## **Supplementary Materials**



**Figure S1.** (a) Chemical structure of the chiral azobenzene Chad-2-S and (b) variation of its absorption spectrum (solved in THF with 0.1 *wt%*) measured during the UV irradiation of 300  $\mu$ W/cm<sup>2</sup> for 2 minutes.



**Figure S2.** Experimental setup for optically controlling the CA-BPLC samples. P1 and P2 both are polarizers, which are set crossed. BS and M represent beam splitter and mirror, respectively.



**Figure S3.** Reflection spectra of (**a**) aligned and (**b**) non-aligned CA-BPLC samples measured at various temperatures in cooling.



**Figure S4.** R-POM images of non-aligned CA-BPLC samples with various concentrations of CA dopants (1, 2.5, and 5 *wt*%) during the illumination of 405 nm laser.