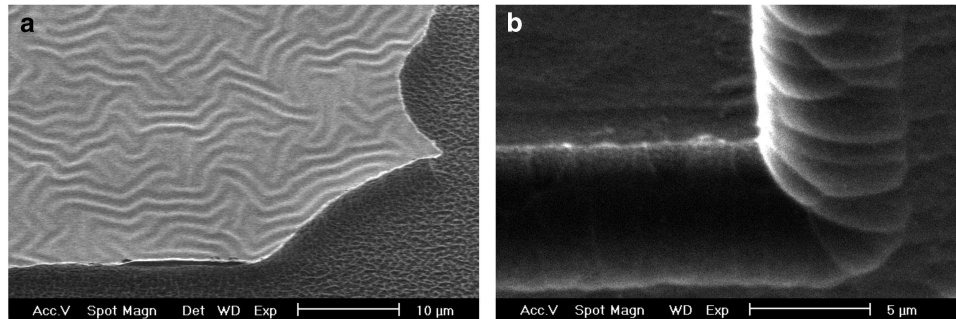


## Supplementary file

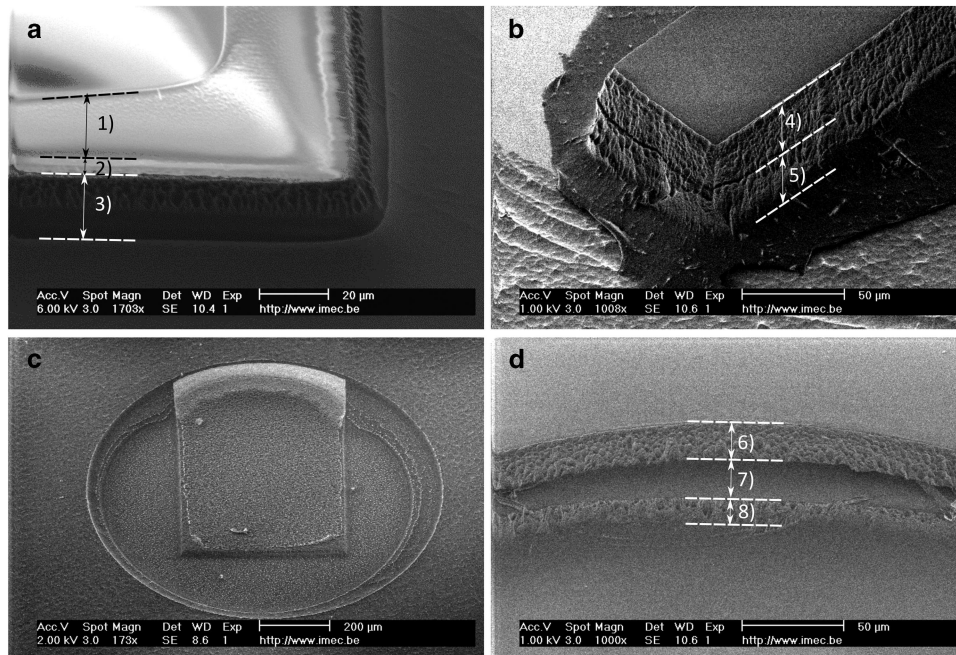
# SU8 etch mask for patterning PDMS and its application to flexible fluidic microactuators

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**Figure S1** (a) Tilted SEM picture of a PDMS structure RIE etched using an aluminum hardmask, showing wrinkling of the top surface due to a mismatch in thermal expansion coefficient. (b) Tilted SEM picture of a PDMS structure RIE etched using the LOR/SU8 mask, showing a clean top surface.



**Figure S2** Tilted SEM pictures of the production process. (a) Side view of an  $O_2:SF_6$  etched PDMS structure, showing the SU8 masking layer (1), LOR release layer (2) and PDMS vertical side walls (3). (b) Image of the tip of a PDMS actuator after  $O_2:SF_6$  etching and wet etching of the LOR layer, clearly showing the thin PDMS layer (4) and thick PDMS layer (5) the actuator is composed of. (c) Image of the pressure supply hole, clearly showing the sacrificial layer between the two layers of PDMS being partially etched away by the RIE process. (d) Detailed view of the pressure supply hole after wet etching of the sacrificial layer between the two layers of PDMS (6) and (8), showing the void where the sacrificial layer used to be (7).

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