

Electronic Supplementary Information for:

Rapid prototyping of poly (dimethoxysiloxane) dot arrays by Dip-Pen Nanolithography

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Patterning of PDMS lines:

The study presented in this manuscript centred on the fabrication of dot arrays but patterning of PDMS lines is indeed also possible. This may be achieved by moving the inked tip over the silicon dioxide surface at a constant speed. However, this process produced “matchstick” structures due to a short residence time of the tip with the surface prior to initiating tip movement. Successful writing of lines and more complex structures will require careful tuning of the ink formulation and of the surface properties of the tip and the substrate surface. Figure S1 shows a series of PDMS lines deposited by moving the inked tip across a silicon dioxide surface at a speed of 30 μm /sec. A red arrow is used to indicate tip movement after initial contact of the tip with the surface. Raman microspectroscopy was used to confirm the chemical identity of the material (PDMS) deposited by DPN.

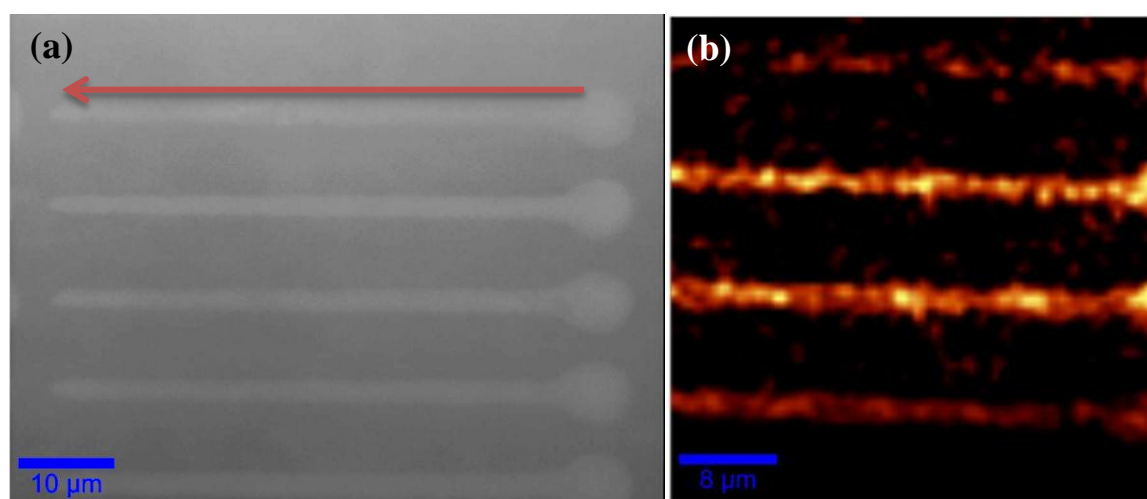


Figure S1. (a) Optical image of PDMS lines patterned on silicon dioxide by moving the inked tip across the silicon dioxide surface at 30 μm /sec. (b) Raman map (CH_3 stretch region) of PDMS lines deposited by DPN.