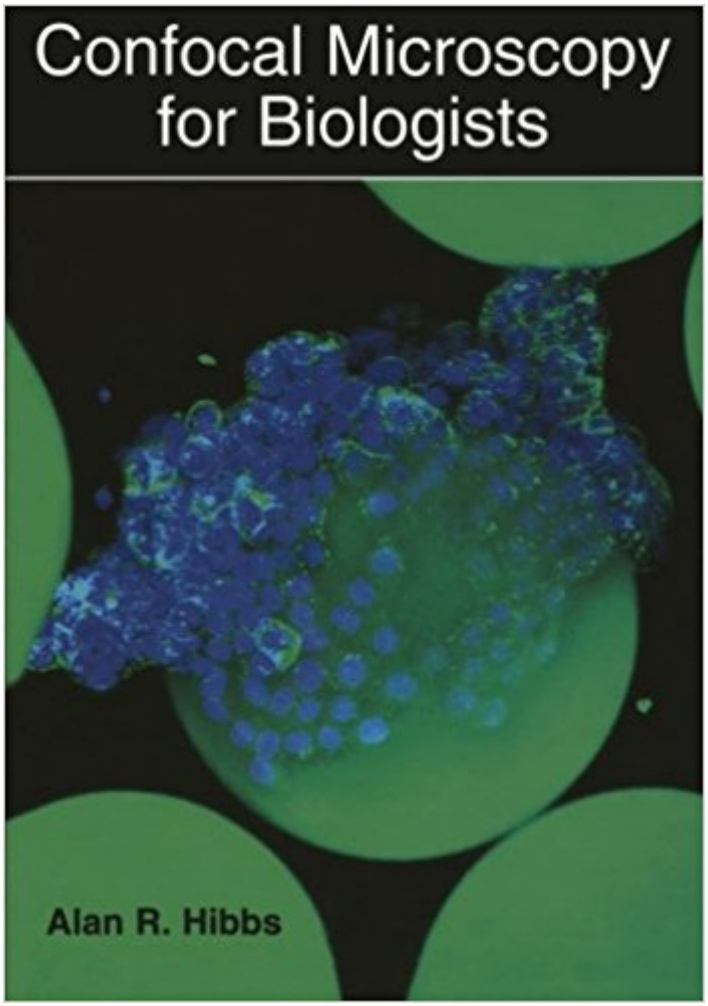
Confocal Microscopy For Biologists



Synopsis

There has been a great upsurge in interest in light microscopy in recent years due to the advent of a number of significant advances in microscopy, one of the most important of which is confocal microscopy. Confocal microscopy has now become an important research tool, with a large number of new fluorescent dyes becoming available in the past few years, for probing your pet structure or molecule within fixed or living cell or tissue sampies. Many of the people interested in using confocal microscopy to further their research do not have a background in microscopy or even cell biology and so not only do they find considerable difficulty in obtaining satisfactory results with a confocal microscope, but they may be mislead by how data is being presented. This book is intended to teach you the basic concepts ofmicroscopy, fluorescence, digital imaging and the principles of confocal microscopy so that you may take full advantage ofthe excellent confocal microscopes now available. This book is also an excellent reference source for information related to confocal microscopy for both beginners and the more advanced users. For example, do you need to know the optimal pinhole size for a 63x 1. 4 NA lens? Do you need to know the fluorescence emission spectrum of Alexa 568? Access to the wealth of practical information in this book is made easier by using both the detailed index and the extensive glossary.

Book Information

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Customer Reviews

From the reviews: "My overall impression of this book is that it offers an excellent compilation of high-standard reviews on basic concepts of microscopy and the principles of confocal microscopy.

â | all of the illustrations and graphs contained in the book are well-designed and concise. In summary, this is an outstanding book. For beginners and advanced users of confocal microscopy, from young scientists to professionals, this is a worthwhile read. The text has enormous value for biologists â | . I enjoyed reading this book â | ." (Rafael LujÃ¡n, Journal of Chemical Neuroanatomy, Vol. 30, 2005)

This book was recommended to me by the folks at the microscopy core in my university. I was hoping for an accessible technical primer on confocal microscopes with emphasis on the hardware and the underlying optical theory. Unfortunately, although there is an introduction to the hardware and a little bit of optics theory, these sections are very superficial and don’t really add to your understanding of the technology (you’ll be better off reading the the documentation on the manufacturer’s websites, especially nikonU). The aim of this book seems to be to make sure you know what buttons to push when you are in front of the microscope, but not necessarily for you to understand what is that you are doing. The book is not bad. I would trade the section on software (that seems dated) for a good introduction to confocal optics and a more complete guide on how to make sure the hardware is optimally set up (key to get good images) which is also lacking.

best service. value for this price. Got this product as a Father’s Day gift. He loves the product. For its price, it is excellent quality. A very good looking tool too. In addition, the customer service was excellent. I certainly would recommend it! These are so great! just buy one for myself,

This book provides a very "user-friendly" guide to beginners in the field of confocal microscopy. As introduction the author reviews in a compact and accesible manner basic issues of microscopy (including optics, the limits of microscopy, imaging modes and the parts of a microscope) and microscopy hardware always pointing out the advantages and drawbacks inherent to confocal microscopy. The main section of the book describes how to use a confocal microscope in detail, from collecting images to image presentation and publication, dealing along the way with topics such as interpretation of images, understanding fluorescence and fluorescent probes, specialized confocal microscopy techniques and live cell imaging. Appendices discuss further information that can be accessed through further reading or microscopy resources in the internet, as well as a succint evaluation of all commercial confocal microscopy brands currently available, highlighting their strengths and weaknesses.The book has been written with a thorough care to produce an enjoyable and didactic text, containing many hints and "how to" procedures that have been

personally very helpful to me when I started working with this technique, being completely novel to ANY class of microscopy.The wealth of information available in its pages make it a good reference book on the subject. Indeed, we have adopted it in my laboratory as the standard for our confocal applications.Highly recommended, in short.

Confocal Microscopy for Biologists (Disease Management of Fruits and Vegetables) Confocal Microscopy for Biologists Confocal Laser Scanning Microscopy (Royal Microscopical Society Microscopy Handbooks) Electron microscopy for beginners: Easy course for understanding and doing electron microscopy (Electron microscopy in Science) Basic Confocal Microscopy Techniques in Confocal Microscopy (Reliable Lab Solutions) Scanning Electron Microscopy and X-Ray Microanalysis: A Text for Biologists, Materials Scientists, and Geologists Liquid Cell Electron Microscopy (Advances in Microscopy and Microanalysis) Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A Laboratory Workbook Introduction to Light Microscopy (Royal Microscopical Society Microscopy Handbooks) Galapagos at the Crossroads: Pirates, Biologists, Tourists, and Creationists Battle for Darwin's Cradle of Evolution Experimental Design and Data Analysis for Biologists Maths from Scratch for Biologists Practical Statistics for Experimental Biologists, 2nd Edition Getting Started with R: An Introduction for Biologists Practical Computing for Biologists The New Statistics with R: An Introduction for Biologists Advanced Python for Biologists Experimental Design for Biologists, Second Edition Statistics for Terrified Biologists