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Titolo	Laser-Tissue Interactions : Fundamentals and Applications // by Markolf H. Niemz
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ISBN	3-030-11917-3
Edizione	[4th ed. 2019.]
Descrizione fisica	1 online resource (XVIII, 313 p. 180 illus., 77 illus. in color.)
Disciplina	571.455
Soggetti	Biophysics Surgery Lasers Photonics Quantum optics Manufactures Biological and Medical Physics, Biophysics Optics, Lasers, Photonics, Optical Devices Quantum Optics Manufacturing, Machines, Tools, Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Historical Review -- Goal of the Book -- Outlook -- Light and Matter -- Reection and Refraction -- Absorption -- Scattering -- Turbid Media -- Photon Transport Theory -- Measurement of Optical Tissue Properties -- Questions to Chapter 2 -- Interaction Mechanisms -- Photochemical Interaction -- Photothermal Interaction -- Photoablation -- Plasma-Induced Ablation -- Photodisruption -- Questions to Chapter 3 -- Medical Applications of Lasers -- Lasers in Ophthalmology -- Lasers in Dentistry -- Lasers in Gynecology -- Lasers in Urology -- Lasers in Neurosurgery -- Lasers in Angioplasty and Cardiology -- Lasers in Dermatology -- Lasers in Orthopedics -- Lasers in Gastroenterology -- Lasers in Otorhinolaryngology and Pulmology -- Questions to Chapter 4 -- Laser Safety -- Introduction -- Laser Hazards -- Eye Hazards -- Skin

Hazards -- Associated Hazards from High Power Lasers -- Laser Safety Standards and Hazard Classification -- Viewing Laser Radiation -- Eye Protection -- Laser Beam Calculations -- Questions to Chapter 5 -- Solutions. .

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## Sommario/riassunto

Laser-Tissue Interactions by Prof. Dr. Markolf H. Niemz (Heidelberg University) has become the standard reference book in this fast growing field. It addresses basic concepts such as optical and thermal tissue properties, hard and soft tissue ablation, and photobiomodulation. Clinical applications are reviewed according to the latest references. The last chapter covers today's standards of laser safety with a careful selection of essential guidelines published by the Laser Institute of America. This fourth edition has been completely revised and updated. Color illustrations, summaries, and questionnaires with solutions transform this book into a useful guide for graduate students, scientists, and medical practitioners. OPHTHALMOLOGY DENTISTRY GYNECOLOGY UROLOGY NEUROSURGERY ANGIOPLASTY AND CARDIOLOGY ORTHOPEDICS DERMATOLOGY AND COSMETICS GASTROENTEROLOGY OTORHINOLARYNGOLOGY "An extremely useful reference companion." LASERS IN SURGERY AND MEDICINE.

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