

1. Record Nr.	UNINA9910458576903321
Titolo	Molecular imaging [[electronic resource]] : FRET microscopy and spectroscopy // edited by Ammasi Periasamy, Richard N. Day
Pubbl/distr/stampa	Oxford ; ; New York, : Published for the American Physiological Society by Oxford University Press, 2005
ISBN	1-281-03382-0 9786611033828 0-08-053687-5
Descrizione fisica	1 online resource (329 p.)
Collana	The American Physiological Society methods in physiology series
Altri autori (Persone)	PeriasamyAmmasi DayRichard N
Disciplina	570/.28
Soggetti	Fluorescence microscopy Fluorescence spectroscopy 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 and index.
Nota di contenuto	Front Cover; Molecular Imaging: FRET Microscopy and Spectroscopy; Copyright Page; Contents; Contributors; Chapter 1. Proteins and the Flow of Information in Cellular Function; Chapter 2. Basics of Fluorescence and FRET; Chapter 3. An Introduction to Filters and Mirrors for FRET; Chapter 4. FRET Imaging in the Wide-Field Microscope; Chapter 5. Confocal FRET Microscopy: Study of Clustered Distribution of Receptor-Ligand Complexes in Endocytic Membranes; Chapter 6. Multiphoton FRET Microscopy for Protein Localization in Tissue; Chapter 7. FRET Data Analysis: The Algorithm Chapter 8. Photobleaching FRET Microscopy Chapter 9. Single-Molecule FRET; Chapter 10. FRET Measurements Using Multispectral Imaging; Chapter 11. Real-Time Fluorescence Lifetime Imaging and FRET Using Fast-Gated Image Intensifiers; Chapter 12. Streak Fluorescence Lifetime Imaging Microscopy: A Novel Technology for Quantitative FRET Imaging; Chapter 13. Time-Correlated Single Photon Counting Fluorescence Lifetime Imaging- FRET Microscopy for Protein Localization; Chapter 14. Bioluminescence Resonance Energy Transfer:

Techniques and Potential

Chapter 15. Quantifying Molecular Interactions with Fluorescence Correlation Spectroscopy
Chapter 16. Mapping Molecular Interactions and Transport in Cell Membranes by Image Correlation Spectroscopy;
Index

Sommario/riassunto

The detection and measurement of the dynamic interactions of proteins within the living cell are critical to our understanding of cell physiology and pathophysiology. With FRET microscopy and spectroscopy techniques, basic and clinical scientists can make such measurements at very high spatial and temporal resolution. But sources of background information about these tools are very limited, so this book fills an important gap. It covers both the basic concepts and theory behind the various FRET microscopy and spectroscopy techniques, and the practical aspects of using the techniques and analyzing
