Special Issue

Past Present and Future of Raman Spectroscopy

Message from the Guest Editors

In the last 20 years, more and more scientific fields have become interested in Raman spectroscopy because it could be used in fields that need non-destructive microscopic chemical sensing and biological imaging. The “Raman effect” is remarkable for being based on the inelastic scattering of an incident photon by atoms and molecules in a substance. It may occur in solids, liquids, or gases. The technology behind Raman spectroscopy has made tremendous progress in recent years to address problems including fluorescence, limited sensitivity, and weak Raman signals. In addition, many more advanced Raman techniques than the conventional dispersive Raman approach have been developed to fulfill the challenges of analysis. These techniques include a Fourier Transform Raman Spectrometer, Confocal Raman Microscopy, Surface Enhanced Raman Scattering (SERS), Tip-enhanced Raman Scattering (TERS), and Coherent Anti-Stokes Raman Scattering (CARS). Physicists and chemists have used Raman scattering to investigate the chemical composition of several liquid and solid materials.

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As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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