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Titolo	Cellular Imaging : Electron Tomography and Related Techniques / / edited by Eric Hanssen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-68997-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XIX, 323 p. 84 illus., 59 illus. in color.)
Collana	Biological and Medical Physics, Biomedical Engineering, , 1618-7210
Disciplina	616.07572
Soggetti	Biophysics Spectrum analysis Microscopy Biomedical engineering Biological and Medical Physics, Biophysics Spectroscopy and Microscopy Biomedical Engineering and Bioengineering Spectroscopy/Spectrometry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	TEM Tomography -- STEM Tomography -- CryoTomo -- Large Volume Electron Tomography -- Block Face Tomography -- Array Tomography -- Image Alignment -- Reconstruction Algorithms -- Subtomogram Averaging -- Resolution -- Signal Optimisation -- Segmentation -- Placing Macromolecular Complexes in Context.
Sommario/riassunto	This book highlights important techniques for cellular imaging and covers the basics and applications of electron tomography and related techniques. In addition, it considers practical aspects and broadens the technological focus by incorporating techniques that are only now becoming accessible (e.g. block face imaging). The first part of the book describes the electron microscopy 3D technique available to scientists around the world, allowing them to characterize organelles, cells and tissues. The major emphasis is on new technologies like scanning transmission electron microscopy (STEM) tomography, though

the book also reviews some of the more proven technologies like electron tomography. In turn, the second part is dedicated to the reconstruction of data sets, signal improvement and interpretation.