

Supporting Information

Optically Active Helical Vinylbiphenyl Polymers with Reversible Thermally Induced Stereomutation

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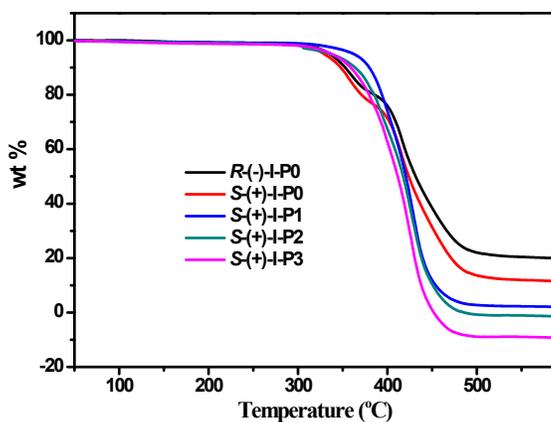


Figure S1. TGA thermograms of *S*-(+)-I-Pm/*R*-(*-*)-I-P0 recorded at a heating rate of 20 °C/min under nitrogen atmosphere

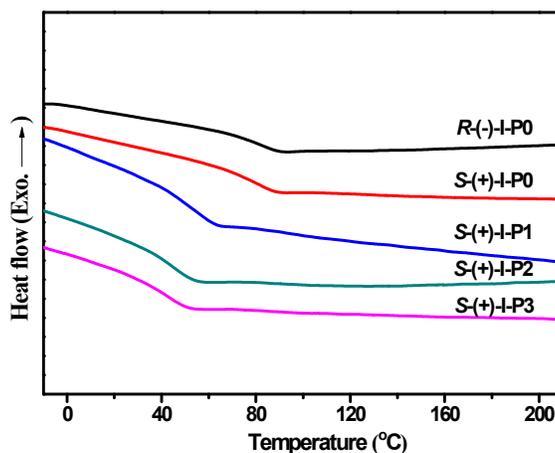


Figure S2. DSC curves of *S*-(+)-I-Pm/*R*-(*-*)-I-P0 recorded during the second heating scanning at a rate of 20 °C/min under nitrogen atmosphere

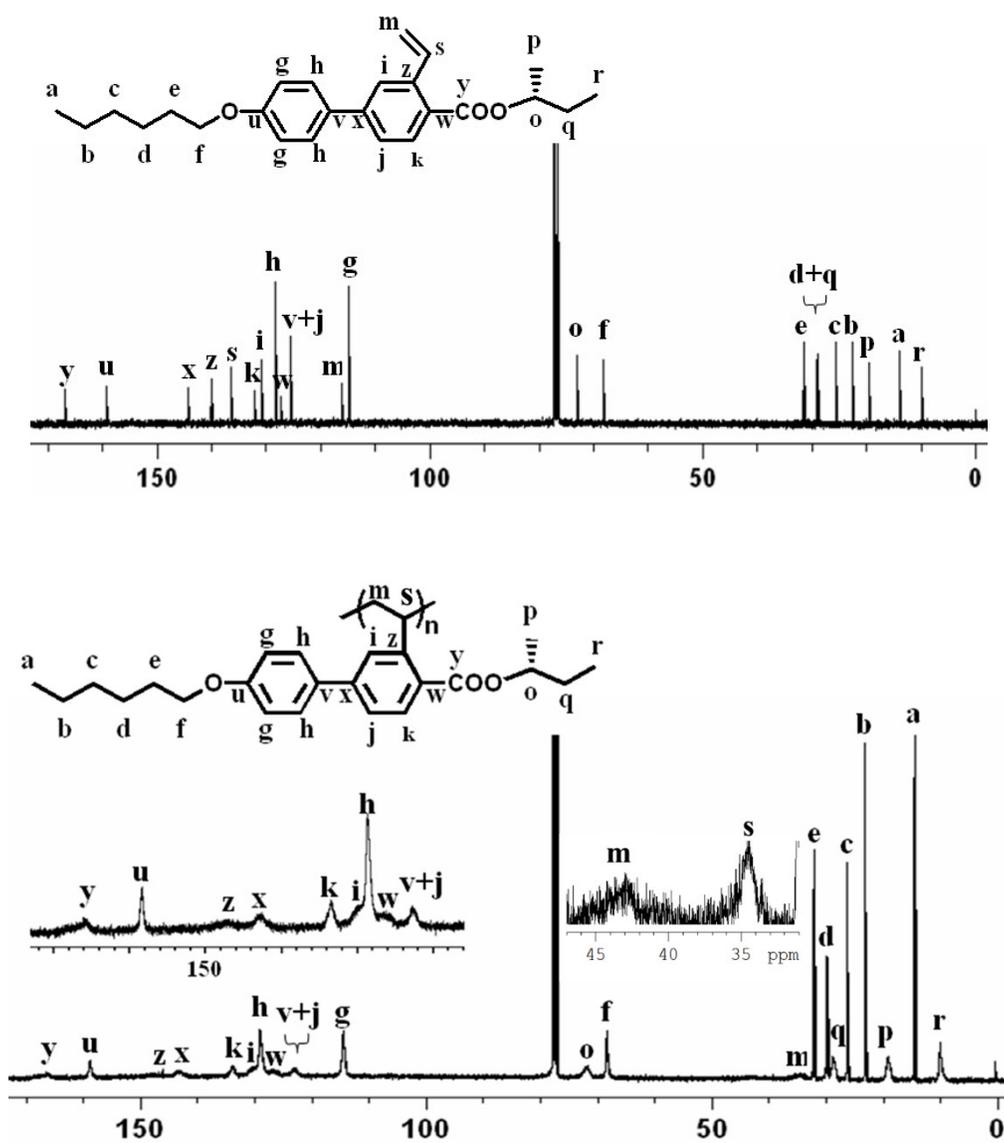


Figure S3. ^{13}C NMR spectra of *R*-(-)-I-MO (upper) and *R*-(-)-I-PO (lower) recorded in CDCl_3 at 25 $^\circ\text{C}$.

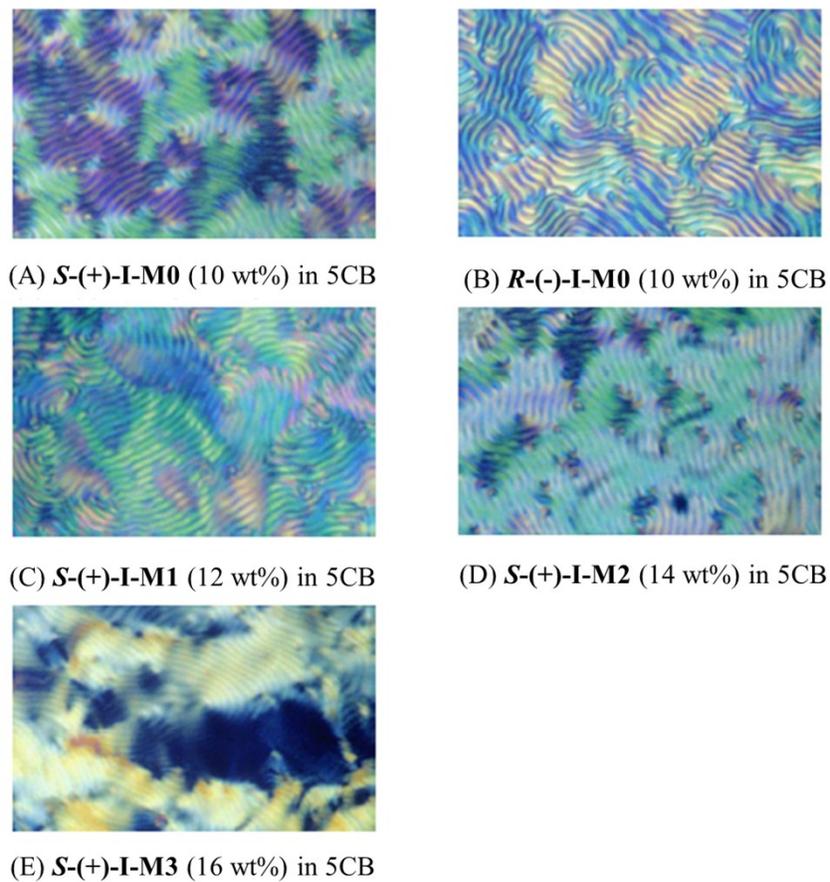


Figure S4. Fingerprint textures of **5CB** doped with *R*-(-)-*I*-**M0**/*S*-(+)-*I*-**Mm** (10 wt%), $p \approx 7.5 \mu\text{m}$. Taken under cross-polarized optical microscope at 20 °C

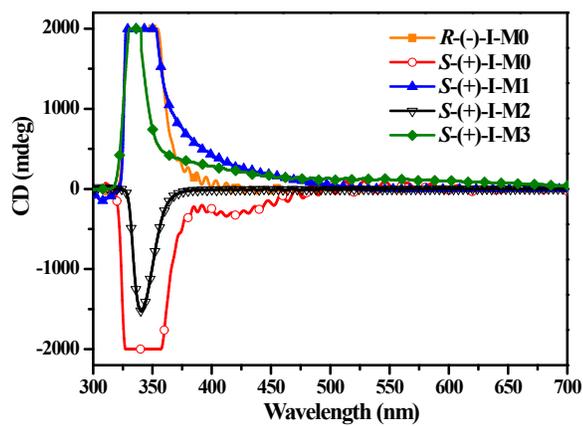


Figure S5. CD spectra of induced cholesteric phases of **5CB** doped with *R*-(-)-*I*-**M0**/*S*-(+)-*I*-**Mm** at 20 °C

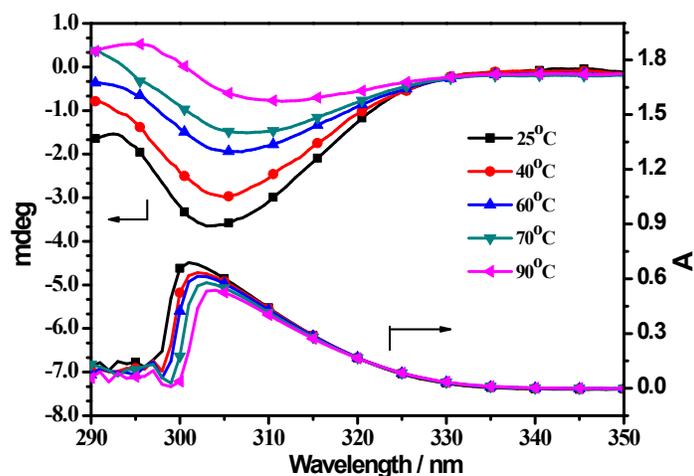


Figure S6. Temperature variable CD spectra of *S*-(+)-I-P0 in anisole Quartz cell: 1 mm in thickness (c 0.4 mM)

Table S1. Chiroptical properties of polymers prepared at 25°C^a

Monomer	$[\alpha]_{365}^{25}(\text{°})^b$	Polymer	$[\alpha]_{365}^{25}(\text{°})^f$
R-(-)-I-M0	-77.6	R-(-)-I-P0	160.0
S-(+)-I-M0	89.2	S-(+)-I-P0	-139.0
S-(+)-I-M1	14.3	S-(+)-I-P1	-53.1
S-(+)-I-M2	0.7	S-(+)-I-P2	5.1
S-(+)-I-M3	16.1	S-(+)-I-P3	12.0

^a Polymerization condition: solvent, anisole; temperature, 25 °C; monomer concentration, 20 wt%; initiator, BPO; [M]/[I]= 250. ^b Specific optical rotation of monomer in unit of degree was measured in a 1 dm cell at a concentration of ca. 2.0 mg/mL in THF at 25 °C. ^f Specific optical rotation of polymer in unit of degree was measured in a 1 dm cell at a concentration of ca. 2.0 mg/mL in THF at 25 °C.