## SUPPORTING INFORMATION

## for

## Reversible photo-responsive gel-sol transitions of robust organogels based on azobenzene-containing main chain liquid crystalline polymer

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 Solvent	α	π*	β
THF	0	0.51	0.54
dioxane	0	0.55	0.37
chloroform	0.44	0.58	0
DMF	0	0.88	0.76

**Table S1** The  $\alpha$ ,  $\beta$  and  $\pi^*$  values for different solvents

**Table S2** Summary of the  $K_{tc}$ ,  $t_{\infty}$  and P of UV light irradiation

Sample	$K_{\rm tc}$ (s <sup>-1</sup> )	$P^a$ (mW cm <sup>-</sup>	$t_{\infty}^{b}(\mathbf{s})$	Reference
1		<sup>2</sup> )		
β-CD-Azo-C <sub>8</sub>	0.077	2.6	60	[26]
A9ABT		3	540	[27]
Azopy-C <sub>10</sub> •TFDIB		3	240	[28]
Dopant2	0.115	3.6	51	[29]
C0		3	600	[30]
C10		3	180	[30]
CLCP		20	900	[31]
PEO <sub>48</sub> - <i>b</i> -P(AZO <sub>10</sub> - <i>co</i> -		90	60	[32]
NIPAM <sub>10</sub> )				
PAA-Azo		0.45	90	[9]
AZO-mLCP	0.035	0.28	78	Our work

<sup>*a*</sup> P represents the intensity of the UV light.

 $^{b}t_{\infty}$  indicates the time to the photo-stationary state.



Fig. S1 <sup>1</sup>H NMR spectra of Azo-mLCP in  $d_8$ -dioxane at different concentrations.



Fig. S2 POM photographs of the mixture of 8 wt% Azo-mLCP in dioxane captured at

25 °C before UV irradiation (a) and after UV irradiation (b).