absorbed hydrogen under dry-wet corrosion environment

**Presenting author:** Shinji Ootsuka

**Authors:** Shinji Ootsuka (JFE steel Corporation, Kawasaki Kanagawa, Japan) / Daisuke Mizuno (JFE steel Corp., Kawasaki Kanagawa, Japan) / Nobuyuki Ishikawa (JFE steel Corp., Kawasaki Kanagawa, Japan)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 10:35:00 AM

**Abstract ID and Title:** 211388, EBSD characterization of hydrogen induced blisters and internal cracks in TRIP-assisted steel with various degrees of cold deformation

**Presenting author:** Aurélie Laureys

**Authors:** Aurélie Laureys (UGent, Zwijnaarde, Belgium) / Margot Pinson (UGent, Zwijnaarde, Belgium) / Roumen Petrov (UGent, Zwijnaarde, Belgium) / Kim Verbeken (UGent, Zwijnaarde, Belgium) / Tom Depover (University Ghent, Ghent, Belgium)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 10:55:00 AM

**Abstract ID and Title:** 182106, Hydrogen absorption into iron with rust layer during atmospheric corrosion in humidity-controlled air

**Presenting author:** Takumi Haruna

**Authors:** Takumi Haruna (Kansai University, Osaka, Japan) / Yuki Shoji (Kansai University, Osaka, Japan) / Youhei Hirohata (Kansai University, Osaka, Japan)

**11:15 - 11:45** Coffee break

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 11:45:00 AM

**Abstract ID and Title:** 172877, Determination of hydrogen in zinc coated high strength steels using Scanning Kelvin Probe Force Microscopy

**Presenting author:** Ines Traxler

**Authors:** Ines Traxler (CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, Linz, Austria) / Gabriela Schimo-Aichhorn (CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, Linz, Austria) / Andreas Muhr (voestalpine Stahl GmbH, Linz, Austria) / Gerald Luckeneder (voestalpine Stahl GmbH, Linz, Austria) / Hubert Duchaczek (voestalpine Stahl GmbH, Linz, Austria) / Karl-Heinz Stellnberger (voestalpine Stahl GmbH, Linz, Austria) / Josef Faderl (voestalpine Stahl GmbH, Linz, Austria) / Darya Rudomilova (University of Chemistry and Technology Prague, Kralupy nad Vltavou, Czech Republic) / Tomáš Prošek (University of Chemistry and Technology Prague, Kralupy nad Vltavou, Czech Republic) / Sabine Hild (Johannes Kepler Universität, Linz, Austria) / David Stifter (Johannes Kepler Universität, Linz, Austria)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 12:05:00 PM

**Abstract ID and Title:** 202775, Effect of cutting-edge condition on stress-corrosion cracking susceptibility of Advanced High Strength Steels

**Presenting author:** Sílvia Molas

**Authors:** Sílvia Molas (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Amadeu Concustell (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Antoni Lara (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Giselle Ramírez (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / David Frómata (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain) / Daniel Casellas (EURECAT, Centre Tecnològic de Catalunya, Manresa, Spain)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 12:25:00 PM

**Abstract ID and Title:** 201400, Comparison of environmentally assisted cracking in high zinc content 7xxx Al alloys imaged by time-lapse synchrotron computed tomography (CT)

**Presenting author:** Tim Burnett

**Authors:** Tim Burnett (The University of Manchester, Manchester, United Kingdom) / Visweswara Gudla (The University of Manchester, Manchester, United Kingdom) / Zak Barrett (Airbus, Bristol, United Kingdom) / Al Garner (The University of Manchester, Manchester, United Kingdom) / Henry Holroyd (The University of Manchester, Manchester, United Kingdom) / Christian Engel (Airbus, Munich) / Phil Prangnell (The University of Manchester, Manchester, United Kingdom) / Malte Storm (Diamond Light Source, Oxford, United Kingdom) / John Lewandowski (Case Western Reserve University, Cleveland, United States of America) / Ben Palmer (Case Western Reserve University, Cleveland, United States of America) / Philip Withers (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 12:45:00 PM

**Abstract ID and Title:** 198925, Multiscale Correlative Characterization of Environmentally Assisted Crack Initiation, Propagation and Failure in a High Strength Aluminium Alloy

**Presenting author:** Visweswara Gudla

**Authors:** Visweswara Gudla (The University of Manchester, Manchester, United Kingdom) / Timothy Burnett (The University of Manchester, Manchester, United Kingdom) / N J Henry Holroyd (The University of Manchester, Manchester, United Kingdom) / Malte Storm (Diamond Light Source, Didcot, United Kingdom) / Alistair Garner (The University of Manchester, Manchester, United Kingdom) / Benjamin Palmer (Case Western Reserve University, Cleveland, United States of America) / John Lewandowski (Case Western Reserve University, Cleveland, United States of America) / Philip Withers (The University of Manchester, Manchester, United Kingdom)

**Room and situation:** Triana 1+2+3, Floor -1 / Floor 0 (between Atrio III and Atrio I)

**Session and Chair(s):** JS Atmospheric EAC (WP5, WP17, WP22 + TF)/Chair: .

**Presentation time:** 1:05:00 PM

**Abstract ID and Title:** 193645, Factors Influencing Atmospheric Environment Assisted Cracking of a High Strength Aluminum Alloy

**Presenting author:** Fritz Friedersdorf

**Authors:** Fritz Friedersdorf (Luna Innovations Incorporated, CHARLOTTESVILLE, United States of America) / Brandi Clark (Luna Innovations, Charlottesville, United States of America) / Jacob Wright (Luna Innovations, Charlottesville, United States of America) / Nathan Brown (Luna Innovations, Charlottesville, United States of America)

**Room and situation:** Sevilla 1+2+3+4, Floor 0 (foyer)

**13:55 – 14:15** Closing Remarks



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