TMS2016
145th Annual Meeting & Exhibition

FEBRUARY 14-18 DOWNTOWN NASHVILLE, TENNESSEE MUSIC CITY CENTER

Connecting the Global Minerals, Metals, and Materials Community.

Nanostructured Materials for Nuclear Applications

A paramount challenge in the development of advanced nuclear reactors is to discover advanced materials that can operate reliably in extreme service conditions, i.e., under high-dose neutron irradiation at high temperatures and in corrosive environments. Nanostructured materials with a high volume fraction of buried interfaces are believed to have improved resistance to irradiation. Thus, there is an increasing need to understand how interfacial structures mitigate radiation-induced damage and to design stable nanostructured materials that can survive in severe irradiation conditions. The aim of this symposium is to provide a forum for the discussion of irradiation response of nanostructured materials and the stability of the corresponding interfacial structures. Presentations on experimental, theoretical, and modeling research are solicited.

Topic areas for this symposium include:

- Processing, characterization, and testing of nanostructured nuclear materials
- Radiation damage of nanostructured metals, ceramics, and composites
- Radiation response of nanowire, nanoparticles, and nanoporous solids
- Effect of local interface chemistry on radiation response and properties
- Nanomechanical measurements of irradiated materials
- The effects of surfaces, grain boundaries, and phase boundaries on radiation respons

Organizers include:

Cheng Sun, Los Alamos National Laboratory (USA)
Michael Demkowicz, Massachusetts Institute of Technology (USA)
Amit Misra, University of Michigan (USA)
Osman Anderoglu, Los Alamos National Laboratory (USA)
Khalid Hattar, Sandia National Laboratories (USA)

Learn More at www.tms.org/TMS2016

Join us at TMS2016 in Downtown Nashville, Tennessee, February 14-18!