

Special Issue

Functional Polymer and Ceramic Nanocomposites

Message from the Guest Editor

Nanocomposites differ from conventional composite materials widely used today due to the nanoscale dimensions of the filler phase and the exceptionally high surface-to-volume ratio of this phase. As a result, compared with traditional composites, nanocomposites always hold many unique mechanical, thermal, electrical, magnetic, optical, biological, or catalytic properties, which are controlled by many factors like local chemistry, mobility, morphology, or crystallinity. Additionally, nanocomposites often offer a combination of several properties, thus making them even more attractive as multifunctional materials for the future. Therefore, the objective of this Special Issue is to explore all aspects of polymeric and ceramic nanocomposites and nano-engineered composites, from nanoparticles, synthesis, morphology, structure, interfacial bonding, aging, properties (e.g., mechanical, thermal, electrical, optical, wear, barrier, flame retardancy, antifouling, sensing, and drug release) and characterizations, processing to potential applications.

Guest Editor

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About the Journal

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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