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March 10–14, 2019 San Antonio, Texas, USA

JOIN US FOR THIS TMS2019 SYMPOSIUM:

NANOSTRUCTURED MATERIALS

Nanoarchitectured and Morphology-controlled Nanoporous Materials

Nanoarchitectured materials, such as nanoporous solids, nanolattices, and nanoporous membranes, have received large attention due to their unique structural and functional properties including high strength, stiffness, radiation and fatigue resistance as well as thermal stability. These materials often offer large surface area and low density that makes them attractive for applications including energy harvesting and storage, fuel cells, Li–ion batteries, hydrogen storage, catalysis, gas purification, and separation technologies. The properties and applications of nanoarchitectured solids depend on their ligament size, porosity, network structure, morphology, connectivity, and surface area. This symposium will cover advances in synthesis, characterization, and computational modeling of nanoarchitectured and morphology-controlled nanoporous materials.

Topics include, but are not limited to:

- Advances in synthesis of thermodynamics driven nanostructures to controlled architectured materials systems
- Hybrid systems through integrated processing methods
- Design and optimization of morphology controlled nanoarchitectured materials
- Surface-driven phenomena in nanoporous and nanoarchitectured materials: experiments, modeling and simulation
- Influence of the morphology and topology on network-driven mechanical, and thermal properties in nanoarchitectured and nanoporous materials:
- Structural and functional applications of nanoporous and nanoarchitectured materials

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