

Abstract Submitted
for the DFD15 Meeting of
The American Physical Society

Electrohydrodynamics Of Multicomponent Vesicles¹ PRERNA GERA, DAVID SALAC, University at Buffalo SUNY — The addition of cholesterol into a lipid membrane induces the formation of distinct domains. These domains try to minimize the overall energy of the system by coalescence and migration. The application of electric fields will induce flow of these membrane domains and influence the rate at which they coarsen. In this work the electrohydrodynamics of multicomponent vesicles is numerically modelled. The method uses a Cahn-Hilliard-Cook model of the lipid domains restricted to a deforming three-dimensional vesicle and will be briefly discussed. Sample results will be presented and compared to experimental observations.

¹This work supported by NSF Grant #1253739

David Salac
University at Buffalo SUNY

Date submitted: 29 Jul 2015

Electronic form version 1.4