

1. Record Nr.	UNINA9910555129703321
Titolo	Biological field emission scanning electron microscopy // edited by Roland A. Fleck, Bruno M. Humbel
Pubbl/distr/stampa	John Wiley & Sons, Inc
ISBN	1-118-66324-1 1-118-66326-8 1-118-66323-3
Disciplina	502.8/25
Soggetti	Microscopy, Electron, Scanning - methods Microscopy, Electron, Scanning - instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>"The go-to resource for microscopists on biological applications of field emission gun scanning electron microscopy (FEGSEM) The evolution of scanning electron microscopy technologies and capability over the past few years has revolutionized the biological imaging capabilities of the microscope - giving it the capability to examine surface structures of cellular membranes to reveal the organization of individual proteins across a membrane bilayer and the arrangement of cell cytoskeleton at a nm scale. Most notable are their improvements for field emission scanning electron microscopy (FEGSEM), which when combined with cryo-preparation techniques, has provided insight into a wide range of biological questions including the functionality of bacteria and viruses. This full-colour, must-have book for microscopists traces the development of the biological field emission scanning electron microscopy (FEGSEM) and highlights its current value in biological research as well as its future worth. Biological Field Emission Scanning Electron Microscopy highlights the present capability of the technique and informs the wider biological science community of its application in basic biological research. Starting with the theory and history of FEGSEM, the book offers chapters covering:</p>

operation (strengths and weakness, sample selection, handling, limitations, and preparation); Commercial developments and principals from the major FEGSEM manufacturers (Thermo Scientific, JEOL, HITACHI, ZEISS, Tescan); technical developments essential to bioFEGSEM; cryobio FEGSEM; cryo-FIB; FEGSEM digital-tomography; array tomography; public health research; mammalian cells and tissues; digital challenges (image collection, storage, and automated data analysis); and more. Examines the creation of the biological field emission gun scanning electron microscopy (FEGSEM) and discusses its benefits to the biological research community and future value Provides insight into the design and development philosophy behind current instrument manufacturers Covers sample handling, applications, and key supporting techniques Focuses on the biological applications of field emission gun scanning electron microscopy (FEGSEM), covering both plant and animal research Presented in full colour An important part of the Wiley-Royal Microscopical Series, Biological Field Emission Scanning Electron Microscopy is an ideal general resource for experienced academic and industrial users of electron microscopy--specifically, those with a need to understand the application, limitations, and strengths of FEGSEM"--Provided by publisher.

---