

MIT Chapter Sponsors Seminar on Materials Research Opportunities in Industry

The MRS Chapter of Massachusetts Institute of Technology sponsored the first seminar in its series on "Materials Research Opportunities in Industry." This program is intended to provide a forum for the MIT community to learn about companies with significant materials research efforts. In each presentation, a company representative describes the overall direction, motivation, and organization of its materials research.

Dr. L.C. Kimberling, manager of the Materials Physics Group at AT&T Bell Laboratories, was the inaugural speaker last spring. After describing the corporate organization of research at Bell Labs, Kimberling focused on three topics of primary importance to AT&T: optical communications technology, including optical fibers and solid-state lasers; growth and properties of heterostructures and superlattices needed for lasers and quantum devices; and the novel electronic applications of polymers.

In addition to the continuing seminar series, the MIT Chapter hosted several activities in conjunction with the 1988 MRS Fall Meeting in Boston. One week prior to the meeting, the Chapter coordinated a videotape practice session for all MIT students presenting papers at the conference. Following the meeting, a poster session was held to allow those unable to attend the meeting a chance to review MIT's contributions.

For more information regarding the Chapter, particularly if anyone is interested in participating in the "Materials Research Opportunities in Industry" series or presenting a technical seminar, please contact:

Sergio Ajuria
MRS University Chapter President
Massachusetts Institute of Technology
Room 13-4009
77 Massachusetts Avenue
Cambridge, MA 02139
(617) 253-8770

University of Minnesota Chapter Activities Focus on Microscopy

The Scanning Tunneling Microscopy Group of the MRS Chapter at the University of Minnesota held its second meeting, an informal lunchtime meeting, July 28, 1988. The informal lunchtime meetings were established to facilitate the exchange of ideas in areas ranging from sample preparation to instrument modification, and

they are open to any researchers involved with scanning tunneling microscopy/spectroscopy or atomic force microscopy on the University of Minnesota campus. Current members are from the Materials Science, Physics and Chemical Engineering departments.

On October 14, 1988 the University Chapter (in its entirety) sponsored a lecture by Mary Hibbs-Brenner from Honeywell's Physical Science Center, who spoke about her research on the growth of AlGaAs heterostructures for use in solid state lasers. She has characterized these systems using transmission electron microscopy, photoluminescence, and Auger electron spectroscopy.

Membership

The University of Minnesota Chapter has initiated a unique twist to its membership drive by eliminating membership dues in favor of can and glass recycling. Members are required to keep a recycling bin in their labs or offices and, in exchange, are added to the mailing list to be notified of upcoming sponsored lectures or other programs. The Chapter is collecting recycling income at a rate of \$80/year.

Travel Grants

The University of Minnesota sent MRS University Chapter secretary/treasurer Joe Bailey to the 1988 MRS Spring Meeting in Reno, where he won an Outstanding Student Speaker award for his research entitled "Structural Evolution During the Sol to Gel Transition of Silicon-Alkoxide Based Sols Observed by Cryogenic Transmission Electron Microscopy." The Chapter's 1988 MRS student travel grant was awarded to Tom Olmstead, who presented a poster at the 1988 MRS Fall Meeting on "Gas Phase and Surface Reactions in the MOCVD of GaAs from Triethylgallium, Trimethylgallium, Triethylarsine, and Tertiarybutylarsine" (Symposium E on Chemical Perspectives of Microelectronic Materials).

For more information concerning the University of Minnesota Chapter, contact:
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New York Chapter Holds First Regional Student Conference

On April 30, 1988 the New York area University Chapters of the Materials Research

Society held a stimulating student conference at Rensselaer Polytechnic Institute's Center for Industrial Innovation in Troy, New York. The conference was co-sponsored by the Rensselaer and Cornell University Chapters.

Approximately 70 students and faculty attended the conference, which consisted of seventeen 15-minute contributed talks and a 45-minute invited talk. The contributed papers covered the entire breadth of materials science, from EPR (electron paramagnetic resonance) study of gel-glass transition in silica (J. Darab, Rensselaer) and solid phase epitaxy of laser-amorphized Si (J. Custer, Cornell) to hydrogen diffusion in titanium dioxide (X.S. Guo, SUNY Albany).

N. Demyttenaere of the New York State Office of Parks, Recreation and Historic Preservation gave the keynote talk on materials problems as they relate to the restoration and/or preservation of historical artifacts. Following an enjoyable dinner reception in the evening, Alan Taub of the General Electric Corporate R&D Center presented the plenary talk on materials research within the R&D center.

The conference was coordinated by J.H. Hawley (Rensselaer Chapter President), and A.R. Sitaram (Rensselaer), with assistance from Professors R.K. MacCrone (Rensselaer advisor) and M. Thompson (Cornell advisor).

The Rensselaer MRS University Chapter is grateful for the financial support provided by the Rensselaer Center for Integrated Electronics, Departments of Chemistry, Electric Power Engineering, Materials Engineering, and Physics. Thanks are also due to the Rensselaer Center for Industrial Innovation for providing meeting space for the conference.

Second Conference Stated for April 1989

The second annual Cornell-Rensselaer MRS Student Conference will be held April 8, 1989 at Rensselaer. All students and other interested parties are invited to attend. Poster sessions will be provided if needed. For additional information, please contact Terry Spooner, Department of Materials Engineering, Materials Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180.

Abstracts of contributed papers should be mailed by **March 17, 1989** to Steven Richards, MRS University Chapter President, Department of MS&E, Bard Hall, Cornell University, Ithaca, NY 14850.

STUDENT SCHOLARSHIPS

1989 MRS Spring Meeting Short Course Program


Application Deadline April 14, 1989

Scholarships are available for full-time graduate or undergraduate students to attend the short courses offered April 22-29, 1989 in conjunction with the MRS Spring Meeting in San Diego.

Partial-tuition scholarships will be awarded on a space-available basis to a limited number of students in each course. Course fees for scholarship recipients are: \$60 for a one-day course, \$90 for a two-day course, and \$120 for a three-day course.

Application forms are available from MRS Headquarters and have also been distributed to all MRS University Chapter presidents.

Mail or fax completed applications to: Dr. L. Ralph Dawson, Sandia National Laboratories, Division 1141, P.O. Box 5800, Albuquerque, NM 87185; telephone (505) 845-3451; fax (505) 846-2009.



Short Course Program

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SPRING MEETING

April 22-29, 1989

Town and Country Hotel
San Diego,
California

Telephone
(412) 367-3003
FAX (412) 367-4373

Selected Short Courses covering the latest developments in materials science and technology will be offered in conjunction with the Materials Research Society 1989 Spring Meeting and Equipment Exhibit. These up-to-date courses are at the forefront of science and technology and complement Spring Meeting symposia topics. SPECIALTY, REVIEW AND SURVEY courses are designed to meet needs of professional scientists, engineers, technical staff and managers who want to know the latest techniques in characterization and fabrication of materials. CLASS SIZES ARE LIMITED: Early telephone registrations are encouraged.

ADVANCED MATERIALS

M-04 Optoelectronic Materials, Processes, and Devices
Instructor: Mool C. Gupta
Thursday-Friday, April 27-28\$485

M-05 Fabrication, Characterization, and Applications of High-Temperature Superconducting Materials
Instructors: Terry P. Orlando and Robert E. Schwall
Saturday-Sunday, April 22-23\$485

M-06 Growth and Characterization of Diamond and Diamond Films
Instructors: Daniel L. Flamm, Thomas R. Anthony & Jeffrey T. Glass
Sunday, April 23\$375

CHARACTERIZATION OF MATERIALS

C-03 Surface and Thin Film Analysis
Instructors: Leonard C. Feldman & James W. Mayer
Friday-Saturday, April 28-29\$535

C-06 Characterization of Semiconductors using Deep Level Transient Spectroscopy
Instructor: Charles E. Barnes
Wednesday, April 26\$325

C-11 Characterization of Powders and Porous Materials
Instructor: Douglas M. Smith
Monday-Tuesday, April 24-25\$485

C-15 Nuclear Magnetic Resonance Spectroscopy
Instructor: James P. Yesinowski
Monday, April 24\$325

C-17 Scanning, Transmission, and Analytical Electron Microscopy
Instructors: Alton D. Romig, Jr. and David C. Joy
Tuesday-Thursday, April 25-27\$745

PREPARATION AND FABRICATION OF MATERIALS

P-10 Metallorganic Chemical Vapor Deposition
Instructor: P. Dan Dapkus
Monday, April 24\$325

P-11 Rapid Thermal Processing
Instructors: Thomas E. Seidel and Steven C. Shatas
Friday, April 28\$325

P-14 Film Formation, Adhesion, Surface Preparation, and Characterization of Thin Film Structures
Instructor: Donald M. Mattox
Saturday-Sunday, April 22-23\$525

P-15 Ohmic Contacts to Compound Semiconductors
Instructor: Peter A. Barnes
Tuesday, April 25\$345

F-02 Plasma Etching for Microelectronic Fabrication
Instructor: G. Kenneth Herb
Monday, April 24\$325

F-03 Ion Beam Processes for Materials Modification
Instructor: James K. Hirvonen
Thursday, April 27\$325

F-04 Microelectronic Packaging: Materials, Processing, and Reliability
Instructor: Shankara K. Prasad
Monday-Wednesday, April 24-26\$745

To pre-register or to request detailed 1989 Spring Meeting Program or Short Course information, contact:
Materials Research Society
9800 McKnight Road, Suite 327
Pittsburgh, PA 15237
Telephone (412) 367-3003
FAX (412) 367-4373

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