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February 23-27, 2020 · San Diego, California, USA



Submit an abstract to:

Additive Technologies

Additive Manufacturing: Advanced Characterization with Synchrotron, Neutron, and in situ Laboratory-scale Techniques

This symposium focuses on the application of advanced characterization techniques in Additive Manufacturing (AM) materials. It has two main themes. The first theme emphasizes characterization of AM materials using facilitybased, state-of-the-art synchrotron and neutron characterization techniques. Abstracts are requested in, but not limited to, the following areas:

- Time-resolved imaging and diffraction of the AM process
- Structure and microstructure evolution during post-build heat treatment
- Residual stress measurements and their model validation
- Spatially resolved measurements at different length scales, including microdiffraction and microtomography
- Mechanical behavior characterization, including deformation, fatigue, and fracture

The second theme emphasizes in situ characterization and diagnostics using laboratory-scale techniques. Abstracts are requested in, but not limited to, the following areas:

- Advancement of existing and emerging in situ monitoring and control techniques to expose process phenomenon, detect material quality, and control process variation
- Identification and understanding of the formation of inherent defects and process anomalies during fabrication from laboratory-scale research to industrial-scale implementation.

We also welcome abstracts addressing industrial applications and industrial perspective on characterization needs, as well as theoretical modeling and numerical simulations that are validated by synchrotron, neutron, or laboratory-scale in situ measurements.

ORGANIZERS

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Abstract Deadline is July 1, 2019. Submit online at www.programmaster.org/TMS2020.

Questions? Contact programming@tms.org