Special Issue

Advances in Biophotonics Using Optical Microscopy Techniques

Message from the Guest Editor

Biophotonics uses monochromatic laser or laser-like non-ionizing radiation for diagnostic, imaging applications and therapy or surgery. Modern optical microscopy techniques and instrumentations have driven a new era of applied biophotonics interventions in biology, medicine, and nanotechnology. Advanced photon-based techniques are highlighted as very promising tools for the understanding of interaction mechanisms in molecular and cellular biology. The miniaturization of biophotonics tools had led to the research and development of novel strategies for prevention, diagnosis, and treatment of diseases at the nanoscale, at the sub-cellular and molecular level. This Special Issue will be a collection of original articles, communications, and reviews focusing on recent progress in biophotonics in the field of optical tweezers, fluorescence microscopy, optical spectroscopy, hyperspectral enhanced dark-field microscopy, flow cytometry, optoelectronics, nanotechnology, laser nano-surgery, biosensing, and biochips. The SI is also open to optical microscopy techniques enabling real-time and/or in situ imaging or manipulation of living cells and tissue at high resolution and high contrast.

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Optics (ISSN 2673-3269) aims at establishing *Optics* as a leading journal for publishing high impact fundamental research and applications in optics field with a fast processing time and high quality service. The journal particularly welcomes both theoretical (simulation) and experimental research within our journal's scope. We encourage scientists to publish their experimental and theoretical results in as much detail as possible. So, there is no restriction on the length or pages of the papers. The full experimental details must be provided so that the results can be reproduced. Electronic files and software regarding the full details of the calculation or experimental procedure, if unable to be published in a normal way, can be deposited as supplementary electronic material.

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