

Supporting information

Thermally Responsive Microlens Arrays fabricated with the use of Defects arrays in a Smectic Liquid Crystal

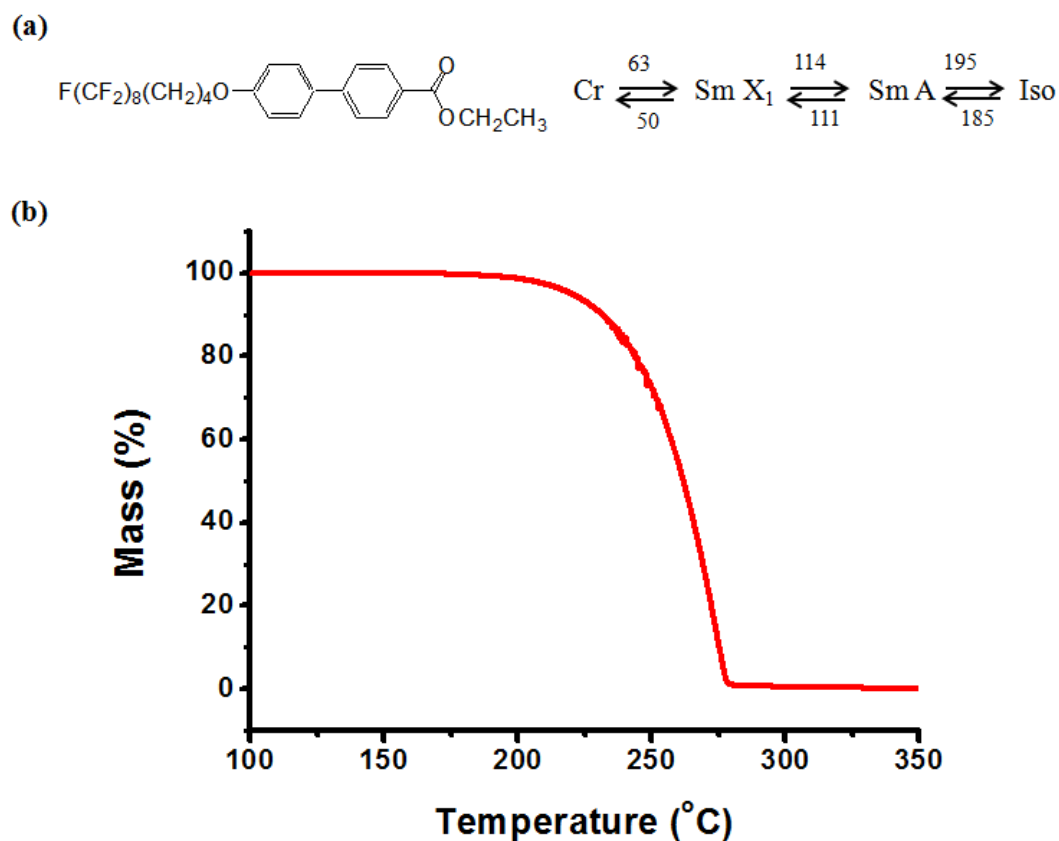
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S1. (a) The molecular structure and the phase transition temperature of the smectic LC compound having sublimation problem. (b) Thermogravimetric analysis (TGA) data of (a) material. As shown in TGA data, sublimation starts to occur near 156°C in smectic region of the material and the rate of sublimation is fast.

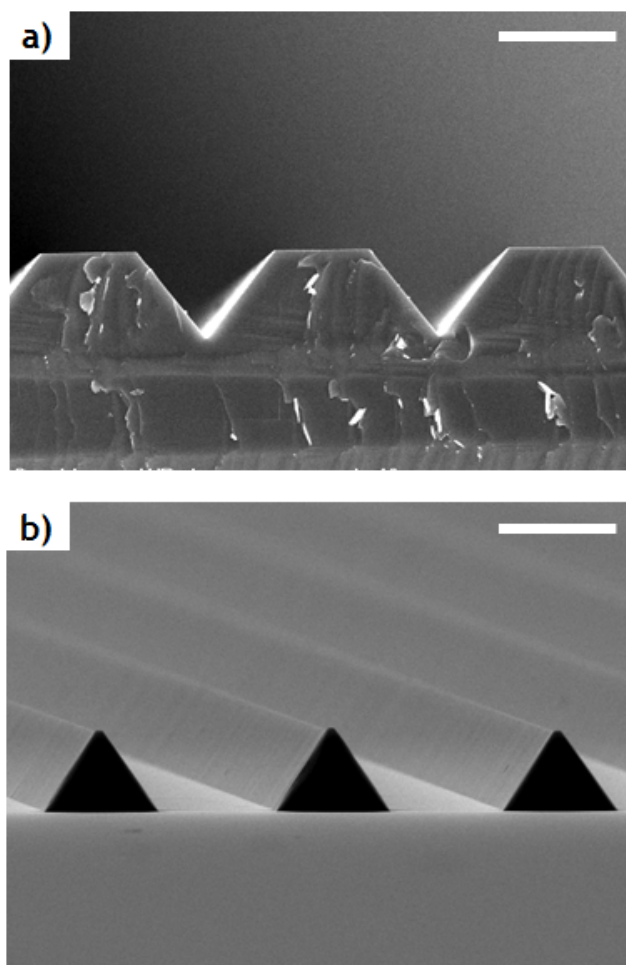


Fig. S2. a) The scanning electron microscopy (SEM) images of Si V-shaped microchannels, b) NOA65 trapezoidal microchannel (Scale: 10 μ m).

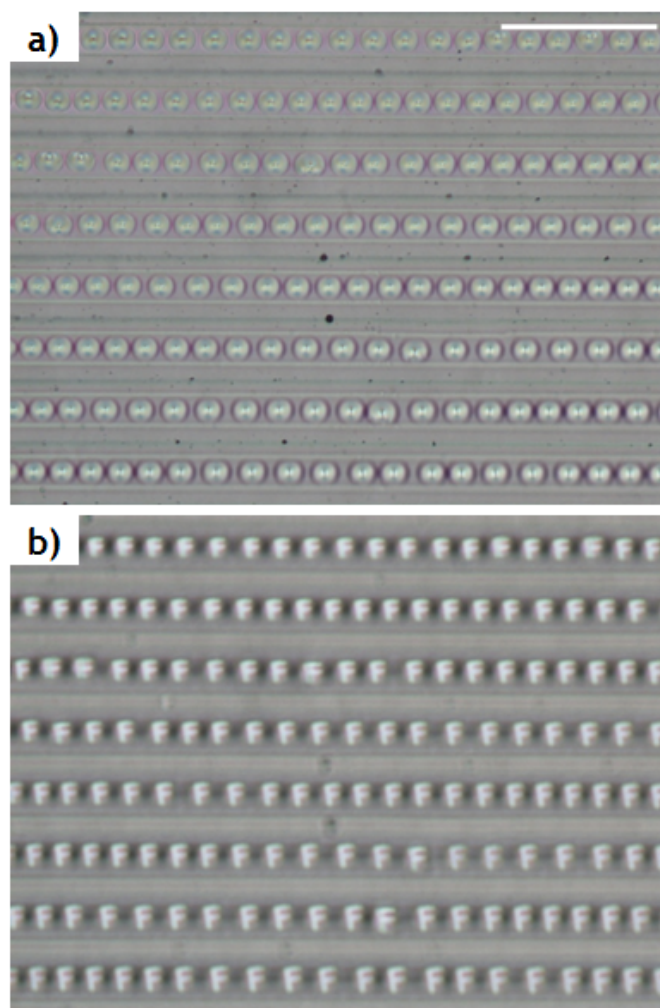


Fig. S3. a) Optical microscope (OM) images of MLAs at $z=0$. At $z=0$, non-diffracted image of the MLA was captured. b) The letter “F” was clearly observed when the focal point of the objective lens was adjusted upwards to match the focal plane of the MLAs. (Scale: $50\mu\text{m}$).

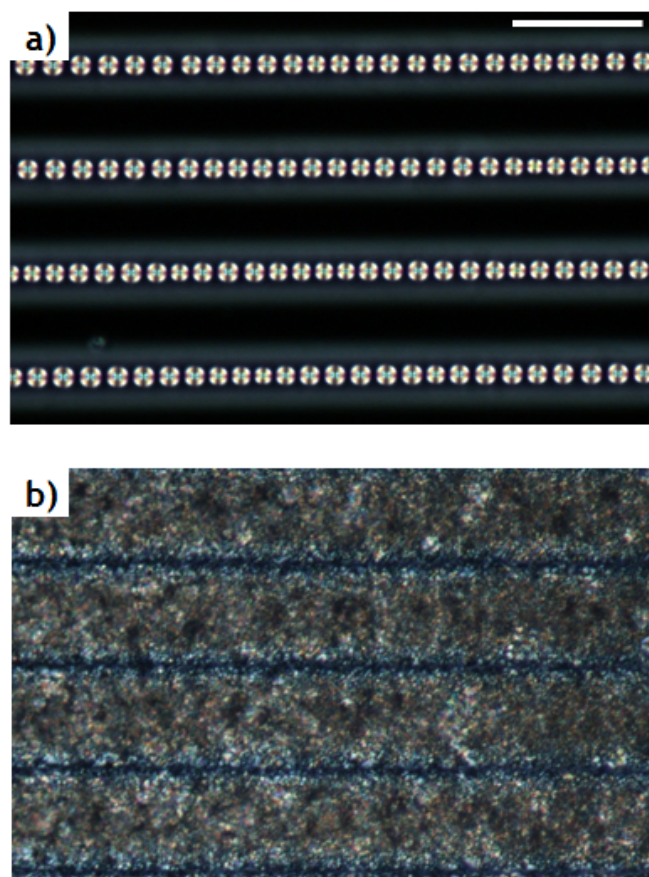


Fig. S4. Polarized optical microscope (POM) images of MLAs a) at 30°C and b) -10°C (Scale: 50 μ m).