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Phase Transitions in block copolymers under external electric field and in confinements ANDREI ZVELINDOVSKY, Centre for Materials Science, University of Central Lancashire, Preston, UK — Phase transitions induced by external factors in various block copolymer systems are investigated by means of coarse-grained computer simulations. We develop several meso-scale computational techniques: dynamic self-consistent field theory and cell dynamics simulation. This contribution puts focus on dynamics of systems subjected to two examples of external fields. First, we describe dynamics of phase transitions of various block copolymer morphologies (lamellae, hexagonally packed cylinders, spheres, gyroid, hexagonally perforated lamellae) under an applied electric field. Second example illustrates kinetics of surface phase transitions in confined systems (thin films).

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