

Abstract Submitted
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Fabrication of Nanodopatterns Using Microphase Separation of Block Copolymer ANDREW BRADSHAW, Texas A&M University, TAKUO TANAKA, NOBUYUKI TAKEYASU, ATSUSHI TAGUCHI, SATOSHI KAWATA, RIKEN — Arranging and patterning on the nanoscale is of great importance to future efforts in data storage and nano-optical effects such as achieving negative permittivity and permeability at visible wavelengths. One way to achieve these nanoscale patterns is through the use of self-assembling block copolymer solutions. The diblock copolymer used, Polyethylene-block-Poly(ethylene glycol), was dissolved in a suitable solvent and then spin coated onto a substrate. During spin coating the diblock copolymer undergoes microphase separation to produce feature sizes on the scale of tens of nanometers. Further investigation into spin coating efficiency is researched through modification of properties such as solubility of the block copolymer, solvent volatility, and ambient humidity.

Andrew Bradshaw
Texas A&M University

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