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Black Phosphorus-Based Nanomaterials and Their Applications

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Black phosphorus-based nanocomposites are a new kind of nanoscale polymer composite with layered black phosphorus dispersed in a polymer matrix. Due to the nano effect brought by black phosphorus nanosheets and the strong interfacial interaction between the nanosheets and the matrix, the mechanical, thermal and flame-retardant properties of black phosphorus nanocomposites are superior to those of conventional polymer composites of the same composition, which provides the possibility for the preparation of a new generation of composite materials with high performance and multiple functions. This Special Issue aims to collect scientific papers on the latest advances in black phosphorus-based nanocomposites. Submissions are welcome on all topics, including but not limited to the synthesis and preparation of black phosphorus-based nanocomposites; polymers with excellent mechanical, thermal and flame-retardant properties; multifunctional composites; enhancement mechanism research; and smoke suppression and toxicity reduction mechanism research.

Prof. Shuilai Qiu
Guest Editor

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Editor-in-Chief

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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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