Supplementary Material (ESI) for Lab on a Chip

Single Step Patterning of Molecularly Imprinted Polymers for Large Scale Fabrication of Microbiochips

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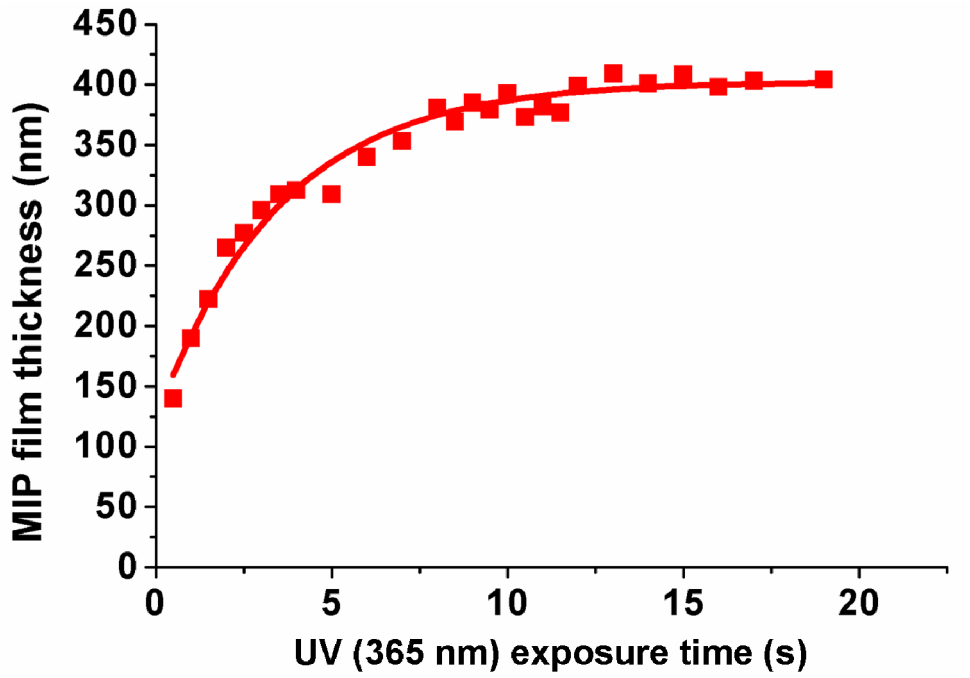

Figure S1: Calibration of the photopolymerization process of micropatterned MIPs by the measurement of the film thickness for increasing curing time.

Figure S1 shows the evolution of the thickness of spin-coated MIP films for different curing times using the EVG 620 mask aligner (light intensity of 30 mW/cm^2 at 365 nm). First, prepolymerized mixtures were spin-coated at 2000 rpm for 30 s on previously silanized silicon wafers. Then, spin-coated films were introduced in the EVG 620 apparatus and covered so that 1/7 of the film was exposed. Thus, by moving the cover, up to 7 curing times were tested serially on the same wafer. To measure the thickness of polymerized films, a Tencor mechanical profiler was used. Similarly to AFM, a mechanical metallic tip is

sweeping the patterns and measuring transverse displacements while profiles are obtained by a laser beam reflected on the arm supporting the tip. According to the graph obtained on Figure S1, if the curing time is too short, the mixture is partially removed when incubated in washing solutions (acetone and ethanol). In contrast, for exposure times longer than 12 s, a constant film thickness was measured, indicating a complete polymerization of the mixture. However, for too long curing times, lateral polymerization was observed due to diffraction of the UV light.