

Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

Perpendicularly oriented nanostructures by using star-shaped poly(methyl methacrylate)-block-polystyrene thin film SANGSHIN JANG, KYUSEONG LEE, HONG CHUL MOON, JICHEOL PARK, JONGHEON KWAK, GUMHYE JEON, JIN KON KIM¹, Pohang Univ of Sci & Tech — Thin films of star-shaped 18-arm poly(methyl methacrylate)-block-polystyrene copolymers ((PMMA-*b*-PS)₁₈) with two different volume fraction of PS block (f_{PS}) (0.60 and 0.75). Interestingly, perpendicularly oriented lamellar and cylindrical structures were confirmed by atomic force microscopy (AFM) and grazing-incidence small angle X-ray scattering (GISAXS), after thermal annealing without additional treatment such as random copolymer treatment or solvent annealing. Perpendicularly oriented nanostructures were also achieved for versatile substrates such as PS(or PMMA)-brushed substrate, flexible substrate (PEN) or gold-deposited substrate.

¹corresponding author

Jin Kon Kim
Pohang Univ of Sci & Tech

Date submitted: 11 Nov 2014

Electronic form version 1.4