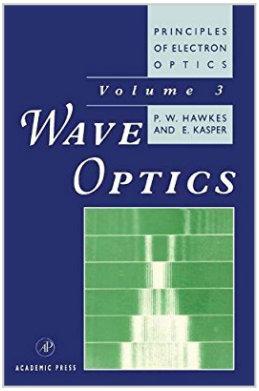

Principles of Electron Optics: Wave Optics (Principles of Electron Optics, Vol 3)

By Peter W. Hawkes, E. Kasper

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The three volumes in the PRINCIPLES OF ELECTRON OPTICS Series constitute *the first comprehensive treatment of electron optics in over forty years.* While **Volumes 1** and **2** are devoted to geometrical optics, **Volume 3** is concerned with wave optics and effects due to wave length. Subjects covered include:

Derivation of the laws of electron propagation from SchrUdinger's equation

Image formation and the notion of resolution

The interaction between specimens and electrons

Image processing

Electron holography and interference

Coherence, brightness, and the spectral function

Together, these works comprise a unique and informative treatment of the subject. **Volume 3,** like its predecessors, will provide readers with both a textbook and an invaluable reference source.

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Editorial Review

Review
The definitive text and source book in the field.
--PROCEEDINGS OF THE ROYAL MICROSCOPIAL SOCIETY
This is a monumental and timely work-well researched.
-NATURE
The large breadth of the subject, which has been organically treated, together with the monumental bibliography and the fairly complete subject index make this volume not only an exceptional reference and and guide book, but also a useful explanatory textbook and even a source of information forscience historians. It is a book for everybody interested in the productions of electron images and in their analysis (*i.e.* teachers, students, and researchers) and, of course, for libraries and laboratories.
--IL NUOVO CURENTO

From the Back Cover
The electron microscope is a viral tool in materials science and in the lige sciences. The images observed can only be interpreted with confidence in the image-forming process is throughly understood. In the third volume, Principles of Electron Optics, the wave optics that enables us to explain the relationship between umage and specimen, especially at high resolution, is presented in detail. Image formation in the electron microscop and electron holography are fully explored and a long section is devoted to methods of processing images with the aid of the computer, to extract all possible information. For completenes, a brief account of beam-specimen interactions in both crystalline and amorphous objects is included and recent ideas about coherence, not hitherto examined in connection with electron microscopy, are summarized.

The bibliography, drawn from widely scattered literature of all these topics, is exceptionally comprehensive.

Users Review

From reader reviews:

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