Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

**Morphology and Fluctuations of Suspended Graphene Oxide Sheets**[1] MATTHEW GRATALE, DANIEL T. N. CHEN, ZEXIN ZHANG, ZHENGTANG LUO, Department of Physics and Astronomy, University of Pennsylvania, ERIK SMITH, PETER COLLINGS, Department of Physics and Astronomy, Swarthmore College, ALAN T. JOHNSON, ARJUN YODH, Department of Physics and Astronomy, University of Pennsylvania — We study the morphology and fluctuations of suspended graphene oxide sheets by phase contrast and confocal microscopy. The morphology of graphene oxide sheets is manipulated by changing solvent pH. Labeling the graphene oxide sheets with quantum dots permits further study of morphology, as well as the possible study of the fluctuations, through the use of confocal microscopy. The direct imaging studies of the morphology are complimented by light scattering studies, conventionally used to characterize morphology of colloidal membranes. These direct imaging studies can lead to measurements of the mechanical properties of graphene oxide in solution.

[1]This work is supported by NSF grant DMR-080488 (AGY) and MRSEC grant DMR-0520020.

Matthew Gratale
Department of Physics and Astronomy, University of Pennsylvania

Date submitted: 18 Nov 2009 Electronic form version 1.4