

Special Issue

Nano-Optics: Novel Research on Theory and Applications

Message from the Guest Editor

The splendid achievements in the field of nano-optics during the last few decades have opened up novel research areas, such as near-field surface plasmon-coupled excitation, metamaterials, invisibility cloaks, and epsilon near-zero materials. Hundreds of theoretical and experimental research works have revealed that the electromagnetic field around nano-optical objects has various physical properties, e.g., huge field enhancement and confinement and a corresponding increase in optical interaction with matters. In this Special Issue, we aim to cover the current achievements in the nano-optical phenomena. Full papers, communications, and reviews are welcomed. Potential topics include, but are not limited to:

- Theory and simulations of electromagnetic fields in nano-optical objects;
- Nano-optical light-matter interactions and their mechanism;
- Nano-optical applications for material characterization, e.g., surface-enhanced Raman scattering, tip-enhanced Raman scattering, and luminescence enhancement;
- Novel applications of artificial atoms, i.e., metamaterials and epsilon near-zero materials;
- Development of novel observation technique for nano-optical objects.

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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