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**TMS2024**  
153<sup>rd</sup> Annual Meeting & Exhibition

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



**SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:**

**ADVANCED CHARACTERIZATION METHODS**

**Characterization of Minerals, Metals and Materials 2024: Process-Structure-Property Relations and New Technologies**

This symposium focuses on the advancements of characterization of minerals, metals, and materials and the applications of characterization results on the processing of these materials. Subjects include, but are not limited to, extraction and processing of various types of minerals, process-structure-property relationship of metal alloys, glasses, ceramics, polymers, composites, semiconductors, and carbon used as functional and structural materials. Advanced characterization methods, techniques, and new instruments are emphasized.

Areas of interest include, but are not limited to:

- Novel methods and techniques for characterizing materials across a spectrum of systems and processes
- Characterization of mechanical, thermal, electrical, optical, dielectric, magnetic, physical, and other properties of metals, polymers, and ceramics including battery materials
- Characterization of structural, morphological, and topographical natures of materials at micro- and nanoscales
- Characterization of extraction and processing including process development and analysis
- Advances in instrument developments for microstructure analysis and performance evaluation of materials, such as computer tomography (CT), X-ray and neutron diffraction, electron microscopy (SEM, FIB, and TEM etc.), spectroscopy (EDS, WDS, EBSD) techniques, etc.
- 2D and 3D modelling for materials characterization.

**SYMPOSIUM DYNAMICS:**

This symposium encourages, but does not require, accompanying proceedings papers for each oral presentation. Awards will be presented for individuals who provide the best combination of oral presentation and written proceedings paper. In addition, a poster session will be organized at this symposium with awards for best posters.

**ORGANIZERS**

**Zhiwei Peng**, Central South University, China  
**Mingming Zhang**  
**Jian Li**, CanmetMATERIALS, Canada  
**Bowen Li**, Michigan Technological University, USA  
**Sergio Neves Monteiro**, Instituto Militar de Engenharia, Brazil  
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**Jiann-Yang Hwang**, Michigan Technological University, USA  
**Yunus Kalay**, Middle East Technical University, Turkey  
**Juan P. Escobedo-Diaz**, University of New South Wales, Australia  
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