Supporting information (SI) for

Rewritable Optical Patterns in Light Responsive Ultra High Molecular Weight Polyethylene

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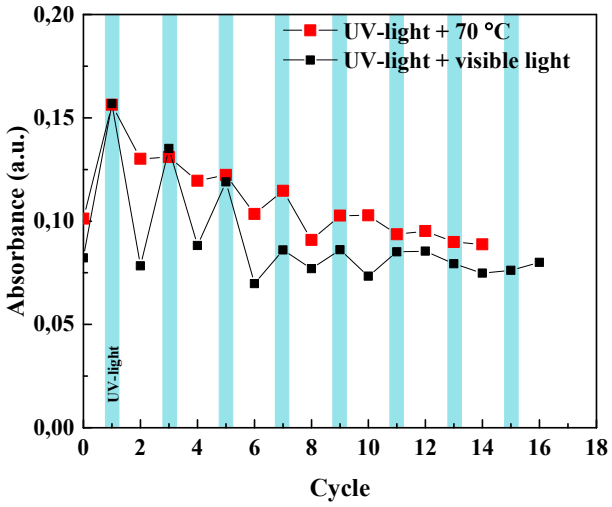

Figure S1. Cyclic photo-isomerization of the UH_DR60 tapes is investigated at λ_{max} ~ 550 nm. The blue boxes indicate exposure to UV-light for 5 minutes. Data points in red correspond to the absorbance after cyclic exposure to UV-light and heat (3 min.). The data set in black corresponds to UV-light and green light cyclic exposure (5 min.).

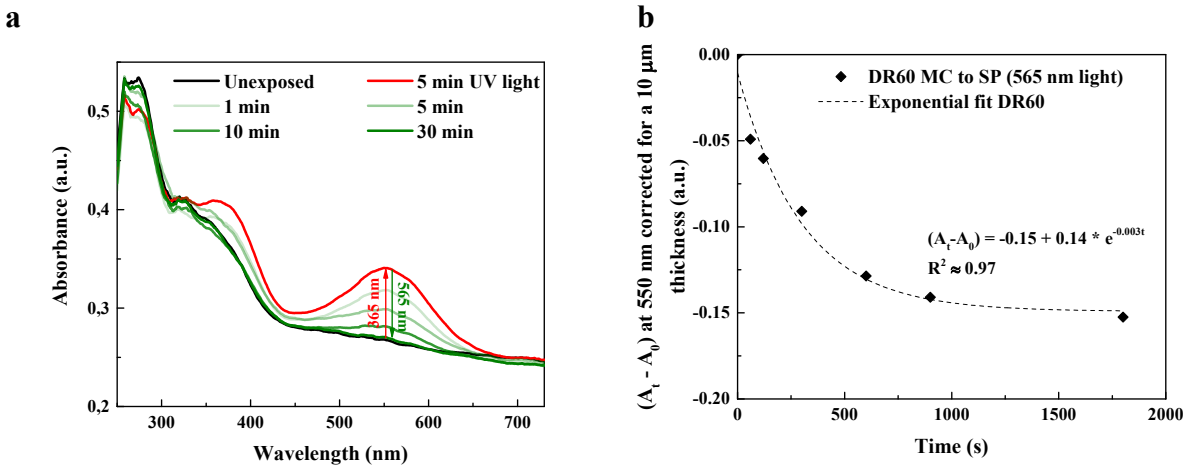

Figure S2. (a) UV-vis spectra of the films showing the isomerization from MC to SP upon exposure to green (565 nm) light for UH_DR60. (b) The photochromic decoloration process was fitted with a first order exponential function in a (A_t-A_o) versus time plot at λ_{max} = 550 nm.

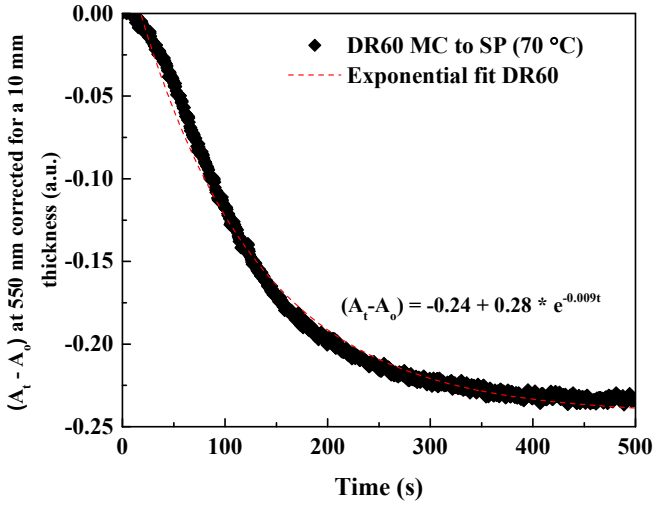

Figure S3. The thermal decoloration process (at 70 °C) was fitted with a first order exponential function in a (A_t-A_o) versus time plot at λ_{max} = 550 nm.

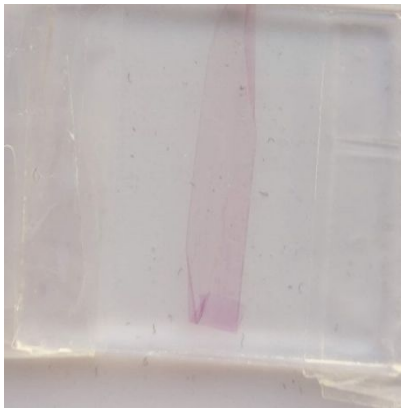

Figure S4. The UH_DR60 tape after UV exposure and soaking in xylene for 2 days, reveals that the photochromic response can still be observed.