

Supporting Information

Structures and Alignment of Anisotropic Liquid Crystal Particles in a Liquid Crystal Cell

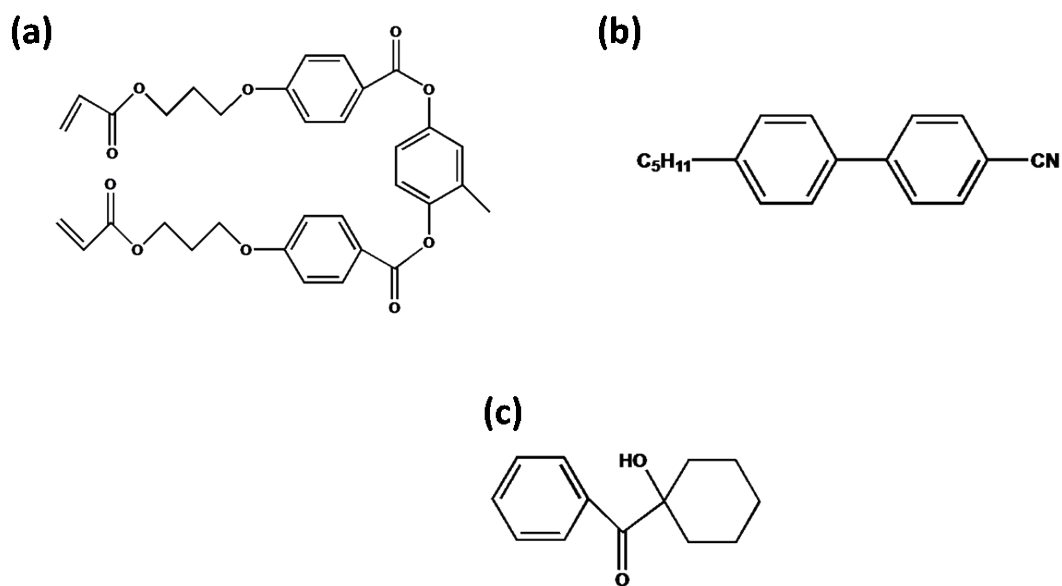
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Figure

SI 1. Chemical structures of (a) RM257; (b) 5CB; and (c) initiator of 1-hydroxycyclohexyl phenyl ketone.

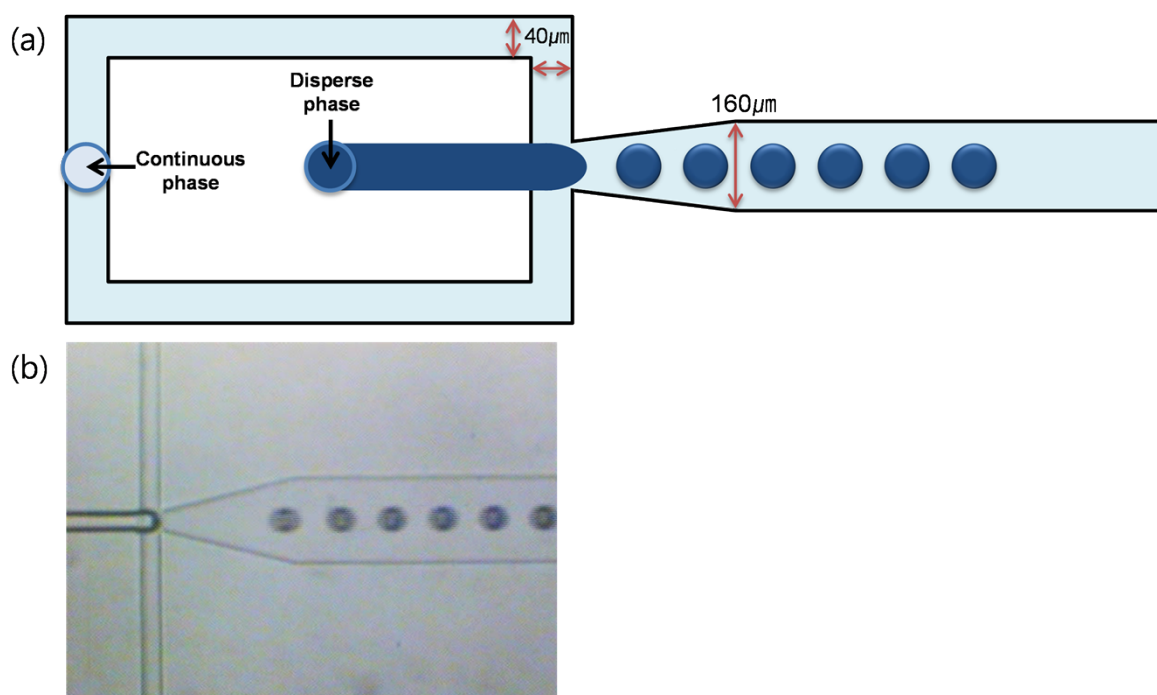


Figure SI 2. (a) Schematic of microchip and dimensions of microfluidics channel used in this study, and (b) photographic image.

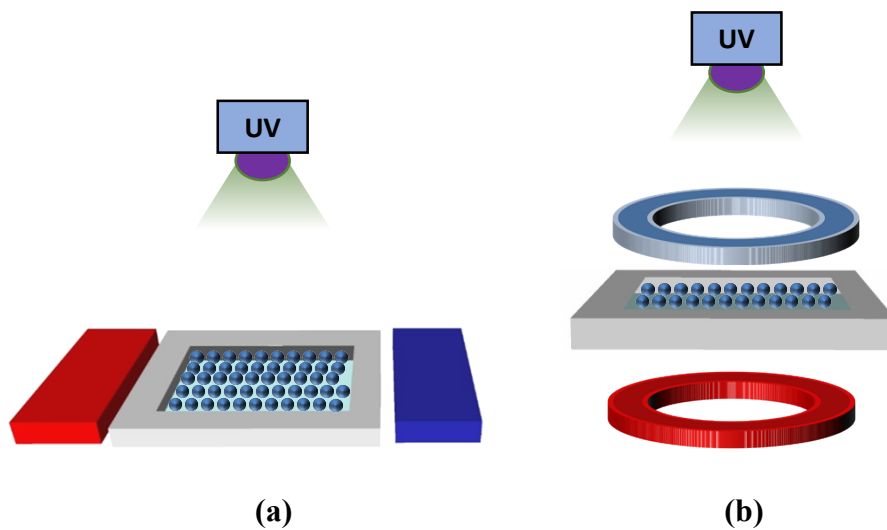
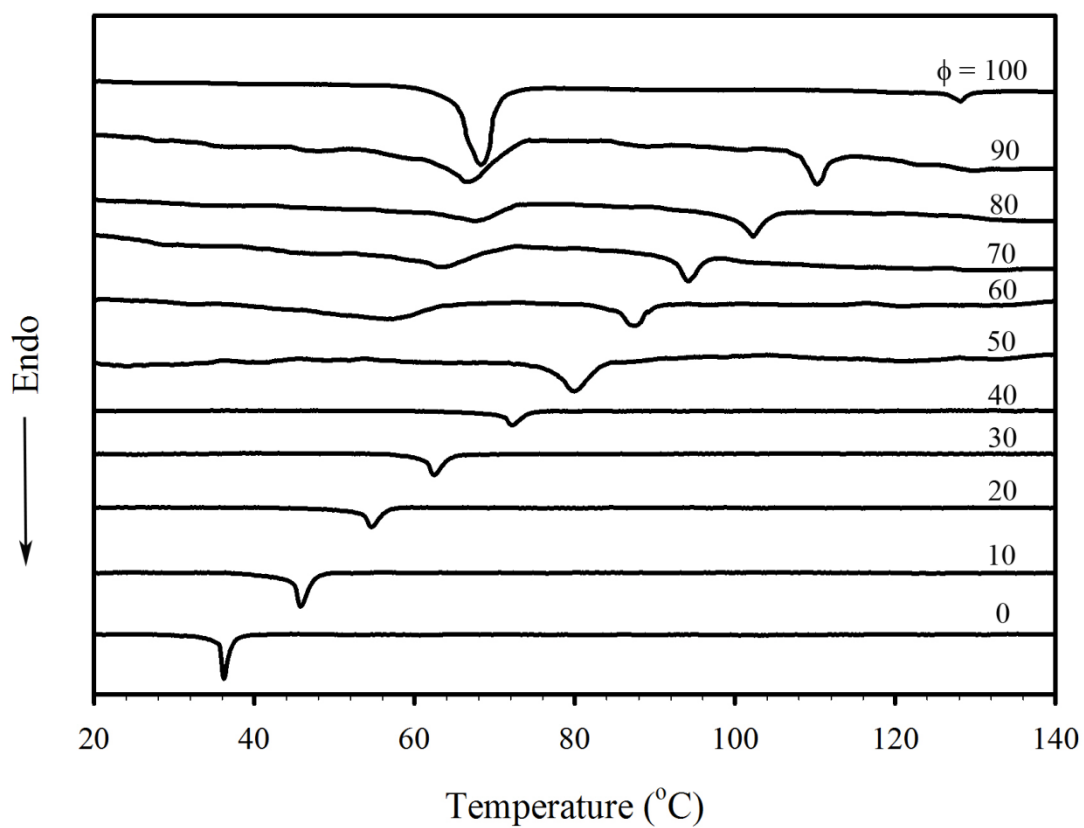


Figure SI 3. Set-ups for (a) horizontal; and (b) vertical magnet arrangements.

(a)



(b)

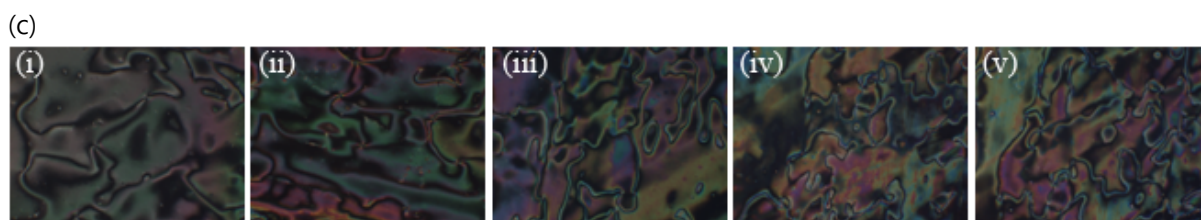
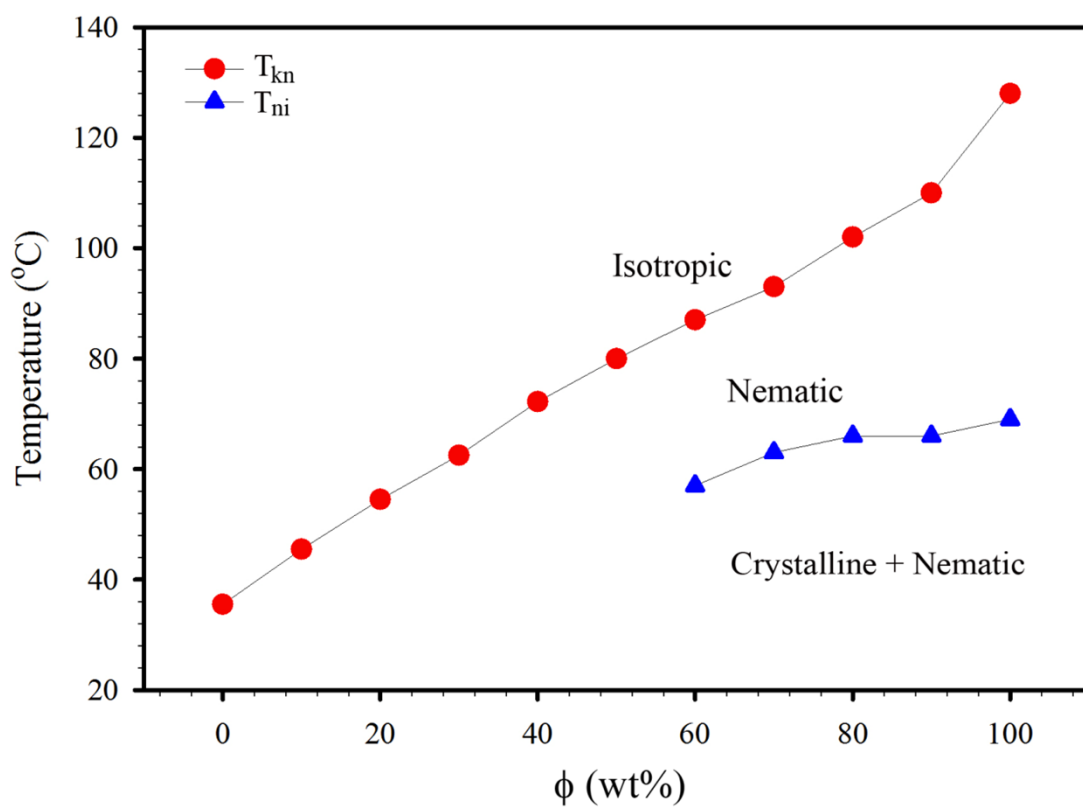


Figure SI 4. (a) DSC heating thermograms at $\phi = 0$ –100 wt%; (b) phase diagram; and (c) POM images at $\phi =$ (i) 10, (ii) 20, (iii) 30, (iv) 40, and (v) 50 wt% under cross polarizers.

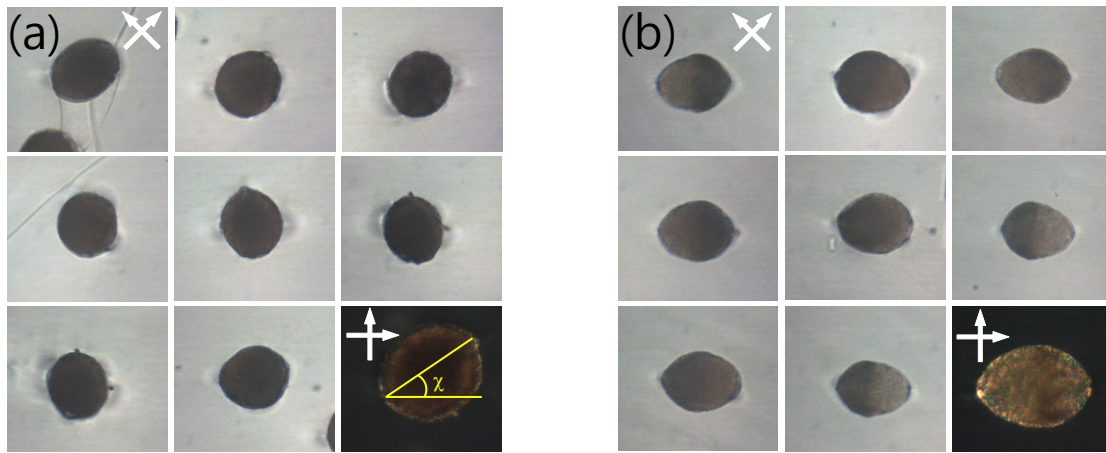


Figure SI 5. POM images of selective anisotropic (a) $LC_{PVA, \text{horizontal}}$; and (b) $LC_{PVA, \text{vertical}}$ particles in an LC cell under crossed polarizers (shown with arrows), which were rotated 45° against the horizontal global orientation of the cell for better visualization on the bright background of the LC cell; the last images in (a) and (b) are before rotation of the crossed polarizers.