Special Issue

Fiber Optic Biosensing Technology

Message from the Guest Editor

The focus of this Special Issue is on fiber optic biosensors, which serve as compact and sensitive tools for the specific detection of chemical and biological samples across various domains, such as biomedical research, life sciences, healthcare, food safety, and environmental monitoring. These biosensors boast several key advantages: low signal loss, allowing for extended transmission distances; cost-effectiveness, facilitating the production of disposable sensors to prevent cross-contamination; immunity to electromagnetic interference, enabling operations in environments like those generated by nuclear magnetic resonance; and excellent compactness and biocompatibility, supporting in vivo applications. Additionally, they offer versatile sensing capabilities through diverse sensing mechanisms and structural designs, with surface functionalization enabling the precise targeting of molecules. We invite submissions related to all aspects of fiber optic biosensors for this Special Issue, encompassing novel design trends, innovative methods for enhancing sensor performance, practical applications in biological detection, and advancements in optimizing fiber optic detection systems.

Guest Editor

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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