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Structural Self-Organization of Light Atoms-Based Materials under Extreme Conditions including Large Shear Deformation

Guest Editor:

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Message from the Guest Editor

Advanced materials based on C, C–N, B–C, B–N and other light atoms, and areas of their applications are known for several decades. Unique transport (including superconductivity), mechanical (including ultrahardness) and optical properties have been discovered or predicted for these materials. Under non-equilibrium conditions, combinations of light atoms are organized in known nanoclusters (fullerenes, nanotubes, onions, cones, etc.). Do the nanoclusters belong to the appropriate phase diagrams?

This Special Issue of *Nanomaterials* is not restricted by the fundamental problem of the nanocluster phase existence in the phase diagram. The main target is properties and applications of light atoms-based nanomaterials. Structural self-organization under extreme conditions, including large shear deformation, is just the unique tool that can ensure the discovery of new advanced materials.

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Editor-in-Chief

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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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