

Abstract Submitted  
for the DFD12 Meeting of  
The American Physical Society

**Active Nematic Flows** GREG FOREST, UNC Chapel Hill, QI WANG, University of South Carolina, RUHAI ZHOU, Old Dominion University — The recent flurry of activity in swimming particle suspensions is extended to macromolecular rods by incorporating polarity, active stress, and density gradients into the kinetic theory of nematic polymers. Simulations predict phenomena unique to nano-rod swimmers at dilute and semi-dilute concentrations.

Greg Forest  
UNC Chapel Hill

Date submitted: 09 Aug 2012

Electronic form version 1.4