

Special Issue

Raman Spectroscopy for Chemical and Structural Characterization in Biology

Message from the Guest Editor

Raman spectroscopy (RS) can be used to determine the chemical composition and the structure of various samples without the need for labeling and extensive sample preparation. This technique is particularly convenient for biological applications, since the Raman signal is not hidden by the contribution of water molecules. Due to the low Raman cross-section of most biomolecules, surface-enhanced Raman spectroscopy (SERS) has also been developed for molecular detection of specimens in minute concentrations, while tip-enhanced Raman spectroscopy (TERS) has emerged as a powerful tool for nanoscale chemical, structural and morphological imaging of biomaterials. In this issue, several recent scientific advances in RS, SERS and TERS, for the study of biosystems, are presented at the experimental and theoretical levels, and original biological and biomedical applications of these techniques are described.

Guest Editor

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