



Nanoscale Self-Assembly: Nanopatterning and Metrology

Guest Editor:

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Message from the Guest Editor

The self-assembly process underlies a plethora of natural phenomena from the macro to the nano scale. In lithography, the use of self-assembling materials is considered an extremely promising patterning option to overcome the size scale limitations imposed by the conventional photolithographic methods. Although considerable progress has been made so far in the control of self-assembly processes applied to nanolithography, a number of unresolved problems related to the reproducibility and metrology of the self-assembled features are still open. The aim of the present Special Issue is to gather original research papers and comprehensive reviews covering various aspects of the self-assembly processes applied to nanopatterning. Topics include but are not limited to the following: Theory, simulation, and synthesis of self-assembling materials; Development of novel self-assembly methods; The realization of nanometric structures and devices; Improvement of long-range order (directed self-assembly, dewetting, coassembly, and hierarchical assembly); Metrology issues related to the nanoscale characterization of self-assembled structures.





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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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