International Symposium on Advances in Nanostructured Materials and Applications

This symposium is dedicated to seminal research contributions of Professor Jagdish (Jay) Narayan, recipient of the 2011 Acta Materialia Gold Medal in the field of materials science and engineering, and to his leadership in materials science worldwide through professional societies and the National Science Foundation. Professor Narayan is the John C.C. Fan Family Distinguished Chair Professor in the Department of Materials Science and Engineering in the College of Engineering at North Carolina State University, Raleigh. He also is a Distinguished Visiting Scientist at Oak Ridge National Laboratory, Tenn.

The symposium addresses critical issues related to synthesis and processing, atomic and nanoscale characterization, structure-property correlations, and modeling of nanostructured materials, as well as to defects, diffusion, ion implantation, laser-solid interactions, and rapid thermal processing and pulsed-laser deposition of novel materials having unique, improved properties. In the case of thin films and layered nanostructures, self-assembly processing, control of defects and interfaces, orientation control and epitaxy across the misfit scale, and stability of nanostructures need to be addressed from a materials-science perspective. Similarly, for bulk nanostructures, innovative processing routes, control of dislocations and grain boundaries, role of twinning, size-dependent mechanical properties, and stability of nanostructures should be addressed. These issues are crucial for the development of test nanostructures and their scale-up in manufacturing.

The symposium features 80 oral presentations and 20 poster presentations, of which 50 are invited talks. A partial list of the invited speakers is shown below. The poster session will be held near the Conference Room and in the common area (bring two copies of your poster), and prizes will be awarded for 1st, 2nd, and 3rd place for best posters. Awards will be presented on Tuesday, October 18 between 6:30-10:30 p.m., as part of the ASM Awards Dinner and Banquet. The peer-reviewed symposium papers will be published in Acta Materialia and in two volumes of reference books by Elsevier.

Partial list of invited speakers for

- **Electronic, Photonic, and Magnetic Materials:**
  - K. Aifantis (Aristotle Univ.), J. Budai (ORNL), M. Chisholm (ORNL), C-B Eom (Univ. of Wisconsin, Madison), A. Gupta (Univ. of Alabama), K. Jones (Univ. of Florida), R. Kalyanraman (Univ. of Tennessee, Knoxville), R.S. Katiyar (Univ. of Puerto Rico, Rio Piedras Campus), S. Mahajan (Arizona State Univ.), A. Madhukar (Univ. of Southern California), T.K. Nath (Indian Institute of Technology, Kharagpur), N. Padture (Ohio State Univ.), S. Pennycook (ORNL), J. Prater (ARO), C.L. Reynolds (NC State Univ.), J. Schwartz (NC State Univ.), S. Seal (Univ. of Central Florida), N. Singh (Northrop Grumman Corp.), R. Singh (Clemson Univ.), R. N. Singh (Univ. of Cincinnati), A. Tiwari (Univ. of Utah), P. Varanasi (ARO), and L. Vayssieres (National Institute for Materials Science)

Partial list of invited speakers for

- **Structural Materials:**
  - E. Aifantis (Aristotle Univ., Greece), R. Armstrong (Univ. of Maryland), I. Beyerlein (LANL), H. Conrad (NC State Univ.), L. Kecske (ARL), C. Koch (NC State Univ.), P. Liao (Univ. of Tennessee), JCM Li (Univ. of Rochester), S. Mao (Univ. of Pittsburgh), S. Mathaudhu (ARO), M. Meyers (UC San Diego), A. Misra (LANL), F. Mohamed (UC Irvine), K. Murty (NC State Univ.), S. Prasad (Sandia National Lab), R. Ritchie (UC Berkeley), I. Robertson (NSF), V. Subramanya Sarma (IIT), H. Sehitoglu (Univ. of Illinois), R. Siegel (Rensselaer Polytechnic Institute), J. Weertman (Northwestern Univ.), Q. Wei (Univ. of North Carolina, Charlotte), and Y. Zhao (UC Davis)

**Monday afternoon (October 17) – Thursday afternoon (October 20) Columbus Convention Center**

*Co-chairs: Haiyan Wang and Xinghang Zhang (Texas A&M); Ravi Ravindra (NJIT); Yuntian Zhu (NC State); Rajiv Singh (Univ. of Florida); Alan Ardell (NSF); and John Prater (ARO)*

**Honoring Professor Jagdish (Jay) Narayan, winner of 2011 Gold Medal and Prize**

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