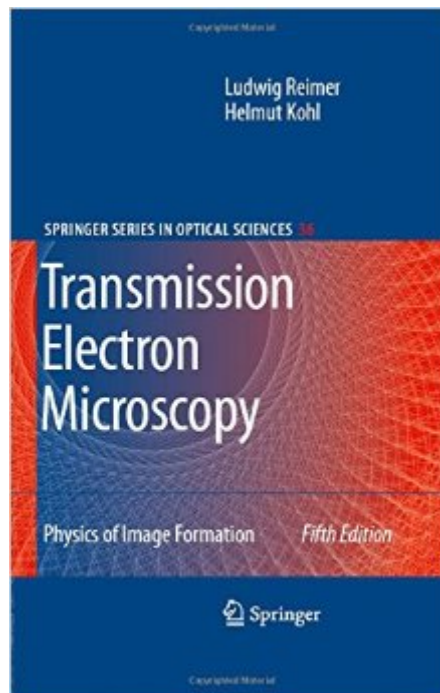


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# Transmission Electron Microscopy: Physics Of Image Formation (Springer Series In Optical Sciences)



## Synopsis

The aim of this monograph is to outline the physics of image formation, electron-specimen interactions, and image interpretation in transmission electron microscopy. Since the last edition, transmission electron microscopy has undergone a rapid evolution. The introduction of monochromators and improved energy filters 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 specific 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, complemented by a list of references to allow the reader to find 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 edition as outlined in the preface to that volume, which immediately follows. A few derivations have been modified to correspond more closely to modern textbooks on quantum mechanics, scattering theory, or solid state physics.

## Book Information

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