Special Issue

Optical Properties of Plasmonic Nanostructures

Message from the Guest Editor

Due to their unique properties, plasmonic nanostructures have found applications in a wide range of socially important modern technologies, such as energy conversion, environmental protection and remediation, human health, and safety. All these applications are based on the interaction of external radiation with frequencies falling in the optical range of the electromagnetic spectrum, with free electrons and/or photoexcited electrons caused by interband transitions in structures with submicron dimensions. These properties are tightly related to the complex permittivity function of the materials making up the nanostructures, which has a key role in determining the spectral range of their application by determining their polarizability, absorption, and emission spectra. This Special Issue aims to create a comprehensive platform of publications on all aspects of the optical response characterization of plasmonic nanostructures, including the determination of complex permittivity function, theoretical modelling, and synthesis methods.

Guest Editor

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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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