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Graphene and 2D Material-Based Photodetectors

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

This Special Issue aims to present research on the progress in photodetectors based on graphene and two-dimensional nanomaterials and further extend potential applications of photodetectors. This includes the fabrication of novel two-dimensional materials, as well as the adjustment of their optoelectronic properties, the construction of new kinds of device structures, the optimization of the photo-response performance based on both experimental and theoretical investigations.

Research areas include but not limited to:

Synthesis of two-dimensional materials with controlled morphology and composition via different fabrication techniques;

Homo- or hetero-junction two-dimensional materials;

Experimental and theoretical investigations of optoelectronic properties of two-dimensional materials;

Photo response performance studies of two-dimensional materials;

Design and optimization of device architectures and interfaces using 2D nanomaterials;

Exploration of the potential applications of photodetectors based on two-dimensional nanomaterials, such as in biomedical imaging, environmental monitoring, and telecommunications.

Dr. Pingping Yu
Guest Editor



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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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