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A detailed investigation of the formation kinetics and layer structure of poly(ethylene glycol) tether supported lipid bilayers

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Figure S1 AFM images of a) bare silicon wafer in Hepes and b) silicon wafer with a 1 mol% PEG(5)-PE SLB on the surface. The forces needed to rupture the PEG-SLB are shown in the histogram c) with an average deflection voltage of (0.7 ± 0.2) V corresponding to (6.0 ± 2.1) nN where the scanning force is added as a solid line at 0.1 V or 0.9 nN respectively. The scanning force was minimized and kept below 0.9 nN ensuring that imaging is performed on top of the PEG-SLB.
These AFM images reproducibly obtained on different spots of the substrates confirm the homogeneity of the PEG-SLB in the micrometer range.

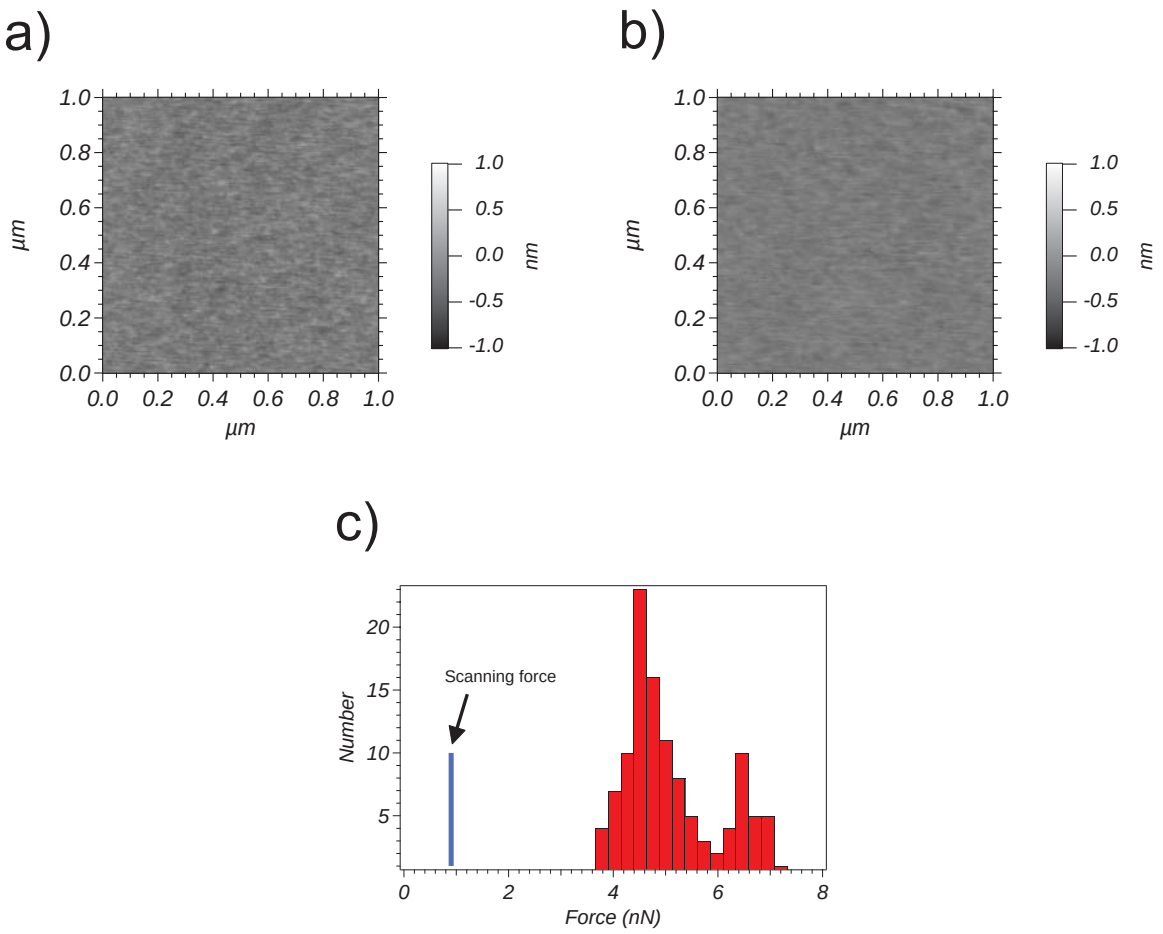

Figure 1:

Figure S2 Light microscopy images of a) 1 mol% PEG(5)-PE, b) 3 mol% PEG(5)-PE, c) 2 mol% PEG(2)-PE, d) 7 mol% PEG(2)-PE and e) 2 mol% PEG(2)-PE/CF. The image sequence shows FRAP measurements of images before photobleaching (first images) and selected images of the sequence after 4 s and 350 s - 368 s respectively. While the FRAP sequences of a) of 1 mol% PEG(5)-PE and c) 2 mol% PEG(2)-PE (mushroom regime) show fluorescence recovery and a homogeneous fluorescence intensity over the whole range, the sequences b) of 3 mol% PEG(5)-PE and d) of 7 mol% PEG(2)-PE present an inhomogeneous SLB with no fluorescence intensity recovery. FRAP measurements of labeled PEG chains (2 mol% PEG(2)-PE/CF) in sequence e) also show a homogeneous fluorescence intensity.
The microscopy images prove the homogeneity of the PEG-SLB in the mushroom regime on the microscopic scale.

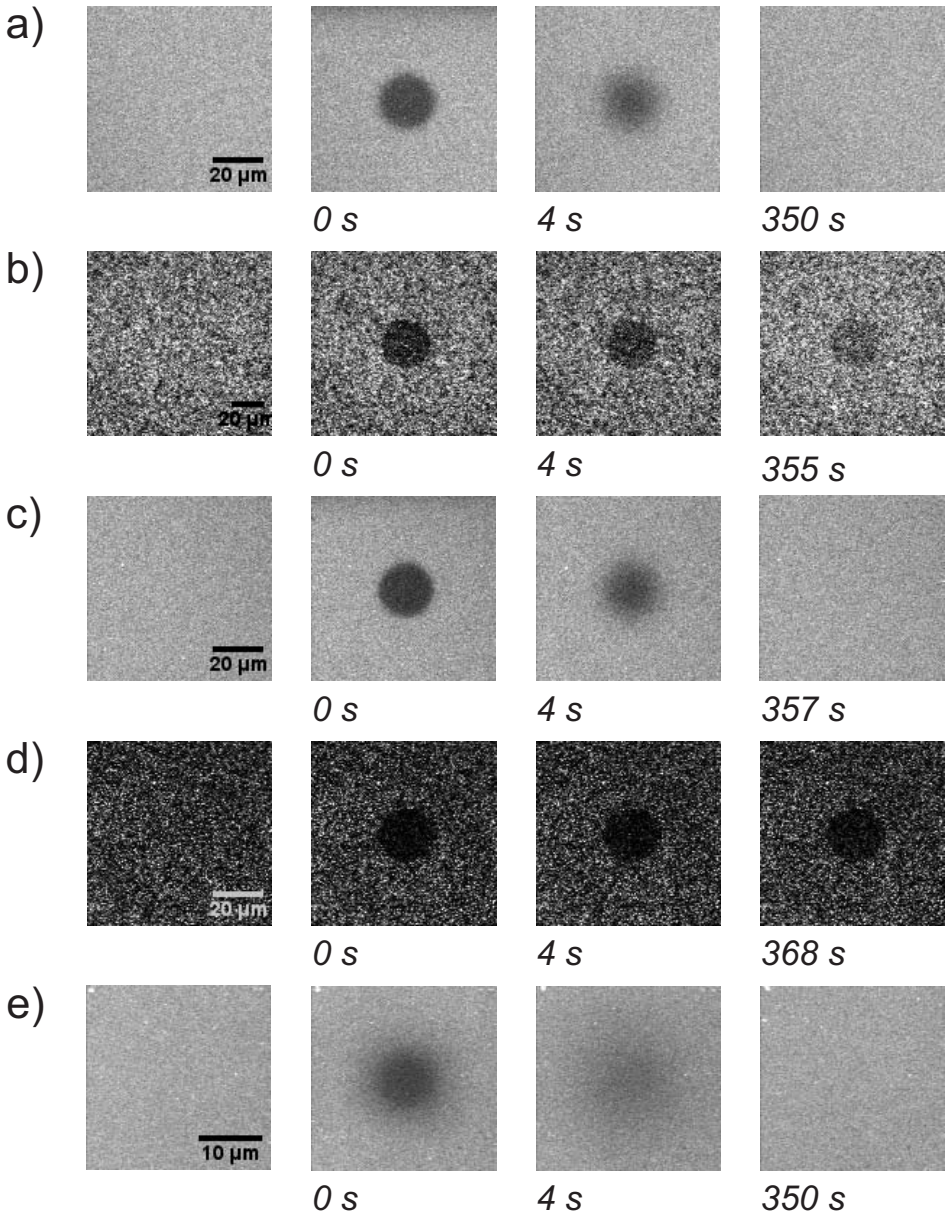

Figure 2: