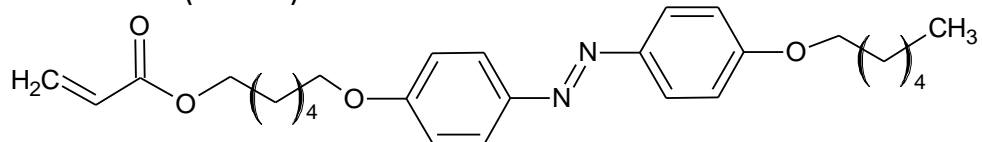


Electronic Supplementary Information (ESI)

Depth-selective microscopic observation of photomobile liquid crystal polymer under UV illumination

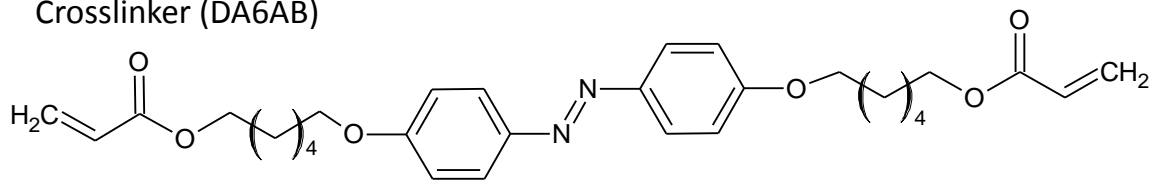
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Kiyohide Takado,^{a,b} Tomiki Ikeda^b

Monomer (A6AB6)



6-[4-(4-Hexyloxyphenylazo)phenoxy]hexylacrylate

Crosslinker (DA6AB)



4,4'-Bis[6-(acryloyloxy)hexyloxy]azobenzene

Fig.S1 The molecular structures of the monomer and the crosslinker..

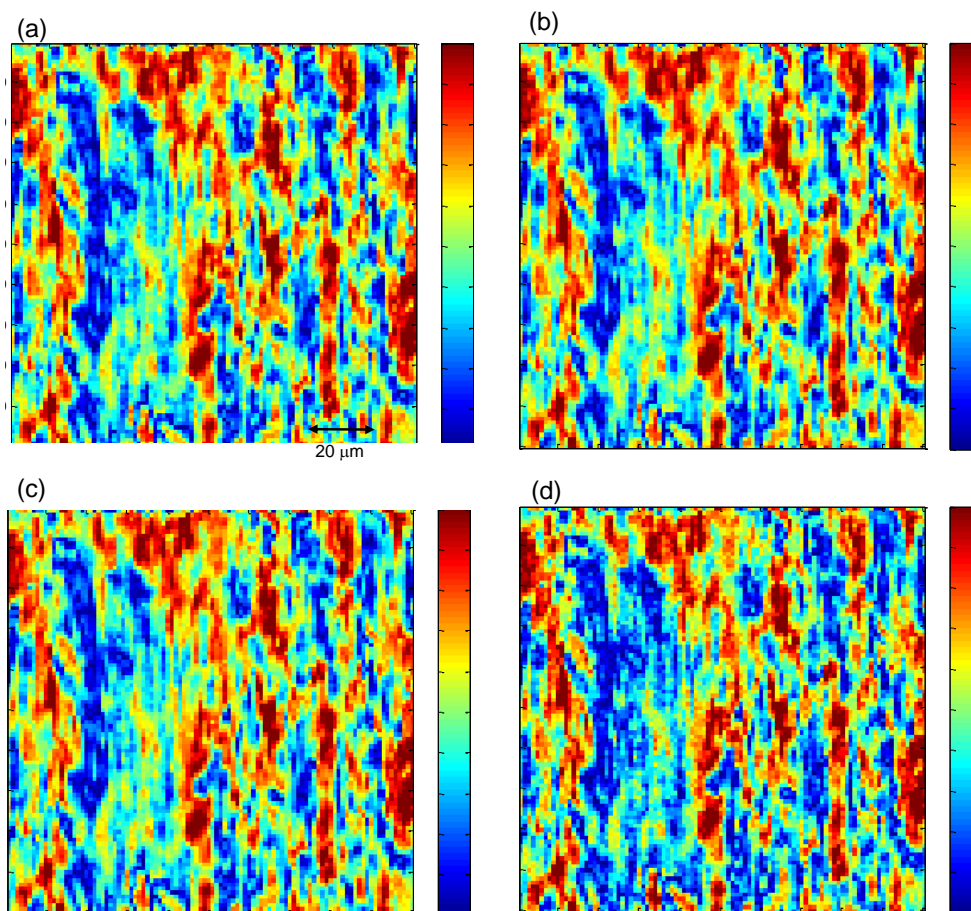


Fig.S2 Anisotropy imaging of a photomobile liquid crystalline polymer film by the Raman microscopy. The anisotropy was calculated using the peaks at 1188, 1409, 1455 and 1602 cm^{-1} , the corresponding figures are (a), (b), (c) and (d), with a scan step of 1 μm with a field of view of 120x120 μm^2 .

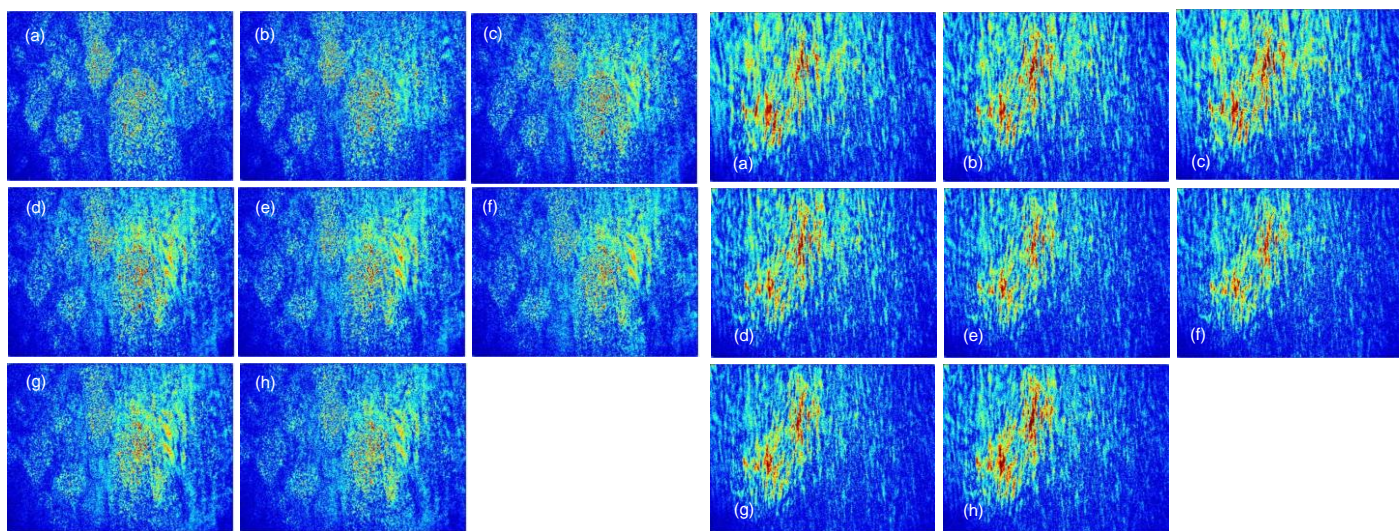


Fig.S3 Sequences of the images of a photomobile liquid crystalline polymer film by irradiation of a UV light when the detection light polarization direction was parallel to the director axis. The left and right sequences correspond to the images at 18.4 and 8.0 μm from the top surface. (a)-(h) corresponds to the images, 0, 15, 30, 45, 60, 90, 120, 180, 240 seconds after the UV irradiation was started, which was stopped after 60 seconds.