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Responsive Polymer Nanoparticles and Nanocomposites

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Message from the Guest Editors

This Special Issue is focused on the most recent advances in the synthesis, characterization, and applications of polymer-based responsive nanomaterials and nanocomposites, whose properties and functions can be controlled, even remotely, by external stimuli. The trigger signal can be induced by physical (temperature, mechanical forces, and electromagnetic radiation), chemical (pH, ionic strength, and solvent), or biological (enzymes and receptors) changes in the external environment. Progress in this field is rapidly expanding, and nanostructured systems based on responsive materials hold great promise for a breakthrough in materials science, for environmental, health, and biomedical applications.

Nonetheless, in this Thematic Issue, we also invite contributions dealing with responsive polymer-based nanostructured materials designed for advanced structural applications, including self-healing and shape memory materials.





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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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