Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

**The Role of Confinement on Biologically Derived Liquid Crystals**[1]

MARGUERITE BROWN, DANIEL BLAIR, Georgetown University Department of Physics and Institute for Soft Matter Synthesis and Metrology — Suspensions of stabilized, dilute microtubules provide a versatile model system for understanding the structure of confined liquid crystals. Microtubule solutions are easily transported as a simple monomeric fluid that can easily be polymerized into rod-like macromolecules after they are confined within quasi-2D geometries (microfluidics). Using polarization and confocal microscopy, we analyze the structure of liquid crystals in a variety of geometries. We will present results on the role of confinement, boundary conditions and concentration, specifically discussing how each variable alters nematic ordering.

[1]ARCS Fellowship: General Dynamics Corporation Scholar

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Date submitted: 09 Nov 2012 Electronic form version 1.4