



Figure 1: The choice of LLC monomer leads to different favorable liquid crystalline phases. The monomer shown in (a) forms the Q_I phase in either the $Ia3d$ (left) or $Pn3m$ (right) space group. The surfaces shown represent the interface between the hydrophilic and hydrophobic regions of unit cell. As pictured, we assume that each region occupies an equal volume. The monomer shown in (b) will form the hexagonal columnar phase (H_{II} or col_h depending on the presence of water).