



SUBMIT AN ABSTRACT FOR THE FOLLOWING SYMPOSIUM

MECHANICS OF MATERIALS

Theory and Design of Metallic Glasses

Rapidly undercooling metallic liquids allows to bypass crystallization and form metals that lack atomic long-range order. Deciphering the underlying mechanisms and how they depend on composition, structure, dynamics, temperature, stress, and other factors governing glass forming ability and crystallization, remains a major challenge. This understanding is essential for the technological development of metallic glasses. This symposium provides a platform to discuss the recent progress made on this front, and how this knowledge can be harnessed to design new metallic glass materials for advanced structural and functional applications.

The Theory and Design of Metallic Glasses symposium brings together a broad range of materials researchers for a technical exchange and a discussion of the scientific issues driving research in this field.

The topics of interest include:

- Structure at the atomic level and beyond
- Mechanisms and dynamics of structural relaxation and crystallization
- Glass-forming ability, glass transition, and stability
- Dependence of mechanical and physical properties on structure and dynamics
- Novel alloys, processing, and manufacturing methods
- New approaches to modeling, machine learning, and accelerated discovery
- Pathways towards new commercially relevant alloys and industrial applications.

The symposium will emphasize experimental, computational, theoretical aspects of the structure and dynamics in metallic glasses and aims to highlight practical applications.

SPONSORED BY:

TMS Structural Materials Division; TMS Mechanical Behavior of Materials Committee

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