



Figure 1: The distribution of angles w.r.t. xy plane between alkane chain tail centroids and nearest neighbor centroids for equilibrated parallel displaced (a) and sandwiched (b) configurations both show distinct peaks at  $\pm 33^\circ$ . (c) Integrated 2D WAXS data between  $q_r=1$  and  $q_r=1.42$  shows distinct peaks at with maxima at  $\pm 37^\circ$