Lithography based on block copolymers - basic technologies: Innovative patterning

Block copolymer lithography has gathered much attention in nanofabrication, holding promise for simple and low cost nanopatterning into ordered domains. Typical dimensions of these nanostructures range from 5 to 50 nm, a span that encompasses those required by the semiconductor industry for the fabrication of future integrated circuits, opening new perspectives into different applications. Here, we highlight some of the recent advances in integrating self-assembling block copolymers into the conventional nanofabrication processes for their practical application in metrology, microelectronics, photonics, and anti-counterfeit technologies.