## **Supporting Information**



**Figure S1** Concentration dependence of the chemical shift of the resonance peak of the amide proton of St-(L)-M (in CDCl<sub>3</sub>) as a function of concentration.



**Figure S2** <sup>1</sup>H-NMR spectra of methanol- $d_4$ /chloroform-d solutions of monomer **St-(L)-M** (50mg/mL) with varying ratios of methanol- $d_4$  (vol%): (A), 0, (B),5, (C), 10, (D), 20, (E), 30, (F), 40, (G), 100. The resonance peaks of the amide proton (CONH) are marked with downward arrows( $\downarrow$ ), while those of the solvent are marked with asterisks (\*)



**Figure S3** <sup>1</sup>H NMR spectra of DMSO-*d6*/chloroform-*d* solutions of **St-(***L***)-M** (50 mg/mL) with varying ratios of DMSO-*d*6 (vol %): (A) 0, (B) 15, (C) 30, (D) 50, (E) 70, and (E) 100. The resonance peaks of the amide (HNCO) protons are respectively marked with asterisks (\*)



**Figure S4** CD spectra of **St-(***L***)-B** and **PSt-(***L***)-B** in methanol or chloroform at 25 °C with a concentration of  $2.0 \times 10^{-5}$  mol/L.



Figure S5 Temperature dependence of CD spectra of PSt-(*L*)-M in chloroform solution at a concentration of  $2.\times 10^{-5}$  mM