Special Issue

Nonlinear Optics Studies on Nanosurfaces and Nanostructures

Message from the Guest Editors

This Special Issue focuses on recent advances in nonlinear optics observed in nanosurfaces and nanostructures. With the growing demand for ultrafast, compact, high-stability, high-scalability, and energy-efficient photonic devices, the study of light–matter interactions at the nanoscale has become increasingly important. Advances in nanofabrication, material synthesis, and optical engineering have enabled unprecedented control over electromagnetic fields in subwavelength structures, offering new routes to enhance nonlinear phenomena and achieve integrated photonic functionalities. This Special Issue aims to serve as a platform for showcasing cutting-edge research at the intersection of nonlinear optics and nanophotonics. We welcome original research articles, communications, and comprehensive reviews related to the design, fabrication, characterization, and theoretical modeling of nanoscale structures for nonlinear optics.

Guest Editors

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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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