

Supplementary Material for Soft Matter

Compartmentalizing a lipid bilayer by tuning lateral stress in a physisorbed polymer-tethered membrane.

Amanda P. Siegel,^a Michael J. Murcia,^a Merrell Johnson,^b Michael Reif,^c Rainer Jordan,^{c,d} Jürgen Rühle,^e Christoph A. Naumann^{*a}

^a*Department of Chemistry and Chemical Biology, Indiana University-Purdue University Indianapolis, Indianapolis, IN 46202-3274, USA.*

^b*Department of Physics, Indiana University-Purdue University Indianapolis, Indianapolis, IN 46202-3274, USA.*

^c*Technical University of Munich, Department of Macromolecular Chemistry, 85747 Garching bei München, Germany*

^d*Technical University of Dresden, Department of Chemistry, 01062 Dresden, Germany (current address).*

^e*University of Freiburg – IMTEK Department of Microsystems Engineering, Laboratory for Chemistry and Physics of Interfaces, Freiburg, Germany*

Bilayers were doped with different lipid dyes, NBD-PE (which segregates into liquid-ordered domains) and TRITC-DHPE (which segregates into liquid-disordered domains). Bilayers showed the same characteristic diffusion barriers using either type of lipid dye. This is an indication that the dark lines are not a result of a separation into liquid-ordered and liquid-disordered phases, but instead indicate a different kind of barrier.

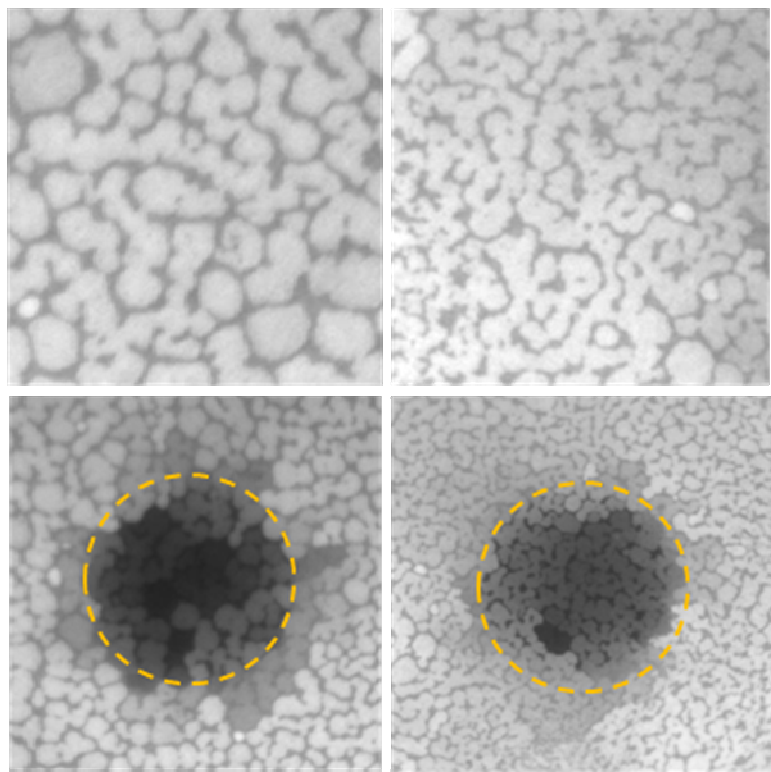


Figure S1. 15 mol% DODA-E₈₅ bilayers doped with different lipid dyes: NBD-DHPE (left – same as Fig. 2 b,e in main text) and TRITC-DHPE (right). As in Fig. 2 in the main text, the size for the top row of micrographs is 50 μm x 50 μm ; the size for the bottom row which also show FRAP is 100 μm x 100 μm . The dotted circle indicates the position and size of the bleaching spot.