

MAR16-2015-002189

Abstract for an Invited Paper
for the MAR16 Meeting of
the American Physical Society

Photothermal assembly of block copolymers

KEVIN YAGER, Center for Functional Nanomaterials, Brookhaven National Laboratory

This talk will discuss recent work on the use of photothermal methods to control the ordering of block copolymer thin films. Photothermal methods can be used to generate temperature gradients and shear fields, which have a strong influence on block copolymer assembly. For example, assembly can be accelerated, and morphology can be aligned. These methods also highlight the non-equilibrium, pathway-dependence of self-assembly. We present examples of exploiting these effects to control alignment, and to iteratively construct arbitrary lattice symmetries.