

Modification of lipid membrane properties by ionic liquids investigated with Langmuir monolayers and bilayers in vesicles

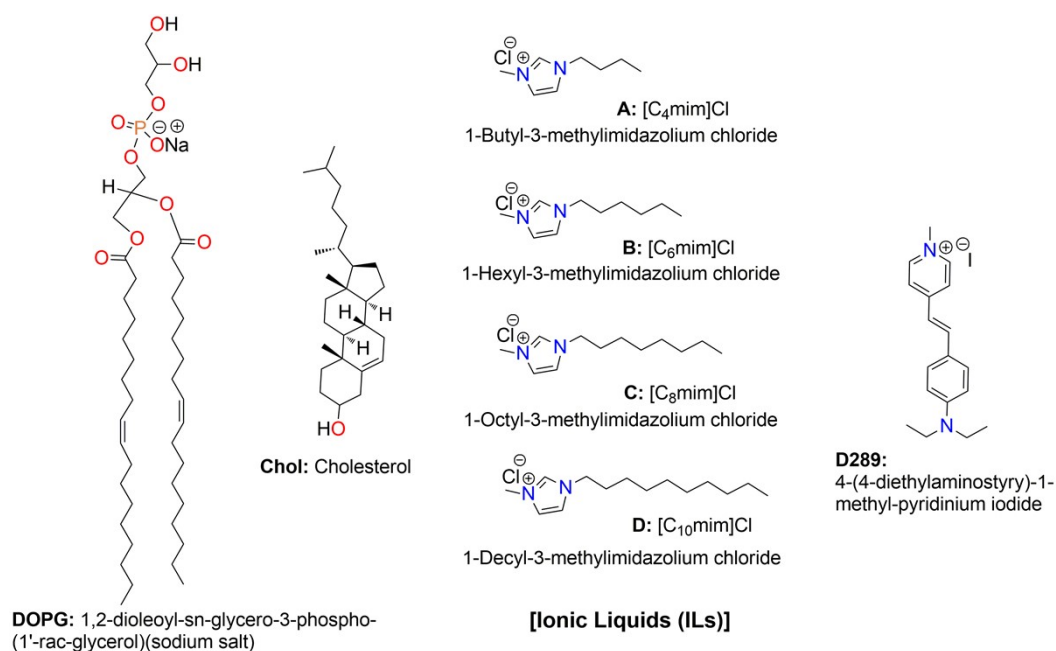
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Scheme S1: Chemical Structures of DOPG, cholesterol, ionic liquids and the probe molecule (D289).

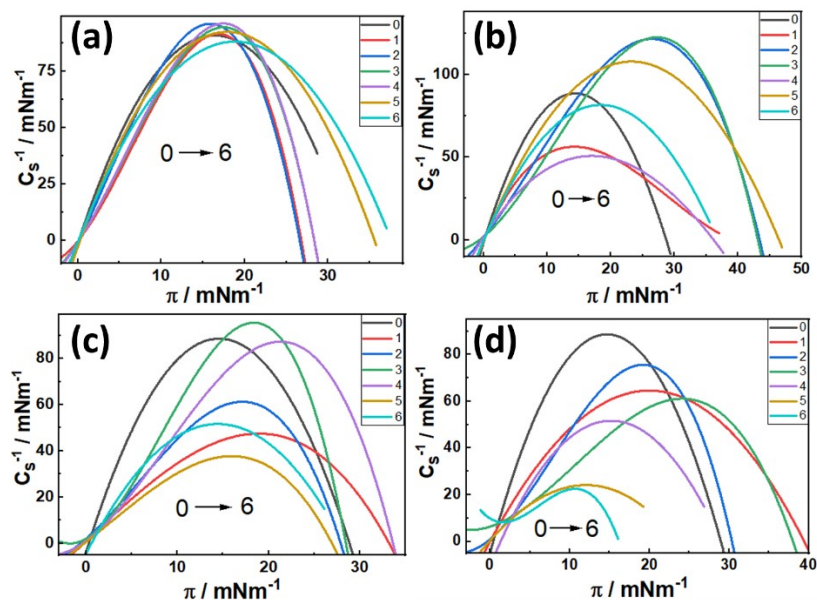


Figure S1: Surface pressure (π) dependent compressibility (C_s^{-1}) of the Langmuir monolayer composed of DOPG + cholesterol (30 mol%) and ILs at different concentrations. 0→6 indicates the increase of IL concentrations in the subphase (0, 0 mM (black); 1, 0.01 mM (red); 2, 0.1 mM (green); 3, 0.5 mM (blue); 4, 1.0 mM (cyan); 5, 2.0 mM (magenta) and 6, 5.0 mM (yellow)). The ILs involved are: **a**, [C₄mim]Cl; **b**, [C₆mim]Cl; **c**, [C₈mim]Cl; and **d**, [C₁₀mim]Cl.

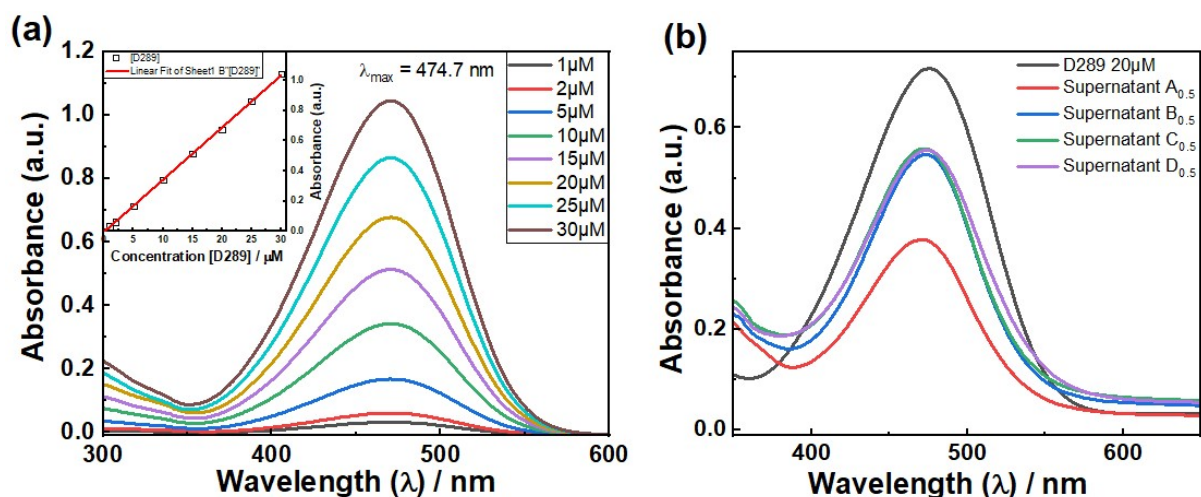


Figure S2: (a) The UV-Vis absorption spectra of the D289 solutions at different concentrations. The inset shows the linear relationship between the absorbance at 474.7 nm and the concentrations of D289. (b); The UV-Vis absorption spectra of the D289 solution (20 μM) and the supernatants after different SUVs (DOPG + 30 mol% cholesterol + ILs) were mixed with the D289 solutions and then removed by centrifugation. The ILs (0.5 mM) introduced in the SUVs are: **A**, $[\text{C}_4\text{mim}]\text{Cl}$; **B**, $[\text{C}_6\text{mim}]\text{Cl}$; **C**, $[\text{C}_8\text{mim}]\text{Cl}$; and **D**, $[\text{C}_{10}\text{mim}]\text{Cl}$.