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TMS 2023
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SAN DIEGO CONVENTION CENTER &
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SAN DIEGO, CALIFORNIA, USA
#TMSANNUALMEETING



SUBMIT AN ABSTRACT BY JULY 1 FOR THE FOLLOWING TMS2023 SYMPOSIUM:

CORROSION

Environmental Degradation of Additively Manufactured Alloys

Over the past 10 years, Additive Manufacturing (AM) has grown and expanded throughout different areas of application. A lot of effort has been focused on the processing parameters and powder quality to improve the mechanical properties of additive manufactured materials. These materials often possess significant differences in microstructure as compared with more traditionally produced materials. Given these microstructural differences, evaluation of environmental degradation of additively-produced materials is essential for the prediction of performance and life in harsh environments.

Additively processed structural materials could potentially be used in aviation, space, marine, and industrial applications. This symposium welcomes contributions that will foster discussion on how additively produced materials degrade in:

- Corrosive environments
- High-temperature, oxidizing environments
- Harsh environments while under mechanical stress
- High radiation environments
- Localized corrosion and pitting corrosion

Keywords: Environmental degradation, additive manufacturing, corrosion, oxidation, high-temperature structural alloys, internal oxidation, stresses, mass loss, oxide scale, water vapor, characterization, environment

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