Special Issue

Single-Molecule Biosensing: Recent Advances and Future Challenges

Message from the Guest Editor

Single-molecule detection is a state-of-the-art bioanalysis technology, and it provides the ultimate sensitivity for the detection of low-abundance targets. The development of single-molecule biosensing technologies has emerged as a hot topic in recent years, and it provides a powerful tool for the efficient detection of rare analytes in complex biological and clinical samples. For this Special Issue, we welcome original research papers and reviews on current advances in the design of single-molecule biosensing systems based on single-molecule fluorescent, plasmonic, electrochemical, and surface-enhanced Raman spectroscopic detection and their applications in the detection of DNAs, RNAs, proteins, enzymes, and other biomolecules. Single-molecule detection-related theoretical research and device developments are also encouraged. The applications of single-molecule detection-based platforms for in vivo imaging and point-of-care detection of clinical disease biomarkers is of special interest. Reviews should provide an in-depth examination of the most recent research in a specific context or discuss the future challenges related to single-molecule detection.

Guest Editor

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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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