



March 15–19, 2026

San Diego Convention Center
and Hilton San Diego Bayfront
San Diego, California, USA

#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING SYMPOSIUM

MATERIALS SYNTHESIS AND PROCESSING

Advances in Ceramic Materials and Processing

This symposium emphasizes the advances of powder and ceramic/glass materials in the fundamental research, technology development, and industrial applications.

Ceramic materials science covers the science and technology of creating objects from inorganic, non-metallic materials, and includes design, synthesis, and fabrication of ceramics, glasses, advanced concretes, and ceramic-metal composites. Ceramics and ceramic-metal hybrids have a wide range of applications, including ionic conductors, catalysis, energy conversion and storage, superconductors, semiconductor, filtrations, etc.

Topics of this symposium will cover, but are not limited to:

- Silicates, oxides, and non-oxide ceramics and glasses
- Synthesis, characterization, modeling, and simulation of ceramic materials
- Design and control of ceramic microstructure and properties
- Ceramic powders and processing
- Catalyst and catalyst support materials
- Fundamental understanding of ceramic materials and processes.
- Novel methods, techniques, and instruments used to characterize ceramics and glasses.
- High entropy ceramics (and/or entropy stabilized, complex-concentrated, compositionally-complex, multi-principal cation ceramics)
- Bioceramics, electronic, magnetic ceramics, and applications
- Surface treatment and ceramic thin films, membranes, and coatings
- Porous ceramic materials
- Hybrid systems of ceramic, metal, and/or polymer composites
- Ceramics used for extreme environments
- Metallurgical byproducts for ceramic manufacturing

Special sessions focusing on "high entropy ceramics" and "ceramic batteries" will also be held in this symposium.

SPONSORED BY:

TMS Extraction & Processing Division; TMS Ceramic Materials Committee

ORGANIZED BY:

- **Alexander Dupuy**, University of Connecticut
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