

## Phillips Leads MRS in 1995

*With Thompson, Hull, Koch, Hays, and  
Bravman in the Executive Committee*

Julia M. Phillips, supervisor of the Thin Film Research Group at AT&T Bell Laboratories, is the new president of MRS for 1995, an automatic move from her elected position as First Vice President in 1994. She succeeds John C. Bravman, associate professor and associate chair of the Department of Materials Science and Engineering at Stanford University, who is now the MRS immediate past president.

The other elected members of the Executive Committee are Carl V. Thompson (Massachusetts Institute of Technology), first vice president and president-elect for 1996; Robert Hull (University of Virginia), second vice president; Carl C. Koch (North Carolina State University), serving his second year in a two-year term as Secretary; and A. Kay Hays (Sandia National Laboratories), re-elected for a two-year term as Treasurer.

The newly elected councillors, Charles B. Duke (Xerox Webster Research Center), Ronald Gibala (University of Michigan), James M.E. Harper (IBM T.J. Watson Research Center), Gabrielle G. Long (National Institute of Standards and Technology), Manfred Rühle (Max-Planck-Institut für Metallforschung), and Alan I. Taub (Ford Research Laboratory), join current councillors Bill R. Appleton (Oak Ridge National Laboratory), Howard K. Bimbaum (University of Illinois—Urbana), Clifton W. Draper

(AT&T Bell Laboratories), Merton C. Flemings (Massachusetts Institute of Technology), J. Murray Gibson (University of Illinois—Urbana), Kevin S. Jones (University of Florida), Merrilea J. Mayo (Pennsylvania State University), June D. Passaretti (Minerals Technologies), and Richard W. Siegel (Argonne National Laboratory).

### **Julia M. Phillips President**

Julia M. Phillips is technical manager of the Thin Film Research Group at AT&T Bell Laboratories. Her research centers on heteroepitaxy, with a concentration in thin film growth of diverse materials, including magnetic oxides, transparent conducting materials, and other oxides.

Phillips' other interests include epitaxial insulators and metals on semiconductors, and structural and electrical characterization of these heterostructures; ion beam analysis; and application of rapid thermal processing techniques to heteroepitaxy.

Phillips received her BS degree in physics from the College of William and Mary and her PhD degree in applied physics from Yale University. She is a fellow of the American Physical Society and a member of Sigma Xi.

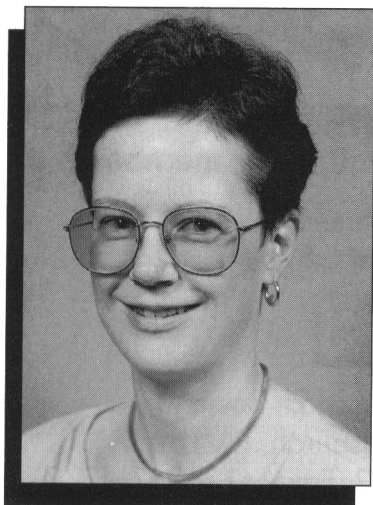
Phillips has served as MRS secretary (1987–89), as second vice president (1993), as a councillor (1991–93), and as first vice pres-

ident (1994). She has been a symposium organizer, has chaired the 1991 Fall Meeting, and has chaired several MRS committees, including the Program, Publicity and Public Relations membership and Corporate Participation committees. Phillips is a principal editor of *Journal of Materials Research* and has been a member of the editorial board of *Applied Physics Letters/Journal of Applied Physics* 1992–94. (Read Phillips' expectations for 1995 in Letter from the President in the front of this issue.)

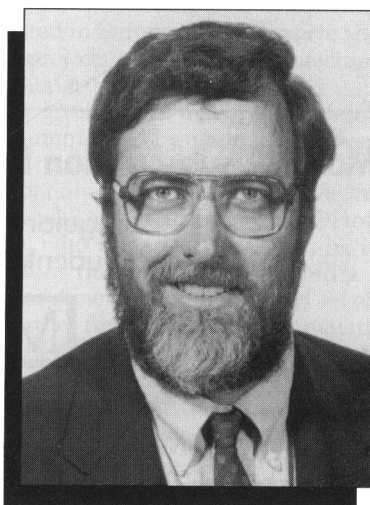
### **Carl V. Thompson First Vice President**

Carl V. Thompson is a professor of electronic materials in the Department of Materials Science and Engineering at the Massachusetts Institute of Technology (MIT). A materials science and engineering graduate of MIT, he received his SM and PhD degrees in applied physics from Harvard University, then returned to MIT as an IBM postdoctoral associate in the Research Laboratory of Electronics. He joined the Materials Science and Engineering faculty in 1983.

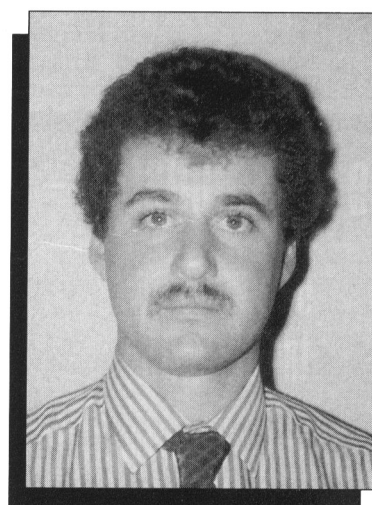
Thompson spent the 1990–91 academic year at Cambridge University as a U.K. Science and Engineering Research Council visiting fellow. He has worked briefly in the research departments of a number of major U.S. companies and has served as a consul-



Julia M. Phillips



Carl V. Thompson



Robert Hull

tant for such firms as IBM and Digital Equipment Corporation.

Thompson's current work includes research on grain growth in thin films, epitaxial growth mechanisms, the effects of microstructure on interconnect reliability, the effects of misfit strain and dislocations on the magnetic properties of heteroepitaxial metallic films, ion beam-induced chemical vapor deposition, laser-induced chemical deposition from solid sources, and epitaxial growth on substrates with artificial surface topography.

Since joining MRS, Thompson has co-organized five MRS symposia, co-chaired the 1990 Spring Meeting, and served on the MRS Continuing Education Committee, the Program Committee, and the Academic Affairs Committee. He chaired the Audit Committee and the Program Development Subcommittee. In 1993 he completed a three-year term on the MRS Council, and served as the 1994 second vice president of MRS. Thompson was co-guest editor of the December 1993 *MRS Bulletin* on reliability in microelectronics. He will present a paper on materials reliability in microelectronics at the MRS 1995 Spring Meeting in San Francisco.

### **Robert Hull** **Second Vice President**

Robert Hull joined the faculty of the Materials Science and Engineering Department at the University of Virginia in the fall of 1994. Prior to that he was a Member of Technical Staff in the Materials Research Department at AT&T Bell Laboratories, beginning in 1987.

His major areas of research have focused on the fundamental processes of epitaxial growth, the structure and properties of

defects in semiconductors, and the theory and applications of electron microscopy.

He received his bachelor's degree from the Physics Department at Oxford University in 1980 and his doctoral degree from the Materials Science Department at Oxford University in 1983.

Hull was a Meeting Chair for the 1990 Fall MRS Meeting in Boston and has co-chaired three MRS symposia (1987, 1988, 1992). He will present a paper on defect and impurity engineered semiconductors and devices at the MRS 1995 Spring Meeting.

He has been a councillor of MRS from 1992 to 1994, and has also served on the MRS Publications, Program, and Continuing Education Committees.

### **Carl C. Koch** **Secretary**

Carl C. Koch is a professor of materials science and engineering and an associate department head at North Carolina State University. His research interests center around nonequilibrium processing, intermetallic compounds, and high  $T_c$  superconducting oxides. His current projects include studies of nanocrystalline materials; the phase stability, mechanical, and oxidation behavior of selected intermetallic compounds; and the factors that influence the superconducting critical current density in the high- $T_c$  oxide superconductors.

Koch received a PhD degree in metallurgy from Case Institute of Technology, then served as a National Science Foundation Fellow at Birmingham University, England. In 1965 he joined Oak Ridge National Laboratory, later becoming a group leader in superconducting materials. He joined the North Carolina State University faculty in 1983.

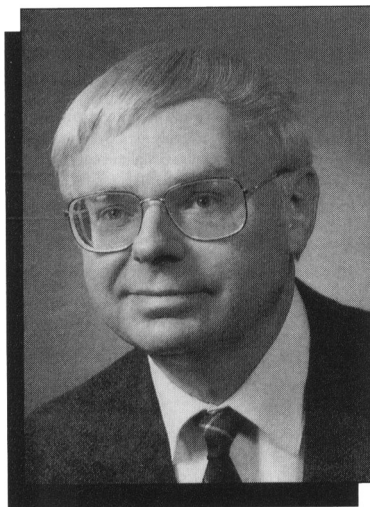
A fellow of the American Physical Society, ASM International, and the American Association for the Advancement of Science, Koch has received a Department of Energy's Metallurgy and Ceramics Award, an IR-100 Award, an NSF Research Award for Special Creativity, and the Alcoa Distinguished Research Award. He is the coholder of three U.S. patents, and has coedited four books and authored or coauthored over 140 journal publications.

This is Koch's second year of his two-year term as Secretary for MRS. His other contributions to MRS include co-organizer of three MRS symposia, co-chair for the 1992 MRS Fall Meeting and former president of the MRS North Carolina Section. He presented an invited paper on mechanical properties of nanocrystalline/ultra fine-grained alloys at the MRS 1994 Fall Meeting. Koch currently serves on the MRS Program, Academic Affairs, Membership, and Awards Committees.

### **A. Kay Hays** **Treasurer**

A. Kay Hays is manager of the Manufacturing, Electronics, and Advanced Information Technology Program Office in the Defense Programs Capabilities Center at Sandia National Laboratories. She received her MS degree in chemistry from the University of California-Berkeley and her PhD degree in physical chemistry from the University of California-Los Angeles.

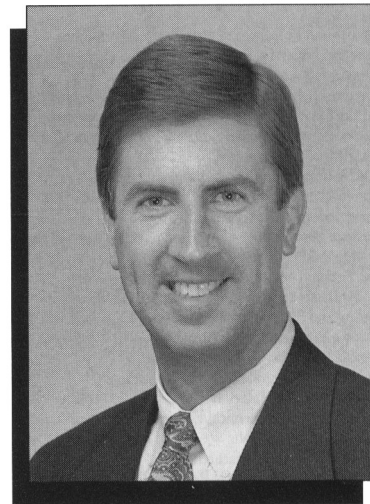
Starting as a staff researcher at Sandia, Hays worked in laser physics, developing high-power, ultraviolet lasers for inertial confinement fusion. Changing from plasma physics to plasma chemistry, she began developing radio-frequency plasma deposi-



Carl C. Koch



A. Kay Hays



John C. Bravman

tion techniques for different applications.

Later, Hays became supervisor of Sandia's Coating Research Division, where work is done in CVD, PVD, plasma deposition, thermal spray, and electrochemical deposition efforts. She has coordinated the laboratory's materials response to DOE's Technology Commercialization Initiative (TCI). She has served as Sandia's representative on the Materials Technical Area Coordinating Team, which is responsible for developing a strategic plan for the DOE laboratories' materials interaction with U.S. industry and for reviewing programs funded by TCI.

She currently serves as an advocate for the Sandia manufacturing, electronics, and advanced information initiatives within the defense programs business sector.

Active in both the American Vacuum Society and MRS, Hays served on the executive committee of the Vacuum Metallurgy

Division of AVS. She was co-organizer of the 1988 MRS Spring symposium on process diagnostics and was a meeting chair for the 1991 MRS Spring Meeting. This is her second consecutive term as Treasurer of MRS.

### John C. Bravman Immediate Past President

John C. Bravman is an associate professor and associate chair in the Department of Materials Science and Engineering at Stanford University. He is also senior associate dean for student affairs in the School of Engineering. His research interests focus on the processing and analysis of thin-film materials and structures. Currently, he directs doctoral students in silicon and gallium arsenide process technology, the mechanical properties of thin films, high-temperature superconductivity, and transmission electron microscopy.

After receiving his BS, MS, and PhD

degrees in materials science from Stanford, Bravman worked at the Fairchild Semiconductor Research and Development Laboratories in Palo Alto, California. He also served as a consultant with several Silicon Valley firms, including Lockheed, National Semiconductor, Advanced Micro Devices, and IBM.

Along with his positions as first vice president (1993) and president (1994), Bravman was MRS second vice president for 1992 and an MRS councillor. He co-chaired the 1990 MRS Spring Meeting, has organized six symposia, and has served on several committees. Bravman's most recent talk at an MRS Meeting was in Fall 1994, in the symposium on Mechanical Properties of Thin Films V, a symposia series he helped initiate in 1988. He is also a member of the MRS Bulletin's Technical Editorial Board.



## New Materials Development    New Characterization Methods    New Process Technology



April 17-21, 1995  
San Francisco Marriott  
San Francisco, CA

### TECHNICAL PROGRAM

- A: Amorphous Silicon Technology - 1995
- B: Defect and Impurity Engineered Semiconductors and Devices
- C: Strained Layer Epitaxy - Materials, Processing, and Device Applications
- D: Materials - Fabrication and Patterning at the Nanoscale
- E: Visible Light-Emitting Materials and Devices
- F: Low-Dielectric Constant Materials - Synthesis and Applications in Microelectronics
- G: Structure and Properties of Multilayered Thin Films
- H: Fullerenes, Fullerene-Polymer Composites, Carbon Nanotubes and Their Applications
- I: Mechanical Behavior of Diamond and Other Forms of Carbon
- J: Hard Coatings for Plastic Substrates - Materials, Processes, and Properties
- K: High-Temperature Superconductors - Material and Fabrication Issues for Applications
- L: Magnetic Ultrathin Films, Multilayers, and Surfaces
- M: Electromechanical Phenomena in Complex Fluids
- N: Polymer/Inorganic Interfaces
- O: Ultraclean Semiconductor Processing Technology and Surface Chemical Cleaning and Passivation
- P: Rapid Thermal and Integrated Processing IV
- Q: Film Synthesis and Growth Using Energetic Beams
- R: Modeling and Simulation of Thin-Film Processing
- S: Electronic Packaging Materials Science VIII
- T: Materials Reliability in Microelectronics V
- U: Thin Films for Integrated Optics Applications
- V: Flat Panel Display Materials
- W: Materials for Electrochemical Energy Storage and Conversion - Batteries, Capacitors, and Fuel Cells
- X: Frontiers of Materials Research
- Y: Materials for Environmental Protection - The Control of Air Quality
- Z: Polymers in Medicine and Pharmacy
- AA: Materials in Sports and Recreational Activities

### SHORT COURSE PROGRAM

The Materials Research Society is offering its outstanding Short Course and Tutorial Program at the 1995 Spring Meeting. Up-to-date courses on the latest advances in the materials sciences and engineering complement the Spring Meeting symposium topics. Designed with something for everyone in research, development or processing of materials, the courses include overview presentations, in-depth instruction in specialty and emerging areas, and practical discussions for problem solving, all taught by instructors who are experts in their fields. Class sizes are limited. Early preregistration is encouraged.

### EXHIBIT

An MRS exhibit at the 1995 Spring Meeting will be located convenient to the technical session rooms. Features include the latest analytical and processing equipment, and publications, which closely parallel the nature of the technical symposia. For information, contact Mary E. Kaufold, Manager, Advertising and Exhibits, Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237-6006; Telephone (412) 367-3036, Fax (412) 367-4373.

### PROCEEDINGS

Many symposia from this meeting will publish proceedings. MRS members and meeting attendees may purchase copies of these proceedings at special prepublication prices and receive priority shipment upon publication. Prices will be higher following the meeting. To take advantage of these special prices, order your proceedings while registering for the meeting. For information on nonmember proceedings prices and ordering procedures, contact the MRS Publications Department.

### SYMPOSIUM AIDE OPPORTUNITIES

Graduate students who plan to attend the 1995 Spring Meeting in San Francisco and are willing to assist in the symposium presentations by operating audio-visual equipment are encouraged to apply for a Symposium Aide position. MRS will pay the 1995 Spring Meeting student registration fee (which includes complimentary student membership from July 1, 1995, through June 30, 1996) and a small stipend toward expenses, for symposium aides who work a minimum of four full half-day sessions. To request an application form and/or information, please contact Jane Stokes at MRS Headquarters, (412) 367-3004, X-302, Fax (412) 367-4373.

### JOB PLACEMENT BULLETIN BOARD

A Job Placement bulletin board for MRS meeting and short course attendees will be open Tuesday through Thursday during the 1995 Spring Meeting adjacent to the Exhibit.

For general meeting information or to request a Call for Papers booklet, a detailed 1995 Spring Meeting program, or information on short courses, publications, exhibit, job placement, or symposium aides, contact:



### MATERIALS RESEARCH SOCIETY

9800 McKnight Road  
Pittsburgh, PA 15237-6006  
Telephone (412) 367-3004  
Fax (412) 367-4373

The MRS 1995 Spring Meeting will serve as a key forum for discussion of interdisciplinary leading-edge materials research from around the world. Various meeting formats - oral, poster, round-table, forum and workshop sessions - are offered to maximize participation.