



## Mechanical and Electrical Properties of Novel Nanocomposites

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### Message from the Guest Editor

Decreasing the size of materials to the nanometer scale always leads to the appearance of new specific properties, due to the major impact of the surface and quantum effects. In the case of mechanical properties, the downsizing often leads to the stiffening of the structure which opens perspectives to design new nanocomposite materials with unique characteristics. Physical and chemical properties of a nanocomposite are sufficiently different from those of the component materials and they are determined by the same factors as usual composites, i.e., component properties, composition, structure, and interfacial interactions. However, their impact is more sensitive due to the nanoscale size of its constituents and it is more challenging to control them.

The titled Special Issue aims to cover current experimental and/or computational studies in the field of nanocomposites. The focus of this Issue is to highlight the state of knowledge in processing, manufacturing, characterization and potential application for the new nanocomposite 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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