Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Nanopatterns in a confined triblock copolymer JUMI LEE, YEONGMIN JEON, Dankook University, JAEUP KIM, Ulsan Institute of Science and Technology, JUNHAN CHO, Dankook University — Ordered structures in thin films of ABC triblock copolymers are studied experimentally and theoretically in order to be applied to fabrication of nanoscale electronic devices. A field-theoretic simulation method based on the self-consistent field theory is used to generate useful nanopatterns starting with a random configuration of compositions. The main parameters for the phase stability, such as Flory interaction parameters, total chain size, compositions, film thickness, and surface interactions, are considered as controllable variables in the present analysis. By using some typical triblock copolymers, nanopatterns observed in experiments are comparable with those in the simulation.

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Date submitted: 08 Dec 2010 Electronic form version 1.4