

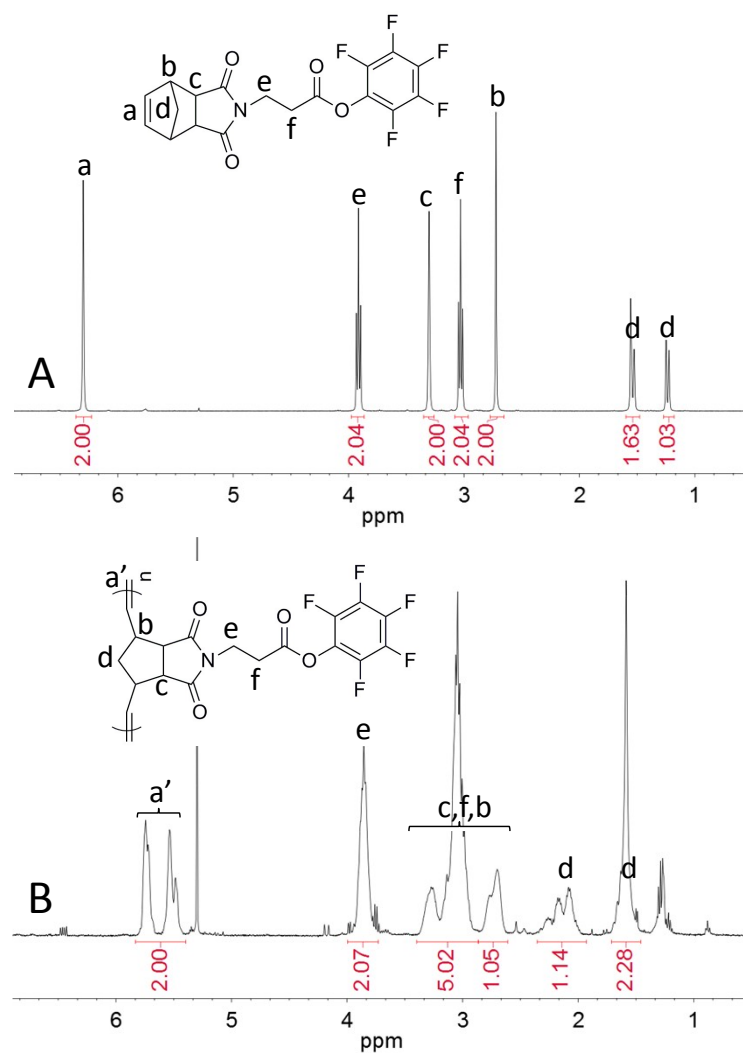
## **SUPPORTING INFORMATION**

### **Thermoresponsive Polymers Based on Ring-Opening Metathesis Polymerization**

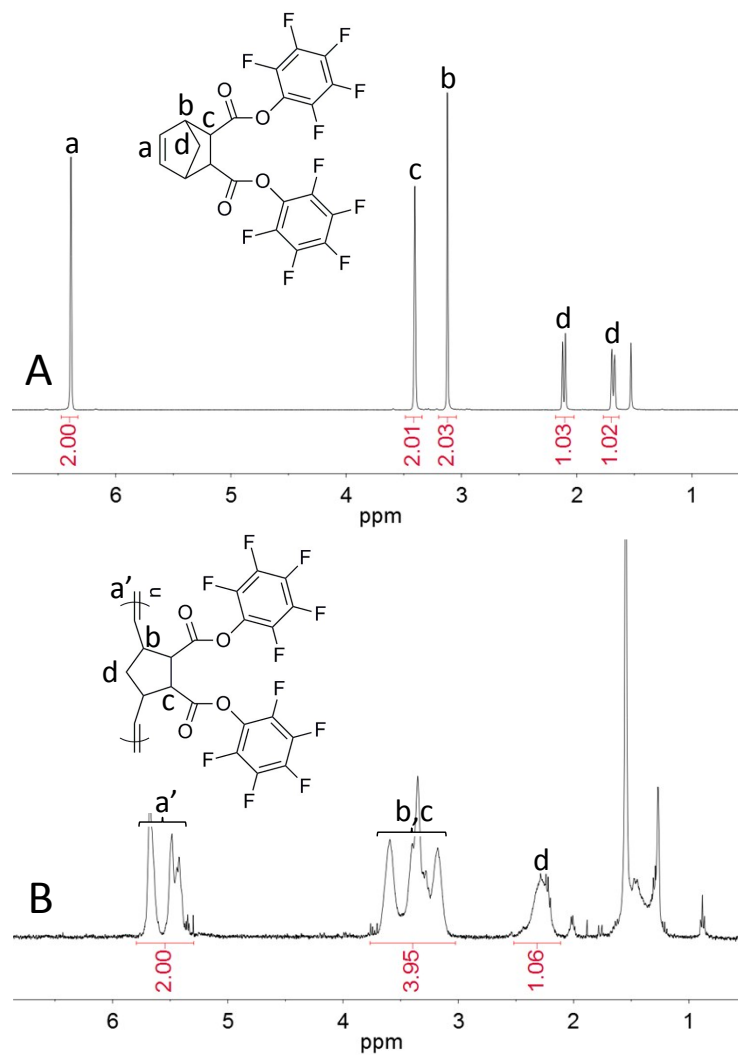
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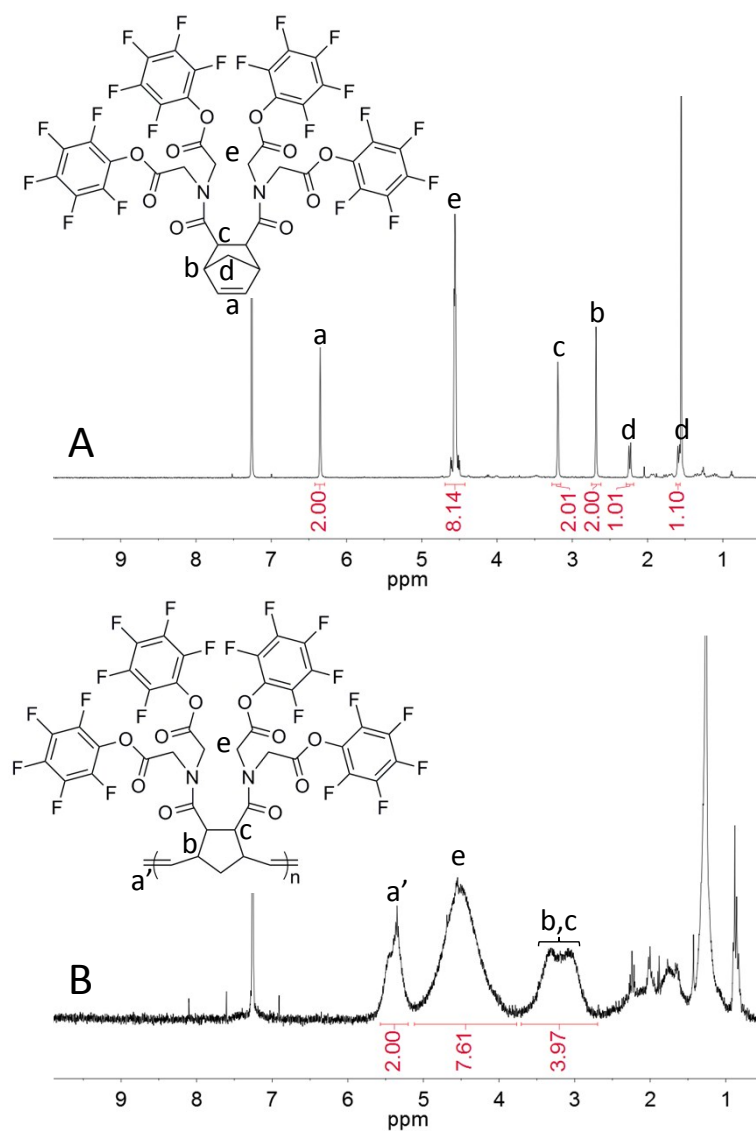
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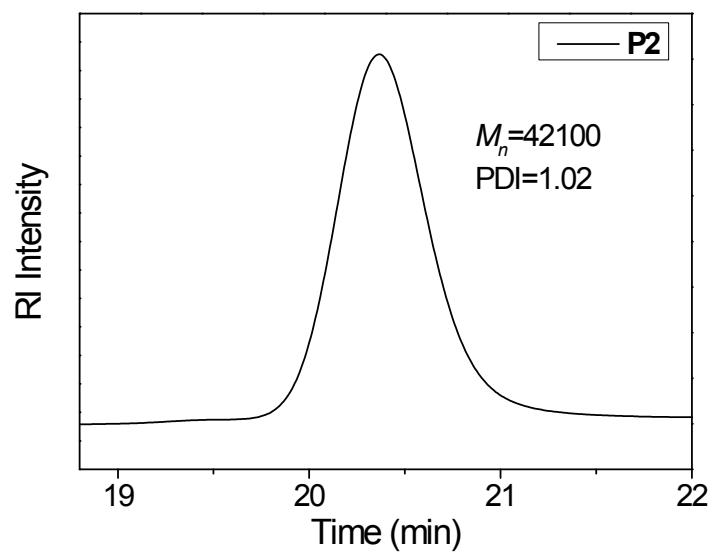
**Figure S1.**  $^1\text{H}$ -NMR spectra of (A) **M1** and (B) the corresponding raw **P1** polymerization solution without precipitation, in which  $\text{CDCl}_3$  was used as deuterated solvent.



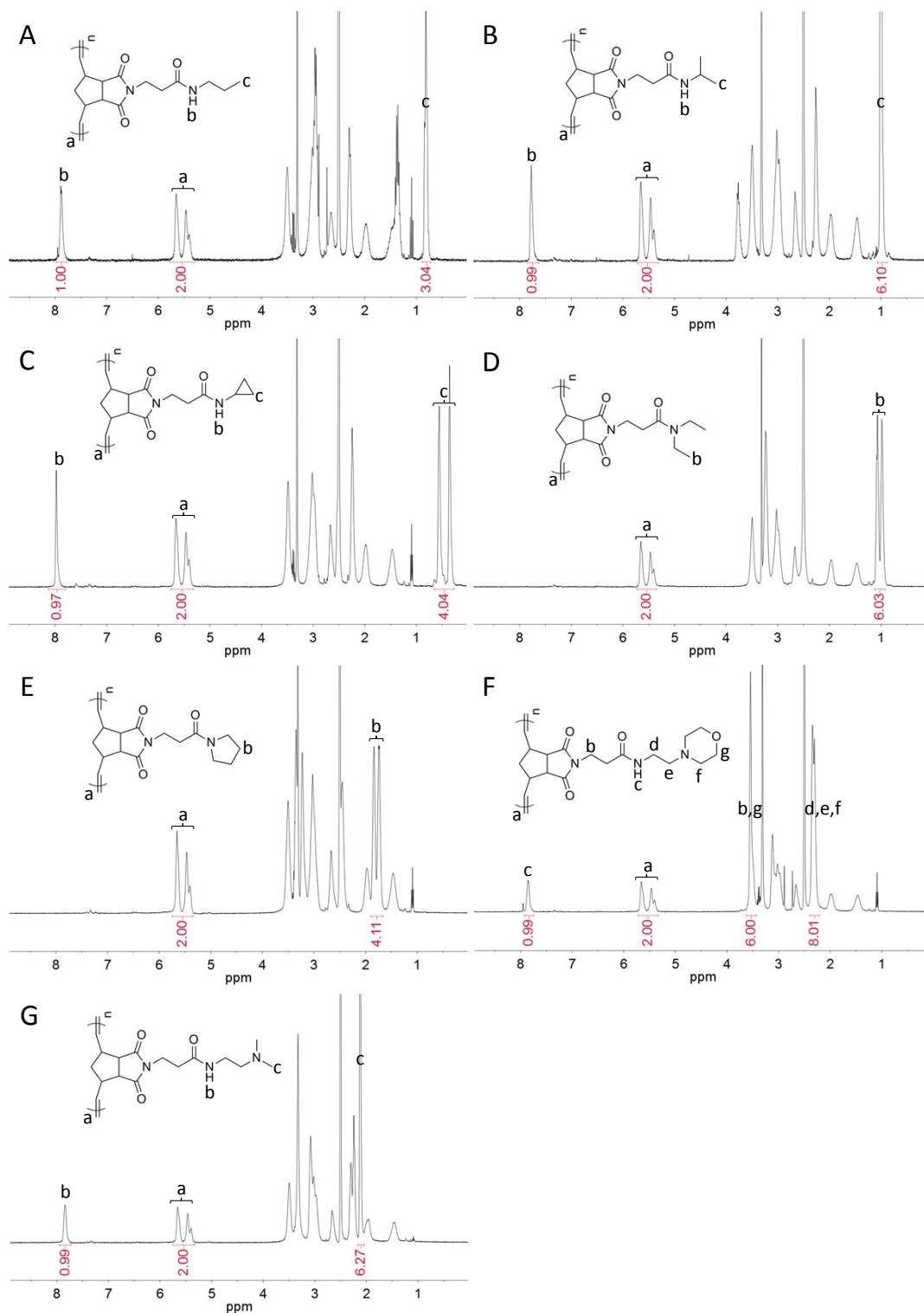
**Figure S2.**  $^1\text{H}$ -NMR spectra of (A) **M2** and (B) the corresponding raw **P2** polymerization solution without precipitation, in which  $\text{CDCl}_3$  was used as deuterated solvent.



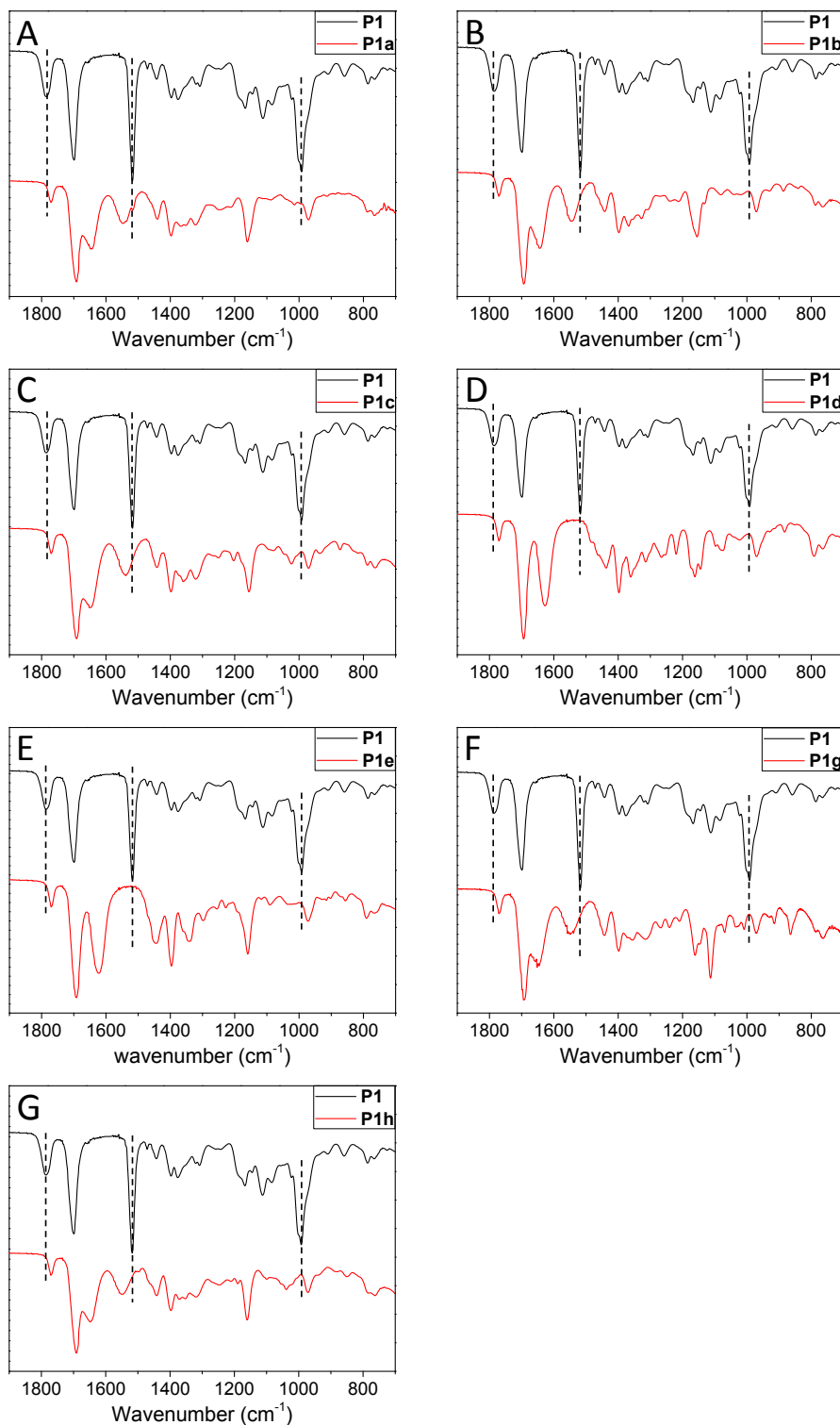
**Figure S3.** <sup>1</sup>H-NMR spectra of (A) **M4** and (B) the corresponding raw **P4** polymerization solution without precipitation, in which CDCl<sub>3</sub> was used as deuterated solvent.



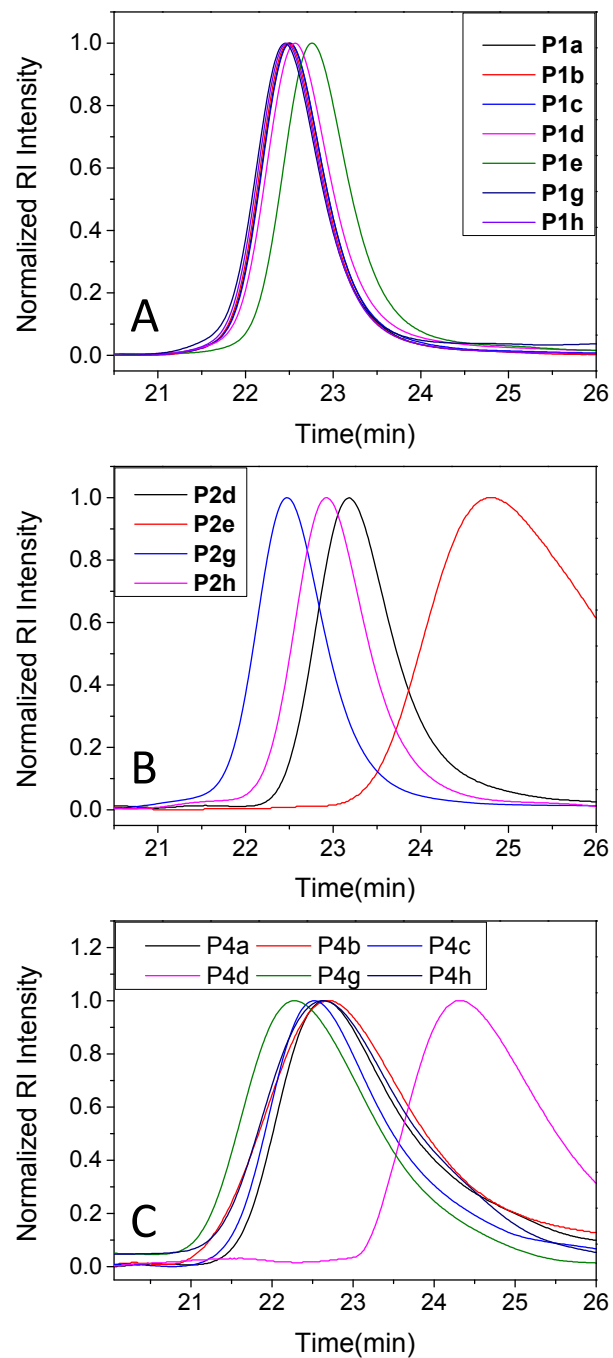
**Figure S4.** GPC curves of **P2**, in which THF was used as the eluent at a flow rate of 1.0 mL/min and PS standards were used for the calibration.



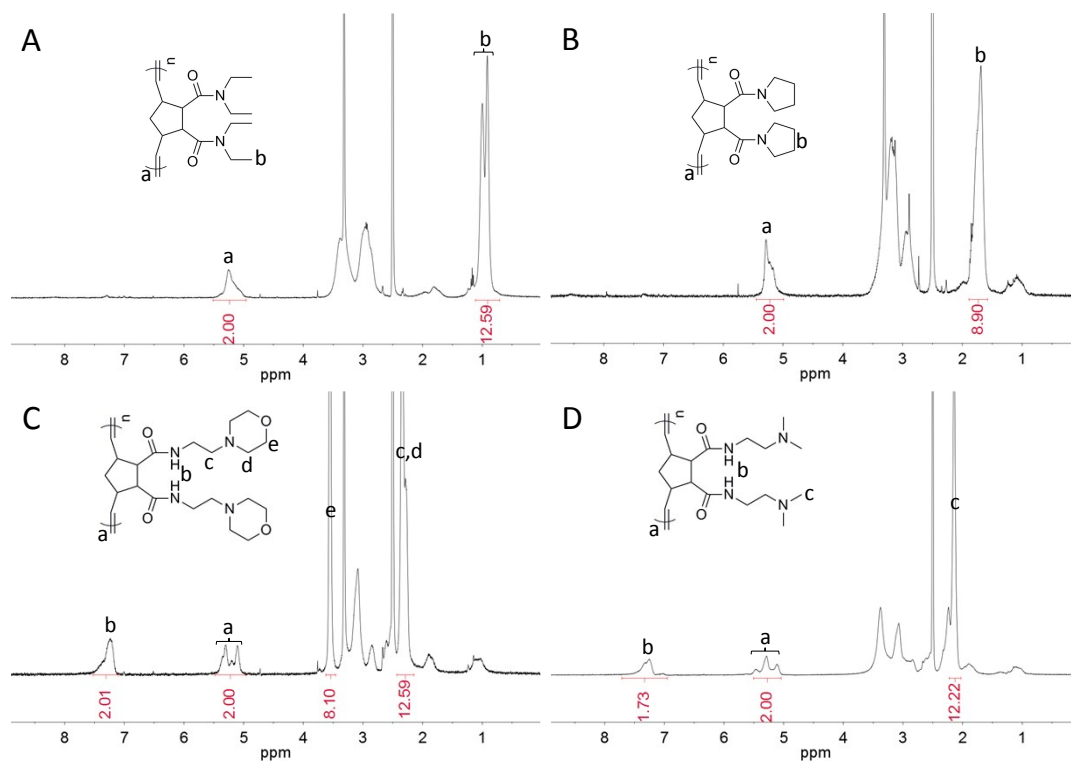
**Figure S5.**  $^1\text{H}$ -NMR spectra of (A) **P1a**, (B) **P1b**, (C) **P1c**, (D) **P1d**, (E) **P1e**, (F) **P1g**, and (G) **P1h**, in which  $\text{DMSO-d}_6$  was used as deuterated solvent.



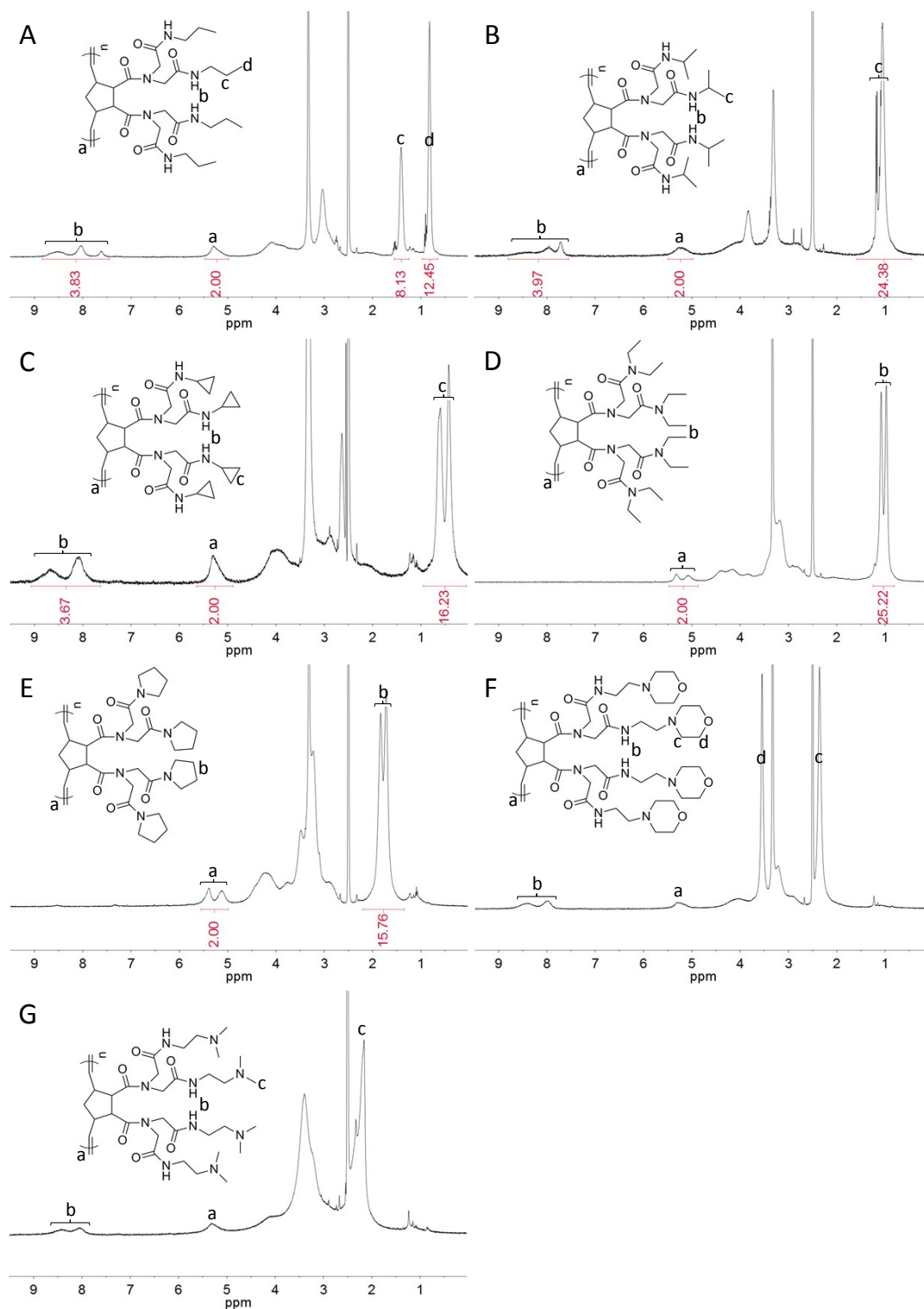
**Figure S6.** FT-IR spectra of (A) **P1** and **P1a**, (B) **P1** and **P1b**, (C) **P1** and **P1c**, (D) **P1** and **P1d**, (E) **P1** and **P1e**, (F) **P1** and **P1g**, and (G) **P1** and **P1h**.



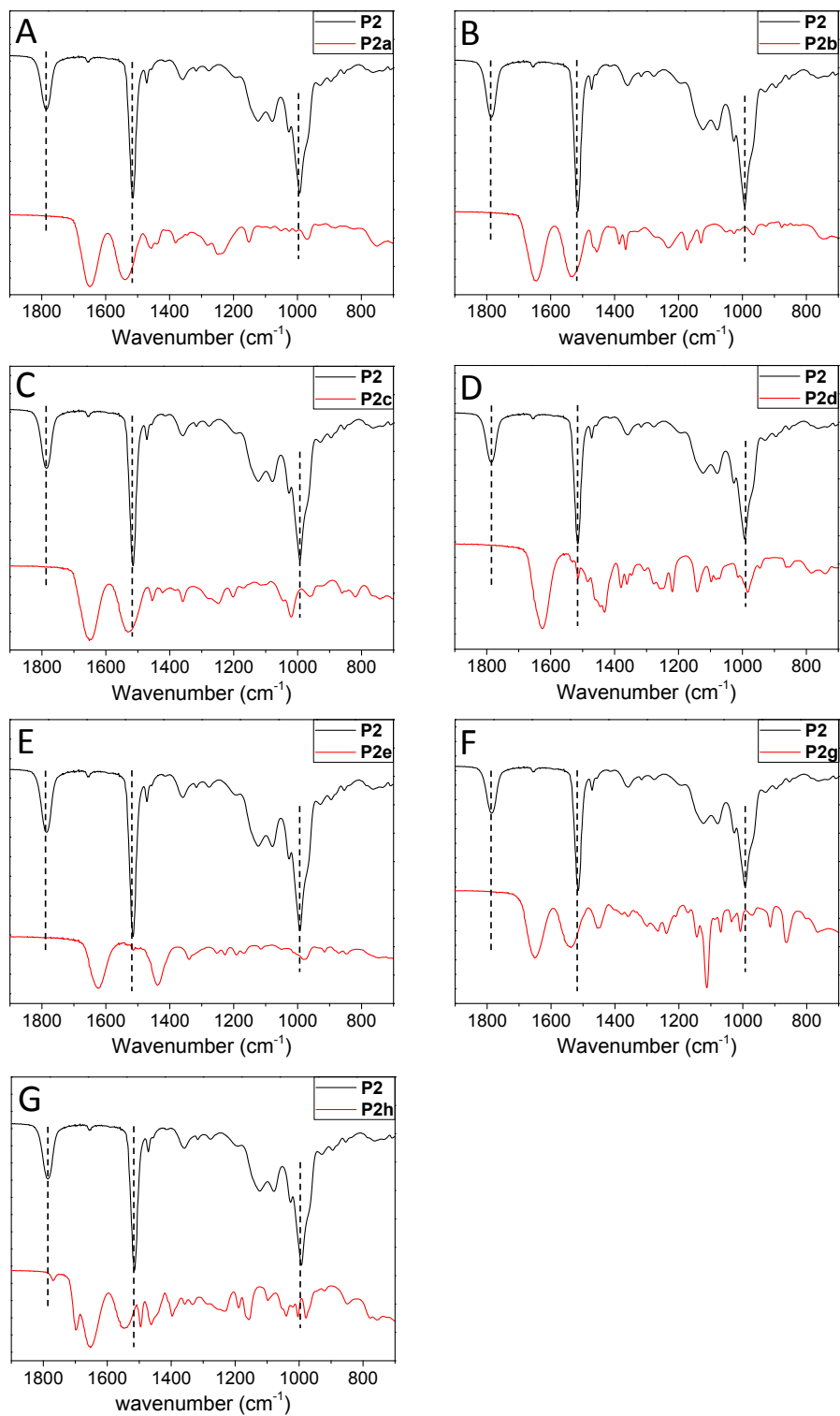
**Figure S7.** GPC curves of (A) **P1a-e, g, h**, (B) **P2d, e, g, h**, and (C) **P4a-d, g, h**, in which DMF with 0.01 M LiBr was used as the eluent at a flow rate of 1.0 mL/min and PS standards were used for the calibration.



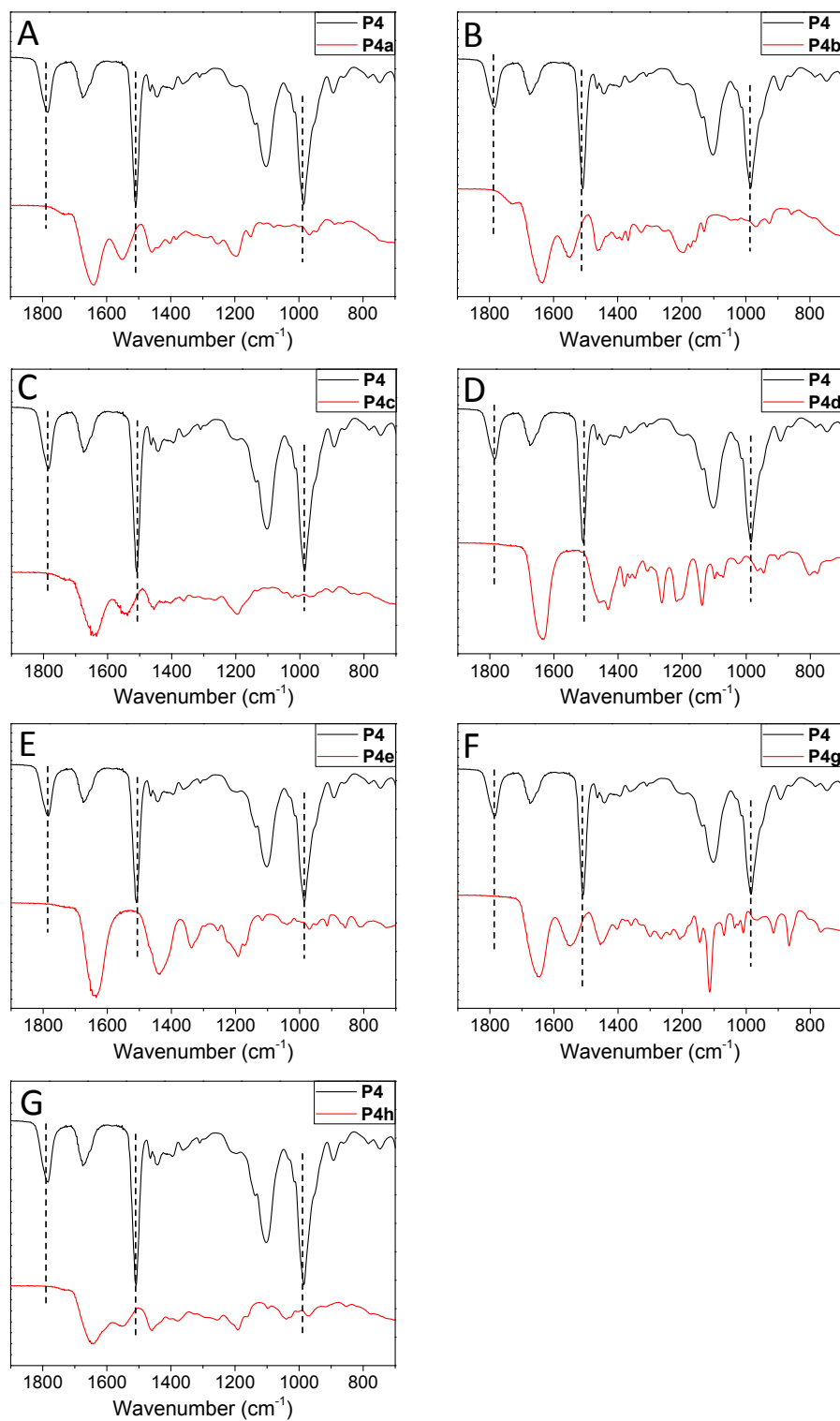
**Figure S8.**  $^1\text{H}$ -NMR spectra of (A) **P2d**, (B) **P2e**, (C) **P2g**, and (D) **P2h**, in which  $\text{DMSO-d}_6$  was used as deuterated solvent.



**Figure S9.**  $^1\text{H}$ -NMR spectra of (A) **P4a**, (B) **P4b**, (C) **P4c**, (D) **P4d**, (E) **P4e**, (F) **P4g**, and (G) **P4h**, in which  $\text{DMSO-d}_6$  was used as deuterated solvent.



**Figure S10.** FT-IR spectra of (A) **P2** and **P2a**, (B) **P2** and **P2b**, (C) **P2** and **P2c**, (D) **P2** and **P2d**, (E) **P2** and **P2e**, (F) **P2** and **P2g**, and (G) **P2** and **P2h**.



**Figure S11.** FT-IR spectra of (A) **P4** and **P4a**, (B) **P4** and **P4b**, (C) **P4** and **P4c**, (D) **P4** and **P4d**, (E) **P4** and **P4e**, (F) **P4** and **P4g**, and (G) **P4** and **P4h**.