Special Issue

Biosensors for Detection and Analysis of Bacterial and Viral Pathogens

Message from the Guest Editors

In recent years, various biosensor technologies have been developed for the detection and analysis of bacterial, fungal, or viral pathogens with applications ranging from medical care, to food and water safety, to biosecurity and biodefense. Specifically, infectious diseases caused by bacterial and viral pathogens have been major global health threats, with antimicrobial resistant pathogens and the COVID-19 pandemic as major examples. Rapid and accurate biosensors are urgently needed to address these challenges. The main topics of this special issue are related but not limited to:

- Biosensors for detection and quantification of a pathogen's genetic signature (DNA or RNA), detecting intact cells, or measuring host immune response (antibody detection).
- Novel sensing materials (e.g., MXenes, MOFs, 2D materials, hybrid materials, etc.) and their sensing application relevant to viral or bacterial pathogens.
- Capture probes (e.g., aptamers, peptides, antibodies, etc.) and surface functionalization
- Novel device/sensor/system design, integration, and sensing demonstration
- Novel sensors based on advanced molecular methods (e.g., CRISPR technology)

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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.

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