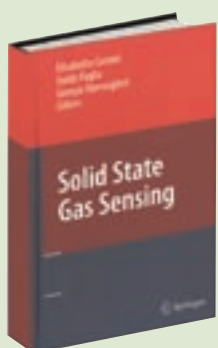


Biomedical Optical Imaging

James G. Fujimoto, Daniel L. Farkas, eds.
Oxford University Press, 2009; \$83.26 (hardcover).

Each of the 15 seemingly unrelated articles in this book present some aspect of optical imaging in biomedicine. Broadly speaking, the content falls into two categories: Imaging techniques (optical coherence tomography, spectral imaging, confocal microscopy, fluorescence) and bioscience (use of imaging techniques in oncology, brain activity research and genetics). In that respect, the book cannot be regarded as a comprehensive introduction to biomedical imaging. Rather, it presents a broad overview of this not-so-precisely-defined subject. Experienced researchers will certainly find something useful and interesting here. However, a novice could be confused by the broadness of the subject. As usual, references are numerous and up-to-date, and the index is comprehensive. There is an unusual number of typographic errors.

Review by Dejan Pantelic, Institute of Physics, Zemun, Belgrade, Serbia.



Solid-State Gas Sensing

E. Comini, G. Faglia and G. Sberveglieri, eds.
Springer, 2008; hardcover (\$129.00).

Everyone knows that smoke detectors are easily to find, and carbon monoxide detectors are now commercially available as well. However, most people probably do not know that gas sensing is becoming a special new field.

This book offers insight into the principles, applications and new trends in gas sensor technology. Developments in this area are rapidly advancing, so the timing of this book's publication is perfect. It covers sensors based on many different approaches, making it useful to a wide variety of people.

Review by Hsuing Hsu, professor emeritus, Ohio State University, Columbus, Ohio, U.S.A.



Max Planck: Annalen Papers

Dieter Hoffmann, ed.
Wiley-VCH, 2008; \$200.00 (hardcover).

This book contains the German facsimiles of Planck's 43 papers published in *Annalen der Physik* and 31 book reviews published in *Annalen* supplements. While the *Annalen* papers are historically important, they only constitute 34 percent of Planck's publications. These papers are divided into the categories of entropy and irreversibility, thermodynamic equilibria and electrical transport, statistical thermodynamics and stochastic systems, theory of radiation and electrodynamics, quantum theory and book reviews. Although contributors wrote English introductions for each section, readers must be able to read German in order to understand the papers themselves. A future edition should contain the English translations of these important papers as well as a fuller historical contextual analysis.

Review by Barry R. Masters, Fellow of OSA, SPIE and AAAS, department of biological engineering, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.

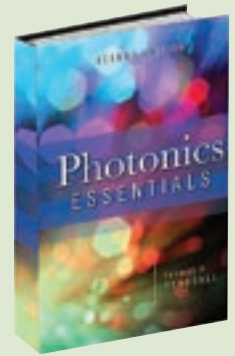
Photonics Essentials, 2nd Ed.

Thomas P. Pearsall
 SPIE Press Monograph, \$89.95 (hardcover).


Devising means for capturing the imagination of students—particularly in challenging scientific disciplines—is a major pedagogical issue. Hands-on learning offers much in this respect. This text teaches photonics from that perspective. It shows how learning hands-on measurement techniques that are applicable to photonic devices enables people to understand the field. The book has some interesting features, including facsimiles of the title page of De Broglie’s 1924 doctoral thesis as well as contemporary student laboratory notes. The latter underscore the practical nature of the approach advocated here.

In addition to its practical information, the text also includes the basic physical principles and requisite mathematical formulations that underpin the concepts being explained. One minor caveat: In pointing, in the preface, to Nobel Prizes that have been recently awarded in photonics, the author could have included the 2000 award to Zhores Alferov for the development of the double-heterostructure semiconductor laser. For a future edition, he will certainly need to mention the 2009 prize given to Charles Kao for his research on optical fibers. The work of these pioneers has provided two veritable photonics essentials.

Review by K. Alan Shore, Bangor University, School of Electronic Engineering, Wales, United Kingdom.



The opinions expressed in the book review section are those of the reviewer and do not necessarily reflect those of OPN or OSA.



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IRREGULARITY - Profilometer (microns)	±10	±1	±0.5
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