



Session: Corrosion and corrosion protection of additive manufactured metals

Additive manufacturing of metals is gaining much interest in various application sectors with aerospace and biomedical as the most dedicated at present, but by far not the only ones: design in automotive, catalysis, appliances, infrastructure... Due to the unique microstructures created during additive manufacturing, which are very unlike the conventional microstructures that we have studied for many years in wrought and cast alloys, the corrosion mechanisms are also very different and unique. Dedicated research is required to understand the corrosion performance properties, as well as to create adapted corrosion protection measures, either by changing the AM printing conditions or alloy compositions, fine-tuning the post-treatments and/or developing adapted surface treatments. The new evolution towards combined additive-subtractive manufacturing (Hybrid 4D printing!) will also bring additional research questions concerning newly created surface characteristics and corrosion properties. Also using the AM methods for repair applications is an open research field where newly created interfaces will influence the corrosion behaviour.

We invite presentations dealing with surface properties, corrosion and corrosion protection of AM metals. I really hope to welcome you in this second edition of our dedicated AM session that will contribute to the new technologies in metals' research, spanning diverse application fields. Note that the first edition in the Virtual Eurocorr2020 was a great success with over 60 participants!

Please submit your abstract online via www.eurocorr.org before January 19, 2021.

I am looking forward to your contribution and participation in EUROCORR 2021 "Materials science and advanced technologies for better corrosion protection" September 19-23, 2021, in Budapest, Hungary.

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Chairmen of the dedicated session on "Corrosion and corrosion protection of
additive manufactured metals"

Prof. Dr. Philippe Marcus, Chair WP6 'Surface Science and Mechanisms of
Corrosion and Protection'

Prof. Dr. Wolfram Fürbeth, Chair WP14 'Coatings'

Theo Hack, Chair WP 22 'Corrosion Control in Aerospace'