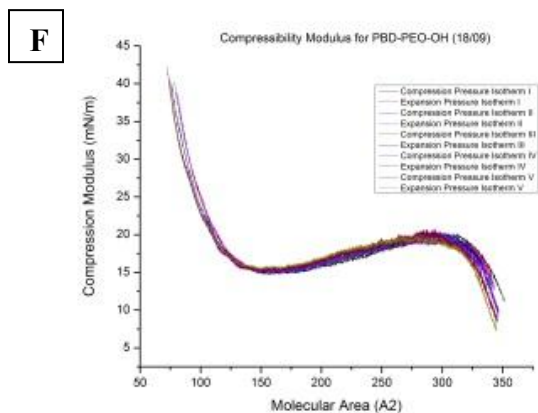
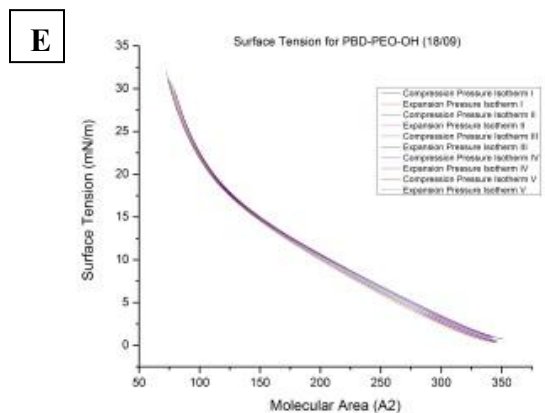
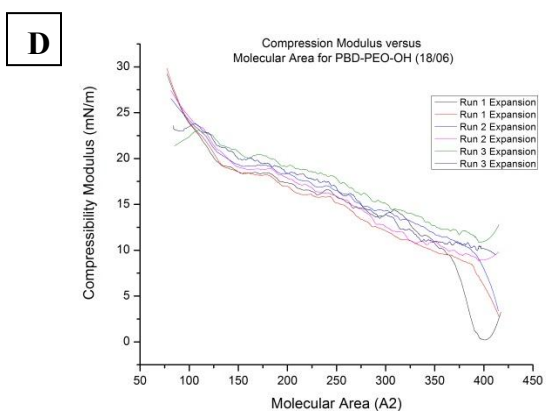
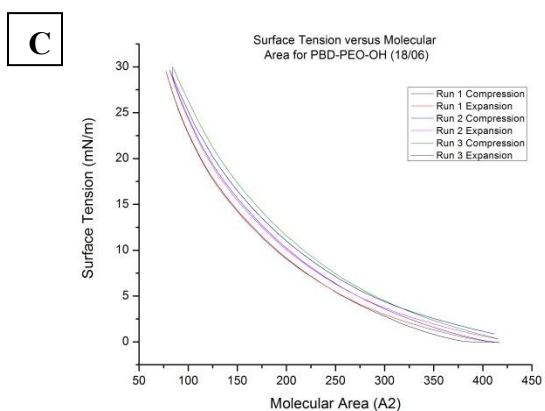
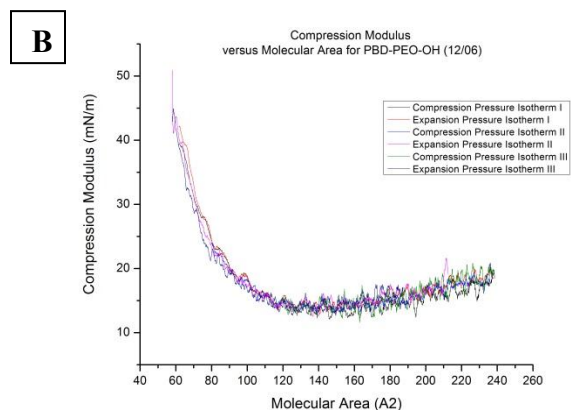
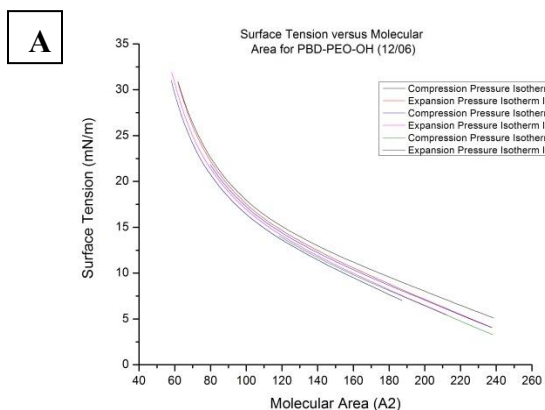
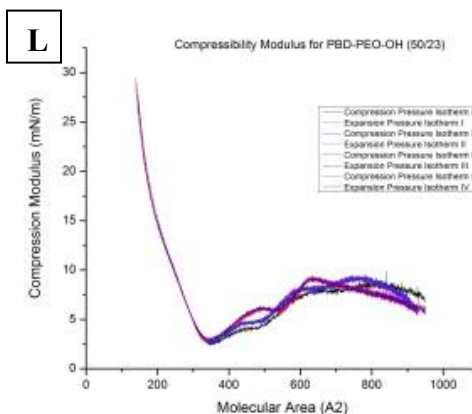
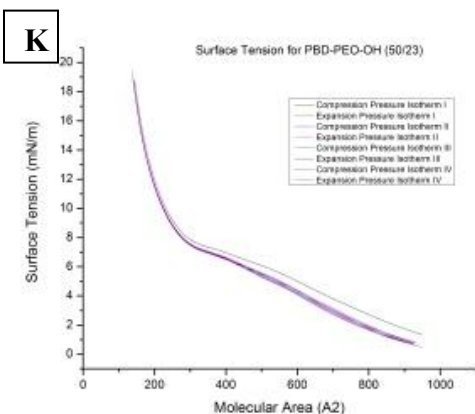
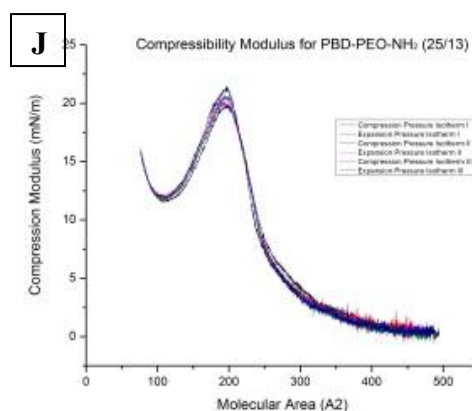
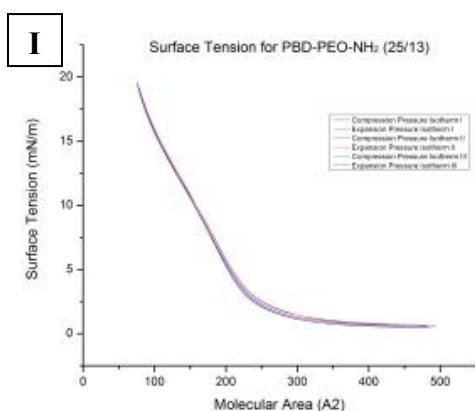
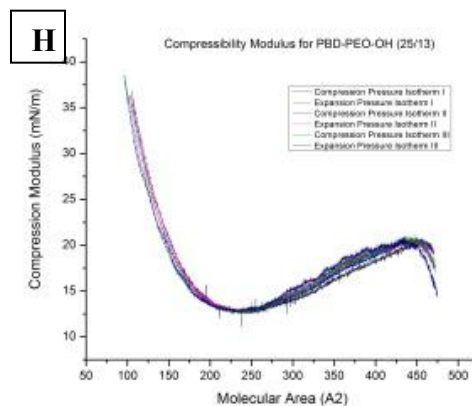
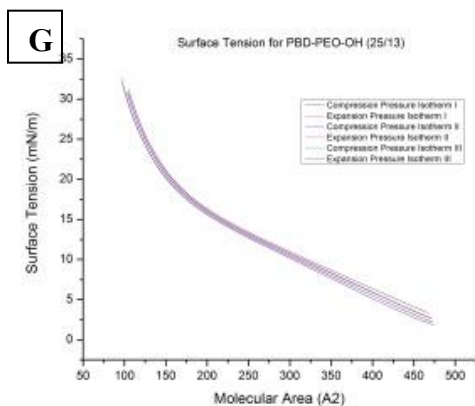
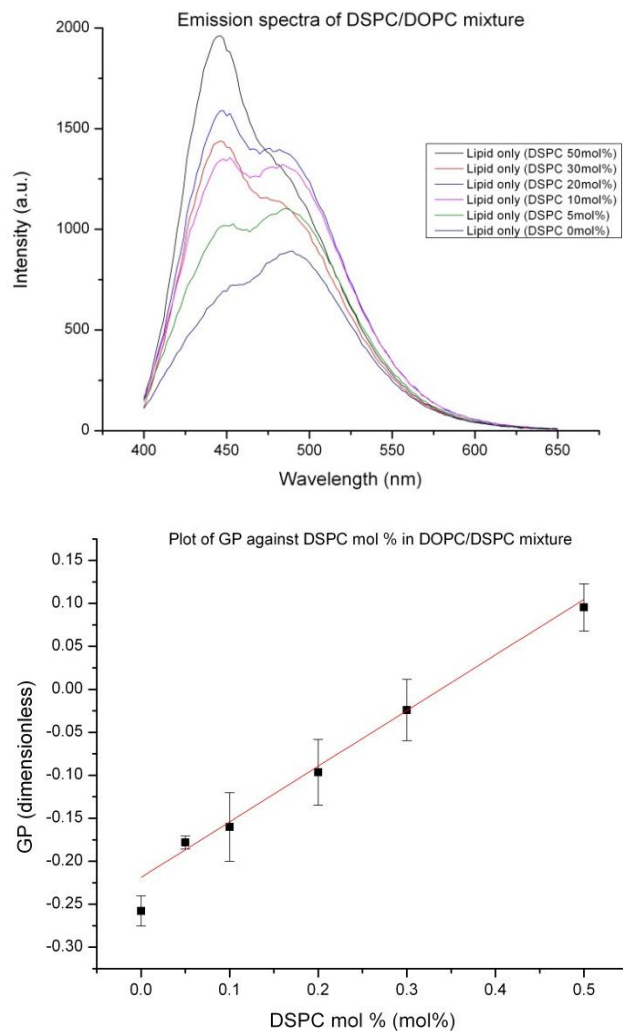


Supporting Information

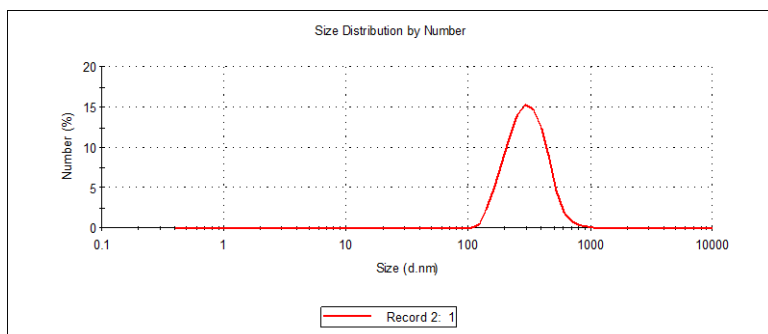




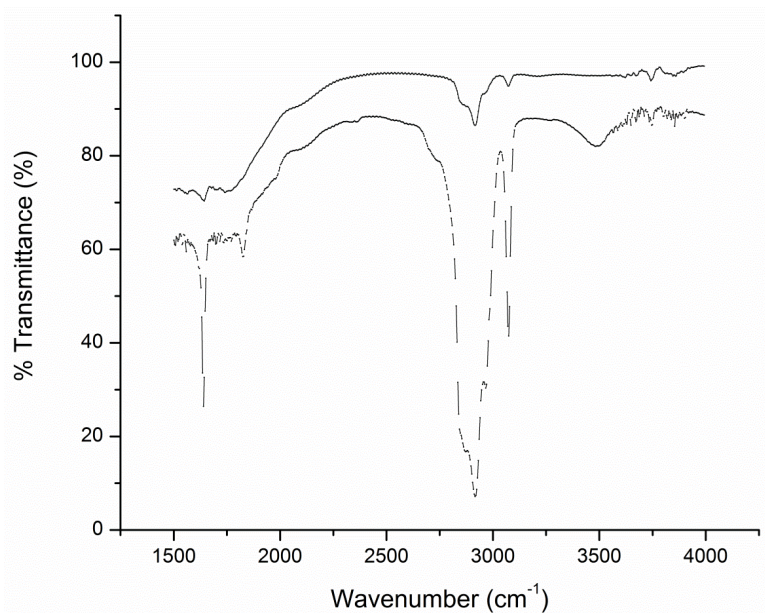
SI. Figure 1. Surface tension and compressibility modulus of (a,b) PBD-PEO-OH (12/06); (c,d) PBD-PEO-OH (18/06); (e,f) PBD-PEO-OH (18/09); (g,h) PBD-PEO-OH (25/13); (i,j) PBD-PEO-NH₂ (25/13); (k,l) PBD-PEO-NH₂ (50/23).



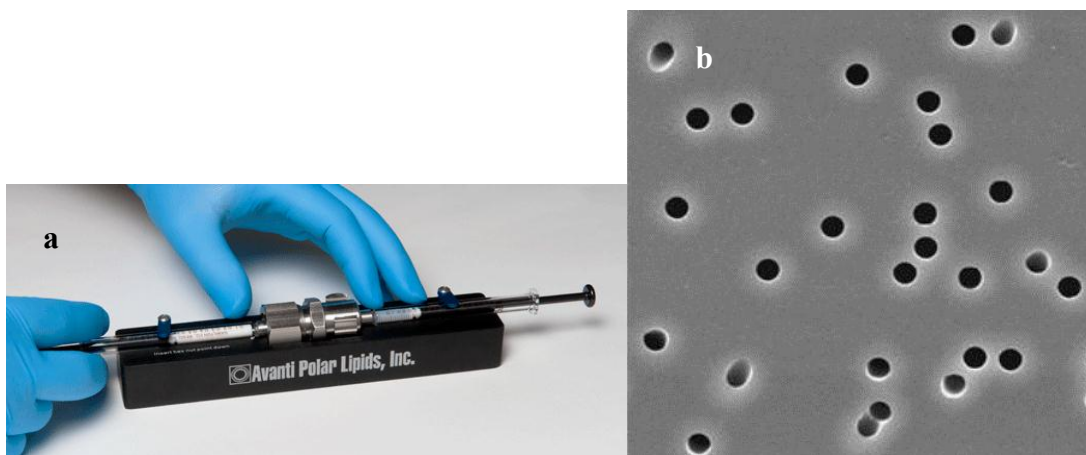
SI. Figure 2. (a) The emission spectra of a series mixture of DOPC and DSPC lipids. The emission fluorescence was recorded at room temperature ($T=25^{\circ}\text{C}$). At this condition, DOPC is in liquid-crystalline phase (phase transition temperature -20°C); DSPC is in gel phase (phase transition temperature 55°C). As the DSPC mol% in the mixture increases, the characteristic emission peaks at 440nm and 490nm remain but the ratio between these two peaks change according to DSPC mol%. (b) GP (Generalized Polarization) calculated versus DSPC mol% in the mixture.



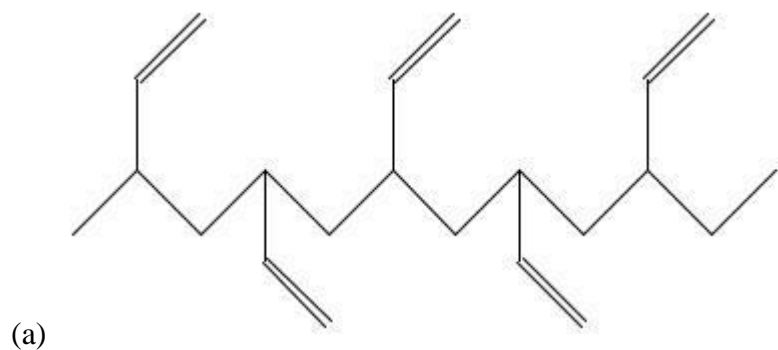
SI Figure 3. DLS result measures the diameter of the vesicle suspension, which indicates a mono-disperse uniform size distribution around 160nm.



SI Figure 4. The extent of crosslinking has been verified via FT-IR in transmittance mode (uncrosslinked vesicles represented by dotted line; crosslinked vesicles represented by solid line). The peaks corresponds to C=C stretch (at 1620-1680cm⁻¹), =C-H stretch (at 3010-3100cm⁻¹) have reduced tremendously after free radical addition reaction.



SI Figure 5. (a) The set-up of mini-extrusion includes two syringes at both ends of the chamber/holder with the PC membrane inside the chamber/holder; (b) images of track-etched PC membrane filter with pore size 100nm^1 . All of the vesicle solutions were subjected to a mini-extrusion process to reduce the size distribution of vesicles to be monodispersed with a uniform distribution. The mini-extrusion process is achieved by repeatedly forcing the vesicle solution through a PC (polycarbonate) membrane with a fixed pore size from one syringe to the other as outlined above.



¹ Mini-extrusion set-up from Avanti[®] Polar Lipids. Avanti[®] Polar Lipids. 2013.
http://www.avantilipids.com/index.php?option=com_content&view=article&id=185&Itemid=193



SI Figure 6. The chemical structure of (a) *1,2*-addition PBD polymer segment; (b) *1,4*-addition PBD polymer segment. The C=C double bond is present on the side chain of *1,2*-addition polymer, and on the main chain of *1,4*-addition polymer.