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Zoology of giant unilamellar vesicles YAN YU, Dept of Materials Science & Engineering, Univ of Illinois at Urbana-Champaign, STEPHEN M. ANTHONY, Dept of Chemistry, Univ of Illinois at Urbana-Champaign, SUNG CHUL BAE, STEVE GRANICK, Dept of Materials Science & Engineering, Univ of Illinois at Urbana-Champaign — Lipid vesicles, especially giant unilamellar vesicles (GUVs) are often used as simplified models for biological membranes, but their polymorphous panoply of shapes and shape changes is notorious to those who work with them. This affords opportunities to study why phospholipid membranes so often fail to minimize their surface area to adopt spherical shapes. For example, tube-like membranes are formed when flow is introduced during hydration and when certain types of lipids or polymers are inserted into the membrane. This talk will describe the evolution of GUVs from spherical to pearl-like and to tube-like shapes, and back again reversibly.

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