# Graduate Student Finalists Compete at 1993 MRS Fall Meeting

At the 1993 MRS Fall Meeting in Boston, 30 finalists will compete for the MRS Graduate Student Awards, to be presented on Wednesday evening, December 1, during ceremonies also honoring the 1993 Von Hippel, MRS Medalist, and Turnbull Lectureship recipients.

Graduate Student Award Finalists, all authors or co-authors of papers to be presented at the Fall Meeting, were selected on the basis of the quality and thoroughness of their research, the originality and independence of their contributions, and their promise for future achievement in materials research. During special sessions beginning at 12 noon on Monday, November 29, the finalists will give brief talks explaining their research to a panel of judges who will select the award recipients. Among the judges will be organizers from the symposia in which the finalists are participating, members of the MRS Awards Committee, and other MRS representatives. MRS Fall Meeting participants are also invited to attend.

The following list identifies the finalists, their places of study, the titles of their papers, and the symposium in which each is participating.

### Graduate Student Award Finalists—1993 MRS Fall Meeting

Pushkar P. Apte, Stanford University, "Thermally Driven In Situ Removal of Native Oxide Using Anhydrous Hydrogen Fluoride (Symposium Ca) Valarie I. Benezra, Naval Research Laboratory, "Selective Attachment of Synthetic DNA to Sam-Functionalized Surfaces" (Symposium S) Thomas Boland, University of Washington, "Concerns and Complications in STM Imaging of Adsorbed Proteins and Biomoleucles on Gold Surfaces" (Symposium U) Y. Michael Cheng, Lehigh University, "Oriented Carbon Pair Defects Stabilized by Hydrogen in As-Grown GaAs Epitaxial Layers" (Symposium L) Nigel Clarke, University of Sheffield, "Kinetics of Concentration Fluctuations and Spinodal Decomposition in Star/ Star and Star/Linear Polymer Blends" (Symposium O)

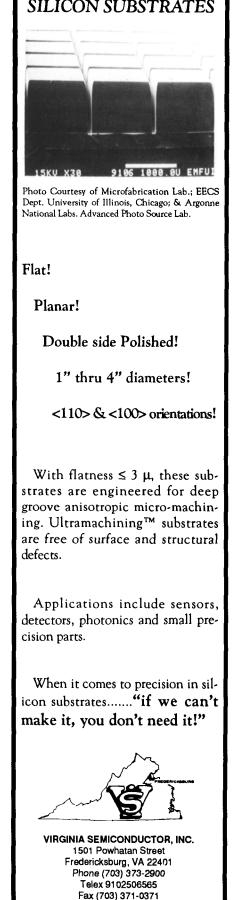
J.F. Dorsten, University of Illinois-Urbana, "Changes in Near-Surface Electronic Structure of Organic Thiol-Passivated GaAs (100) Studied by Raman Spectroscopy" (Symposium Ca) H. Edelman, University of Wisconsin, "The Effect of Local Variations in Microstructure on the Critical Current of (Bi,Pb)<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> Tapes (Symposium H)

Ahmed R. El-Ghannam, University of Pennsylvania, "Bioactive Glass Template for the Synthesis of Bone-Like Tissue *In Vitro*" (Symposium T)

Steven G. Haupt, University of Texas-Austin, "Molecule/Superconductor Structures and Devices" (Symposium H) Richard M. Jacubinas, University of California-Los Angeles, "Synthesis of

High-Temperature Silicides Via Rapid Solid-State Metathesis" (Symposium F) Peter Kofinas, Massachusetts Institute of Technology, "Shear-Induced Morphology of Semicrystalline Diblock and Triblock Copolymers" (Symposium E) Michael P. Mallamaci, University of Minnesota, "In Situ TEM Crystallization of Anorthite Glass Films on α-Al<sub>2</sub>O<sub>3</sub>" (Symposium E) Stuart A. Maloy, Los Alamos National Laboratory, "The Temperature and Strain Rate Dependence of the Flow Stress in MoSi<sub>2</sub> Single Crystals" (Symposium F) Sining Mao, University of Maryland, "High-T<sub>c</sub> Superconducting *p*-*n* Junctions" Symposium H) Amy J. Moll, University of California-Berkeley, Lawrence Berkeley Laboratory, "The Effects of Amorphous Layer Regrowth on Acceptor Activation in III-V Semiconductors" (Symposium A) Jerry F. Moore Jr., SUNY-Stony Brook, "Deposition of Dielectric Thin Films from Condensed Layers of Reactants Excited by Ultraviolet and Soft X-Ray Radiation" (Śymposium Y) D.A. Muller, Cornell University, "Electronic Structure and Bonding at

Interfaces between CVD Diamond and Silicon (Symposium U) Christopher M. Rouleau, University of Florida, "Real-Time In Situ Monitoring of Defect Evolution at Widegap II-VI/GaAs Heterointerfaces During Epitaxial Growth (Symposium K/M) Frank Stepniak, University of Minnesota, "Surface Etching of GaAs (100) and (110) with Chlorine and Bromine" (Symposium W)



Circle No. 37 on Reader Service Card. Please visit Booth No. 905 at the MRS Equipment Exhibit/Table Top Display in Boston, Nov. 30–Dec. 2, 1993.

#### **MRS BULLETIN/NOVEMBER 1993**

John P. Sullivan, University of Pennsylvania "CoSi<sub>2</sub>/Si(111) Interface Structure and its Influence on the Schottky Barrier" (Symposium D) Britt A. Turkot, University of Illinois-Urbana, "Ion Damage Studies in GaAs/AlGaAs/GaAs Heterostructures" (Symposium A) Glenn T. Visscher, Pennsylvania State University, "Poly(phenylcarbyne): A Polymer Precursor to Diamond-Like Carbon" (Symposium Q) Ravi Viswanathan, University of California-Santa Barbara, "Visualizing the Hexatic to Crystalline Transition in L-B Films with AFM (Symposium U) H. Weidner, University of Central Florida, "Energy Transfer Between Two Sites in Nd<sup>3+</sup>:KLiYF<sub>5</sub>" (Symposium R) Keith Whittingham, Cornell University, "Selective Area OMVPE Growth of GaInP on Patterned GaAs Substrates Using Semimetallic Amorphous Carbon Mask" (Symposium M) Joyce Y. Wong, Massachusetts Institute of

Technology, "Cell Interactions with

Fibronectin-Coated Electrically Conducting Polypyrrole Thin Films" (Symposium T) Hang Xu, Harvard University, "C<sub>60</sub>-Induced Reconstruction on Ge(111) Surface" (Symposium G) Taner Yildirim, University of Pennsylvania, "Phase Diagram of Na<sub>x</sub>C<sub>60</sub> (0 < x < 3)" (Symposium G) Chao-Yang Zhang, Massachusetts Institute of Technology, "Gravitational Compression of a Highly Swollen Lyotropic Liquid Crystal" (Symposium O) Jun Fei Zheng, University of California-

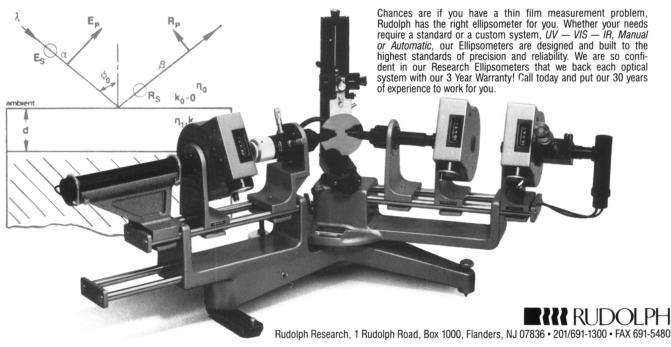
Berkeley, "Atomic Scale Interface Structure of  $In_{0.2}Ga_{0.8}As/GaAs$  Strained Layers Studied by Cross-Sectional Scanning Tunneling Microscopy" (Symposium Cb)



January 4, 1994 is the Deadline for Submitting Graduate Student Award Applications for the 1994 MRS Spring Meeting

For application forms and information, contact: Anne Wagner Materials Research Society 9800 McKnight Road Pittsburgh, PA 15237-6006 Phone: (412) 367-3003 Fax: (412) 367-4373

## FROM 1Å TO 60,000Å FILM MEASUREMENT SOLUTIONS BEGIN WITH RUDOLPH



Circle No. 39 on Reader Service Card. Please visit Booth No. 502 at the MRS Equipment Exhibit/Table Top Display in Boston, Nov. 30–Dec. 2, 1993.

## **MRS EXHIBIT**

## Boston Marriott Hotel Tuesday-Thursday, November 30 – December 2, 1993

As part of the 1993 Fall Meeting, a major exhibit will be held to display analytical and processing equipment closely paralleling the nature of the technical symposia. The exhibit will be in the Boston Marriott Hotel and a table-top display on the fourth floor of the Westin Hotel. The technical program has been arranged to allow meeting participants ample opportunity to visit the exhibit.

### **Exhibit Hours**

Tuesday	noon - 7:00 p.m.
	5:00 p.m 7:00 p.m.
	9:30 a.m 5:00 p.m.
	9:30 a.m 2:00 p.m.

Coffee will be available during morning and afternoon breaks in the Exhibit area, Tuesday afternoon through Thursday morning.

## **1993 Fall Meeting Exhibitors**

Academic Press, Inc. ACS/Office of Industry Relations Advanced Control Systems Corp. AET Thermal Aixtron Inc. AJA International Alcatel Vacuum Products Inc. American Chemical Society American Institute of Physics Anatech, Ltd. APD Cryogenics Inc. Applied Science & Technology, Inc. Applied Surface Technologies Atlantic Vacuum Inc. Bal-Tec Products, Inc. Balzers Biosym Technologies, Inc. Blake Industries, Inc. Butterworth-Heinemann Cambridge University Press Cameca Instruments, Inc. Ceramaseal Chapman & Hall CI Systems Inc. Commonwealth Scientific Corp. Conductus **CRYO** Industries of America Cryomech, Inc. Cymer Laser Technologies Danfysik/GMW Denton Vacuum, Inc. Digital Instruments, Inc. The Electrofuel Manufacturing Company Elsevier Science Publishing Company, Inc **Emcore** Corporation Enraf-Nonius Evans East, Inc. E. A. Fischione Instruments.Inc. **Fisons Instruments** Gatan Inc. High Voltage Engineering, Europa B.V.

Hitachi Scientific Instruments Huntington Mechanical Laboratories IBM Analytical Services Inel, Inc. Innovative Technology, Inc. Institute of Materials Instruments SA, Riber and J-Y Optical Div. Intevac MBE Ion Tech, Inc. IOP Publishing Ltd. Institute for Scientific Information Janis Research Co., Inc. JCPDS-ICDD JEOL U.S.A., Inc. Keithley Instruments Kimball Physics, Inc. Kluwer Academic Publishers Kratos Analytical Inc. Lake Shore Cryotronics, Inc. Lambda Physik, Inc. Kurt J. Lesker Company Leybold Inficon Inc. Leybold Vacuum Products Inc. Luxtron Corporation McAllister Technical Services MDC Vacuum Products Corp. The Mellen Company Inc. Microcal Software, Inc. MKS Instruments Inc. Molecular Simulations Inc. MR Semicon, Inc. National Electrostatics Corporation National Technical Information Service/Department of Commerce Neocera, Inc. Nor-Cal Products, Inc. North Eastern Analytical Corp. **Omicron Associates** Oxford Applied Research Oxford Instruments, Inc. **Oxford University Press** Park Scientific Instruments

Peabody Scientific Instruments Pergamon Press, Inc. Perkin-Elmer Corporation Philips Electronic Instruments Co. Plasma Sciences, Inc. Plenum Publishing Corporation Polytec PI, Inc. Premier American Technologies, Inc. Princeton Gamma-Tech, Inc. **Princeton Instruments Princeton Research Instruments** Pure Tech Inc. Quantum Design, Inc. **Rees Instruments** Research and PVD Materials Corporation Rigaku/USA, Inc. Rudolph Research Scintag Inc. Semiconductor Processing Co. Siemens Industrial Automation, Inc SOPRA Inc. South Bay Technology, Inc. Spire Corporation Springer-Verlag NY, Inc. SSC, Inc. Structure Probe Inc./ SPI Supplies Superior Vacuum Technologies Sycon Instruments Inc. **Tencor Instruments TFI Telemark** Thermionics Laboratory, Inc. **TopoMetrix** Corporation VAT, Inc. VCH Publishers, Inc. Virginia Semiconductor, Inc. Voltaix, Inc. John Wiley & Sons Ltd. J.A. Woollam Company, Inc. World Scientific Publishing Carl Zeiss, Inc. **Zygo** Corporation

Companies interested in exhibiting may contact: Bob Finnegan, MRS Exhibit Manager American Institute of Physics 335 East 45th Street, New York, NY 10017 Telephone (212) 661-9404, Fax (212) 661-2036

## Forthcoming from MRS at special pre-meeting prices ..

### MIRIS MATERIALS RESEARCH SOCIETY MATERIALS SYMPOSIUM PROCEEDINGS

Place your order today for proceedings of the 1993 MRS Fall Meeting in Boston and SAVE 12-26%. SPECIAL PRE-MEETING PRICES EFFECTIVE UNTIL DECEMBER 17, 1993. (After that, pay the higher price on the right.)

## A: Materials Synthesis and Processing Using Ion Beams

Editors: R.J. Culbertson, K.S. Jones, O.W. Holland, K. Maex ISBN: 1-55899-215-4 Code: 316-B \$52 \$70 MRS Members \$70 \$80 U.S. List \$75 \$85 Foreign

### **B:** Mechanisms of Thin Film Evolution

Editors: S.M. Yalisove, C.V. Thompson, D.J. Eaglesham ISBN: 1-55899-216-2 Code: 317-B \$48 \$63 \$73 U.S. List \$68 \$78 Foreign

## Ca: Interface Control of Electrical, Chemical, and Mechanical Properties

Editors: S.P. Murarka, T. Ohmi, K. Rose, T. Seidel ISBN: 1-55899-217-0 Code: 318-B \$52 \$70 MRS Members \$70 \$80 U.S. List \$75 \$85 Foreign

### Cb: Defect-Interface Interactions

Editors: E.P. Kvam, A.H. King, M.J. Mills, T.D. Sands, V. Vitek ISBN: 1-55899-218-9 Code: 319-B \$47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

## D: Silicides, Germanides, and Their Interfaces

Editors: R.W. Fathauer, L. Schowalter, S. Mantl, K.N. Tu ISBN: 1-55899-219-7 Code: 320-B \$47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

## E: Crystallization and Related Phenomena in Amorphous Materials - Ceramics, Metals,

Polymers, and SemiconductorsEditors: M. Libera, T.E. Haynes, P. Cebe,J. DickinsonISBN: 1-55899-220-0Code: 321-B\$50\$68MRS Members\$68\$78U.S. List\$73\$83Foreign

## F: High-Temperature Silicides and Refractory Alloys

Editors: B.P. Bewlay, J.J. Petrovic, C.L. Briant, A.K. Vasudevan, H.A. Lipsitt ISBN: 1-55899-221-9 Code: 322-B \$48 \$63 MRS Members \$63 \$73 U.S. List \$68 \$78 Foreign J: Electronic Packaging Materials Science VII Editors: R. Pollak, P. Børgesen, H. Yamada, K.F. Jensen ISBN: 1-55899-222-7 Code: 323-B \$47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

### K: Diagnostic Techniques for Semiconductor Materials Processing

Editors: O.J. Glembocki, F.H. Pollak, S.W. Pang, G. Larrabee, G.M. Crean ISBN: 1-55899-223-5 Code: 324-B \$47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

#### L: Defects in Advanced Semiconductors: Physics and Applications

Editors: M.O. Manasreh, M. Lannoo, H.J. von Bardeleben, E.L. Hu, G.S. Pomrenke, D.N. Talwar ISBN: 1-55899-224-3 Code: 325-B \$47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

#### M: Growth, Processing, and Characterization of Semiconductor Heterostructures

Editors: G. Gumbs, S. Luryi, B. Weiss, G.W. Wicks ISBN: 1-55899-225-1 Code: 326-B \$49 \$64 MRS Members \$64 \$74 U.S. List \$69 \$79 Foreign

### N: Covalent Ceramics II: Non-Oxides

Editors: A.R. Barron, G.S. Fischman, M.A. Fury, A.F. Hepp ISBN: 1-55899-226-X Code: 327-B \$50 \$68 MRS Members \$68 \$78 U.S. List \$73 \$83 Foreign

### Q: Electrical, Optical, and Magnetic

Properties of Organic Solid State MaterialsEditors: A.F. Garito, A. K-Y. Jen, L.R. Dalton,C. LeeISBN: 1-55899-227-8\$50 \$68 MRS Members\$68 \$78 U.S. List\$73 \$83 Foreign

#### R: New Materials for Advanced Solid State Lasers

Editors: B.H.T. Chai, T.Y. Fan, S.A. Payne, A. Cassanho, T.H. Allik ISBN: 1-55899-228-6 Code: 329-B \$49 \$64 MRS Members \$64 \$74 U.S. List \$69 \$79 Foreign S: Biomolecular Materials By Design Editors: H. Bayley, D. Kaplan, M. Navia ISBN: 1-55899-229-4 Code: 330-B \$50 \$68 MRS Members \$68 \$78 U.S. List \$72 \$83 Foreign

### T: Biomaterials for Drug and Cell Delivery

Editors: A.G. Mikos, R. Murphy, H. Bernstein, N.A. Peppas ISBN: 1-55899-230-8 Code: 331-B \$50 \$68 MR5 Members \$68 \$78 U.S. List \$73 \$83 Foreign

### U: Determining Nanoscale Physical Properties of Materials by Microscopy and Spectroscopy

Editors: M. Sarikaya, M. Isaacson, H. K. Wickramasighe ISBN: 1-55899-231-6 Code: 332-B \$49 \$64 MRS Members \$64 \$74 U.S. List \$69 \$79 Foreign

### V: Scientific Basis for Nuclear Waste Management XVII

Editors: A. Barkatt, R. Van Konynenburg ISBN: 1-55899-232-4 Code: 333-B \$50 \$68 MRS Members \$68 \$78 U.S. List \$73 \$83 Foreign

#### W: Gas-Phase and Surface Chemistry in Electronic Materials Processing

Editors: T.J. Mountziaris, P.R. Westmoreland, F.T.J. Smith, G.R. Paz-Pujalt ISBN: 1-55899-233-2 Code: 334-B \$49 \$64 MRS Members \$64 \$74 U.S. List \$69 \$79 Foreign

#### Y: Metal-Organic Chemical Vapor Deposition of Electronic Ceramics

Editors: S.B. Desu, D.B. Beach, B.W. Wessels, S. Gokoglu ISBN: 1-55899-234-0 S47 \$61 MRS Members \$61 \$71 U.S. List \$66 \$76 Foreign

These books are scheduled for publication by spring or early summer 1994. Standard shipping & handling charges of \$3 per book will be added to each order. Contact MRS for special shipping.

### **ORDER FROM:**

Materials Research Society 9800 McKnight Road, Pittsburgh, PA 15237 Phone (412) 367-3012; FAX (412) 367-4373

## **CORPORATE AFFILIATES**

(As of August 1993)

### Materials Research Society would like to thank the following for their financial support:

Advanced Control Systems Corp. Advanced Energy Industries, Inc. Advanced Micro Devices Advanced Photovoltaic Systems, Inc. Aerospace Corporation AG Associates Air Products and Chemicals, Inc. AIXTRON GmbH AJA International Inc. Allied-Signal, Inc. ALCOA American Superconductor Corp. American Xtal Technology Amoco Chemicals Company Amoco Oil Company Amoco Technology Company AMRAY Inc. AMRAY Inc. Anatech Ltd. APD Cryogenics, Inc. APL Engineered Materials, Inc. Applied Materials ASTeX ASTeX/Gerling Laboratories, Inc. Argonne National Laboratory ast Elektronik GmbH Atomic Facency of Canada Ltd. Atomic Energy of Canada Ltd. AT&T Bell Laboratories Aurora Technologies Corp. AXIC Balzers Bandgap Technology Corp. Belicore Billion Percursors B.V. BIOSYM Technologies Inc. Biotransplant, Inc. Blake Industries, Inc. The BOC Group BP America R&D Bridgestone Corporation Brookhaven National Laboratory Camera Instruments, Inc. Cameca Instruments, Inc. Canon Inc. Charles Evans & Associates Chemat Technology, Inc. Chorus Corp. (EPI Systems) Codman & Shurtleff, Inc. Commonwealth Scientific Corporation Computer Graphic Services, Ltd. Computer Graphic Services, Ltd. Conductus Coming Inc. Cray Research, Inc. CVC Products, Inc. Cymer Laser Technologies Danek Medical, Inc. Data Trace Chemistry Publishers, Inc. David Sarnoff Research Center DCA Instruments Decorative Specialities Int'l. Denton Vacuum, Inc. DePuy. Inc. Denton Vacuum, Inc. DePuy, Inc. Digital Equipment Corporation Digital Instruments, Inc. Dow Chemical Company Dow Corning Corporation Dubbeldee Harris Diamond Corp. E.I. duPont de Nemours & Co., Inc. Eastman Kodak Company Eaton Corporation EG&G Instruments, Inc. EG&G Nuclear Instruments EG&G Ortec EG&G PARC Electric Power Research Institute (EPRI) Elettrorava S.p.A. Elsevier Science Publishing Co., Inc. EMCORE Corporation Encome Corporation Encome America Inc. EPI Division ESCOM Science Publishers B.V. Essential Research, Inc.

eV Products, division of II-VI Evans East Eveready Battery Co., Inc. Extrel FTMS, Millipore Corp. Exxon Chemical Exxon Corporate Research Exxon Research and Engineering Co. FEI Company E.A. Fischione Instruments, Inc. Fisons/VG Instruments Focal Inc. Ford Motor Company Fox Products Corporation Fuji Electric Co., Ltd. Fujitsu Ltd. Furukawa Electric Co., Ltd. GATAN Inc. Gelest Inc. Gelest Inc. General Electric Company General Electric Corp./Aircraft Engines Div. General Motors Research Goodfellow Corporation Gordon & Breach Publishers Inc. Granville-Phillips Company Granville-Phillips Company Harris Corporation Hewlett-Packard Company High Temperature Engineering Corp. High Voltage Engineering Europa B.V. Hitachi Ltd. Hitachi Research Laboratory Hitachi Scientific Instruments Hitachi Colonace Descent Division Hoechst Celanese Research Division Howmedica Hughes Research Laboratories Huntington Laboratories **IBM** Corporation IBM Corporation IGC Advanced Superconductors Inc. Institute for Scientific Information (ISI) Instron Corporation Instruments SA, Inc./Riber Division Intel Corporation Intervac MBE Equipment Division Intevac MBE Equipment Divisio Ion Tech, Inc. IOP Publishing Ltd. JCPDS-International Centre for Diffraction Data JEOL USA, Inc. Johnson Controls, Inc. Johnson & Johnson Johnson & Johnson Orthopaedics Kaneka Corporation Keithley Instruments, Inc. Kimball Physics, Inc. Keitniey Instruments, Inc. Kimball Physics, Inc. Kobe Research Laboratories, USA Komatsu Electronic Metals Co., Ltd. Kratos Analytical, Inc. Lake Shore Cryotronics, Inc. Lawrence Berkeley Laboratory Lawrence Elvermore National Laboratory Lehighton Electronics, Inc. Lockheed Missiles & Space Co., Inc. Los Alamos National Laboratory MACCOR, Inc. Matrin Marietta Energy Systems, Inc. Materials Research Corporation Matsushita Electric Industrial Co., Ltd. MDC Vacuum Products Corp. Medisorb Technologies International L.P. MEMC Electronic Materials, Inc. MEMC Stepapelogies International L.P. MEMC Electronic Materials, Inc. MER Corporation Micro-Optics Technologies, Inc. Microwave Materials Technologies, Inc. Mitsubishi Materials Corporation MKS Instruments, Inc. Monsanto Company Morton International

Motorola APRDL Motoyama Co., Ltd. MR Semicon, Inc. MVSystems, Inc. Nano Instruments, Inc. NASA Lewis Research Center National Electrostatics Corp. National Renewable Energy Laboratory (NREL) National Semiconductor NCUBE NEC Corporation NEC Research Institute, Inc. NEOCERA, Inc. Newport/Klinger Newport/Klinger Niki Kogei Co. Nippon Sanso Corporation Nippon Steel Corporation Nippon Steel Division Nissin Electric Co., Ltd. North Eastern Analytical Corp. Northern Telecom Ltd. Norton Company NSC Electronic Corp. NTT Opto-Electronics Laboratories NTT Opto-Electronics Laborator Oak Ridge National Laboratory Oki Electric Industry Co., Ltd. OPTOVAC Osram Sylvania Inc. Osteonics Corp. Oxford Instruments, Inc. Paterson Instruments PTY Ltd. Pergamon Press Ltd. Pergamon Press Ltd. Perkin-Elmer Perseptive Biosystems, Inc. Pfizer Central Research Pfizer Minerals Technologies, Inc. Philips Electronic Instruments Co. (PEI) Plasma Sciences, Inc. Plasma-Therm Industrial Products, Inc. Plenum Publishing Corporation Potomac Photonics, Inc. PPG Industries, Inc. Princeton Gamma-Tech, Inc. Pure Tech Inc. Pure tech Inc. Quad Group Quantum Design, Inc. Radiant Technologies, Inc. RMD, Inc. (Radiation Monitoring Devices, Inc.) Railway Technical Research Institute Bautheon Co. Equipment Division Railway Technical Research Institut Raytheon Co. Equipment Division Research and PVD Materials Research Center Julich Research Laboratory of Innovative Technology for the Earth (RITE) Resonetics, Inc. Rexham Industrial Rockwell International Science Center ROFIN-SINAR Laser GmbH Sandia National Laboratories Sandia National Laboratories Sanyo Electric Co., Ltd. Schering Plough Research Institute Schlumberger Cambridge Research Schlumberger Doll Research Schlumberger Well Services Science Laboratories, Inc. Scintag, Inc. Sematech Inc. SEMICAPS Inc. Semiconductor Processing Co. SES Research SES Research SFA, Inc. Shin-Etsu Handotai Co., Ltd. Siemens Analytical X-Ray Instruments, Inc. Siemens Solar Industries Sienna Technologies, Inc. Siltec Silicon Smith & Nephew Richards Solarex Corporation

Sony Co., Ltd. SOPRA Inc. South Bay Technology, Inc. Southwest Research Institute Springer-Verlag New York, Inc. Spire Corporation Staib Instruments GmbH Stanford Synchrotron Radiation Laboratory Strem Chemicals, Inc. Sumitomo Electric Industries, Ltd. Sumitomo Sitix Corporation Superior Vacuum Technology Inc. Surface/Interface Inc. Tencor Instruments Texas Instruments, Inc. Thermionics Laboratory, Inc. TN Technologies, Inc. Tokyo Instruments, Inc. Tokyo Instruments, Inc. TopoMetrix Corporation Topcon Technologies, Inc. TopoMetrix Corporation Toshiba Corporation Toshiba Corporation Toshiba Corporation Toshiba Corporation Toshiba Corporation Universal Energy Systems Corp. Universal Energy Systems (UES Inc.) USG Research Center Vacuum Barrier Corporation Vacuum Metallurgical Company Varian Associates, Inc. /Ion Implant Division VCH Publishers, Inc. Virginia Semiconductors, Inc. Virginia Semicond

For more information about the Corporate Participation Program contact: Mary E. Kaufold Materials Research Society 9800 McKnight Road Pittsburgh PA 15237 Phone (412) 367-3036 Fax (412) 367-4373

or

Kenneth E. Voss Corporate Participation Committee Engelhard Corporation 101 Wood Avenue Iselin NJ 08830-0770 Phone (908) 205-5146 Fax (908) 205-5330

## OXFORD UNIVERSITY PRESS

### MECHANISMS OF CONVENTIONAL AND HIGH TC SUPERCONDUCTIVITY

VLADIMIR Z. KRESIN, HANS MORAWITZ AND STUART A. WOLF (International Series of Monographs on Physics 84) 1993 200 pp.; 30 illus.; \$39.95

### VARIATIONAL METHODS IN MECHANICS

TOSHIO MURA AND TATSUHITO KOYA 1992 256 pp.; 73 illus.; \$39.95

## ATOMIC AND MOLECULAR BEAM METHODS

Volume 2 EDITED BY GIACINTO SCOLES 1992 552 pp.; 278 illus.; \$125.00

### Forthcoming INHOMOGENEOUS SUPERCONDUCTORS

Granular and Quantum Effects EUGEN SIMANEK January 1994 384 pp.; 23 illus.; \$75.00

## BIOMECHANICS-MATERIALS

A Practical Approach EDITED BY JULIAN F.V. VINCENT (The Practical Approach Series 105) IRL Press 1992 272 pp; 119 illus.; paper \$50.00/cloth \$70.00

## TENSORS AND MANIFOLDS

With Applications to Mechanics and Relativity ROBERT H. WASSERMAN 1992 424 pp.; 32 illus.; \$39.95

## **QUANTUM FIELD THEORY**

A Modern Introduction Michio Kaku 1993 808 pp.; 79 illus.; \$49.95

### IMAGES OF SCIENCE A History of Scientific Illustration BRIAN J. FORD 1993 216 pp.; 214 illus.; \$45.00

**IMAGES OF MATERIALS** 

EDITED BY DAVID B. WILLIAMS, ALAN R. PELTON AND RONALD GRONSKY 1992 432 pp.; 410 illus.; 78 color plates; \$75.00

### OUT OF THE CRYSTAL MAZE

Chapters from the History of Solid State Physics Edited by Lillian Hoddeson, Ernest Braun, Jürgen Teichmann and Spencer Weart 1992 728 pp.; 103 illus.; \$75.00

### THE MECHANICS OF CRYSTALS AND TEXTURED POLYCRYSTALS

WILLIAM F. HOSFORD (Oxford Engineering Science Series 32) 1993 272 pp.; 176 illus.; \$59.95

## THE RIETVELD METHOD

EDITED BY R.A. YOUNG (International Union of Crystallography Monographs on Crystallography 5) 1993 312 pp.; 87 illus.; \$67.50

## QUASICRYSTALS

A Primer C. JANOT (Monographs on the Physics and Chemistry of Materials 48) 1992 336 pp.; 206 illus.; \$65.00

### HIGH-RESOLUTION TRANSMISSION ELECTRON MICROSCOPY

and Associated Techniques EDITED BY PETER R. BUSECK, JOHN M. COWLEY AND LEROY EYRING 1989 (paper 1992) 672 pp.; 240 illus. paper \$49.95/cloth \$75.00

### Now in a new edition LECTURES ON THE ELECTRICAL PROPERTIES OF MATERIALS Fifth Edition L. SOLYMAR AND D. WALSH

L. SOLYMAR AND D. WALSH 1993 496 pp.; paper \$31.95/cloth \$68.00

### ELEMENTARY DISLOCATION THEORY

JOHANNES WEERTMAN AND JULIA R. WEERTMAN 1992 232 pp.; 116 illus.; paper \$16.95

## CHEMICAL CHANGE IN DEFORMING MATERIALS

BRIAN BAYLY (Oxford Monographs on Geology and Geophysics 21) 1993 256 pp.; 94 illus.; \$75.00

## ELECTROCHEMISTRY

Principles, Methods, and Applications CHRISTOPHER M. A. BRETT AND ANA MARIA OLIVEIRA BRETT 1993 464 pp.; 231 illus. paper \$38.00/cloth \$83.00

### SOLID STATE CHEMISTRY

Volume 2: Compounds Edited by A.K. Cheetham and Peter Day 1992 320 pp.; 207 illus.; \$79.00

### INTRODUCTION TO SCANNING TUNNELING MICROSCOPY

C. JULIAN CHEN (Oxford Series on Optical and Imaging Sciences 4) 1993 472 pp.; 248 illus.; \$65.00

## TRANSITION METAL OXIDES

An Introduction to Their Electronic Structure and Properties

P.A. Cox (International Series of Monographs on Chemistry 27) 1992 296 pp.; 105 illus.; \$75.00

## FUNDAMENTALS OF CRYSTALLOGRAPHY

EDITED BY C. GIACOVAZZO (International Union of Crystallography Texts on Crystallography 2) 1992 674 pp.; 322 illus.; 18 photos paper \$65.00/cloth \$125.00

Now in a new edition CONDUCTION IN NONCRYSTALLINE MATERIALS Second Edition SIR NEVILLE MOTT 1993 160 pp.; 75 illus.; 38.00

PLEASE STOP BY THE OUR BOOTH (#406) WHERE THESE AND OTHER FINE OXFORD BOOKS WILL BE ON DISPLAY!

To order or for more information, please write: OXFORD UNIVERSITY PRESS, 200 Madison Avenue, New York, NY 10016 TO ORDER BY PHONE, CALL TOLL-FREE 1-800-451-7556 (credit card orders only)

Circle No. 39 on Reader Service Card.