Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Concentration-curvature coupling in endocytosis, SARAH NOWAK, Dept of Biomathematics, UCLA, Los Angeles, CA 90095-1766, TOM CHOU, Dept. of Biomathematics and Dept. of Mathematics, UCLA, Los Angeles, CA 90095-1766 — The wrapping of symmetric particles by lipid bilayers depends on the membrane bending rigidity and the adhesion between the membrane and the particle. We consider the additional effects of a membrane composed of a binary lipid mixture. The different lipid components induce different spontaneous curvatures, which mediates the wrapping process through an induced phase separation near the particle-membrane contact region. We find that mixtures always enhance the wrapping. Asymptotic results are also found for the membrane shape in the limit of strong and weak spontaneous curvature-lipid concentration coupling.

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Date submitted: 19 Nov 2006   Electronic form version 1.4