

WORKSHOP

Nanomaterials & Engineered Microstructures for Nuclear Applications (NEMNA)



Brookhaven National Laboratory
February 28 – March 1, 2013

Workshop Objective

The NEMNA workshop at BNL is designed to bring together experts in the field of nanomaterials and nuclear energy to share the new discoveries and research and development from both the fields. Nanomaterials have revolutionized various areas of science and technology and the idea of this workshop is to use the inventions in the field of nanomaterials to address the materials challenges in nuclear energy. The NEMNA workshop will focus on brainstorming ideas on development of novel materials for nuclear energy applications by applying the expertise developed in the field of nanomaterials synthesis to the nuclear regime.

Main Topics

- **Synthesis of radiation resistant nanomaterials.**
- **Materials degradation under extreme environments including thermal, ion-irradiation and corrosion.**
- **Characterization of radiation tolerant nano-nuclear materials including synchrotron methods.**
- **Modeling and simulations including first principle, molecular dynamics and density functional theory methods.**

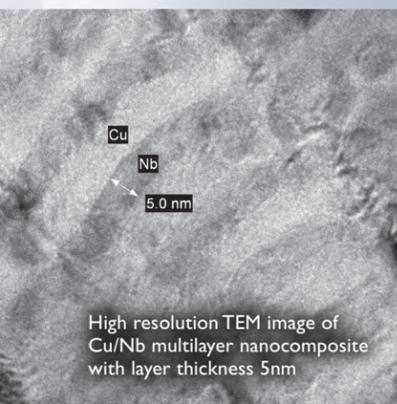
Organizing Committee

James Dickerson (BNL, CFN)
Lynne Ecker (BNL, NST)
Sanjit Ghose (BNL, PS)
Simerjeet K. Gill (BNL, NST)
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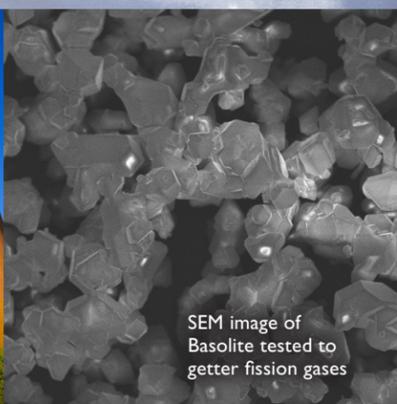
www.bnl.gov/nem2013



High resolution TEM image of Cu/Nb multilayer nanocomposite with layer thickness 5nm



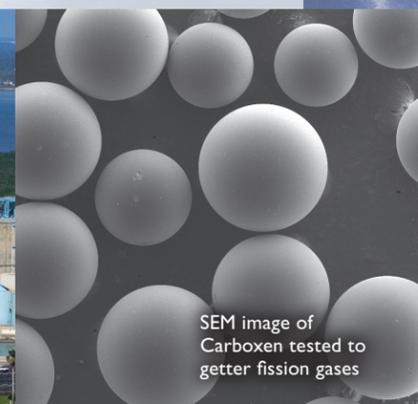
Nuclear Cooling Towers



SEM image of Basolite tested to getter fission gases



Hutchinson Island Power Plant



SEM image of Carboxen tested to getter fission gases

Organized by
Nuclear Sciences and Technology Department, GARS Directorate, BNL



Event Registration Deadline
February 15, 2013