Special Issue

Advances in Nanophotonics and Metasurface

Message from the Guest Editors

This Special Issue aims to showcase cutting-edge research and reviews, covering both fundamental advancements in metamaterials, metasurfaces, theory and experiments as well as interdisciplinary applications in imaging, structured light, photonic sensing, AR/VR, and AI-related photonics. We invite original contributions that bridge nanophotonics, metasurfaces and related fields, fostering cross-disciplinary innovation and practical breakthroughs. Topics include, but are not limited to:

- Design, fabrication, and characterization of novel metasurfaces and metamaterials;
- Generation, detection, and manipulation of structured light fields ;
- Metasurface-based optical elements for imaging, sensing, and beam shaping;
- Computational imaging techniques enhanced by nanophotonic devices;
- Active, tunable, and reconfigurable metasurfaces;
- Nonlinear and quantum phenomena in nanophotonics;
- Metasurfaces for holography, display, and augmented/virtual reality (AR/VR);
- Integration of metasurfaces with waveguides, fibers, and on-chip photonic circuits;
- Machine learning and inverse design for nanophotonics;
- Biomedical applications: super-resolution imaging, biosensing, and endoscopic devices.

Guest Editors

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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