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TMS2024
153rd Annual Meeting & Exhibition

MARCH 3–7, 2024
HYATT REGENCY ORLANDO
ORLANDO, FLORIDA, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

ADDITIVE MANUFACTURING

Additive Manufacturing: Process-induced Microstructures and Defects

Additive manufacturing (AM) refers to a suite of transformative technologies that enable production of metallic components with complex shape and geometry and facilitate on-demand fabrication of metal parts under austere field conditions. AM processing parameters encapsulate a large set of variables that can directly affect the underlying microstructure, induced defects, and material properties. As a result, it is critical to understand the effect of processing parameters of AM processes on the aforementioned structures including microstructures and defects.

This symposium invites submissions that focus on the investigation of metal AM processes towards revealing the process-induced microstructures and defects of the AM materials. Submissions are encouraged to provide ample process-structure characterization to inform studies relevant investigated properties (e.g., modulus of elasticity, tensile strength, elongation, hardness). Examples of topics of interest include but are not limited to the experimental characterization of the microstructure, defects, and properties in metal AM.

We encourage abstracts in the broad areas of:

- Sensing and monitoring of microstructure and/or defect formation
- Characterization of microstructure and/or defects post facto
- Evaluation of the variability of mechanical properties (e.g., modulus of elasticity, tensile strength, elongation, hardness) as a function of processing parameters
- Modeling and numerical simulation that are validated by experimental measurements

ORGANIZERS

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