

Biomedical photonics handbook: volume 2: biomedical diagnostics / Tuan Vo-Dinh . 2nd. ed.

ISBN 9781420085143

Table of Contents

Biomedical Analysis, Sensing and Imaging

Biosensors for Medical Applications

Tuan Vo-Dinh, Leonardo Allain and Andrew Fales

Glucose Monitoring

Casey W. Pirnstill, Brian Cummins, Gerard L. Coté, Roger J. McNichols

Biochips and MicroArrays: Tools for the New Medicine

Tuan Vo-Dinh and G. D. Griffin

Atomic Spectroscopy for Biological and Clinical Analysis

Andrew Taylor

Flow Cytometry

Francis Mandy, Joe Trotter, Rudi Varro, Ming Yan, and Diether Recktenwald

Capillary Electrophoresis Techniques in Biomedical Analysis

S. Douglas Gilman and Michael J. Sepaniak

Surface Plasmon Resonance Imaging: Principle, Development, and Biomedical Applications

Julien Moreau, Jean-Pierre Cloarec, Paul Charette, Michel Goossens, Michael Canva, Tuan Vo-Dinh

Surface-Enhanced Raman Scattering (SERS) for Biomedical Diagnostics

Tuan Vo-Dinh and David L. Stokes

Functional Imaging with Diffusing Light

Arjun G. Yodh and David A. Boas

Molecular Contrast Optical Coherence Tomography

Oscar Carrasco-Zevallos, and Joseph Izatt

Multiscale Photoacoustic Microscopy and Macroscopy, Song Hu and Lihong V. Wang

Polarized light for Medical Diagnostics

Steven L. Jacques

X-Ray Diagnostic Techniques

Xizeng Wu, Molly. D. Wong, Abby E. Deans and Hong Liu

Optical Pumping and MRI of Hyperpolarized Spins

Xizeng Wu, Thomas Nishino and Hong Liu

Biomedical Diagnostics and Optical Biopsy

Fluorescence Spectroscopy for Biomedical Diagnostics

Tuan Vo-Dinh and Brian M. Cullum

Elastic-Scattering Spectroscopy and Diffuse Reflectance

Judith R. Mourant and Irving J. Bigio

Quantitative Diffuse Reflectance Imaging of Tumor Margins

Bing Yu, Nirmala Ramanujam

Near Infrared Fluorescence Imaging and Spectroscopy in Random Media and Tissues

E.M. Sevick-Muraka, E. Kuwana, A. Godavarty, J.P. Houston, A.B. Thompson, R.Roy

Interferometric light scattering techniques for measuring nuclear morphology and detecting dysplasia

Yizheng Zhu, Francisco E. Robles, Neil G. Terry, and Adam Wax

Ultrasonically Modulated Optical Imaging

François Ramaz, Emmanuel Bossy, Michel Gross and A. Claude Boccara

Optoacoustic Tomography

Alexander A. Oraevsky and Alexander A. Karabutov

Raman Spectroscopy: From Benchtop to Bedside Anita Mahadevan-Jansen

Fourier Transform Infrared (FTIR) Microspectroscopic Methods for Biomedical Analyses: From Single Point Detection to Two-Dimensional Imaging

Rohit Bhargava and Ira W. Levin

Photon Migration Spectroscopy Frequency-Domain Techniques

Albert E. Cerussi and Bruce J. Tromberg