

Special Issue

Biosensors for Ultrasensitive and Rapid Detection

Message from the Guest Editors

This Special Issue, "Biosensors for Ultrasensitive and Rapid Detection," is dedicated to the latest breakthroughs in biosensing technologies that address the growing demand for analyzing targets at ultralow concentrations with rapid turnaround. A key focus lies on innovative signal amplification strategies (e.g., enzymatic, nanomaterial-based, and isothermal amplification) and emerging methodologies for single-molecule detection that are pushing the limits of quantification. This Special Issue also explores novel biorecognition elements, advanced transducers (including plasmonic, electrochemical, and FET-based platforms), and integrated microfluidic systems. The collected works demonstrate significant strides in pushing the limits of detection and reducing assay times, paving the way for next-generation biosensors. These advancements hold immense potential for transformative applications in early disease diagnostics, point-of-care testing, environmental monitoring, and food safety control, ultimately contributing to improved health and safety outcomes.

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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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