



SUBMIT AN ABSTRACT FOR THE FOLLOWING SYMPOSIUM

ELECTRONIC, MAGNETIC, AND ENERGY MATERIALS

Hume-Rothery Symposium: Interface Structure and Properties: Impact on Microstructure Evolution

The past decade has seen major advances in our understanding of grain boundary and hetero-phase interface structure, the mechanisms by which they migrate, and their influence on microstructure evolution as a result of profound advances in theory, simulation, and experimental characterization at the single interface/grain boundary level and microstructure scales. The goal of the Hume-Rothery Symposium is to assess the state-of-the-art in our community's understanding of grain boundary and hetero-phase interface structure and properties, and the impact of these on interface migration mechanisms/how interfaces move. These, in turn, have a profound impact on microstructure evolution; the second theme of this Symposium. This includes the evolution of grain/phase size, morphology, crystallographic texture, and orientation relations.

This invitation-only symposium will bring together experts in theory, computation, characterization, and experiments in areas including, but not limited to:

- Grain boundaries and hetero-phase interfaces
- Interface & grain boundary structure
- Bicrystallography
- Disconnections
- Mechanisms of grain boundary and interface migration
- Interface/grain boundary thermodynamics and statistical mechanics
- Diffusional transport along interfaces
- Grain growth and recrystallization
- Crystallographic texture evolution
- Electron microscopy-based characterization of interface structure and interface dynamics
- Novel microstructure evolution simulation and experimental methods
- Materials processing techniques that exploit our understanding of how interfaces develop and interact

(NB: This symposium only accepts invited abstracts)

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