

Abstract Submitted
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Critical Lamellar Thickness of Polymer Crystal Growth Studied by Dynamic Monte Carlo Simulations¹ XIAOMING JIANG, WENBING HU, State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing University, China — We set up a parallel-oriented slit to block lamellar crystal growth of chain molecules, and found a critical spacing of the slit gate, which reflected the critical lamellar thickness (L_{min}) for crystal growth. The values of L_{min} measured at various temperatures provided useful information about the role of lamellar crystal thickness in the kinetics of polymer crystal growth. More interesting, we found that the excess lamellar thicknesses decreased with the increase of temperatures, in contradictory to the prediction of Lauritzen-Hoffman theory.

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