

Abstract Submitted  
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**Polymer Single Crystals as 2D Templates** STEPHEN CHENG, RYAN VAN HORN, WENBIN ZHANG, University of Akron — Polymer single crystals grown from dilute solution provide a novel approach to studying polymer physics. Because these crystals are lamellar in shape, their fold surfaces provide a platform from which to study two-dimensionally ordered structures. By coupling other polymers (forming multiblock copolymers) or inorganic particles (forming organic/inorganic hybrids) to the crystallizable block, it is possible to analyze the inherent physics of confining this assembly to 2D space and to provide an opportunity to use the crystal as a template. These non-crystallizable components are excluded from the single crystal lattice, tethering them to both surfaces. This control over the 2D assembly of these materials allows us to study materials for various biological, optical, and electrical applications.

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