Special Issue

Biosensors Based on Electrochemical Catalysis, Biofuels, or Functional Nanomaterials

Message from the Guest Editors

The first decade of the 21st century has been labeled as “the sensing decade”. Among the various sensing types, biosensing is currently one of the hottest topics in bioanalysis. Nowadays, biosensors have become a valuable tool in a number of applications, encompassing the monitoring of treatment and progression of diseases, environmental monitoring, food safety concern, drug development, forensics, and biomedical research. Among them, biosensors based on electrochemical catalysis, biofuels, and functional nanomaterials constitute a pivotal component and have garnered escalating attention. For instance, electrochemical catalysis-based biosensors play a significant role in point-of-care testing diagnostics because they are rapid, cost-effective, suitable for miniaturization, intelligent, and capable of working in real time. Biofuel cells have been applied as the basic component for constructing self-powered electrochemical biosensors, while the unique properties of nanomaterials offer excellent platforms for electronic and optical signal transduction, allowing us to design a new generation of biosensing devices.

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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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