

Abstract Submitted
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Crystallization of Tethered Chain Layers in Crystalline-Crystalline Diblock Copolymers RYAN M. VAN HORN, University of Akron, JOSEPH X. ZHENG, MING-SIAO HSIAO, SIWEI LENG, HAO-JAN SUN, STEPHEN Z.D. CHENG — Confined-crystallization has been researched in many ways using diblock copolymers. Microphase-separated morphologies provide a controllable environment to tune the confinement parameters. Another method of confined crystallization is through tethering one end to a surface with variable tethering density. Single crystals of crystalline-crystalline diblock copolymers have been made using dilute solution self-seeding. This technique provides a monolayer of chains on the single crystal surface. PEO-b-PCL samples with various molecular weights have been used to crystallize one block into the single crystal, while the other block is sequestered to the basal surfaces. The crystallizability as a function of tethering density as well as the crystal orientation in these single surface layers has been studied.

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