1. Record Nr. UNINA9910463858303321

Titolo	Coherent Raman scattering microscopy / / edited by Ji-Xin Cheng and Xiaoliang Sunney Xie
Pubbl/distr/stampa	Boca Raton, FL : , : CRC Press, an imprint of Taylor and Francis, , 2012
ISBN	0-429-19367-X 1-138-19952-4 1-4398-6766-6
Edizione	[First edition.]
Descrizione fisica	1 online resource (603 p.)
Collana	Series in Cellular and Clinical Imaging
Disciplina	543/.57
Soggetti	Raman spectroscopy Three-dimensional imaging in medicine Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Front Cover; Contents; Series Preface; Preface; Editors; Contributors; Chapter 1 - Theory of Coherent Raman Scattering; Chapter 2 - Coherent Raman Scattering under Tightly Focused Conditions; Chapter 3 - Construction of a Coherent Raman Microscope; Chapter 4 - Stimulated Raman Scattering Microscopy; Chapter 5 - Femtosecond versus Picosecond Pulses for Coherent Raman Microscopy; Chapter 6 - Miniature Coherent Raman Probes for In Vivo Biomedical Imaging; Chapter 7 - Wide-Field CARS-Microscopy Chapter 8 - Vibrational Spectromicroscopy by Coupling Coherent Raman Imaging with Spontaneous Raman Spectral AnalysisChapter 9 - Coherent Control in CARS; Chapter 10 - Fourier Transform CARS Microscopy; Chapter 11 - CRS with Alternative Beam Profiles; Chapter 12 - Vibrational Phase Microscopy; Chapter 13 - Multiplex CARS Microscopy; Chapter 14 - Interferometric Multiplex CARS; Chapter 15 - Photonic Crystal Fiber-Based Broadband CARS Microscopy; Chapter 16 - Multiplex Stimulated Raman Scattering Microscopy; Chapter 17 - Imaging Myelin Sheath Ex Vivo and In Vivo by CARS Microscopy Chapter 18 - Imaging Lipid Metabolism in Caenorhabditis elegans and Other Model OrganismsChapter 19 - Lipid-Droplet Biology and

	Obesity-Related Health Risks; Chapter 20 - White Matter Injury: Cellular-Level Myelin Damage Quantification in Live Animals; Chapter 21 - CARS Microscopy Study of Liquid Crystals; Chapter 22 - Live Cell Imaging by Multiplex CARS Microspectroscopy; Chapter 23 - Coherent Raman Scattering Imaging of Drug Delivery Systems; Chapter 24 - Applications of Stimulated Raman Scattering Microscopy Chapter 25 - Applications of Coherent Anti-Stokes Raman Spectroscopy Imaging to Cardiovascular DiseasesChapter 26 - Applications of CARS Microscopy to Tissue Engineering; Chapter 27 - Dietary Fat Absorption Visualized by CARS Microscopy; Back Cover
Sommario/riassunto	The First Book on CRS Microscopy Compared to conventional Raman microscopy, coherent Raman scattering (CRS) allows label-free imaging of living cells and tissues at video rate by enhancing the weak Raman signal through nonlinear excitation. Edited by pioneers in the field and with contributions from a distinguished team of experts, Coherent Raman Scattering Microscopy explains how CRS can be used to obtain a point-by-point chemical map of live cells and tissues.