

Special Issue

Nano-Optics and Nano-Optoelectronics: Challenges and Future Trends

Message from the Guest Editor

Nano-optics and nano-optoelectronics currently represent one of the most active scientific and technological frontiers. By combining the achievements of photonics and nano-technology to realize thoroughly novel optical, electronic and optoelectronic functions, nano-optics and nano-optoelectronics have become indispensable in science and technology. After tremendous endeavors, nano-optics and nano-optoelectronics have already departed from their infancy and stepped into an exciting era, where research ideas and theoretical concepts are being vigorously transferred into functional devices and real-life applications. Topics include, but are not limited to, nano-optics and photonics, silicon photonics, integrated photonics, nano-optoelectronics, optoelectronic integration, flat optics, photonic and plasmonic nanomaterials, metamaterials and metasurfaces, strong light-matter interactions at the nanoscale, nano-antennas, nano-waveguide chips, nano-optomechanics, nano-lasers, nano-optoelectronic detectors, quantum nano-optics, nonlinear and ultrafast nano-optics, topological photonics, and non-reciprocal nano-optics.

Guest Editor

Prof. Dr. Hai-Zhi Song

Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China, Chengdu 610054, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of
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