Special Issue

Advances in Electrochemical, Photonic and Optoelectronic Biosensor Technologies for Rapid Point-of-Care Diagnostics

Message from the Guest Editor

Biosensors are innovative analytical devices that integrate biological recognition elements with electrochemical transducers to rapidly and accurately detect significant analytes. They represent a substantial leap forward in rapid detection and point-of-care diagnostics, offering numerous advantages in terms of cost-effectiveness, user-friendliness, portability, and accuracy. Moreover, their continued development, alongside advances in photonic and optoelectronic systems, promises to revolutionize healthcare and environmental monitoring by enabling more timely and precise detection of target analytes. The integration of photonic and optoelectronic technologies enhances the sensitivity, speed, and versatility of biosensors, further expanding their applications in real-time analysis. Therefore, this Special Issue highlights recent advances in the design and development of various electrochemical biosensors, as well as photonic and optoelectronic systems, and their applications in the rapid detection of significant analytes for point-of-care diagnostics. These include fundamental research, technique development, and device fabrication in the following areas.

Guest Editor

Dr. Young-Joon Kim

Department of Electronic Engineering, Gachon University, Seongnam 13120, Republic of Korea

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Biosensors
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biosensors@mdpi.com

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About the Journal

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.

Editor-in-Chief

Prof. Dr. Giovanna Marrazza
Department of Chemistry "Ugo Schiff", University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino, Italy

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