Special Issue

SERS-Based Biosensors: Design and Biomedical Applications

Message from the Guest Editors

In recent years, surface-enhanced Raman scattering (SERS) spectroscopy has gained recognition as a powerful tool for chemical analysis and for determining structural information about molecular systems in a wide range of fields. The SERS effect and mechanism is based on the strong amplification of the Raman signals of target molecules adsorbed and/or in proximity with Au or Ag metallic nanostructures and plasmonic quantum dots, which are commonly utilised in colloidal form or supported on solid substrates. The degree of SERS amplification is greatly dependent on the substrates employed for qualitative analysis and quantitative detection. Therefore, the development of SERS technologies with high sensitivity, reproducible results, and stability has become a hot topic in recent years, particularly as a clinical tool in the biomedical fields. For this Special Issue, we welcome original research papers as well as reviews on current developments in the design of high-sensitivity and reproducible biomedical diagnostic systems with SERS, TERS, CRM, and/or SORS technologies.

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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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