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Abstract for an Invited Paper
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Pattern Coarsening in a Two Dimensional Hexagonal System¹

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We have been studying the ordering, annealing, coarsening and alignment of two dimensional periodically ordered structures in thin films of diblock copolymers*. Coarsening by dislocation and disclination annihilation is clearly observed in AFM studies of monolayer films of cylindrical patterns with a time dependence given by t^α , with α about 1/4. However in hexagonal structures the mechanism is less well defined and appears to involve the collapse of small grains entrained in the grain boundaries of larger domains. Remarkably the exponent of α about 1/4 remains. We also report on shear aligned samples and samples quenched in a gradient after alignment. * Harrison C, Angelescu DE, Trawick M, Cheng ZD, Huse DA, Chaikin PM, Vega DA, Sebastian JM, Register RA, Adamson DH, EUROPHYSICS LETTERS **67** 800-806 (2004)

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