

Fabrication of Nanoscopic Templates by Block Copolymer and Supramolecular Self-Assemblies

권기영, 최대근, 양승만, 정희태*
한국과학기술원 생명화학공학과
(heetae@kaist.ac.kr*)

Self-assembly of building blocks is one of "bottom-up" approaches, which a considerable number of studies have been conducted on. Especially, block copolymer and supramolecules are major part of these studies for fabrication of 2D nanopatterns, due to simple control of pattern size and low-cost parallel processes. In this work, the ordered nanopatterns of metal dot arrays available for magnetic storage device, was successfully fabricated by self-assembly of block copolymer. The process route consists of only several steps, and is cost-effective by parallel processing, e.g., reactive ion etching (RIE) and electron-beam (E-beam) deposition. And more higher integration, supramolecules was used with the characteristic dimension of several nanometer scale. The nanopatterns fabricated by self-assembly of supramolecules showed the possibility for nanolithography.