Special Issue

CRISPR-Based Biosensing for Point-of-Care Diagnostics

Message from the Guest Editors

Point-of-care (POC) diagnostics are essential for the timely and efficient prevention, control, and treatment of human diseases, including cancers, infections, and even epidemic outbreaks. POC diagnostics based on the detection of pathogenic nucleic acids, antibodies, antigens, and small molecules are advantageous over other strategies due to their high detection sensitivity and specificity. Currently, clustered regularly interspaced short palindromic repeats (CRISPR)-leveraged biosensing has emerged as an innovative strategy, enabling rapid and accurate POC testing. The CRISPR-based diagnostic toolbox has expanded rapidly, involving CRISPR-coupled polymerase chain reaction, isothermal amplification, electrochemical analysis, diagnostic materials/nanomaterials, microfluidic analysis, and chemiluminescence/lateral flow immunoassays. This surge in development brings substantial promise for the industrialization of CRISPR-based diagnostic products.

We welcome original research articles and reviews in research areas such as biomedical engineering, biosensing/biosensors, molecular biology, biochemistry, nanomaterials, microfluidics, diagnostics, and theranostics.

Guest Editors

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Deadline for manuscript submissions

closed (30 June 2025)

Biosensors

an Open Access Journal by MDPI

Impact Factor 5.6
CiteScore 9.8
Indexed in PubMed

mdpi.com/si/223272

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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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