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Near Infrared (NIR) Biosensors and Imaging Techniques

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Message from the Guest Editors

Biosensors based on visible fluorophores have revolutionized all aspects of cell biology. However, how chemical and biological processes are spatiotemporally regulated in intact 3-dimensional tissues *in vivo* is still poorly understood. To address this shortcoming, there is growing interest in the development of longer wavelength biosensors in the near-infrared (NIR) region of the spectrum (700–1700 nm). This is motivated by the penetration ability of NIR light into tissue and the significantly lower light scattering and autofluorescence throughout the NIR spectral range. Additionally, NIR biosensors enable multiplexed measurements with previously developed visible probes, as well as compatibility with optogenetic tools. In this Special Issue of Biosensors, we seek cutting-edge research on the development of NIR biosensors of all types, including fluorescent proteins, organic and small molecule fluorophores, and inorganic nanoparticles that span the entire NIR-I and NIR-II spectral ranges, as well as the development of novel NIR imaging systems and techniques. Both original article and review submissions are welcome.



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Special Issue



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Message from the Editor-in-Chief

Biosensors is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

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