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Functional Nanocomposites: From Strategic Design to Applications

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Message from the Guest Editors

Nanocomposites are advanced composites that include nanomaterials to improve properties for various applications. They are low-dimensional materials having one-, two-, or three-dimensional confinements, and possess superior optical, electronic, magnetic, thermal, or mechanical properties compared to their bulk material counterparts. The intriguing properties of nanomaterials continue to attract broad attention for developing new advanced materials with improved properties, further stimulating the research and development of functional nanocomposites. In this special issue, original research and review articles on developing functional nanocomposites for novel applications are welcome. Research areas may include (but are not limited to) the following:

- Development of nanocomposites with 0D nanomaterials and applications
- Development of nanocomposites with 1D nanomaterials and applications
- Development of nanocomposites with 2D nanomaterials and applications
- Theoretical simulations and modeling of design, fabrication, properties, mechanisms, as well as applications for advanced functional nanocomposites
- Review articles involving functional nanocomposites and their applications



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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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