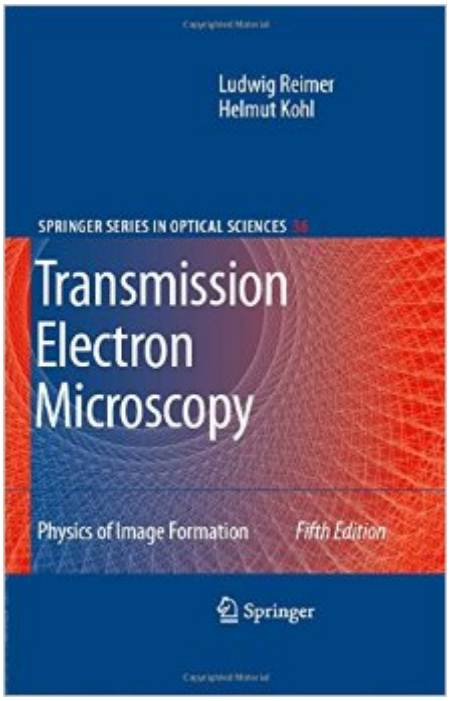
Transmission Electron Microscopy: Physics Of Image Formation (Springer Series In Optical Sciences)



Synopsis

The aim of this monograph is to outline the physics of image formation, electronâ “specimen interactions, and image interpretation in transmission el- tron microscopy. Since the last edition, transmission electron microscopy has undergone a rapid evolution. The introduction of monochromators and - proved energy ?lters has allowed electron energy-loss spectra with an energy resolution down to about 0.1 eV to be obtained, and aberration correctors are now available that push the point-to-point resolution limit down below 0.1 nm. After the untimely death of Ludwig Reimer, Dr. Koelsch from Springer- Verlag asked me if I would be willing to prepare a new edition of the book. As it had served me as a reference for more than 20 years, I agreed without hesitation. Distinct from more specialized books on speci?c topics and from books intended for classroom teaching, the Reimer book starts with the basic principles and gives a broad survey of the state-of-the-art methods, comp- mented by a list of references to allow the reader to ?nd further details in the literature. The main objective of this revised edition was therefore to include the new developments but leave the character of the book intact. The presentation of the material follows the format of the previous e- tion as outlined in the preface to that volume, which immediately follows. A few derivations have been modi?ed to correspond more closely to modern textbooks on quantum mechanics, scattering theory, or solid state physics.

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Transmission Electron Microscopy: Physics of Image Formation (Springer Series in Optical Sciences) D. B. Williams's C. Barry Carter's Transmission Electron Microscopy 2nd(Second) edition (Transmission Electron Microscopy: A Textbook for Materials Science [Hardcover])(2009) Electron Diffraction in the Transmission Electron Microscope (Microscopy Handbooks) Electromagnetic and Optical Pulse Propagation 1: Spectral Representations in Temporally Dispersive Media (Springer Series in Optical Sciences) (v. 1) Handbook of Transmission Electron Microscopy Transmission Electron Microscopy: A Textbook for Materials Science (4 Vol set) Scanning Transmission Electron Microscopy of Nanomaterials: Basics of Imaging Analysis Sample Preparation Handbook for Transmission Electron Microscopy: Techniques Scanning Transmission Electron Microscopy: Imaging and Analysis Typical Electron Microscope Investigations (Monographs in Practical Electron Microscopy in Materials Sci) Electron Correlations in Molecules and Solids (Springer Series in Solid-State Sciences) The Body Image Workbook for Teens: Activities to Help Girls Develop a Healthy Body Image in an Image-Obsessed World Atomic Physics (Oxford Master Series in Atomic, Optical and Laser Physics) Scanning Electron Microscopy and X-Ray Microanalysis: A Text for Biologists, Materials Scientists, and Geologists Scanning Electron Microscopy and X-Ray Microanalysis Practical Electron Microscopy: A Beginner's Illustrated Guide Electron Microscopy, 2nd Edition Light and Electron Microscopy Diagnostic Electron Microscopy: A Practical Guide to Interpretation and Technique Introduction to Electron Microscopy