

The first comprehensive and authoritative introduction to biophotonics

Biophotonics is an exciting multidisciplinary frontier involving a fusion of biology and photonics, a light-based technology. It addresses the interaction of light with biological matter. Four major technologies—lasers, photonics, nanotechnology, and biotechnology—are integrated into biophotonics, offering opportunities for early detection of diseases and for new modalities of light-guided and light-activated therapy. In addition, biophotonics opens new directions in advancing photonics using environmentally friendly biomaterials. *Introduction to Biophotonics* provides a much-needed overview of this emerging discipline and creates a unified synthesis on this subject.

Paras Prasad's text covers fundamental principles of optics, lasers, light-matter interaction, optical spectroscopy and microscopy. It describes a large number of applications of biophotonics, identifying some key opportunities for chemists, physicists, engineers, biologists, biomedical researchers, clinicians as well as other health care personnel. The chapter on biosensors describes important tools for detecting biological and chemical threats; it will be of interest to those involved in health, safety and environmental disciplines.

Introduction to Biophotonics is a lucid and comprehensive text suitable for multidisciplinary education and training. It is a valuable reference source able to stimulate research and development in this field.

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