

MONDAY, 07.09.2015

SCIENTIFIC LECTURES PROGRAMME

Registration08:00 - 09:00 **Room: Saal 1****Opening Ceremony**09:00 - 09:15 **Room: Saal 1**

Chairs **F. Montemor**, Universidade Técnica de Lisboa, Lisboa/PT
A. Mol, TU Delft, Delft/NL
K.-H. Stellnberger, voestalpine Stahl, Linz/AT
G. Mori, Montanuniversität Leoben, Leoben/AT

EFC Medal Award and Lecture09:15 - 09:55 **Room: Saal 1**

Passivity of metals and alloys and initiation of localized corrosion
P. Marcus, CNRS - Chimie ParisTech, Paris/FR

Kurt Schwabe Prize Award: Marta Moledano Sánchez09:55 - 10:20 **Room: Saal 1**

Plasma electrolytic oxidation of light alloys for corrosion protection and surface functionalization
M. Moledano, Helmholtz-Zentrum Geesthacht, Geesthacht/DE

EFC Honorary Fellow Award: Mr. Pourbaix (Director of Cebelcor)10:20 - 10:30 **Room: Saal 1**10:30 - 11:00 **COFFEE BREAK / Room: Exhibition Area**

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Pretreatments / Organic Coatings	
11:00 – 12:40	Room: Saal 11
Chairs	W. Fürbeth, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE J. Vogelsang, Sika Technology AG, Zürich/CH
11:00 – 11:20	Effect of cerium addition on the corrosion protection properties of hybrid sol-gel coatings on AA1050 M. Fedel ¹ , M. Fabbian ¹ , F. Deflorian ¹ , ¹ University of Trento, Trento/IT
11:20 – 11:40	Influence of substrate pretreatments on the Trivalent Chromium Process (TCP) coating properties on aluminium alloys R. Viroulaud ¹ , J. Swiatowska ¹ , A. Seyeux ¹ , S. Zanna ¹ , J. Tardelli ² , P. Marcus ¹ ¹ CNRS - Chimie ParisTech, Paris/FR; ² IRT-M2P - Institut de Recherche Technologique/Matériaux Métallurgie et Procédés, Metz/FR
11:40 – 12:00	Corrosion protection of road bridges with a 100 years lifetime O. Knudsen ¹ , G. Djuve ² , J. Hasselø ² ¹ SINTEF, Trondheim/NO; ² NPRA - Norwegian Public Roads Administration, Oslo/NO
12:00 – 12:20	Corrosion protection of steel structures in industrial and marine atmospheres by waterborne acrylics DTM (direct to metal) paint system P. Tiano ¹ , I. Aoki ² ¹ Industria Eletrica Marangoni Marretti Ltda, Mogi Mirim, São Paulo/BR ² Universidade de São Paulo, São Paulo/BR
12:20 – 12:40	Corrosion protection of superhydrophobic PVDF-co-HEF/Al2O3 coating for aluminum surfaces A. Bahgat ¹ , A. Mohamed ¹ , A. Abdullah ¹ , M. Al-Maadeed ¹ , M. Sliem ¹ ¹ Qatar University, Doha/QA
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Organic Coatings	
14:00 – 15:40	Room: Saal 11
Chairs	J. Vogelsang, Sika Technology AG, Zürich/CH P. Keil, BASF Coatings GmbH, Münster/DE
14:00 – 14:20	Novel waterborne 2K epoxy-hardener dispersions with top performance and minimum impact on health & environment F. Lunzer ¹ , M. Zirngast ¹ , G. Hobisch ¹ ¹ Allnex, Graz/AT

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14:20 – 14:40	Corrosion protection of machined steel surfaces – coating adhesion C. Hagen ¹ , A. Kristoffersen ¹ , O. Knudsen ² ¹ Norwegian University of Science and Technology, Trondheim/NO ² SINTEF, Trondheim/NO
14:40 – 15:00	Dielectric and impedance spectroscopy investigations on highly structured corrosion protection coatings on mild steel C. Becker-Willinger ¹ , S. Schmitz-Stoewe ¹ , M. Jochum ¹ , S. Albayrak ¹ , E. Perre ¹ , M. Wild ¹ ¹ INM - Leibniz-Institut für Neue Materialien GmbH, Saarbrücken/DE
15:00 – 15:20	The effect of doping level on corrosive properties of polyaniline / polyvinylbutyral coatings F. Perrin ¹ , T. Phan ² , D. Nguyen ² ¹ Université de Toulon, La Garde Cedex/FR; ² University of Da Nang, Da Nang/VN
15:20 – 15:40	Polyaniline/graphene nanocomposite coatings on mild steel for surface protection A. Madhan Kumar ¹ , Z. Gasem ¹ ¹ King Fahd University of Petroleum and Minerals, Dhahran/SA
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Organic Coatings	
16:10 – 17:10	Room: Saal 11
Chairs	P. Keil, BASF Coatings GmbH, Münster/DE W. Fürbeth, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE
16:10 – 16:30	Anodic delamination and constant climate test for degradation of organic coatings S. Walkner ¹ , A. Hassel ² ¹ CEST Competence Centre for Electrochemical Surface Technology, Wiener Neustadt/AT; ² Johannes Kepler Universität Linz, Linz/AT
16:30 – 16:50	Anticorrosion and wear-resistant composite coating at the surface of magnesium alloys S. Gnedenkov ¹ , S. Sinebryukhov ¹ , D. Mashtalyar ¹ , K. Nadaraya ¹ ¹ Russian Academy of Sciences, Vladivostok/RU
16:50 – 17:10	Development of excellent corrosion- and abrasion-resistant anti-fingerprint steels for digital TV panels D. Jo ¹ , J. Park ¹ ¹ POSCO, Pohang/KR

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Mechanisms, Methods & Modelling	
11:00 – 11:40	Room: Galerie B
Chairs	A. Mol , TU Delft, Delft/NL P. Marcus , CNRS - Chimie ParisTech, Paris/FR
11:00 – 11:40 Keynote	Metal grain boundary passivation studied by in situ scanning tunnelling microscopy on microcrystalline copper V. Maurice¹ , H. Chen ¹ , L. Klein ¹ , L. Lapeire ² , K. Verbeken ² , H. Terryn ³ , P. Marcus ¹ ¹ CNRS - Chimie ParisTech, Paris/FR ² Ghent University, Zwijnaarde/BE ³ Vrije Universiteit Brussel (VUB), Brussel/BE
11:40 – 12:00	Sigma (S3) and random grain boundaries and their effect on the corrosion of Ni-Cr-Mo alloys N. Ebrahimi¹ , P. Jakupi ¹ , I. Korinek ² , D. Moser ¹ , D. Shoesmith ¹ ¹ Western University, London, Ontario/CA ² Canadian Center of Electron Microscopy, Hamilton/CA
12:00 – 12:20	Relative humidity of pitting initiation and repassivation of stainless steels under wet-dry cycles at various temperatures A. Nishikata¹ , T. Nam ¹ , E. Tada ¹ ¹ Tokyo Institute of Technology, Tokyo/JP
12:20 – 12:40	On the effect of local strain and stress on environment-assisted cracking susceptibility of grade 2205 duplex stainless steel C. Örnek¹ , D. Engelberg ¹ ¹ The University of Manchester, Manchester/GB
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
14:00 – 15:40	Room: Galerie B
Chair	V. Maurice , CNRS - Chimie ParisTech, Paris/FR
14:00 – 14:20	Influence of the grain orientation spread and grain size on the pitting corrosion resistance of duplex stainless steel using EBSD / CPT at the microscale V. Vignal¹ , D. Ba ¹ , S. le Manchet ² ¹ CNRS - Université de Bourgogne, Dijon/FR; ² ArcelorMittal, Global R&D, Le Creusot/FR

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14:20 – 14:40	Correlating grain boundary crystallography to aluminum corrosion M. Seita¹ , M. Volpi ² , M. Pedferri ² , M. Demkowicz ¹ , M. Diamanti² ¹ Massachusetts Institute of Technology, Cambridge/US ² Politecnico di Milano, Milano/IT
14:40 – 15:00	Corrosion properties of polished or shot-peened and plasma nitride austenitic stainless steel 304L and 316L J. Biehler¹ , H. Hoche ¹ , M. Oechsner ¹ , ¹ TU Darmstadt, Darmstadt/DE
15:00 – 15:20	Influence of nitrogen on the corrosion resistance of martensitic stainless steels P. Rosemann¹ , T. Halle ¹ ¹ Otto-von-Guericke Universität Magdeburg, Magdeburg/DE
15:20 – 15:40	Modelling of hydrogen evolution and diffusion on carbon steel in an inverted rotating disk electrode L. Vecchi¹ , B. Özdirik ¹ , H. Terryn ¹ , I. De Graeve ¹ , J. Deconinck ¹ , C. Khon ¹ , Y. Van Ingelgem ¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
16:10 – 17:30	Room: Galerie B
Chair	V. Vignal , CNRS - Université de Bourgogne, Dijon/FR
16:10 – 16:30	Repassivation studies using coupled multi electrode arrays T. Kosec¹ , B. Zajec ¹ , A. Legat ¹ ¹ Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI
16:30 – 16:50	A risk-based approach to pitting corrosion evaluation E. Shekari¹ , F. Khan ¹ , S. Ahmed ¹ , ¹ Memorial University of Newfoundland, St. John's/CA
16:50 – 17:10	Behaviour of a low-carbon martensitic stainless steel (X4CrNiMo 16.5.1) exposed to water condensation S. Thiebaut¹ , V. Vignal ² , S. Ringeval ¹ , K. Tabalaiev ² ¹ CEA, Is-sur-Tille/FR; ² CNRS - Université de Bourgogne, Dijon/FR
17:10 – 17:30	Change of pH of inside the crevice with time during crevice corrosion initiation and growth step of a duplex stainless steel N. Ito¹ , R. Yamamoto ² , S. Aoki ¹ , J. Sakai ¹ ¹ Waseda University, Shinjuku-ku, Tokio/JP ² EBARA Corporation, Fujisawa-shi, Kanagawa/JP

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Hydrogen in Oil, Marine and ESF	
11:00 – 12:40	Room: Saal 10
Chairs	S. Paterson , Shell Projects & Technology, Amsterdam/NL K. Wolski , Ecole Nationale Supérieure des Mines, Saint Etienne/FR
11:00 – 11:20	HISC testing and result from long time low temperature creep measurements of duplex U. Kivisäkk AB Sandvik Materials Technology, Sandviken/SE
11:20 – 11:40	Hydrogen induced stress cracking tests for offshore wind farm monopile foundations – Part II D. Bangsgaard¹ , T. Mathiesen¹ , L. Hilbert¹ ¹ Force Technology, Brøndby/DK
11:40 – 12:00	Hydrogen induced SCC of a martensitic stainless steel: influence of cathodic potential F. Bolzoni¹ , G. Fumagalli¹ , L. Lazzari¹ , S. Tagini¹ ¹ Politecnico di Milano, Milano/IT
12:00 – 12:20	Influence of stress state and plastic strain on hydrogen diffusion and trapping into subsurface of nickel single crystal (100) X. Feaugas¹ , C. Lekbir¹ , C. Huvier¹ , E. Conforto¹ , J. Creus¹ , R. Sabot¹ ¹ Université de la Rochelle, La Rochelle/FR
12:20 – 12:40	Impact of cementite on the tortuosity of the hydrogen diffusion paths in pearlitic steels C. Forot¹ , E. Legrand² , E. Roguet³ , J. Creus² , J. Kittel¹ , X. Feaugas² ¹ IFP Energies Nouvelles (IFPEN), Solaize/FR; ² Université de la Rochelle, La Rochelle/FR; ³ IFP Energies Nouvelles (IFPEN), Rueil-Malmaison/FR
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Hydrogen in Oil, Marine and ESF	
14:00 – 15:40	Room: Saal 10
Chair	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE
14:00 – 14:20	Comparison of sour environmental severity by DCB K. Kobayashi¹ , K. Kondo² ¹ Nippon Steel & Sumitomo Metal Corporation, Amagasaki/JP ² Nippon Steel & Sumitomo Metal Corporation, Wakayama/JP

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14:20 – 14:40	Influence of baking time at different temperature on the hydrogen embrittlement of QTM steels J. Creus¹ , A. Oudriss¹ , R. Milet¹ , H. Morillot² , J. Sobrino² , C. Berziou¹ , C. Rébéré¹ , S. Cohendoz¹ , X. Feaugas¹ ¹ Université de La Rochelle, La Rochelle/FR; ² CETIM, Senlis/FR
14:40 – 15:00	On the implication of the grain boundary character on hydrogen diffusion and trapping in the nickel bicrystals A. Oudriss¹ , J. Li¹ , J. Creus¹ , J. Bouhattate¹ , X. Feaugas¹ ¹ Université de la Rochelle, La Rochelle/FR
15:00 – 15:20	The hydrogen permeation of low alloy high strength steel at splash zone and the mitigation effect of a wrapping protection technique Y. Huang¹ , W. Qu¹ , X. Yu¹ , M. Zheng¹ , D. Lu¹ , B. Hou¹ ¹ Chinese Academy of Sciences, Qingdao/CN
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Hydrogen in Oil, Marine and ESF	
16:10 – 17:30	Room: Saal 10
Chair	S. Paterson , Shell Projects & Technology, Amsterdam/NL
16:10 – 16:30	The Double-Cantilever-Beam Test at Forty D. Sponseller¹ , T. Sponseller¹ , ¹ OMNI Metals Laboratory Inc., Ann Arbor/US
16:30 – 16:50	Online monitoring of crack growth in NACE TM0177-2005 method D sour gas testing C. Holzer¹ , G. Mori¹ , G. Klösch² , J. Klarner³ , R. Sonnleitner³ ¹ Montanuniversität Leoben, Leoben/AT; ² voestalpine Stahl Donawitz GmbH & Co KG, Leoben/AT; ³ voestalpine Tubulars GmbH & Co KG, Kindberg-Aumüh/AT
16:50 – 17:10	Influence of Cu addition on corrosion product and hydrogen permeation in mildly sour conditions D. Mizuno¹ , K. Baba¹ , H. Nakamichi¹ , K. Yasuda¹ , N. Ishikawa¹ ¹ JFE Steel Corporation, Kawasaki/JP
17:10 – 17:30	Corrosion product formation under sour conditions and its influence on H uptake E. Wallaert¹ , K. Verbeken¹ , I. De Graeve² ¹ Ghent University, Zwijnaarde/BE; ² Vrije Universiteit Brussel (VUB), Brussel/BE

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Sustainable and Green Energies	
11:00 – 12:20	Room: Saal 3
Chair	R. Bäßler, BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE
11:00 – 11:20	Damage tolerance of thermally sprayed corrosion resistant alloy coatings on carbon steel for use in CCS S. Paul, TWI, Cambridge/GB
11:20 – 11:40	Carbon steel corrosion in CO₂ with water on both side of the solubility limit B. Morland ¹ , A. Dugstad ¹ ¹ Institute for Energy Technology, Kjeller/NO
11:40 – 12:00	Effect of biogas components on the integrity of existing gas distribution infrastructure W. Rittel ¹ , R. Hermkens ¹ ¹ Kiwa Technology, Apeldoorn/NL
12:00 – 12:20	Electrochemical measurements of corrosion resistance behavior for ferritic, austenitic and duplex stainless steels in biogas production environments M. Romero Barragán ¹ , V. Matres ¹ ; R. Brunstermann ² ¹ Acerinox Europa SAU, Los Barrios/ES; ² Universität Duisburg-Essen, Essen/DE
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area

Tribocorrosion

14:00 – 15:40	Room: Saal 3
Chair	S. Mischler, EPFL STI IMX LMCH, Lausanne/CH
14:00 – 14:20	Tribocorrosion of stainless steel in nitric acid solutions for surface polishing applications V. Totolin ¹ , H. Gocerler ¹ , H. Reicher ¹ , M. Jech ¹ ¹ AC2T research GmbH, Wiener Neustadt/AT
14:20 – 14:40	Friction and wear behaviour of nitride coatings in Na₂SO₄ aqueous solution under low contact pressure V. Pejakovic ¹ , V. Totolin ¹ , H. Gocerler ¹ , J. Brenner ¹ , M. Rodriguez Ripoll ¹ ¹ AC2T research GmbH, Wiener Neustadt/AT

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14:40 – 15:00	Repassivation kinetic of a duplex stainless steel under tribocorrosion condition in anoxic media N. Mary ¹ , S. Marcelin ¹ , B. Normand ¹ , ¹ INSA - Lyon, Villeurbanne/FR
15:00 – 15:20	Influence of the microstructure of low-alloyed carbon steel tubings on sliding/corrosion wear phenomena G. Zehethofer ¹ , A. Trausmuth ² , M. Rodriguez Ripoll ² , T. Vogl ³ , E. Badisch ² , W. Havlik ¹ ¹ OMV Exploration & Production GmbH, Wien/AT ² AC2T research GmbH, Wiener Neustadt/AT ³ voestalpine Tubulars GmbH & Co. KG, Kindberg-Aumühl/AT
15:20 – 15:40	Tribocorrosion performance of surface engineered titanium surfaces V. Totolin ¹ , V. Pejakovic ¹ , T. Csanyi ² , O. Hekele ² , M. Huber ² , M. Rodriguez Ripoll ¹ ¹ AC2T research GmbH, Wiener Neustadt/AT; ² CCI Valve Technology GmbH, Wien/AT
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Tribocorrosion	
14:00 – 15:40	Room: Saal 3
Chair	S. Mischler, EPFL STI IMX LMCH, Lausanne/CH
16:10 – 16:30	Tribological properties of alternative coatings to hard Cr P. Masset ¹ , A. Förg ¹ , K. Dotzler ¹ , A. Bund ² , A. Ispas ² , V. Gruia ² , A. Dietz ³ , L. Libralesso ⁴ , C. Nouvellon ⁵ , J. Ratajski ⁶ , P. Rokicki ⁷ , Ł. Szparaga ⁶ ¹ Fraunhofer Institute UMSICHT, Sulzbach-Rosenberg/DE ² TU Ilmenau, Ilmenau/DE; ³ Fraunhofer IST, Braunschweig/DE ⁴ CRM Group, Liege/BE; ⁵ Materia Nova, Mons/BE ⁶ Koszalin University of Technology, Koszalin/PL ⁷ Rzeszow University of Technology, Rzeszow/PL
16:30 – 16:50	Tribocorrosion behaviour of mooring HSLA steel in synthetic seawater under bidirectional sliding A. López ¹ , R. Bayón ² , J. Arana ³ , F. Pagano ² , A. Igartua ² ¹ IK4-TEKNIKER, Eibar/ES; ² IK4-Tekniker, Eibar/ES ³ University of Basque Country, Bilbao/ES
16:50 – 17:10	Tribocorrosion performances of Co/nano-CeO₂ bio-coatings in physiological solution L. Benea ¹ , E. Dănilă ¹ , P. Ponthiaux ² ¹ Dunarea de Jos University of Galati, Galati/RO ² Ecole Centrale Paris, Châtenay-Malabry/FR

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Corrosion by Hot Gases	
11:00 – 12:40	Room: Saal 12
Chair M. Schütze, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE	
11:00 – 11:20	Type II hot corrosion of coatings in the next generation of industrial gas turbines A. Potter ¹ , J. Sumner ¹ , N. Simms ¹ , J. Oakey ¹ ¹ Cranfield University, Cranfield, Bedfordshire/GB
11:20 – 11:40	Molten salt induced high temperature oxidation of directionally solidified Rene 80 A. Vayyala ¹ , N. Paulose ² , S. Babu ² , M. Kamaraj ¹ , L. Neelakantan ¹ ¹ Indian Institute of Technology Madras, Chennai/IN ² Gas Turbine Research Establishment (GTRE), Bengaluru/IN
11:40 – 12:00	Study of corrosion kinetics and mechanisms of metallic materials in waste to energy conditions E. Schaal ¹ , N. David ¹ , P. Panteix ¹ , C. Rapin ¹ , F. Maad ² , J. Brossard ² ¹ Institut Jean Lamour - Université de Lorraine, Vandoeuvre lès Nancy/FR ² Veolia Environnement Recherche Et Innovation, Limay/FR
12:00 – 12:20	The effect of La, C and B contents on the cyclic oxidation behaviour of Ni-Cr-W-Mo superalloys D. Yun ¹ , Y. Yoo ¹ , H. Jeong ¹ , S. Seo ¹ ¹ Korea Institute of Materials Science, Changwon, Gyungnam/KR
12:20 – 12:40	Investigation of corrosion behaviour of different steels in hot molten salt for solar thermal power plants D. Rückle ¹ , S. Kaesche ¹ , H. Garrecht ¹ , S. Virtanen ² ¹ Universität Stuttgart, Stuttgart/DE ² Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen/DE
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Corrosion by Hot Gases	
14:00 – 15:00	Room: Saal 12
Chair M. Schütze, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE	

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14:00 – 14:20	Microstructure and mechanical properties of thermal oxide scale: effect of MnS inclusions in the austenitic stainless steels C. Pascal ¹ , V. Parry ¹ , M. Braccini ¹ , E. Fedorova ² , M. Mantel ³ , D. Oquab ⁴ , Y. Wouters ¹ , D. Monceau ⁴ ¹ University of Grenoble, Grenoble/FR ² Polytechnic Institute of Siberian Federal University, Krasnoyarsk/RU ³ Ugitech SA, Ugine/FR ⁴ Université de Toulouse, Toulouse/FR
14:20 – 14:40	Thermogravimetry and post-mortem study of the oxide scale spallation behavior during post-isothermal oxidation cooling of Cr-rich {Co, Ni or Fe}-based cast alloys with various Hf contents P. Berthod ¹ , E. Conrath ¹ ¹ Université de Lorraine, Vandoeuvre-lès-Nancy/FR
14:40 – 15:00	High pressure nickel alloy materials for nuclear materials for nuclear power plants D. Marušáková ¹ , P. Sajdl ¹ ¹ University of Chemistry and Technology Prague, Praha/CZ
Refractory Metals and their Alloys	
15:00 – 15:40	Room: Saal 12
Chair M. Schütze, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE	
15:00 – 15:20	Effect of porosity on microstructure, corrosion resistance of a new tool steel by salt bath nitriding and post-oxidation H. Fu ¹ , J. Zhang ¹ , S. Wu ¹ , J. Huang ¹ , Y. Lian ¹ , C. Zhang ¹ ¹ University of Science and Technology Beijing, Beijing/CN
15:20 – 15:40	Cracking of SA213 Gr22 BFW preheater heat exchanger tubes ends A. Cafissi ¹ , G. Paci ¹ , A. Pudia ¹ , M. Orlandini ¹ ¹ Saipem S.p.a, San Donato/IT
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Refractory Metals and their Alloys	
16:10 – 17:30	Room: Saal 12
Chair M. Schütze, DECHEMA - Forschungsinstitut, Frankfurt am Main/DE	

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16:10 – 16:30	High temperature oxidation of platinum alloys in presence of monomethylhydrazine, dinitrogen tetroxide and their reaction products L. Wermuth¹, S. Beyer¹, J. Deck², M. Schütze³ ¹ Airbus DS GmbH, München/DE; ² Airbus DS GmbH, Hardthausen-Lampoldshausen/DE ³ DEHEMA - Forschungsinstitut, Frankfurt am Main/DE
16:30 – 16:50	Strategies against high temperature nitridation of Cr-alloys M. Galetz¹, A. Soleimani-Dorcheh¹ ¹ DEHEMA-Forschungsinstitut, Frankfurt am Main/DE
16:50 – 17:10	Corrosion resistance of anodic coatings on Ta after plasma electrolytic oxidation in a Ca and P containing solution M. Sowa¹, M. Woszczak¹, G. Dercz², W. Simka¹ ¹ Silesian University of Technology, Gliwice/PL; ² University of Silesia, Katowice/PL
17:10 – 17:30	Microstructural influence on the corrosion behaviour of Ti15Mo alloy in NaF solution F. Depentori¹, S. Benfer¹, W. Fürbeth¹, V. Brunke², C. Siemers² ¹ DEHEMA - Forschungsinstitut, Frankfurt am Main/DE ² TU Braunschweig, Braunschweig/DE

Corrosion and Scale Inhibition

11:00 – 12:40 Room: Saal 2

Chairs **G. Schmitt**, IFINKOR-Institute for Maintenance and Corrosion Protection Technologies n.f.p.Ltd., Iserlohn/DE
W. Hater, Kurita Europe APW GmbH, Düsseldorf/DE

11:00 – 11:20 **Unravelling the intricacies of corrosion inhibition by metal phosphonate anticorrosion coatings**
K. Demadis
University of Crete, Heraklion/GR

11:20 – 11:40 **The influence of alkalising amines on the film formation of oleyldiamine**
W. Hater¹, P. Kraft¹, C. Forêt²
¹Kurita Europe APW GmbH, Düsseldorf/DE
²ICL France SAS, Vaas/FR

11:40 – 12:00 **Implementation of vapor corrosion inhibitors to improve corrosion protection effectiveness of dry air system**
B. Bavarian¹, B. Miksic², Y. Ikder¹, B. Samimi¹, L. Reiner¹
¹California State University, Northridge/US; ²Cortec Corporation, St. Paul/US

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12:00 – 12:20	Electrochemical characterization and release properties of corrosion inhibitor containing microparticles for environmentally friendly smart coatings B. Pearman¹, W. Li¹, J. Buhrow¹, X. Zhang¹, M. Johnsey¹, E. Montgomery¹, L. Fitzpatrick², J. Surma¹, L. Calle¹ ¹ NASA, Merritt Island, Florida/US; ² NASA, Kennedy Space Center/US;
12:20 – 12:40	Corrosion protection of Cu70Ni30 alloy by phosphonic acids H. Otmačić Ćurković¹, Z. Hajdari¹, K. Huljev² ¹ University of Zagreb, Zagreb/HR ² Institute of Science and Technology Austria, Klosterneuburg/AT
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Corrosion and Scale Inhibition	
14:00 – 15:40	Room: Saal 2
Chairs	G. Schmitt , IFINKOR-Institute for Maintenance and Corrosion Protection Technologies n.f.p.Ltd., Iserlohn/DE W. Hater , Kurita Europe APW GmbH, Düsseldorf/DE
14:00 – 14:20	Application of SVET to study the inhibitive effect of benzotriazole and cerium chloride with a model aluminium/copper galvanic coupling system L. Bertolucci Coelho¹, M. Mouanga¹, M. Druart¹, I. Recloux¹, M. Olivier¹ ¹ University of Mons, Mons/BE
14:20 – 14:40	Evaluation of performance of an amine based and an imidazoline based gas and gas condensate inhibitor tested with high velocity laboratory test rig A. Prethaler¹, G. Mori¹, W. Havlik², G. Zehethofer², S. Hönig², E. Rosenberg³, M. Rückemann³ ¹ Montanuniversität Leoben, Leoben/AT ² OMV Exploration & Production GmbH, Wien/AT; ³ TU Wien, Wien/AT
14:40 – 15:00	Downhole O₂-corrosion inhibitor evaluation for nitrogen gas lifting system ? Part II: jet impingement Y. Al-Janabi¹, M. Alsalem¹, K. Al-Dossary¹ ¹ Saudi Aramco, Dhahran/SA
15:00 – 15:20	Evaluation of chitosan and carboxymethyl cellulose (CMC) as ecofriendly corrosion inhibitors for X60 pipeline steel in CO₂ saturated 3.5% NaCl solution A. Al Ahmary¹, S. Umoren¹, Z. Gasem¹ ¹ King Fahd University of Petroleum and Minerals, Dhahran/SA

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15:20 – 15:40	Performance evaluation of polypropylene glycol as corrosion inhibitor for X60 pipeline steel in 15% HCl solution <u>S. Umoren</u> ¹ , ¹ King Fahd University of Petroleum and Minerals, Dhahran/SA
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Corrosion and Scale Inhibition	
16:10 – 17:10	Room: Saal 2
Chairs	G. Schmitt , IFINKOR-Institute for Maintenance and Corrosion Protection Technologies n.f.p.Ltd., Iserlohn/DE W. Hater , Kurita Europe APW GmbH, Düsseldorf/DE
16:10 – 16:30	Inhibition effect of polyacrylamide on the corrosion behaviour of carbon steel (K-55) in fracturing fluid under hydrodynamic conditions <u>G. Palumbo</u> ¹ , <u>J. Banas</u> ¹ , <u>U. Lelek-Borkowska</u> ¹ , <u>A. Balkowiec</u> ² , <u>J. Mizera</u> ² , <u>M. Pisarek</u> ³ ¹ AGH-University of Science and Technology, Krakow/PL ² Warsaw University of Technology, Warsaw/PL ³ Polish Academy of Science, Warsaw/PL
16:30 – 16:50	Control of microbial corrosion in sewers using a green biocidal agent <u>G. Jiang</u> ¹ ; <u>X. Sun</u> ¹ ; <u>P. Bond</u> ¹ ; <u>J. Keller</u> ¹ ; <u>Z. Yuan</u> ¹ ¹ The University of Queensland, St Lucia/AU
16:50 – 17:10	Theoretical design of new benzimidazole derivatives as steel corrosion inhibitors in CO2 corrosive environment: DFT and Monte Carlo approaches <u>I. Obot</u> King Fahd University of Petroleum and Minerals, Dhahran/SA

Microbial Corrosion

11:00 – 12:40	Room: Galerie C
Chair	P. Cristiani , RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
11:00 – 11:40 Keynote	Predicting and managing microbially-influenced corrosion: current understanding and future perspectives <u>I. Beech</u> University of Oklahoma, Norman/US
11:40 – 12:00	Concrete sewer corrosion due to wastewater inoculation <u>G. Jiang</u> ¹ , <u>J. Keller</u> ¹ , <u>Z. Yuan</u> ¹ , <u>P. Bond</u> ¹ , <u>X. Sun</u> ¹ , <u>M. Zhou</u> ¹ , <u>T. Chiu</u> ¹ ¹ The University of Queensland, St Lucia/AU

MONDAY, 07.09.2015

SCIENTIFIC LECTURES PROGRAMME

12:00 – 12:20	Electrochemical investigations of materials for biogas plants <u>R. Feser</u> ¹ , <u>A. Krebs</u> ¹ , <u>D. Wagner</u> ² ¹ Fachhochschule Südwestfalen, Iserlohn/DE; ² APMA Services GmbH, Saarlouis/DE
12:20 – 12:40	Biofouling and biocorrosion in carbon steel welds <u>V. Liduino</u> ¹ , <u>M. Lutterbach</u> ² , <u>A. Ferreira</u> ³ , <u>J. Ribeiro</u> ³ , <u>E. Sérvulo</u> ¹ ¹ UFRJ - Universidade Federal do Rio de Janeiro, Rio de Janeiro/BR ² INT - National Institute of Technology, Rio de Janeiro/BR ³ National Industrial Training Service, Rio de Janeiro/BR
12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Microbial Corrosion	
14:00 – 15:40	Room: Galerie C
Chair	P. Cristiani , RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
14:00 – 14:20	Cyclodextrin modified metal surface for inhibition of (a)biotic corrosion <u>D. Holuscha</u> ¹ , <u>C. Thyssen</u> ² , <u>W. Sand</u> ² , <u>W. Fürbeth</u> ¹ ¹ DECHEMA - Forschungsinstitut, Frankfurt am Main/DE ² Universität Duisburg-Essen, Essen/DE
14:20 – 14:40	Addition of sodium hydroxide to sea water inhibited souring and steel corrosion by microbes in oil field water <u>Y. Tanji</u> Tokyo Institute of Technology, Yokohama/JP
14:40 – 15:00	Penicillium chrysogenum influenced corrosion <u>K. Mataqi</u> Kuwait Institute for Scientific Research, Kuwait City/KW
15:00 – 15:20	Microbiologically influenced corrosion resistant behavior of a novel Cu-bearing antibacterial 2205 duplex stainless steel in the presence of aerobic marine Pseudomonas aeruginosa biofilm <u>D. Xu</u> ¹ , <u>J. Xia</u> ¹ , <u>K. Yang</u> ¹ ¹ Chinese Academy of Sciences, Shenyang/CN
15:20 – 15:40	Investigation of the Ag-Cu ions' effect on microbial activity of sulphate reducing bacteria leading to corrosion <u>S. Arkan</u> ¹ , <u>E. Sungur</u> ¹ , <u>N. Cansever</u> ² , <u>T. Unsal Istek</u> ¹ ¹ Istanbul University, Istanbul/TR; ² Yildiz Technical University, Esenler, Istanbul/TR
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area

MONDAY, 07.09.2015

SCIENTIFIC LECTURES PROGRAMME

Microbial Corrosion	
16:10 – 17:30	Room: Galerie C
Chair	P. Cristiani, RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
16:10 – 16:50 Keynote	Microbial influenced corrosion (MIC) in the oil and gas industry <u>T. Liengen</u> ¹ , S. Olsen ¹ , ¹ Statoil ASA, Porsgrunn/NO
16:50 – 17:10	Investigating the corrosion effect of high salinity oil field produced water on metal electrodes for microbial fuel cells <u>A. Colombo</u> ¹ , P. Roustazadeh Sheikhyousefi ² , P. Cristiani ³ , M. Nasr Esfahany ² , S. Trasatti ¹ ¹ Università degli Studi di Milano, Milano/IT; ² Isfahan University of Technology, Isfahan/IR; ³ RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
17:10 – 17:30	Identification and biotyping of bacteria isolated from petroleum installation in Kuwait <u>I. Al-Maheimid</u> ¹ , K. Mataqi ² , A. Al-Jasmi ¹ ¹ Kuwait Oil Company, Ahmadi/KW ² Kuwait Institute for Scientific Research, Kuwait City/KW

Corrosion Reliability of Electronic Devices	
11:00 – 12:40	Room: Galerie A
Chairs	R. Ambat, Technical University of Denmark Lyngby/DK H. Schweigart, Zestron Europe, Ingolstadt/DE
11:00 – 11:20	Corrosion reliability of electronics: prediction, prevention, and control <u>R. Ambat</u> , Technical University of Denmark, Lyngby/DK
11:20 – 11:40	Corrosion prevention by assembly design <u>H. Schweigart</u> , Zestron Europe, Ingolstadt/DE
11:40 – 12:00	Phosphorous based flame retardants for polyamides and corrosion <u>L. Müller</u> ¹ , H. Steffes ² ¹ Robert Bosch GmbH, Reutlingen/DE; ² Bosch Power Tec GmbH, Böblingen/DE
12:00 – 12:20	Effect of iodine on the corrosion of Au-Al wire bond interconnects <u>V. Verdingovas</u> ¹ , L. Müller ² , M. Stendahl Jellesen ¹ , R. Ambat ¹ ¹ Technical University of Denmark, Lyngby/DK; ² Robert Bosch GmbH, Reutlingen/DE
12:20 – 12:40	Cost-efficient feed-throughs with polymers – Interphase design, benchmarking & tightness <u>A. Holm</u> ¹ , J. Jacobsen ¹ , J. Krog ¹ , A. Riis ¹ , J. Harming ¹ , L. Rimestad ¹ ¹ Grundfos Holding A/S, Bjerringbro/DK

MONDAY, 07.09.2015

SCIENTIFIC LECTURES PROGRAMME

12:40 – 14:00	LUNCH BREAK / Room: Exhibition Area
Corrosion Reliability of Electronic Devices	
14:00 – 15:40	Room: Galerie A
Chair	R. Ambat, Technical University of Denmark, Lyngby/DK
14:00 – 14:20	Formation of semiconductive electrochemical migration <u>S. Mattern</u> ¹ , L. Henneken ¹ , M. Nowotnick ² ¹ Robert Bosch GmbH, Schwieberdingen/DE; ² Universität Rostock, Rostock/DE
14:20 – 14:40	Corrosion of printed circuit board assemblies (PCBAs) – Field experience and counter measures <u>J.-H. Klingel</u> , Kunststoff-Chemische Produkte GmbH, Frielzheim/DE
14:40 – 15:00	Contamination, potential bias and humidity effects on electrical performance and corrosion reliability of electronic devices <u>K. Piotrowska</u> ¹ , V. Verdingovas ¹ , M. Stendahl Jellesen ¹ , R. Ambat ¹ ¹ Technical University of Denmark, Lyngby/DK
15:00 – 15:20	Experimental study of humidity distribution inside an electronic enclosure and effect of internal heating <u>H. Conseil</u> ¹ , M. Jellesen ¹ , R. Ambat ¹ ¹ Technical University of Denmark, Lyngby/DK
15:20 – 15:40	Humidity related failure mechanisms and corresponding tests <u>K. Schmidt</u> ¹ , A. Kentved ¹ ¹ DELTA, Hoersholm/DK
15:40 – 16:10	COFFEE BREAK / Room: Exhibition Area
Corrosion Reliability of Electronic Devices	
16:10 – 16:50	Room: Galerie A
Chair	H. Schweigart, Zestron Europe, Ingolstadt/DE
16:10 – 16:30	Thermal effects in electronic systems as an implication of electrochemical corrosion <u>F. Petri</u> , Robert Bosch GmbH, Reutlingen/DE
16:30 – 16:50	Sulphur induced corrosion of electronics <u>M. Jellesen</u> ¹ , V. Verdingovas ¹ , S. Davidsdottir ¹ , R. Ambat ¹ ¹ Technical University of Denmark, Lyngby/DK

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

Plenary Lecture	
09:00 – 09:45	Room: Saal 1
	Recent advances in modeling of corrosion of mild steel in CO₂ and H₂S aqueous environments S. Nestic ¹ , ¹ Ohio University, Athens, Ohio/US
09:45 – 10:00	BREAK FOR CHANGING LECTURE HALL

Metallic Coatings

10:00 – 11:20	Room: Saal 11
Chairs	M.-G. Olivier, University of Mons, Mons/BE J. Fernandes, Universidade Técnica de Lisboa, Lisbon/PT
10:00 – 10:20	Corrosion protection by zinc-magnesium coatings on steel studied by electrochemical methods F. Andreatta ¹ , J. Rodriguez ² , M. Mouanga ² , A. Lanzutti ¹ , L. Fedrizzi ¹ , M. Olivier ² ¹ University of Udine, Udine/IT; ² University of Mons, Mons/BE
10:20 – 10:40	Relationship between corrosion performance and microstructure of Zn-Al and Zn-Al-Mg model alloys T. Prosek ¹ , D. Thierry ¹ , J. Hagström ² , D. Persson ² , N. Fuertes Casals ² , F. Lindberg ² , C. Taxén ² , J. Serak ³ ¹ Institut de la Corrosion, Brest/FR; ² Swerea KIMAB AB, Kista/SE ³ University of Chemistry and Technology, Prague/CZ
10:40 – 11:00	Corrosion assessment of new ZnAlMg galvanized steel by single dip technology for offshore applications. A. Álvarez Pampliega ¹ , E. Thomas ¹ , J. Balduyck ² , T. Pinger ³ , A. Tomandl ⁴ , D. Socol ⁵ ¹ METALogic N.V., Heverlee/BE; ² Galvapower Group N.V., Hasselt/BE ³ ZINQ Technologie GmbH, Gelsenkirchen/DE ⁴ Hilti Corporation, Schaan/LI; ⁵ METALogic, /BE
11:00 – 11:20	Corrosion mechanism of Zn-Mg-Al hot-dip coated steel sheet T. Kim ¹ , M. Oh ¹ , S. Kim ¹ , J. Kim ¹ ¹ POSCO, Gwangyang/KR
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area

Metallic Coatings
11:50 – 13:10 **Room: Saal 11**
TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

Chairs	M. Olivier, University of Mons, Mons/BE J. Fernandes, Universidade Técnica de Lisboa, Lisbon/PT
11:50 – 12:10	Plastic strain effect on the corrosion resistance of continuous hot-dip galvanized steel M. Biskri ¹ , M. Touzet ² , A. Poulon-Quintin ³ , M. Puiggali ¹ , O. Devos ¹ ¹ Université de Bordeaux, Talence/FR; ² Bordeaux INP, Talence/FR ³ Université de Bordeaux, Pessac/FR
12:10 – 12:30	Effect of the pulse current on the microstructure and corrosion properties of hard chromium deposits obtained using trivalent chromium baths M. Lekka ¹ , M. Poelman ² , M. Olivier ³ , L. Fedrizzi ¹ ¹ University of Udine, Udine/IT; ² Materia Nova, Mons/BE ³ University of Mons, Mons/BE
12:30 – 12:50	Relationships between metallurgical state and corrosion processes in electrodeposited Ni-W nanostructured alloys N. Shakibi Nia ¹ , M. Lagarde ¹ , J. Creus ¹ , X. Feaugas ¹ , C. Savall ¹ ¹ Université de la Rochelle, La Rochelle/FR
12:50 – 13:09	Corrosion characterisation of ruthenium films deposited by RF sputtering F. Moyo ¹ , J. Van Der Merwe ¹ , D. Wamwangi ¹ ¹ University of the Witwatersrand, Johannesburg/ZA
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Metallic Coatings	
14:30 – 15:50	Room: Saal 11
Chairs	F. Deflorian, University of Trento, Trento/IT T. Prosek, Institut de la Corrosion, Brest/FR
14:30 – 14:50	Development of alternative coatings to cadmium P. Masset ¹ , A. Bund ² , A. Förg ¹ , A. Ispas ² , L. Libralesso ³ , C. Nouvellon ⁴ , J. Ratajski ⁵ , P. Rokicki ⁶ , L. Szparaga ⁵ , C. Vlaic ² , G. Wolf ¹ ¹ Fraunhofer Institute UMSICHT, Sulzbach-Rosenberg/DE ² TU Ilmenau, Ilmenau/DE; ³ CRM Group, Liege/BE; ⁴ Materia Nova, Mons/BE ⁵ Koszalin University of Technology, Koszalin/PL ⁶ Rzeszow University of Technology, Rzeszow/PL
14:50 – 15:10	Influence of silicon on the electrochemical behaviour of aluminized steel B. Lemmens ¹ , A. Lutz ² , B. Corlu ³ , J. De Strycker ³ , I. De Graeve ² , K. Verbeken ¹ ¹ Ghent University, Zwijnaarde/BE ² Vrije Universiteit Brussel (VUB), Brussel/BE ³ ArcelorMittal Global R&D Gent, Zelzate/BE

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:10 – 15:30	Aluminium surface modification by zinc diffusion layers for improved corrosion resistance <u>M. Stepanova</u> ¹ , <u>O. Lunder</u> ² , <u>J. Nordlien</u> ³ , <u>K. Nisancioglu</u> ¹ ¹ Norwegian University of Science and Technology, Trondheim/NO; ² SINTEF Materials and Chemistry, Trondheim/NO; ³ Sapa Precision Tubing, Håvik/NO
15:30 – 15:50	Surface modification of laser alloyed UNS G10150 steel with Al+Sn powders: artificial neural model approach <u>O. Fatoba</u> ¹ , <u>P. Popoola</u> ¹ , <u>S. Pityana</u> ² ¹ Tshwane University of Technology, Pretoria/ZA ² Centre for Scientific and Industrial Research, Pretoria/ZA

Mechanisms, Methods & Modelling
10:00 – 11:20 Room: Galerie B

Chairs H. McMurray, University of Swansea, Swansea, Wales/GB

10:00 – 10:20	Hydrodynamic effect of entry side cell on hydrogen permeation into steel sheet <u>K. Fushimi</u> ¹ , <u>M. Jin</u> ¹ , <u>Y. Yamamoto</u> ¹ , <u>Y. Kitagawa</u> ¹ , <u>T. Nakanishi</u> ¹ , <u>Y. Hasegawa</u> ¹ ¹ Hokkaido University, Sapporo/JP
10:20 – 10:40	Hydrogen detection with scanning Kelvin probe in hydrogen embrittlement studies <u>G. Schimo</u> ¹ , <u>W. Burgstaller</u> ² , <u>A. Hassel</u> ² ¹ CEST Competence Centre for Electrochemical Surface Technology, Wiener Neustadt/AT; ² Johannes Kepler Universität Linz, Linz/AT
10:40 – 11:00	Mechanistic study of coating failure using local electrochemical methods <u>Z. Kefallinou</u> ¹ , <u>S. Lyon</u> ¹ , ¹ The University of Manchester, Manchester/GB
11:00 – 11:20	Atmospheric corrosion of iron induced by sessile droplets from aqueous saline solutions <u>V. Soulié</u> ¹ , <u>F. Lequien</u> ² , <u>D. Féron</u> ² , <u>H. Riegler</u> ¹ , <u>P. Prené</u> ² , <u>T. Zemb</u> ³ , <u>H. Moehwald</u> ¹ ¹ Max Planck Institute of Colloids and Interfaces, Potsdam/DE ² CEA Saclay, Gif-sur-Yvette/FR ³ Institut de Chimie Séparative de Marcoule, Bagnols-sur-Cèze/FR
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area

Mechanisms, Methods & Modelling
14:00 – 15:40 Room: Galerie B

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

Chair K. Fushimi, Hokkaido University, Sapporo/JP	
11:50 – 12:10	The role of tin in suppressing atmospheric corrosion kinetics on tin coated and tin-iron intermetallic coated steels <u>H. McMurray</u> ¹ , <u>G. Williams</u> ¹ , <u>N. Wint</u> ¹ , <u>A. deVooy</u> ² , <u>S. Geary</u> ¹ ¹ University of Swansea, Swansea, Wales/GB; ² Tata Steel, IJmuiden/NL
12:10 – 12:30	Comparison between computational modelling of galvanic corrosion and experimental investigation on localised corrosion activities of mild steel in thin electrolyte layer NaCl solution <u>W. Shi</u> ¹ , <u>N. Stevens</u> ¹ , <u>S. Lyon</u> ¹ ¹ The University of Manchester, Manchester/GB
12:30 – 12:50	Corrosion mechanisms of brass-coated steel in confined aqueous environment <u>A. Romaine</u> , MATEIS, INSA-Lyon, Villeurbanne Cedex/FR
12:50 – 13:10	Using a micro-optode for overcoming the negative influence of the amperometric micro-probe on localized corrosion measurements <u>S. Lamaka</u> ¹ , <u>M. Taryba</u> ¹ , ¹ University of Lisbon, Lisbon/PT
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
14:30 – 15:50 Room: Galerie B	
Chair G. Mori, Montanuniversität Leoben, Leoben/AT	
14:30 – 14:50	A fundamental study of the protective role of hydrozincite formed on brass in chloride-containing atmospheres <u>C. Leygraf</u> ¹ , <u>X. Zhang</u> ¹ , <u>I. Odnevall Wallinder</u> ¹ ¹ KTH Royal Institute of Technology, Stockholm/SE
14:50 – 15:10	Atmospheric corrosion monitoring of metals using electrochemical impedance <u>H. Katayama</u> ¹ , <u>R. Miyahara</u> ² , <u>Y. Hoshi</u> ² , <u>I. Shitanda</u> ² , <u>M. Itagaki</u> ² ¹ National Institute for Materials Science, Tsukuba/JP; ² Tokyo University of Science, Noda/JP
15:10 – 15:30	Influence of Mg substitution and rare earths composition on the corrosion mechanism of intermetallics used for Ni-MH batteries. <u>J. Monnier</u> ¹ , <u>V. Charbonner</u> ¹ , <u>J. Zhang</u> ¹ , <u>M. Latroche</u> ² , <u>S. Joiret</u> ³ , <u>B. Puga</u> ³ , <u>L. Goubault</u> ⁴ , <u>P. Bernard</u> ⁴ ¹ ICMPE - CNRS, Thiais/FR; ² CNRS, Thiais/FR; ³ UPMC - CNRS, Paris/FR ⁴ Saft SA, Bordeaux/FR

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:30 – 15:50	Atom Probe Microscopy of Oxidation Products I. McCarroll¹, J. Cairney¹, A. la Fontaine¹, P. Felfer¹, J. Zhang², D. Young² ¹ The University of Sydney, Sydney/AU; ² University of New South Wales, /AU
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
16:10 – 17:30	Room: Galerie B
Chair	G. Mori , Montanuniversität Leoben, Leoben/AT
16:10 – 16:30	Pattern recognition on electrochemical noise of an epoxy coating/metal system under marine alternating hydrostatic pressure F. Meng¹, L. Liu¹, W. Tian¹, L. Ying¹, F. Wang¹ ¹ Chinese Academy of Sciences, Shenyang/CN
16:30 – 16:50	From vacancy migration to the steady state of passive films grown on pure Cr and NiCr or NiCrFe alloys B. Ter-Ovanesian¹, C. Boissy¹, B. Normand¹ , ¹ INSA - Lyon, Villeurbanne/FR
16:50 – 17:10	Mechanism of corrosion and passivation of nickel in methanol solutions of electrolytes U. Lelek-Borkowska¹, M. Bisztyga¹, M. Gruszka¹, J. Banas¹ ¹ AGH-University of Science and Technology, Krakow/PL
17:10 – 17:30	Semiconducting properties of surface oxides formed on austenitic stainless steel in NaCl solution S. Al Saadi¹, Y. Yi¹, P. Cho¹, C. Jang², P. Beeley¹ ¹ Khalifa University of Science, Technology & Research, Abu Dhabi/AE ² Korea Advanced Institute of Science and Technology, Daejeon/KR

Nuclear Corrosion

10:00 – 11:20	Room: Saal 10
Chair	D. Féron , CEA Saclay, Gif-sur-Yvette/FR
10:00 – 10:20 Keynote	New corrosion issues in the nuclear industry today – An update W. Bogaerts¹, J. Zheng² ¹ Katholieke Universiteit (KU) Leuven, Leuven/BE ² Technologica Group - INS Div., Meerhout/BE

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:20 – 10:40	Wear-corrosion performances of Ni/WC nano-structured composite coatings obtained by electrochemical codeposition L. Benea¹, P. Ponthiaux², E. Dănăilă¹, N. Caron³, O. Raquet³ ¹ Dunarea de Jos University of Galati, Galati/RO ² Ecole Centrale Paris, Châtenay-Malabry/FR; ³ CEA Saclay, Gif-sur-Yvette Cedex/FR
10:40 – 11:00	Effect of implantation defects on 316 L oxidation in PWR primary medium S. Perrin¹, M. Dumerval¹, L. Marchetti¹, F. Jomard², Y. Wouters³ ¹ CEA, Gif-sur-Yvette/FR; ² CNRS, Versailles/FR ³ University of Grenoble, Saint Martin d'Hères/FR
11:00 – 11:20	Development of innovative high temperature cleanup of steam generator tubes by acidic steam solution V. Yurmanov¹, K. Shutko¹, E. Yurmanov¹, A. Polevich², A. Kirilina² ¹ NIKIET, Moscow/RU; ² VTI, Moscow/RU
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Nuclear Corrosion	
11:50 – 13:10	Room: Saal 10
Chair	A. Legat , Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI T. Couvant , Electricité de France (EDF), Moret sur Loing/DE
11:50 – 12:10 Keynote	Effect of Zn water chemistry on surface film and corrosion of various materials in PWR primary water E.-H. Han¹, X. Liu¹, X. Wu¹ ¹ Institute of Metal Research, Chinese Academy of Sciences, Shenyang/CN
12:10 – 12:30	Helium effects on irradiation assisted stress corrosion cracking I. Villacampa Roses¹, J. Chen¹, P. Spätig¹, H. Seifert¹ ¹ Paul Scherrer Institute, Villigen PSI/CH
12:30 – 12:50	Surface oxidation phenomena of Ni-based alloys in PWR primary water environments Y. Lim¹, S. Hwang¹, S. Kim¹ ¹ Korea Atomic Energy Research Institute, Daejeon/KR
12:50 – 13:10	Corrosion characteristic of Zr alloys under lithium conditions A. Krausová¹, J. Macák¹, P. Sajdl¹, V. Vrtílková² ¹ University of Chemistry and Technology Prague, Praha/CZ ² UJP PRAHA a.s., Praha/CZ

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Nuclear Corrosion	
14:30 – 15:50	Room: Saal 10
Chairs	S. Perrin, CEA, Gif-sur-Yvette/FR P. Andresen, GE Global Research Center, Schenectady/US
14:30 – 14:50	Platinum deposition behaviour on stainless steel surfaces in a boiling water reactor plant S. Ritter ¹ , P. Grundler ¹ , L. Veleva ¹ , G. Ledergerber ² ¹ Paul Scherrer Institut (PSI), Villigen/CH; ² Kernkraftwerk Leibstadt (KKL), Leibstadt/CH
14:50 – 15:10	Using advanced steels as near term implementation for accident tolerant fuel cladding in light water reactors R. Rebak ¹ , E. Dolley ¹ , ¹ GE Global Research, Schenectady/US
15:10 – 15:30	In-situ imaging of corrosion processes in nuclear fuel cladding A. Laferrere ¹ , R. Burrows ¹ , L. Picco ² , O. Payton ² , R. Clark ³ , C. Glover ³ , G. Williams ³ ¹ National Nuclear Laboratory, Stonehouse/GB; ² University of Bristol, Bristol/GB; ³ University of Swansea, Wales/GB
15:30 – 15:50	High temperature behavior of candidate alloys in helium environments C. Tsai ¹ , T.-K. Yeh ¹ , M. Wang ¹ , ¹ National Tsing Hua University, Hsinchu City/TW
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Nuclear Corrosion	
16:10 – 17:30	Room: Saal 10
Chair	S. Ritter, Paul Scherrer Institut (PSI), Villigen PSI/CH
16:10 – 16:30	Evolution in our understanding of stress corrosion cracking P. Andresen, GE Global Research Center, Schenectady/US
16:30 – 16:50	Alternative dissolution and oxidation behavior of 316LN steel at 550°C in liquid sodium containing low concentration of oxygen J.-L. Courouau ¹ , M. Rivollier ¹ , V. Lorentz ¹ , M. Tabarant ¹ ¹ CEA-Saclay, Gif-sur-Yvette/FR
16:50 – 17:10	Oxidation of 316L(N) stainless steel in liquid sodium M. Rivollier ¹ , J. Courouau ¹ , M. Giorgi ² , M. Tabarant ¹ ¹ CEA-Saclay, Gif-sur-Yvette/FR; ² École Centrale Paris, Chatenay-Malabry/FR

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

Corrosion in Oil and Gas	
10:00 – 11:20	Room: Saal 1
Chair	S. Paterson, Shell Projects & Technology, Amsterdam/NL M. Wilms, Shell Global Solutions International, Amsterdam/NL
10:00 – 10:20	Assessment of the CO₂ corrosion rate at weld defects on carbon steel backing pipe with an alloy 625 cladding J. Halma ¹ , M. Wilms ¹ , P. Dent ² , R. Doyle ² ¹ Shell Global Solutions International, Amsterdam/NL; ² Exova Group, Dudley/GB
10:20 – 10:40	Top of line corrosion R. Nyborg ¹ , G. Svenningsen ¹ , ¹ Institute for Energy Technology, Kjeller/NO
10:40 – 11:00	Electrochemistry of iron sulphide and its galvanic coupling to carbon steel M. Tjelta ¹ , J. Kvarekvål ¹ ¹ Institute for Energy Technology, Kjeller/NO
11:00 – 11:20	The effect of monoethylene glycol on CO₂/H₂S corrosion of API 5L X52 steel M. Javidi ¹ , M. Khodaparast ¹ , ¹ Shiraz University, Shiraz/IR
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Corrosion in Oil and Gas	
11:50 – 12:50	Room: Saal 1
Chair	S. Paterson, Shell Projects & Technology, Amsterdam/NL
11:50 – 12:10	Elucidating sour corrosion scales K. Cooper ¹ , G. Joshi ¹ , D. Engelberg ¹ , R. Lindsay ¹ ¹ The University of Manchester, Manchester/GB
12:10 – 12:30	Novel experimental techniques for corrosion monitoring S. Srinivasan ¹ , I. Kosacki ¹ ¹ Honeywell Process Solutions, Houston/US
12:30 – 12:50	Investigating the use of electrochemical techniques as tools to evaluate the pitting resistance of stainless steel 304 tank metallurgy in contact with neat chemical products Y. De-Abreu ¹ , J. Moloney ¹ ¹ NALCO Champion, An Ecolab Company, Sugar Land/US

TUESDAY, 08.09.2015

SCIENTIFIC LECTURES PROGRAMME

Coatings for High Temperatures	
10:00 – 11:20	Room: Saal 12
Chair	M. Galetz, DECHEMA - Forschungsinstitut, Frankfurt/DE
10:00 – 10:20	Corrosion resistant materials for biomass gasification P. Masset ¹ , A. Wiltner ² , G. Walther ² , T. Weißgräber ² , M. Hülscher ³ , E. Drechsler ¹ , H. Hill ⁴ , A. Ossenber-Engels ⁵ ¹ Fraunhofer Institute UMSICHT, Sulzbach-Rosenberg/DE ² Fraunhofer IFAM, Dresden/DE; ³ Qalovis GmbH, Laer/DE ⁴ Deutsche Edelstahlwerke, Krefeld/DE; ⁵ VDM Metals GmbH, Werdohl/DE
10:20 – 10:40	The effect of KCl on Fe-Cr-Al sputter coatings in the high temperature chloride environment at 550°C D. Orlicka ¹ , N. Simms ¹ , T. Hussain ² , J. Nicholls ¹ ¹ Cranfield University, Cranfield, Bedfordshire/GB ² University of Nottingham, Nottingham/GB
10:40 – 11:00	Influence of silicon and refractory metals on the corrosion-erosion mechanisms under biomass firing conditions R. Pflumm ¹ , B. Adamczyk ² , C. Adam ² , M. Galetz ¹ ¹ DECHEMA - Forschungsinstitut, Frankfurt am Main/DE ² BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE
11:00 – 11:20	Evaluation of a novel exothermic reaction synthesised Ni Al intermetallic coating for the corrosion protection of boiler tubes A. Pidcock ¹ , M. Craig ¹ , N. Simms ¹ , J. Nicholls ¹ ¹ Cranfield University, Cranfield, Bedfordshire/GB
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Coatings for High Temperatures	
11:50 – 12:30	Room: Saal 12
Chair	M. Galetz, DECHEMA - Forschungsinstitut, Frankfurt/DE
11:50 – 12:10	Effect of nanocrystalline mixed rare earth oxide coatings on the high temperature oxidation behavior of Fe-20Cr alloy L. Ramanathan ¹ , S. Fernandes ¹ , O. Correa ¹ ¹ Instituto de Pesquisas Energéticas e Nucleares, São Paulo/BR
12:10 – 12:30	Influences of (Ti, Al, Si) N coatings on oxidation and corrosion behaviours and mechanical properties of titanium alloys L. Xin ¹ , S. Zhu ¹ , F. Wang ¹ , ¹ Chinese Academy of Sciences, Shenyang/CN

TUESDAY, 08.09.2015

SCIENTIFIC LECTURES PROGRAMME

Automotive Corrosion	
14:30 – 15:50	Room: Saal 12
Chair	F. Hannour, Qatar National Research Fund, Doha/QA
14:30 – 14:50	I3: Integrated process for identifying and developing breakthrough innovations in the global automotive industry L. Otremba, CooperStandard, /US Keynote
14:50 – 15:10	Electrochemical and microstructural characteristics of 3xxx based interlayers in high strength brazing sheets T. Kremmer ¹ , H. Antrekowitsch ¹ , G. Mori ¹ , P. Oberhauser ² , G. Hanko ² ¹ Montanuniversität Leoben, Leoben/AT; ² AMAG rolling GmbH, Ranshofen/AT
15:10 – 15:30	Control of corrosion and stiction phenomena in automotive brake discs A. Sin ¹ , F. Lupone ¹ , A. Angeleri ¹ , V. Galardo ¹ , L. Martinotto ¹ , A. De Nicolò ² , F. Andreatta ² , L. Fedrizzi ² ¹ ITT Motion Technologies, Barge/IT; ² University of Udine, Udine/IT
15:30 – 15:50	Corrosion protection for mass-produced, light-weight automotive bodies N. Hosking ¹ , M. Nichols ¹ , ¹ Ford Motor Company Ltd., Dearborn/US
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Automotive Corrosion	
16:10 – 17:30	Room: Saal 12
Chair	F. Hannour, Qatar National Research Fund, Doha/QA
16:10 – 16:30	Digital image analysis of automotive steels with protective coatings exposed to maritime atmosphere O. Startsev ¹ , D. Ruzaev ² , I. Medvedev ¹ , A. Frolov ¹ ¹ All-Russian Scientific-Research Institute of Aviation Materials, Gelendzhik/RU ² JSC AvtoVAZ, Tolyatti/RU
16:30 – 16:49	Analysis of calcareous deposition layers forming during AM50 magnesium alloy corrosion in presence of Ca²⁺– Corrosion mechanism M. Grabowski ^{1/3} , D. Blücher ² , M. Korte ³ , S. Virtanen ¹ ¹ Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen/DE ² SINTEF Materials and Chemistry, Trondheim/NO; ³ Audi AG, Ingolstadt/DE
16:49 – 17:09	Steam based nano-composite coating for aluminium alloys R. Ud Din ¹ , M. Jellesen ¹ , R. Ambat ¹ , ¹ Technical University of Denmark, Lyngby/DK

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

17:09 – 17:29	Corrosion mechanisms of Zn(Mg,Al) coated steel: The effect of HCO₃⁻ and NH₄⁺ ions on the intrinsic reactivity of the coating <u>P. Volovitch</u> ¹ , M. Azevedo ² , C. Allély ² , V. Shkirskiy ¹ , K. Ogle ¹ ¹ Chimie ParisTech, Paris/FR; ² ArcelorMittal Research SA, Maizières-lès-Metz/FR
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Corrosion and Scale Inhibition

10:00 – 11:20	Room: Saal 2
Chairs	G. Schmitt , IFINKOR-Institute for Maintenance and Corrosion Protection Technolgies n.f.p.Ltd., Iserlohn/DE W. Hater , Kurita Europe APW GmbH, Düsseldorf/DE
10:00 – 10:20	Efficiency of a biodegradable antiscalant against barite under geothermal plant conditions <u>A. Stratmann</u> ¹ , <u>W. Hater</u> ¹ , <u>C. Forêt</u> ² ¹ Kurita Europe APW GmbH, Düsseldorf/DE; ² ICL France SAS, Vaas/FR
10:20 – 10:40	Bioinspired “green” scale inhibitors to combat silica scale deposits <u>K. Demadis</u> , University of Crete, Heraklion/GR
10:40 – 11:00	A new approach to elucidating the surface interaction of organic corrosion inhibitors <u>D. Chekulaev</u> ¹ , <u>M. Torres Molina</u> ¹ , <u>A. Thomas</u> ¹ , <u>R. Lindsay</u> ¹ , <u>D. Collison</u> ¹ , <u>R. Winpenny</u> ¹ ¹ The University of Manchester, Manchester/GB
11:00 – 11:20	Ammonium [2,4-dimethylphenyl]-dithiocarbamate as an environmentally friendly corrosion inhibitor for steel <u>N. Kicir</u> ¹ , <u>G. Tansug</u> ¹ , <u>T. Tüken</u> ¹ , <u>M. Erbil</u> ¹ , ¹ Çukurova University, Adana/TR

Microbial Corrosion

10:00 – 11:20	Room: Galerie C
Chair	P. Cristiani , RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
10:00 – 10:20	Unusual corrosion of bronze: a new MIC phenomenon in a hydroelectric power plant <u>P. Linhardt</u> , TU Wien, Wien/AT
10:20 – 10:40	The role of Pseudomonas fluorescens on the corrosion of Tin Bronze archaeological analogues: morphology and mechanisms <u>G. Ghiara</u> ¹ , <u>P. Piccardo</u> ¹ , <u>C. Grande</u> ¹ , <u>L. Repetto</u> ¹ , ¹ University of Genoa, Genova/IT
10:40 – 11:00	Effect of biofilm community members on biocorrosion in copper drinking water systems <u>C. Galarce</u> ¹ , <u>D. Fischer</u> ¹ , <u>I. Vargas</u> ¹ , <u>G. Pizarro</u> ¹ , ¹ Pontificia Universidad Católica, Santiago/CL

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

11:00 – 11:20	Microbially influenced corrosion and inhibition of zinc coatings by Aspergillus niger <u>M. Zemanová</u> ¹ , <u>J. Vávrová</u> ¹ , <u>L. Křištofiková</u> ¹ , <u>V. Jorík</u> ¹ ¹ Slovak University of Technology, Bratislava/SK
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11:20 – 11:50 COFFEE BREAK / Room: Exhibition Area

Microbial Corrosion

11:50 – 12:50	Room: Galerie C
Chair	P. Cristiani , RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
11:50 – 12:10	Corrosion of steel in Toarcian argillite in presence of mix of bacterial strains: complementarity of μRaman, XRD and FESEM <u>F. Mercier-Bion</u> ¹ , <u>Y. Leon</u> ¹ , <u>D. Neff</u> ¹ , <u>L. Urios</u> ² , <u>C. Wittebroodt</u> ³ , <u>M. Flachet</u> ³ , <u>P. Dillmann</u> ¹ ¹ CEA Saclay, Gif-sur-Yvette/FR ² UPPA - Université de Pau et des Pays de l'Adour, Pau/FR ³ IRSN - Institut Radioprotection Sûreté Nucléaire, Fontenay-aux-Roses/FR
12:10 – 12:30	Bi-model character for copper alloy corrosion and implications for long-term MIC <u>R. Melchers</u> , University of Newcastle, Newcastle/AU
12:30 – 12:50	Impedance analysis of 70Cu-30Ni alloy at the corrosion potential in wastewater <u>M. Carvalho</u> ¹ , <u>P. Cristiani</u> ¹ , <u>B. Tribollet</u> ² ¹ RSE-Ricerca sul Sistema Energetico S.p.A., Milano/IT; ² CNRS, Paris/FR

Marine Corrosion

14:30 – 15:50	Room: Galerie C
Chair	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE
14:30 – 14:50	Localized corrosion of carbon steel in marine media: galvanic coupling and heterogeneity of the corrosion product layer <u>P. Refait</u> ¹ , <u>M. Jeannin</u> ¹ , <u>R. Sabot</u> ¹ , <u>A. Grolleau</u> ² , <u>E. François</u> ² ¹ Université de La Rochelle, La Rochelle/FR; ² DCNS Research, Cherbourg-Octeville/FR
14:50 – 15:10	Potential ennoblement of stainless steel: Influence of oxygen content in sea water and pressure <u>D. Thierry</u> ¹ , <u>N. Larché</u> ² , <u>L. Charles</u> ² ¹ Institut de la Corrosion, Brest/FR; ² French Corrosion Institute, Brest/FR

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:10 – 15:30	Corrosion behavior of stainless steel AISI 470 in pacific seawater <u>J. Aguirre</u> ¹ , M. Walczak ¹ , J. Armijo ¹ , L. Daille ¹ , D. Fischer ¹ , C. Galarce ¹ , R. De la Iglesia ¹ , G. Pizarro ¹ , I. Vargas ¹ ¹ Pontificia Universidad Católica de Chile, Santiago/CL
15:30 – 15:50	Corrosion assessment in coastal seas <u>M. Schorr</u> ¹ , B. Valdez ¹ , R. Orozco ² , R. Galvan ² , A. Eliezer ³ , T. Perez ⁴ , R. Ramos ¹ , T. Prieto ¹ , J. Bastidas ⁵ ¹ Universidad Autónoma de Baja California, Mexicali/MX; ² Universidad Veracruzana, Veracruz/MX; ³ Sami Shamoan College of Engineering, Ber Sheva/IL ⁴ Universidad Autónoma de Campeche, Campeche/MX; ⁵ National Center for Metallurgical Research, Madrid/ES
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Marine Corrosion	
16:10 – 17:10	Room: Galerie C
Chair	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE
16:10 – 16:30	Effect of aqua blasting, sand blasting, and laser engraving on the corrosion resistance of type 316 stainless steel <u>B. Krawczyk</u> ¹ , D. Engelberg ¹ , ¹ University of Manchester, Manchester/GB
16:30 – 16:50	A holistic concept for coating monitoring and maintenance on offshore wind power constructions S. Buchbach ¹ , A. Momber ² , P. Plagemann ¹ , I. Winkels ³ ¹ Fraunhofer IFAM, Bremen/DE; ² Muehlhan AG, Hamburg/DE ³ Sika Deutschland GmbH, Vaihingen/DE
16:50 – 17:10	Failure behavior of several epoxy organic coatings in ocean pressure environments <u>L. Li</u> ¹ , L. Ying ¹ , F. Wang ¹ , ¹ Chinese Academy of Sciences, ShenYang/CN

Corrosion Control in Aerospace

10:00 – 11:20	Room: Galerie A
Chair	T. Hack , Airbus Group Innovations, München/DE
10:00 – 10:20	Incremental innovation - requirements and industrial needs for aircraft surface protection systems <u>H. Lohner</u> , ¹ Airbus Operations, Bremen/DE

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:20 – 10:40	Anticipating, managing, and preventing corrosion at NASA's Kennedy Space Center <u>L. Calle</u> , NASA, Merritt Island, Florida/US
10:40 – 11:00	Application of Cr(VI)-free primers with phosphoric/sulphuric acid anodizing for aerospace aluminium alloys <u>J. de Kok</u> ¹ , A. Langeveld ¹ , M. Obrebska ¹ , ¹ Fokker Aerostructures BV, Papendrecht/NL
11:00 – 11:20	Synergetic corrosion protection by dual organic-inorganic inhibitor release <u>S. Garcia</u> ¹ , S. van der Zwaag ¹ , M. Zheludkevich ² , A. Bastos ² , J. Tedim ² , M. Abdolazadeh ¹ ¹ Delft University of Technology, Delft/NL ² Universidade de Aveiro, Aveiro/PT
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Corrosion Control in Aerospace	
11:50 – 13:10	Room: Galerie A
Chair	T. Hack , Airbus Group Innovations, München/DE
11:50 – 12:10	Lithium based corrosion inhibiting coating technology for the protection of AA2024-T3 <u>P. Visser</u> ¹ , Y. Liu ² , X. Zhou ² , L. van der Ven ³ , H. Terryn ⁴ , A. Mol ⁵ ¹ Delft University of Technology, Delft/NL ² The University of Manchester, Manchester/GB; ³ AkzoNobel, Sassenheim/NL ⁴ Vrije Universiteit Brussel (VUB), Brussel/BE; ⁵ TU Delft, Delft/NL
12:10 – 12:30	Influence of inhibitors on the corrosion behavior of intermetallic (Al₂Cu) – A study using micro-electrochemical cell <u>V. Rajan</u> ¹ , L. Neelakantan ¹ , ¹ Indian Institute of Technology Madras, Chennai/IN
12:30 – 12:50	Effect of surface pretreatments on intermetallics of aluminium alloy AA2024 <u>M. Ely</u> ¹ , J. Światowska ¹ , A. Seyeux ¹ , S. Zanna ¹ , L. Klein ¹ , G. Hervé ² , P. Marcus ¹ ¹ CNRS - Chimie ParisTech, Paris/FR; ² Socomore, Vannes/FR
12:50 – 13:10	Atmospheric and marine corrosion of the D16 aerospace aluminum alloy protected by the composite polymer-containing coating fabricated using PEO S. Gnedenkov ¹ , S. Sinebryukhov ¹ , V. Egorkin ¹ , D. Mashtalyar ¹ , I. Vyalii ¹ , I. Medvedev ² ¹ Russian Academy of Sciences, Vladivostok/RU ² All-Russian Scientific-Research Institute of Aviation Materials, Gelendzhik/RU

Anodising of Al / Ti

14:30 – 15:50	Room: Galerie A
Chairs	T. Hack , Airbus Group Innovations, München/DE W. Fürbeth , DECHEMA - Forschungsinstitut, Frankfurt am Main/DE

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

14:30 – 14:50	Cr(III)-sealed TSA as new corrosion protection for helicopter parts M. Boutoba¹, L. Bortolotto² ¹ Airbus Helicopters, Marignane/FR; ² Airbus Helicopters, Donauwörth/DE
14:50 – 15:10	Effect of sand-blasting stripping and sol-gel sealing on the performance of tartaric-sulphuric acid anodizing layers formed on clad and bare AA2024 M.-G. Olivier¹, A. Romano¹, I. Recloux¹, Y. Paint², A. Lanzutti³, L. Fedrizzi³ ¹ University of Mons, Mons/BE ² Materia Nova Research Centre, Mons/BE ³ University of Udine, Udine/IT
15:10 – 15:30	Optimisation of phosphoric/sulphuric acid anodizing for structural adhesive bonding of AA7075T6 alclad J. de Kok¹, J. Hofstede¹, B. Poker¹ ¹ Fokker Aerostructures BV, Papendrecht/NL
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Anodising of Al / Ti	
16:10 – 17:30	Room: Galerie A
Chair	T. Hack , Airbus Group Innovations, München/DE
16:10 – 16:30	Friction stir processed Al-TiO₂ surface composites: DC vs. high frequency pulse and pulse reverse anodising V. Gudla¹, F. Jensen¹, K. Bordo¹, A. Simar², R. Shabadi³, R. Ambat¹ ¹ Technical University of Denmark, Lyngby/DK ² Université Catholique de Louvain, Louvain-la-Neuve/BE ³ Université Lille1, Villeneuve 'Ascq,FR
16:30 – 16:50	Effects of pulsed current on plasma electrolytic oxidation E. Babka¹, R. Mann¹, W. Hansal¹, S. Hansal¹ ¹ Happy Plating Ltd., Wiener Neustadt/AT
16:50 – 17:10	Degradation and adhesion properties of titanium oxide layers in hot/wet conditions B. Rico-Oller¹, T. Mertens¹, M. Kolb¹, J. Wehr¹, T. Hack¹, M. Zheludkevich² ¹ Airbus Group Innovations, München/DE ² Helmholtz-Zentrum Geesthacht (HZG), Geesthacht/DE
17:10 – 17:30	The corrosion and adhesion performance of barrier-type anodic aluminium oxides prepared in different electrolytes S. Abrahami¹, T. Hauffman², J. de Kok³, H. Terry², A. Mol⁴ ¹ Materials Innovation Institute (M2i), Delft/NL; ² Vrije Universiteit Brussel (VUB), Brussel/BE; ³ Fokker Aerostructures BV, Papendrecht/NL; ⁴ TU Delft, Delft/NL

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

Corrosion of Steel in Concrete	
10:00 – 11:20	Room: Saal 4
Chair	M. Raupach , RWTH Aachen Universität, Aachen/DE
10:00 – 10:20	Advances in modelling entrance and transport of corrosive agents into concrete R. Montoya¹, J. Deconinck¹ , ¹ Vrije Universiteit Brussel (VUB), Brussel/BE
10:20 – 10:40	Chloride-induced reinforcement corrosion in separation cracks after injection with PUR M. Kosalla¹, M. Raupach¹ , ¹ RWTH Aachen Universität, Aachen/DE
10:40 – 11:00	Stray current vs anodic polarization in reinforced mortar: a comparative study on steel corrosion behaviour in both regimes Z. Chen¹, D. Koleva¹, K. van Breugel¹ , ¹ TU Delft, Delft/NL
11:00 – 11:20	Influence of mixed cement based concrete on corrosion E. Milost¹, T. Kosec¹, A. Legat¹, A. Sajna¹, V. Bokan-Bosiljkov² ¹ Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI ² University of Ljubljana, Ljubljana/SI
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Corrosion of Steel in Concrete	
11:50 – 13:10	Room: Saal 4
Chair	M. Raupach , RWTH Aachen Universität, Aachen/DE
11:50 – 12:10	Hydrogen evolution on galvanized rebar in fresh concrete with different chromate-reduced cements G. Ebell¹, A. Burkert¹, J. Mietz¹ ¹ BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE
12:10 – 12:30	Effect of polymer modified cementitious coatings on chloride induced corrosion of steel in concrete F. Bolzoni¹, S. Beretta¹, A. Brenna¹, M. Diamanti¹, M. Ormellese¹, T. Pastore², M. Berra³ ¹ Politecnico di Milano, Milano/IT; ² Università degli studi di Bergamo, Dalmine, Bergamo/IT; ³ RSE-Ricerca sul Sistema Energetico S.p.A, Milano/IT
12:30 – 12:50	Potentiometric response of chloride sensors in cementitious materials of varying chemical composition and water-to-cement ratio F. Pargar¹, D. Koleva¹, K. van Breugel¹ , ¹ TU Delft, Delft/NL
12:50 – 13:10	Stress corrosion cracking behaviour of the prestressing steels. Influence of the steel type I. Popenar , ICECON Group, Bucharest/RO

TUESDAY, 08.09.2015 SCIENTIFIC LECTURES PROGRAMME

13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Corrosion of Steel in Concrete	
14:30 – 15:50	Room: Saal 4
Chair	M. Raupach, RWTH Aachen Universität, Aachen/DE
14:30 – 14:50	Technical textiles embedded in mortar for cathodic corrosion protection A. Asgharzadeh ¹ , M. Raupach ¹ , ¹ RWTH Aachen Universität, Aachen/DE
14:50 – 15:10	Corrosion protection of bridges using a textile reinforced concrete interlayer C. Driessen ¹ , M. Raupach ¹ , ¹ RWTH Aachen Universität, Aachen/DE
15:10 – 15:30	Long term performance of corrosion resistant steel reinforcement in saline environment N. Gartner ¹ , M. Bajt Leban ¹ , T. Kosec ¹ , A. Kranjc ¹ , A. Legat ¹ ¹ Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI
15:30 – 15:50	Chloride induced corrosion of lean duplex stainless steel reinforcements in simulated concrete pore solution D. Bastidas ¹ , C. Zapico ¹ , I. Llorente ¹ ¹ CENIM - Centro Nacional de Investigaciones Metalúrgicas, Madrid/ES
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Corrosion of Steel in Concrete	
16:10 – 17:10	Room: Saal 4
Chair	M. Raupach, RWTH Aachen Universität, Aachen/DE
16:10 – 16:30	Development of "smart" corrosion inhibitors for reinforced concrete structures exposed to microbial environment E. Volpi ¹ , C. Foadelli ¹ , S. Trasatti ² , D. Koleva ³ ¹ University of Milan, Milano/IT; ² Università degli Studi di Milano, Milano/IT ³ TU Delft, Delft/NL
16:30 – 16:50	Cathodic protection for reinforced concrete revisited: effects and side effects studied in lab conditions and a 45 years-old structure D. Koleva ¹ , K. van Breugel ¹ , V. Pareek ² , M. Tade ² ¹ TU Delft, Delft/NL; ² Curtin University of Technology, Perth/AU
16:50 – 17:10	Threshold conditions for concrete reinforcing steel corrosion in Barakah nuclear power plants, UAE M. Qasem ¹ , Y. Yi ² , P. Cho ² ¹ Emirates Nuclear Energy Corporation (ENEC), Abu Dhabi/AE ² Khalifa University of Science, Technology & Research, Abu Dhabi/AE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

Plenary Lecture and EFC Poster Prize	
09:00 – 09:45	Room: Saal 1
09:00 – 09:45	Corrosion as a key factor for materials performance and life-time in advanced high temperature technologies M. Schütze DECHEMA-Forschungsinstitut, Frankfurt am Main/DE
09:45 – 10:00	BREAK FOR CHANGING LECTURE HALL
Metallic Coatings	
10:00 – 11:20	Room: Saal 11
Chairs	L. Fedrizzi, University of Udine, Udine/IT S. Garcia, Delft University of Technology, Delft/NL
10:00 – 10:20	Thermally sprayed coatings as protection systems for screw connections in offshore wind plants A. Mertke ¹ , R. Feser ¹ , F. Prenger ² , S. Hof ² , S. Güres ³ ¹ Fachhochschule Südwestfalen, Iserlohn/DE; ² Grillo-Werke AG, Duisburg/DE ³ August Friedberg GmbH, Gelsenkirchen/DE
10:20 – 10:40	Effects of the sealing process on the corrosion behaviour of thermally sprayed and sealed coatings for corrosion protection of large building parts T. Maghet ¹ , M. Sallai ¹ , T. Wilhelm ¹ , J. Mährlein ¹ , S. Friedrich ² , R. Regenspürger ² ¹ GSI mbH, SLV Duisburg branch, Duisburg/DE ² Institut für Korrosionsschutz Dresden GmbH, Dresden/DE
10:40 – 11:00	Investigation on the improved corrosion behaviour of TiMgN hard coatings on steel substrate T. Müller ¹ , A. Burkert ¹ , A. Heyn ² , M. Balzer ³ , M. Fenker ³ ¹ BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE ² Otto-von-Guericke-Universität Magdeburg, Magdeburg/DE; ³ fem Research Institute for Precious Metals and Metal Chemistry, Schwäbisch Gmünd/DE
11:00 – 11:20	HVAF thermal spray Fe-based coating: an environmentally acceptable alternative to cobalt-based coating E. Sadeghimeresht ¹ , N. Markocsan ¹ , P. Nylen ¹ ¹ University West, Trollhattan/SE
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

Metallic/Self-healing Coatings	
11:50 – 13:10	Room: Saal 11
Chairs	L. Fedrizzi, University of Udine, Udine/IT S. Garcia, Delft University of Technology, Delft/NL
11:50 – 12:10	Protecting machines and constructions against corrosion influences from Earth, Water, Fire and Air environment with active thermal sprayed coatings F. van Rodijnen, Oerlikon Metco Europe GmbH, Kelsterbach/DE
12:10 – 12:30	Intrinsic healing corrosion protective sol-gel coatings containing reversible tetrasulphide groups S. Garcia ¹ , M. Abdolazadeh ¹ , S. van der Zwaag ¹ ¹ Delft University of Technology, Delft/NL
12:30 – 12:50	PH-responsive cerium based nanocomposites for anticorrosion purposes C. Oueiny ¹ , S. Berlioz ¹ , F. Perrin ¹ ¹ Université de Toulon, La Garde Cedex/FR
12:50 – 13:10	ZrO₂ thin films combined with organic inhibitors for corrosion protection of aluminium alloys A. De Nicolò ¹ , L. Paussa ¹ , F. Andreatta ¹ , A. Cotugno ² , A. Fisogni ² , L. Fedrizzi ¹ ¹ University of Udine, Udine/IT; ² Turco Italiana S.p.A., Montirone/IT
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Self-healing Coatings	
14:30 – 15:50	Room: Saal 11
Chairs	H. Terryn, Vrije Universiteit Brussel (VUB), Brussel/BE M. Zheludkevich, Helmholtz-Zentrum Geesthacht (HZG), Geesthacht/DE
14:30 – 14:50	Innovative sealing for coatings on magnesium alloys produced by plasma electrolytic oxidation (PEO) M. Mohedano ¹ , M. Serdechnova ¹ , C. Blawert ¹ , M. Zheludkevich ¹ ¹ Helmholtz-Zentrum Geesthacht (HZG), Geesthacht/DE
14:50 – 15:10	Composite protective coatings enriched with combination of inhibitors for magnesium alloys S. Lamaka ¹ , D. Snihirova ¹ , D. Ivanov ² , M. Starykevich ² , M. Zheludkevich ³ , T. Hack ⁴ ¹ University of Lisbon, Lisbon/PT; ² University of Aveiro, Aveiro/PT; ³ Helmholtz-Zentrum Geesthacht (HZG), Geesthacht/DE; ⁴ Airbus Group Innovations, München/DE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:10 – 15:30	Preparation and characterization of a coating containing two autonomous self-healing mechanisms A. Kakaroglou ¹ , M. Shiba ² , H. Verbruggen ¹ , S. Pletincx ¹ , H. Terryn ¹ , I. De Graeve ¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE ² National College of Technology, Asahikawa/JP
15:30 – 15:50	Preparation of nanocontainers for inhibition of aluminium alloy corrosion and dispersion in an organic coating E. Lachéry ¹ , J. Escobar ² , S. Peeterbroeck ¹ , M. Poelman ¹ , M. Poorteman ² , M. Wanner ³ , M. Olivier ² ¹ Materia Nova, Mons/BE; ² University of Mons, Mons/BE; ³ Fraunhofer IPA, Stuttgart/DE
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Self-healing Coatings	
16:10 – 17:10	Room: Saal 11
Chairs	M. Zheludkevich, Helmholtz-Zentrum Geesthacht (HZG), Geesthacht/DE H. Terryn, Vrije Universiteit Brussel (VUB), Brussel/BE
16:10 – 16:30	Self-healing microcomposites for corrosion protection of hot dip galvanized steel C. Charitidis ¹ , I. Kartsonakis ¹ , E. Karaxi ¹ , E. Koumoulos ¹ , I. Kanellopoulou ¹ , A. Karantonis ¹ ¹ National Technical University of Athens, Zographos/GR
16:30 – 16:50	Role of environment on release kinetics of intercalated MoO₄²⁻ inhibitor from Zn₂Al₂(OH)₆Cl₂ layered double hydroxides V. Shkirskiy ¹ , P. Volovitch ¹ , K. Ogle ¹ , F. Leroux ² , P. Vialat ² , A. Vvedenskii ³ , P. Keil ⁴ , H. Hintze-Brüning ⁴ ¹ Chimie ParisTech, Paris/FR; ² Université Blaise Pascal, Aubière/FR ³ Voronezh State University, Voronezh/RU; ⁴ BASF Coatings GmbH, Münster/DE
16:50 – 17:10	Raman spectroscopy as a complementary technique (to electrochemical techniques) for studying multiple-action self-healing coatings H. Verbruggen ¹ , A. Lutz ¹ , M. Meeusen ² , K. Baert ¹ , I. De Graeve ¹ , H. Terryn ¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE; ² TU Delft, Delft/NL
Mechanisms, Methods & Modelling	
10:00 – 11:00	Room: Galerie B
Chair	H. Terryn, Vrije Universiteit Brussel (VUB), Brussel/BE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:00 – 10:20	In-situ analytical proof of passivity in valve metal libraries A. Hassel¹, J. Kollender¹, M. Hafner¹, A. Mardare¹, C. Mardare¹ ¹ Johannes Kepler Universität Linz, Linz/AT
10:20 – 10:40	Fabrication, investigation and corrosion behaviour of electrodeposited material libraries C. Grill¹, J. Kollender¹, A. Hassel¹ ¹ Johannes Kepler Universität Linz, Linz/AT
10:40 – 11:00	Bimetallic corrosion under atmospheric conditions, effect of different types of specimens for field exposure tests J. Tidblad¹, L. Sjögren¹, H. Pahverk¹ ¹ Swerea KIMAB AB, Kista/SE
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
11:50 – 13:10	Room: Galerie B
Chair	S. Lamaka , University of Lisbon, Lisbon/PT
11:50 – 12:10	Oxygen reduction on platinum covered by thin NaCl electrolyte layers O. Dolgikh¹, A. Bastos², A. Oliveira², J. Deconinck¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE; ² Universidade de Aveiro, Aveiro/PT
12:10 – 12:30	Numerical prediction of flow accelerated corrosion with surface topology change K. Suga , Tokyo University of Science, Chino/JP
12:30 – 12:50	Simulating the influence of corrosion products on the corrosion rate: Approach and applications H. Simillion¹, O. Dolgikh¹, H. Terryn¹, J. Deconinck¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE
12:50 – 13:10	Numerical prediction of liquid film formation during accelerated corrosion tests N. Van den Steen¹, J. Deconinck¹ ¹ Vrije Universiteit Brussel (VUB), Brussel/BE
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
14:30 – 15:50	Room: Galerie B

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

Chair	A. Atrens , The University of Queensland, St Lucia/AU
14:30 – 14:50	Influence of proteins on corrosion of biodegradable Mg and Fe S. Virtanen Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen/DE
14:50 – 15:10	Localized corrosion of the Mg alloys protected by polymer- and inhibitor-containing composite coating: mechanism and kinetics A. Gnedenkov¹, S. Sinebryukhov¹, D. Mashtalyar¹, S. Gnedenkov¹ ¹ Russian Academy of Sciences, Vladivostok/RU
15:10 – 15:30	SO₂-induced corrosion of Mg alloy AZ91D M. Esmaily¹, D. Blücher², J. Svensson¹, L. Johansson¹ ¹ Chalmers University of Technology, Gothenburg/SE ² SINTEF Materials and Chemistry, Trondheim/NO
15:30 – 15:50	Effect of Friction Stir Processing (FSP) on the corrosion properties of magnesium F. Deflorian¹, M. Fedel¹, D. Ahmadkhaniha², M. Sohi² ¹ University of Trento, Trento/IT; ² University of Tehran, Tehran/IR
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
16:10 – 17:30	Room: Galerie B
Chair	S. Virtanen , Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen/DE
16:10 – 16:30	Recent developments regarding the Mg corrosion reaction sequence A. Atrens , The University of Queensland, St Lucia/AU
16:30 – 16:50	Investigation of hydrogen evolution behaviour on corroding magnesium electrodes by electrochemical impedance spectroscopy, real-time hydrogen measurement and optical imaging M. Curioni¹, F. Scenini¹, T. Monetta², F. Bellucci² ¹ The University of Manchester, Manchester/GB ² Università degli Studi di Napoli Federico II, Napoli/IT
16:50 – 17:10	The skin effect of Nd-Y-containing magnesium alloys A. Lugovskoy¹, O. Gaon¹, N. Siani¹ ¹ Ariel University, Ariel/IL

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

Nuclear Corrosion	
10:00 – 11:20	Room: Saal 10
Chair	D. Féron, CEA Saclay, Gif-sur-Yvette/FR
10:00 – 10:20	Influence of corrosion products on the behavior of stainless steel in nitric acid and in presence of oxidizing ions F. Alexis ¹ , N. Larabi-Gruet ¹ , S. Jakab-Costenoble ³ , P. Moisy ³ ¹ CEA Saclay, Gif-sur-Yvette/FR; ³ CEA Marcoule, Bagnols-sur-Cèze/FR
10:20 – 10:40	Estimation method for corrosion rate of carbon steel in water with gamma-ray irradiated condition M. Yamamoto ¹ , T. Satoh ¹ , A. Komatsu ¹ , J. Nakano ¹ , F. Ueno ¹ ¹ Japan Atomic Energy Agency, Tokai-Mura Ibaraki/JP
10:40 – 11:00	Importance of experimental arrangement for corrosion testing in bentonite environment M. Kouril ¹ , M. Cervenak ¹ , D. Novikova ¹ vN. Papezova ¹ , P. Novak ¹ ¹ University of Chemistry and Technology, Praha/CZ
11:00 – 11:20	Evaluation of the hydrogen induced crack behaviour of titanium for overpack applications under buried conditions G. Nakayama ¹ , T. Koketsu ¹ , ¹ IHI Corporation, Yokohama/JP
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area

Environment Sensitive Fracture	
11:50 – 13:10	Room: Saal 10
Chair	K. Wolski, Ecole Nationale Supérieure des Mines, Saint Etienne/FR
11:50 – 12:30 Keynote	Research on the influence of hydrogen on mechanical properties of medium strength steels A. Atrens ¹ , Q. Liu ¹ , ¹ The University of Queensland, St Lucia/AU
12:30 – 12:50	Evaluation of susceptibility to hydrogen induced cracking of ultra-high strength steel sheets for automobiles H. Kim ¹ , W. Yang ¹ , H. Jeong ¹ , S. Lee ¹ , Y. Jeong ¹ , M. Moon ¹ , ¹ Hyundai-Steel, Chungnam/KR
12:50 – 13:10	Detection of stress corrosion cracking in sensitized austenitic stainless steel at near-ambient conditions in thiosulfate solutions B. Zajec ¹ , M. Bajt Leban ¹ vT. Kosec ¹ , A. Legat ¹ ¹ Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Environment Sensitive Fracture	
14:30 – 15:50	Room: Saal 10
Chair	A. Visser, Montanuniversität Leoben, Leoben/AT
14:30 – 14:50	Hydrogen redistribution during continuous cooling of a low alloy steel J. Sezgin ¹ , C. Bosch ¹ , A. Mascaro ² , G. Perrin ³ , K. Wolski ¹ ¹ Ecole Nationale Supérieure des Mines, Saint-Etienne/FR ² AREVA Creusot Forge, Le Creusot/FR; ³ AREVA DRDI, Paris/FR
14:50 – 15:10	Behavior of short stress corrosion cracks colonies in nuclear environments J. Bolivar ¹ , M. Frégonèse ¹ , J. Rethore ¹ , M. Baietto ¹ , C. Duret-Thual ² , O. Calonne ³ , P. Combrade ⁴ , F. Bumbieler ⁵ , A. Proust ⁶ , P. Pineau ¹ ¹ Université de Lyon, Villeurbanne/FR; ² Institut de la Corrosion, Fraisses/FR ³ AREVA NP, Le Creusot/FR; ⁴ ACXCOR, Le Bessat/FR; ⁵ ANDRA, Bure/FR ⁶ Mistras Group SA, Sucy en Brie/FR
15:10 – 15:30	Crystallography of stress corrosion cracking of austenitic stainless steel by scanning electron microscope and electron backscatter diffraction H. Mubarak ¹ , L. Barrallier ¹ , S. Jégou ¹ , F. Guittonneau ¹ , K. Ogle ² , P. Volovitch ² ¹ Arts et Métiers ParisTech, Aix-en-Provence/FR; ² Chimie ParisTech, Paris/FR
15:30 – 15:50	Effect of high temperature nitriding on corrosion properties of martensitic stainless steels M. Borchert ¹ , G. Mori ¹ , M. Bischof ² , A. Tomandl ² ¹ Montanuniversität Leoben, Leoben/AT; ² Hilti Corporation, Schaan/LI
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Environment Sensitive Fracture	
16:10 – 17:10	Room: Saal 10
Chair	K. Wolski, Ecole Nationale Supérieure des Mines, Saint Etienne/FR
16:10 – 16:30	Study of embrittlement mechanisms of the Virgo™38, a 16Cr-4Ni low-carbon supermartensitic stainless steel C. Gayton ¹ , C. Bosch ¹ , A. Rozinoer ² , F. Millet ² , K. Wolski ¹ , J. Stolarz ¹ ¹ Ecole Nationale Supérieure des Mines de Saint-Etienne, Saint-Étienne/FR ² General Electric Oil & Gas Thermodyn SAS, Le Creusot/FR

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

16:30 – 16:50	<p>Corrosion fatigue behaviour of a new austenitic stainless steel under various testing conditions</p> <p>A. Visser¹, G. Mori¹, R. Fluch², M. Kapp², H. Leitner², B. Holper³, M. Panzenböck¹, R. Pippan⁴</p> <p>¹ Montanuniversität Leoben, Leoben/AT ² BÖHLER Edelstahl GmbH & Co KG, Kapfenberg/AT ³ Schoeller Bleckmann Oilfield Technology GmbH, Ternitz/AT ⁴ Erich Schmid Institute of Materials Science, Leoben/AT</p>
16:50 – 17:10	<p>Influence of metallurgical state on the susceptibility to stress corrosion cracking of α,β' brass</p> <p>C. Berne¹, E. Andrieu², J. Reby³, J. Sobrino⁴, C. Blanc²</p> <p>¹ ENSIACET - Ecole Nationale Supérieure des Ingénieurs en Arts Chimiques Et Technologiques, Toulouse/FR ² Université de Toulouse, Toulouse/FR ³ CETIM, Nantes/FR; ⁴ CETIM, Senlis/FR</p>

Corrosion in Oil and Gas

10:00 – 11:20	Room: Saal 1
Chair	M. Wilms , Shell Global Solutions International, Amsterdam/NL
10:00 – 10:20	<p>Corrosion behaviour of martensite-based stainless steel OCTG in sour environment</p> <p>T. Kawano¹, K. Eguchi¹, K. Fujimura¹, Y. Ishiguro¹, H. Ota¹, H. Kajiyama¹, M. Kimura¹</p> <p>¹ JFE Steel Corporation, Kawasaki/JP</p>
10:20 – 10:40	<p>Sulfide stress corrosion study of a super martensitic stainless steel: role of H₂S on metallic sulfur formation and hydrogen embrittlement</p> <p>M. Monnot¹, M. Mantel¹, G. Berthomé², V. Roche³, R. Nogueira³, E. Chauveau¹</p> <p>¹ Ugitech SA, Ugine/FR; ² CNRS, Grenoble/FR ³ Université Grenoble Alpes, Grenoble/FR</p>
10:40 – 11:00	<p>Utilizing composite pipe wrap technologies to restore corroded pipework to operating compliance</p> <p>C. Bateman¹, K. Flanagan¹</p> <p>¹ Belzona Polymerics Ltd, Harrogate/GB</p>
11:00 – 11:20	<p>Centrifugally cast 25% Cr superduplex solid corrosion resistant alloy (CRA) pipe for upstream oil and gas</p> <p>S. Venkataraman¹, D. Jakobi¹</p> <p>¹ Schmidt + Clemens GmbH + Co. KG, Lindlar/DE</p>

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Corrosion in Oil and Gas	
11:50 – 13:10	Room: Saal 1
Chair	M. Wilms , Shell Global Solutions International, Amsterdam/NL
11:50 – 12:10	<p>Influence of different heat treatments on sensitization of alloy 625</p> <p>G. Mori¹, R. Lackner¹, F. Winter², H. Rinner², R. Egger²</p> <p>¹ Montanuniversität Leoben, Leoben/AT ² voestalpine Grobblech GmbH, Linz/AT</p>
12:10 – 12:30	<p>Latest developments in clad-plate production for enhanced toughness and corrosion-resistance properties with cladding alloy 625</p> <p>H. Lengauer¹, C. Schindler¹, H. Mitter¹, C. Ganglbauer¹</p> <p>¹ voestalpine Grobblech GmbH, Linz/AT</p>
12:30 – 12:50	<p>Pre-commissioning of submarine pipelines – water quality and corrosion threats</p> <p>B. Graver¹, A. Pedersen¹, E. Skavås¹, E. Gulbrandsen¹</p> <p>¹ DNV GL, Høvik/NO</p>
12:50 – 13:10	<p>Exploring the suitability of cold bonding solutions for safety critical assets and equipment</p> <p>C. Bateman¹, K. Flanagan¹</p> <p>¹ Belzona Polymerics Ltd, Harrogate/GB</p>
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Corrosion in Oil and Gas	
14:30 – 15:30	Room: Saal 1
Chairs	M. Wilms , Shell Global Solutions International, Amsterdam/NL S. Paterson , Shell Projects & Technology, Amsterdam/NL
14:30 – 14:50	<p>Influence of structure on the corrosion properties of high manganese high nitrogen stainless steels</p> <p>S. Kolesov¹, A. Shakhmatov¹, R. Badrak², A. Kharkov³</p> <p>¹ Weatherford International, St. Petersburg/RU ² Weatherford International, Houston/US ³ Saint-Petersburg State University, St. Petersburg/RU</p>

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

14:50 – 15:10	Is HIC test mandatory for sour gas service pipelines weldments? M. Najmi¹, D. Masouri¹, N. Azimzadeh² ¹ POGC - Pars Oil and Gas Co., Tehran/IR ² Amirkabir University of Technology, Tehran/IR
15:10 – 15:30	Corrosion behaviour of 316L stainless steel in Qatar's atmosphere M. Sliem¹, A. Abdullah¹, A. Mohamed¹, D. Roulston², R. Johnsen³, S. Al-Remaihi² ¹ Qatar University, Doha/QA ² Qatar Petroleum, Doha/QA ³ Norwegian University of Science and Technology, NTNU, Trondheim/NO
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Corrosion in Oil and Gas	
16:10 – 17:30	Room: Saal 1
Chairs	S. Paterson , Shell Projects & Technology, Amsterdam/NL M. Wilms , Shell Global Solutions International, Amsterdam/NL
16:10 – 16:30	Estimating internal corrosion evolution of oil pipelines by deterministic and reliability analysis H. Castaneda-Lopez¹, Q. Huang² ¹ Texas A&M University, College Station/US ² The University of Akron, Akron/US
16:30 – 16:50	Close-to-reality sliding-corrosion test-rig for oilfield application A. Trausmuth¹, M. Rodriguez Ripoll¹, G. Zehethofer², T. Vogl³, E. Badisch¹ ¹ AC2T research GmbH, Wiener Neustadt/AT ² OMV Exploration & Production GmbH, Wien/AT ³ voestalpine Tubulars GmbH & Co. KG, Kindberg-Aumüh/AT
16:50 – 17:10	Protection effectiveness of vapor corrosion inhibitor for corrosion under insulation B. Bavarian¹, B. Samimi¹, Y. Ikder¹, L. Reiner¹, B. Miksic² ¹ California State University, Northridge/US ² Cortec Corporation, St. Paul/US

Automotive Corrosion
10:00 – 11:20 **Room: Saal 12**
Chair **F. Hannour**, Qatar National Research Fund, Doha/QA

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:00 – 10:20	Influence of corrosion on the fatigue behaviour of different stainless steels for exhaust systems D. Knoll¹, D. Neubauer², M. Yasir¹, H. Wieser¹, B. Heine² ¹ Faurecia Emissions Control Technologies, Augsburg/DE; ² HTW Aalen, Aalen/DE
10:20 – 10:40	How to quantify pitting corrosion in exhaust systems – advantages and limitations of different statistical approaches H. Wieser¹, M. Yasir¹, D. Knoll¹, S. Burger¹, M. Hogl¹ ¹ Faurecia Emissions Control Technologies, Augsburg/DE
10:40 – 11:00	Study of the corrosion behaviour of zirconia based thin film pretreatments vs phosphating during short and long term cyclic corrosion exposure K. Tarka¹, A. Jaako¹, D. Persson², L. Johansson³, H. Mattsson¹ ¹ Volvo Car Corporation, Gothenburg/SE; ² Swerea KIMAB AB, Kista/SE ³ Chalmers University of Technology, Gothenburg/SE
11:00 – 11:20	Simultaneous and alternated fatigue-corrosion performance of joined materials for automotive applications F. Vucko¹, D. Thierry¹, B. Weber², G. Luckeneder³, T. Bschorr⁴, K. Rother⁵, C. Sciaboni⁶, J. Sczepanski⁷ ¹ Institut de la Corrosion, Brest/FR; ² ArcelorMittal Maizières Research SA, Maizières-lès-Metz/FR; ³ voestalpine Stahl GmbH, Linz/AT ⁴ Gesellschaft für Schweißtechnik International mbH, München/DE ⁵ University of Applied Science, München/DE; ⁶ Centro Sviluppo Materiali SpA, Roma/IT ⁷ Bayerische Motoren Werke AG, München/DE
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Automotive Corrosion	
11:50 – 13:10	Room: Saal 12
Chair	F. Hannour , Qatar National Research Fund, Doha/QA
11:50 – 12:10	Atmospheric corrosion analysis of the dissimilar friction stir welded joint of AM50 Mg alloy to 6005-T6 Al alloy M. Esmaily¹, D. Blücher², J. Svensson¹, L. Johansson¹ ¹ Chalmers University of Technology, Gothenburg/SE ² SINTEF Materials and Chemistry, Trondheim/NO
12:10 – 12:30	Improvement of the Corrosion Behaviour of AZ91 via Friction Stir Processing W. Huemer¹, C. Hahn², A. Hütter¹, R. Vallant¹, C. Sommitsch¹ ¹ TU Graz, Graz/AT; ² TU Darmstadt, Darmstadt/DE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

12:30 – 12:50	A capable, simple replacement to salt spray testing - Part 1 - Exposure results and a draft standard proposal <u>B. Rendahl</u> ¹ , <u>M. Ström</u> ² ¹ Swerea KIMAB, Kista/SE; ² Volvo Car Corporation, Göteborg/SE
12:50 – 13:10	Assesing hydrogen susceptibility of press hardened and high strength steels using various testing methods <u>A. Muhr</u> ¹ , <u>T. Kurz</u> ¹ , <u>S. Kolnberger</u> ¹ , <u>F. Zwettler</u> ¹ , <u>G. Luckeneder</u> ¹ , <u>J. Faderl</u> ¹ , <u>K. Stellnberger</u> ¹ , <u>G. Mori</u> ² ¹ voestalpine Stahl GmbH, Linz/AT ² Montanuniversität Leoben, Leoben/AT
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Automotive Corrosion	
14:30 – 15:50	Room: Saal 12
Chair	F. Hannour , Qatar National Research Fund, Doha/QA
14:30 – 14:50	Replacement systems for tri-cation-phosphating - a principle application test with galvanized press-hardened and cold rolled car-body materials <u>G. Luckeneder</u> ¹ , <u>M. Voith</u> ¹ , <u>K. Stellnberger</u> ¹ , <u>J. Faderl</u> ¹ , <u>T. Kurz</u> ¹ ¹ voestalpine Stahl GmbH, Linz/AT
14:50 – 15:10	A capable, simple cyclic replacement to salt spray testing; Part 2 - Corrosion mechanistic aspects <u>M. Ström</u> ¹ , <u>B. Rendahl</u> ² ¹ Volvo Car Corporation, Göteborg/SE; ² Swerea KIMAB, Kista/SE
15:10 – 15:30	Corrosion test improvement by climatic modeling <u>R. Mayrhofer</u> ¹ , <u>T. Bäck</u> ² ¹ Daimler AG, Sindelfingen/DE; ² Divis intelligent solutions GmbH, Dortmund/DE
15:30 – 15:50	Corrosion test instruments of new cyclic corrosion test methods <u>S. Suga</u> Suga Test Instruments Co., Ltd., Tokyo/JP
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Automotive Corrosion	
16:10 – 17:30	Room: Saal 12
Chair	F. Hannour , Qatar National Research Fund, Doha/QA

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

16:10 – 16:30	In-depth parameter study on the use of weight loss samples for improved monitoring of automotive cyclic corrosion tests <u>F. Beier</u> ¹ , <u>H. Rudolph</u> ² , <u>R. Mayrhofer</u> ² ¹ SZMF - Salzgitter Mannesmann Forschung GmbH, Salzgitter/DE ² Daimler AG, Sindelfingen/DE
16:30 – 16:50	Metrological analysis of corrosion-climatic stresses in an entire vehicle long-term study <u>C. Jahn</u> ¹ , <u>P. Prokop</u> ¹ , ¹ TU Dresden, Dresden/DE
16:50 – 17:10	Corrosion of aluminium steel joints produced by cold bulk metal forming process <u>A. Altin</u> ¹ , <u>S. Wohletz</u> ² , <u>W. Krieger</u> ¹ , <u>P. Groche</u> ² , <u>A. Erbe</u> ¹ ¹ Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf/DE ² TU Darmstadt, Darmstadt/DE
17:10 – 17:30	The new era in corrosion testing <u>J. Quill</u> , Q-Lab Corp., Westlake/US

Corrosion in Refinery Industry

10:00 – 11:20	Room: Saal 2
Chair	F. Ropital , IFP Energies nouvelles, Solaize/FR
10:00 – 10:20	Investigation of initial stages of metal dusting corrosion phenomenon relevant to natural gas conversion technologies <u>D. Gunawardana</u> ¹ , <u>J. Walmsely</u> ² , <u>H. Venvik</u> ¹ ¹ Norwegian University of Science and Technology (NTNU), Trondheim/NO ² SINTEF Materials and Chemistry, Trondheim/NO
10:20 – 10:40	Innovative corrosion testing using a fully automatic fixed bed pilot plant unit <u>M. Suleiman</u> ¹ , <u>N. Chandak</u> ¹ , <u>A. Al Maqtari</u> ¹ ¹ Abu Dhabi Oil Refining Company (Takreer), Abu Dhabi/AE
10:40 – 11:00	Industrial, electrochemical, on-line corrosion monitoring – applications, problems and challenges <u>S. Kus</u> ¹ , <u>S. Srinivasan</u> ² , <u>M. Qreis</u> ³ ¹ Honeywell Process Solutions, Bracknell/GB; ² Honeywell Process Solutions, Houston/US; ³ Abu Dhabi Polymers Company Ltd. (Borouge), Abu Dhabi/AE
11:00 – 11:20	Application of modified electrochemical noise technique in Kuwaiti open cooling water system <u>H. Al-Mazeedi</u> ¹ , <u>M. Miyazawa</u> ² , <u>Y. Ishikawa</u> ² ¹ Kuwait Institute for Scientific Research, Kuwait City/KW ² JSCE - Japan Society of Corrosion Engineering, Tokyo/JP

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Corrosion in Refinery Industry	
11:50 – 12:50	Room: Saal 2
Chair	F. Ropital, IFP Energies nouvelles, Solaize/FR
11:50 – 12:10	Three Layered CUI Protection System: Field Performance M. Funahashi, MUI International, West Chester/US
12:10 – 12:30	Failure investigation of alloy 20 in concentrated sulphuric acid S. Almaaesab ¹ , S. Al-Subai ¹ ¹ SABIC - Saudi Basic Industries Corporation, Jubail Industrial City/SA
12:30 – 12:50	Corrosion in a thermal cracking process A. Schmid ¹ , G. Mori ¹ , ¹ Montanuniversität Leoben, Leoben/AT

Archaeological and Historical Artefacts

14:30 – 15:50	Room: Saal 2
Chair	D. Neff, CEA Saclay, Gif-sur-Yvette/FR
14:30 – 14:50	Phases' transformations during subcritical treatment of iron archaeological artefacts M. Bayle ¹ , P. de Viviés ² , J. Memet ² , P. Dillmann ¹ , D. Neff ¹ ¹ CEA Saclay, Gif-sur-Yvette/FR; ² A-CORROS Expertises, Arles/FR
14:50 – 15:10	Impact of akaganeite on corrosion rate of iron as a function of relative humidity: synthetic versus naturally formed βFeOOH N. Emmerson ¹ , D. Watkinson ¹ ¹ Cardiff University, Cardiff/GB
15:10 – 15:30	Atmospheric corrosion resistance of stainless steel: results of a field exposure programme in Middle-East S. Hägg Mameng ¹ , R. Pettersson ² , C. Leygraf ³ , L. Wegelius ¹ ¹ Outokumpu Stainless steel AB, Avesta/SE ² The Swedish Steel Producers' Association Stockholm, Stockholm/SE ³ Royal institute of Technology, Stockholm/SE;
15:30 – 15:50	In situ atmospheric corrosion assessment on weathering steel sculptures S. Grassini ¹ , E. Angelini ¹ , M. Parvis ¹ , F. Zucchi ² ¹ Politecnico di Torino, Torino/IT; ² Università di Ferrara, Ferrara/IT

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Archaeological and Historical Artefacts	
16:10 – 17:10	Room: Saal 2
Chair	S. Grassini, Politecnico di Torino, Torino/IT
16:10 – 16:30	New coatings for the protection of ornamental cast ironwork exposed in uncontrolled environment Z. Abdel Hamid ¹ , M. Rifai ² , S. Saleh ³ , M. Abdelbar ³ ¹ Central Metallurgical Research and Development Institute (CMRDI), Helwan, Cairo/EG ² Cairo University, Cairo/EG; ³ Fayoum University, Cairo/EG
16:30 – 16:50	Quantitative testing of corrosion rates of heritage steel coated with Paraloid B72™, Cosmolloid H80™ and Siliglide 10™ D. Watkinson ¹ , N. Emmerson ¹ , A. Lawson ¹ ¹ Cardiff University, Cardiff/GB
16:50 – 17:10	Study of iron sulphides origin in archaeological artefacts by determination of sulphur isotopic ratio S. Grousset ¹ , F. Mercier-Bion ¹ , D. Neff ¹ , D. Crusset ² , A. Dauzeres ³ , P. Dillmann ¹ , J. Gallien ¹ ¹ CEA Saclay, Gif-sur-Yvette/FR; ² ANDRA, Chatenay-Malabry/FR ³ IRSN - Institut Radioprotection Sûreté Nucléaire, Fontenay-aux-Roses/FR

Marine Corrosion

10:00 – 11:00	Room: Galerie C
Chair	U. Kivisäkk, AB Sandvik Materials Technology, Sandviken/SE
10:00 – 10:20	Corrosion of flange of marine hose X. Zhang ¹ , G. Ferrari ¹ , ¹ Endures BV, Den Helder/NL
10:20 – 10:40	Electrochemical monitoring of damaged thermally sprayed aluminium coatings on steel in a simulated marine immersion environment at different temperatures S. Paul, TWI, Cambridge/GB
10:40 – 11:00	Comparative electrochemical study of arc- and flame sprayed aluminum coatings in marine environment L. Abdoli ¹ , H. Li ¹ ¹ Chinese Academy of Sciences, Ningbo/CN

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

Cathodic Protection in Marine Environment	
11:50 – 13:10	Room: Galerie C
Chairs	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE J. Crouzillac , BAC Corrosion Control, Voisins-le-Bretonneux/FR
11:50 – 12:10	Offshore windfarm monopile cathodic protection: deficiencies in standards and specifications B. Wyatt Corrosion Control Associates Ltd., Stafford/GB
12:10 – 12:30	CP design and retrofit of offshore windmills H. Osvoll¹, G. Lauvstad¹, T. Mathiesen² ¹ FORCE Technology Norway AS, Trondheim/NO; ² Force Technology, Brøndby/DK
12:30 – 12:50	Time-dependent CP simulation of wind turbine foundations C. Baeté¹, B. Van den Bossche¹ ¹ Elsyca n.v., Wijgmaal/BE
12:50 – 13:10	Corrosion protection inside monopile wind turbine foundations - Commissioning and performance B. Jensen¹ , ¹ DONG Energy, Gentofte/DK
13:10 – 14:30	LUNCH BREAK / Room: Exhibition Area
Cathodic Protection in Marine Environment	
14:30 – 15:50	Room: Galerie C
Chairs	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE J. Crouzillac , BAC Corrosion Control, Voisins-le-Bretonneux/FR
14:30 – 14:50	CP retrofit and life extension based on CP inspection H. Osvoll FORCE Technology Norway AS, Trondheim/NO
14:50 – 15:10	Internal cathodic protection of offshore wind turbine monopile foundations B. Wyatt¹, I. Tavares², P. Ernst³, G. John³, R. Jacob⁴ ¹ Corrosion Control Associates Ltd., Stafford/GB; ² Centrica Energy Ltd, Windsor/GB ³ Intertek, Manchester/GB; ⁴ The CP Consultancy Ltd., Little Wenlock/GB
15:10 – 15:30	Coatings in combination with cathodic protection – offshore field experiences O. Knudsen¹, S. Olsen² ¹ SINTEF, Trondheim/NO; ² Statoil ASA, Porsgrunn/NO

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

15:30 – 15:50	Influence of oxide layer on the early stage of cathodic protection A. Zanibellato¹, M. Jeannin¹, R. Sabot¹, P. Refait¹, X. Nóvoa² ¹ Université de la Rochelle, La Rochelle/FR ² Universidade de Vigo, Vigo/ES
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Cathodic Protection in Marine Environment	
16:10 – 17:30	Room: Galerie C
Chairs	U. Kivisäkk , AB Sandvik Materials Technology, Sandviken/SE J. Crouzillac , BAC Corrosion Control, Voisins-le-Bretonneux/FR
16:10 – 16:30	Volume synthesis of calcareous deposit on carbon steel in natural seawater: effect of applied potential and temperature D. Nguyen Dang¹, B. Kabbadj¹, S. Gascoin¹, B. Riffault¹, R. Sabot², M. Jeannin², D. Chateigner¹, O. Gil¹ ¹ Université de Caen Basse-Normandie, Caen/FR ² Université de la Rochelle, La Rochelle/FR
16:30 – 16:50	Offshore pipelines: do we need -900mV C. Googan antiCORR, Much Wenlock/GB
16:50 – 17:10	Cathodic protection project (EPC) cost analysis with new generation designs M. Attarchi¹, N. Merhjooy¹, A. Sohrabi Farid¹, S. Mirghafourian¹, M. Nasri Karladani¹ ¹ Borna Electronics Co., Tehran/IR

Drinking Water
10:00 – 11:20 **Room: Galerie A**
Chair **W. Erning**, BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:00 – 10:20	Extreme value statistical modelling of pitting in cast iron pipes <u>Z. Soltani Asadi</u> ¹ , R. Melchers ¹ ¹ University of Newcastle, Newcastle/AU
10:20 – 10:40	Quantifying the effect of copper corrosion scales on passivation G. Pizarro ¹ , <u>D. Fischer</u> ¹ , C. Galarce ¹ , M. Walczak ¹ , I. Vargas ¹ ¹ Pontificia Universidad Católica, Santiago/CL
10:40 – 11:00	Pitting corrosion of copper - current damages in drinking water systems in Germany <u>A. Becker</u> ¹ , U. Ruhrberg ¹ , T. Jentzsch ¹ ¹ IWW Water Centre, Mülheim an der Ruhr/DE
11:00 – 11:20	Investigation of corrosion susceptibility of two types of brass in drinking water <u>M. Bajt Leban</u> ¹ , T. Kosec ¹ , P. Močnik ¹ , A. Legat ¹ ¹ Slovenian National Building and Civil Engineering Institute [ZAG], Ljubljana/SI
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Drinking Water	
11:50 – 12:30	Room: Galerie A
Chair	W. Erning, BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE
11:50 – 12:10	Incidence of microbial corrosion of metallic tubes in sanitary facilities <u>F. Delaunois</u> ¹ , V. Vitry ¹ , A. Hantson ¹ , F. Tosar ¹ ¹ Université de Mons (UMONS), Mons/BE
12:10 – 12:30	Corrosion behaviour of stainless steel in contact with ECA-generated disinfectant fluids <u>W. Erning</u> ¹ , M. Dimper ¹ , A. Ahrens ² , S. Reimann ² ¹ BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE ² VLB - Versuch- u. Lehranstalt für Brauerei, Berlin/DE

Corrosion of Polymer Materials
14:30 – 15:50 **Room: Galerie A**
Chair J. Heinemann, Technische Universität Darmstadt, Darmstadt/DE

WEDNESDAY, 09.09.2015 SCIENTIFIC LECTURES PROGRAMME

14:30 – 14:50	Compatibility of polyethylene grades with biofuels and biodiesel-heating oil blends <u>M. Weltschey</u> ¹ , A. Kohl ¹ , M. Haufe ¹ ¹ BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE
14:50 – 15:10	Mechanical and Thermo-Mechanical Behaviour of Aliphatic Polyketones in Wet Environments <u>P. Guttman</u> ¹ , G. Pitz ¹ ¹ Montanuniversität Leoben, Leoben/AT
15:10 – 15:30	Degradation of carbon fiber reinforced composites induced by galvanic coupling to metallic materials D. Persson ¹ , <u>J. Andersson</u> ¹ , D. Jönsson ² , M. Tornberg ¹ , E. Lindh-Ulmgren ¹ ¹ Swerea KIMAB AB, Kista/SE; ² Scania CV AB, Södertälje/SE
15:30 – 15:50	Change in properties of sealing materials in biofuels, biodiesel-heating oil blends, diesel and premium grade fuel at different temperatures <u>M. Weltschey</u> ¹ , J. Werner ¹ , F. Jochems ¹ , F. Heming ² ¹ BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/DE ² Federal Institute for Materials Research and Testing, Berlin/DE
15:50 – 16:10	COFFEE BREAK / Room: Exhibition Area
Corrosion of Polymer Materials	
16:10 – 17:10	Room: Galerie A
Chair	J. Heinemann, Technische Universität Darmstadt, Darmstadt/DE
16:10 – 16:30	High performance plastic coating with ultra adhesion by using Polysiloxane and Chlorinated polyolefin <u>A. Assarian</u> University of Zagreb, Zagreb/HR
16:30 – 16:50	Investigation of waterborne polyurethanes dispersions synthesized with biobased prepolymer polyols and aliphatic diisocyanate as binders in paints <u>A. Ślusarczyk</u> ¹ , M. Zubielewicz ¹ , A. Królikowska ² ¹ Institute for Engineering of Polymer Materials and Dyes, Gliwice/PL ² Road and Bridge Research Institute, Warsaw/PL
16:50 – 17:10	Controlling the degradation rate of gelatin- modified AZ91 magnesium alloy in means of dip/spin-coating procedures <u>H. Tiyyagura</u> ¹ , S. Gorgieva ² , K. Mantravadi ¹ , V. Boyapati ¹ , V. Kokol ² ¹ National Institute of Technology Warangal, Warangal/IN ² University of Maribor, Maribor/SI

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

Plenary Lecture	
09:00 – 09:45	Room: Saal 1
	Understanding Mechanisms and Kinetics of Environmentally Assisted Cracking <u>S. Lynch</u> , DSTO - Defence Science & Technology Organisation, Port Melbourne/AU
09:45 – 10:00	BREAK FOR CHANGING LECTURE HALL

Inorganic Coatings	
10:00 – 11:20	Room: Saal 11
Chairs	F. Montemor , Universidade Técnica de Lisboa, Lisboa/PT J. Sykes , University of Oxford, Oxford/UK
10:00 – 10:20	Weldable anti-corrosion coatings for the protection of steel <u>A. Rexach</u> ¹ , <u>S. Naik</u> ¹ , <u>A. Taylor</u> ¹ ¹ TWI Ltd, Cambridge/GB
10:20 – 10:40	Hydrotalcite coatings to protect spent aluminum-clad nuclear fuels during long term wet storage <u>L. Ramanathan</u> ¹ , <u>S. Fernandes</u> ¹ , <u>O. Correa</u> ¹ , <u>J. De Souza</u> ¹ , <u>R. Antunes</u> ² , <u>M. De Oliveira</u> ³ ¹ Instituto de Pesquisas Energéticas e Nucleares, São Paulo/BR ² Universidade Federal do ABC, Santo André/BR ³ Electrocell Ind. Com. Equip. Elet. LTDA, São Paulo/BR
10:40 – 11:00	Corrosion resistance and surface characteristics of plasma electrolytic oxidation coating produced on steels <u>L. Pezzato</u> ¹ , <u>K. Brunelli</u> ¹ , <u>M. Magrini</u> ¹ , <u>M. Dabalà</u> ¹ ¹ University of Padua, Padova/IT
11:00 – 11:20	Effect of Al content on the microstructure and corrosion resistance of plasma electrolytic oxidation (PEO) coatings on Mg-Al alloys <u>T. Zhang</u> ¹ , <u>F. Wang</u> ¹ , <u>W. Zhang</u> ¹ , <u>F. Wei</u> ¹ ¹ Chinese Academy of Sciences, ShenYang/CN
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

Inorganic Coatings	
11:50 – 12:50	Room: Saal 11
Chairs	F. Montemor , Universidade Técnica de Lisboa, Lisboa/PT J. Sykes , University of Oxford, Oxford/UK
11:50 – 12:10	Corrosion study of Ti6Al4V alloy and stability of TiO2 films thermally obtained and doped with lanthanum salt <u>J. Flores Álvarez</u> ¹ , <u>F. Rodríguez-Gómez</u> ¹ , <u>E. Onofre Bustamante</u> ² , <u>P. Roncagliolo-Barrera</u> ¹ ¹ Universidad Nacional Autónoma de México (UNAM), México-City/MX ² Instituto Politécnico Nacional (IPN), Altamira Tamaulipas/MX
12:10 – 12:30	Strontium doped hydroxy-apatite coatings on Ti and NiTi by electrodeposition: surface and electrochemical characterization <u>B. Munirathinam</u> ¹ , <u>L. Neelakantan</u> ¹ ¹ Indian Institute of Technology Madras, Chennai/IN

Mechanisms, Methods & Modelling	
10:00 – 11:20	Room: Galerie B
Chair	M. Diamanti , Politecnico di Milano, Milano/IT
10:00 – 10:20	The behaviour of strontium aluminium polyphosphate in organic coating for corrosion protection of zinc alloy coated steel <u>Y. Liu</u> ¹ , <u>X. Zhou</u> ¹ , <u>S. Lyon</u> ¹ , <u>S. Emad</u> ¹ , <u>G. Smyth</u> ² , <u>S. Gibbon</u> ² , <u>D. Francis</u> ² , <u>D. Graham</u> ² ¹ The University of Manchester, Manchester/GB ² AkzoNobel, Felling, Gateshead/GB
10:20 – 10:40	Mechanical and Electrochemical Characterization of TiO2 Nanotubular Structures exposed in two aqueous solutions of different pH. <u>C. Cuevas Arteaga</u> ¹ , <u>A. Vera Jiménez</u> ¹ , <u>R. Melgoza Alemán</u> ¹ , <u>M. Valladares Cisneros</u> ¹ ¹ Universidad Autónoma del Estado de Morelos, Cuernavaca, Morelos/MX
10:40 – 11:00	Evaluation of protective properties of the superhydrophobic coatings on aluminium alloy by electrochemical impedance spectroscopy <u>S. Gnedenkov</u> ¹ , <u>S. Sinebryukhov</u> ¹ , <u>V. Egorkin</u> ¹ , <u>I. Vyalii</u> ¹ , <u>A. Emelyanenko</u> ² , <u>L. Boinovich</u> ² ¹ Russian Academy of Sciences, Vladivostok/RU ² A. N. Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow/RU

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

11:00 – 11:20	Mechanistic investigation on acid corrosion and dew point corrosion of AlSi12 cast alloy <u>W. Wang</u> ¹ , <u>W. Fürbeth</u> ¹ ¹ DEHEMA - Forschungsinstitut, Frankfurt am Main/DE
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Mechanisms, Methods & Modelling	
11:50 – 12:50	Room: Galerie B
Chair	R. Ambat, Technical University of Denmark, Lyngby/DK
11:50 – 12:10	Surface analysis of passive films formed on Aluminum alloys in different metal cation containing solutions <u>M. Sakairi</u> ¹ , <u>R. Sasaki</u> ¹ , <u>O. Kyohei</u> ¹ , <u>K. Suzuki</u> ¹ , <u>A. Kaneko</u> ² ¹ Hokkaido University, Sapporo/JP; ² Nippon Light Metal Co. Ltd., Shizuoka/JP
12:10 – 12:30	Effect of the crystallographic orientation of grains and mechanical stress on the corrosion resistance of pure aluminum in sodium chloride solution <u>H. Krawiec</u> ¹ , <u>Z. Szklarz</u> ¹ ¹ AGH - University of Science and Technology, Krakow/PL
12:30 – 12:50	Sensitization of AA5083 aluminium alloy <u>W. Wei</u> ¹ , <u>X. Zhou</u> ¹ , <u>G. Thompson</u> ¹ ¹ University of Manchester, Manchester/GB

Environment Sensitive Fracture

10:00 – 11:20	Room: Saal 10
Chair	M. Borchert, Montanuniversität Leoben, Leoben/AT
10:00 – 10:20	Pitting corrosion resistance affecting corrosion fatigue behavior of CrMn-stainless steel in chloride-containing solutions <u>H. Sarmiento Klapper</u> ¹ , <u>J. Stevens</u> ¹ ¹ Baker Hughes, Celle/DE
10:20 – 10:40	Fatigue crack propagation in lubricating environment <u>B. L'Hostis</u> ¹ , <u>M. Frégonèse</u> ² , <u>B. Ter-Ovanesian</u> ¹ , <u>C. Verdu</u> ¹ , <u>C. Minfray</u> ³ , <u>A. Da Costa D'Ambros</u> ⁴ ¹ INSA Lyon, Villeurbanne/FR; ² Université de Lyon, Villeurbanne/FR ³ Ecole Centrale de Lyon, Ecully/FR; ⁴ TOTAL France, Solaize/FR

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

10:40 – 11:00	Corrosion attack of martensitic stainless steel in caster rolls <u>A. Lanzutti</u> ¹ , <u>N. Sartori</u> ² , <u>G. Luvarà</u> ² , <u>G. Carnelutti</u> ² , <u>M. Pellizzari</u> ³ , <u>F. Andreatta</u> ¹ , <u>L. Fedrizzi</u> ¹ ¹ University of Udine, Udine/IT; ² Danieli & C Officine Meccaniche S.p.A., Buttrio/IT ³ University of Trento, Trento/IT
11:00 – 11:20	Fabrication induced stress corrosion cracking of waste water volatile organic compounds stripper domes <u>S. Funani</u> ¹ , <u>A. Al-Meshari</u> ¹ , <u>A. Saha</u> ² ¹ SABIC - Saudi Basic Industries Corporation, Jubail Industrial City/SA ² Jubail United Petrochemical Company, Jubail Industrial City/SA

Automotive Corrosion

10:00 – 11:20	Room: Saal 12
Chair	F. Hannour, Qatar National Research Fund, Doha/QA
10:00 – 10:20	Corrosion protection performance of hot dip zinc-magnesium-aluminium-coatings in the automotive industry a bridge between laboratory tests and field applications <u>G. Luckeneder</u> ¹ , <u>J. Hagler</u> ¹ , <u>K. Stellnberger</u> ¹ , <u>L. Rolecek</u> ² ¹ voestalpine Stahl GmbH, Linz/AT; ² SKODA AUTO a.s., Mlada Boleslav/CZ
10:20 – 10:40	Novel types of multifunctional electro-coatings for aluminium and magnesium <u>C. Rosenkranz</u> Henkel, Düsseldorf/DE
10:40 – 11:00	Thin-film pretreatment coating for multi-metal applications <u>P. Schubach</u> ¹ ; <u>S. Birkenheuer</u> ¹ ¹ Chemetall GmbH, Frankfurt am Main/DE
11:00 – 11:20	Anticorrosive performance of new thin layer pretreatments with standard and new materials in automotive coatings <u>U. Christ</u> Fraunhofer IPA, Stuttgart/DE
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Automotive Corrosion	
11:50 – 12:30	Room: Saal 12

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

Chair F. Hannour, Qatar National Research Fund, Doha/QA	
11:50 – 12:10	Corrosion behaviour of ferritic stainless steels for automotive exhaust system at condensed water containing dissolved aluminium <u>S. Lee</u> , POSCO, Incheon/KR
12:10 – 12:30	Local probing & modelling of micro-galvanic corrosion of Al alloys <u>L. Yin</u> ¹ , <u>Y. Jin</u> ² , <u>C. Leygraf</u> ¹ , <u>J. Pan</u> ¹ ¹ KTH Royal Institute of Technology, Stockholm/SE ² University of Science and Technology Beijing, Beijing/CN

Archaeological and Historical Artefacts

10:00 – 11:20	Room: Saal 2
Chair D. Watkinson, Cardiff University, Cardiff/GB	
10:00 – 10:20	Degradation phenomena of bronze artefacts in coastal archaeological environments of the Mediterranean basin <u>S. Grassini</u> ¹ , <u>E. Angelini</u> ¹ , <u>O. Papadopoulou</u> ² , <u>P. Vassiliou</u> ² , <u>G. Ingo</u> ³ , <u>V. Gouda</u> ⁴ ¹ Politecnico di Torino, Torino/IT ² National Technical University of Athens, Athina/GR ³ CNR-Montelibretti, Roma/IT; ⁴ National Research Centre, Dokki/EG
10:20 – 10:40	Patinated bronze protection by long chain organic acids <u>H. Otmačić Čurković</u> ¹ ; <u>Z. Hajdari</u> ¹ ; <u>M. Markusi</u> ¹ ; <u>E. Kristan</u> ¹ ¹ University of Zagreb, Zagreb/HR
10:40 – 11:00	Protection of bronze statuary, comparison of classical treatments and approaches with carboxylates <u>E. Apchain</u> ¹ , <u>D. Neff</u> ¹ , <u>A. Texier</u> ² , <u>A. Azéma</u> ² , <u>F. Mirambet</u> ³ , <u>D. Robcis</u> ³ , <u>J. Gallien</u> ¹ , <u>A. Noumowé</u> ⁴ , <u>P. Dillmann</u> ¹ ¹ CEA Saclay, Gif-sur-Yvette/FR ² Laboratoire de Recherches des Monuments Historiques, Champs-sur-Marne/FR ³ Centre de Recherche et de Restauration des Musées de France, Paris/FR ⁴ Université de Cergy-Pontoise, Cergy-Pontoise/FR
11:00 – 11:20	Self assembled film of thiol compounds on bronze <u>G. Tansug</u> ¹ , <u>G. Sigircik</u> ¹ , <u>T. Tüken</u> ¹ ¹ Çukurova University, Adana/TR

Cathodic Protection

10:00 – 11:20	Room: Galerie C
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THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

Chairs <u>J. Crouzillac</u> , BAC Corrosion Control, Voisins-le-Bretonneux/FR <u>A. Grolleau</u> , DCNS Research, Cherbourg-Octeville/FR	
10:00 – 10:20	Study of corrosion protection of steel rebars in concrete by sacrificial anodes of Zn-Al-In alloys and by green inhibitor locust bean gum <u>Z. Gace</u> ¹ , <u>A. Lame</u> ¹ , <u>E. Kokalari</u> ¹ , <u>A. Jano</u> ² , <u>A. Sadiku</u> ³ ¹ University of Tirana, Tirana/AL; ² Polytechnic University of Tirana, Tirana/AL ³ Faculty of Geoscience and Technology, Mitrovica/DE
10:20 – 10:40	Interpretation and use of the off-potential technique for the assessment of cathodic protection condition <u>A. Brenna</u> ¹ , <u>L. Lazzari</u> ¹ , <u>M. Ormellese</u> ¹ , <u>M. Pedefferri</u> ¹ , ¹ Politecnico di Milano, Milano/IT
10:40 – 11:00	Selecting appropriate cathodic protection criteria for tank bottom using polarization method <u>M. Attarchi</u> ¹ , <u>S. Mirghafourian</u> ¹ , <u>M. Nasri Karladani</u> ¹ , ¹ Borna Electronics Co., Tehran/IR
11:00 – 11:20	Upgrade the existing sacrificial cathodic protection system to ICCP system for existing tanks bottom plates <u>F. Alfawaz</u> , SABIC, Jubail/SA
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Cathodic Protection	
11:50 – 12:50	Room: Galerie C
Chairs <u>J. Crouzillac</u> , BAC Corrosion Control, Voisins-le-Bretonneux/FR <u>M. Roche</u> , Cefracor, Paris/FR	
11:50 – 12:10	Influence of soil moisture on the residual corrosion rates of buried carbon steel structures under cathodic protection <u>P. Refait</u> ¹ , <u>D. Nguyen Dang</u> ² , <u>L. Lanarde</u> ³ , <u>M. Jeannin</u> ¹ , <u>R. Sabot</u> ¹ ¹ Université de la Rochelle, La Rochelle/FR ² Université de Caen Basse-Normandie, Caen/FR ³ GDF Suez-Crigen, Saint-Denis La Plaine/FR
12:10 – 12:30	Cathodic protection of tank bottom plates to mitigate soil side corrosion <u>W. Baig</u> ¹ , <u>F. Alfawaz</u> ¹ ¹ SABIC - Saudi Basic Industries Corporation, Al-Jubail Industrial City/SA
12:30 – 12:50	Comparison between ECDA methods for corrosion and coating survey of underground pipeline <u>H. Ettelaie</u> ¹ , <u>F. Faraji</u> ¹ ¹ IOPTC - Iranian Oil Pipeline & Telecommunication Co., Tehran/IR

THURSDAY, 10.09.2015 SCIENTIFIC LECTURES PROGRAMME

Electrochemical Sensors	
10:00 – 11:20	Room: Galerie A
Chair	G. Fafilek, TU Wien, Wien/AT
10:00 – 10:20	The development of a sensors based technology for remote monitoring, prediction and optimisation of structural failure parameters <u>M. Nazir</u> ¹ , Z. Khan ¹ ¹ Bournemouth University, Bournemouth/GB
10:20 – 10:40	Permanent zinc reference electrodes for soil applications <u>P. Marcassoli</u> ¹ , M. Mori ¹ , M. Ginocchio ¹ , B. Bazzoni ¹ ¹ Cescor srl, Milano/IT
10:40 – 11:00	Development of carborane based membranes for the selective determination of serotonin in clinical samples using potentiometric sensors <u>C. Bliem</u> ¹ , A. Stoica ¹ , C. Kleber ¹ ¹ CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, Wiener Neustadt/AT
11:00 – 11:20	Methods for hydrogen detection in metals and aqueous solutions <u>G. Schimo</u> ¹ , S. Walkner ¹ , C. Mardare ² , A. Hassel ² ¹ CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, Wiener Neustadt/AT ² Johannes Kepler Universität Linz, Linz/AT
11:20 – 11:50	COFFEE BREAK / Room: Exhibition Area
Electrochemical Sensors	
11:50 – 12:30	Room: Galerie A
Chair	G. Fafilek, TU Wien, Wien/AT
11:50 – 12:10	Screening of formaldehyde and hydrazine electrocatalytic oxidation of a copper-nickel thin film combinatorial library <u>I. Pötzelberger</u> ¹ , A. Mardare ¹ , A. Hassel ¹ ¹ Johannes Kepler Universität Linz, Linz/AT
12:10 – 12:30	Enhanced sensitivity on electrochemical glucose sensor due to corrosion G. Fafilek ¹ , S. Kogler ¹ , M. Joksich ² , M. Gerstl ¹ , S. Wibihal ¹ ¹ TU Wien, Wien/AT; ² Siemens AG, Wien/AT

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Closing Remark	
12:50 – 13:10	Room: Saal 1
Chairs	F. Montemor, Universidade Técnica de Lisboa, Lisboa/PT A. Mol, TU Delft, Delft/NL G. Mori, Montanuniversität Leoben, Leoben/AT