

THE WORLD COMES HERE.
TMS 2025
154th Annual Meeting & Exhibition



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MGM Grand Las Vegas
Hotel & Casino
Las Vegas, Nevada, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2025 SYMPOSIUM:

MATERIALS SYNTHESIS AND PROCESSING

Advances in Materials Deposition by Cold Spray and Related Technologies

Cold spray is a solid-state layer-by-layer deposition of accelerated microparticles through a de Laval nozzle toward a substrate or previously deposited particles. Since its discovery, interest in cold spray technology has witnessed significant growth as it serves as a potentially greener manufacturing alternative due to recent stringent environmental regulations. Cold spray continues to enjoy widespread use in several industries, including aerospace, energy, military, biomedical, etc., and continued efforts on process and powder optimization are necessary to meet the anticipated expansion beyond traditional applications.

Exploring the structure-property relationship in deposited materials, topics will include:

- Experimental, theoretical, and computational studies on cold spray (and related technologies) process, including aerosol deposition (vacuum cold spray)
- Effect of processing and feedstock parameters on bonding
- Powder development and optimization
- Microstructural evolution and evaluation of high-speed microparticle impact
- Mechanical and deteriorative behavior of cold-sprayed components
- Cold spray-induced stress-state

ORGANIZERS

Ahmed Alade Tiamiyu, University Of Calgary, Canada; **Tanaji Paul**, Florida International University; **Yu Zou**, University of Toronto; **Maniya Aghasibeig**, National Research Council Canada; **Aaron Nardi**, VRC Metal Systems, LLC; **Pin Lu**, Solvus Global

SYMPOSIUM SPONSORS

TMS Structural Materials Division, TMS Extraction & Processing Division, TMS Materials Characterization Committee, TMS Mechanical Behavior of Materials Committee, TMS Additive Manufacturing Committee

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QUESTIONS?

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