Fundamentals of Light Microscopy and Electronic Imaging

Provides a coherent introduction to the principles and applications of the integrated optical microscope system, covering both theoretical and practical considerations.

It expands and updates discussions of multi-spectral imaging, intensified digital cameras, signal colocalization, and uses of objectives, and offers guidance in the selection of microscopes and electronic cameras, as well as appropriate auxiliary optical systems and fluorescent tags.

The book is divided into three sections covering optical principles in diffraction and image formation, basic modes of light microscopy, and components of modern electronic imaging systems and image processing operations. Each chapter introduces relevant theory, followed by descriptions of instrument alignment and image interpretation. This revision includes new chapters on live cell imaging, measurement of protein dynamics, deconvolution microscopy, and interference microscopy.

Publication Year: 2012
Edition: 2nd
Author/Editor: Murphy, Douglas B.; Davidson, Michael W.
Publisher: Wiley
ISBN: 978-0-471-69214-0
Doody's Star Rating®: ★★★★☆ Score: 96
Platform: Ovid
Product Type: Book
Speciality: Microbiology, Neuroscience
Language: English
Pages: 552
Illustrations: 0
Included In: Wiley Doody's Premier Titles Collection 2014