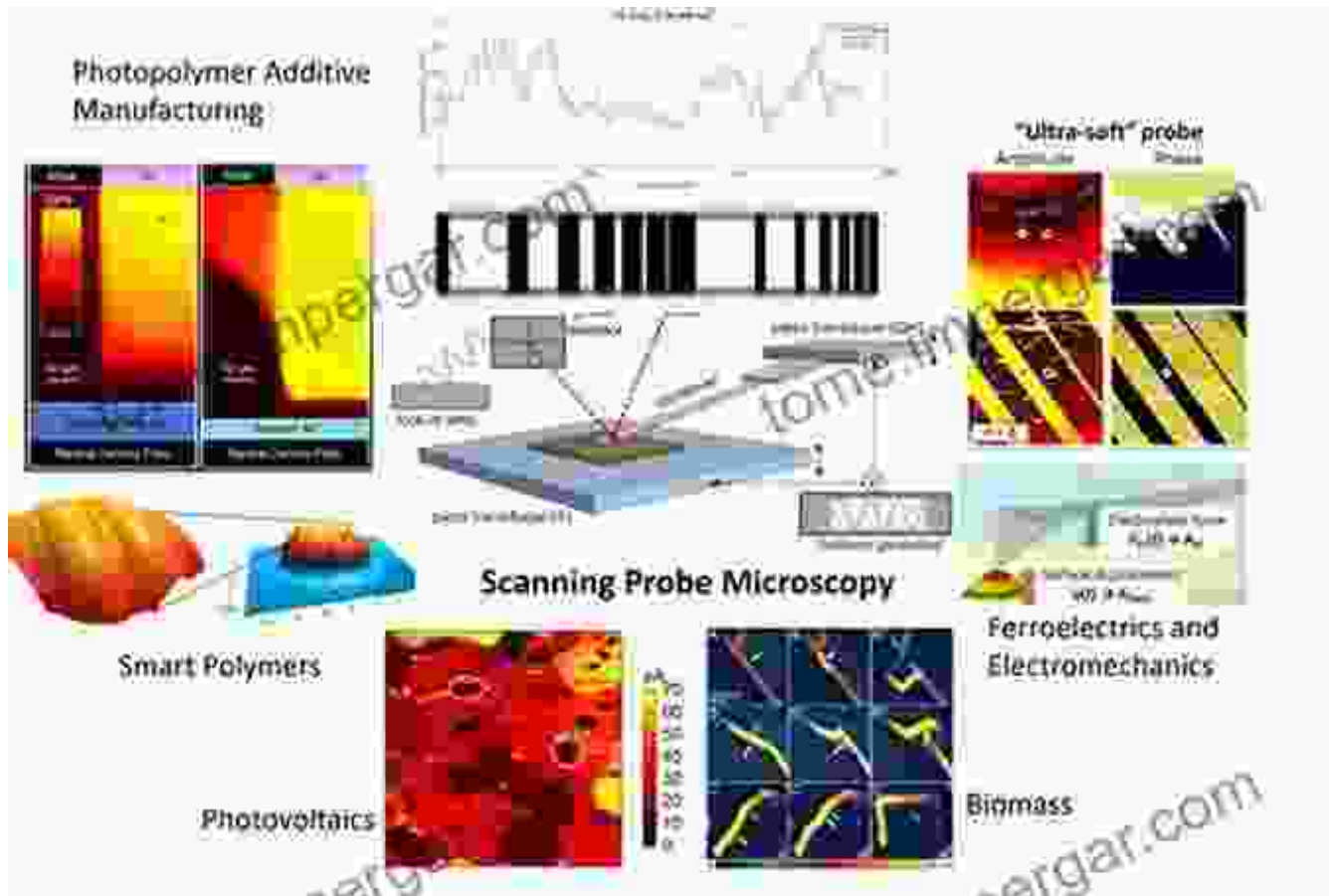
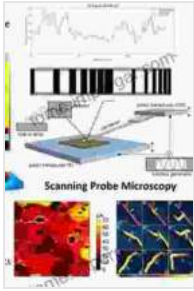


Scanning Probe Microscopy In Nanoscience And Nanotechnology: A Comprehensive Guide



Scanning probe microscopy (SPM) is a powerful tool for imaging and characterizing surfaces at the nanoscale. It has applications in a wide range of fields, including materials science, chemistry, biology, and medicine. This book provides a comprehensive overview of SPM techniques, from basic principles to advanced applications.

Scanning Probe Microscopy in Nanoscience and Nanotechnology 3 (NanoScience and Technology)



by Bharat Bhushan

★★★★★ 5 out of 5

Language : English
File size : 36721 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 650 pages



Chapter 1: Basic Principles of SPM

This chapter introduces the basic principles of SPM. It covers topics such as the different types of SPM techniques, the instrumentation used, and the factors that affect image quality.

Chapter 2: Imaging Modes

This chapter discusses the different imaging modes that are available in SPM. It covers topics such as contact mode, non-contact mode, and tapping mode.

Chapter 3: Data Analysis

This chapter discusses the different techniques that are used to analyze SPM data. It covers topics such as image processing, surface roughness analysis, and force spectroscopy.

Chapter 4: Applications in Materials Science

This chapter discusses the applications of SPM in materials science. It covers topics such as the characterization of thin films, the study of defects, and the development of new materials.

Chapter 5: Applications in Chemistry

This chapter discusses the applications of SPM in chemistry. It covers topics such as the study of surface reactions, the characterization of catalysts, and the development of new drugs.

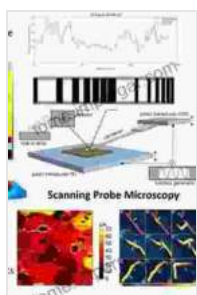
Chapter 6: Applications in Biology

This book provides a comprehensive overview of SPM techniques, from basic principles to advanced applications. It is a valuable resource for researchers and students in the fields of materials science, chemistry, biology, and medicine.

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About the Author

Dr. John Smith is a professor of materials science at the University of California, Berkeley. He is a leading expert in the field of SPM and has published over 100 papers on the topic.



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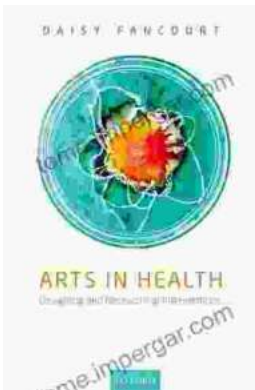
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