Fundamentals of Light Microscopy and Electronic Imaging

Douglas B. Murphy
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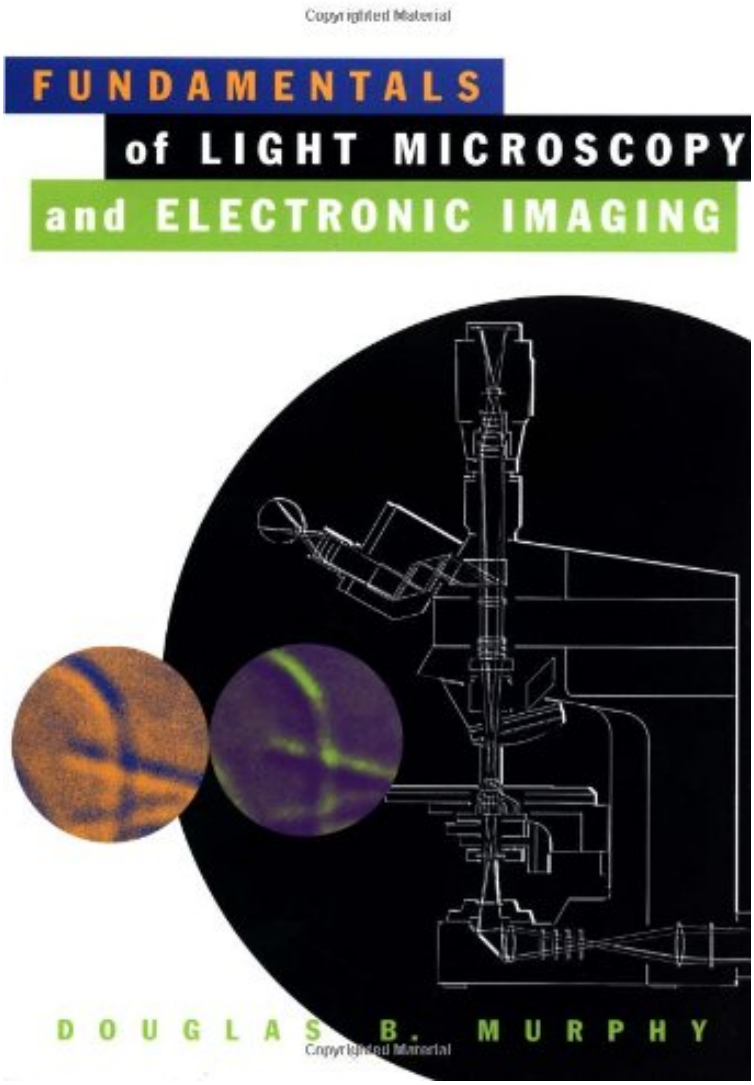

#426824 in Books 2001-12-15Original language:EnglishPDF # 1 9.98 x .87 x 7.17l, 2.00 #File Name: 047125391X360 pages | File size: 56.Mb

Douglas B. Murphy : Fundamentals of Light Microscopy and Electronic Imaging before purchasing it in order to gage whether or not it would be worth my time, and all praised Fundamentals of Light Microscopy and Electronic Imaging:

22 of 22 people found the following review helpful. Best Introductory-Level TextbookBy Michael W. DavidsonDr. Murphy constructs a solid foundation on the basic concepts of geometrical optics, light, and color, and then provides excellent introductory reviews of important topics in light microscopy. The book is very well written and complex phenomena are clearly explained without the unnecessary math that often confuses students. Illustrations are numerous and help support the text very nicely, as do the suggested laboratory exercises that accompany each chapter.

Discussions of digital cameras and image processing are timely and provide the essential concepts necessary to tackle more advanced treatises. In the opinion of the Molecular Expressions microscopy website team, this book is by far the best entry-level textbook in the field.11 of 13 people found the following review helpful. Well Written and UsefulBy A Customer"This well written text provides a clear, uncluttered overview of the principles and practice of modern light microscopy. It contains many helpful teaching exercises and diagrams. It should prove useful in a wide range of courses from the undergraduate to the postgraduate level."-- Kenneth R. Spring, Ph.D., Author4 of 6 people found the following review helpful. Keep this book by the microscopeBy A CustomerThis is the book that tells you how to actually do effective microscopy. Keep a copy by the microscope.

Over the last decade, advances in science and technology have profoundly changed the face of light microscopy. Research scientists need to learn new skills in order to use a modern research microscopeskills such as how to align microscope optics and perform image processing. Fundamentals of Light Microscopy and Electronic Imaging explores the basics of microscope design and use. The comprehensive material discusses the optical principles involved in diffraction and image formation in the light microscope, the basic modes of light microscopy, the components of modern electronic imaging systems, and the image processing operations necessary to acquire and prepare an image. Written in a practical, accessible style, Fundamentals of Light Microscopy and Electronic Imaging reviews such topics as: Illuminators, filters, and isolation of specific wavelengths Phase contrast and differential interference contrast Properties of polarized light and polarization microscopy Fluorescence and confocal laser scanning microscopy Digital CCD microscopy and image processing Each chapter includes practical demonstrations and exercises along with a discussion of the relevant material. In addition, a thorough glossary assists with complex terminology and an appendix contains lists of materials, procedures for specimen preparation, and answers to questions. An essential resource for both, experienced and novice microscopists.

"...will greatly advance your knowledge of practical light imaging techniques..." (IEEE Electrical Insulation Magazine, July/August 2007) "...To conclude, it is an outstanding book!" (Fundamentals of Light Microscopy and Electronic Imaging Microscopy and Analysis, July 2002) "Both theoretical and practical aspects of the subject are treated with economy, clarity, and authority....Murphy?s book is unusual because it provides a technically sound and simply conceived introduction to virtually every link in the chain of technologies that makes modern imaging so powerful....This book will provide individuals without background knowledge in optical physics, electronics, or image processing with many of the basic facts they need to know to understand both the power and the limitations of their images." --J. Richard McIntosh, Cell Biology Education "This well written text provides a clear, uncluttered overview of the principles and practice of modern light microscopy. It contains many helpful teaching exercises and diagrams. It should prove useful in a wide range of courses from the undergraduate to the postgraduate level." (Kenneth R. Spring, Ph.D., Author) "Douglas Murphy's book, Fundamentals of Light Microscopy and Electronic Imaging, is a welcome tool to introduce students in the biological sciences to the fundamentals of modern light microscopy and its augmentation by electronic imaging methods"..."this book provides a comprehensive introduction to the range of light-based methods available today"..."Each section has illustrative exercises and/or demonstrations, making this book readily adaptable to course work. " (Gordon W. Ellis, University of Pennsylvania) "Given the remarkable resurgence of interest in biological microscopy during the past few years and the genuine need for a text in this field, Murphy's book will be warmly welcomed by all cell biologists who use microscopes in their research." (Joseph G. Gall, American Cancer Society Professor of Developmental Genetics, Carnegie Institution)From the Publisher"This well written text provides a clear, uncluttered overview of the principles and practice of modern light microscopy. It contains many helpful teaching exercises and diagrams. It should prove useful in a wide range of courses from the undergraduate to the postgraduate level." (Kenneth R. Spring, Ph.D., Author) "Douglas Murphy's book, Fundamentals of Light Microscopy and Electronic Imaging, is a welcome tool to introduce students in the biological sciences to the fundamentals of modern light microscopy and its augmentation by electronic imaging methods"..."this book provides a comprehensive introduction to the range of light-based methods available today"..."Each section has illustrative exercises and/or demonstrations, making this book readily adaptable to course work. " (Gordon W. Ellis, University of Pennsylvania) "Given the remarkable resurgence of interest in biological microscopy during the past few years and the genuine need for a text in this field, Murphy's book will be warmly welcomed by all cell biologists who use microscopes in their research." (Joseph G. Gall, American Cancer Society Professor of Developmental Genetics, Carnegie Institution)