

Fig. S1. Schematic of Backside Diffused Light Lithography. UV light passing the photomask diffuses radially in the cover glass to expose an area wider than the area of the photomask. The rounded shape results from a spatial-intensity profile that results from diffused and diffracted light. More detail and characterization of this process is described by Futai et al⁶.



Fig. S2. Photomasked for device in ESI Fig.S3. The device is of basic hydrodynamic focusing design save for Disconnected Photomask Feature (*) for the center channel that eventually becomes an orifice after BDLL. Photomask dimensions. PM1 L: 10.5 mm, PM1 W: 300 μ m, PM2 L: 27 mm, PM2W: 1 mm, PM3 L: 13 mm, PM3 W:150 μ m.

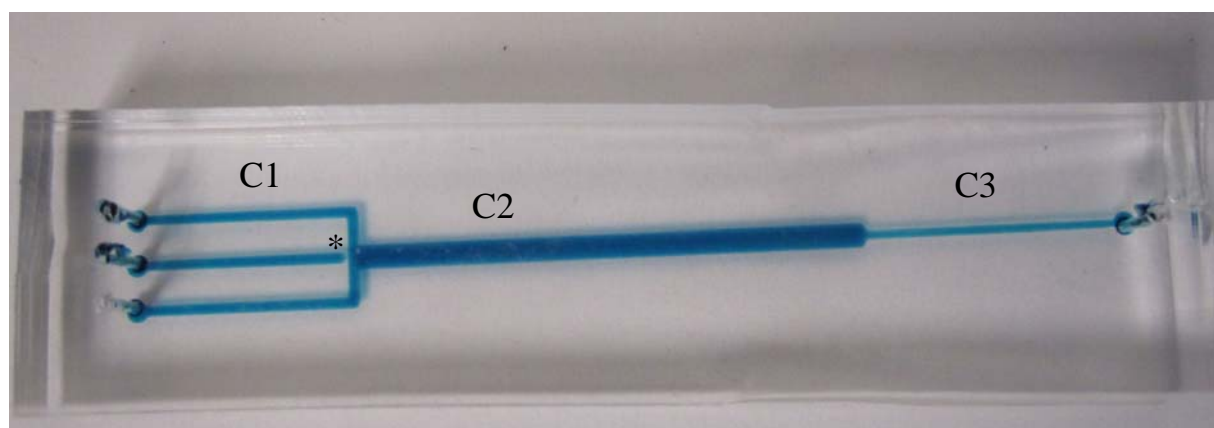


Fig. S3. Device used for droplet generation. The device is of basic hydrodynamic focusing design save for a small orifice (*) for the center channel that allows for efficient channel valving by Braille actuation. Channel dimensions. C1 L: 10.6 mm, C1 W: 587 μ m, C2 L: 27.1 mm, C2W: 1.24 mm, C3 L: 13.2 mm, C3 W: 413 μ m.