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Application of Carbon-Based Nanostructures and Nanocomposites for Sustainable Development

Guest Editor:

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closed (30 November 2022)

Message from the Guest Editor

Dear Colleagues,

In recent years, nanotechnology has emerged as a versatile platform for developing new solutions to global sustainability issues. Nanomaterials and, in particular, carbon-based nanomaterials, possess peculiar physicochemical properties as well as large and active surface areas that allow their use as functional materials for the removal of contaminants from air and water, the production of renewable energy (clean water, clean air and clean energy), and for addressing health issues (from diagnostics to therapy).

This Special Issue is devoted to the synthesis, characterization, and applications of carbon-based nanomaterials and nanocomposites (e.g., C nanostructures/polymers, C nanostructures/metal oxides, etc.) with specific focus on the following fields:

- Environment (pollution prevention, pollution removal, environmental remediation, water treatment, desalination, environmental sensing);
- Energy (energy storage and conversion, water splitting);
- Health and wellbeing (from diagnostics to therapy).

Full research papers, communications, and reviews are all welcome.



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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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