Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

SUPPORTING INFORMATION

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

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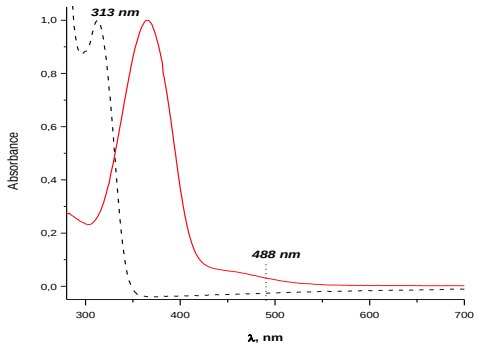


Fig. S1. *Absorbance spectra of chiral-photochromic dopant* ***Sorb*** *(dashed line) and azobenzene fragment of copolymer* ***PAAzo8*** *(full line) in dichloromethane solution.*

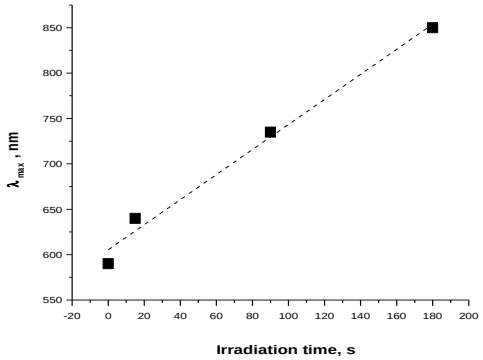
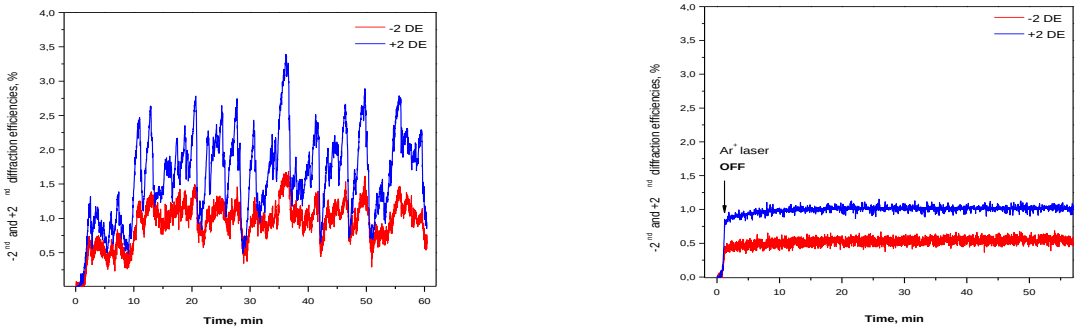


Fig. S2. *Changes of the selective light reflection wavelength (λ_{max}) results from different irradiation time with UV light (313 nm, light intensity ~1.2mW/cm^2).*



a b

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.*

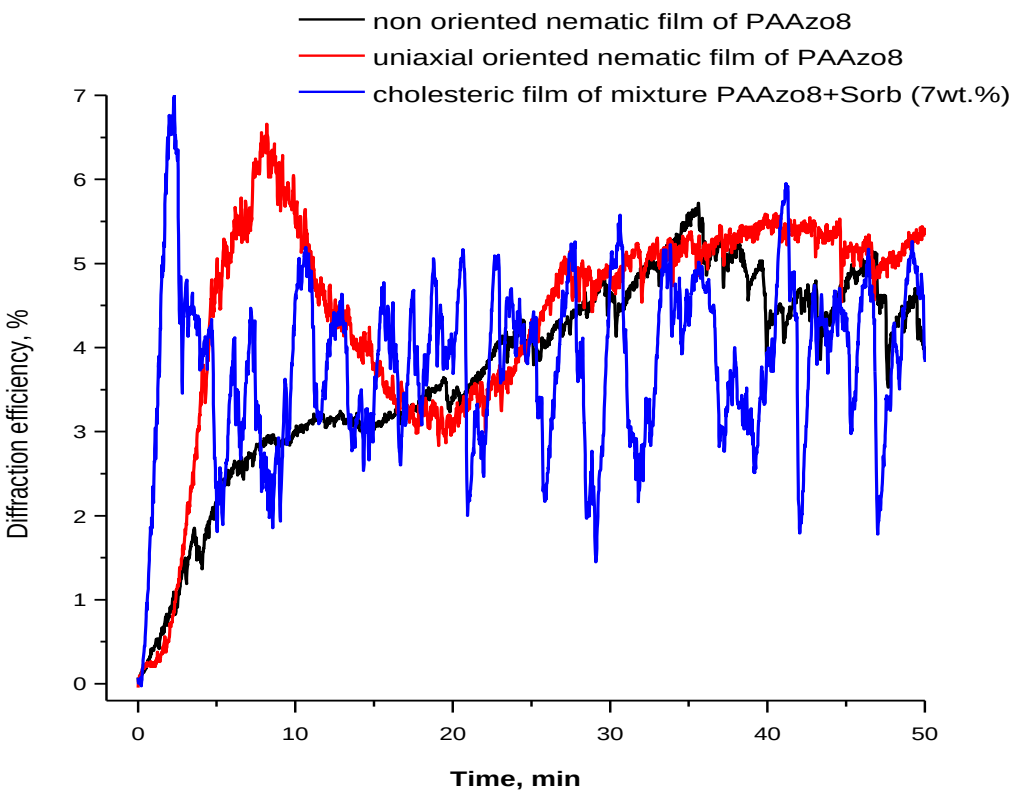


Fig. S4. *First-order diffraction efficiency dynamics of uniaxial oriented and non-oriented nematic film of copolymer* ***PAAzo8,*** *and of cholesteric mixture* ***PAAzo8****+****Sorb (7 wt. %)****.*