

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Twisting in a new direction: Conformationally-tunable interactions of rafts in colloidal membranes JOIA MILLER, Brandeis University, PRERNA SHARMA, Indian Institute of Science Bangalore, ZVONIMIR DOGIC, Brandeis University — Colloidal membranes composed of micron-long chiral rods provide a rich test system through which to study membrane properties. Specifically, we can study membrane-mediated interactions using self-assembled rafts of shorter rods suspended in a membrane. These rafts, composed of right-handed rods, display strong repulsive interactions when in a background membrane of left-handed rods driven by the chirality of the system. We find that tuning the net chirality of the membrane allows rafts to bind together into groups via an attractive interaction driven by conformational switching of rod orientation at the rafts' edge.

Joia Miller
Brandeis University

Date submitted: 11 Nov 2016

Electronic form version 1.4