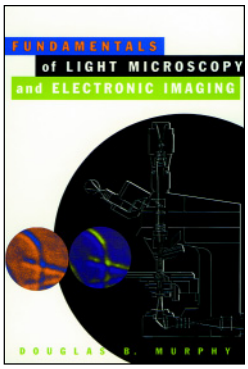
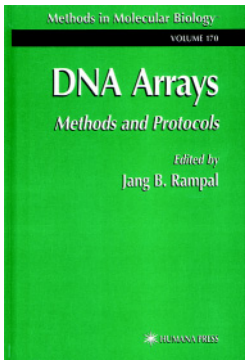
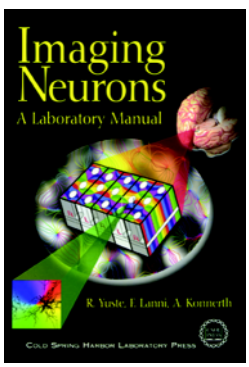
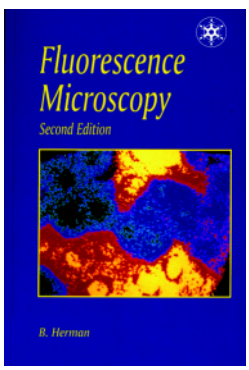








24.6 Books from Molecular Probes

To augment our selection of fluorescent probes and research products, we offer several valuable reference books for scientists who utilize fluorescence techniques for their research applications. We recommend these recent editions to anyone interested in up-to-date guides on fluorescence methods.

Fundamentals of Light Microscopy and Electronic Imaging

Modern research microscopes are advanced electronic imaging systems designed for resolving the structural and functional intricacies of complex biological specimens. Covering optical infrastructure, cameras and image processing techniques from the standpoints of fundamental principles and practical implementation, this comprehensive 384-page reference provides researchers with the technical background essential for obtaining peak performance from these technically sophisticated instruments. Written in a practical, accessible style, *Fundamentals of Light Microscopy and Electronic Imaging* (F-24840) provides comprehensive coverage of essential topics, including:

- 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.

DNA Arrays: Methods and Protocols (Methods in Molecular Biology, Volume 170)

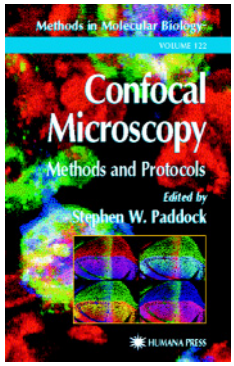
The development and application of microarray technologies has proceeded rapidly, driven by the need to analyze the copious amount of genetic information generated by the Human Genome Project. *DNA Arrays: Methods and Protocols* (D-24835), edited by J.B. Rampal, provides biomedical researchers with a forward-looking and state-of-the-art overview of these techniques. In 312 information-packed pages, this benchtop manual provides step-by-step instructions for array printing, DNA and RNA sample preparation, hybridization conditions, signal detection, probe optimization, data collection and bioinformatics. Additional topics include genotyping, sequencing by hybridization, antisense reagents, and gene expression analysis.

Imaging Neurons: A Laboratory Manual

Recently developed fluorescence imaging technologies such as two-photon excitation (TPE) microscopy are allowing researchers deeper insights into the structure and function of the brain. Laboratory protocols and technical background for implementing these techniques are described in detail in this 838-page benchtop manual by R. Yuste, F. Lanni and A. Konnerth, published at Cold Spring Harbor Laboratory Press. The many applications of Molecular Probes' products, including fluorescent Ca^{2+} indicators, potential-sensitive dyes, caged neurotransmitters, FM 1-43 and DiI, featured in this excellent book (I-24830) make it a perfect complement to our *Handbook of Fluorescent Probes and Research Products*.

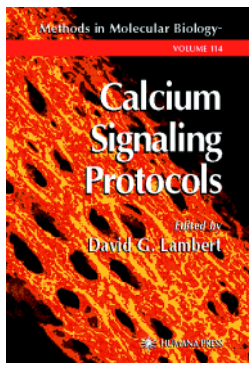
Fluorescence Microscopy, Second Edition

Fluorescence Microscopy, Second Edition (F-14942), by B. Herman, provides both the novice and the master microscopist with a concise summary of the essentials. Optical and physical fundamentals, practical implementation and applications are all covered in 170 information-packed pages. Practical troubleshooting guides, an extensive bibliography and a list of microscopy Web sites are included in appendices.



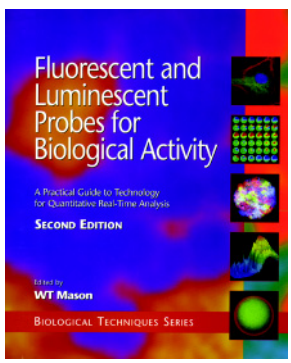
Confocal Microscopy: Methods and Protocols (Methods in Molecular Biology, Volume 122)

Confocal Microscopy (C-14946), edited by S.W. Paddock, provides researchers who want to use confocal microscopy techniques with all of the information they need to produce high-quality images; tissue-sampling methods and the staining process, as well as manipulation, presentation and publication of the realized image, are all discussed in detail. Written in a user-friendly, nontechnical style, the methods specifically cover most of the commonly used model organisms: worms, sea urchins, flies, plants, yeast, frogs and zebrafish.



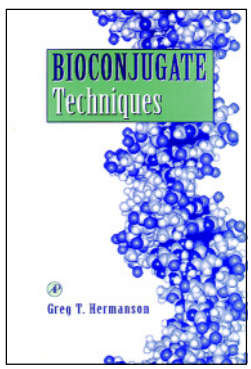
Calcium Signaling Protocols (Methods in Molecular Biology, Volume 114)

Calcium Signaling Protocols (C-14945), edited by D.G. Lambert, presents a wide range of experimental protocols for studying Ca^{2+} signaling. These optimized techniques cover basic fluorometric technology, as well as more sophisticated methods, including confocal microscopy and subcellular Ca^{2+} imaging. There are also methods — largely based on fluorescence measurement — to determine Ca^{2+} channel activity and the release of Ca^{2+} from intracellular stores.



Fluorescent and Luminescent Probes for Biological Activity, Second Edition

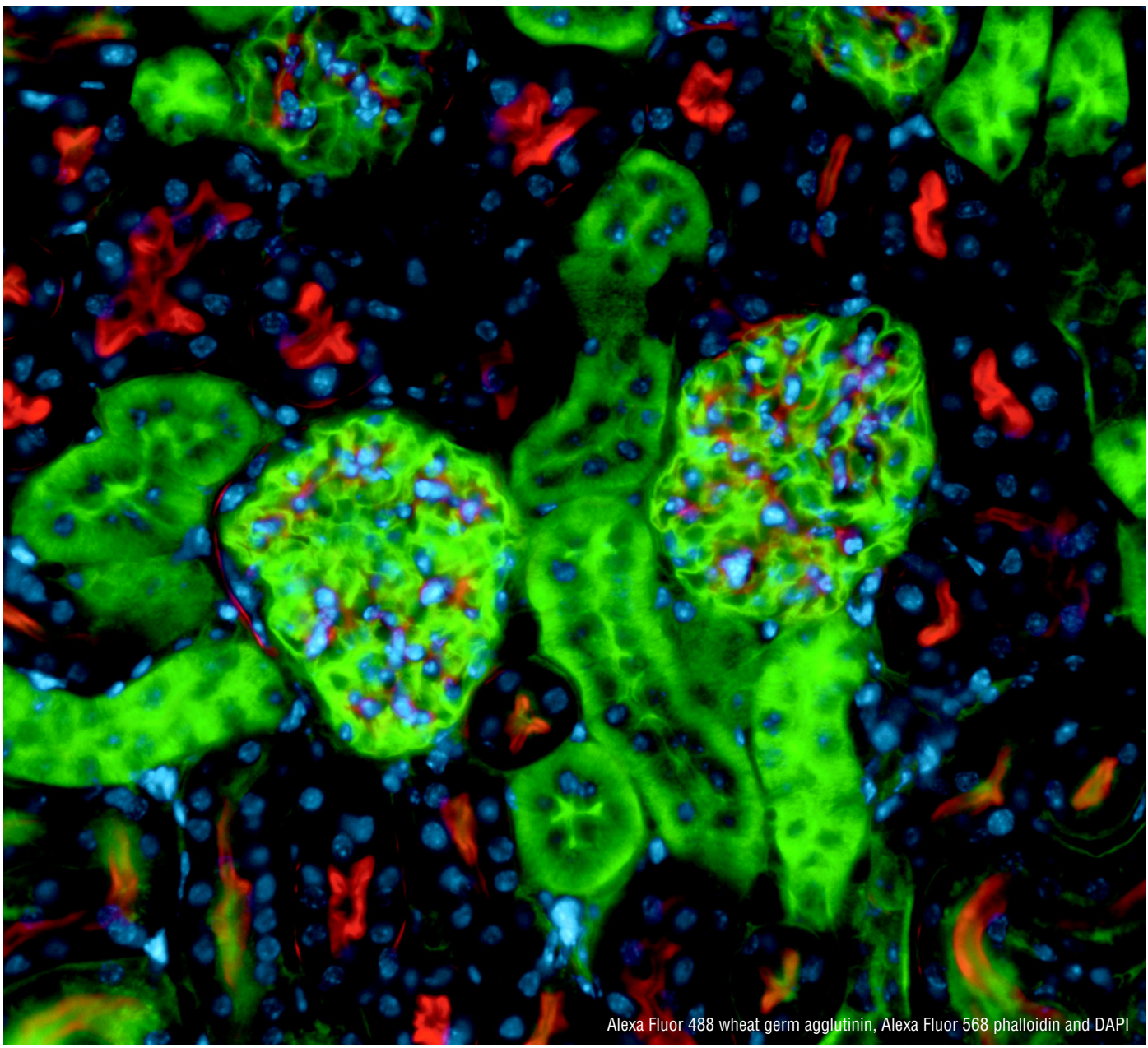
The development of optical probes for biological activity has contributed greatly to important technical and experimental advances in the biomedical sciences. Fluorescent and luminescent probes have in many instances displaced radioisotopes as standard research tools, providing significant improvements in speed and ease of detection. *Fluorescent and Luminescent Probes for Biological Activity, Second Edition* (F-14944), a comb-bound guide edited by W.T. Mason, provides a comprehensive survey of the current scope of optical probe techniques. Also presented are detailed discussions of practical biological questions, underlying principles of optical and microelectronic instrumentation and future developments of optical probe technology.



Bioconjugate Techniques

Bioconjugate Techniques (B-7884), by G.T. Hermanson, is an essential guide that captures the entire field of bioconjugate chemistry in a single volume. The chemistry, reagents and applications for generating conjugated molecules are described in detail. In addition, this well illustrated and highly referenced book provides easy-to-follow protocols for creating modified and crosslinked reagents that can be used for detecting, quantitating and analyzing biomolecules in research, diagnostic and clinical applications.

Cat #	Product Name	Unit Size
B-7884	Bioconjugate Techniques. G.T. Hermanson, Academic Press (1996); 785 pages, soft cover	each
C-14945	Calcium Signaling Protocols (Methods in Molecular Biology Volume 114). David Lambert, ed. Humana Press (1999); 376 pages, hard cover	each
C-14946	Confocal Microscopy (Methods in Molecular Biology Volume 122). Stephen Paddock, ed. Humana Press (1998); 464 pages, hard cover	each
D-24835	DNA Arrays: Methods and Protocols (Methods in Molecular Biology Volume 170). J.B. Rampal, ed. Humana Press (2001); 312 pages, hard cover	each
F-14942	Fluorescence Microscopy, Second Edition. B. Herman. Bios Scientific Publishers (1998); 170 pages, soft cover	each
F-14944	Fluorescent and Luminescent Probes for Biological Activity. A Practical Guide to Technology for Quantitative Real-Time Analysis, Second Edition. W.T. Mason, ed. Academic Press (1999); 647 pages, comb bound	each
F-24840	Fundamentals of Light Microscopy and Electronic Imaging. D.B. Murphy. John Wiley & Sons, Inc. (2001); 384 pages, hard cover	each
I-24830	Imaging Neurons: A Laboratory Manual. R. Yuste, F. Lanni and A. Konnerth. Cold Spring Harbor Laboratory Press (2000); 838 pages, comb bound	each



Alexa Fluor 488 wheat germ agglutinin, Alexa Fluor 568 phalloidin and DAPI