Special Issue

Advances in Hyperspectral and Multispectral Optical Spectroscopy and Imaging of Tissue

Message from the Guest Editors

Optical imaging and characterization of tissue has become a huge applied field due to the advantages of optical analysis methods, which include non-invasiveness, high sensitivity, and high spectral specificity. This research field continues to grow and spread in many directions due to new light sources and detectors, such as the supercontinuum and tunable lasers, portable highly sensitive spectrometers, multiwavelength photoacoustic imagers, due to novel methods of data analysis, such as machine-learning, and due to novel applications, such as the imaging of embryogenesis or monitoring of cerebral oxygen metabolism.

The purpose of this Special Issue is to provide an overview of recent advances in methods of tissue imaging and characterization which benefit from using large numbers of optical wavelengths. Potential topics include but are not limited to novel methods and instrument designs, in vivo imaging and monitoring of human and animal organs and embryos, biomedical optical guidance, detection and characterization of diseases and molecular imaging.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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