Temperature Dependence of the Photoinduced Micro-crystalline Surface Topography of a Diarylethene

Noriko Fujinaga,[a] Naoki Nishikawa,[a] Shingo Sakiyama,[a] Seiji Yamazoe,[a,b] Yuko Kojima,[c] Tsuyoshi Tsujioka,[d] Satoshi Yokojima,[e] Shinichiro Nakamura,[f] and Kingo Uchida,[a*]

[a] *Department of Materials Chemistry, Faculty of Science and Technology, Ryukoku University, Seta, Otsu 520-2194, Japan. Fax: +81 77 543 7483; Tel: +81 77 543 7462; E-mail: uchida@rins.ryukoku.ac.jp*
[b] *Department of Chemistry, School of Science, the University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo, 221-0033, Japan.*
[c] *Science and Technology Research Center Mitsubishi Chemical Group 1000 Kamoshida, Yokohama 227-8502, Japan.*
[d] *Department of Arts and Sciences Faculty of Education Osaka Kyoiku University, 4-698-1 Asahigaoka, Kashiwara, Osaka 582-8582, Japan.*
[e] *School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, 1432-1 Horinouchi, Hachioji, Tokyo 192-0392, Japan.*
[f] *RIKEN Research Cluster for Innovation, Nakamura Laboratory, 2-1 Hirosawa, Wako, Saitama 351-0198, Japan.*

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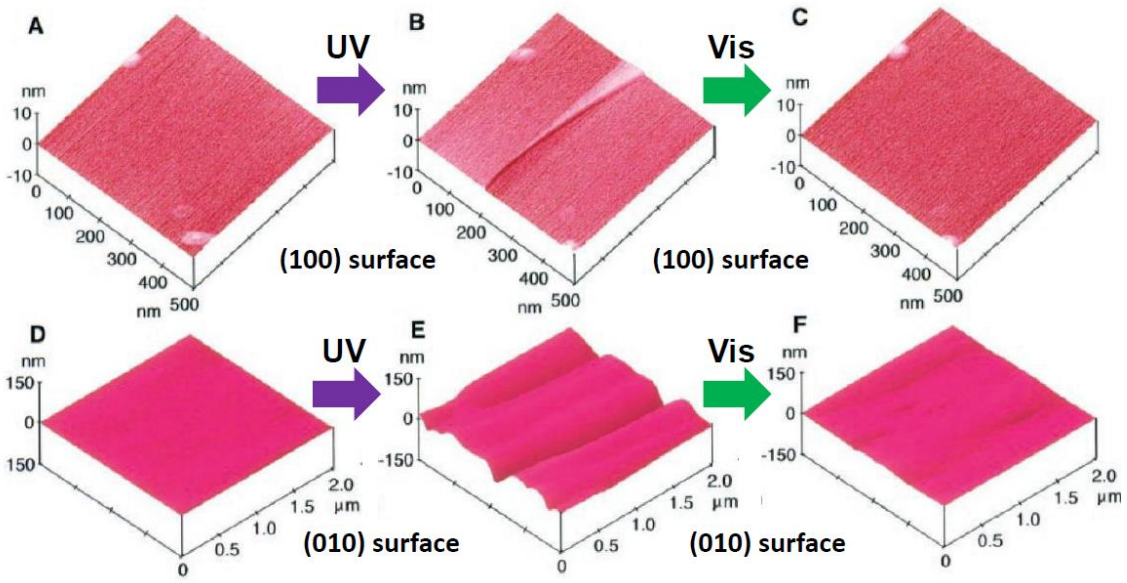


Figure S1. AFM images of (**A** to **C**) the (100) crystal surface of **1o** and (**D** to **F**) the (010) surface: before photoirradiation, (A) and (D); after irradiation with 366-nm light for (B) 10 s and (E) 15 s; and after irradiation with visible light (λ > 500 nm), (C) and (F).[S1]

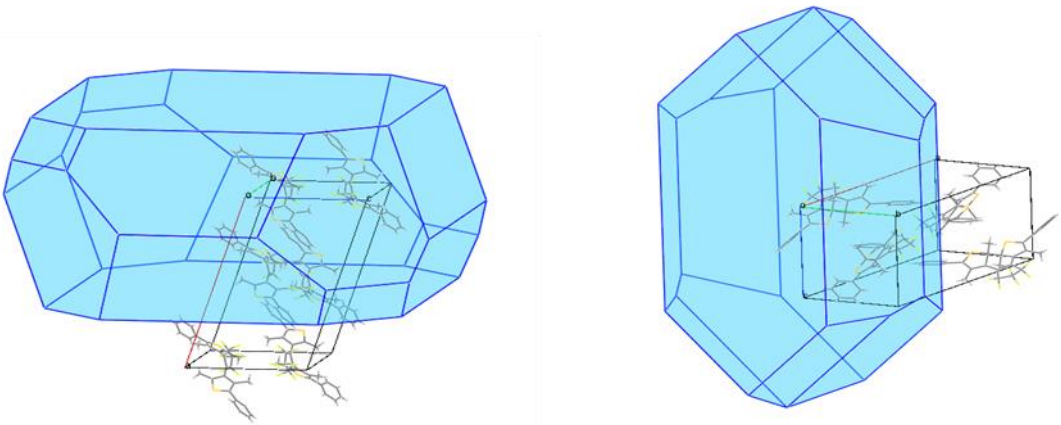
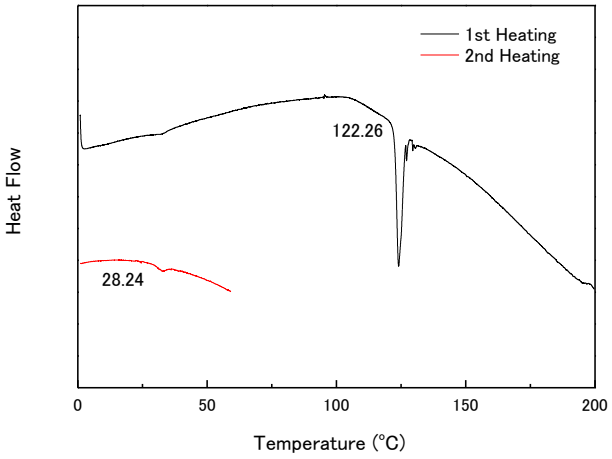
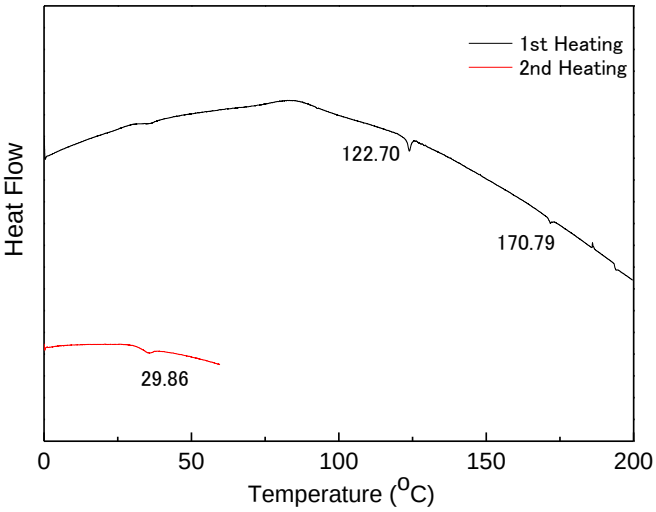


Fig. S2 The estimated crystal shapes from the crystal units of (a) **1o** and (b) **1c**.

(a)



(b)



(c)

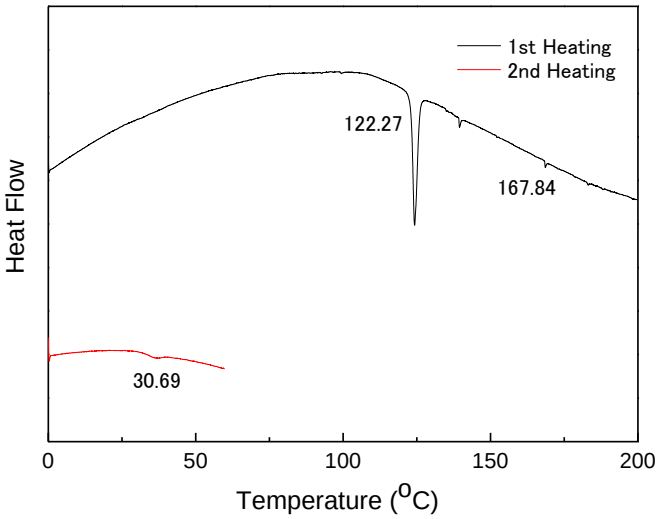


Fig. S3. DSC curves of the 1st and 2nd heating of the mixture of **1o** and **1c** with heating rate of 10 K/min (a) mixture of **1o** and **1c** (**1o** : **1c** = 87 : 13), (b) **1o** : **1c** = 71.1 : 28.9, (c) **1o** : **1c** = 54.9 : 45.1 The ratio was obtained after heating of the samples (**1o:1c** = 85:15, **1o:1c** = 71:29 and **1o:1c** = 55:45) mentioned in the main text. The slight decrease of the content of **1c** is due to the thermal cycloreversion of **1c** to **1o**.

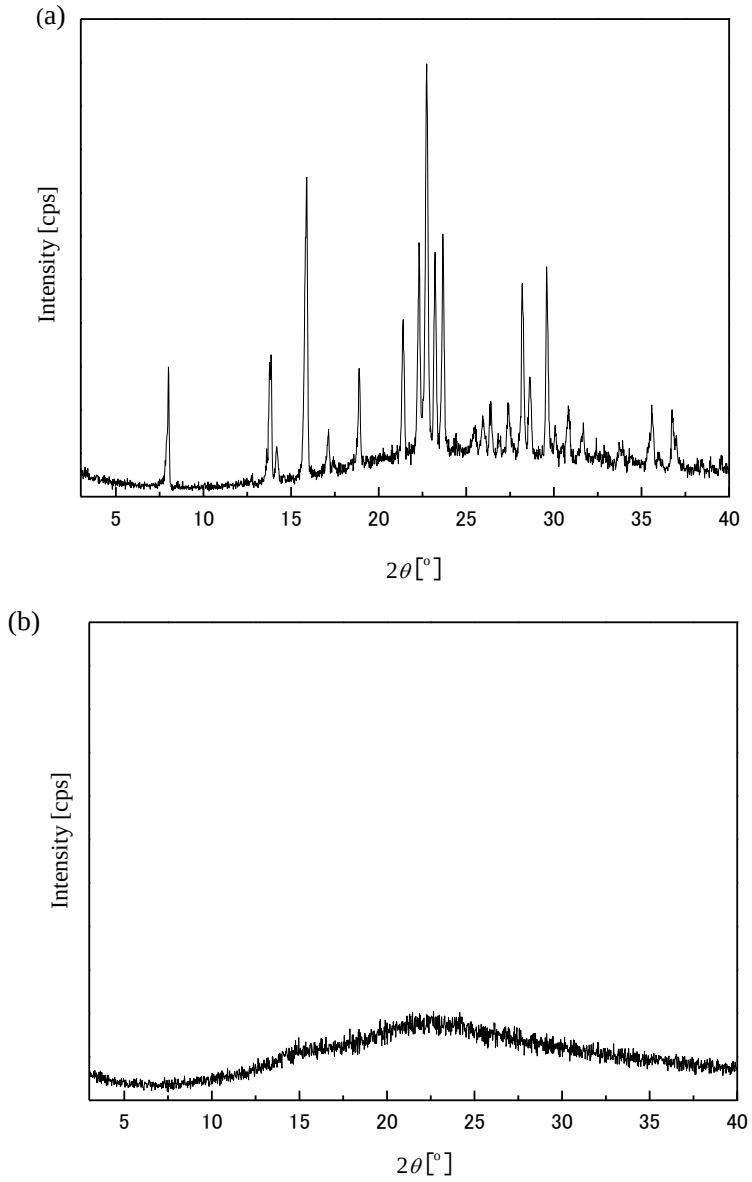


Fig. S4. XRD spectra of microcrystalline surface of **1o** (a) before 1st heating and (b) after second heating in Fig. S2.

Reference

S1) M. Irie, S. Kobatake and M. Horichi, *Science*, 2001, **291**, 1769-1772.