



Plasmonic Nanomaterials for SERS Applications: Progress and Trends

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Message from the Guest Editors

Surface-enhanced Raman spectroscopy (SERS) combines nanotechnology with conventional Raman spectroscopy to afford an ultrasensitive and highly specific analytical tool that has been exploited as the optical signal readout in a variety of physical and chemical applications. The SERS effect primarily relies on the excitation of localized surface plasmon resonances at the surface of nanostructured plasmonic materials. Thus, progresses in the precise design and fabrication of plasmonic substrates with tailored morphologies, high and reproducible enhancing performances and, when applicable, multifunctional features have been major driving forces in boosting the technological advances and applications of SERS spectroscopy. The successful translation of the analytical potential of SERS into viable commercial devices is also dependent on the ability to produce excellent plasmonic substrates at a large scale and in a cost-effective fashion.

This Special Issue focuses on presenting and discussing the most recent technological advances in the design of plasmonic nanomaterials. For detailed information please see the Special Issue homepage.





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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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