Electronic Supplementary Material (ESI) for CrystEngComm.

Supporting Information

Photomechanical bending behavior of photochromic diarylethene crystals induced under polarized light

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Figures and Videos

Table S1. Crystallographic data for diarylethenes **1a** and **2a**.

	1a	**2a**
Formula	$C_{51}H_{34}F_6O_4S_2$	$C_{29}H_{22}F_6O_2S_2$
Formula weight	888.92	580.59
Temperature / K	138(2)	293(2)
Crystal system	triclinic	monoclinic
Space group	$P\bar{1}$	$P2_1/c$
a / Å	6.838(2)	18.727(4)
b /Å	15.416(6)	6.643(1)
c /Å	20.719(8)	21.459(4)
α / °	70.74(3)	90
β / °	88.28(3)	101.035(3)
γ / °	89.84(3)	90
Volume /Å^3	2060.9(13)	2620.1(9)
Z	2	4
Density / g cm^{-3}	1.432	1.472
Goodness-of-fit on F^2	1.046	0.962
R [$I > 2\sigma(I)$]	R_1 = 0.0442 wR_2 = 0.0868	R_1 = 0.0389 wR_2 = 0.0878
R (all data)	R_1 = 0.0864 wR_2 = 0.0912	R_1 = 0.0810 wR_2 = 0.1019
CCDC No.	942519	185945
Reference	S1	S2

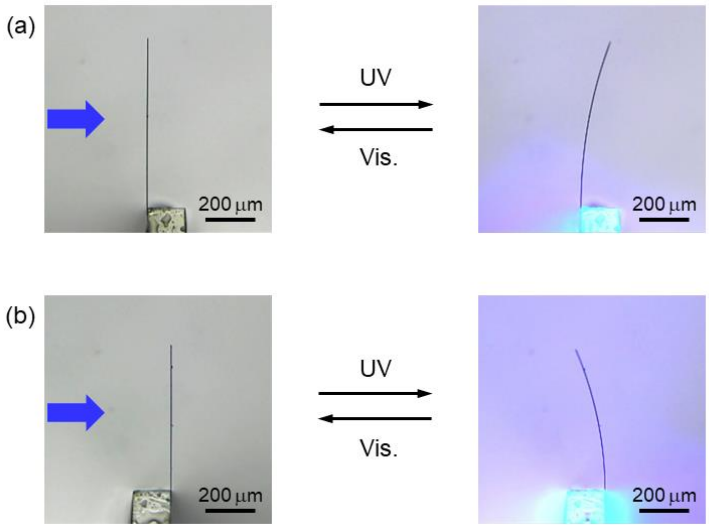

Figure S1. Photomechanical bending behavior with non-polarized UV light and visible light for crystals **1a** (a) and **2a** (b).

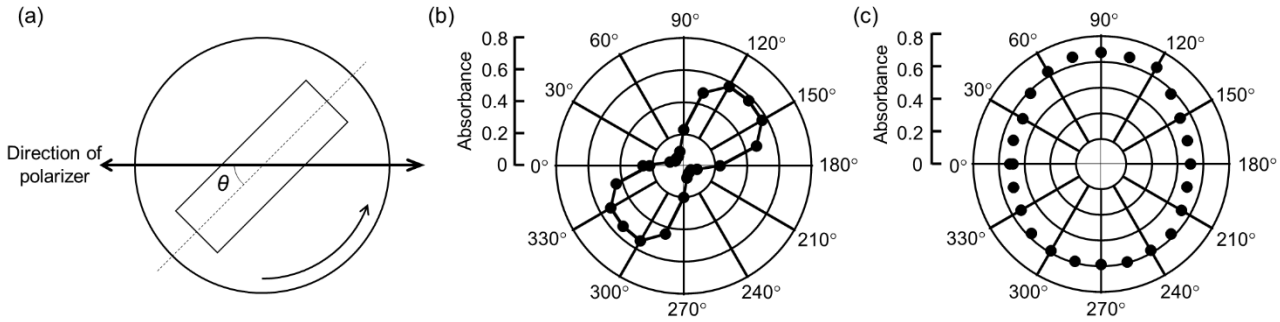

Figure S2. (a) The definition of rotation angle θ and absorption anisotropy of the closed-ring isomer in crystals **1a** (b) and **2a** (c).

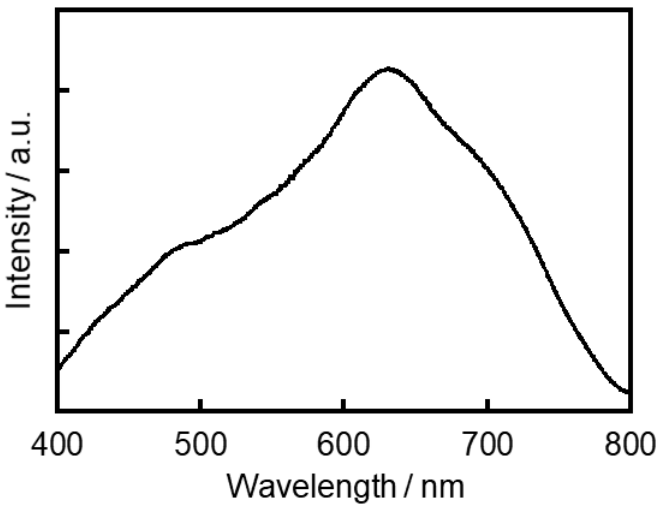

Figure S3. Spectrum of the incident visible light.

Reference

S1 D. Kitagawa and S. Kobatake, *J. Phys. Chem. C*, **2013**, *117*, 20887–20892.

S2 M. Morimoto, S. Kobatake and M. Irie, *Chem.– Eur. J.*, **2003**, *9*, 621–627.