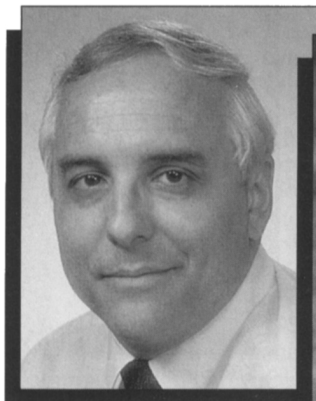
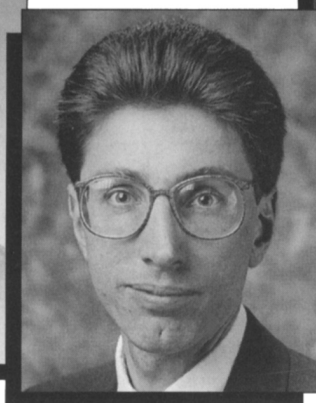


MRS Bulletin Volume Organizers Guide Technical Theme Topics for 1998



Orlando Auciello



Russell J. Composto



Philippe M. Fauchet

One hallmark of *MRS Bulletin* is that frequently an issue has a theme consisting of a group of articles dedicated to a single scientific or technological topic and written for the technical nonspecialist. These theme issues provide a continuing education forum for members of the materials community, helping scientists and students stay informed of the latest advances in a particular field which may or may not be related to their own research interests. Additionally, the theme issues can provide valuable information to researchers exploring new research opportunities. Each theme issue is organized by one or two experts in the field acting as guest editor or co-editors. Last year the Materials Research Society leadership recognized that volunteer Volume Organizers could enhance the organization of *MRS Bulletin* issues. The Volume Organizers would suggest and solicit theme topics and potential guest editors, and they would contribute to the selection of unsolicited proposals received by the *Bulletin* editor. In May 1997, *MRS Bulletin* introduced this new volunteer group consisting of three scientists working with the Editor and Editorial Board (see *MRS Bulletin*, May 1997, p. 4).

The first *MRS Bulletin* Volume Organizers, Orlando Auciello (Argonne National Laboratory), Russell J. Composto (University of Pennsylvania), and Philippe Fauchet (University of Rochester), guided the selection of the technical theme topics and guest editors for the 1998 volume of *MRS Bulletin* issues, paralleling the way meeting chairs select symposium organizers to coordinate and run symposia. Some theme issues were initiated by this group of Volume Organizers and other ideas were suggested or proposed from other members of the

materials science community. The Volume Organizers, with help from the Editorial Board, reviewed proposals and directed guest editors to produce balanced and fair coverage of each topic. The main goal of the Volume Organizers was to use their interdisciplinary expertise and interests to develop issues aimed at exposing materials researchers to a balance of scientific and technological themes, bringing emerging topics into focus, reviewing dynamic fields with new developments, and covering core materials subjects. The Volume Organizers gathered an eclectic set of topics including Quantum Dots, Materials for Sports, Si-Based Optoelectronics, Fundamentals of Friction, Ternary Chalcopyrites as Non-linear Optical Materials, Field Responsive Smart Fluids, Diamond Films, Colloidal Materials, New Functionality of Glass, and Synchrotron X-Ray Analysis for *In Situ* Studies of Materials. For a list of topics and guest editors as they unfold, access the *MRS Bulletin* website at <http://www.mrs.org/>.

Orlando Auciello is a scientist in the Division of Materials Science at Argonne National Laboratory and an adjunct professor in the Department of Materials Science of North Carolina State University. He earned his MS (1973) and PhD (1976) degrees in physics from the Physics Institute "Dr. Balseiro" (National University of Cuyo and Atomic Energy Commission, Argentina). He worked as a postdoctoral researcher at McMaster University (Hamilton, Canada, 1977–1979), and subsequently as a research scientist at the University of Toronto, Canada (1979–1984), an associate professor at North Carolina State University (1985–1988), and a staff scientist at the Microelectronics Center of North Carolina (1988–1996). He

has been a guest scientist in several institutions, including Princeton Plasma Physics Laboratory (United States), University of Wuppertal (Germany), University of Salford (England), and University of Alicante (Spain).

Auciello is an author or co-author of about 250 publications, including numerous review articles and book chapters. He is an editor or co-editor of eight books on the science and technology of ion, plasma, and laser interaction with solids and the science and technology of thin films and co-editor of the book series *Plasma Materials Interaction* published by Academic Press.

He worked in diverse fields of basic and applied research, including sputtering processes and ion-bombardment-induced surface modification, plasma-surface interaction phenomena relevant to fusion devices, the physics and chemistry of plasma, ion-beam, and laser interaction with solids and their application to processing of materials (bulk and thin films).

Auciello can be reached at Argonne National Laboratory, Materials Science Division / 212 / C210, 9700 South Cass Avenue, Argonne, IL 60439-4838; 630-252-1685; fax 630-252-4798; e-mail orlando_auciello@qmgate.anl.gov.

Russell J. Composto joined the Materials Science and Engineering Department at the University of Pennsylvania in 1990 where he is now associate professor and undergraduate chair. He received a PhD degree in materials science and engineering from Cornell University in 1987 where he studied polymer interdiffusion, and worked as a postdoctoral researcher in polymer science and engineering at the University of Massachusetts from 1987 to 1990. He is a member of the polymer group within the Laboratory for Research on the Structure of Matter, where he is also director of the surface analysis facility.

Composto is an author or co-author of about 50 publications. He has published review articles and book chapters on the behavior of macromolecules at surfaces and interfaces, and depth profiling techniques for polymer films.

His research interests involve polymer surface and interface phenomena, polymeric and ceramic coatings, polymer surface engineering via adsorption, segregation and wetting, the thermodynamics and dynamics of blends in confined spaces, and the development and application of polymer depth profiling techniques. Most recently, his research has focused on improving polymer-metal adhesion via

polymer brushes. His website can be found at <http://www.lrsm.upenn.edu/~composto>.

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Philippe M. Fauchet is a professor in the Departments of Electrical Engineering, Physics and Astronomy, and Optics, and senior scientist at the Laboratory for Laser Energetics, at the University of Rochester. He received a degree in electrical engineering from Faculté Polytechnique de Mons, Belgium (1978), an MS degree in engineering from Brown University (1980), and a PhD degree in applied physics from Stanford University (1984). Fauchet has taught at Stanford and Princeton Universities. He was an IBM Postdoctoral Fellow at Stanford (1983–1984) and a visiting professor at the University of Paris (1985).

Presently, Fauchet and his group of 15 postdoctoral research associates, graduate students, and visitors work with industrial and academic collaborators on the materi-

als science and device applications of porous silicon, optoelectronics using high-temperature superconductors, nonlinear optics with polymers, femtosecond electronic processes in semiconductors, ultrahigh bit rate optoelectronic devices, and applications of the free electron laser. He was the first user of free electron lasers (FEL) in materials science, and maintains active collaborations with the FEL centers at Vanderbilt and Stanford Universities. His international collaborators include groups from Belarus through the U.S. Civilian Research and Development

Foundation. He is the co-author of over 220 publications in these areas and has edited five books in his fields. He is the North American editor for *Physica Status Solidi*.

Fauchet can be reached at the Department of Electrical Engineering, Computer Studies Building, 160 Trustee Road, University of Rochester, P.O. Box 270231, Rochester, NY 14627-0231; 716-275-1487; fax 716-275-2073; e-mail fauchet@ee.rochester.edu; website <http://www.seas.rochester.edu:8080/ee/faculty/fauchet/fauchet.html>. MRS

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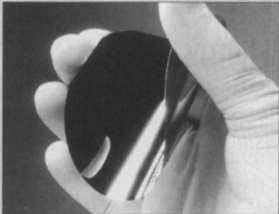
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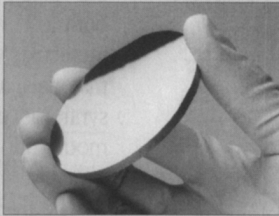
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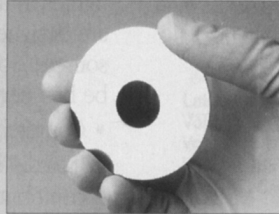
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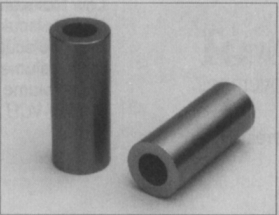
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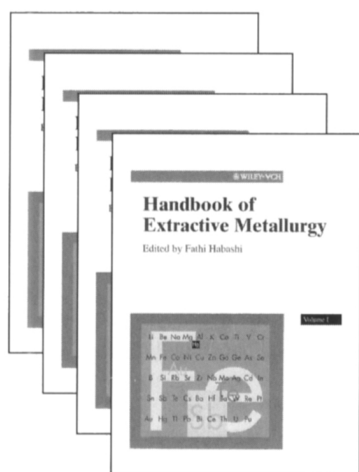
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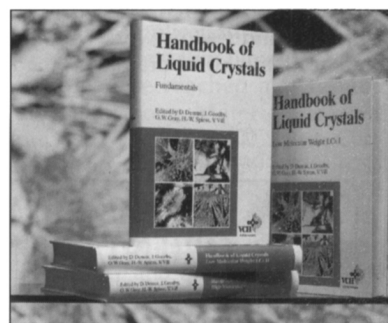
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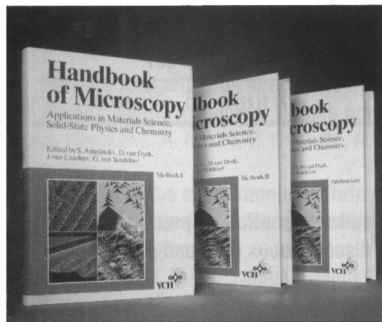
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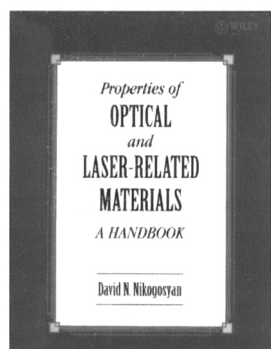
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