Supplementary Information for Lab on a Chip

Fusion and sorting of two parallel trains of droplets by using a railroad-like channel network and guiding tracks

Linfeng Xu, Hun Lee, Rajagopal Panchapakesan, and Kwang W. Oh*

SMALL (Sensors and MicroActuators Learning Lab) Department of Electrical Engineering University at Buffalo, The State University of New York (SUNY at Buffalo) Buffalo, New York 14260,USA E-mail: kwangoh@buffalo.edu, http://www.SMALL.buffalo.edu

No voltage applied Optimal condition ($Q_W = 10 \mu$ l/hr, $Q_0 = 180 \mu$ l/hr) $V = V = 0 \mu$ $V = 0 \mu$ V = 0

Fig. S2 Without the voltage application, synchronized droplets are not fused and sorted to the side outlets. The scale bar is $200 \,\mu\text{m}$.

Supplementary Figure