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Research of Photonics at the Nanometer Scale

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Message from the Guest Editors

Dear Colleagues,

The miniaturization of photonic devices has led to unanticipated phenomena and applications. However, the hypothesis of “smaller-is-better” is not correct at all times. This is due to a deep understanding of the fundamental nano-scaling behavior of such devices. For example, some devices can stop working when the structure length drops below 50-100 nanometers due to the insufficient effectiveness of some key parameters.

This Special Issue will present comprehensive research outlining progress on the research of photonics at the nanometer scale. We invite authors to contribute original research articles and review articles covering the current progress in nanometer-scale photonics. Potential topics include, but are not limited to:

- light and laser sources;
- photodetectors;
- quantum dot;
- specially designed nano-structured materials;
- optical phenomena in nano-photonic structures;
- electro-optic modulators;
- all-optical switches;
- light trapping at nanoscale;
- optical nanoresonators, etc.



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Guest Editors

Special Issue



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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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