## Kilo-Scale Droplet Generation in Three-Dimensional Monolithic Elastomer Device (3D MED)

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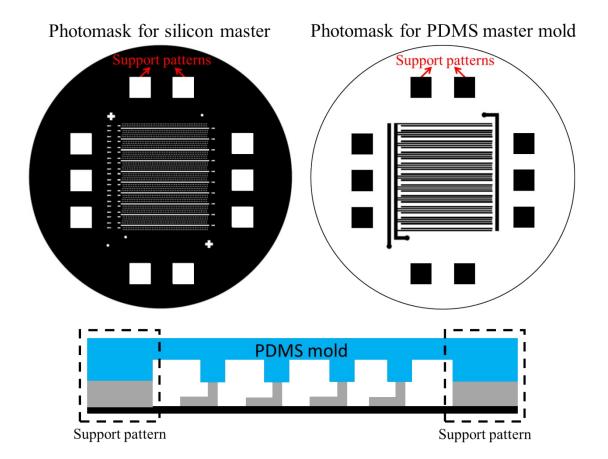


Fig. S1 Photomask with designed support pattern (upper two images) and schematic diagram (below) to maintain alignment between silicon master and PDMS mold.

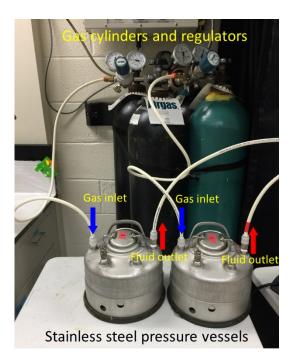


Fig. S2 Experimental set-up for pressure driven flow using stainless steel pressure vessels.

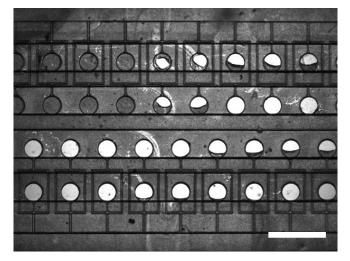


Fig. S3 Formation of thin film PDMS on through-holes with lower pressure application below 20 kPa. Scale bar indicates 1mm.

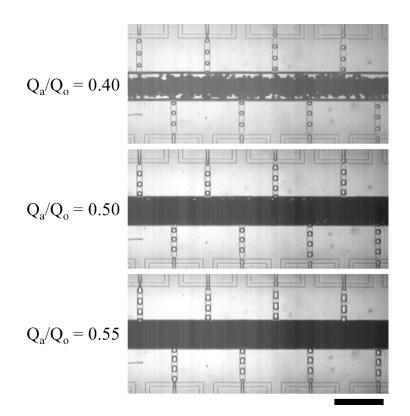


Fig. S4 Generation of the W/O emulsion in k-FFGs at different ratios of water/oil flow rates.  $Q_a$  and  $Q_o$  represent the flow rates of the water and oil phases, respectively. Scale bar indicates 0.5 mm.