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Graphene-Based Nanomaterials

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Message from the Guest Editors

The evolution of two-dimensional materials has been indubitably impressive during the previous decade, mainly due to graphene—the truly planar carbon allotrope with its atoms bonded in a honeycomb lattice. This extraordinary feature enables the unique electronic properties of graphene, such as the ballistic transport, surface plasmon polariton excitation, and non-reciprocal effects. Additionally, graphene-based nanomaterials, such as graphene oxide, are constantly emerging owing to their easy high-quality production and applications in a variety of contemporary fields, including physics, chemistry, biology, and medicine.

The main purpose of this Special Issue is to highlight the recent advances and future perspectives concerning graphene-based nanomaterials, ranging from their chemical structure investigation up to their direct utilization in advanced applications. Specifically, the original research and review articles should discuss one of the following aspects:

- Novel graphene-based compositions;
- Improved methods for high-quality production;
- Techniques for electromagnetic analysis;
- Advanced feature investigation;
- Device design and fabrication.



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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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