Special Issue

Novel Structural and Functional Material Properties Enabled by Nanocomposite Design

Message from the Guest Editors

Nanocomposites have the potential to enable material properties that exceed the capabilities of their individual constituent phases by far, thereby, enabling the exploration of white areas on material property charts. In this inaugural Special Issue for the newly released subsection Nanocomposites in the Journal *Nanomaterials*, we aim to provide an overview of the state of the art in enabling novel structural and functional material properties using nanocomposites. We welcome contributions regarding the synthesis, characterization, modeling, and in-depth understanding of the mechanisms governing the outstanding properties of this fascinating material class. Properties of interest encompass, but are not limited to, structural properties (e.g., strength, ductility, and high-temperature stability), functional properties (e.g., soft magnetic properties, energy storage, and radiation resistance), and property by design strategies (bioinspired design, topology optimization).

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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.

Editor-in-Chief

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