

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Frustrated Ordering of Colloidal Crystals in Spatially Varying Potentials VISHAL SONI, WILLIAM T.M. IRVINE, University of Chicago — Frustrated ordering processes are of wide interest in condensed matter systems. Experiments on interfacial colloidal systems have resulted in several recent insights into the two dimensional ordering of crystalline lattices frustrated by Gaussian curvature. We study the ordering of two-dimensional lattices of colloids frustrated by spatially varying dielectrophoretic forces. In particular, we investigate the role of topological defects in organizing the conformal-crystal like ground state and the defect dynamics that lead to equilibration as the applied dielectrophoretic force is increased.

Vishal Soni
University of Chicago

Date submitted: 28 Nov 2012

Electronic form version 1.4