

Biomedical photonics handbook: volume 1: fundamentals, devices, and techniques / ed.
by Tuan Vo-Dinh. 2nd. ed.

ISBN 9781420085129

Table of Contents

Photonics and Tissue Optics

Optical Properties of Tissues

Joel Mobley, Tuan Vo-Dinh and Valery Tuchin

Light-Tissue Interactions

Valery V. Tuchin

Theoretical Models and Algorithms in Optical Diffusion Tomography

Stephen J. Norton and Tuan Vo-Dinh

Basic Instrumentation in Photonics

Tuan Vo-Dinh

Optical Fibers and Waveguides for Medical Applications

Israel Gannot and Moshe Ben David

Fiberoptics Probe Design

Urs Utzinger

Laser and Optical Radiation Safety in Biophotonics

Robert J. Landry, T. Joshua Pfefer, and Ilko K. Ilev

Biological Imaging Spectroscopy

Gregory Bearman, David Cuccia and Richard Levenson

Lifetime-Based Imaging

Petr Herman and Joseph R. Lakowicz

Confocal Microscopy

Tony Wilson

Two-Photon Excitation Fluorescence Microscopy

Peter T.C. So, Chen Y. Dong, and Barry R. Masters

Laser Doppler Perfusion Monitoring and Imaging

T. Stromberg and K. Wardell, M. Larsson, and E.G. Salerud

Light Scatter Spectroscopy and Imaging of Cellular and Subcellular Events

Nada N. Boustany and Nitish V. Thakor

Tissue Viability Imaging

Gert E. Nilsson

Photothermal Detection and Tracking of Individual Non-fluorescent Nanosystems

Laurent Cognet & Brahim Lounis

Thermal Imaging

Jay Gore and Lisa X. Xu

Multidimensional fluorescence imaging of biological tissue

Paul French

Speckle Correlometry

Dmitry A. Zimnyakov and Valery V. Tuchin

Spectroscopic Data

Spectroscopic Data in Biological and Biomedical Analysis

Dimitra N. Stratis-Cullum, Mikella E. Farrell, Ellen Holthoff, David L. Stokes,
Brian M. Cullum, Joon Myong Song, Paul M. Kasili, Ramesh Jaganathan,
and Tuan Vo-Dinh