

MRS Short Course Program Continues Expansion

The Short Course Program at the 1987 MRS Fall Meeting in Boston presented 29 courses on materials-related topics. It was the largest, most comprehensive educational program presented so far by the Materials Research Society, and the courses were extremely well attended. Nine new courses gave breadth to the MRS Short Course Program, whose technical thrust includes materials characterization, studies of advanced new materials, preparation and fabrication of materials, and processing/diagnostic techniques. The new courses on Conventional and High-Temperature Superconductivity, Scanning Tunneling Microscopy, Characterization of Powders and Porous Materials, Scanning Electron Microscopy and X-Ray Microanalysis, and Atom Probe Microanalysis were particularly popular. Fourteen courses were designed and scheduled to directly complement symposia at the meeting. The Materials Research Society also provided 27 short course scholarships to full-time graduate/undergraduate students.

The Short Course Program at the 1988 MRS Spring Meeting in Reno, Nevada will present 23 courses. Two new courses will be offered. The first new course, Optoelectronic Materials, Processes and Devices, will survey the materials, processes and devices used in the rapidly advancing field of optoelectronics. It will emphasize the basic concepts and materials problems associated with devices such as lasers, detectors, liquid-crystal display, light emitting diodes, modulators, optical data storage and fibers. The course will complement Symposium P on Advanced Surface Processes for Optoelectronics.

The second new course at the 1988 MRS Spring Meeting is titled Optical and Laser Techniques for Semiconductor Dry Process Diagnostics. Dry processing growth and fabrication technologies are assuming increasing importance for producing semiconductor devices. Optical and laser techniques provide important, non-invasive tools for increased understanding of process mechanisms and for process control. This course will overview relevant optical techniques and instrumentation which are important for semiconductor growth and fabrication. The

course will complement Symposium C on Process Diagnostics.

In addition to the short course programs at its meetings, the Materials Research Society also presents "On-Site" courses for organizations upon request and subject to instructor availability.

Through the team efforts of the MRS Continuing Education Committee chaired by Alton D. Romig Jr., the enthusiastic support of the MRS Meeting Chairs, and the dedication of the short course instructors and MRS headquarters staff, the MRS Short Course Program has been established as a premier educational resource to the materials science community.

Plans for 1988 include the presentation of a specially selected series of MRS short courses prior to the World Congress on High Temperature Superconductivity, February 20-24 in Houston, Texas. The four MRS short courses to be presented are relevant to the new superconducting materials technology.

Vivienne Harwood Mattox
MRS Short Course Manager
(505) 294-9532

The Materials Research Society gratefully acknowledges the following organizations for their assistance in promoting the MRS Short Course Program: VG Instruments Inc., VG Ionex, Solid State Technology, SAMPE, American Association of Crystal Growth, JEOL, Perkin-Elmer, Quantachrome, R.D. Mathis, Morton Thiokol, Sula Technologies, Nanosil, Superconductor Week, Edgework Inc., Bruker Instruments, Spire Corporation, American Instruments Inc., Nissel Sangyo America, Ltd., Massachusetts Institute of Technology.

BRING THE EXPERTS TO YOU...

MRS ON-SITE SHORT COURSES IN MATERIALS SCIENCE AND TECHNOLOGY

An efficient, cost-effective, versatile way to provide continuing education for research professionals.

Featuring Characterization of Materials
Preparation and Fabrication of Materials
Advanced Materials
Materials Aspects of Device Fabrication

Bring the experts to your location to
teach the latest techniques,
explain leading-edge developments,
discuss technical problems.

MRS On-Site courses can be adapted to your needs. Management will have the opportunity to discuss the course emphasis with the instructor.

The short courses listed on p. 36 in this issue and 23 additional course titles can be presented on-site, on an instructor-available basis. Contact: Vivienne Harwood Mattox, MRS Short Course Manager, 440 Live Oak Loop, Albuquerque, NM 87122; telephone (505) 294-9532.

SHORT COURSE PROGRAM

1988 MRS SPRING MEETING

April 5-10, 1988

Reno, Nevada

A program of 23 short courses on materials science and technology is offered in conjunction with the 1988 Spring Meeting of the Materials Research Society. The courses, including two new topics, have been scheduled to enable short course registrants to participate in the Spring Meeting symposia with topics closely paralleling the courses. Space in the short courses is limited, so early registration is advised. The MRS Equipment Exhibit at this meeting may be of particular interest to short course registrants.

<i>COURSES</i>	<i>TUITION*</i>	<i>INSTRUCTORS</i>	<i>DATE</i>
Conventional and High-Temperature Superconductors	\$485	Terry P. Orlando and Robert E. Schwall	April 8-9
Optoelectronic Materials, Processes, and Devices	\$485	Mool C. Gupta	April 8-9
Liquid Phase Epitaxy Techniques	\$320	L. Ralph Dawson	April 5
Molecular Beam Epitaxy.	\$485	Gary W. Wicks	April 8-9
Vapor Phase Epitaxy	\$485	P. Dan Dapkus and Herbert M. Cox	April 6-7
Film Formation, Adhesion, and Surface Preparation	\$320	Donald M. Mattox	April 8
Implantation, Diffusion, and Rapid Thermal Processing.	\$320	Thomas E. Seidel	April 8
Sol-Gel Processing of Glass	\$485	C. Jeffrey Brinker and George W. Scherer	April 9-10
Plasma Etching for Microelectronic Fabrication	\$320	G. Kenneth Herb	April 7
Ion Beam Processes for Materials Modification	\$320	James K. Hirvonen	April 6
Microelectronic Packaging: Materials, Processing, and Reliability. . .	\$710	Shankara K. Prasad	April 7-9
Electron Microscopy of Thin Films	\$485	Alton D. Romig, Jr. and David B. Williams	April 6-7
Surface and Thin Film Analysis	\$510	Leonard C. Feldman and James W. Mayer	April 8-9
Characterization of Films, Coatings, and Surfaces.	\$320	Donald M. Mattox	April 9
Application of Reflection Electron Diffraction to Epitaxial Growth . .	\$320	Philip I. Cohen	April 7
Deep Level Transient Spectroscopy	\$320	Charles E. Barnes	April 5
Amorphous Semiconductor Materials and Devices	\$485	Marvin Silver and Eric A. Schiff	April 8-9
Ceramic and Metal-Matrix Composites	\$485	Jack Mecholsky and Maurice F. Amateau	April 7-8
Characterization of Powders and Porous Materials	\$485	Douglas M. Smith and Joan E. Shields	April 7-8
IC Failure Mechanisms and Analytical Techniques	\$485	Giorgio Riga	April 5-6
Scanning Tunneling Microscopy: Theory and Practice.	\$320	Robert J. Hamers	April 6
Scanning Electron Microscopy and X-Ray Microanalysis.	\$340	David C. Joy	April 5
Optical and Laser Techniques for Semiconductor Dry Process Diagnostics	\$320	Steven R. J. Brueck	April 8

MEETING REGISTRATION: Individuals registered for two or more short course days may attend the 1988 MRS Spring Meeting at the special fee of \$50.

SHORT COURSE REGISTRATION: Special tuition discounts are available to registrants attending certain groups of courses and to students. For further details on courses, tuition, and instructors, contact:

Materials Research Society
9800 McKnight Road, Suite 327
Pittsburgh, PA 15237
telephone (412) 367-3003

* All registrations received after March 21, 1988 will be \$25 higher for each course.

New Materials Developments...
New Characterization Methods...
New Process Technology

MATERIALS RESEARCH SOCIETY

1988 Spring Meeting

April 5-9, 1988 • Bally's Reno • Reno, Nevada

The 1988 Spring Meeting will serve as a key forum for discussion of interdisciplinary leading-edge materials research from around the world.

Technical Program

- Heteroepitaxy on Silicon: Fundamentals, Structures, and Devices
- Materials for Controlled-Release Environments
- Process Diagnostics
- Diamond and Diamond-like Materials Synthesis
- Amorphous Silicon Technology
- Adhesion in Solids
- High Temperature/High Performance Composites
- Better Ceramics Through Chemistry III
- Interfacial Structure, Properties, and Design
- Science and Technology of Refractory Alloys
- High Temperature Superconductors II
- Materials Issues in Art and Archaeology
(Cosponsored by the Getty Conservation Institute and Conversion Analytical Laboratory, Smithsonian Institution)
- Microwave Processing of Materials
(Endorsed by the American Chemical Society)
- Materials Stability and Environmental Degradation
- Advanced Surface Processes for Optoelectronics

Short Courses

An extensive short course program will be held concurrently for scientists who wish to update their knowledge and skills in a particular field.

Equipment Show

The equipment show will display the latest analytical and processing equipment for materials research.

Featuring "MicroScapes: The Hidden Art of High Technology," a major photomicrography exhibition which focuses on advanced developments in microelectronics and lightwave communications.

For more information, contact: Materials Research Society
9800 McKnight Road, Suite 327
Pittsburgh, PA 15237
Telephone: (412)367-3003
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