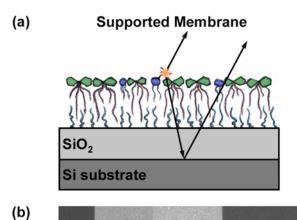
SUPPLEMENTARY INFORMATION

Figure S1. (a) Schematic of the experimental setup for Fluorescence Interference Contrast Microscopy (FLIC) experiments, including supported membrane system the and illustrative interference paths. As discussed in the main text, the presence of a reflective silicon substrate leads to optical interference of the excitation or emission light of a fluorophore with its reflection from the substrate, illustrated here for one pair of emission paths. (b) Fluorescence image of a supported monolayer consisting of 99 mol% TDM with 1 mol% Texas Red-DHPE. Each square represents a different SiO₂ thickness and the intensity of an individual square is determined by the interference of direct and reflected light. (c) Average intensity of each square versus the corresponding oxide thickness (squares) and the best-fit theoretical model curve (dashed line). The mean height of the probes above the oxide is extracted as a fit parameter.



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