Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

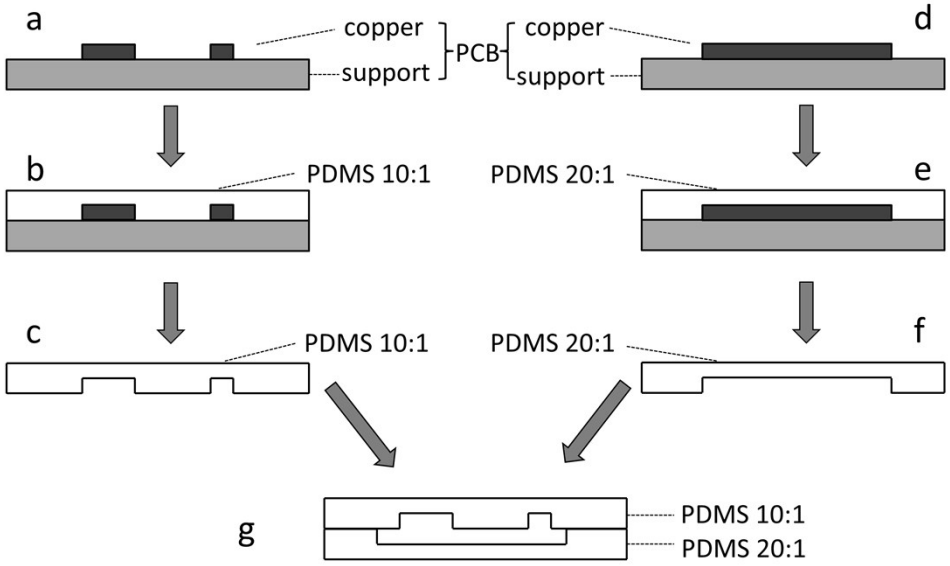

Fig. S1 Schematic diagram for multi-height device fabricating. (a) Using a commoditized PCB product as master. (b) Pouring degassed PDMS prepolymer (10:1 silicone elastomer with curing agent) over the first PCB master. (c) Peeling off the semi-cured PDMS replica from the first master. (d) Using another commoditized PCB product as master. (e) Pouring degassed PDMS prepolymer (20:1 silicone elastomer with curing agent) over the second PCB master. (f) Peeling off the semi-cured PDMS replica from the second master. (g) Bonding the first replica which is fabricated using 10:1 silicone elastomer with curing agent to the second replica which is fabricated using 20:1 silicone elastomer with curing agent.

Fig. S2 Tearing experiments of the sealed PDMS-based microfluidic devices. All fabricated devices cracked within one PDMS layer, instead of splitting along the bonding surfaces.

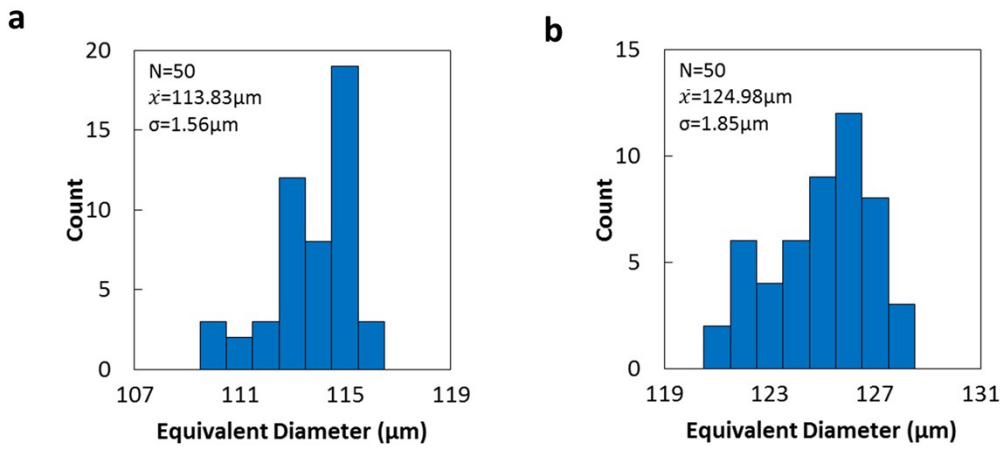

Fig S3. Histogram of daughter droplet size distribution. The daughter droplets were formed by the splitting of mother droplets in the symmetrical T-junction. (a) Histogram of the left daughter droplet size distribution. (b) Histogram of the right daughter droplet size distribution.