

1.3. In-Situ Fluorescence Imaging: Poration at -0.4 V/SCE for 1 min

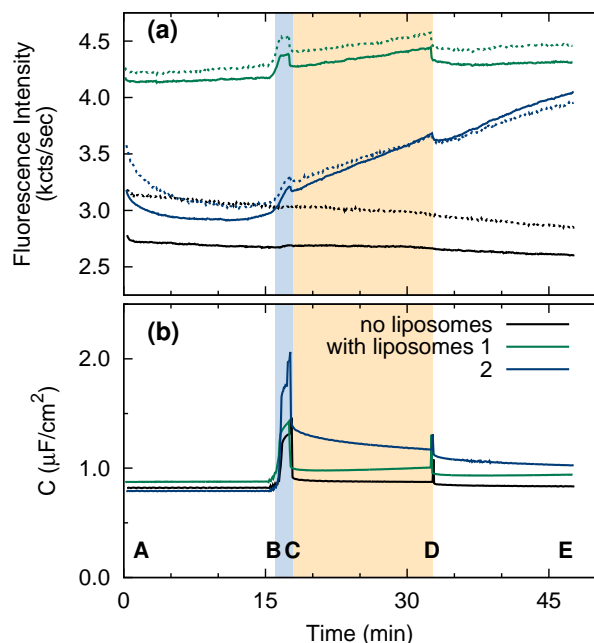


Figure 1.3: Spectroelectrochemical behaviour of adsorbed octadecanol bilayers with and without liposomes in solution during application of a potential profile with a 1 min poration step. (a) Fluorescence intensity as average grayscale values for hotspot regions (dotted lines) and the remainder of the image (solid lines). (b) Capacitance values of the interface during application of the potential step. Black traces: No liposomes in solution. Green and blue traces: with liposomes in solution, separate trials. Letters A-E correspond to time points of images reproduced in Figure 1.4. Blue-shaded background highlights the time period spent at the poration potential (-0.4 V/SCE), orange shaded background highlights the time period at -0.2 V/SCE, and the unshaded background represents time periods spent at 0 V/SCE. Capacitance measurements were performed with a 5 mV RMS potential perturbation and a 200 Hz perturbation frequency. Fluorescence images were taken with either of the exposure settings described in Section 1.1 and converted to equivalent kilocounts per second.