38th Annual Symposium
New Mexico Chapter of the American Vacuum Society

TECHNICAL PROGRAM CHAIRS

Program Chair:
Craig Y. Nakakura
Sandia National Laboratories

Vice Program Chair:
David P. Adams
Sandia National Laboratories

SESSION 1 Applications of Scanning Probe Microscopy

Session Chair:
Alan R. Burns
Sandia National Laboratories

Although once used primarily for high resolution, topographical imaging, scanning probe microscopy (SPM) has evolved into a versatile research technique with a wide range of applications. A variety of probe-based techniques have been developed to measure electrical, magnetic, and mechanical properties, leading to diverse applications in biology, surface science, microelectronics, and nanotechnology. We encourage contributions from research groups who use SPM to characterize surfaces, surface reactions, thin films, biological thin films, and novel devices. In particular, we seek talks from groups who have developed novel SPM applications for surface and device characterization, failure analysis, and nanofabrication.

SESSION 2 Thin Films: Nanometer-Scale Structure and Properties

Session Chair:
Steve A. Joyce
Los Alamos National Laboratory

The growth of planar, uniform films was often, and still is, the objective of many thin film studies. With the emergence of nanoscience and technology, there is considerable interest in systems and growth techniques which produce highly structured overlayers such as quantum wires, quantum dots, nanoporous films and multilayer films which exhibit unique electronic, optical, mechanical, and chemical properties. In this session, we solicit talks that address any aspect of thin film systems and particularly encourage talks on systems that exhibit novel physical or chemical effects, as well as growth methods which produce nanostructured films.

SESSION 3 Plasma Processing

Session Chair:
Sang M. Han
University of New Mexico

Papers are solicited on the subject of low-temperature plasmas widely used in fabrication of integrated circuits, microelectromechanical systems, and optoelectronic devices. This session will feature both modeling and experimental papers. Paper submission is encouraged in the areas of, but not limited to, plasma physics, gas phase and surface chemistry, kinetics and transport phenomena, plasma-surface interactions, diagnostics, process control, and other emerging areas of plasma science and engineering (e.g., environmentally benign plasma processing, microdischarges, and plasma treatment of biocompatible surfaces).

SESSION 4 Packaging and Sealing: Microelectronics, MEMS, and Microsystems

Session Chair:
Jon S. Custer,
Sandia National Laboratories

Packaging determines the performance, lifetime, and reliability of most microelectronics and microsystems. Concerns include how to seal the system, what the sealing process does to the devices, how to control contamination, and how to preserve the package environment over time. We seek contributions that address any of the broad concerns as applied to integrated circuits, MEMS, sensors, and other devices. Topics as diverse as vacuum sealing, gettering of impurities, MEMS packaging, moisture penetration of packages, and new packaging solutions for microfluidic are welcome in this session.

ABSTRACT SUBMISSION

Abstracts for contributed papers must be submitted by e-mail to *cynakak@sandia.gov*, either as MS Word file or in the body of the e-mail. The abstract deadline is **April 15, 2002.** Abstracts should include: 1) the intended session, 2) paper title, 3) authors' names, 4) authors' affiliations, and 5) e-mail address of presenting or contact author.

STUDENT FINANCIAL ASSISTANCE

Travel expense assistance is available for students presenting papers at the Symposium. Request must be made at the time abstract is submitted. Details will be provided with paper acceptance notification.

STUDENT AWARDS

Students should indicate their interest in the competition when they submit their abstracts.
1st Place Award - All expenses paid trip to the AVS 49th International Symposium (Denver, Colorado November 4-8, 2002).

Hotel Information

Room Rates are $102 single and $112 double occupancy, plus tax. The cut-off date for the group rate reservations is **April 11, 2002**. After that date rooms will be available at the symposium rate on a space available basis. To obtain symposium rates, be sure to identify yourself as an attendee of the **AMERICAN VACUUM SOCIETY - NEW MEXICO**. For more information, contact:

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Vendor Show

The Vendor Show will be held May 15th and will include state of the art vacuum technology, surface analysis and thin film deposition equipment from approximately 40 vendors. Companies interested in exhibiting at the show should contact the Vendor Show Coordinator, Guild Copeland at 505 284.2694 or gcopeavs@aol.com

Short Courses

A variety of short courses focusing on different aspects of vacuum science and technology are offered during the week of May 13-17, 2002 at the Wyndham. Printed announcements including detailed short course descriptions can be requested by contacting Dr. Heidi Ruffner: voice mail or fax 505 286.1308. Additional information can be accessed via the AVS/NMC website at http://nmavs.lanl.gov/course.html

Detailed descriptions of most of the short courses are also available at the AVS National website http://www.avs.org/shortcourses/index.html

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Call for Papers

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New Mexico Chapter
of the
American Vacuum Society

Symposium
May 14-15, 2002

Vendor Show
May 15, 2002

Short Courses
May 13-17, 2002

Wyndham Albuquerque Hotel
at International Sunport
2910 Yale Blvd SE
Albuquerque, NM 87106