



Hierarchical Nanostructured Materials for Multifunctional Applications

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Message from the Guest Editor

It is well known that the performance of materials is highly dependent on their structures. Research on revealing their relationship is always the focus of material scientists. Due to their special mechanical properties, large specific surface area, excellent electrical/thermal conductive 3D network, and special porous structure, versatile hierarchical nanostructured materials have been designed and applied for various material systems, including polymers, metals, inorganic materials, and their composites. The study of the mechanisms of unique nanostructures on promoting the mechanical, electrical, thermal, and electrochemical properties of materials is essential to acquire new knowledge and pave the way for the development of novel advanced materials. The aim of this Special Issue is to collect state-of-the-art contributions related to advancements in the field of designing and fabricating hierarchical nanostructured materials and their various applications, including (but not limited to) structure engineering materials, surface protective materials, functional materials for thermal management, electromagnetic shielding, supercapacitors, rechargeable batteries, sensors, etc.





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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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