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## Synthesis and Applications of Block Copolymers and Inorganic Nanoparticles

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### Message from the Guest Editor

Block copolymers have attracted a great deal of attention because of their ability to self-assemble into a variety of nanostructures depending on their molecular structures and the surroundings. Recent progress in the precise synthesis of polymers has further expanded the possibility of the formation of novel, well-defined nano-objects from block copolymers. The interactions between block copolymers and inorganic components are interesting research topics from the viewpoints of both fundamental and material sciences. Block copolymers can be used to synthesize inorganic nanoparticles or assemble nanoparticles into higher-order structures, leading to next-generation nanomaterials with unique optical, magnetic, electronic, and catalytic properties. In these cases, block copolymers often do not merely act as templates but rearrange their assembled structures in response to interactions with inorganic components (synergistic assembly).

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**Prof. Dr. Ayae Sugawara-Narutaki**

*Guest Editor*



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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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