Special Issue

Mechanics of Nanomaterials and Low-Dimensional Materials

Message from the Guest Editors

The structure–property relationship at the nanoscale is found to facilitate their unique physical behavior. Among various physical properties, the mechanical properties of these nanostructure-based materials act as a significant foundation for their functional applications. It is, thus, urgent to develop/utilize new mechanics theories, as well as computational and experimental techniques, to explore the mechanical behavior of nanostructure-based materials across different-length scales. This Special Issue aims to the latest advances in experimental or theoretical/computational investigations in the multi-scale mechanical properties of nanomaterials and low-dimensional materials. Research areas may include (but are not limited to) the following: Theoretical/computational/experimental studies of the mechanical properties of nanomaterials and low-dimensional materials; Development of advanced experimental techniques in nano-/micro-mechanical testing; Multi-field (mechanical, chemical, electrical) coupling performance and applications of nanostructure-based materials.

Guest Editors

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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