Special Issue

Crystallization and Assembly-Driven Nanostructures for Energy, Electronics, Environment and Emerging Applications

Message from the Guest Editor

Self-assembly and crystallization are important processes that govern performance and applications of a wide range of materials and nanomaterials found in nature and in our society. We wish to see how crystallization or assembly-driven nanostructures can further have an impact on energy conversion, energy transport, and energy storage processes, as well as in various optoelectronic, environmental, and emerging applications. In this Special Issue of Nanomaterials, we wish to gather updates on different aspects of self-assembly and crystallization processes in nanomaterials.

We welcome articles in the form of reviews, short communications, as well as full articles. These include but not limited to:

- Theory, simulation, and modeling;
- Synthesis of novel materials for self-assembly, crystal-containing multicomponent materials, nanopatterning;
- Novel processes and technique improvements for optimized assembly and crystalline complexes;
- New or potential applications;
- Biomimetic or bio-inspired materials, self -assembled interfaces, and complexes;
- Novel characterization or in situ observations;
- Structure–property correlations.

Guest Editor

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Deadline for manuscript submissions

closed (30 April 2022)

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
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