

STM Conference to Explore Progress and New Applications

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The Scanning Tunneling Microscope (STM), a relatively new research instrument, can produce ultra-high resolution topological maps (topographs) of surfaces. Clean surfaces of silicon, germanium, and gallium arsenide have been mapped with atomic resolution showing surface reconstruction. Under optimum conditions, STM resolution is about 0.1 Å vertically and 5 Å horizontally. Topographs have also been produced for metals, absorbed layers, and biological samples. And a spectroscopic mode can probe local chemical and electronic features. The heart of the STM, a fine electron tunneling tip, is scanned across a surface at an elevation a few angstroms above it; and the STM can be operated with the sample in either vacuum or air.

The aim of the conference is to report on recent progress in STM and to explore new applications for it. Invited experts will overview fields on which STM can have an

impact. The conference will include contributed papers on topography and atomic surface structure; surface chemistry, elastic and inelastic spectroscopy; lithography and surface modification; metrology; and biology, tribology, metallurgy, and small devices.

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For information contact N. Garcia, Departamento de Fisica Fundamental, Universidad Autonoma de Madrid, 28049 Madrid, Spain; telephone (1) 7340100 (1746). Or contact R. C. Jaklevic, Ford Motor Company, P.O. Box 2053, Scientific Research Lab, Room S-3012, Dearborn, MI 48121; telephone (313) 322-7554.

1986 International Symposium on Application of Ferroelectrics

The 1986 IEEE International Symposium on the Applications of Ferroelectrics is scheduled for June 8-11, 1986, in Bethlehem, Pennsylvania. The symposium is sponsored by the IEEE Ultrasonics, Ferroelectrics and Frequency Control Society with the cooperation of the Electronics Division of the American Ceramic Society.

Papers will describe applications and applications-oriented materials studies of ferroelectric ceramics, polymers, and related materials. Areas of interest include but are not limited to the following:

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- Piezoelectrics — Transducers, adaptive optics, PVDF and other polymers
- Electro-optics — IR E/O materials, modulators, composite devices and ceramics
- Photo-effects — Optical storage, display, photorefractive devices
- Dielectrics — Microwaves, high voltage, barrier layers and multilayers
- Thin Films — Transducers, integrated optics, electro-optics, field effect, conducting, insulating, index matching and waveguide optics
- Memory/Display — PLZT, switching, novel effects and liquid crystal
- Materials — Processing, stoichiometry, crystal growth and structure
- Pyroelectrics — Detectors, arrays and vidicons

For more information contact the conference coordinator, Ms. Betty Zdinak, Department of Metallurgy and Materials Engineering, Lehigh University, Whitaker Lab #5, Bethlehem, PA 18015; telephone (215) 861-4221.

CALL FOR PAPERS

International Conference on Solid State Devices and Materials

Papers are currently being sought for the 1986 International Conference on Solid State Devices and Materials, to be held August 20-22, 1986, Tokyo, Japan. The conference, sponsored by the Japan Society for Applied Physics, is held annually in Japan and is conducted this year in cooperation with the Materials Research Society, the Institute of Electronics and Communication Engineers of Japan, IEEE Electron Device Society, IEEE Tokyo Section, the Institute of Electrical Engineers of Japan, the Electrochemical Society of Japan, and the Institute of Television Engineers of Japan.

The conference will cover the entire field of solid-state devices and materials. Papers are solicited in, but not limited to, the following areas: electronic devices, optoelectronic devices, integrated circuits, materials and process technology, and new phenomena and new materials. Sessions are also planned on very-high-speed integrated circuits, devices and process technologies for VLSI, super-thin films and heterostructure technology, new optoelectronic devices, microcharacterization and *in-situ* process monitoring.

Authors who wish to contribute papers

formation sheet to Dr. Toshimasa Suzuki, NTT Electrical Communications Laboratories, 9-11, Midoricho 3-chome, Musashino-shi, Tokyo 180, Japan; telex 0 2822620 NTTECLJ. All manuscripts should be in English and submitted by March 20, 1986. Extended Abstracts will be published from the conference.

To register for the conference, contact 1986 SSDM, c/o Business Center for Academic Societies Japan, 40-14 Hongo 2-chome, Bunkyo-ku, Tokyo 113, Japan; telex: 0722268 BCJSPJ; telephone: (03) 817-5831.

Fifth Southern Biomedical Engineering Conference

The Fifth Southern Biomedical Engineering Conference is scheduled for October 20-21, 1986, at the Louisiana State University Medical Center in Shreveport, Louisiana. The conference is being sponsored by the Bioengineering Division of the American Society for Mechanical Engineers in cooperation with IEEE/Engineering in Medicine and Biology Society, and is being co-sponsored by the Society for Experimental Mechanics.

Authors are invited to submit papers on any aspect of bioengineering including the following areas: artificial organs/prosthetic devices, biochemical engineering, biocontrol systems, bioethics, biofluid mechanics, bio-

diology/hemodynamics, clinical engineering, computers in medicine, dentistry, imaging/radiology, medical instrumentation, microcirculation, modeling and simulation, occupational injury and safety, orthopedic biomechanics, rehabilitation engineering, soft tissue mechanics, and ultrasonics in medicine.

The deadline for abstracts is March 1, 1986. Forward all abstracts and requests for information to Dr. S. Saha, Conference Chairman, Fifth Southern Biomedical Engineering Conference, Department of Orthopaedic Surgery, Louisiana State University Medical Center, P.O. Box 33932, Shreveport, LA 71130; telephone (318) 674-6187.

1986 MRS Fall Meeting

Look for Call for Papers

in an upcoming issue

of the MRS BULLETIN.

Materials Research Society

1986 Short Course Program

The Materials Research Society has slated a short course program of 16 intensive short courses on materials topics to be run in conjunction with the Society's 1986 Spring Meeting to be held April 15-19, 1986 at the Hyatt Hotels in Palo Alto, California.

The total course program of 16 courses which consist of one-, two-, and three-day courses, are:

April 15 Liquid Phase Epitaxy Techniques

Instructor: L. Ralph Dawson. Tuition: \$295

April 16 Contamination Control for the Microelectronics Industry

Instructor: Stuart A. Hoenig. Tuition: \$295

April 17 Film Formation, Adhesion and Surface Preparation

Instructor: Donald M. Mattox. Tuition: \$295

April 18 Plasma Etching for Microelectronic Fabrication

Instructor: Herbert H. Sawin. Tuition: \$295

April 18 Plasma Enhanced CVD of Thin Films for Microelectronics

Instructor: Rafael Rief. Tuition: \$295

April 18 Technology and Metallurgy of Fusion Welding

Instructor: Jim L. Jellison. Tuition: \$295

April 19 Ion Implantation and Rapid Thermal Annealing

Instructor: Tom E. Seidel. Tuition: \$295

April 15-16 Design and Application of Vacuum and Plasma Processing Systems

Instructor: Donald M. Mattox. Tuition: \$460

April 15-16 Hands-On Personal Computers for Technical Professionals

Instructors: Richard Gilbert and Tony Llewellyn. Tuition: \$595

April 15-16 Introduction to Transmission and Analytical Electron Microscopy

Instructors: Al D. Romig and David B. Williams. Tuition: \$460

April 16-17 Molecular Beam Epitaxy

Instructor: Gary Wicks. Tuition: \$460

April 18-19 Vapor Phase Epitaxy

Instructors: Herbert Cox and P. Dan Dapkus. Tuition: \$460

April 18-19 Surface and Thin Film Analysis

Instructors: Leonard Feldman and James W. Mayer. Tuition: \$460

April 18-19 Films and Coatings for Engineering Applications

Instructor: Donald M. Mattox. Tuition: \$460

April 15-17 Computer Assisted X-Ray Diffraction Analysis

Instructor: Ron Jenkins. Tuition: \$625

April 17-19 Materials Aspects and Recent Advances of Silicon Device Processing

Instructors: Subhash Mahajan and K. S. SreeHarsha. Tuition: \$625

Special discounts on tuition are offered to registrants attending certain groups of courses. For further details on courses, course outlines, instructors and hotel reservation forms, contact the Materials Research Society, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; telephone (412) 367-3003.

On-Site courses can be offered on an instructor available basis.

These courses can be tailored to the needs of the requesting organization. For details of On-Site courses contact: Vivienne Harwood Mattox, MRS Short Course Manager; telephone (505) 292-7763.