DESCRIPTION

Discusses the basic physical principles underlying Biomedical Photonics, spectroscopy and microscopy

This volume discusses biomedical photonics, spectroscopy and microscopy, the basic physical principles underlying the technology and its applications. The topics discussed in this volume are: Biophotonics; Fluorescence and Phosphorescence; Medical Photonics; Microscopy; Nonlinear Optics; Ophthalmic Technology; Optical Tomography; Optofluidics; Photodynamic Therapy; Image Processing; Imaging Systems; Sensors; Single Molecule Detection; Futurology in Photonics.

• Comprehensive and accessible coverage of the whole of modern photonics

• Emphasizes processes and applications that specifically exploit photon attributes of light

• Deals with the rapidly advancing area of modern optics

• Chapters are written by top scientists in their field

Written for the graduate level student in physical sciences; Industrial and academic researchers in photonics, graduate students in the area; College lecturers, educators, policymakers, consultants, Scientific and technical libraries, government laboratories, NIH.
ABOUT THE AUTHOR

DAVID L. ANDREWS leads research on fundamental molecular photonics and energy transport, optomechanical forces, and nonlinear optical phenomena. He has over 300 research papers and a dozen of books to his name including the widely adopted textbook, *Lasers in Chemistry*. The current focus of his research group is on optical vortices, novel mechanisms for optical nanomanipulation and switching, and light harvesting in nanostructured molecular systems. The group enjoys strong international links, particularly with groups in Canada, Lithuania, New Zealand, and the United States. Andrews is a Fellow of the Royal Society of Chemistry, a Fellow of the Institute of Physics, and a Fellow of SPIE, the international society for optics and photonics.

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