Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting information for: A photoresponsive planar chiral azobenzene dopant with high helical twisting power

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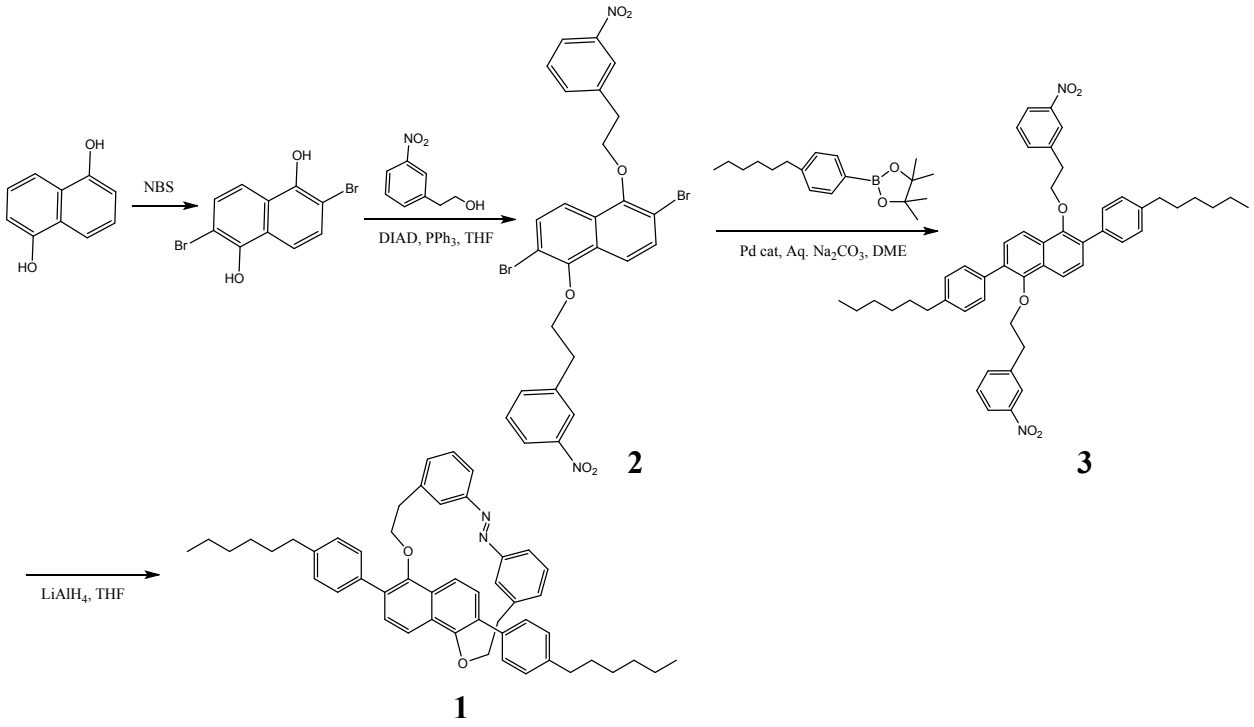

Scheme S1. Synthetic route to molecule **1.**

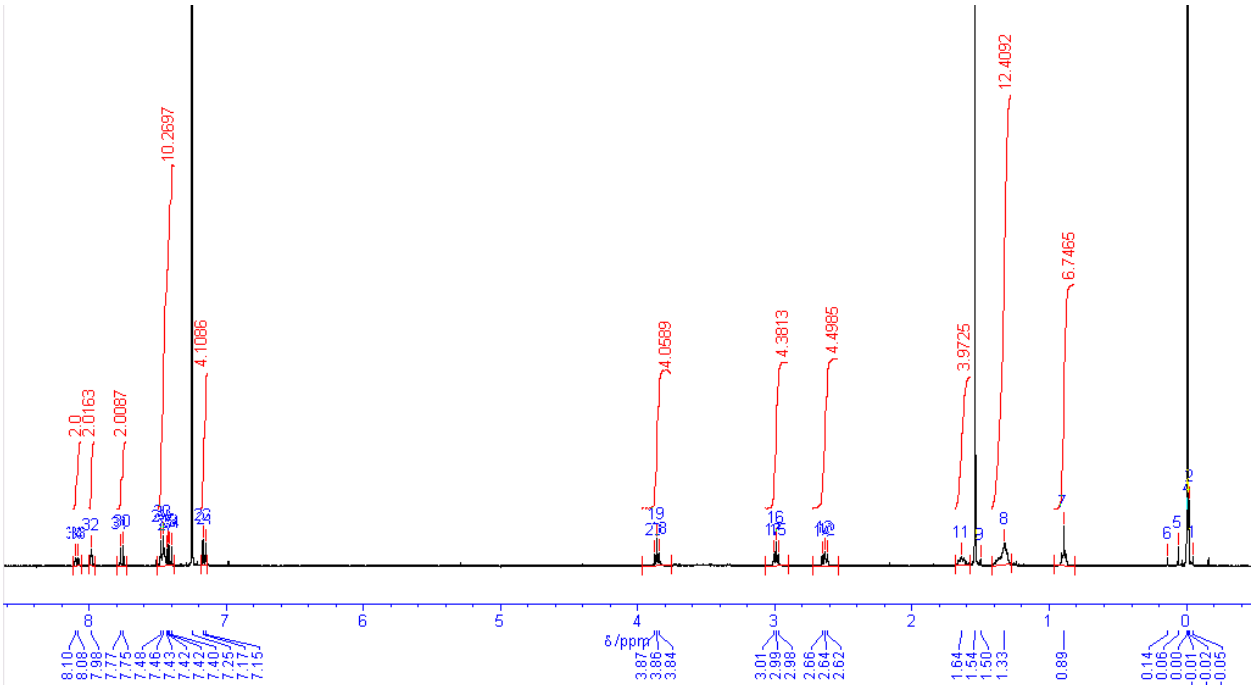

Figure S1. ^{1}H-NMR (400 MHz, $CDCl_3$) spectrum of *trans* isomer of compound **3.**

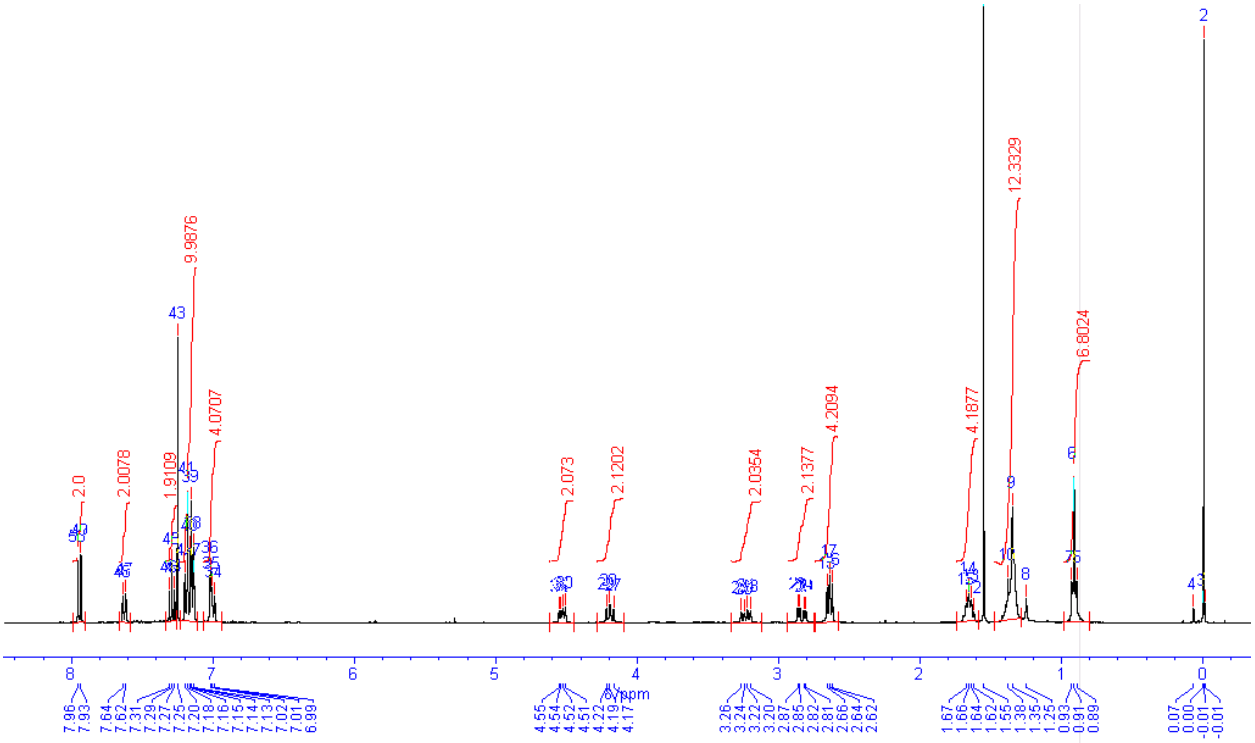

Figure S2. ^{1}H-NMR (400 MHz, $CDCl_3$) spectrum of *trans* isomer of compound **1.**

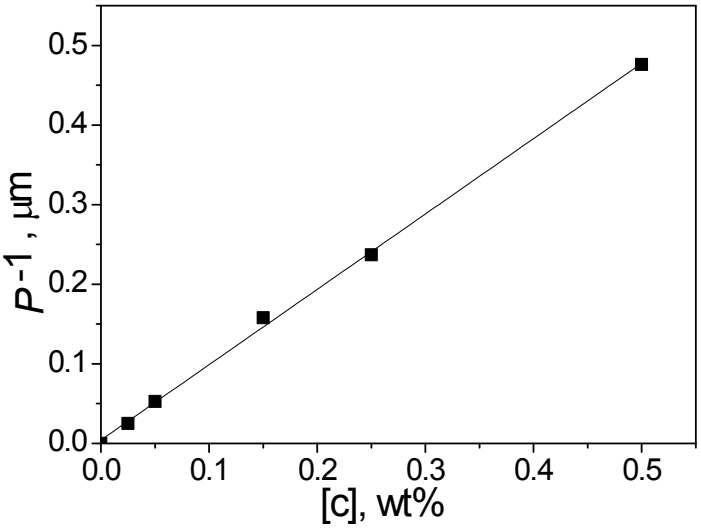

Fig. S3 Plot of reciprocal helical pitch as a function of concentration of dopant (*E*)-A in a nematic host 5CB.

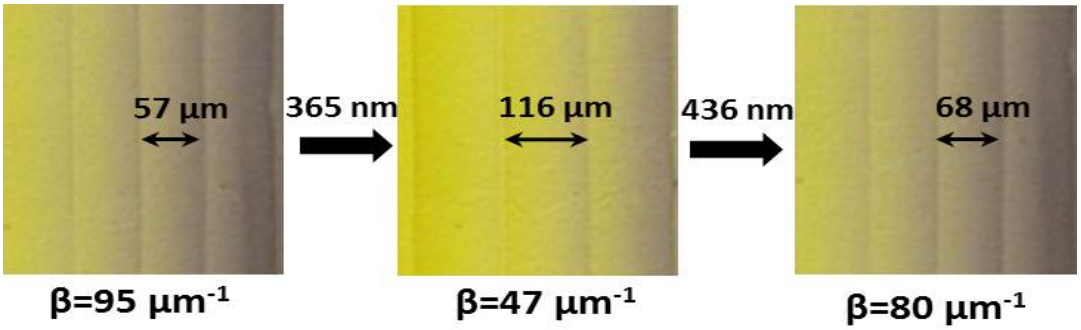

Fig. S4 HTP value change of 0.5 wt% **1** in LC host 5CB upon UV or Vis light irradiation.

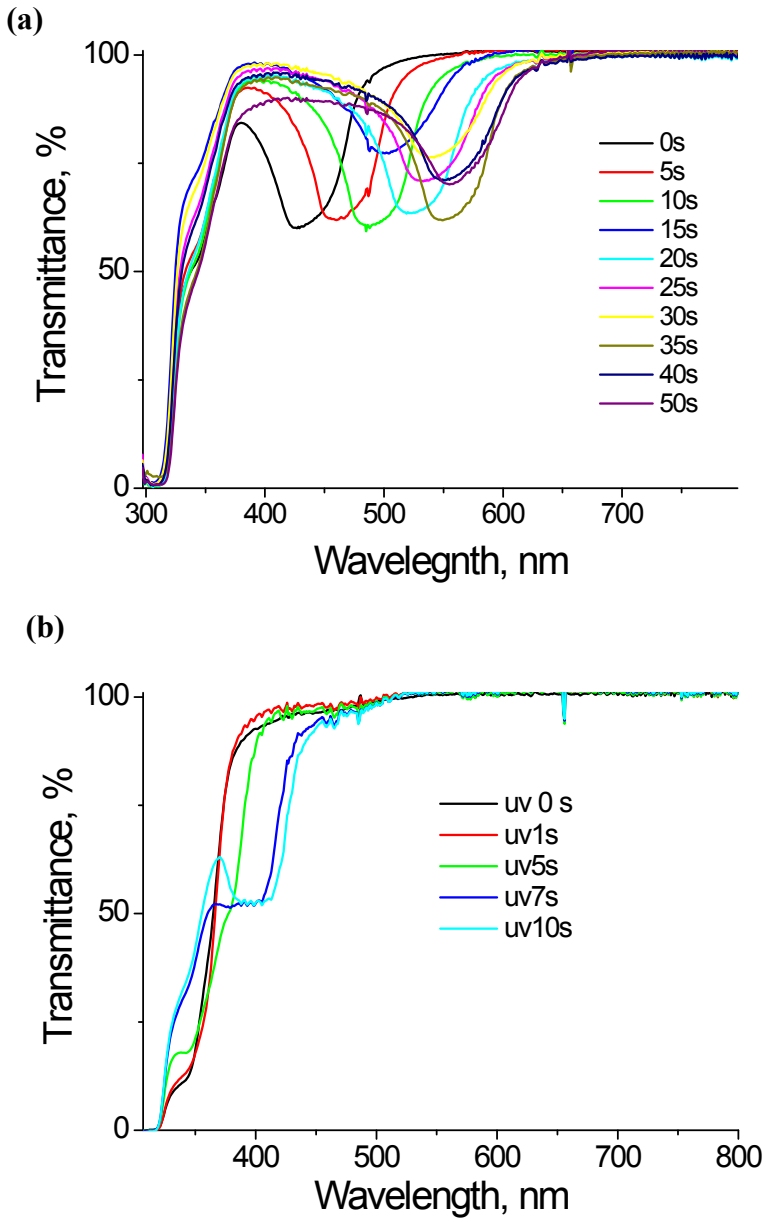

Fig. S5 Reflection band shift by UV light irradiation; films with a dopant concentration of (a) 3 wt%, and (b) 5 wt%.

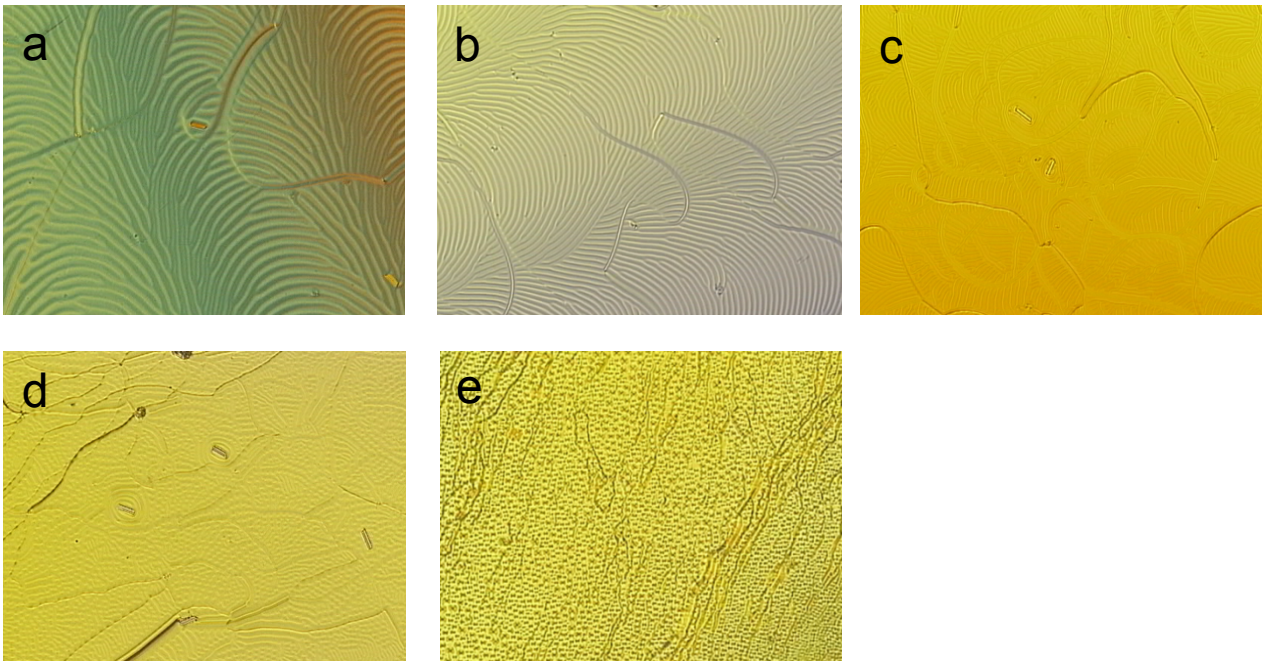

Fig. S6 Film surface textures with a dopant **1**-B concentration of (a) 0.15 wt%, (b) 0.25 wt%, (c) 0.35 wt%, (d) 0.5 wt%, and (e) 1 wt%. The length of the glass rods shown in the images (taken at the same magnification) corresponds to around 25μm.