Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Polymer single crystal membranes from curved liquid/liquid interface WENDA WANG, CHRISTOPHER LI, Department of Materials Engineering, Drexel University, SOFT MATTER RESEARCH GROUP TEAM — The weak mechanical properties of the current available vesicles such as liposomes, polymersomes, colloidosomes limit their applications for targeting delivery of drugs/genes. Recently, we developed an emulsion-crystallization method to grow polymer curved single crystals. Using polyethylene and poly(l-lactic acid)as the model systems, enclosed or partially open polymer single crystals have been obtained. Electron diffraction and XRD results confirmed their crystalline structure. The single crystal hollow sphere is structurally close to polymersomes, but with thinner wall and higher modulus.

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Date submitted: 14 Nov 2013 Electronic form version 1.4