Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

**Macroscale Janus polymer single crystal film and its wettability analysis** HAO QI, WENDA WANG, TIAN ZHOU, CHRISTOPHER LI, Drexel University — Liquid-liquid interface between two immiscible solvents is crucial to studying amphiphile and colloidal self-assembly. It can also guide chain folding during the crystallization process. In this presentation, we show that crystallization of dicarboxy end functionalized poly($\epsilon$-caprolactone) at water/pentyl acetate interface result in millimeter scale, uniform polymer single crystal (PSC) film. Due to the asymmetric nature at the liquid-liquid interface, the PSC film exhibit Janus property - a hydrophobic side and a hydrophilic side, which is confirmed by in-situ nanocondensation experiment using an environmental scanning electron microscope. The thickness of the PSC film changes with different polymer solution concentration, revealing a surface tension dominated crystallization process.

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Date submitted: 14 Nov 2013 Electronic form version 1.4