

1986 E-MRS Meeting Preview

The 1986 meeting of the European Materials Research Society (E-MRS), is scheduled for June 17-20, 1986 at the Council of Europe, Strasbourg, France. Following the highly successful format of previous E-MRS meetings, this one will feature four symposia that will be conducted concurrently with the common goal of discussing recent material development, characterization methods and process technology. A number of plenary sessions are also scheduled where general presentations on topics of current interest in materials science and technology will be held. The deadline for contributed papers is April 1, 1986. Abstracts should be submitted to one of the chairmen of the symposia in which the paper is to be presented.

For registration information, contact P. Siffert, Centre de Recherches Nucleaires, Laboratoire PHASE, F-67037 Strasbourg Cedex, France; telephone (88) 28 65 43.

Symposium A: Advanced Materials for Telecommunication

Chairmen: P.A. Glasow (Siemens, Erlangen), J.P. Noblanc and Y. Nissim (CNET, Bagneux), and J. Speight (British Telecom., London).

The scope of this symposium encompasses the wide range of advanced material for modern and future telecommunication. The complete material aspect from emitters through transmitters up to receivers will be covered.

Topics of the Conference:

Bulk single crystal growth of device-grade substrate material

Material characterization (with emphasis on device properties)

Correlations: bulk material—processing—device properties (A special rump session will be devoted to this subject.)

Growth, characterization and interface studies of heterostructures for emitters, detectors, transistors

Uncommon optical fibers (fluoride fibers, glass fibers, organic core fibers), passive components

New materials and layered structures for contacts and interconnections, insulation and passivation

A round table, chaired by Prof. Hilsum, will discuss "Current Material Problems in Display Systems."

Plenary Lectures include: "Telecommunication Systems" (J. Jerphagnon), "Future Telecommunications" (B. Czaputa), "Political Aspects and International Significance of Future Telecommunication" (M. Kanzow), and "The ESPRIT and RACE Programs" (C. Garric).

Symposium B: Laser Processing and Diagnostics

Chairmen: D. Bauerle (University Linz), K.L. Kompa (Max Planck Institute, Garching), and L. Laude (State University, Mons).

This symposium will focus on laser processing and diagnostics with special emphasis on chemical processing.

Topics of the Conference:

Fundamentals of laser chemical processing
Photophysics and photochemistry of laser-surface interactions

Direct write processing with lasers including deposition, etching and doping of materials by pyrolytic and photolytic processes

Extended thin film formation

Chemical synthesis of novel materials

Applications of chemical processing

Diagnostics of laser processing

Laser induced phase transitions

Special laser developments devoted to these applications

The preliminary list of invited lectures includes:

"Laser Investigations of the Dynamics of Molecule Surface Interaction" (H. Walther), "Recent Microelectronics Applications by Laser Direct Writing and Excimer Projection" (D. Ehrlich), "Temperature Distributions in Pyrolytic Laser-induced Chemical Processing" (K. Piglmayer), "Photochemistry of Surface Metallization with Excimer Lasers" (H. Schroder), "Kinetics of Oxidation of Metals by cw Argon Ion Laser Irradiation" (R. Andrex), "Laser Plasma Synthesis of Thin Film Polycomponent Materials" (S. Metev), "Surface Studies with Lasers with Application to Laser Material Processing" (I.N. Mihailescu), "Microelectronic Films Fabrication by Laser Chemical Processing" (G. Auvert, D. Tonneau, and J. Pauleau), "UV-laser Deposition of Metal Films on Semiconductors" (M.L. Lloyd), topic to be announced (H. Gilgen), topic to be announced (I. Gianinoni and M. Musci), topic to be announced (M.V. Allmen)

Symposium C: State of the Art of Computer Simulation of Casting and Solidification Processes

Chairman: H. Frederiksson (Royal Institute of Technology, Stockholm), Co-Chairmen: W. Wurz (Ecole Polytechnique, Lausanne), G. Lesoult (Ecole des Mines, Nancy), and P. Sahn (Gießerei Institute, Aachen)

The symposium provides a forum for metallurgists, physicists, chemical and me-

chanical engineers to discuss the possibility of combining heat flow laws with kinetic and thermodynamic laws in numerical methods in order to understand and control solidification and casting processes.

Topics of the Conference are analytical and numerical methods in the following areas:

Thermodynamics in solidification processes
Kinetic laws during crystal growth and solidification

Heat flow due to convection and conduction during solidification processes

Structure failures and inhomogeneities formed during solidification processes

Invited speakers include: J. Agren (Stockholm, Sweden), D.T. Hurler (Malvern, England), J.D. Hunt (Oxford, England), P. Hansen (Copenhagen, Denmark), F. Durand (Grenoble, France), C.-H. Chun (Essen, Germany), J. Ohnaka (Osaka, Japan), K. Schwerdtfeger (Klausthal, Germany), T.W. Clyne (Surrey, England)

Symposium D: Dielectric Layers in Semiconductors—Novel Technologies and Devices

Chairman: G. Bentini (Bologna, Italy)

Co-Chairmen: E. Fogarassy (Strasbourg, France) and A. Golanski (Meylan, France).

The goal of this symposium is to provide an international forum for scientists and engineers involved in research and development of dielectric thin films in silicon and III-V compounds and their applications for microelectronics and semiconductor devices. The symposium will focus on recent developments in this area with special interest in the use of nonconventional techniques for dielectric layer formation.

Topics of the Conference:

Fundamentals of growing and deposition of dielectric films induced by plasma, laser and electron beam assisted processes

Formation of semiconductor on insulator structures using ion implantation, backside diffusion, high pressure and electrochemical processing including porous Si formation and oxidation, etc.

Applications for advanced technologies and novel devices.



E-MRS Summer School

"Current Problems of Semiconductor Surfaces and Interfaces"

June 30 - July 4, 1986

Burghausen, West Germany

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