10th International Conference on Microscopy of Semiconducting Materials Celebrates Centennial Discovery of the Electron

The tenth in the series of biennial conferences on Microscopy of Semiconducting Materials will be held at Oxford University on April 7–10, 1997. The conference takes place on the centenary of the discovery of the electron and will celebrate this with a special symposium in which world experts will review the accumulated achievements in the areas of semiconductor science and technology and electron beam instrumentation and techniques.

The conference will focus on the latest developments in the study of structural and electrical properties of semiconductors by the application of transmission and scanning electron microscopy. Recent advances in the use of other microcharacterization techniques such as x-ray topography, scanning probe microscopy, and atom probe microanalysis will also be featured. The materials of interest cover the range of elemental and compound semiconductors.

The state-of-the-art in a number of subject areas will be addressed, including the characterization of as-grown semiconductors in both bulk and thin film forms, the study of lattice defect and impurity behavior, and the investigation of the effects of advanced semiconductor processing procedures. Special sessions will concentrate on recent developments in high resolution electron microscopy, scanning probe microscopy, the properties of dislocations, the characteristics of epitaxial layers, quantum wells, wires and dots, the nature of metal-semiconductor contacts and silicides, and the effects of device processing treatments.

Invited speakers provisionally include P.J. Goodhew (Liverpool University) "Strained Layer Dislocation Behavior"; D.C. Houghton (NRC, Ottawa) "Strained Layer Devices"; D.E. Jesson (Oak Ridge National Laboratory) "Semiconductor Growth Instabilities"; J.C.H. Spence (Arizona State University, Phoenix) "Dislocation Kink Behavior"; H.P. Strunk (Erlangen University) "Heteroepitaxial Self-Organization"; S.



Circle No. 11 on Reader Service Card.

Takeda (Osaka University) "HRTEM of Defects in Si and Ge"; R.T. Tung (Bell Labs, Murray Hill) "Silicides for ULSI Devices"; J. Vanhellemont (IMEC, Leuven) "TEM of Processed Si"; and P.R. Wilshaw (Oxford University) "Advances in SEM-EBIC."

Conference proceedings will be published. For further details, contact conference Co-Chair Prof. A.G. Cullis, Dept. of Electronic and Electrical Engineering, University of Sheffield, Mappin Street, Sheffield S1 3JD, UK (+44-114-282-5407; fax +44-114-272-6391; e-mail a.g.cullis@ sheffield.ac.uk). Information about abstract submission (deadline December 2, 1996) and registration can be obtained from The Administrator, The Royal Microscopical Society, 37/38 St. Clements, Oxford OX4 1AJ, UK (+44-1865-248768; fax: +44-1865-791237; e-mail: rms@vax.ox.ac.uk).

The conference is sponsored by the Royal Microscopical Society and The UK Institute of Physics, with endorsement by the Materials Research Society. \Box

CALL FOR ABSTRACTS

4th International Workshop on Measurement, Characterization, and Modeling of Ultrashallow Doping Profiles in Semiconductors

APRIL 6-9, 1997

Sheraton Imperial Hotel, Research Triangle Park, North Carolina, USA

The focus of the workshop will be on the limitations of present-day analytical techniques and progress toward more advanced capabilities for analysis of ever shallower and more abrupt doping profiles. Papers are encouraged in all relevant topical areas, in particular:

- Sputter depth profiling;
- Spreading resistance measurements;
- Electrical, photo-acoustic, and microwave characterization;
- Microscopy; and
- Process and device modeling.

Prospective authors are encouraged to submit a 200-word abstract to Michael Kump, Publications Chair, Sematech, 2706 Montopolis Drive, Austin, Texas 78741; 512-356-7032; fax 512-356-7668; e-mail mike.kump@sematech.org.

Abstract Deadline: November 1, 1996.

76

Visit Our Booth #114 at the MRS MEETING

Fundamentals of Ceramic Powder Processing and Synthesis

Terry A. Ring

Ceramic powder processing, as a field of materials processing, is undergoing rapid expansion. The present volume is intended as a complete and useful source on this subject of great current interest.

KEY FEATURES

- Emphasizes both natural and synthetic ceramic powder synthesis
- Provides information on reaction kinetics
- Presents superior, more comprehensive coverage than existing texts
- · Contains sample problems and exercises

1996, 961 pp., \$150.00/ISBN: 0-12-588930-5

Includes a Foreword Written by Pierre-Gille de Gennes! **Giant Molecules**

Here, There, and Everywhere

Alexander Yu. Grosberg and Alexei R. Khokhlov

From the Prepublication Reviews

"Giant Molecules is a beautiful small book on polymer science which is written by two of the leaders in the field who are also tremendously skilled at putting the science in both historical and scientific contexts. The book is actually a marvelous introduction to polymer physics (for people who have had some training in physical science) which is scientifically accurate but can also be read as a wonderfully articulate and amusing history of polymer science. This book must be on the shelf of all polymer scientists and will go a long way in explaining this sub-discipline to the broad public.

-P. PINCUS, University of California, Santa Barbara

January 1997, c. 300 pp., \$34.95 (tentative) ISBN: 0-12-304130-9 Includes a multi-platform CD-ROM

Order from your local bookseller

or directly from:

Academic Press, Inc.

AP) Order Fulfillment Dept. DM27098 6277 Sea Harbor Drive, Orlando, FL 32887 24-28 Oval Road, London NW1 7DX, U.K.

In the U.S. and Canada CALL TOLL FREE: 1-800-321-5068 FAX: 1-800-874-6418 E-MAIL: ap@acad.com In Europe, CALL: 0181-300-3322

Prices subject to change without notice. @1996 by Academic Press, Inc. All Rights Reserved KB/NO/SI B/PECS-10106

The Handbook of Infrared and Raman Spectra of **Inorganic Compounds** and Organic Salts

Richard A. Nyquist, Ronald O. Kagel, Curtis L. Putzig, and M. Anne Leugers

KEY FEATURES

- Indices provide a guide to both infrared and Raman specta
- Includes unique IR and Raman spectral correlation charts
- Contains indices of spectra by alphabetical order, chemical class, and chemical formula to facilitate ease of use
- Cross-referenced to allow comparisons of the IR and Raman spectra of the same compound

Four Volume Set Prepublication Price: \$850.00* *Valid through December 31, 1996. August 1996, c. 1200 pp., \$1,000/ISBN: 0-12-523444-9

Acoustic Wave Sensors

Theory, Design, & Physico-**Chemical Applications**

David S. Ballantine, Jr., Richard M. White, Stephen J. Martin, Antonio J. Ricco, Greg C. Frye, Edward T. Zellers and Hank Wohltijen

A Volume in the APPLICATIONS OF MODERN ACOUSTICS Series

Written by an interdisciplinary group of experts from both industry and academia, Acoustic Wave Sensors provides an in-depth look at the current state of acoustic wave devices and the scope of their use in chemical, biochemical, and physical measurements, as well as in engineering applications.

October 1996, 448 pp., \$85.00/ISBN: 0-12-077460-7

Understanding **Molecular Simulation** From Algorithms to Applications

Daan Frenkel and Berend Smit

Computer simulation techniques have become almost essential in the study of the macro-molecular phenomena and phase behavior on the molecular level. As these techniques become increasingly important, it is necessary to realize that they are useful tools, but are not the goals of research. With this important distinction in mind,

Understanding Molecular Simulation describes simulation techniques along with the physics behind the phenomena that these techniques simulate.

1996, 443 pp., \$65.00/ISBN: 0-12-267370-0



Confocal Scanning Optical Microscopy and Related Imaging Systems

Timothy R. Corle and Gordon S. Kino

KEY FEATURES

- Provides a comprehensive introduction to the field of scanning optical microscopy for scientists and engineers
- Explains many practical applications of scanning optical and interference microscopy in such diverse fields as bioloav and semiconductor metrology
- Considers the practical aspects of building a confocal scanning or interference microscope and explores some of the design tradeoffs made for microscopes used in various applications

August 1996, 335 pp., \$79.95/ISBN: 0-12-408750-7

Unified Constitutive Laws of Plastic Deformation

Edited by A.S. Krausz and K. Krausz

High-technology industries using plastic deformation demand soundly-based economical decisions in manufacturing design and product testing, and the unified constitutive laws of plastic deformation give researchers a guideline to use in making these decisions. This book provides extensive guidance in low cost manufacturing without the loss of product quality. This important book deals with a prime topic in materials science and engineering, and will be of great use to both researchers and graduate students.

1996, 463 pp., \$129.00/ISBN: 0-12-425970-7

