SUPPORTING INFORMATION

Dual photorecording on cholesteric azobenzene-containing LC polymer films using helix pitch photo-tuning and holographic grating recording

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Fig. S1. Absorbance spectra of chiral-photochromic dopant Sorb (dashed line) and azobenzene fragment of copolymer PAAzo8 (full line) in dichloromethane solution.

Fig. S2. Changes of the selective light reflection wavelength ($\lambda_{\text{max}}$) results from different irradiation time with UV light (313 nm, light intensity $\sim$1.2mW/cm$^2$).

Fig. S3. The second-order diffraction efficiency changes during the grating recording process for different recording time: 1 hour (a) and 1 minute (b). In the last case the grating was recorded for a 1 minute till approximately maximum of 1st order diffraction efficiency, after that the Ar$^+$ laser was off and the system was still monitored by He-Ne laser.
Fig. S4. First-order diffraction efficiency dynamics of uniaxial oriented and non-oriented nematic film of copolymer PAAzo8, and of cholesteric mixture PAAzo8+Sorb (7 wt.%).