

1986 MRS Spring Meeting Preview

The third annual MRS Spring Meeting will be held in Palo Alto, California, April 15-18, 1986 featuring 9 topical symposia, 16 short courses held throughout the week, a job placement center, and the popular Symposium X, Frontiers of Materials Research. Program Chairs Wei-Kan Chu, Rod Quinn, and Malcolm Thompson report that the technical program contains an extensive overview of many important new materials developments. The following is a description of activities planned for the week. Attendees are encouraged to register in advance using the registration form in this issue.

Registration Fees

Preregistration fees (those received by March 20, 1986) are:

Regular
MRS member: \$125
Nonmember: \$155

Student
MRS student member: \$30
Student nonmember: \$45

At-meeting fees (those received after March 20, 1986) are:

Regular
MRS member: \$140
Nonmember: \$170

Student
MRS student member: \$40
Student nonmember: \$55

Payment of the registration fee entitles the participant to attend all symposia, as well as the Plenary and Student Awards Session and the reception that follows.

Job Placement Center

A job placement service will be available to attendees of the Spring Meeting. The purpose of the Center is to arrange interviews between prospective employees and employers attending the meeting. Candidate forms will be available for examination by interested employers. Descriptions of employment opportunities offered by employers will not be available before the meeting since there is no compulsory registration for employers.

Individuals who wish to participate should complete an employment candidate form available in this BULLETIN. Individuals should also bring resumes to the Placement Center. There will be a \$5.00 fee for use of the Placement Center. Individuals who have preregistered for the Center should report to the Center at the Hyatt Ricketts Hotel to receive a placement identification number. To register on-site, candidates should report to the Center to complete a candidate form.

Return completed forms by March 14, 1986 to Beverly Citrynell, Manpower Placement Division, American Institute of Physics, 335 East 45th Street, New York, NY 10017.

Plenary Address

Dr. Pieter Meyers, Director of the Conservation Center, Los Angeles County Museum of Art, will present a keynote lecture entitled "Materials Studies in the Examination of Works of Art."

Micro-characterization of materials, the development of new materials and studies of materials interactions have led to remarkable advances in the study and conservation of works of art, both ancient and contemporary. Such advances will be illustrated graphically with special reference to several intriguing recent case histories.

Dr. Meyers earned his PhD in nuclear chemistry and nuclear physics at the University of Amsterdam. He subsequently undertook research at Brookhaven National Laboratory, applying nuclear techniques to the study of archeological materials. He developed a new research laboratory at New York's prestigious Metropolitan Museum of Art from 1970 until accepting the responsibilities for Conservation Research at the Los Angeles County Museum of Art in 1981. His experience ranges over many fields and he is a leader in conservation research today.

Prior to Dr. Meyers' lecture, new MRS Sections and Student Chapters will be presented with their charters, and winners of Graduate Student Awards will be recognized.

Heteroepitaxy on Si Technology (Symposium A)

Wednesday-Friday, April 16-18

Chairs: J.C.C. Fan, MIT Lincoln Laboratory; J. M. Poate, AT&T Bell Laboratories.

Approximately 27 papers will cover growth of GaAs on Si, properties of GaAs on Si, heterostructures of semiconductors and insulators on Si, device properties of GaAs on Si, heterostructures of semiconductors and metals on Si. Invited speakers include: H. Kroemer, S. Sakai, M. Akiyama, Y. Ohmachi, H. Ishiwara, H. Morkoc, T.H. Windhorn, T.R. Tung, and K.L. Wang. A panel discussion will explore the future of GaAs on Si.

Compound Semiconductor Conductors (Symposium B)

Tuesday-Friday, April 15-18

Chairs: L. Ralph Dawson, Sandia National Laboratories; Vassilis Keramidias, Bell Communications Research.

Approximately 39 papers will span bulk and surface processes, molecular beam epitaxy, characterization, metal-semiconductor interfaces/silicon carbide, and II-VI materials. Invited speakers include: R.N. Thomas, M.B. Panish, H.M. Cox, J.F. Schetzina, A.S. Jordan, P.I. Cohen, and D. Collins.

Plasma Processing (Symposium C)

Tuesday-Friday, April 15-18

Chairs: J. Coburn, AT&T Bell Laboratories; D.W. Hess, University of California-Berkeley.

Approximately 68 papers will discuss current developments in plasma processing, diagnostics, metastable materials, modeling, deposition, radiation effects, and ion-surface chemistry. Invited speakers include: K. Herb, C.J. Tracy, M. Isaacson, V.M. Donnelly, A. Garscadden, J.A. Reimer, B.S. Meyerson, D.B. Graves, J. Keller, M.J. Kushner, G. Lucovsky, G.S. Oehrlein, L.C. Feldman, J.M. Mayer, and R. Walkup.

Materials Characterization (Symposium D)

Tuesday-Thursday, April 15-17

Chairs: Marc-A. Nicolet, California Institute of Technology and Nathan W. Cheung, University of California-Berkeley

Approximately 70 oral and poster papers will cover TEM, SEM, ion channeling, RBS, SIMS, Auger spectroscopy, laser microprobe mass analysis, hyperfine interactions, Raman spectroscopy, magnetic resonances and other methods for analysis of metals, alloys, and semiconductor devices. Invited speakers include: C.R. Helms, R. Gronsky, P.E. Russell, W.K. Chu, C. Evans, Jr., R.J. Nemanich, B.M. Paine, R.W. Hoffmann, N. Amer, P.S. Alexopoulos, E. Weber, F. Ponce, R.L. Kubena, N.M. Johnson, and A. Rosencwang.

Materials Issues in Amorphous Semiconductor Technology (Symposium E)

Tuesday-Friday, April 15-18

Chairs: D. Adler, Massachusetts Institute of Technology; Y. Hamakawa, Osaka University; and A. Madan, Glasstech Solar, Inc.

Approximately 110 oral and poster presenta-

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tions will explore growth and electronic properties of amorphous silicon films; preparation and characterization of amorphous silicon films; amorphous silicon and chalcogenides; amorphous silicon alloys; chemical vapor deposition of amorphous silicon films; chalcogenides; contacts and interfaces; photoreceptors and image sensors; devices, interfaces, and superlattices; solar cells; thin-film transistors. Invited speakers include: A. Gallagher, J.D. Joannopoulos, J.D. Cohen, K. Tanaka, M. Aiga, M. Konagai, C.C. Tsai, M. Hirose, Y. Kuwano, D.E. Carlson, Y. Tawada, Y. Uchida, M.J. Thompson, and Z. Yaniv.

**Materials Issues in Silicon
Integrated Circuit Processing
(Symposium F)**

Tuesday-Friday, April 15-18

Chairs: M. Wittmer, International Business Machines; J. Stimmell, National Semiconductor; and M. Strathman, Charles Evans & Associates.

Approximately 79 papers will explore silicon materials science, epitaxy, ion implantation, contact and interconnect materials, high pressure oxidation, rapid thermal processing, and dielectrics. Invited speakers include: G.A. Rozgonyi, T.E. Seidel, T.J. Magee, H. Melchior, J.M. Phillips, S.T. Pantelides, N. Cheung, R.A. Levy, H.U. Schreiber, T.I. Kamins, M.O. Aboelfotoh, S.P. Tay, and M. Current.

**Electronic Packaging Materials Science
(Symposium G)**

Tuesday-Thursday, April 15-17

Chairs: D.R. Ulrich, Air Force Office of Scientific Research; R.C. Pohanka, Office of Naval Research; D.R. Uhlmann, Massachusetts Institute of Technology; and K.A. Jackson, AT&T Bell Laboratories.

Approximately 39 papers will cover processing, mechanical properties and reliability, polymers, interfaces and films. Invited speakers include: L.E. Cross, B.G. Bagley, T.L. Baker, A. Evans, K.M. Prewo, T-W. Chou, M.R. Pinnel, and C-A. Chang.

**Better Ceramics Through Chemistry
(Symposium H)**

Tuesday-Friday, April 15-18

Chairs: C. Jeffrey Brinker, Sandia National Laboratories; David E. Clark, University of Florida; and Donald R. Ulrich, Air Force Office of Scientific Research.

Approximately 111 oral and poster presentations will report on solution chemistry and synthesis—gels and powders, characterization of chemically derived ceramics, drying and consolidation, structure of random and ordered systems, nonoxides, comparison of chemically and conventionally derived ceramics, application of MO/MD calculations, materials for electronic pack-

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SPRING MEETING TIMETABLE

REGISTRATION (Hyatt Rickey's Hotel)

Monday, April 14: 4:00 p.m.-9:00 p.m.

Tuesday, April 15: 7:00 a.m.-7:00 p.m.

Wednesday-Thursday, April 16-17: 7:30 a.m.-5:00 p.m.

Friday-Saturday, April 18-19: 7:30 a.m.-noon

JOB PLACEMENT CENTER (Hyatt Rickey's Hotel)

Wednesday-Friday, April 16-18: 9:00 a.m.-5:00 p.m.

PLENARY SESSION (Hyatt Palo Alto Hotel)

Wednesday, April 17: 6:00 p.m.

Dr. Pieter Meyers,

Director of Conservation Center, Los Angeles County Museum of Art
"Materials Studies in the Examination of Works of Art"

POSTER SESSIONS

Tuesday-Thursday, April 15-17: See locations and times in the Preliminary and Final Programs.

TRANSPORTATION — CONVENTION AIRFARE DISCOUNTS

American Airlines is offering MRS members exclusive Meeting Saver fares equal to any American Airline special promotional fare for which you may qualify or 35% discount off day-coach fare, whichever is lower and in effect the date the tickets are purchased. This exclusive Meeting Saver fare waives the Saturday night stay and is valid through the MRS Services desk for roundtrip domestic travel on American Airlines. Tickets may be purchased up to 7 days prior to departure.

RESERVATIONS

Call the MRS Services desk weekdays 9:00 a.m. to 5:30 p.m. (California time) at one of the telephone numbers listed below. Give the travel specialist the special MRS file number S-7237. Your reservations on all airlines will be confirmed including connecting and roundtrip flights and your tickets sent to you directly. The special discount Meeting Saver fare is available for MRS members through a special arrangement with American River Travel in Sacramento, California.

SPECIAL FEATURES

When you make your flight reservations you can order special diet entrees or any one of seven American Traveler meals. American River Travel specialists will pre-reserve the seat you choose—window, aisle, smoking or nonsmoking and help you confirm car rentals. At the airport, they will issue roundtrip boarding passes so you can skip check-in on your way home.

CALL NOW AND SAVE

American River Travel

(800) 334-4331 (In Continental U.S.)

(800) 624-4868 (In California)

LOCAL TRANSPORTATION

Airport shuttle service is available to Hyatt Hotels Palo Alto from San Francisco International Airport (\$12). Exit the terminal and proceed to the middle island with the blue stripe on the concrete terminal. Shuttle service is also available from the San Jose Airport (\$10). Arrangements for shuttle service from either airport must be made in advance. You may do so when making airline reservations with American River Travel (numbers listed above) or by calling 1-800-AIRPORT directly.

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aging, and new initiatives/novel materials. Invited speakers include: W.G. Klemperer, L. Hench, D. Avnir, K.G. Frase, T.M. Shaw, D.W. Schaefer, K.D. Keefer, J.M. Drake, G.Y. Onoda, L.V. Interrante, R. T. Paine, A.R. Cooper, M.C. Weinberg, L.C. Klein, G.L. Messing, S.H. Garofalini, J. Simmons, G.V. Gibbs, S. Brawer, U. Chowdhry, J. Livage, H. Schmidt, P.E.D. Morgan, and J. Fricke.

Materials for Chemical Sensors
(Symposium I)

Wednesday-Thursday, April 16-17

Chairs: S.C. Chang, General Motors Research Laboratory; and J.N. Zemel, University of Pennsylvania.

Approximately 12 papers will cover optical materials, fiber optics, polypyrroles, integrated arrays, electrochemical sensors, solid-state gas sensors, dielectrometry, and sensing of environmental toxins.

Frontiers of Materials Research
(Symposium X)

Tuesday-Thursday, April 15-17

Chair: Rustum Roy, Pennsylvania State University.

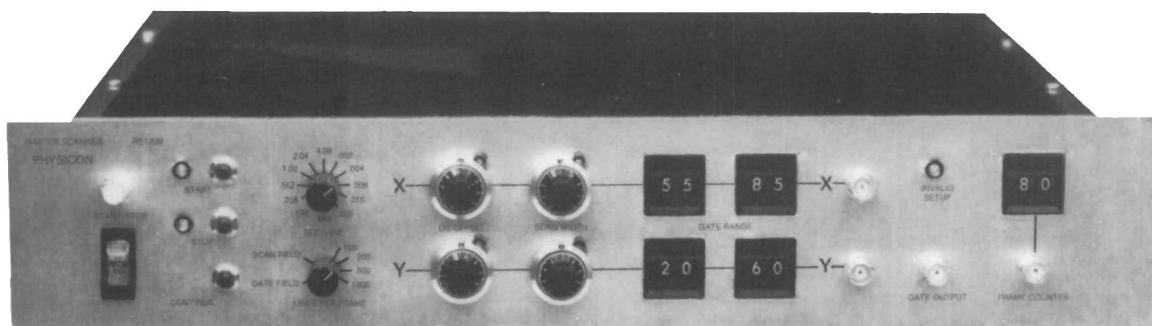


1986 Spring Meeting Program Chairs (left to right): Rod Quinn, Malcolm Thompson, and Wei-Kan Chu.

The speakers will present a tutorial review of recent work in the field, setting it in the context of previous and related science, so that the nonspecialist can obtain a general understanding of the field. Topics

will include epitaxial methods for compound semiconductors, fiber-reinforced ceramics, colloids, high-temperature semiconductors, materials for sensors, and amorphous semiconductors.

MRS



X, Y Raster Scanner RS1200 for ion and electron beams and imaging applications.

Bi-directional, high resolution driver circuit, Physicon model RS1200, with -10V to +10V output linear range, capable of precise beam handling (.01%) from dc steering to a line scan to full raster scanning within a frame or a part of the frame. Independent controls for scan field, gate field, beam sweep from dc to near-video, variable in steps, and 1 to 1000 lines per raster, frame count and search functions. Magnification with zoom feature in combination with plate supply unit RS1221. Data entry port for non-sequential scanning under external control. For use with a dc-coupled X, Y CRT for imaging.

Duoplasmatron ion source with 2-lens column DPQ for SIMS: Intense ion beams of gases with spot size of microns on the target at 5cm, mass separated.

PHYSICON Corporation 221 Mount Auburn Street, Boston MA 02138, USA. 617/491-7997

MATERIALS RESEARCH SOCIETY

Call and File Number

Return to:

American Institute of Physics, Placement Service
335 East 45th Street, New York, NY 10017

Date _____

Name _____ Tel. # _____
(Bus.) (Home)

Address _____
Street City State Zip

Citizenship: U.S.A. Permanent Resident Visa Temporary Visa

EMPLOYMENT

(list in reverse chronological order—present position first)

Position and nature of work

Description of Thesis, Principal Research and Publications

State briefly just what kind of position you desire

AIP/MRS has my permission to show this to any employer.

Signature _____

Major Subject	Institution	Year	Degree
			BA or BS
			MA or MS
			PhD
			Other

Years of training and/or experience in area below.

Fill in the number of years beyond undergraduate degree in the appropriate column.	Teaching	Academic Research	Industrial/Laboratory Experience

FIELD OF TRAINING

Biology			
Chemistry			
Earth Sciences			
Engineering			
Materials Science			
Metallurgy			
Physics			
Other			
Subfield of the above			

MATERIALS

Amorphous materials/glasses			
Biomaterials			
Cement			
Ceramics			
Composites/Cermets			
Earth materials			
Electronic materials			
Insulators			
Magnetic materials			
Metals/Alloys			
Nuclear materials			
Nuclear waste form materials			
Optical materials			
Polymers			
Semiconductor materials			
Other			

SELECTED TOPICS

Catalysis			
Corrosion			
Crystal growth			
Crystallography/crystal chemistry			
Defects			
Environmental science/engineering			
Beam (laser and ion) analysis/solid interactions			
Materials processing/fabrication			
Mechanical and physical properties			
Phase equilibria/transitions			
Polymer science and engineering			
Thin films/surfaces/interfaces			
Vacuum science and technology			
Other			

Specify analytical techniques with which you have experience.

PREFERRED AND ACCEPTABLE POSITIONS (check)

	P	A
Industrial Development		
Industrial Research		
Government Research or Civil Service		
Teaching only Undergraduates		
Undergraduate Teaching and Research		
Teaching Graduate and Research		
Academic Research only		
Institutional (Non-Profit) Research		
Other		

Please leave this margin clear.