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TMS2024
153rd Annual Meeting & Exhibition

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

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

ELECTRONIC, MAGNETIC, AND ENERGY MATERIALS

Advances in Magnetism and Magnetic Materials

This symposium focuses on structure, processing, and performance interrelationships for soft and hard magnetic materials, thin film magnetism, magnetoelastic, multiferroic, magnetostrictive, thermoelectric and, in general, any kind of magnetic materials.

The scope includes new material compositions, novel phenomena in magnetic materials, novel and advanced 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 related to magnetic materials manufacturing. Separate symposia exist for work related to additively manufactured magnetic materials and for magnetocaloric materials, so these topic areas are not within the scope of this symposium.

Topics of particular interest include:
- 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.
- Functionalized magnetic materials for biomedical applications: hyperthermia, magneto mechanical actuation, drug delivery, imaging.
- Multiferroic, hexaferrites, and magnetoelastic materials.
- Thin film magnetism.
- Advanced characterization techniques, including neutron and synchrotron radiation, to study magnetic materials.
- Ab-initio, micromagnetic, machine learning, artificial intelligence, and accelerated development techniques to predict new magnetic materials and optimize their properties.
- Magnetic materials for energy, sustainability, recycling, climate change mitigation and green technologies.

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QUESTIONS?
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