

Special Issue

Polymer/Nanoparticles Composites Materials as a Tool for Biotechnology and Optoelectronics Applications

Message from the Guest Editors

Due to nanocomposite materials' nano-sized dimension, nanocomposites exhibit multifunctional properties such as high surface-to-volume ratios, high thermal resistance, good mechanical strength, and redox and catalytic activity. Many nanocomposites, such as polymer-metal, metal-metal oxide nanohybrid materials, and carbon-metal nanomaterials, can be used for the fabrication of enzymatic sensors, wastewater treatment, hydrogels, tissue engineering, energy storage/conversion systems, and material coatings, among other application areas. This Special Issue focuses on the synthesis, characterization, and application of polymer-based nanocomposites in the field of biotechnology and optoelectronics. Research articles and reviews concerning a combination of soft and hard nanomaterials, such as conducting and semi-conducting, insulating, thermoplastic, and elastomeric polymers (both natural or synthetic), with nanocarbons and inorganic nanoparticles (metal and metal oxides nanoparticles) highlighting enhanced functional and/or mechanical properties, are highly encouraged.

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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