

Eaglesham Leads MRS Board of Directors in 2005



David J. Eaglesham



Peter F. Green



Cynthia A. Volkert



Howard E. Katz

On January 1, **David J. Eaglesham** (Applied Materials) assumed the presidency of the Materials Research Society (MRS) for 2005, after serving as vice president/president-elect in 2004. He succeeded **Howard E. Katz** (The Johns Hopkins University), who now serves MRS as immediate past president.

In last fall's annual election of officers and directors, **Peter F. Green** (University of Texas at Austin) was elected vice president/president-elect, and **Cynthia A. Volkert** (Forschungszentrum Karlsruhe) was elected secretary.

During the 2004 MRS Fall Meeting in December, director **Robert Averbach** (University of Illinois at Urbana-Champaign) was appointed treasurer by the Board of Directors, and he was appointed as chair of the Operational Oversight Committee by Eaglesham. Eaglesham also announced the chairs of the other governing committees: **Kristi Anseth** (University of Colorado), Planning Committee; and **Eugene A. Fitzgerald** (Massachusetts Institute of Technology), External Relations/Volunteer Involvement Committee.

The newly elected members to the MRS Board of Directors are **William A. Frezza**, Adams Capital Management Inc. (for a one-year term); and **Horst W. Hahn**, Forschungszentrum Karlsruhe/University of Technology Darmstadt; **Julia W.P. Hsu**, Sandia National Laboratories; **Darrell G. Schlom**, The Pennsylvania State University; **David J. Srolovitz**, Princeton University; and **Bethanie J.H. Stadler**, University of Minnesota for three-year terms. Beginning January 1, they will join continuing directors **Kristi Anseth**; **Robert Averbach**; **Zhenan Bao**, Stanford University; **Marie-Isabelle Baraton**, University of Limoges; **Eugene A. Fitzgerald**; **Ulrich M. Goesele**, Max Planck Institute; **Albert Polman**, FOM

Institute for Atomic and Molecular Physics (AMOLF); **Yuri Suzuki**, University of California, Berkeley; and **Jerry Tersoff**, IBM T.J. Watson Research Center.

David J. Eaglesham President

Beginning in 2005, David J. Eaglesham will be managing director of the New Business and New Products Group for Applied Materials, leading efforts to develop new advanced materials technologies and implement them in manufacturing. Prior to joining Applied Materials, he worked at Lawrence Livermore National Laboratory as chief technologist, where he was involved in developing nanotechnologies for sensing applications, and at Bell Laboratories, where he was vice president of Electronic Devices Research. His technical interests center on thin-film techniques and processing.

Within MRS, Eaglesham co-chaired the 1997 MRS Spring Meeting, where he helped implement the Meeting Chairs' Poster Prize. He served on the MRS Council from 1998 to 2001, chaired the Audit Committee, and served on the editorial board of *MRS Bulletin*. Eaglesham received the MRS Outstanding Young Investigator Award in 1994. He earned his BSc degree in chemical physics and his PhD degree in physics at the University of Bristol, England, and served on the faculty at the University of Liverpool.

Peter F. Green Vice President/President-Elect

Peter F. Green is professor of chemical engineering and holds the B.F. Goodrich Endowed Professorship in Materials Engineering at the University of Texas—Austin. Prior to his arrival at the university in 1996, he spent 11 years at Sandia National Laboratories, the last five years of which he was a department manager

in the Materials and Process Sciences Center. His current research interests lie in the areas of dynamics, wetting, and interfacial phenomena in soft materials and on dynamic processes in network glass melts. He is a fellow of the American Physical Society and of the American Ceramic Society.

Green has been an MRS member since 1984, when he received an MRS Graduate Student Award. He has organized MRS symposia, served as a Meeting Chair of the 1997 MRS Fall Meeting, and served as guest editor for the November 1998 issue of *MRS Bulletin* on the theme of new functionality of glass. He has participated on various MRS task forces and recently concluded a three-year term on the Board of Directors. Since 1996, he has been a member of the Meetings Program Development Subcommittee, which actively works with the Meeting Chairs organizing the Fall and Spring Meetings.

Cynthia A. Volkert Secretary

Cynthia A. Volkert is a group leader at the Forschungszentrum Karlsruhe in Germany, where she performs studies in microstructure and mechanical properties of small metal structures. She received her PhD degree from Harvard University in 1988. She spent 10 years as a staff member at Bell Laboratories in New Jersey and four years at the Max Planck Institute for Metals Research in Stuttgart before she moved to Forschungszentrum Karlsruhe. Volkert has published many scientific papers in the field of thin films and holds several patents. She has consulted regularly with Bell Laboratories as well as with several European-based companies.

In addition to her involvement in several MRS committees, Volkert has been an organizer for three symposia and was a Meeting Chair for the 2001 MRS Spring

Meeting. In 2004, she served as treasurer of MRS as well as chair of the Operational Oversight Committee for the MRS Board of Directors.

Howard E. Katz

Immediate Past President

Howard E. Katz recently joined the Department of Materials Science and Engineering at The Johns Hopkins University after being a Distinguished Member of Technical Staff at Lucent Technologies–Bell Labs Innovations. He received his PhD degree in chemistry from the University of California, Los Angeles.

His scientific interests include electrical phenomena in polymers and solids, synthesis and fabrication, information storage, and sensing. His work on organic semiconductors was recognized with an R&D 100 Award for a demonstration plastic electrophoretic display, and the team he co-founded received the American Chemical Society Award for Team Innovation. Katz was recently named fellow of the American Association for the Advancement of Science (AAAS). He is a member of the Defense Sciences Research Council, holds 31 U.S. patents, and is the author or co-author of more than 140 publications.

Within MRS, Katz has been a director and served on the Operational Oversight Committee, the Workshop Subcommittee, and the Audit Committee. He was a symposium organizer at the 1992 MRS Fall Meeting and co-chair of the 1998 MRS Fall Meeting, where he introduced the now-ongoing topics of combinatorial materials science, materials science of microelectromechanical systems, and polymer pharmaceuticals. Katz is now serving MRS as immediate past president, following his tenure as president (2004) and vice president/president-elect (2003). MRS

Cheng, Ginley, Uhrich, and Wehrspohn to Chair 2005 MRS Fall Meeting



Yang-Tse Cheng



David S. Ginley



Kathryn E. Uhrich



Ralf B. Wehrspohn

The 2005 Materials Research Society Fall Meeting in Boston, November 28–December 2, will be chaired by **Yang-Tse Cheng** (General Motors Research and Development Center, Warren, Mich.), **David S. Ginley** (National Renewable Energy Laboratory), **Kathryn E. Uhrich** (Rutgers University), and **Ralf B. Wehrspohn** (Paderborn University, Germany). Updated information on the meeting is available at Web site www.mrs.org/meetings/.

Yang-Tse Cheng is a Technical Fellow and Laboratory Group Manager for Engineered Surfaces and Functional Materials at the General Motors Research and Development Center in Warren, Mich. He began his college education in physics at Beijing University in 1978. He transferred to the California Institute of Technology in 1980 and obtained his BS degree in physics with a minor in mathematics in 1982. He continued his graduate studies at Caltech and received MS and PhD degrees in applied physics in 1983 and 1987, respectively. Cheng has since been with GM and has conducted research in areas such as ion-beam modi-

fication of materials; the growth of epitaxial, nanocrystalline, and amorphous thin films of metals and ceramics; stress-induced growth of nanowires; metal hydride thin films and battery electrodes; thin-film hydrogen sensors; and thin-film materials for fuel cell applications. His most recent research focus is on mechanical and tribological properties of nanostructured materials, microscopic shape memory and superelastic effects, and indentation modeling. Cheng has authored or co-authored more than 90 publications and holds eight U.S. patents. He has co-organized four MRS symposia and is currently serving on the MRS Membership Committee and as one of the principal editors for the *Journal of Materials Research*.

David S. Ginley is a Group Manager in Process Technology and Advanced Concepts at the National Renewable Energy Laboratory, leading activities in the applications of nanotechnology, organic electronics, transition-metal oxides (ferroelectric materials, rechargeable Li batteries, and transparent conductors), and inkjet printing. He leads a team in the development of nanoparticle-based

precursors to electronic materials, particularly as they apply to photovoltaic and optoelectronic technologies. Recent new activities include a program on combinatorial approaches to electronic materials and a program on polymer-based photovoltaic cells and organic light-emitting diodes. Over the past 25 years, he has been active in developing a basic understanding of the relationships between structure and the optoelectronic properties in a variety of materials. Ginley has worked in the areas of photoelectrochemical cells, hydrogen passivation of Si photovoltaic cells, conductive polymers, semiconductors, and high-temperature superconductors. He has also focused on the basic science of materials growth, electrochemistry, and electro-optical materials properties.

Ginley received his PhD degree in inorganic chemistry from the Massachusetts Institute of Technology. He has been involved in numerous professional societies, concentrating on the Electrochemical Society (fellow), the Materials Research Society, and the Institute of Electrical and Electronics Engineers. He

has published more than 320 papers, holds 24 patents, and has been honored with a Department of Energy Award for Sustained Research in Superconducting Materials and R&D 100 Awards for novel chemical etches, nanoparticle technology, ferroelectric frequency agile electronics, and alumina-based nanofibers. He has also received two FLC technology transfer awards.

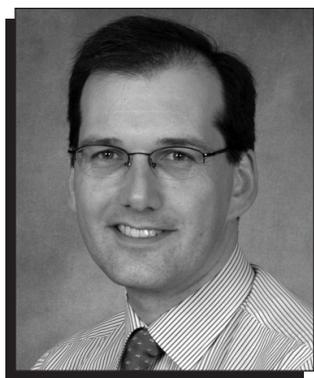
Kathryn E. Uhrich is an associate professor of chemistry at Rutgers University. She received a BS degree (1986) in chemistry at the University of North Dakota, and a PhD degree (1992) in organic chemistry from Cornell University. Before moving to her present post at Rutgers in 1995, she held postdoctoral positions at AT&T Bell Laboratories in 1992 and at the Massachusetts Institute of Technology (1993–1995). Her current research program focuses on the synthesis and

characterization of biocompatible polymers for medical and dental applications such as drug delivery and tissue engineering. She has authored nearly 50 peer-reviewed research articles, nine issued patents, and 20 pending U.S. applications, and has delivered over 50 invited presentations at national and international conferences. In addition to funding from the National Institutes of Health, she has received financial support from the National Science Foundation (CAREER Program), Hoechst Celanese (Innovative Research Award), and Johnson & Johnson (Discovery Award). She founded Polymerix Corporation in 2000 to develop products for medical and dental applications based upon her laboratory's inventions.

Ralf B. Wehrspohn is a professor in experimental physics in the Nanophotonic Materials Group at Paderborn University

in Germany. In 1990, he started his studies of physics at the Carl von Ossietzky University Oldenburg, completing his degree with a diploma thesis in physics; he earned his PhD degree at the University of Oldenburg and the École Polytechnique (Palaiseau, France). In 1998, he worked as a fellow at the Philips Research Laboratories in Redhill, England, on thin-film transistors for flat-panel displays. Later in 1999, he moved to the Max Planck Institute of Microstructure Physics in Halle, Germany, as group leader of the porous material/photonic crystal group. He joined Paderborn University in 2003. Wehrspohn has co-authored more than 70 publications and holds five patents. He has been awarded the Outstanding Young Inventor Award of the German Science Foundation and was one of *MIT Technology Review's* TR100 nominees in 2003. MRS

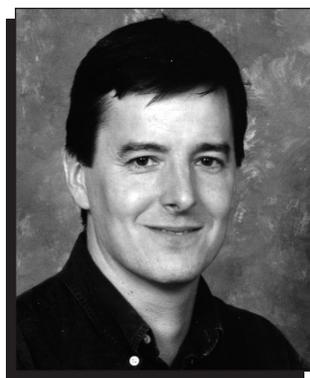
MRS Bulletin Volume Organizers Guide Technical Theme Topics for 2006



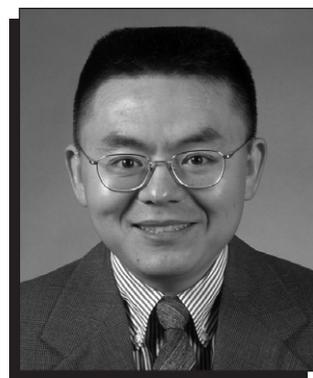
Paul A. Midgley



Christine A. Orme



John A. Rogers



Ji-Cheng (J.-C.) Zhao

The *MRS Bulletin* 2006 volume organizers, who will guide the development of theme topics for the 2006 volume year, are Paul A. Midgley (University of Cambridge), Christine A. Orme (Lawrence Livermore National Laboratory), John A. Rogers (University of Illinois at Urbana-Champaign), and Ji-Cheng (J.-C.) Zhao (GE Global Research Center). Instructions on submitting proposals for *MRS Bulletin* theme topics can be obtained on the Web via URL www.mrs.org/publications/bulletin/propose_theme.html/.

Paul A. Midgley is a Reader in Electron Microscopy and Director of the Electron Microscope Facility in the Department of Materials Science and Metallurgy at the University of Cambridge. He studied physics at the H.H. Wills Physics Laboratory at the University of Bristol, receiving his PhD degree in 1991 for electron

microscopy studies of high-temperature superconductors. He then held two research fellowships, the first funded by the Royal Commission for the Exhibition of 1851, and the second by the Royal Society. He moved to Cambridge in 1997. He has studied a wide variety of materials by electron microscopy and developed a number of novel electron microscopy techniques using energy-filtered transmission electron microscopy (EFTEM), scanning transmission electron microscopy (STEM), and electron holography. Recently, he has worked on the development of electron tomography using a new STEM-based approach that has wide applicability in materials science. He is editor in chief of the journal *Ultramicroscopy*. He is the 2004 Federation of European Materials Societies (FEMS) Lecturer and recipient of the Institute of Materials' Rosenhain Medal for 2004.

Christine A. Orme is a physicist in the Chemical Biology and Nuclear Science Division at Lawrence Livermore National Laboratory. Her research focuses on experimental physics in the area of surface evolution and pattern formation during the growth of thin films; combined imaging with kinetic Monte Carlo simulations and continuum modeling to deduce diffusional processes during vapor growth; study of crystal growth from solution; biomineralization processes in which organic molecules substantially change the shape of inorganic crystals; and the use of electrochemical driving forces to control electrodeposition and corrosive processes, particularly in their application to biomedical implants and corrosion-resistant industrial materials. She received her BS degree in physics from the University of California, Berkeley, and her PhD degree in physics

from the University of Michigan in 1995. She is the recipient of the Presidential Early Career Award in Science and Engineering for her work in biomineralization.

John A. Rogers is Founder Professor of Engineering at the University of Illinois at Urbana-Champaign, where he pursues research in unconventional methods for micro/nanofabrication, macroelectronics, and unusual photonic systems. He obtained BA and BS degrees in chemistry and in physics from the University of Texas at Austin in 1989. From the Massachusetts Institute of Technology, he received SM degrees in physics and in chemistry in 1992 and a PhD degree in physical chemistry in 1995. From 1995 to 1997, Rogers was a junior fellow in the Harvard University Society of Fellows. During this time, he also served as a director for Active Impulse Systems, a semiconductor metrology company based on his PhD research, that he co-founded in 1995 and which was acquired in whole by Philips in 1998. He joined Bell Laboratories as a member of technical staff in the Condensed-Matter Physics Research Department in 1997, and served as director of the department in 2000–2002.

Rogers has published more than 100 papers and has over 60 patents and patent applications, more than 30 of which are licensed or in active use. He was selected as one of the top 100 young innovators for the 21st century in the United States by *MIT Technology Review* magazine in 1999 and was named the Robert B. Woodward Scholar at Harvard University in 2001. Among his honors are the American Chemical Society's Team Innovation Award (2001), two R&D 100 awards (2001 and 2002), and, most recently, *MIT Technology Review* magazine's top 10 emerging technologies award for microfluidic optical-fiber devices (2004).

Ji-Cheng (J.-C.) Zhao is a materials scientist at the GE Global Research Center in Niskayuna, N.Y., where he has worked since 1995. He has been a project leader and principal investigator of several GE and government-funded programs. His research focused on the design of advanced alloys and coatings for jet engines from 1995 to 2002. Since 2003, he has worked on the development of hydrogen storage materials. In addition

to many materials innovations, he developed a diffusion-multiple approach for the rapid mapping of materials properties for the accelerated design of alloys. Zhao received his BS (1985) and MS (1988) degrees in materials science and engineering from Central South University, China, and his PhD degree in the same discipline from Lehigh University (1995). He has received several honors, including the Geisler Award from ASM International and the Hull Award from GE Global Research, and was elected a fellow of ASM International in 2003. Zhao has published about 55 papers and co-edited one book and two theme issues of *MRS Bulletin*. He holds 26 U.S. patents, with 20 more pending and is an associate editor for the *Journal of Phase Equilibria and Diffusion*. Zhao has delivered many invited talks and seminars at universities and national and industrial laboratories. He is also a book reviewer for *MRS Bulletin* and a proposal reviewer/panelist for several organizations. His innovations were featured in news, covers, or cover stories in *Nature*, *Chemical & Engineering News*, *MRS Bulletin*, and *Advanced Engineering Materials*. 



**ACS/MRS/IEEE CPMT
Organic Microelectronics
Workshop**

**July 10 - 13, 2005
Newport, Rhode Island, USA**

The Workshop will bring together a broad spectrum of chemists, materials scientists, physicists, and engineers from both industry and academia in a stimulating forum to share information and ideas in the emerging field of Organic Microelectronics. The goal is to build an interdisciplinary community working on applications such as RFIDs, displays, sensors and photovoltaics while addressing some of the common scientific and manufacturing challenges to help these technologies advance in a more rapid, effective, and economical manner.

The technical program will focus on the areas of synthesis, theory, novel processing/ patterning/fabrication and device physics through a series of presentations by renowned invited speakers and poster sessions.

Conference Chairs
Tobin J. Marks, Northwestern University
Henning Sirringhaus, Cambridge University
George G. Malliaras, Cornell University

For Additional Information
www.microelectronics.org, online registration available
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