Abstract Submitted for the MAR12 Meeting of The American Physical Society

How to control GUV shape transformations KEJIA CHEN, ADAM SZMELTER, SUNG CHUL BAE, STEVE GRANICK, University of Illinois at Urbana-Champaign — Using a microfluidic platform, we expose giant unilamellar vesicles (GUVs) to programmed time-varying profiles of osmotic pressure. In response to these conditions that intentionally do not approach equilibrium, water flows in and out, and the excess area changes in response. Shape transformations are observed that were not previously reported, nor predicted theoretically.

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Date submitted: 10 Nov 2011

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