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Considerations; 4.3 Nanomaterials Applications; 4.4 Beam Sensitive Materials; 4.5 Semiconductor Materials; 4.6 Biological Specimens; 4.7 Low-Voltage Microanalysis; 4.8 Conclusions; References; Chapter 5: Low Voltage High-Resolution Transmission Electron Microscopy; 5.1 Introduction; 5.2 So How Low is Low?; 5.3 The Effect of Chromatic Aberration and Chromatic Aberration Correction; 5.4 The Electron Monochromator; 5.5 Theoretical Tradeoffs of Low kV Imaging
5.6 Our Experience at 40 keV LV-HREM5.7 Examples of LV-HREM Imaging; 5.8 Conclusions; References; Chapter 6: Gentle STEM of Single Atoms: Low keV Imaging and Analysis at Ultimate Detection Limits; 6.1 Introduction; 6.2 Optimizing STEM Resolution and Probe Current at Low Primary Energies; 6.3 STEM Image Formation; 6.4 Gentle STEM Applications; 6.5 Discussion; 6.6 Conclusion; Acknowledgements; References; Chapter 7: Low Voltage Scanning Transmission Electron Microscopy of Oxide Interfaces; 7.1 Introduction; 7.2 Methods and Instrumentation; 7.3 Low Voltage Imaging and Spectroscopy; 7.4 Summary
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Sommario/riassunto

"Part of the Wiley-Royal Microscopical Society Series, this book discusses the rapidly developing cutting-edge field of low-voltage microscopy, a field that has only recently emerged due to the rapid developments in the electron optics design and image processing. It serves as a guide for current and new microscopists and materials scientists who are active in the field of nanotechnology, and presents applications in nanotechnology and research of surface-related phenomena, allowing researches to observe materials as never before" --