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Functionalized Carbon-Based Nanomaterials for Emerging Applications in Optoelectronics, Clean Energy, and Environmental Monitoring

Guest Editors:

Dr. Eugenia-Lenuta Fagadar-Cosma

Dr. Mihaela Birdeanu

Dr. Isabela Costinela Man

Dr. Serban Stamatin

Deadline for manuscript submissions:
closed (20 March 2024)

Message from the Guest Editors

Dear Colleagues,

Due to remarkable chemical stability and electrical properties, functionalized carbon materials with different moieties are required materials for emerging applications. This is especially true in the generation of hydrogen via electrocatalytic water splitting, overcoming the performance of fullerenes, carbon nanotubes, graphene or carbon dots alone.

This Special Issue covers applications in optoelectronic field/field emission displays, because undoped and doped oxide nanomaterials have strong luminescence, thermo-stability, and thermo-responsive emission properties. According to the successful results that have been obtained, oxide-carbon-based complexes are much stronger adsorbents than carbon materials in gas adsorption. Synergistic effects between porphyrins and carbon-based materials are offering the best molecular electrocatalysts with regard to oxygen reduction reactions yet reported, and are also acting as high-performance gas sensors.

Dr. Eugenia Fagadar-Cosma
Dr. Mihaela Birdeanu
Dr. Isabela Costinela Man
Dr. Serban Stam
Guest Editors

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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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