

In 'Laser Imaging and Manipulation in Cell Biology', the editor has gathered a team of international experts to present the latest advances in the field of laser imaging and manipulation techniques. The result is broad coverage of the interactions with biological samples to perform novel optical manipulation operations, both on the cellular and tissue levels.

Of interest to physicists working and researching laser tissue mechanisms, cell biologists investigating new imaging and manipulation operation on the cellular level, medical doctors working with new laser therapies and diagnostic tools, as well as engineers developing new technologies in the field of optics and lasers.

From the contents:

Multiphoton Imaging and Nanoprocessing

- Multiphoton Imaging and Nanoprocessing of Human Stem Cells
- In Vivo Nanosurgery

Light-Molecule Interaction Mechanisms

- Interaction of Pulsed Light with Molecules:
Photochemical and Photophysical Effects
- Chromophore-Assisted Light Inactivation:
A Twenty-Year Retrospective
- Photoswitches
- Optical Stimulation of Neurons

Tissue Optical Imaging

- Light-Tissue Interaction at Optical Clearing

Laser Tissue Operation

- Photodynamic Therapy – the Quest for Improved Dosimetry
in the Management of Solid Tumors
- Laser Welding of Biological Tissue:
Mechanisms, Applications and Perspectives
- Conclusions



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ISBN 978-3-527-40929-7



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