Record Nr. UNINA9910454476403321 Autore Spence John C. H Titolo High-resolution electron microscopy [[electronic resource] /] / John C. H. Spence New York, : Oxford University Press, 2009 Pubbl/distr/stampa 0-19-170866-6 **ISBN** 1-281-97574-5 9786611975746 0-19-156461-3 Edizione [3rd ed.] Descrizione fisica 1 online resource (425 p.) Monographs on the physics and chemistry of materials Collana Disciplina 502.825 535.3325 Soggetti Transmission electron microscopes Electron microscopy Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographies and index. Nota di contenuto Contents; 1 Preliminaries; 2 Electron Optics; 3 Wave Optics; 4 Coherence and Fourier Optics: 5 High-Resolution Images of Crystals and their Defects; 6 HREM in Biology, Organic Crystals, and Radiation Damage; 7 Image Processing and Super-Resolution Schemes; 8 STEM and Z-contrast; 9 Electron Sources and Detectors; 10 Measurement of Electron-Optical Parameters: 11 Instabilities and the Microscope Environment; 12 Experimental Methods; 13 Associated Techniques; Appendices: Index Sommario/riassunto This book describes how to see atoms using electron microscopes. This new edition includes updated sections on applications and new uses of atomic-resolution transmission electron microscopy. Several new chapters and sources of software for image interpretation and electron-optical design have also been added. - ;The discovery of the Nanotube in 1991 by electron microscopy has ushered in the era of Nanoscience. The atomic-resolution electron microscope has been a crucial tool in this effort. This book gives the basic theoretical

background needed to understand how electron microscopes allow us