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## **Supporting Information**

## **Tunable Reflectance of Inverse Opal-Chiral nematic Liquid Crystal-Multilayer Device** by Electric-/Thermal-Control

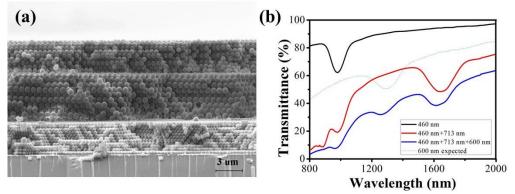
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**Fig. S1** (a) SEM image of trilayer opal and (b) transmission spectra measured during the process of layer-by-layer assembly of trilayer opal. The trilayer opal was fabricated from PS spheres of 460 nm-713 nm-600 nm (460 nm at the bottom and 600 nm on the top).

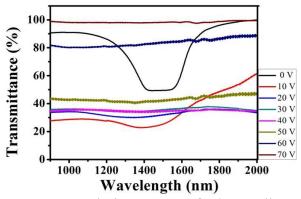
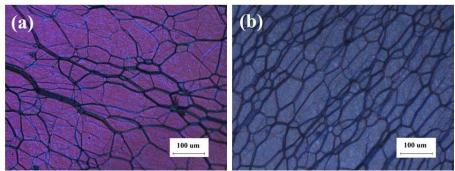
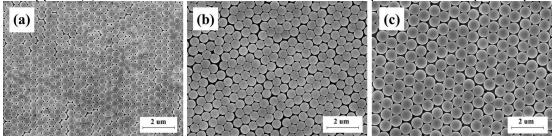


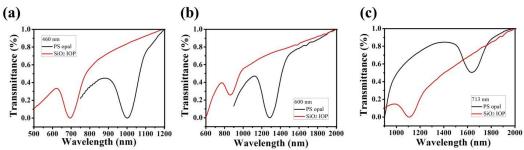
Fig. S2 Transmission spectra of N\*LC-cell applied with electric field.



**Fig. S3** POM images of monolayer-IOP-N\*LC (a) at initial state when the electric field was not applied (a) after the electric-field was removed and a pressure was imposed upon the cell.



**Fig. S4** SEM images of monolayer opals fabricated from PS spheres with different diameters (a) 460 nm (b) 600 nm (c) 713 nm.



**Fig. S5** Transmission spectra of monolayer SiO<sub>2</sub> IOP compared with corresponding monolayer PS opal.

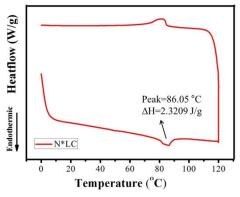


Fig. S6 DSC of N\*LC heating and cooling traces at 10 °C min<sup>-1</sup>.