Biophotonics Imaging and Therapy: Advances, Applications, and Perspectives toward Translation and Clinics

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Message from the Guest Editors

Dear Colleagues,

Light is almost an ideal mechanism to probe and treat biological tissues. It is safe, nonionizing, noncarcinogenic, and it interacts with tissue directly at molecular levels, allowing for functional, metabolic, and molecular imaging at very early stage of diseases. Moreover, light can be used for controlled therapy, activation, and manipulation. Although light experiences strong scattering at depths in tissue, which causes primary trade-off between spatial resolution and penetration depth, researchers in the field have proposed many approaches to tackle this challenge from different perspectives. In recent decades, exciting achievements have been accomplished in biophotonics, which has greatly advanced or even reshaped the landscape of biomedical imaging and therapy, enabling many applications that were otherwise impossible.

This Special Issue plans to focus on recent advancement and applications of optical imaging and therapy technologies toward translation and clinics. Fundamental research to tackle existing technical limitations and perspectives of future development is also welcome.

Special Issue