Electronic Supplementary Material (ESI) for Lab on a Chip.

Live single cell imaging assays in glass microwells produced by laser-induced deep etching

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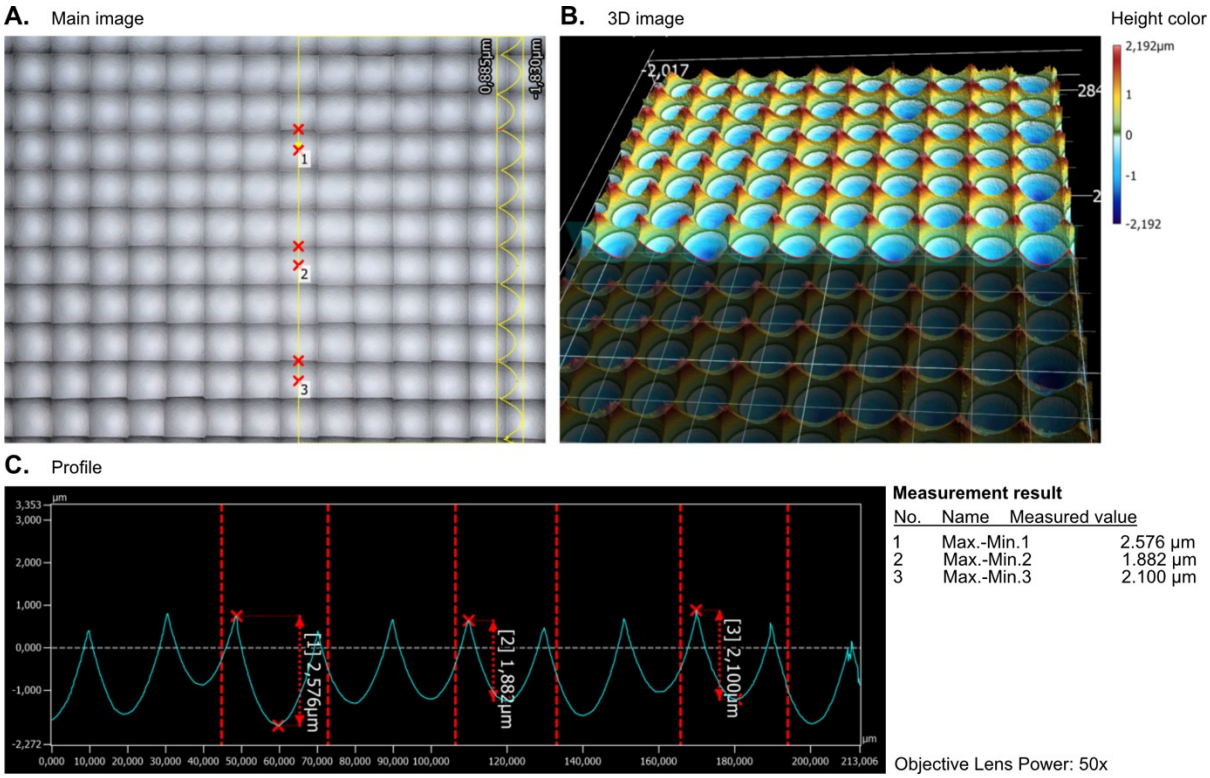
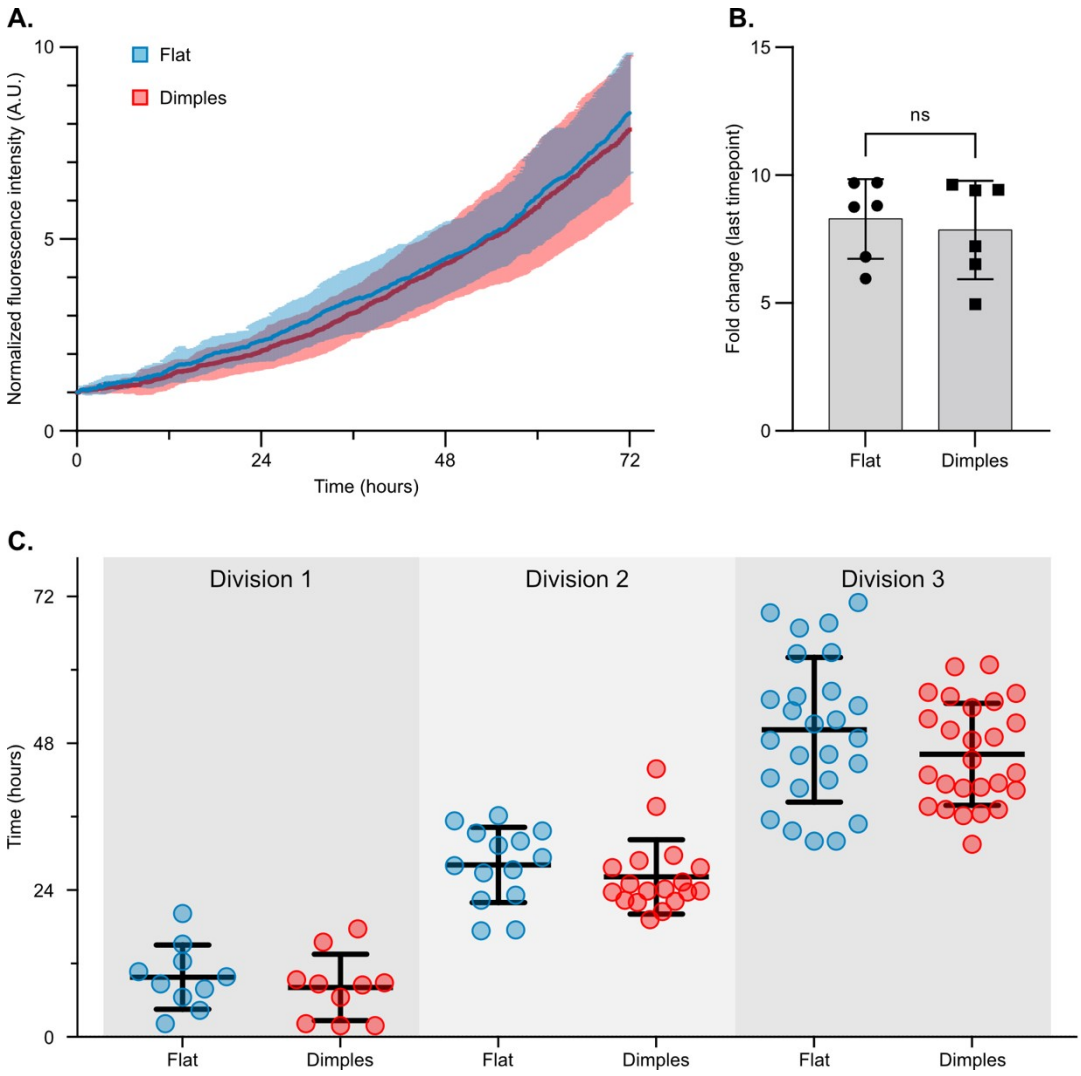


Supplementary figure 1. *Optical profilometry of the microstructured bottom surface of a dimpled U-well.* ***A)*** *Main image of the dimpled bottom showing the dimples from above.* ***B)*** *A 3D representation of the measured surface profile. The height from the bottom of the dimples (blue) up to the peaks of the ridges at the ridge crossings (red) is at maximum close to 4 µm.* ***C)*** *2D surface profile measurements with three different positions marked in the main image in A). The measurements show the height from the bottom of the dimples up to the lowest part of the ridges, which is in between the peaks at the ridge crossings. Note that the x- and y-axes are different.*



Supplementary figure S2. *A498-RFP cells were seeded on a circular glass chip containing dimpled U-wells surrounded by flat glass. After seeding cells onto the chip and growing overnight at 37°C, they were imaged with a 10x objective for 72h with a time frame of 10 min.* ***A)*** *In order to quantify A498-RFP doubling time, fluorescence intensity was quantified on a region-of-interest selected on the dimpled surfaces as well as on the flat glass surfaces on the chip between the dimpled wells. Background fluorescence was subtracted, and normalized data were plot over time.* ***B)*** *T-test was performed at last time point (72 hours) showing no statistical difference in fluorescence intensity on dimpled versus flat surfaces.* ***C)*** *Division events were followed over time for 10 cells for dimpled and flat surfaces. Cells were randomly chosen with the only criteria of not leaving the field-of-view until at least the first division. Time for division events were recorded and plotted, showing comparable values between dimpled and flat glass surface.*