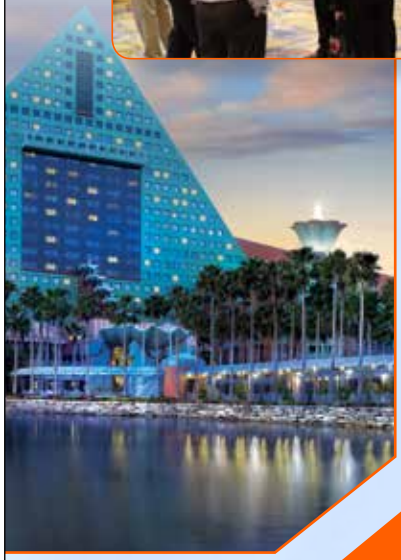
TMS2015

144th Annual Meeting & Exhibition

March 15-19, 2015 • Walt Disney World
Orlando, Florida, USA

Connecting the global minerals, metals, and materials community.



Plan Now to Attend:

Magnetic Materials for Energy Applications V

This symposium will discuss recent developments in the processing, characterization, property evaluation, and product development of magnetic materials for energy applications. The relevant materials include permanent magnets, soft magnetic materials, magnetocaloric materials, and magnetic nanomaterials.

Magnetic materials and components with improved properties will enhance energy security and reduce greenhouse gas emissions by increasing the efficiency of power generation, distribution, storage, and conversion systems. Advanced electric machines and drives, with either permanent magnet or induction architectures, are being developed to operate at continually higher speeds and temperatures. In addition to excellent magnetic properties, these rotating machines place demands on the mechanical and thermal properties of the magnetic materials used in their construction. For electric vehicles, motors and wind power generators, the magnetic materials must retain their properties up to elevated temperatures. Advanced soft magnetic materials are required to enhance the performance of electrical power systems; high power density and high system efficiency demand soft magnetic materials which exhibit low power loss at high frequencies. High efficiency magnetic refrigeration technology relies on the application of both magnetocaloric materials and the use of permanent magnets to drive the refrigeration cycle. Magnetic nanomaterials, e.g., magnetic nanoparticles, can exhibit superior magnetic properties compared to their bulk counterparts.

Sponsored by:

- TMS Functional Materials Division (formerly EMPMD)
- Magnetic Materials Committee

Organized by:

Francis Johnson, GE Global Research (USA)
Raju Ramanujan, Nanyang Technological University (Singapore)
Paul R. Ohodnicki, National Energy Technology Laboratory (USA)

For more information on how to participate, visit:

www.tms.org/TMS2015

Questions? Contact ***programming@tms.org***