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Titolo	Microscopic Techniques for the Non-Expert // edited by Sathish-Kumar Kamaraj, Arun Thirumurugan, Shanmuga Sundar Dhanabalan, Samuel A. Hevia
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Descrizione fisica	1 online resource (251 pages)
Disciplina	578
Soggetti	Medicine—Research Biology—Research Materials—Microscopy Crystallography Nanotechnology Materials—Analysis Imaging systems Biomedical Research Microscopy Crystallography and Scattering Methods Characterization and Analytical Technique Imaging Techniques Microscòpia Manuals de laboratoris Llibres electrònics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Beginner's Guide to Different Types of Microscopes -- Principles of Light and Fluorescence Microscopy -- Confocal and Multiphoton Microscopy -- Scanning Probe Microscopy: tipping the path towards atomic visions -- Atomic Force Microscopy - An Advanced Imaging Technique: From Molecules to Morphologies -- Exploring the microcosm at atomic precision using Atomic Force Microscopy --

Scanning Electron Microscopy (SEM): Learning to generate and interpret the topographical aspects of materials -- Recent updates on methods, applications, and practical uses of scanning electron microscopy in various life sciences -- Transmission electron microscopy - A powerful and novel scientific technique with nanoscale resolution for characterization of materials -- Preparation of Biological Samples for SEM: Techniques and Procedures -- Index.

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Sommario/riassunto

This book covers fundamental microscopic techniques for Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), Atomic Force Microscopy (AFM), and other microscopic tools. It provides step-by-step instructions and explanations of the basic fundamental concepts and mechanisms and guides the reader on resolving queries related to taking and analyzing microscopy images. The latest advancements and developments in microscopic equipment are described. Theoretical background on microscopy is also provided to enhance the reader's understanding of microscopy techniques and tools. Microscopic Techniques for the Non-Expert is an ideal book for undergraduate and postgraduate students, as well as researchers with a background in environmental science, materials science, biomedicine, engineering, or bio-nanotechnology.

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