



Synthesis, Self-Assembly, and Applications of Block Copolymers

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Nanomanufacturing with high efficiency and low cost is a key technology for next-generation electronic/photonic/energy devices. Block copolymers (BCPs) have been extensively studied for decades due to their ability to generate ordered nanoscale patterns induced by microphase separation.

Recent progress in block copolymer synthesis, templating, and processing has enabled sub-7nm patterns with a high degree of controllability bringing BCPs closer to practical applications in nanolithography. Moreover, the delicate design of block copolymer molecules/morphology, and the development of various block copolymer-based nanocomposites are expanding their application fields to organic photovoltaics/semiconductor, display, catalysis, filtration, sensor, energy device, and biomedical applications.

This Special Issue will cover a wide range of recent developments in block copolymer research, including, but not limited to, the design of block copolymer molecules, modeling, directed self-assembly, block copolymer particles, multiblock copolymers, and their potential applications.

Dr. Hong Kyoong Choi

Guest Editor





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