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Supporting Information

Supramolecular Chirality and Reversible Chiroptical Switching in New Chiral Liquid Crystal Azopolymers

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Supplementary material

Contents:

Table S1. Spacing, determined by applying Bragg's law to the small-angle reflection observed in the patterns, in the smectic A mesophase of Poly[(*S*)-**ML6A**]-14, Star[(*S*)-**ML6A**]-2 and Star[(*S*)-**ML6A**]-24 measured by XRD at variable temperatures.

Sample	Conditions	Measured d_{002} spacing (Å)[a]	Layer spacing (Å)[a]
Poly[(*S*)-**ML6A**]-14	25ºC, Virgin	15.5	31.0
	25ºC, Annealed	16.5	33.0
	25ºC, Aligned	16.3	32.6
	75ºC	15.8	31.6
Star[(*S*)-**ML6A**]-2	25ºC, Annealed	16.5	33.0
Star[(*S*)-**ML6A**]-24	25ºC, Virgin	15.8	31.6
	25ºC, Annealed	16.5	33.0
	25ºC, Aligned	16.1	32.2
	75ºC	15.7	31.4

[a] The spacing was measured with an estimated accuracy of ± 0.5Å.

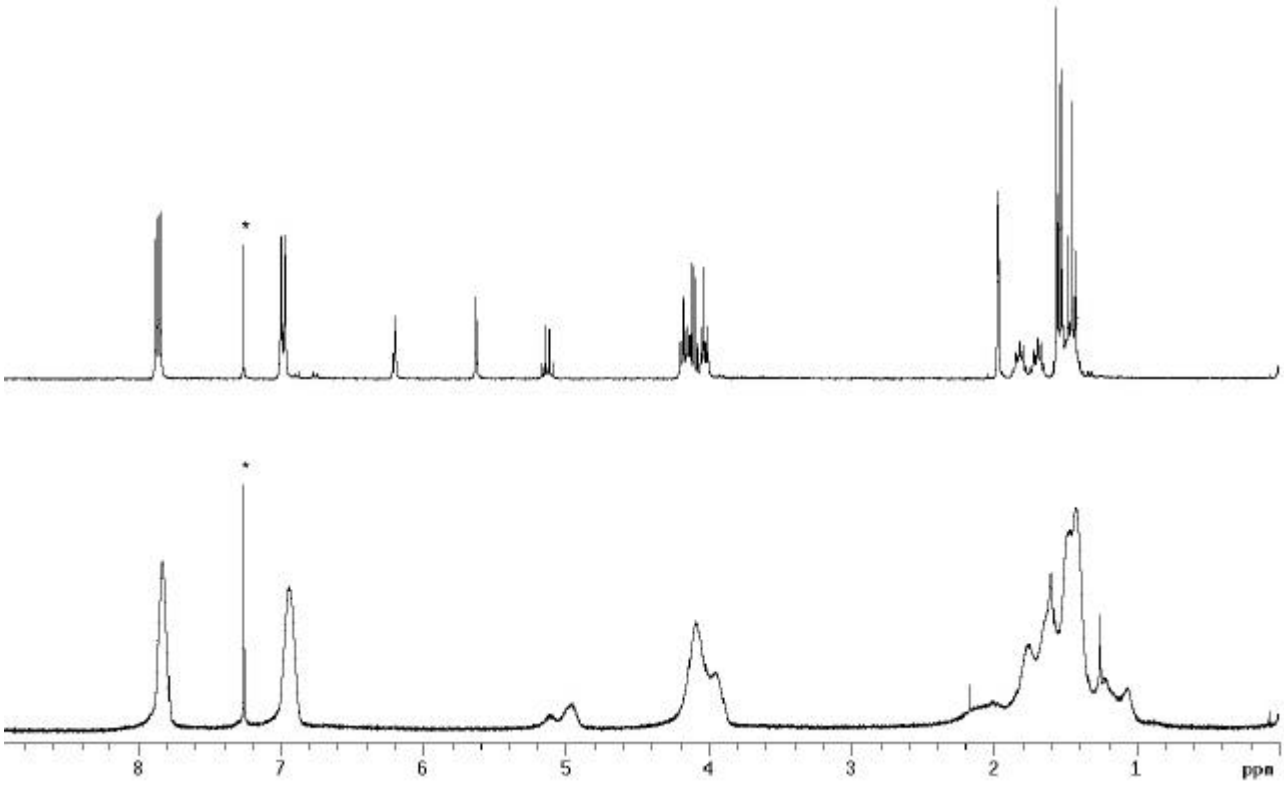


Figure S1: ^{1}H-NMR spectra of (*S*)-**ML6A** (up) and of Star[(*S*)-**ML6A**]-2 (down). Starred signals refer to solvent resonance.

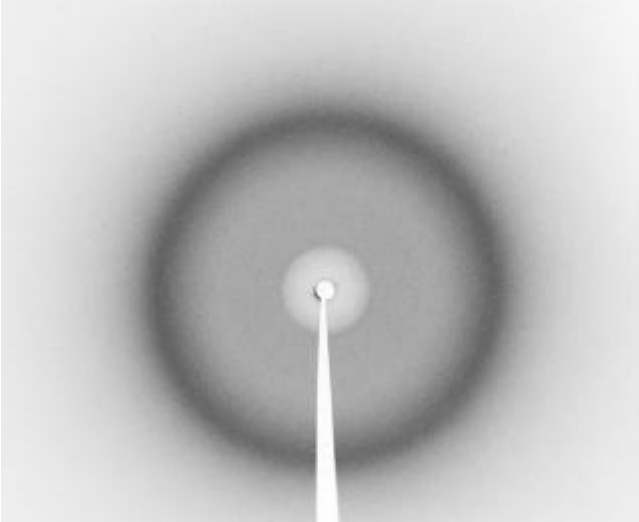


Figure S2: X-ray diffraction pattern of the SmA mesophase of Poly[(*S*)-**ML6A**]-14 recorded at room temperature after heating at 135ºC.

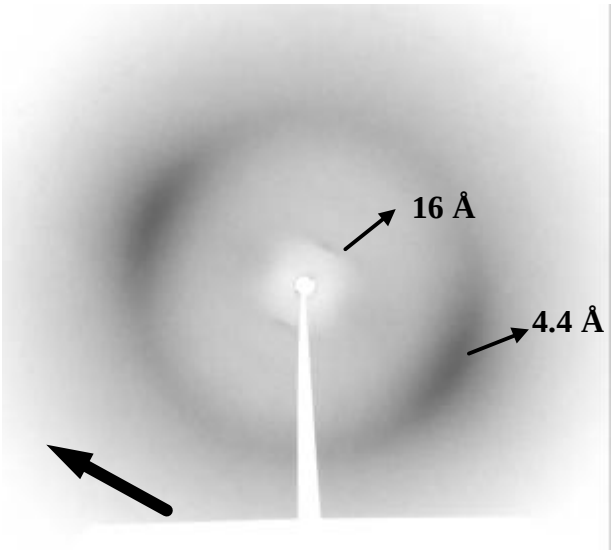
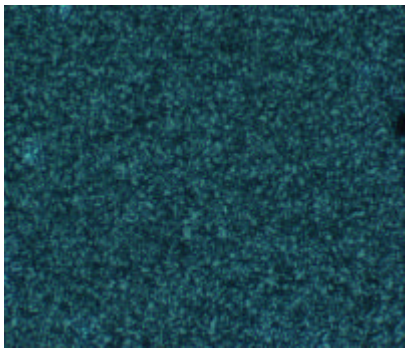


Figure S3: Oriented X-ray diffraction pattern of the SmA mesophase of Poly[(*S*)-**ML6A**]-14 recorded at room temperature. The sample was mechanically aligned in the direction of thick arrow.

a



b

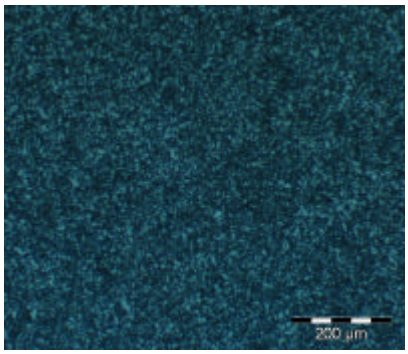


Figure S4: Optical microscopy images of a smectic thin film of Poly[(*S*)-**ML6A**]-14 before (a) and after irradiation with *l*-CPL for 30 minutes (b).