Electronic Supplementary Material (ESI) for CrystEngComm.

Supporting Information:

Photoinduced stepwise bending behavior of photochromic diarylethene crystals

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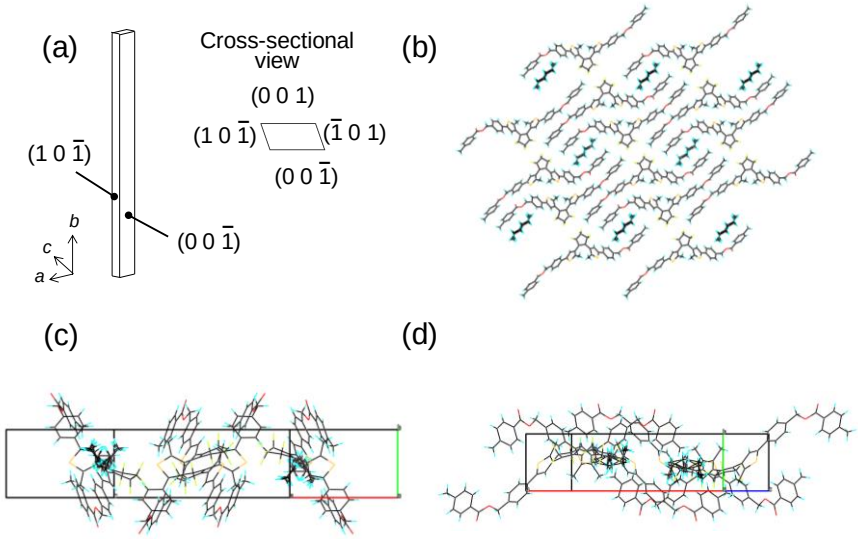

Figure S1. Crystal shape of **1a** (a) and molecular packing diagrams viewed from cross section (b), (1 0 $\bar{1}$) face (c), and (0 0 $\bar{1}$) face (d).

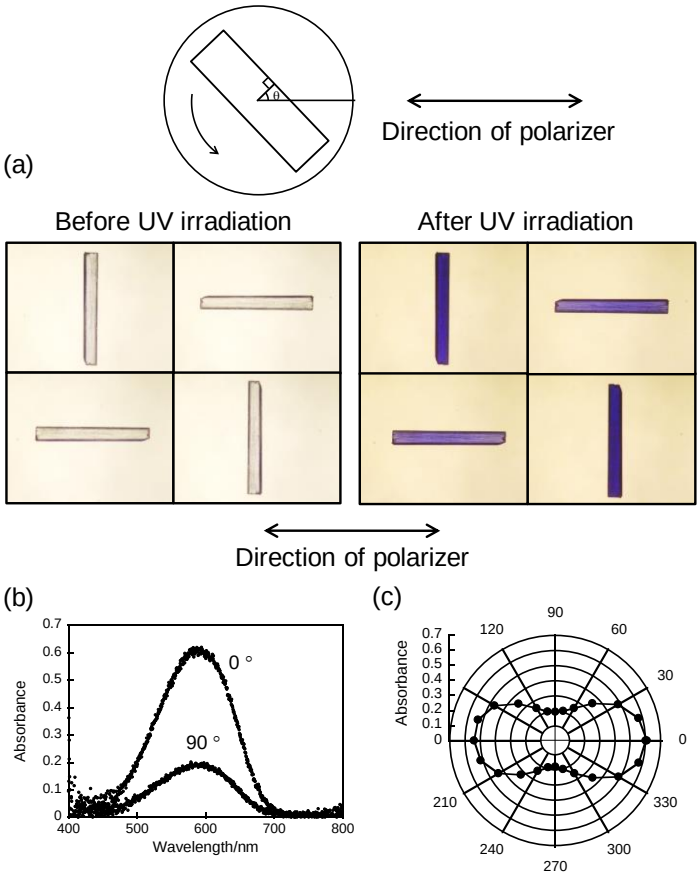

Figure S2. Photographs of crystal **1a** before and after UV light irradiation, viewed from (0 0 $\bar{1}$) face (a) and absorption spectra of the colored crystal under polarized light (b), and polar plots of absorbance at 590 nm (c).

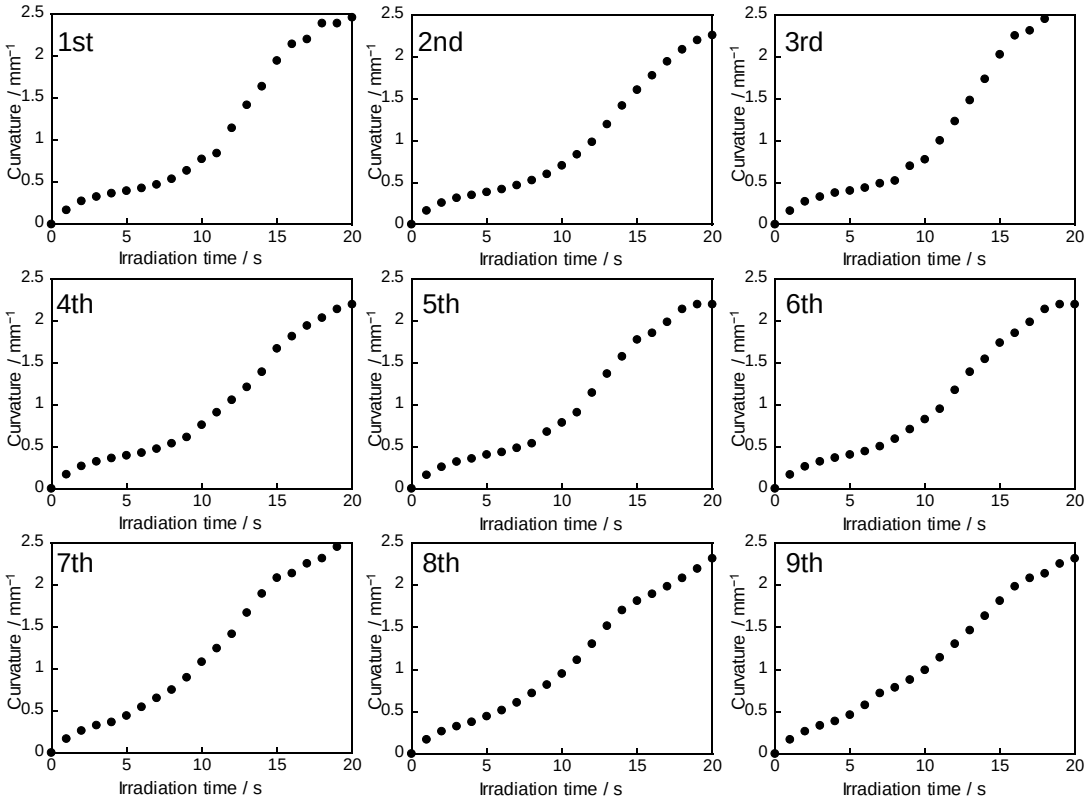

Figure S3. Change in the curvature relative to irradiation time with UV light in each cycle.

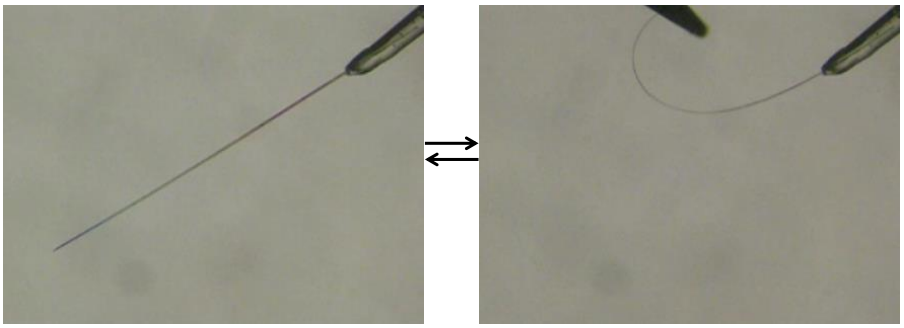

Figure S4. Photograph of the manual bending of crystal **1a**.

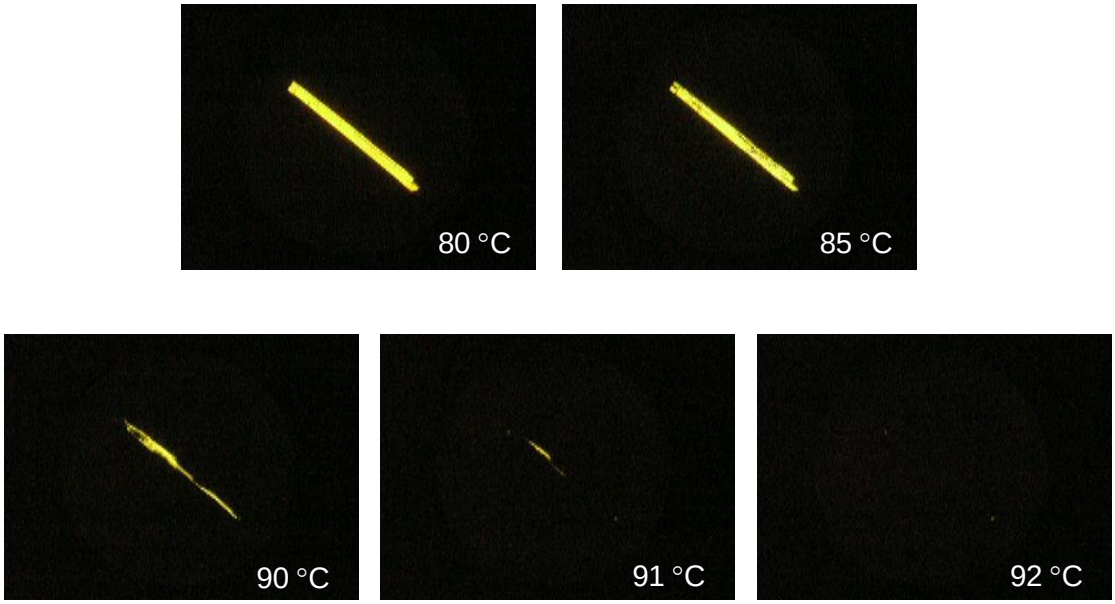

Figure S5. Melting behavior of crystal **1a** at a heating rate of 1 °C min^{-1}.

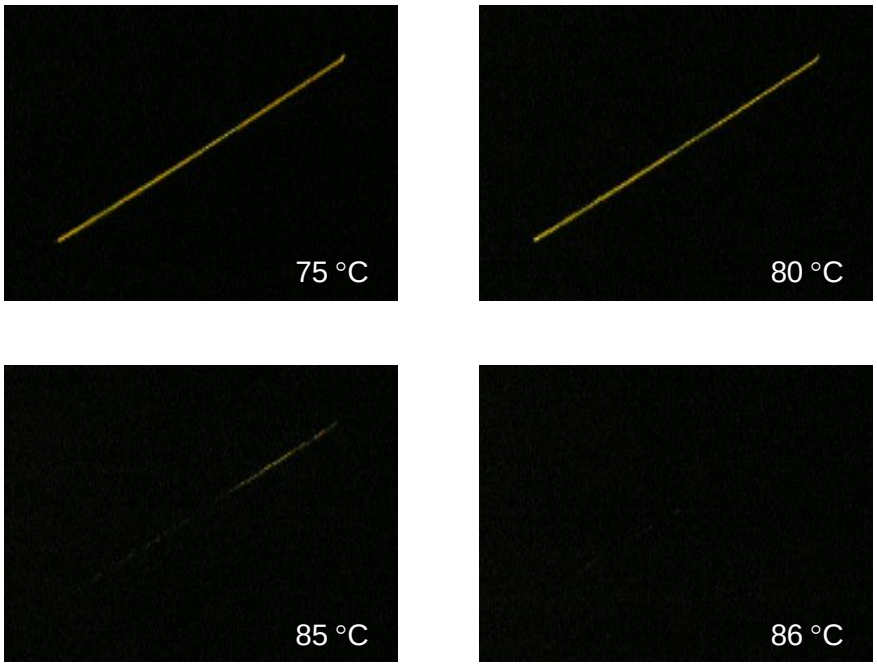

Figure S6. Melting behavior of crystal **1a** after many cycles of alternating irradiation with UV and visible light at a heating rate of 1 °C min^{-1}.

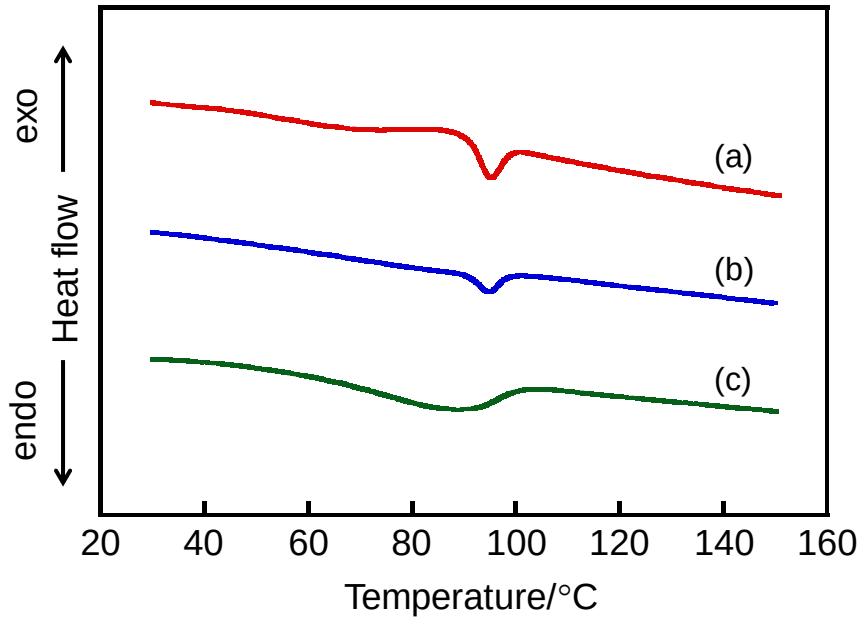

Figure S7. DSC curves of crystal **1a** (a) before and (b) after several cycles, and (c) many cycles of alternating irradiation with UV and visible light at a heating rate of 5 °C min^{-1}.

Table S1. X-ray crystallographic data of **1a**.[S1]

	1a
Empirical formula	C_{45} H_{34} F_6 O_4 S_2, C_3 H_7
Formula weight	859.93
Temperature	120(2) K
Crystal system	Monoclinic
Space group	*P*2/n
Unit cell dimensions	*a* = 21.493(10) Å
	b = 6.174(3) Å
	c = 32.059(15) Å
	β = 98.765(6)°
Volume	4205(3) Å^3
Z	4
Density	1.358 g/cm^3
Crystal size	0.36 × 0.22 × 0.01 mm^3
Goodness-of-fit on F^2	1.077
Final *R* [$I > 2\sigma(I)$]	*R*1 = 0.0564, *wR*2 = 0.1231
R (all data)	*R*1 = 0.0806, *wR*2 = 0.1346

Reference

S1. D. Kitagawa, C. Iwaihara, H. Nishi, S. Kobatake, *Crystals* **2015**, *5*, 551-561.