

Supporting Information

A *Twisting* Ring Polymer: Synthesis and Thermally Induced Chiroptical Responses of a Cyclic Poly(tetrahydrofuran) Having Axially Chiral Units

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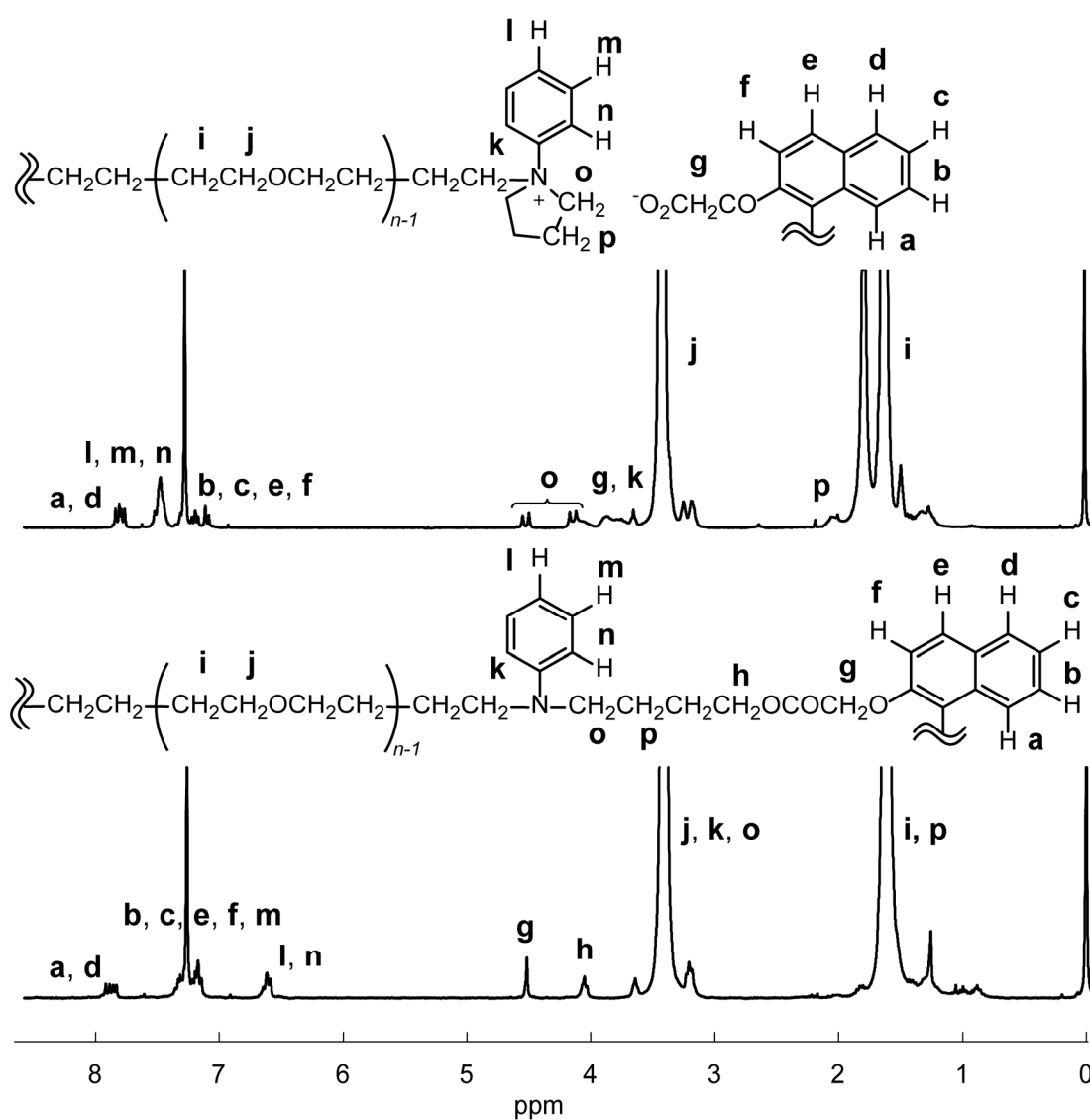


Figure S1. 300 MHz ^1H NMR spectra of (top) **2/1_R** and (bottom) **C_{R-1}**. (CDCl_3 , 25 °C)

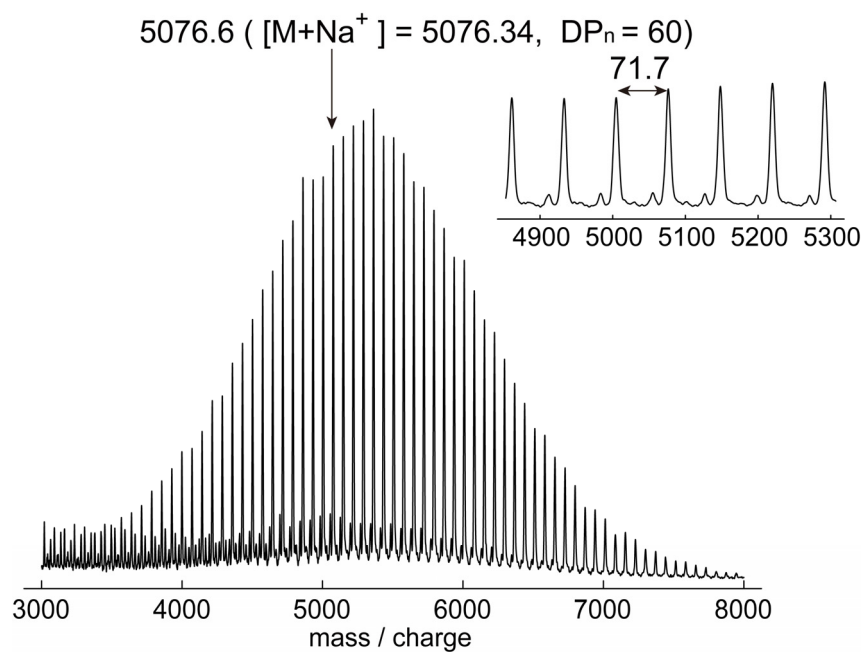


Figure S2. A MALDI-TOF mass spectrum of C_{R-1} . (Linear mode, matrix: dithranol with sodium trifluoroacetate. DP_n denotes the number of monomer units in the product.)

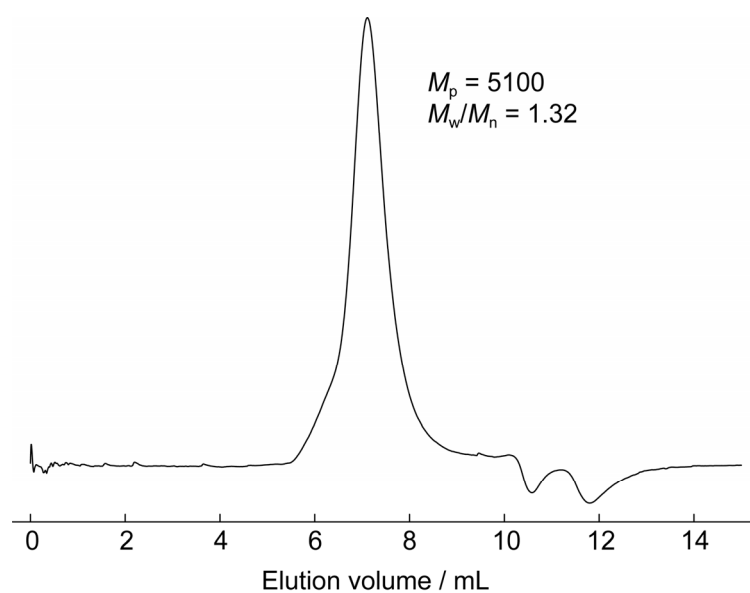


Figure S3. A SEC trace of **CR-1**. The observed minor shoulder peak at the higher molecular weight direction in cyclic poly(THF) is assignable to the product formed by the intermolecular chain-extension reaction. (THF as an eluent, 1.0 mL/min.)

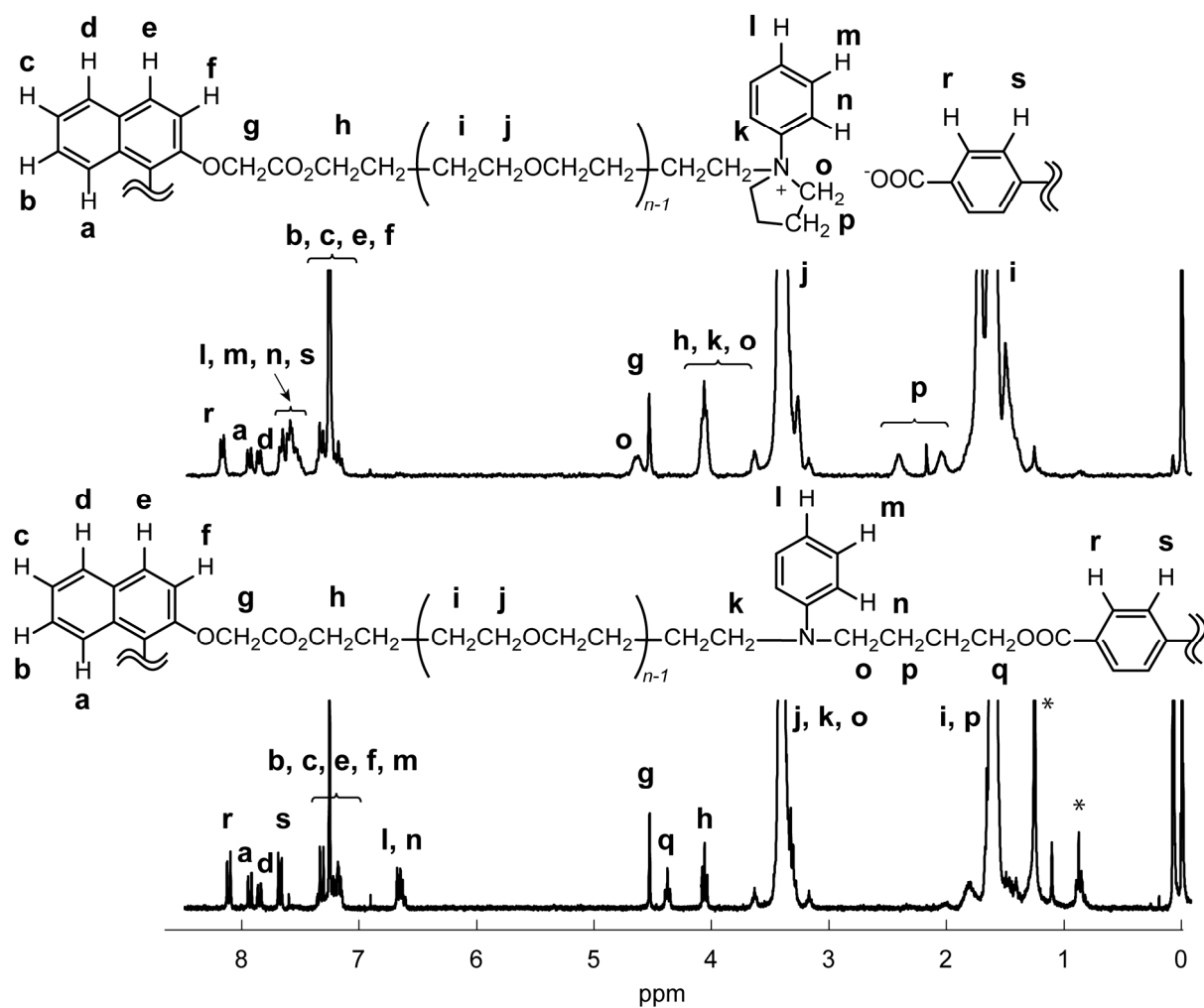


Figure S4. 300 MHz ¹H NMR spectra of (top) 3_R/BiPh and (bottom) C_{R-2}. (CDCl₃, 25 °C; the signal with * is due to hexane in the mixture.)

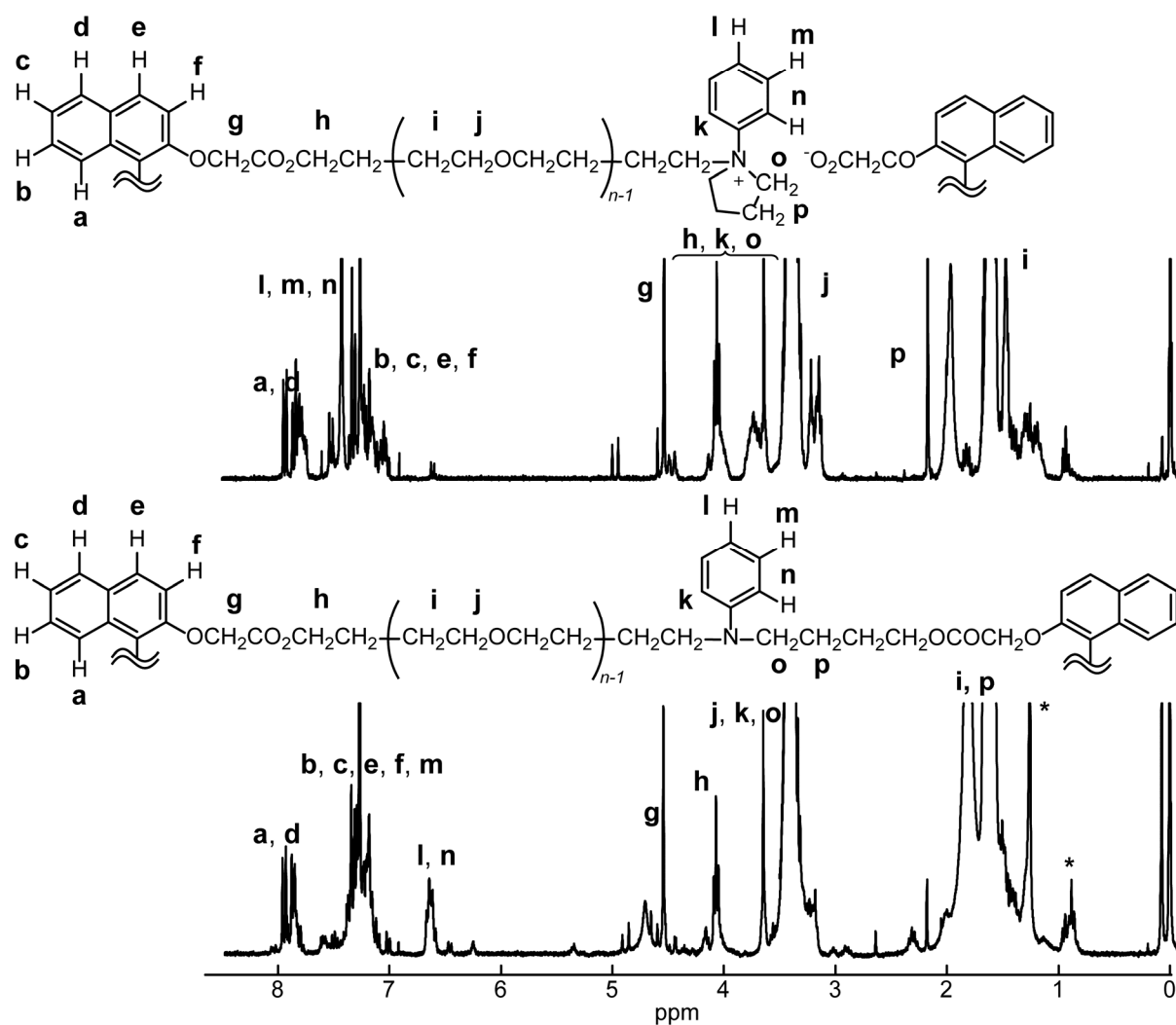


Figure S5. 300 MHz ¹H NMR spectra of (top) **3R/1s** and (bottom) **CR-s**. (CDCl₃, 25 °C; the signal with * is due to hexane in the mixture.)

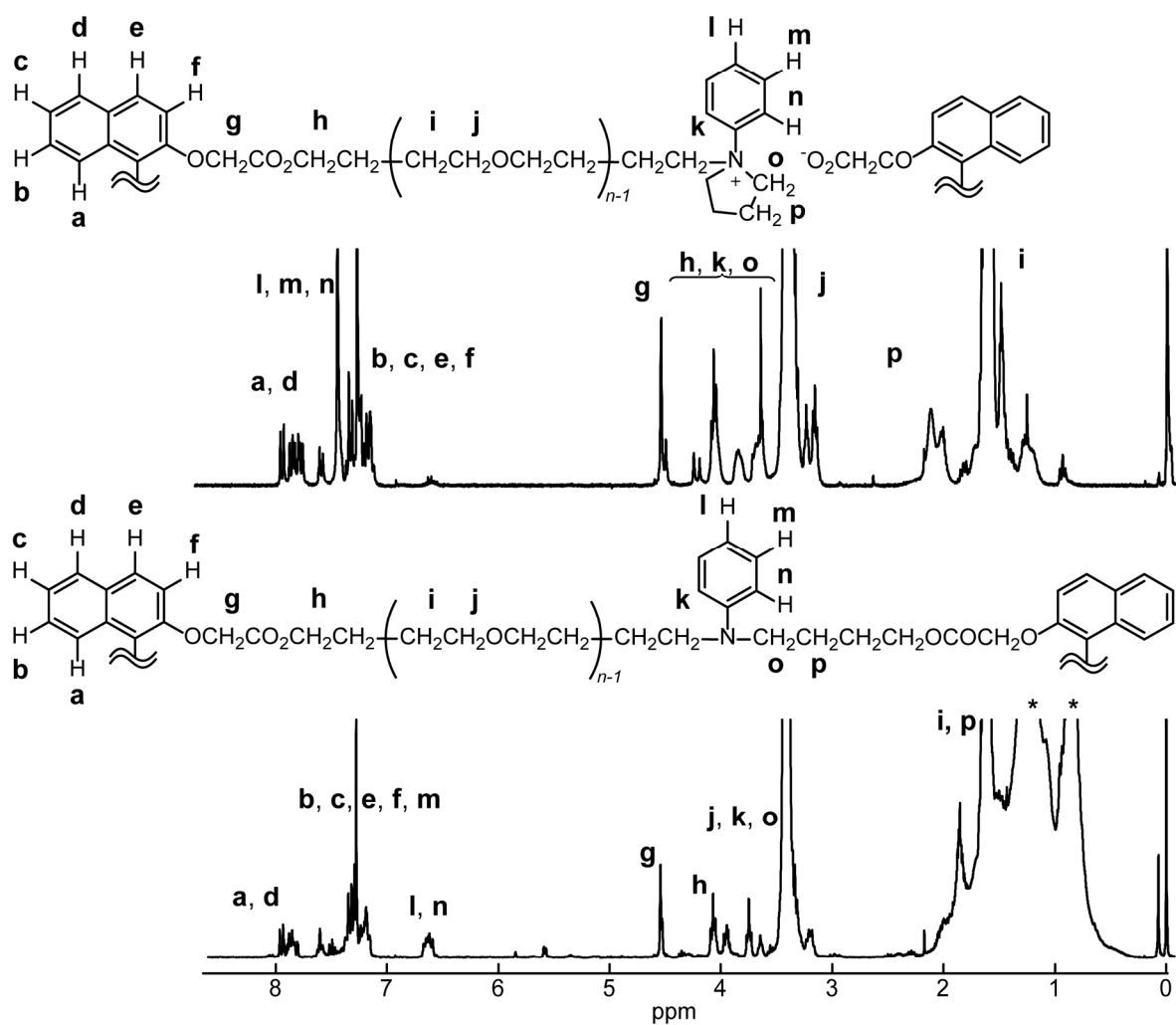


Figure S6. 300 MHz ^1H NMR spectra of (top) **3R/1R/S** and (bottom) **CR-R/S**. (CDCl_3 , 25 $^\circ\text{C}$; the signal with * is due to hexane in the mixture.)

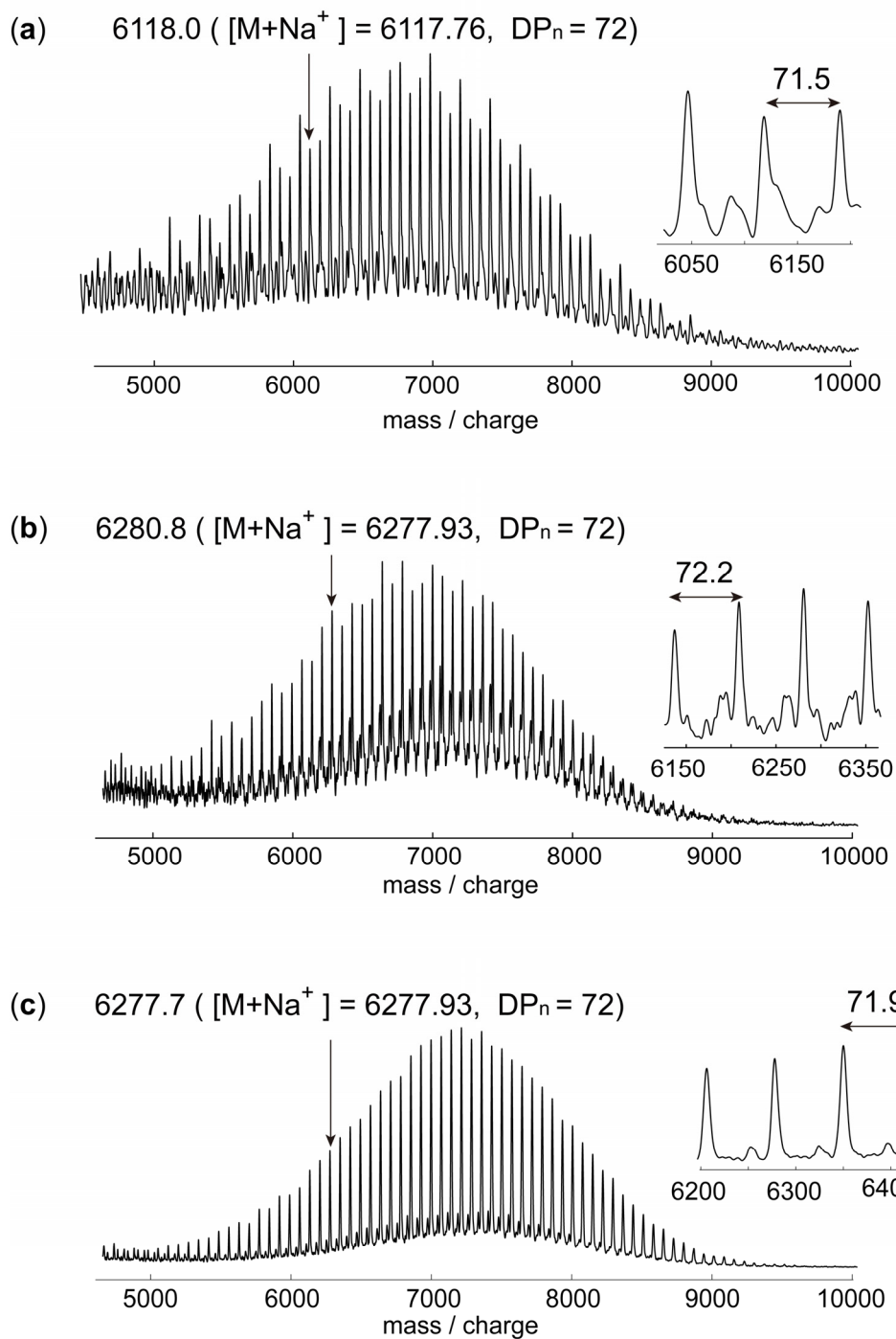


Figure S7. MALDI-TOF mass spectra of (top) C_{R-2} , (middle) C_{R-S} , and (bottom) $C_{R-R/S}$. (Linear mode, matrix: dithranol with sodium trifluoroacetate. DP_n denotes the number of monomer units in the product.)

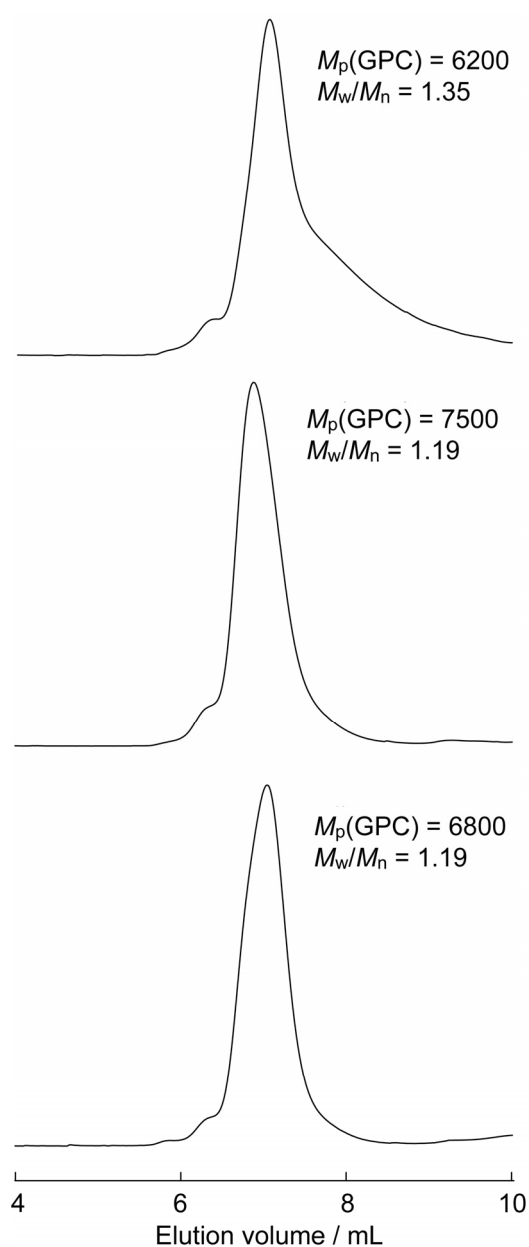


Figure S8. SEC traces of (top) C_{R-2}, (middle) C_{R-S}, and (bottom) C_{R-R/S}. The observed minor shoulder peaks at the higher molecular weight direction in cyclic poly(THF)s are assignable to the products formed by the intermolecular chain-extension reaction. (THF as an eluent, 1.0 mL/min.)

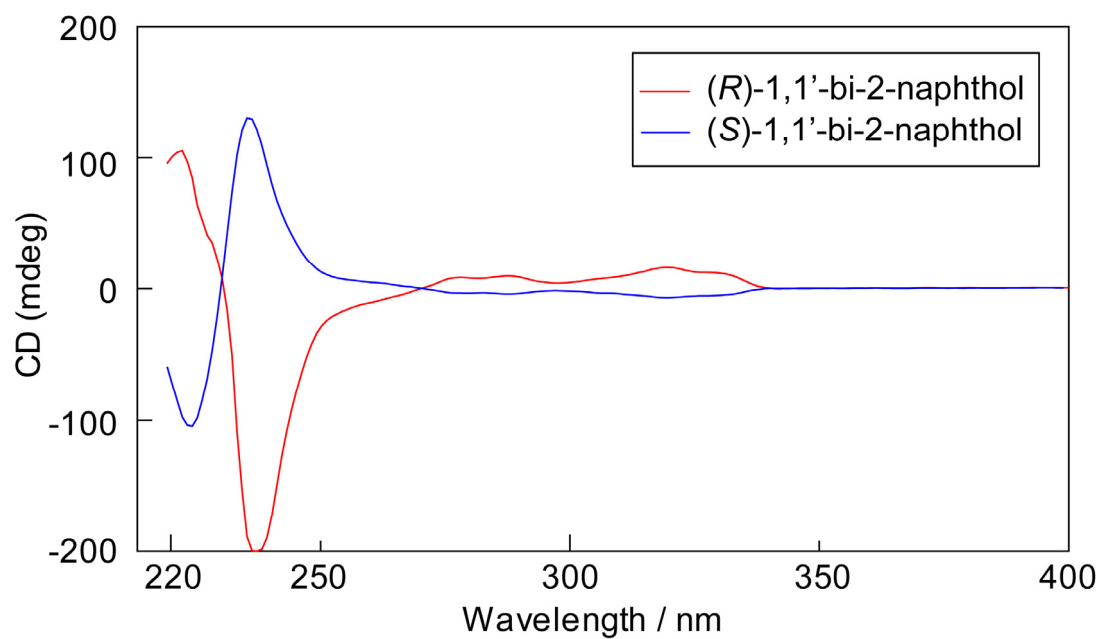


Figure S9. CD spectra of (*R*)-1,1'-bi-2-naphthol (in red) and (*S*)-1,1'-bi-2-naphthol (in blue). (1.0×10^{-7} mol L⁻¹ in THF)

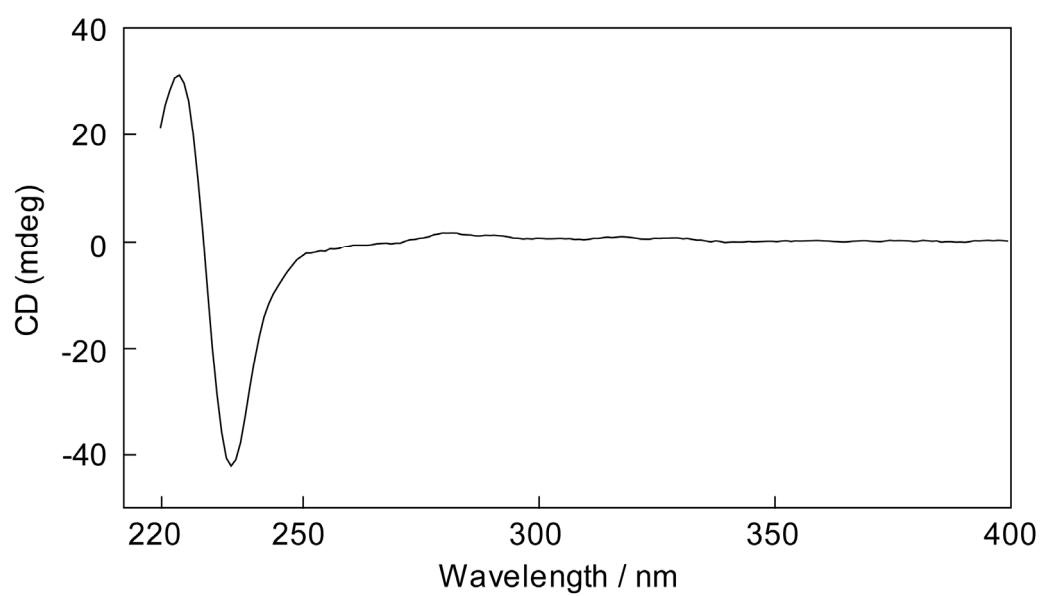


Figure S10. A CD spectrum of C_{R-1}. (1.0×10^{-7} mol L⁻¹ in THF)