

1. Record Nr.	UNINA9910254623703321
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Titolo	Ultrafast Biophotonics // by P. Vasa, D. Mathur
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-39614-5
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XI, 227 p. 60 illus., 20 illus. in color.)
Collana	Biological and Medical Physics, Biomedical Engineering, , 1618-7210
Disciplina	621.36
Soggetti	Lasers Photonics Biophysics Biological physics Physical chemistry Biomedical engineering Biochemistry Optics, Lasers, Photonics, Optical Devices Biological and Medical Physics, Biophysics Physical Chemistry Biomedical Engineering and Bioengineering Biochemistry, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction and overview -- Introduction to ultrafast and intense Fields -- Multiphoton microscopy and imaging techniques, including THz imaging -- Intense fields I -- Intense fields II -- Dynamical studies -- Mimicking biological systems: light harvesting without chlorophyll -- Biological interactions and energy landscapes: theoretical frameworks -- Outlook.
Sommario/riassunto	This book presents emerging contemporary optical techniques of ultrafast science which have opened entirely new vistas for probing biological entities and processes. The spectrum reaches from time-resolved imaging and multiphoton microscopy to cancer therapy and

studies of DNA damage. The book displays interdisciplinary research at the interface of physics and biology. Emerging topics on the horizon are also discussed, like the use of squeezed light, frequency combs and terahertz imaging as the possibility of mimicking biological systems. The book is written in a manner to make it readily accessible to researchers, postgraduate biologists, chemists, engineers, and physicists and students of optics, biomedical optics, photonics and biotechnology. .

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