Supporting Information

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Materials Integration by Nanointaglio

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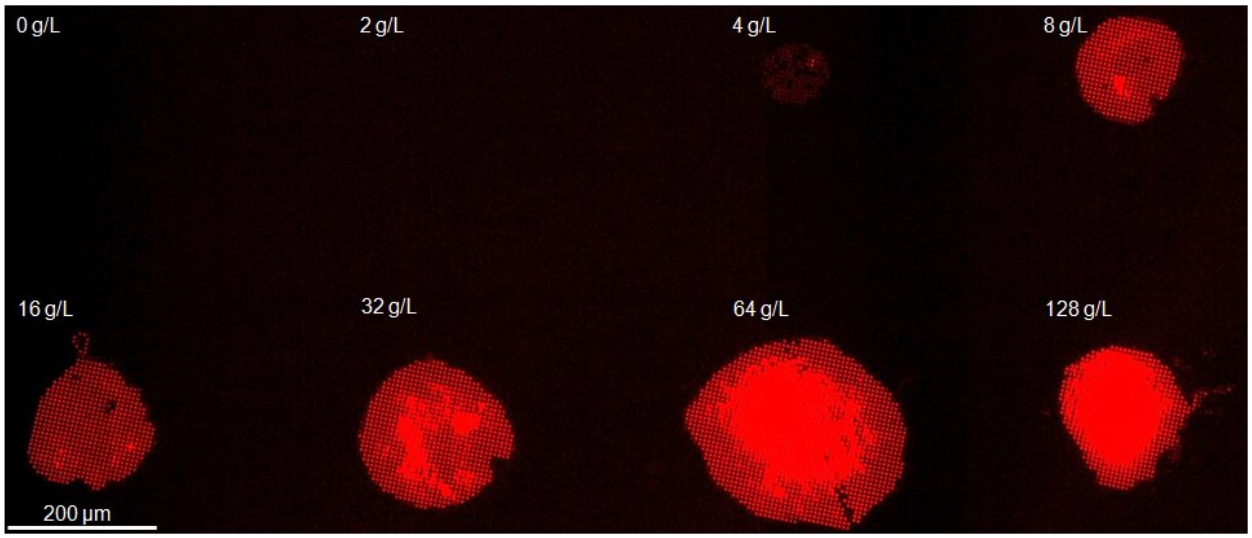
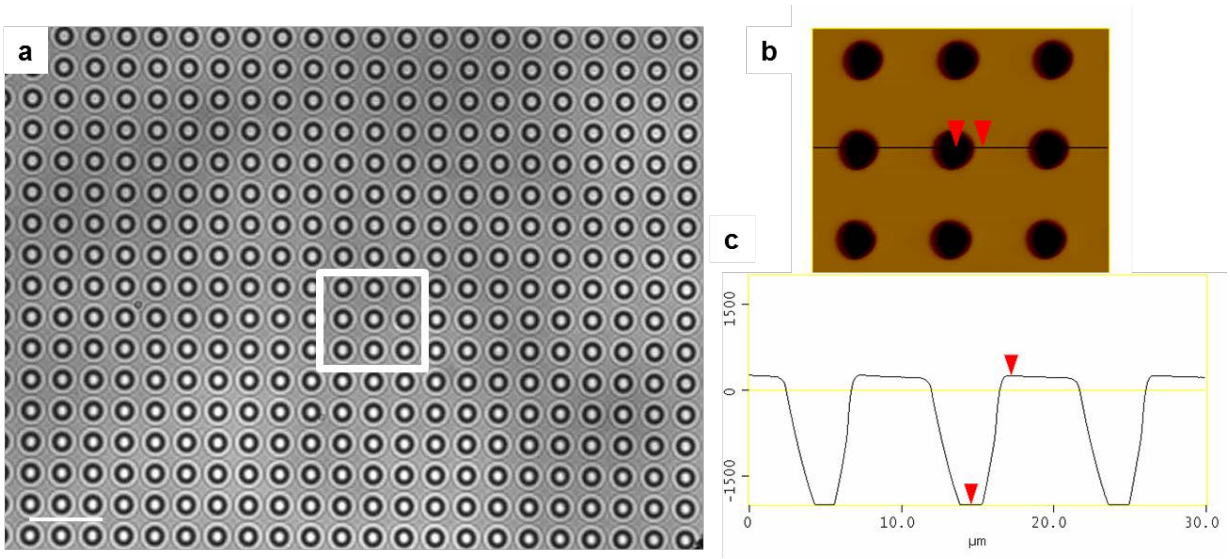
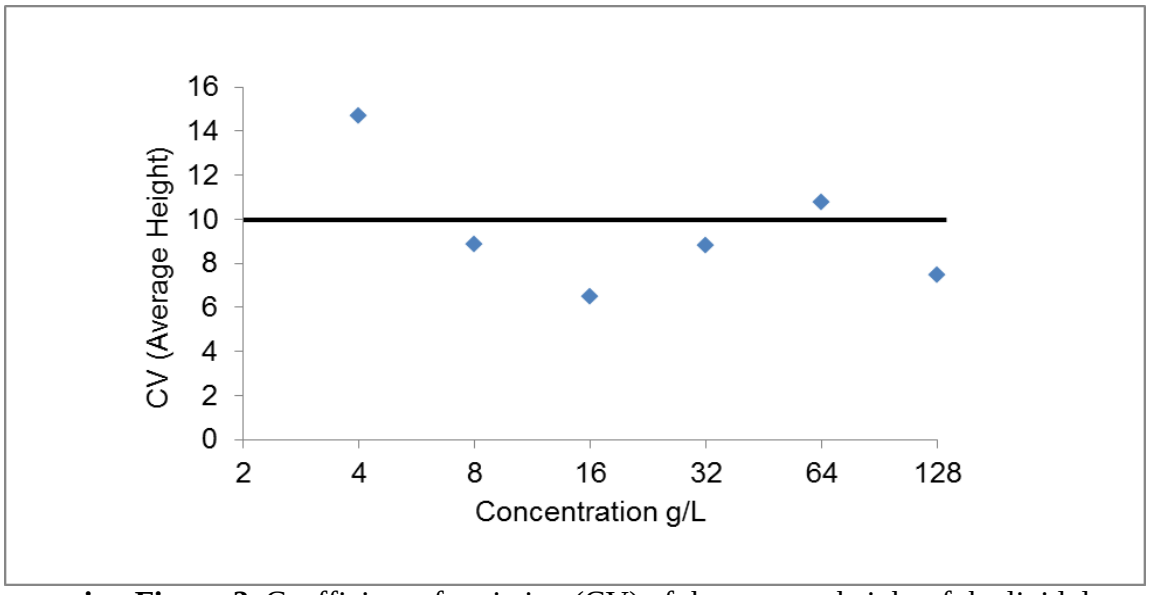


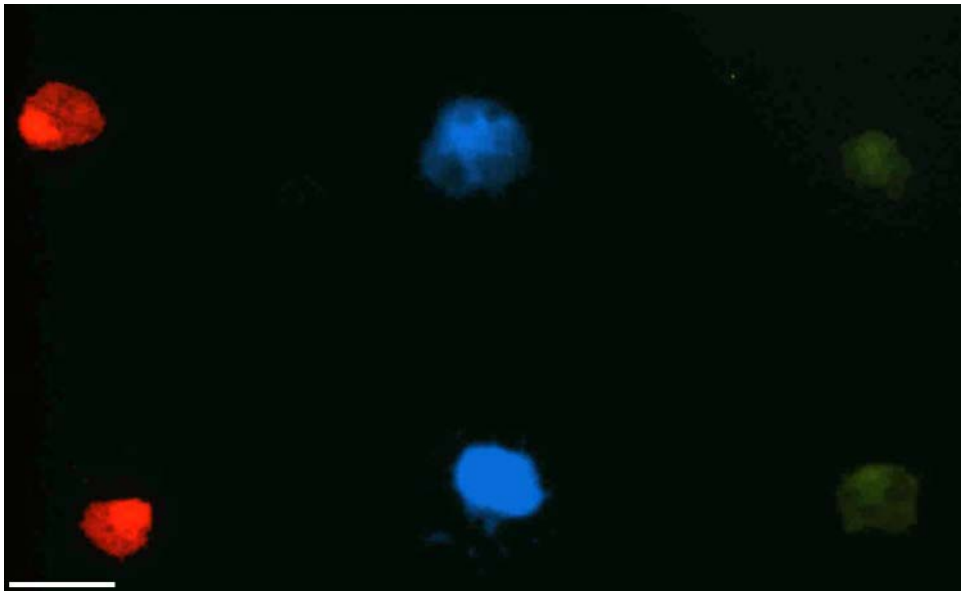
Supporting Figure 1. Variation of the ink concentration. 4x red fluorescence overview of lipid multilayer patterns created from microarrraying and multilayer stamping using a 5um well pattern. DOTAP concentrations of 4, 8, 16, 32, 64, and 128 g/L stamped onto a glass substrate (4th print). Lipid concentrations at 2 g/L do not microarray sufficiently to allow pattern formation by lipid multilayer stamping.



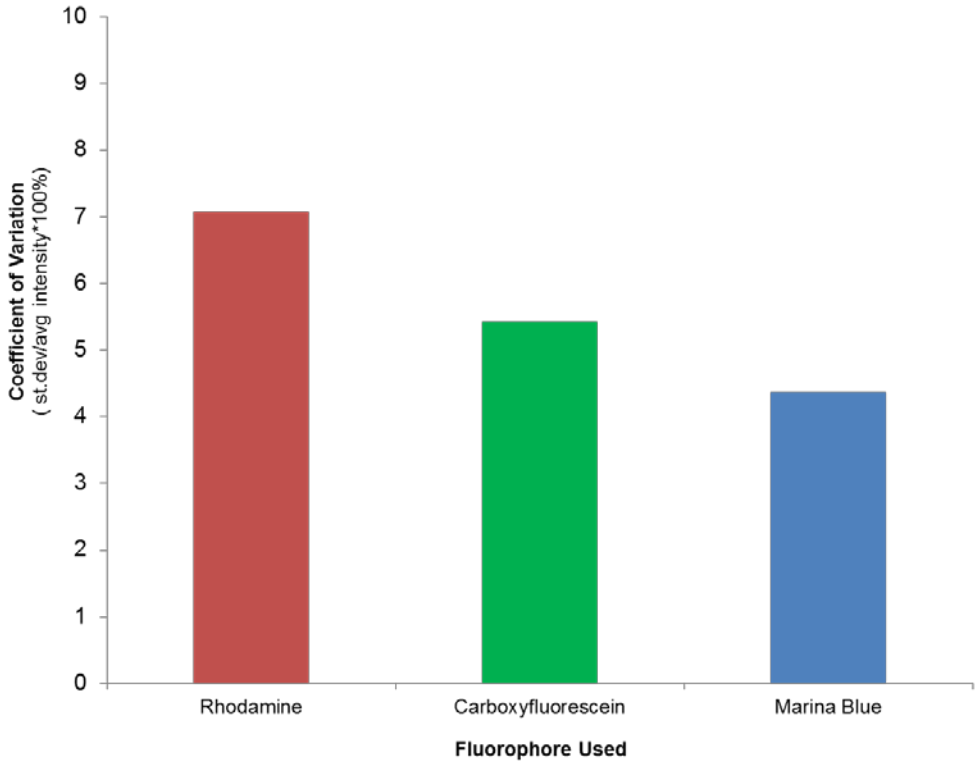
Supporting Figure 2. Characterization of a PDMS Stamp with 5µm diameter holes at a center-to-center spacing of 10 µm. **a**, 40x bright field image of a section of the PDMS stamp the size of the white box in **a**. Bar = 25 µm. **b**, AFM topographical image, and **c** sectional analysis shows that the wells are ~2.7 µm deep, with 5 µm diameters.



Supporting Figure 3. Coefficient of variation (CV) of the average height of the lipid dots derived from the series of AFM measurements on glass as shown in panel **e** of Figure 2 of the concentrations 4, 8, 16, 32, 64 and 128 g/L liposomal concentrations. The CV of the average height is 10 % or less for all concentrations except 4 and 64 g/L, indicating uniform patterning of the structures sampled.



Supporting figure 4. Multicomponent patterning from microarraying. 2x3 ink pallet of DOTAP doped with 1 Mol % Rhodamine-DOPE, 2 Mol % Marina Blue-DHPE, and Carboxyfluorescein-DOPE. There was no detectable contamination of the different fluorescently tagged lipids. Scale bar = 200 µm



Supporting figure 5. Uniformity of integrated lipid dot patterns. The coefficient of variation (CV) of the three different fluorescently doped lipid dot patterns from figure panels 1 j-l is well below 10%, demonstrating uniform patterning. The CV was calculated by finding the average intensity for each dot shown in panels 1 j-l and then finding the intensities' average and standard deviation.