Semiconductor Astm International

Polyimides and Other High Temperature Polymers: Synthesis, Characterization and Applications, Volume 4
Oxygen in Silicon
Advances in Automation, Signal Processing, Instrumentation, and Control
Semiconductor Measurement Technology
Semiconductor Processing
NBS Special Publication
Methods of Measurement for Semiconductor Materials, Process Control, and Devices; Quarterly Report
Proceedings of the Tenth International Workshop on the Physics of Semiconductor Devices : (December 14 - 18, 1999) [New Delhi]. 2(2000)
Publications of the National Institute of Standards and Technology ... Catalog
Publications of the National Bureau of Standards
Materials for Advanced Packaging
Catalog of National Bureau of Standards Publications, 1966-1976
Compound Semiconductor
The Relationship Between Resistivity and Dopant Density for Phosphorus- and Boron-doped Silicon
Semiconductor Measurement Technology
Publications of the National Bureau of Standards ... Catalog
Catalog of National Bureau of Standards Publications, 1966-1976
Wafer Manufacturing
Physics of Semiconductor Devices
Polycrystalline Semiconductors
Publications of the National Bureau of Standards, 1986 Catalog
Semiconductor Material and Device Characterization
Semiconductor Characterization Techniques
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VLSI Electronics
Characterization in Compound Semiconductor Processing
Standards Committee Activities of the National Bureau of Standards
Semiconductor Measurement Technology
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Analytical and Diagnostic Techniques for Semiconductor Materials, Devices and Processes
Semiconductor International
Handbook of Thermoset Plastics
Semiconductor Materials
Space Simulation
Emerging Semiconductor Technology
Passivation of Metals and Semiconductors, and Properties of Thin Oxide Layers

PARKER CHAMBERS

Polyimides and Other High Temperature Polymers: Synthesis, Characterization and Applications, Volume 4 John Wiley & Sons
"Characterization in Compound Semiconductor Processing is for scientists and engineers working with compound semiconductor materials and devices who are not characterization specialists. Materials and processes typically used in R&D and in the fabrication of GaAs, GaA1As, InP and HgCdTe based devices provide examples of common analytical problems. The book discusses a variety of characterization techniques to provide insight into how each individually, or in combination, might be used in solving problems associated with these materials. The book will help in the selection and application of the appropriate analytical techniques by its coverage of all stages of materials or device processing: substrate preparation, epitaxial growth, dielectric film deposition, contact formation and dopant introduction."--P. [4] of cover.
Oxygen in Silicon ASTM International
VLSI Electronics
Advances in Automation, Signal Processing, Instrumentation, and Control Springer Science & Business Media
This Third Edition updates a landmark text with the latest findings The Third Edition of the internationally lauded Semiconductor Material and Device Characterization brings the text fully up-to-

date with the latest developments in the field and includes new pedagogical tools to assist readers. Not only does the Third Edition set forth all the latest measurement techniques, but it also examines new interpretations and new applications of existing techniques. Semiconductor Material and Device Characterization remains the sole text dedicated to characterization techniques for measuring semiconductor materials and devices. Coverage includes the full range of electrical and optical characterization methods, including the more specialized chemical and physical techniques. Readers familiar with the previous two editions will discover a thoroughly revised and updated Third Edition, including: Updated and revised figures and examples reflecting the most current data and information 260 new references offering access to the latest research and discussions in specialized topics New problems and review questions at the end of each chapter to test readers' understanding of the material In addition, readers will find fully updated and revised sections in each chapter. Plus, two new chapters have been added: Charge-Based and Probe Characterization introduces charge-based measurement and Kelvin probes. This chapter also examines probe-based measurements, including scanning capacitance, scanning Kelvin force, scanning spreading resistance, and ballistic electron emission microscopy. Reliability and Failure Analysis examines failure times and distribution functions, and discusses electromigration, hot carriers, gate oxide integrity, negative bias temperature instability, stress-induced leakage current, and electrostatic discharge. Written by an internationally recognized authority in the field, Semiconductor Material and Device Characterization remains essential reading for graduate students as well as for professionals working in the field of semiconductor devices and materials. An Instructor's Manual presenting detailed solutions to all the problems in the book is available from the Wiley editorial department.

Semiconductor Measurement Technology ASTM International

This book summarizes the most recent aspects of polycrystalline semiconductors as presented at the conference Polycrystalline Semiconductors - Grain Boundaries and Interfaces. It contains 12 review articles on selected topics written by experts in their fields and 41 complementary contributed papers. The structure, chemistry and physics of grain boundaries and other interfaces are experimentally and theoretically studied. Aspects of the technologically important polycrystalline silicon are discussed in detail. Also covered are other polycrystalline semiconductors, germanium and compound semiconductors, that are currently of interest in fundamental research and in the technology of solar cells and thin film devices. Anyone interested in polycrystalline semiconductors will be able to use this comprehensive collection to advantage. It also suggests directions for new research and development.

Semiconductor Processing The Electrochemical Society

This book is mostly based on papers presented at the Fourth International Symposium on this topic held in Savannah, Georgia. However, in addition to these papers, certain very relevant papers have also been included to broaden the scope and thus enhance the value of this book.Currently there is tremendous interest in these material because of their

NBS Special Publication John Wiley & Sons

This book presents the select proceedings of the International Conference on Automation, Signal Processing, Instrumentation and Control (i-CASIC) 2020. The book mainly focuses on emerging technologies in electrical systems, IoT-based instrumentation, advanced industrial automation, and advanced image and signal processing. It also includes studies on the analysis, design and implementation of instrumentation systems, and high-accuracy and energy-efficient controllers. The contents of this book will be useful for beginners, researchers as well as professionals interested in instrumentation and control, and other allied fields.

Methods of Measurement for Semiconductor Materials, Process Control, and Devices; Quarterly Report Springer Nature

Semiconductor Materials presents physico-chemical, electronic, electrical, elastic, mechanical, magnetic, optical, and other properties of a vast group of elemental, binary, and ternary inorganic semiconductors and their solid solutions. It also discusses the properties of organic semiconductors. Descriptions are given of the most commonly used semiconductor devices-charge-coupled devices, field-effect transistors, unijunction transistors, thyristors, Zener and avalanche diodes, and photodiodes and lasers. The current trend of transitioning from silicon technology to gallium arsenide technology in field-effect-based electronic devices is a special feature that is also covered. More than 300 figures and 100 tables highlight discussions in the text, and more than 2,000 references guide you to further sources on specific topics. Semiconductor Materials is a relatively compact book containing vast information on semiconductor material properties. Readers can compare results of the property measurements that have been reported by different authors and critically compare the data using the reference information contained in the book. Engineers who design and improve semiconductor devices, researchers in physics and chemistry, and students of materials science and electronics will find this a valuable guide.

Proceedings of the Tenth International Workshop on the Physics of Semiconductor Devices : (December 14 - 18, 1999) [New Delhi]. 2(2000) CRC Press

Significant progress has been made in advanced packaging in recent years. Several new packaging techniques have been developed and new packaging materials have been introduced. This book provides a comprehensive overview of the recent developments in this industry, particularly in the areas of microelectronics, optoelectronics, digital health, and bio-medical applications. The book discusses established techniques, as well as emerging technologies, in order to provide readers with the most up-to-date developments in advanced packaging.

Publications of the National Institute of Standards and Technology ... Catalog Springer Science & Business Media

This volume reviews the latest understanding of the behavior and roles of oxygen in silicon, which will carry the field into the ULSI era from the experimental and theoretical points of view. The fourteen chapters, written by recognized authorities representing industrial and academic institutions, cover thoroughly the oxygen related phenomena from the crystal growth to device fabrication processes, as well as indispensable diagnostic techniques for oxygen. - Comprehensive study of the behavior of oxygen in silicon - Discusses silicon crystals for VLSI and ULSI applications -

Thorough coverage from crystal growth to device fabrication - Edited by technical experts in the field - Written by recognized authorities from industrial and academic institutions - Useful to graduate students, scientists in other disciplines, and active participants in the arena of silicon-based microelectronics research - 297 original line drawings

Publications of the National Bureau of Standards Academic Press

Presenting all the major stages in wafer manufacturing, from crystals to prime wafers. This book first outlines the physics, associated metrology, process modelling and quality requirements and the goes on to discuss wafer forming and wafer surface preparation techniques. The whole is rounded off with a chapter on the research and future challenges in wafer manufacturing.

Materials for Advanced Packaging Momentum Press

Passivation of Metals and Semiconductors, and Properties of Thin Oxide Layers contains a selection of papers presented at PASSIVITY-9, the 9th International Symposium on the Passivation of Metals and Semiconductors and the Properties of Thin Oxide Layers, which was held in Paris, 27 June - 1 July, 2005. One hundred and twelve peer-reviewed manuscripts have been included. The book covers all the fundamental and applied aspects of passivity and provides a relevant and updated view of the advances and new trends in the field. It is structured in ten sections: • Growth, (Nano)structure and Composition of Passive Films • Passivity of Semiconductors • Electronic Properties of Passive Films • Passivity Issues in Biological Systems • Passivity in High-Temperature Water • Mechanical Properties of Passive Films,• Passivity Issues in Stress Corrosion Cracking and Tribocorrosion • Passivity Breakdown and Localized Corrosion • Modeling and Simulation • Surface Modifications and Inhibitors (for Improved Corrosion Resistance and/or Adhesion)

Catalog of National Bureau of Standards Publications, 1966-1976 Allied Publishers

Handbook of Thermoset Plastics, Fourth Edition provides complete coverage of the chemical processes, manufacturing techniques and design properties of each polymer, along with its applications. This new edition has been expanded to include the latest developments in the field, with new chapters on radiation curing, biological adhesives, vitrimers, and 3D printing. This detailed handbook considers the practical implications of using thermoset plastics and the relationships between processing, properties and applications, as well as analyzing the strengths and weakness of different methods and applications.The aim of the book is to help the reader to make the right decision and take the correct action on the basis of informed analysis – avoiding the pitfalls the authors' experience has uncovered. In industry, the book supports engineers, scientists, manufacturers and R&D professionals working with plastics. The information included will also be of interest to researchers and advanced students in plastics engineering, polymer chemistry, adhesives and coatings. - Offers a systematic approach, guiding the reader through chemistry, processing methods, properties and applications of thermosetting polymers - Includes thorough updates that discuss current practice and the new developments on biopolymers, nanotechnology, 3D printing, radiation curing and biological adhesives - Uses case studies to demonstrate how particular properties make different polymers suitable for different

applications - Covers end-use and safety considerations
Compound Semiconductor Elsevier
The Relationship Between Resistivity and Dopant Density for Phosphorus- and Boron-doped Silicon Elsevier
Semiconductor Measurement Technology CRC Press
Publications of the National Bureau of Standards ... Catalog
William Andrew
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