Special Issue

Advances in CRISPR/Cas-Based Biosensors

Message from the Guest Editors

CRISPR/Cas systems have emerged as a transformative molecular toolkit for biosensing, enabling highly sensitive, specific, and programmable detection of nucleic acids, proteins, small molecules, and chemical signals. Beyond their original genome-editing function, diverse CRISPR/Cas effectors—including Cas12, Cas13, Cas14, and emerging compact and engineered variants—have been repurposed into powerful biosensing platforms through collateral cleavage, signal amplification, and structural engineering strategies. This Special Issue, "Advances in CRISPR/Cas-Based Biosensors", aims to showcase recent conceptual, technological, and translational advances in CRISPR-enabled biosensing. Topics of interest include novel Cas effectors and engineered variants; innovative reporter designs and signal transduction mechanisms; amplification-free and autocatalytic sensing strategies; integration with microfluidics, nanomaterials, and point-of-care devices; and emerging applications in clinical diagnostics, infectious disease detection, environmental monitoring, and food safety.

Guest Editors

Dr. Fei Deng

School of Biomedical Engineering, Faculty of Engineering, University of New South Wales, Sydney, NSW 2052, Australia

Dr. Mei Yang

Key Laboratory for Biorheological Science and Technology of Ministry of Education, Bioengineering College of Chongqing University, Chongqing 400044, China

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

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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.

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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