

Supporting Information for

Formation of pH Responsive 5CB Droplets decorated with PAA-*b*-LCP using Microfluidics

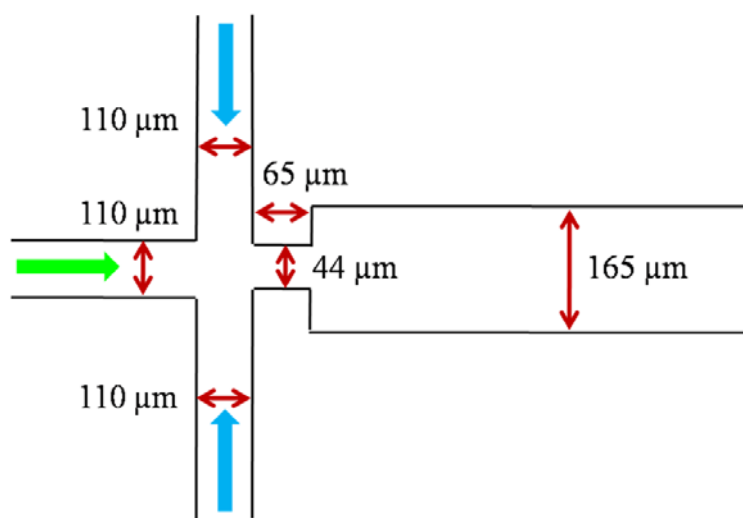
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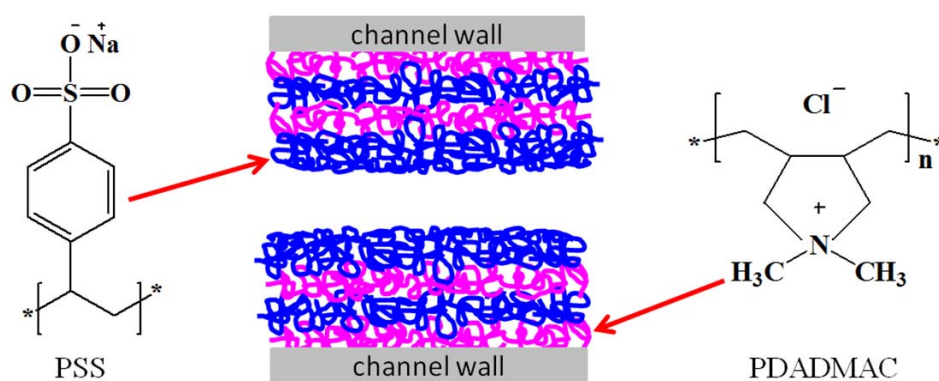
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(a)



(b)

Figure SI 1. (a) The microchip used for the droplets generation and (b) the schematic illustration of the surface modification of the PDMS microchannel with the multi layers of PDDMAC (purple) and PSS (blue) complex with chemical structures of PDDMAC (cationic polyelectrolyte) and PSS (anionic polyelectrolyte).

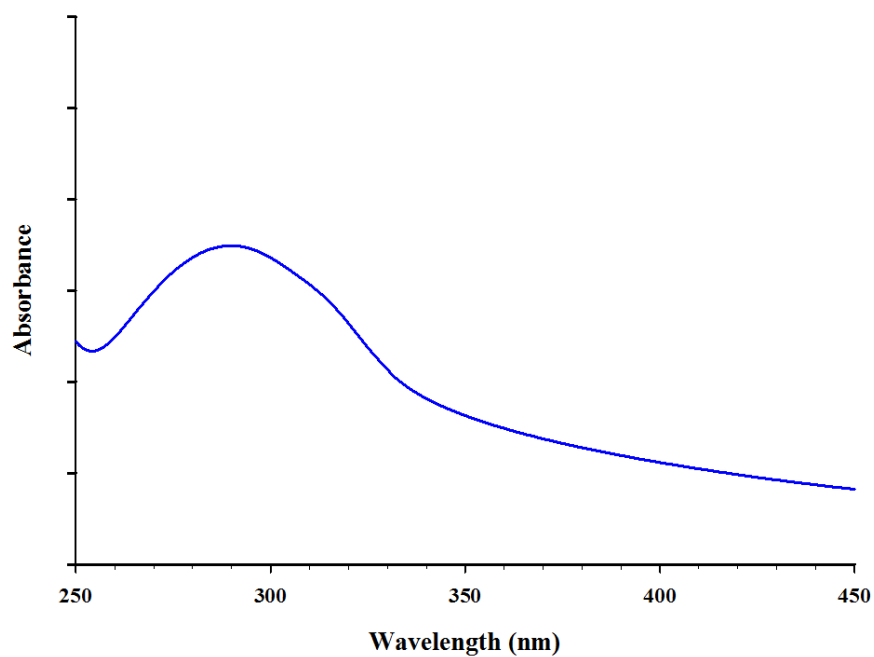


Figure SI 2. UV-absorbance spectra for 5CB droplets coated with L-PAA-b-LCP.

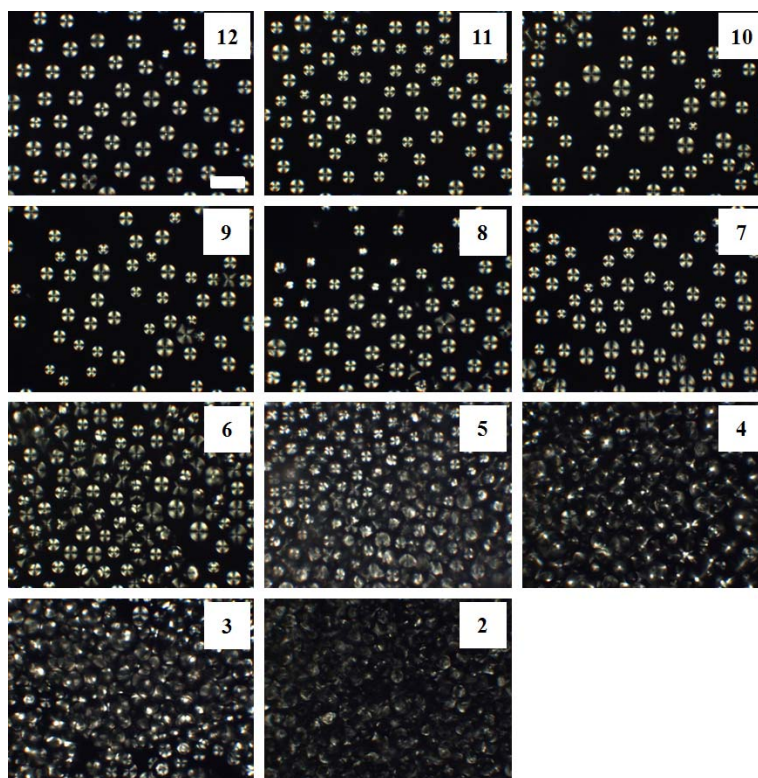


Figure SI 3. Polarized optical micrographs of the 5CB droplets coated with a 0.025 wt % PAA-*b*-LCP solution observed under a polarized optical microscope with a cross polar state at different pHs; the number in the figure indicate the respective pH; the scale bar represent 100 μm .

Movies SI 4(a-d): Formation of stable LC microdroplets which pass through the entire length of microchannel without any coalescence; Microdroplets generation at flow rates of 0.2 (b), 0.15 (c), and 0.1 mLh⁻¹ (d), the flow rate for dispersed phase is 0.01 mLh⁻¹ for all the samples (corresponding to Fig. 1).