Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary Information

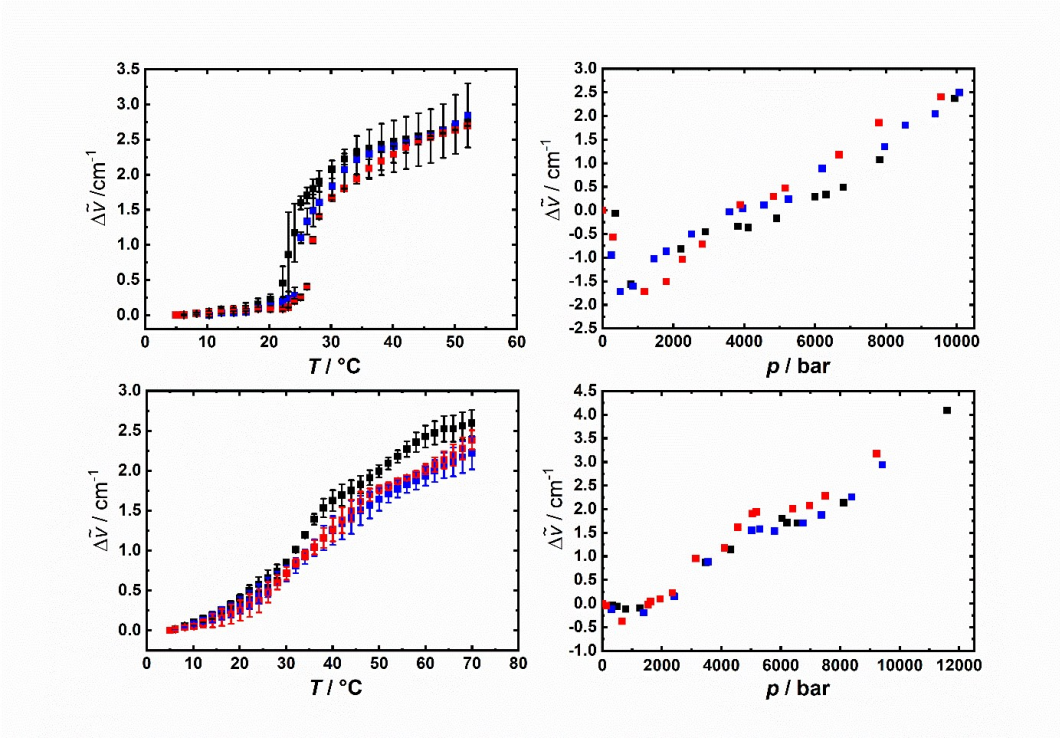

Fig. S1: The results of the temperature (left) and pressure (right) dependent FT-IR spectroscopy data of the symmetric CH_2 stretching vibration at ~2850 cm^{-1} of DMPC (top) and DOPC:DPPC:Chol 1:2:1 (bottom) (black: 0 M, blue: 1 M and red: 3 M TMAO). The wavenumbers are given as difference with respect to the data at 5 °C and 1 bar, respectively. Phase transitions are indicated as changes in the slope of the CH_2 stretching vibration.

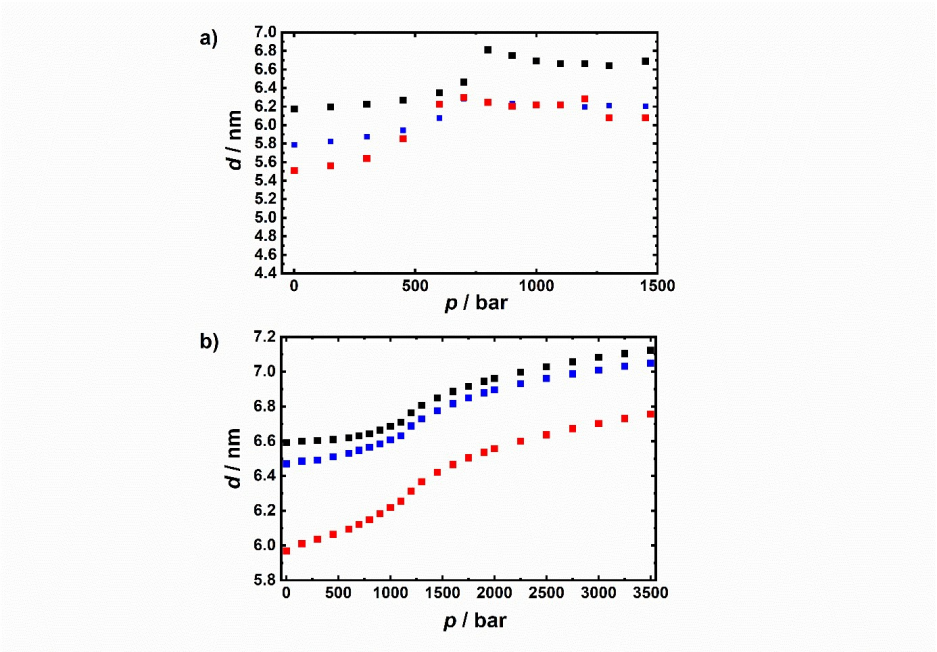

Fig. S2: The effect of TMAO on the pressure dependence of the lamellar repeat distance, *d*, of (a) DMPC and (b) DOPC:DPPC:Chol 1:2:1 (black: 0 M, blue: 1 M and red: 3 M TMAO).

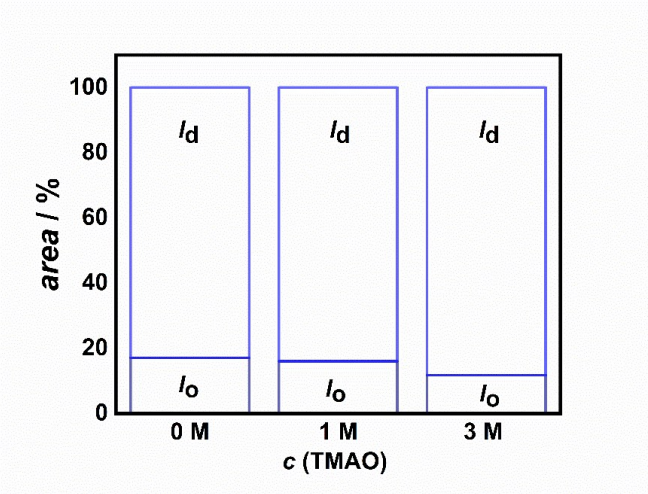

Fig. S3: Domain area distribution of liquid-ordered (l_o) and liquid-disordered (l_d) phases of the lipid system DOPC:DPPC:Chol 1:2:1 for different TMAO concentrations.

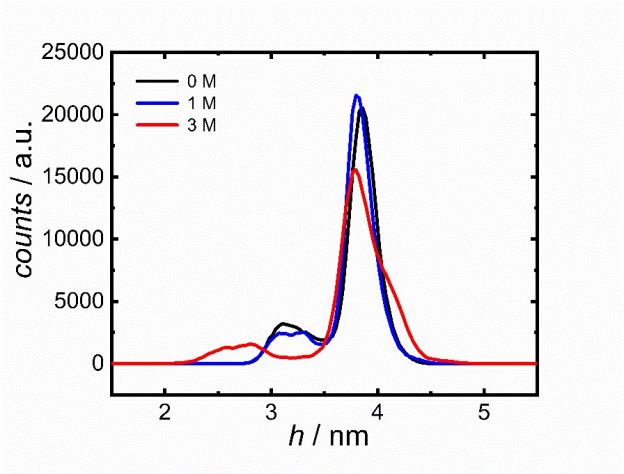

Fig. S4: Membrane height distribution (measured relative to the mica surface) of the lipid system DOPC:DPPC:Chol 1:2:1 for different TMAO concentrations. The difference between the maxima of the height distribution reflects the height difference between domains.