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Anomalous Slow Domain Growth in Membranes with Asymmetric Transbilayer Lipid Distribution MOHAMED LARADJI, Physics Department, University of Memphis, Memphis, TN 38152, P.B. SUNIL KUMAR¹, Center for Biomembrane Physics, University of Southern Denmark, Campusvej 55, DK-5230, Odense-M, Denmark — The effect of asymmetry in transbilayer lipid distribution on the phase separation of self-assembled multicomponent fluid vesicles is investigated numerically via dissipative particle dynamics. We show that this asymmetry induces a spontaneous curvature which alters significantly the morphology and dynamics of the lipid mixture. In particular, at intermediate tension, domain growth is found to be anomalously slow dynamics. In contrast, in the limiting cases of low and high tensions, the dynamics proceed toward full phase separation.

¹Permanent address: Physics Dept., Indian Institute of Technology-Madras, Chennai-600036, India

Mohamed Laradji
University of Memphis

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