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Single liposome tracking in dense suspensions of stabilized liposomes YAN YU, Dept of Materials Science and Engineering, Univ of Illinois at Urbana-Champaign, STEPHEN ANTHONY, Dept of Chemistry, Univ of Illinois at Urbana-Champaign, LIANGFANG ZHANG, Dept of Chemical Engineering, Univ of Illinois at Urbana-Champaign, ANGELO CACCIUTO, STEVE GRANICK, Dept of Materials Science and Engineering, Univ of Illinois at Urbana-Champaign — Methods developed to stabilize phospholipid vesicles against fusion, up to volume fraction around 80%, enable one to perform single-particle tracking on these soft, flexible, hollow objects. Stabilization is accomplished by studding the outer leaflet with charged nm-sized particles. Image analysis of time trajectories, obtained using epifluorescence imaging, was performed at sub-pixel resolution. This talk will emphasize aspects of curiously heterogeneous dynamics and also quantification of "cage" size in this system. Taken together, this system of charged, polydisperse, flexible objects displays rich dynamics that contrasts acutely with known behavior for hard-sphere dense particle systems.

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