



Graphene in Materials Science and Nanotechnology: Synthesis, Functionalization, Hybridization, and Applications

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Message from the Guest Editor

Graphene-based nanostructures and nanomaterials have attracted more attention in recent years due to their two-dimensional (2d) structure, high surface area, good biocompatibility, low mass density, and unique electrical properties. To enhance the properties of graphene-based materials and extend their applications in emerging research fields, it is necessary to develop new synthesis strategies and functionalization methods of graphene; in addition, it is helpful to create hybrid nanomaterials by combining graphene with other functional nanoscale building blocks. For instance, the conjugation between graphene and biomolecules can improve biologically related properties, and promote their applications in biomedicine, tissue engineering, and sensors/biosensors. The binding of various inorganic nanoparticles and quantum dots onto graphene materials can extend their applications in energy storage, catalysis, and nanodevices.

Therefore, in this special issue, we would like to collect contributions that focus on (but are not limited to) the topic of graphene in materials science and nanotechnology.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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