TMS2016
145th Annual Meeting & Exhibition

FEBRUARY 14-18 DOWNTOWN NASHVILLE, TENNESSEE **MUSIC CITY CENTER**

Connecting the Global Minerals, Metals, and Materials Community.

Phase Transformations and Microstructural Evolution

Phase transformation is still one of the most effective and efficient means to produce desired microstructures in materials for various applications. This symposium is the fourth in a series of annual TMS symposia focusing on phase transformations and microstructural evolution in materials during processing and in service. It intends to bring together theoretical, experimental, and computational experts to assess the current status of theories of phase transformations and microstructure evolution in solid states. In addition to fundamental understanding of the mechanisms' underlying phase transformations and microstructure evolution, such as interface related effects, attention will also be given to the utilization of unique transformation pathways to develop novel microstructures for advanced structural and functional materials. Examples of studying these transformation kinetics and microstructure evolution behaviors through novel in-situ and ex-situ characterization techniques are sought.

Session topics for 2016 include:
- Phase transformations and microstructure evolution under extreme environmental conditions
- Multiferroics and thermoelectric materials, including:
  - Irradiation by high energy particles (both ions and neutrons)
  - Shock loading via high velocity impact
  - Processing via additive manufacturing and/or other unique or severe thermo-mechanical cycling processes
  - Extremes in high or low temperatures
- Phase transformations in steels and ferrous alloys, non-ferrous alloys, ceramics, and other materials

Organizers include:
Sudarsanam Suresh Babu, The University of Tennessee (USA)
Dhriti Bhattacharyya, ANSTO (Australia)
Yunzhi Wang, The Ohio State University (USA)
Osman Anderoglu, Los Alamos National Laboratory (USA)
J. Pablo Escobedo-Diaz, University of New South Wales (Australia)

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