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TMS 2019
148th Annual Meeting & Exhibition

CALL FOR ABSTRACTS

March 10–14, 2019
San Antonio, Texas, USA

SUBMIT AN ABSTRACT TO:

MATERIALS DESIGN

ICME Case Studies and Validation: Extreme Environments

This symposium focuses on Integrated Computational Materials Engineering (ICME) case studies and experimental validation of materials for extreme environments.

We are seeking abstracts in the following general topic areas, including:

- Developing and validating ICME approaches for material design, manufacturing process development (including advanced manufacturing techniques), mechanical behavior (e.g., tensile and creep), and environmental performance (e.g., corrosion and/or oxidation resistance)

- Performing critical experiments to fill knowledge gaps for physics-based, mechanistic process-structure-property models, elucidating the relationship between environment and the evolution of microstructure

- Developing methods to expedite verification and validation testing of materials for extreme environments and relevant performance models under representative extreme environments

- Demonstrate how this approach can be applied to novel alloys (e.g., high entropy alloys), critical alloy systems (e.g., Ni-based alloys), coatings, novel extreme environments (e.g., supercritical CO_2), and/or novel product forms (e.g., thin sheet materials)

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