TMS2010
139th Annual Meeting & Exhibition

February 14 - 18, 2010, Washington State Convention Center, Seattle, Washington USA

Tutorial on "Nanoscale Computational Materials Science"
Sunday, February 14, 1 to 5 p.m.

This tutorial will explore current state-of-the art approaches in computational materials science that are most suitable for modeling mechanical properties. Particular emphasis will be placed on what types of computational approaches are suitable for specific problems.

Who should attend?

This tutorial is targeted at scientists and engineers interested in discovering how modern computational approaches can be used to predict the structural properties of materials. The tutorial will benefit students, post-doctoral scholars and early career scientists, as well as senior scientists and engineers who do not specialize in computation.

Topics

- Introduction to atomic scale total energy methods: empirical interatomic potentials and first principles electronic structure based total energy methods.
- Applications of total energy methods to the computation of structures and energies of extended defects.
- Atomic scale dynamics: Molecular dynamics and Monte Carlo methods with applications to diffusion and synthesis.

Speakers

Daryl C. Chrzan, professor of materials science and engineering in the Department of Materials Science and Engineering, University of California – Berkeley. He is also a faculty staff scientist at Lawrence Berkeley National Laboratory.

M.D. Asta, professor of materials science and engineering in the Department of Materials Science and Engineering at the University of California – Berkeley and the Department of Chemical Engineering and Materials Science at the University of California – Davis.

Jeffrey C. Grossman, professor in the Department of Materials Science and Engineering at Massachusetts Institute of Technology, Cambridge, Massachusetts.

Organizer

Lawrence Friedman, National Institute of Standards & Technology

How to Register

Register by January 15, 2010 using the online registration form or download the registration form (PDF) and mail or fax with your payment. Cost is $100 for members and $125 for nonmembers.

For More Information

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