

Abstract Submitted
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Diblock copolymers in thin films MARIANNE HECKMANN, BARBARA DROSSEL, Darmstadt, Technical University — We investigate the phase behaviour of diblock copolymers which are confined to thin films. We employ both self-consistent field (SCFT) theory and Strong Stretching Theory (SST) in order to compute the free energies of different possible morphologies. We show that only the simplest structures which are combinations of the bulk morphologies are stable when cylinder- or sphere-forming copolymers are confined between hard walls interacting with the monomers. We present and compare phase diagrams computed with SCFT and SST for different sets of parameters.

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