

Special Issue

Multiscale Innovative Materials and Structures

Message from the Guest Editors

Nanomaterials are currently essential constituents of ground-breaking nano-electromechanical systems (NEMS). There is increasing attention in multiscale metamaterials and a rising demand for exploring the potential of such novel systems in real-life engineering applications, including: smart buildings, antiseismic engineering, and structural health monitoring. This Special Issue is aimed at extending the fundamental understanding of the mechanics of multiscale materials, ranging from multifunctional lattices to nanocomposites, and its application to the design of unconventional materials and structures. Authors are invited to submit both theoretical and experimental contributions. Potential topics include but are not limited to the following:

- Nanosized and nanostructured materials;
- Periodic lattices and multiscale composites;
- Preparation, characterization, and application of nanomaterials;
- Nanocomposites, nanosystems, and nanodevices;
- Nonlinear lattices, hierarchical lattices;
- Nonlocal and generalized continua;
- Experimental and computational techniques in nanoscience;
- Design of ultralight structures and seismic devices for smart buildings.

Guest Editors

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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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