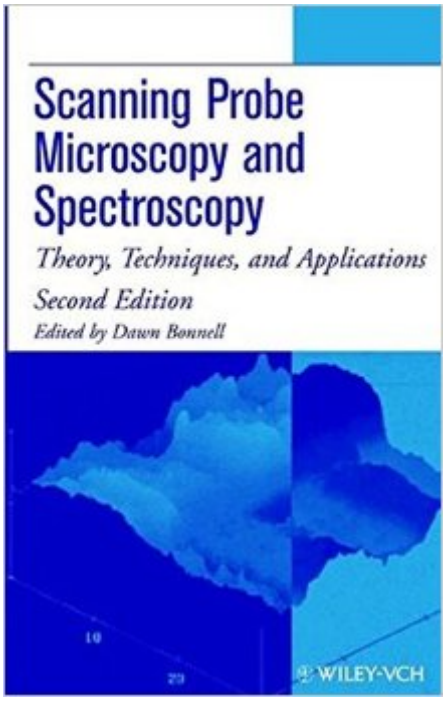
Scanning Probe Microscopy And Spectroscopy: Theory, Techniques, And Applications



Synopsis

A practical introduction to basic theory and contemporary applications across a wide range of research disciplines Over the past two decades, scanning probe microscopies and spectroscopies have gained acceptance as indispensable characterization tools for an array of disciplines. This book provides novices and experienced researchers with a highly accessible treatment of basic theory, alongside detailed examples of current applications of both scanning tunneling and force microscopies and spectroscopies. Like its popular predecessor, Scanning Probe Microscopy and Spectroscopy, Second Edition features contributions from distinguished scientists working in a wide range of specialties at university, commercial, and government research labs around the world. Chapters have been edited for clarity, conciseness, and uniformity of presentation to provide professionals with a concise working reference to scanning probe microscopic and spectroscopic principles, techniques, and practices. This Second Edition has been substantially revised and expanded to reflect important advances and new applications. In addition to numerous examples, the Second Edition features expanded coverage of electrostatic and magnetic force microscopies, near-field optical microscopies, and new applications of buried interfaces in nanomechanics, electrochemistry, and biology. Scanning Probe Microscopy and Spectroscopy, Second Edition is an indispensable working resource for surface scientists, microscopists, and spectroscopists in materials science, chemistry, engineering, biochemistry, physics, and the life sciences. It is also an unparalleled reference text for advanced undergraduates and graduate students in those fields.

Book Information

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Customer Reviews

This book mainly focus on STM. However, it doesn’t cover much on AFM. The use of AFM has become increasingly popular in recent years in research investigation in various areas, including cell biology, DNA research, material science, nanotechnology, and so on. The editor may consider include detailed discussion on AFM in next edition (if any).

Scanning Probe Microscopy and Spectroscopy: Theory, Techniques, and Applications Scanning Probe Microscopy and Spectroscopy: Methods and Applications Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A Laboratory Workbook Phenology and Reproductive Aspect of Cannabis Sativa L: Scanning Electron Microscopy of pollen grains, trichomes and pollen physiology in different medium Electron Microprobe Analysis and Scanning Electron Microscopy in Geology Scanning and Transmission Electron Microscopy: An Introduction Principles and Practice of Variable Pressure: Environmental Scanning Electron Microscopy (VP-ESEM) Introduction to Scanning Tunneling Microscopy (Monographs on the Physics and Chemistry of Materials) Scanning Electron Microscopy Flourescence Microscopy of Living Cells in Culture, Part A, Volume 29: Fluorescent Analogs, Labeling Cells, and Basic Microscopy (Methods in Cell Biology, Vol) (Vol 29) Role Microscopy In Semiconductor Failure Analysis (Royal Microscopical Society Microscopy Handbooks) Symmetry and Spectroscopy: An Introduction to Vibrational and Electronic Spectroscopy (Dover Books on Chemistry) Handbook of Raman Spectroscopy: From the Research Laboratory to the Process Line (Practical Spectroscopy) Biological Electron Microscopy: Theory, Techniques, and Troubleshooting Electrochemical Impedance Spectroscopy and its Applications Dielectric Spectroscopy of Polymeric Materials: Fundamentals and Applications (ACS Professional Reference Book) Dynamic Light Scattering: Applications of Photon Correlation Spectroscopy The Theory of Vibrational Spectroscopy and Its Application to Polymeric Materials Electron Microscopy: Principles and Techniques for Biologists by Bozzola, J.J. 2nd Revised edition (1998) A Manual of Applied Techniques for Biological Electron Microscopy