Soft Matter

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ARTICLE TYPE

Supplementary Information

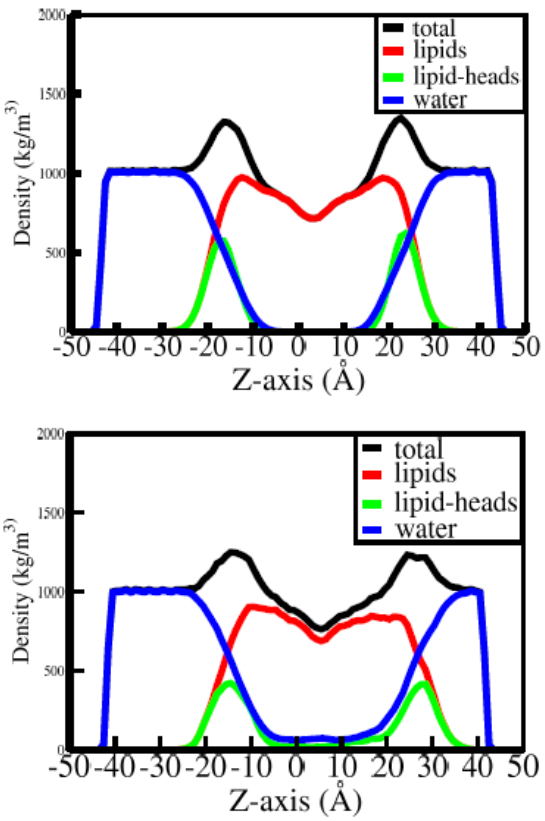

Fig. S1 (Top) The density profiles of the POPC lipid bilayer which was equilibrated for 20 ns at 300 K. (Bottom) The density profiles of the same POPC lipid bilayer with a pore inside. The pore formation field is 0.75 kcal/molÅ*e* (0.32 V/nm).

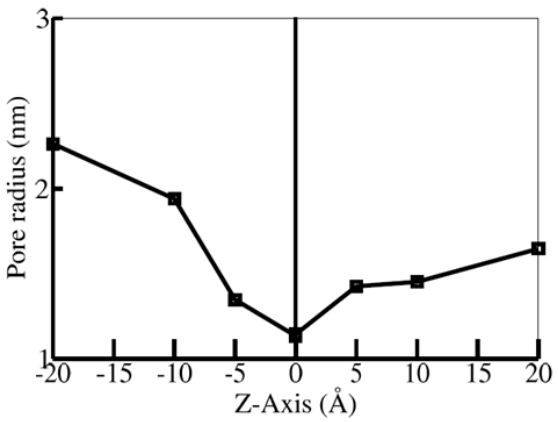

Fig. S2 The variation of pore radius along Z-axis (axis of the pore) for a field of 0.75 kcal/molÅ*e* (0.32 V/nm) applied to POPC at 300 K. The radius was calculated from ImageJ by viewing different cross-sections of the bilayer.

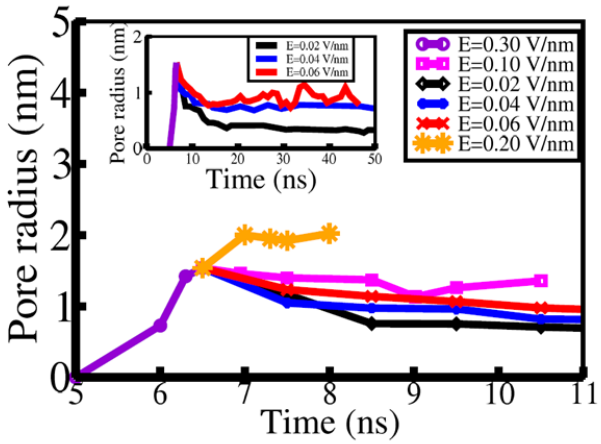

Fig. S3 A POPC lipid bilayer, equilibrated for 50 ns, with a pore of radius 1.5 nm was subjected to different low fields in order to find the sustaining fields. The radius was calculated from the ionic current. The inset shows that the fields (0.02 (black), 0.04 (blue) and 0.06 (red) V/nm) could maintain the pore in the bilayer for 50 ns.

Table S1 Radii of stable pores for different sustaining fields in POPC. The standard deviation has been estimated from three independent simulations for each sustaining field.

Sustaining Field (kcal/molÅ*e*)	Sustaining Field (V/nm)	Stable pore radius (nm)
0.05	0.02	0.33±0.02
0.10	0.04	0.73±0.04
0.15	0.06	0.96±0.11

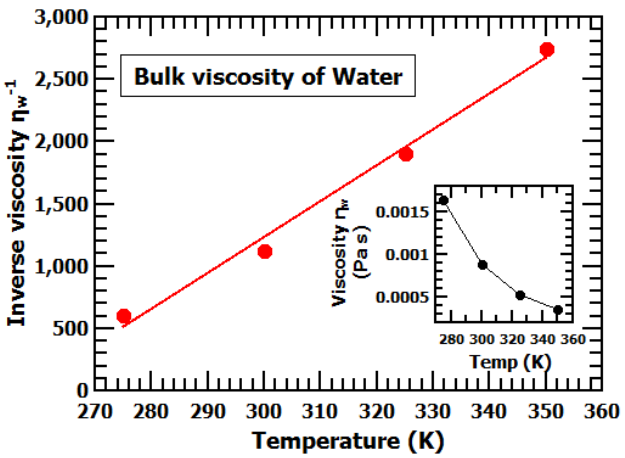

Fig. S4 Inverse of the bulk viscosity of water as a function of temperature showing linear dependence in this range. Inset shows the actual decrease of viscosity with increasing temperature.

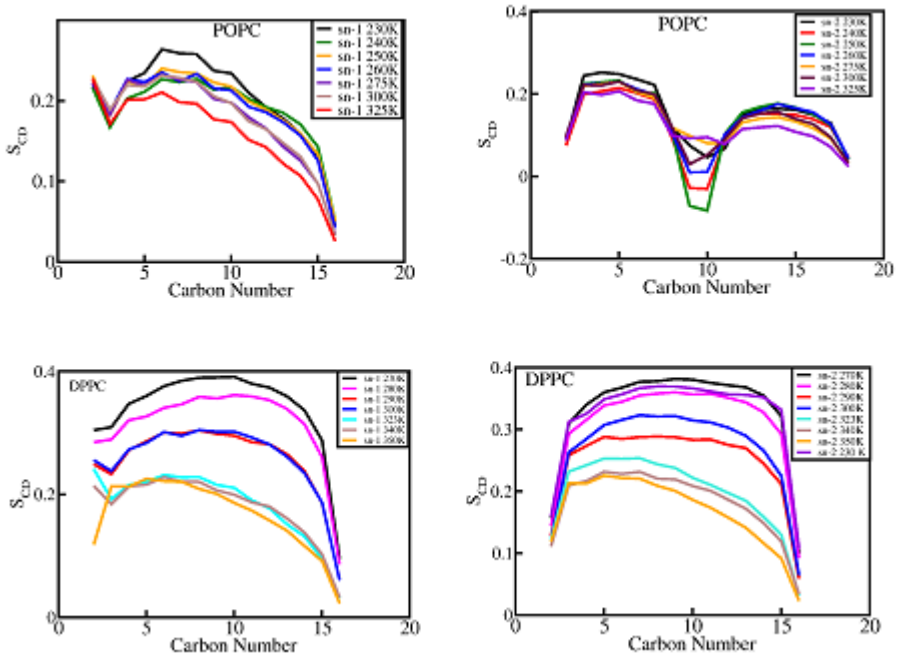

Fig. S5 The order parameter for the sn-1 (left) and sn-2 (right) carbons in POPC (top) and DPPC (bottom) lipid bilayers from simulations carried out at different temperatures before the application of the electric field.

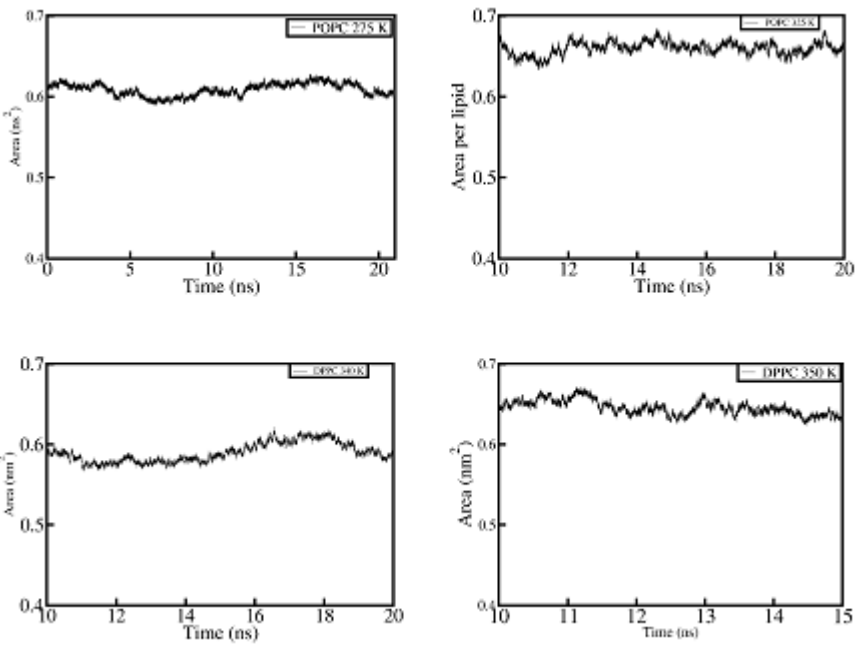

Fig. S6 The area per lipid as a function of simulation time for POPC (top) and DPPC (bottom) at different temperature.