Special Issue

Nanostructures for Tip and Surface Enhanced Vibrational Spectroscopy (TERS, SERS, SEIRA, SECARS)

Message from the Guest Editors

In the past few decades, the tools for performing molecular analysis using infrared (IR) and Raman spectroscopy have improved so much that it has become possible to detect target single molecules and visualize them in complex biological objects. One of the decisive roles in achieving such amazing results has been played by the combination of nanomaterials that facilitate enhancing IR absorption and Raman scattering, spectrometers, confocal, and probe microscopes. This has led to the development of unique precision techniques such as TERS, SERS, SEIRA, SECARS, which now have tangible prospects to be widely implemented for accurate and reproducible non-contact measurements. This Special Issue aims to publish new research and state-of-the-art applications in all types of nanomaterials for TERS, SERS, SEIRA, and SECARS, including but not limited to the design, simulation, and engineering of metallic, dielectric, and hybrid nanostructures to improve molecular analysis performances. It is my pleasure to encourage both theoretical and empirical work in this ever-expanding and exciting field of science and technology.

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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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