AIME–TMS 150th CELEBRATION
TMS2022 Annual Meeting & Exhibition
SINCE 1871

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2022 SYMPOSIUM:

ENERGY & ENVIRONMENT

Advanced Magnetic Materials for Sensors, Power, and Multifunctional Applications

This symposium focuses on structure, properties, processing, and performance interrelationships for traditional and emerging magnetic materials. The symposium will cover soft and hard magnetic materials, magnetocaloric materials, magnetoelastic, magnetoelectric, magnetostrictive, and thermoelectric materials. The scope includes new material compositions, novel characterization approaches, and application-driven magnetic component design for energy conversion, sensors, and actuators. We also encourage topics that focus on the economic and supply chain impacts that magnetic materials have on manufacturing and adaptation of technologies and applications as well as novel computational approaches used for the discovery and development of advanced magnetic material. The symposium will place particular interest on the following topics:

- Emerging and established advanced manufacturing methods:
    - Bulk manufacturing of advanced magnetic materials
    - Thermal-mechanical/thermal-magnetic processing
    - Energy-dense processing using RF, microwave, high pressure, or high magnetic fields
- Novel magnetic materials and processing techniques for sensor and actuator applications
- System-level implications and interactions of magnetic components and magnetic design
- Functionalized magnetic materials for biomedical applications: hyperthermia, magnetomechanical actuation, drug delivery, imaging

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