

# JOM TECHNICAL TOPICS

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## Advanced Technology for Electronic Packaging and Interconnection Materials

**Scope:** Advanced progress in devices requires new materials and technologies to meet the electrical, thermal, mechanical, reliability and environmental demands. The special topic addresses current research in new and existing materials for emerging interconnects and electronic packaging.

**Editor:** Albert T. Wu, National Central University

**Sponsor:** Electronic Packaging and Interconnection Materials Committee

## Advanced Magnetic Materials for Energy and Other Functional Applications and Devices

**Scope:** This topic focuses on developments in the design, manufacture, characterization, and/or modeling of emerging and traditional magnetic materials for energy applications and functional devices. Included are hard and soft magnets as well as magnetic materials with functional properties (e.g., magnetoelastic, magnetostrictive, magnetocaloric, and magnetoelectric materials).

**Editors:** Zachary Morgan, Oak Ridge National Laboratory, and Zachary Tener, Oak Ridge National Laboratory

**Sponsor:** Magnetic Materials Committee

## Fatigue and Fracture of Additively Manufactured Materials

**Scope:** An understanding of the mechanical properties of additively manufactured materials is critical to their improvement and wider-scale adoption. Additive manufacturing processing results in unique microstructures, defect structures, and surface roughness that all play a role in the eventual properties of the fabricated components. This special topic covers recent advancements in the characterization, assessment, modeling, and improvement of the fatigue and fracture properties of additively manufactured materials, including metals, ceramics, polymers, and composites.

**Editor:** Allison Beese, Penn State University

**Sponsor:** Additive Manufacturing Committee

## High-Temperature Phases and Processes for Enabling Cleaner Production of Metals and Energy

**Scope:** This special topic on thermodynamics and modeling of high-temperature phases and processes aims to frame a comprehensive discussion and data sharing that promote the advancement of environmentally friendly and economic production of metals and renewable energy technologies.

**Editors:** Fiseha Tesfaye, Abo Akademi University; Joseph Hamuyuni, Metso Outotec; Hong Peng, University of Queensland; Chukwunwike O. Iloje, Argonne National Laboratory; and Dirk Verhulst, Devv

**Sponsors:** Recycling and Environmental Technologies Committee, Energy Committee, Process Technology and Modeling Committee



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