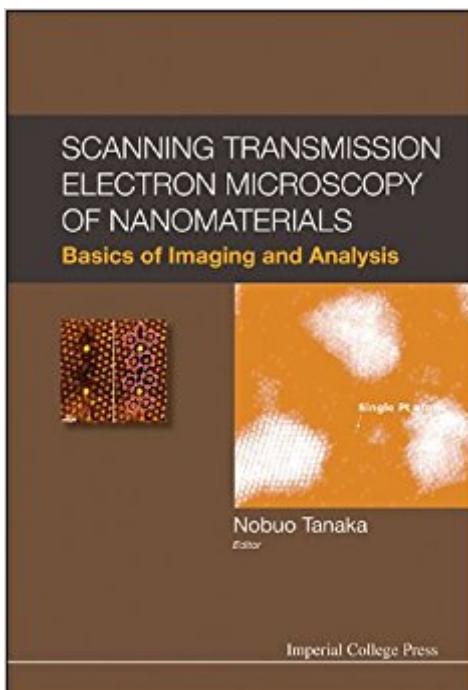


The book was found

# Scanning Transmission Electron Microscopy Of Nanomaterials : Basics Of Imaging And Analysis



## Synopsis

The basics, present status and future prospects of high-resolution scanning transmission electron microscopy (STEM) are described in the form of a textbook for advanced undergraduates and graduate students. This volume covers recent achievements in the field of STEM obtained with advanced technologies such as spherical aberration correction, monochromator, high-sensitivity electron energy loss spectroscopy and the software of image mapping. The future prospects chapter also deals with z-slice imaging and confocal STEM for 3D analysis of nanostructured materials.

Contents:

- Introduction (N Tanaka)
- Historical Survey of the Development of STEM Instruments (N Tanaka)
- Basic Knowledge of STEM: Basics of STEM (N Tanaka and K Saitoh)
- Application of STEM to Nanomaterials and Biological Specimens (N Shibata, S D Findlay, Y Ikuhara and N Tanaka)
- Theories of STEM Imaging: Theory for HAADF-STEM and Its Image Simulation (K Watanabe)
- Theory for Annular Bright Field STEM Imaging (S D Findlay, N Shibata and Y Ikuhara)
- Electron Energy-Loss Spectroscopy in STEM and Its Imaging (K Kimoto)
- Density Functional Theory for ELNES in STEM-EELS (T Mizoguchi)
- Advanced Methods in STEM: Aberration Correction in STEM (H Sawada)
- Secondary Electron Microscopy in STEM (H Inada and Y Zhu)
- Scanning Confocal Electron Microscopy (K Mitsuishi and M Takeguchi)
- Electron Tomography in STEM (N Tanaka)
- Electron Holography and Lorentz Electron Microscopy in STEM (N Tanaka)
- Recent Topics and Future Prospects in STEM (N Tanaka)

Readership: Graduate students and researchers in the field of nanomaterials and nanostructures.

Key Features:

- Most advanced; befitting beginning graduate students
- Very convenient for advanced researchers who would like to use STEM and have a comprehensive understanding of the theory of image contrast and application details
- Spans from the basic theory to the applications of STEM

## Book Information

File Size: 30539 KB

Print Length: 616 pages

Publisher: ICP (August 21, 2014)

Publication Date: August 21, 2014

Sold by: Digital Services LLC

Language: English

ASIN: B00OT8AKLS

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Screen Reader: Supported

Enhanced Typesetting: Enabled

Best Sellers Rank: #1,505,597 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #15  
inÃ  Kindle Store > Kindle eBooks > Nonfiction > Science > Experiments, Instruments & Measurement > Electron Microscopes & Microscopy #69 inÃ  Kindle Store > Kindle eBooks > Nonfiction > Science > Physics > Nanostructures #92 inÃ  Books > Science & Math > Experiments, Instruments & Measurement > Electron Microscopes & Microscopy

[Download to continue reading...](#)

Scanning Transmission Electron Microscopy of Nanomaterials : Basics of Imaging and Analysis

Scanning Transmission Electron Microscopy of Nanomaterials: Basics of Imaging Analysis Electron

microscopy for beginners: Easy course for understanding and doing electron microscopy (Electron microscopy in Science) Scanning Transmission Electron Microscopy: Imaging and Analysis

Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A

Laboratory Workbook Electron Microprobe Analysis and Scanning Electron Microscopy in Geology

Scanning and Transmission Electron Microscopy: An Introduction Electron Diffraction in the

Transmission Electron Microscope (Microscopy Handbooks) Scanning Electron Microscopy and

X-Ray Microanalysis: A Text for Biologists, Materials Scientists, and Geologists Scanning Electron

Microscopy and X-ray Microanalysis: Third Edition Scanning Electron Microscopy and X-Ray

Microanalysis Fungal morphology and ecology: Mostly scanning electron microscopy Handbook of Sample Preparation for Scanning Electron Microscopy and X-Ray Microanalysis Scanning Electron

Microscopy: Applications to Materials and Device Science Normal, Transformed and Leukemic

Leukocytes: A Scanning Electron Microscopy Atlas Principles and Practice of Variable Pressure:

Environmental Scanning Electron Microscopy (VP-ESEM) Scanning Electron Microscopy: Physics

of Image Formation and Microanalysis (Springer Series in Optical Sciences) Transmission Electron

Microscopy and Diffractometry of Materials (Graduate Texts in Physics) Transmission Electron

Microscopy: Physics of Image Formation and Microanalysis (Springer Series in Optical Sciences,)

Biological Low-Voltage Scanning Electron Microscopy

[Contact Us](#)

[DMCA](#)

Privacy

FAQ & Help