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C.B. Carter, D.B. Williams (Eds.)

## **Transmission Electron Microscopy**

Diffraction, Imaging, and Spectrometry

- ▶ An essential companion volume to *Transmission Electron Microscopy: A Textbook for Materials Science* by Williams and Carter
- ▶ Equips the reader with a clear and deep understanding of TEM, the essential tool for studying nanomaterials
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- ▶ Provides the fundamentals for students to understand and interpret the results of electron tomography and electron holography, even if they will not employ these techniques themselves

This text is a companion volume to *Transmission Electron Microscopy: A Textbook for Materials Science* by Williams and Carter. The aim is to extend the discussion of certain topics that are either rapidly changing at this time or that would benefit from more detailed discussion than space allowed in the primary text. World-renowned researchers have contributed chapters in their area of expertise, and the editors have carefully prepared these chapters to provide a uniform tone and treatment for this exciting material. The book features an unparalleled collection of color figures showcasing the quality and variety of chemical data that can be obtained from today's instruments, as well as key pitfalls to avoid. As with the previous TEM text, each chapter contains two sets of questions, one for self assessment and a second more suitable for homework assignments. Throughout the book, the style follows that of Williams & Carter even when the subject matter becomes challenging—the aim is always to make the topic understandable by first-year graduate students and others who are working in the field of Materials Science.

Topics covered include sources, in-situ experiments, electron diffraction, Digital Micrograph, waves and holography, focal-series reconstruction and direct methods, STEM and tomography, energy-filtered TEM (EFTEM) imaging, and spectrum imaging. The range and depth of material makes this companion volume essential reading for the budding microscopist and a key reference for practicing researchers using these and related techniques.

Praise for *Transmission Electron Microscopy: A Textbook for Materials Science* by Williams and Carter:

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More Praise for *Transmission Electron Microscopy: A Textbook for Materials Science* by Williams and Carter:

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"It is truly a book so thoughtfully written that ... it will provide a solid foundation for those studying material science...an outstanding book." —IEEE Electrical Insulation Magazine, Vol. 26 (4), July/August, 2010

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