

Electronic Supplementary Material (ESI) for New Journal of Chemistry

Structural Effects of Zinc on Phosphatidylserine-Containing Lipid Membranes:

Kinetic Analysis of Membrane Reorganization

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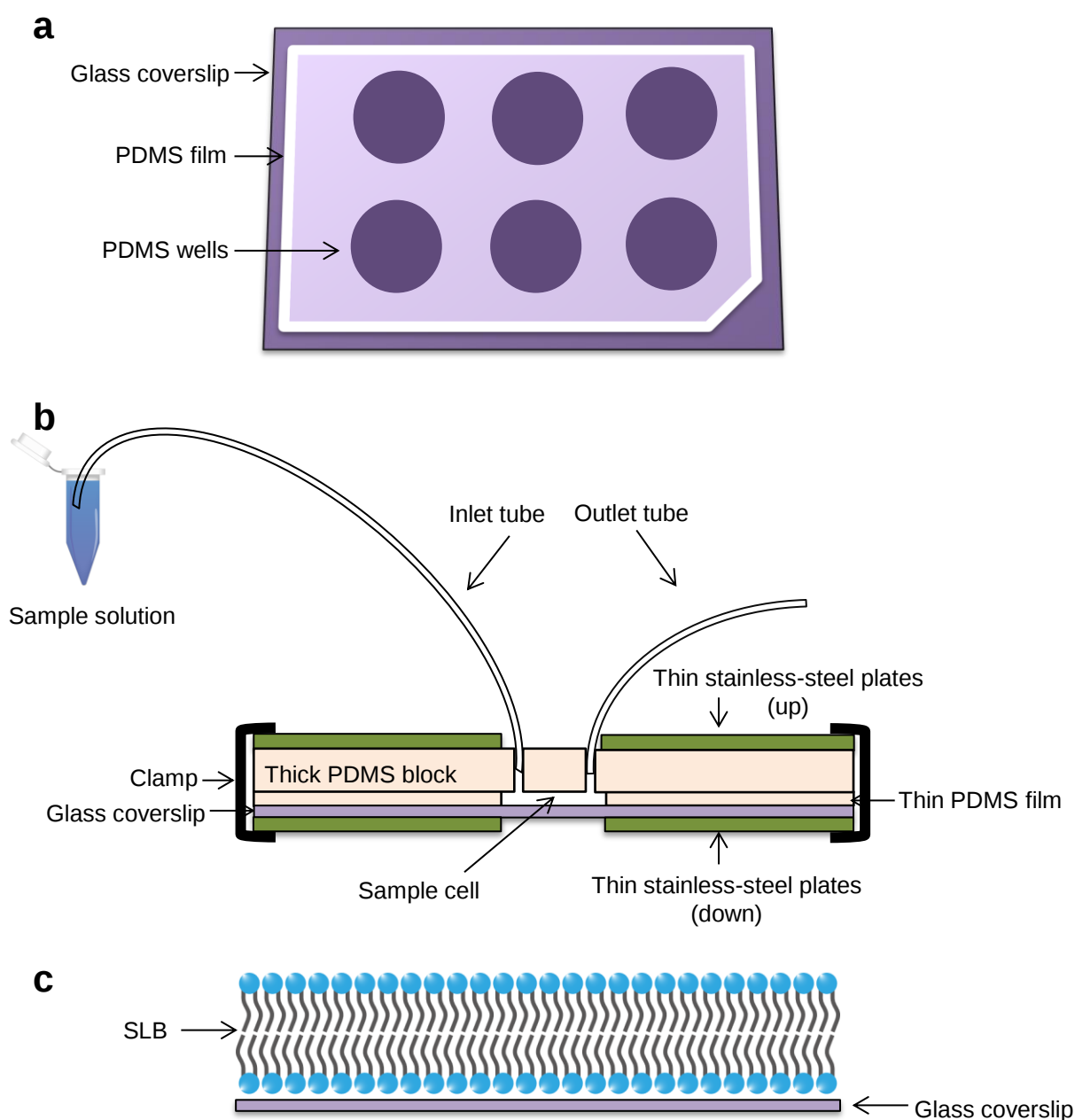


Fig. S1 The setups of PDMS well and flow cell. (a) Top view of the PDMS well; (b) Side view of the flow cell; (c) SLB coated on the top side of the coverslip. Drawing is not to scale.

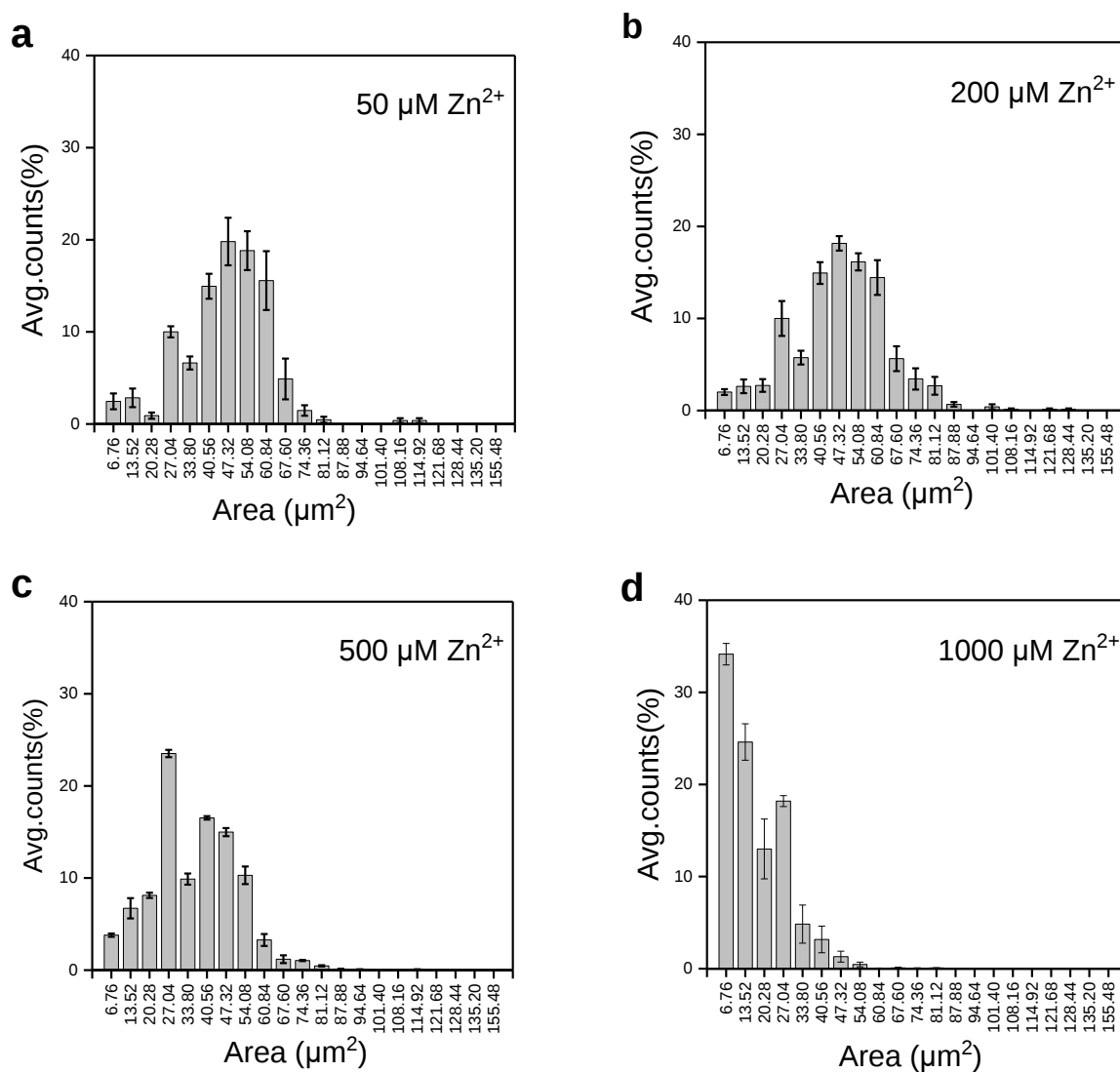


Fig. S2 Histogram of the bright domain size on the surface of POPC SLBs containing 40 mol% POPS after 2.5 h incubation with different concentrations of Zn^{2+} . The y-axis shows the percentage of average count numbers from four different bilayers. No discernable bright domain was observed in lipid bilayers without Zn^{2+} in the bulk solution.

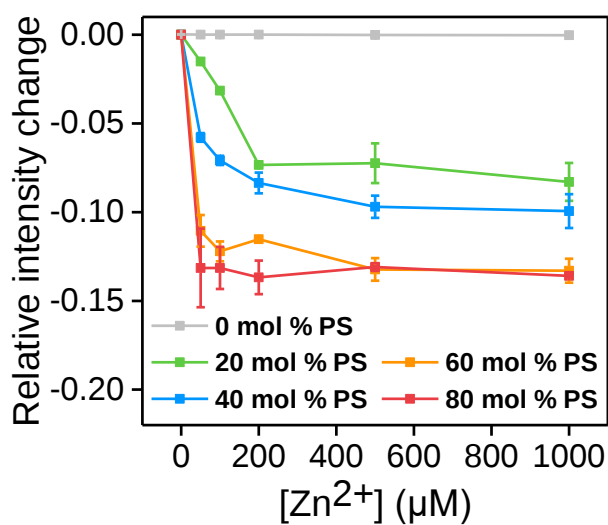


Fig. S3 The relative fluorescence intensity changes of SLBs vs bulk Zn^{2+} concentration.

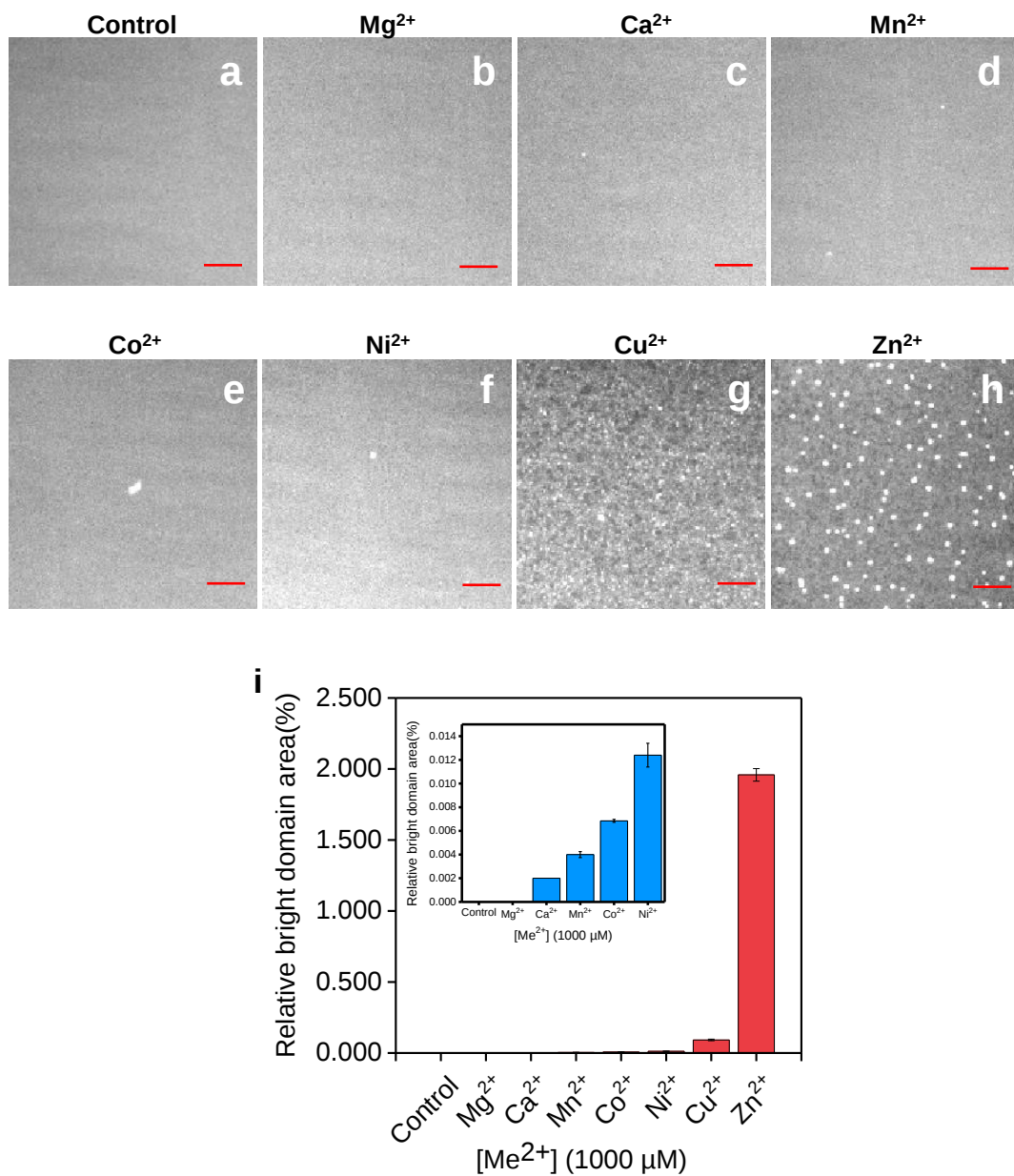


Fig. S4 (a-h) Fluorescence images of SLBs containing 40 mol% POPS treated with 1000 μM of different cations. The fluorescence images were observed at 10 $\times$ magnification. Scale bar: 50 μm . (i) Plot of the relative domain area change for different cations. The inset shows data in expanded form. The error bars represent the standard deviations obtained by averaging at least 3 independent measurements. Scale bar: 50 μm .

Movie S1. Bright domain formation in POPC SLBs containing 40 mol% POPS after 2.5 h incubation with 50 μM Zn^{2+} .

Movie S2. Bright domain formation in POPC SLBs containing 80 mol% POPS after 1 h incubation with 50 μM Zn^{2+} .