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ANAHEIM CONVENTION CENTER & ANAHEIM MARRIOTT
ANAHEIM, CALIFORNIA, USA
#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2022 SYMPOSIUM:

ADDITIVE TECHNOLOGIES

Additive Manufacturing: Beyond the Beam III

Additive manufacturing (AM) comprises a breadth of processes, which have substantial commercial potential, design flexibility, and technical challenges. Significant corporate and government resources have been committed to energy beam powder bed fusion processes, while solid-state AM technologies have lagged in terms of overall funding for research and development. Furthermore, these "green part" additive technologies build extensively on decades of particulate material processes, which enable the additive manufacturing of non-weldable materials.

These processes include, but are not limited to:

- Binder jetting
- Material extrusion, material jetting, bound filament deposition, nano-Inkjet printing, friction stir deposition
- Ordered powder lithography
- Cold spray

Non-beam-based additive technologies face several unique challenges, such as:

- Feedstock development
- Alloy design
- Depowdering
- Powder recycling
- Binder design
- Debinding
- Process modeling
- Microstructural development
- Dimensional accuracy
- Sintering distortion
- Sintering support structure design.

This symposium will explore the relationships between the various aspects of process variables, properties, application performance, economics, and functionality of these non-beam additive techniques.

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