

Supporting Information

**Unusual phenomena of ethylene homopolymerization
catalyzed by α -diimine Nickel emerging in a microflow
platform**

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1. NMR spectra of the ligand

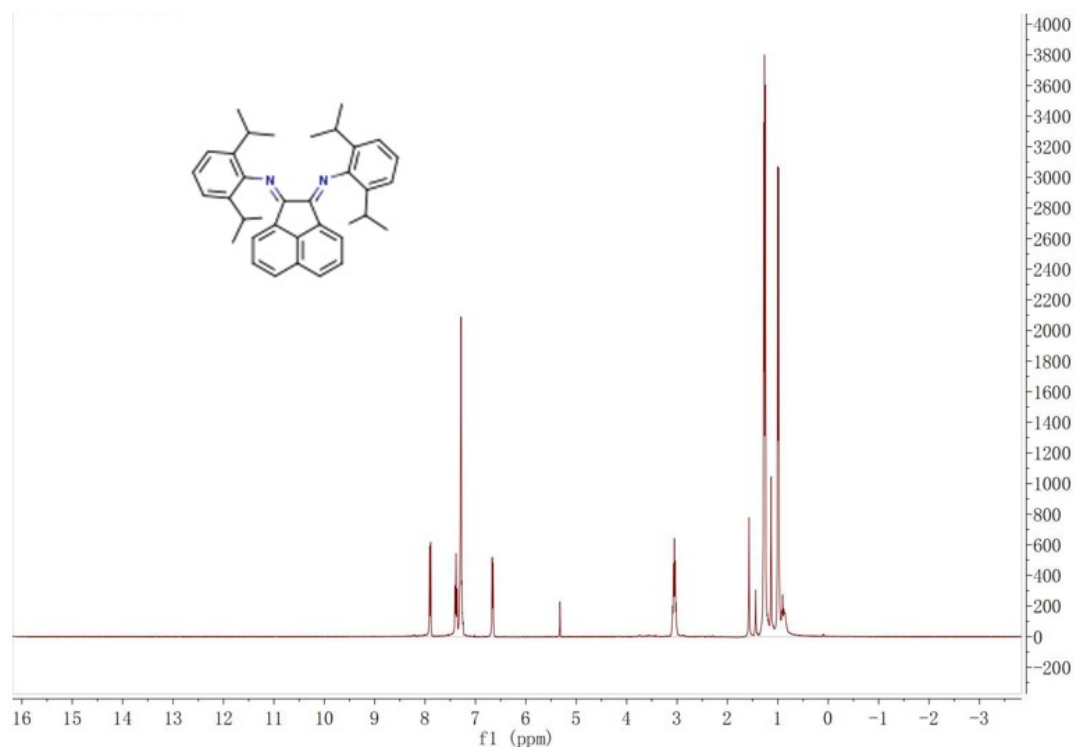
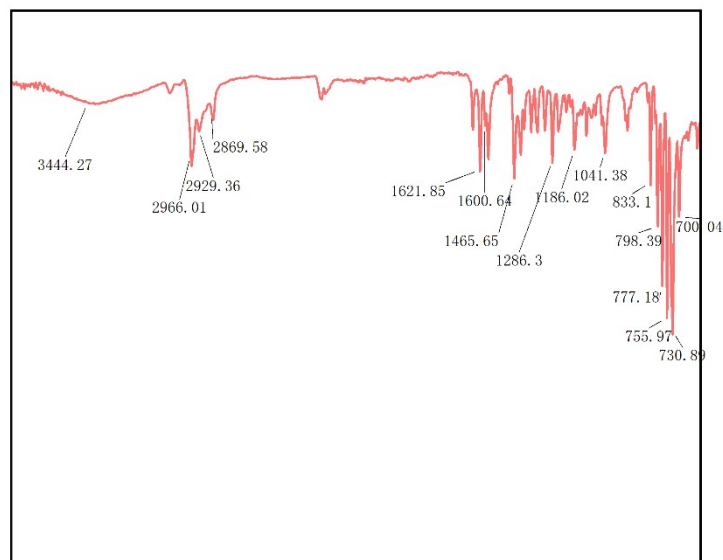


Figure S1. ¹H-NMR of ligand

The sample for proton nuclear magnetic resonance (¹H-NMR) was prepared by dissolving 2–3 mg ligand into 0.5 mL CDCl₃ at 65 °C. All NMR spectra were recorded on Bruker, AVANCE III HD400 at room temperature. Chemical shifts were referenced to residual CDCl₃ as an internal standard and given in ppm.

δ=(0.97d, 15-H), 1.23 (d, 16-H), 3.03 (sept, 14-H), 6.63 (d, 3-H), 7.26 (s, 12-H, 11-H, 10-H), 7.36 (pst, 4-H), 7.88 (d, 5-H).

2. FT-IR of the catalyst



Wavenumber (cm⁻¹)

Figure S2. FT-IR of catalyst

3. ¹H-NMR of polymer

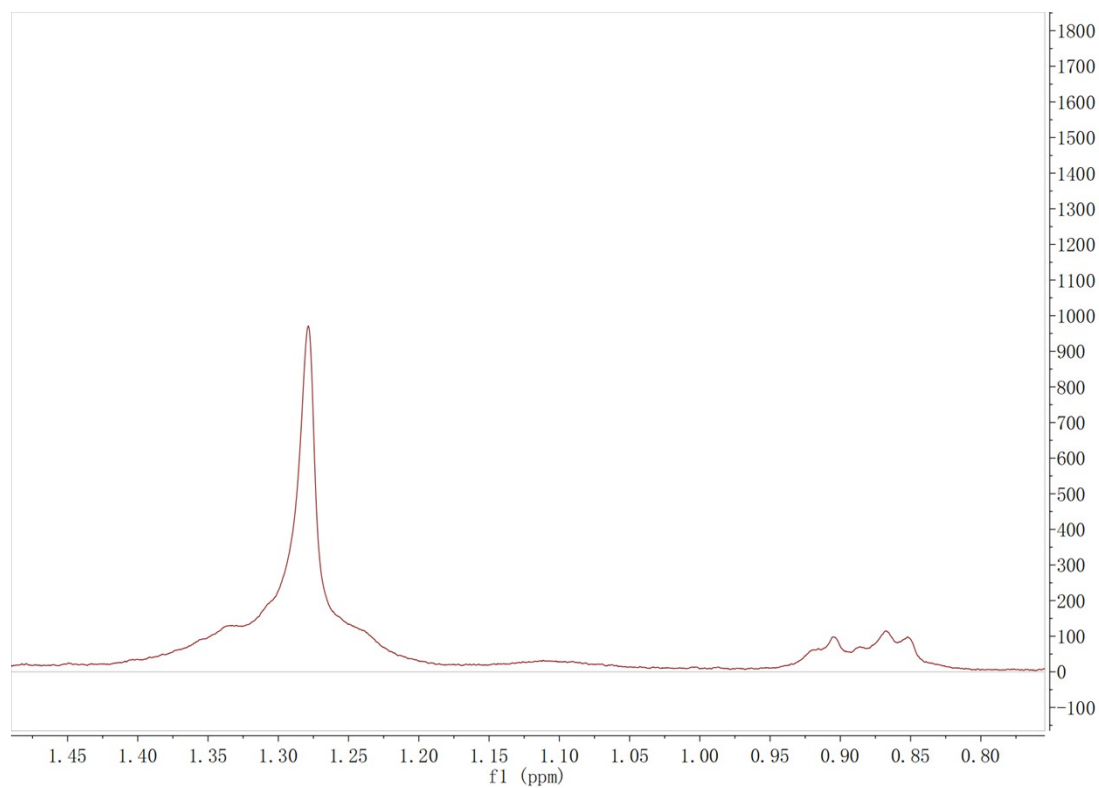


Figure S3. ¹H-NMR spectrum of the polymer from Table 2, entry 1.

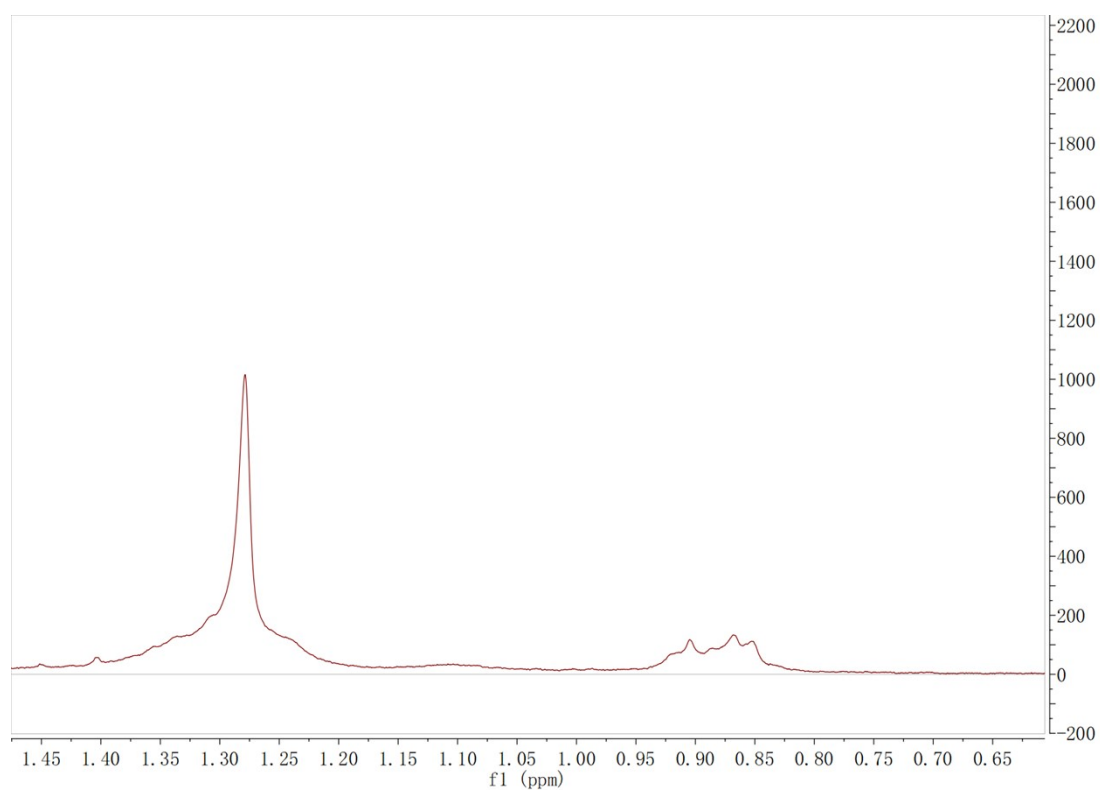


Figure S4. ^1H -NMR spectrum of the polymer from Table 2, entry 2.

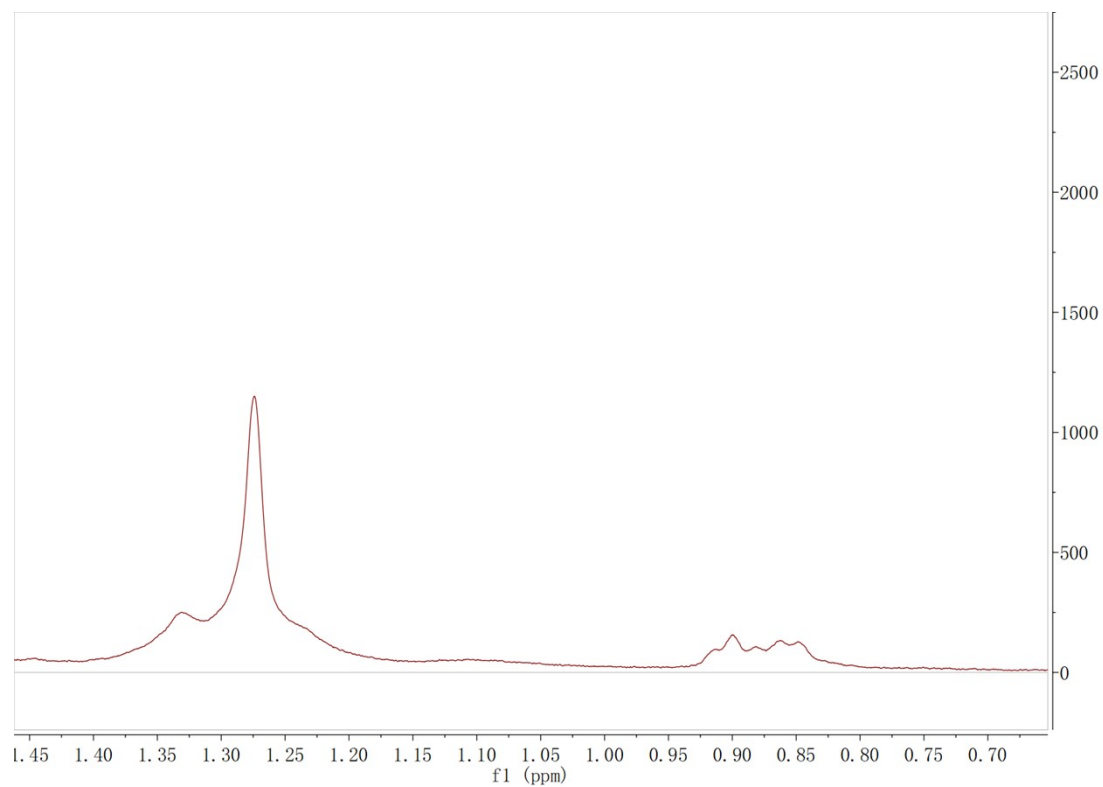


Figure S5. ^1H -NMR spectrum of the polymer from Table 2, entry 3.

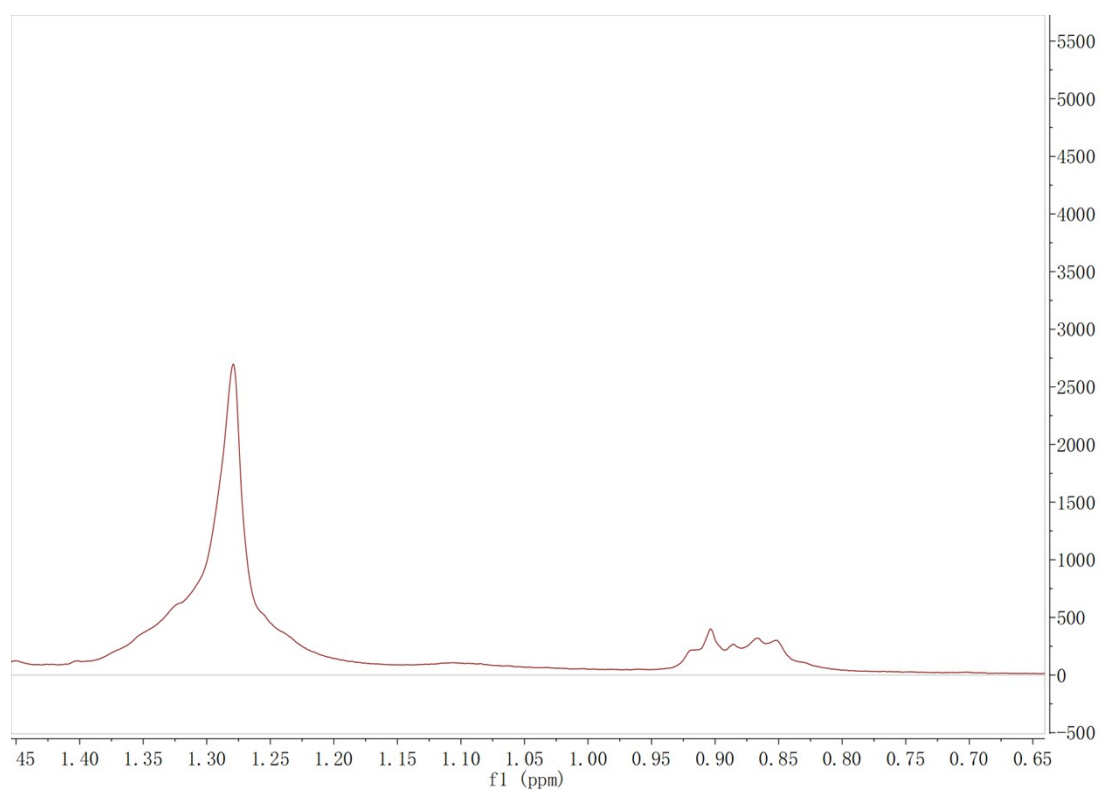


Figure S6. ^1H -NMR spectrum of the polymer from Table 2, entry 4.

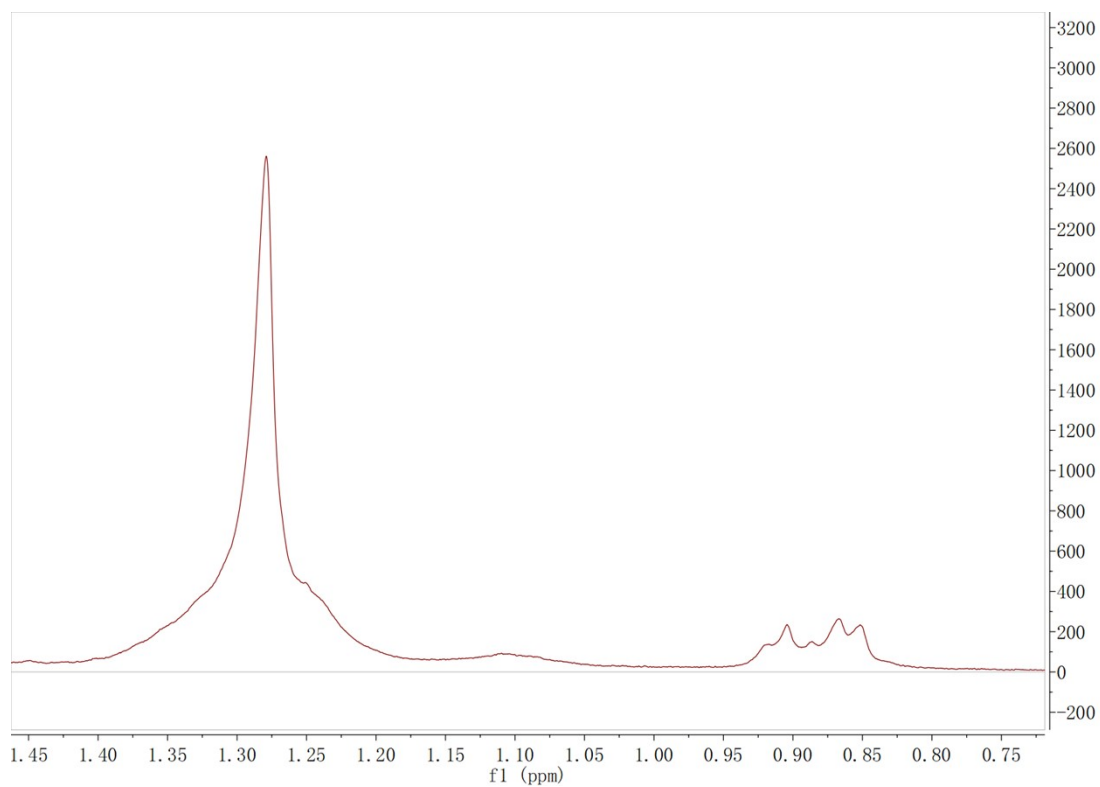


Figure S7. ^1H -NMR spectrum of the polymer from Table 2, entry 5.

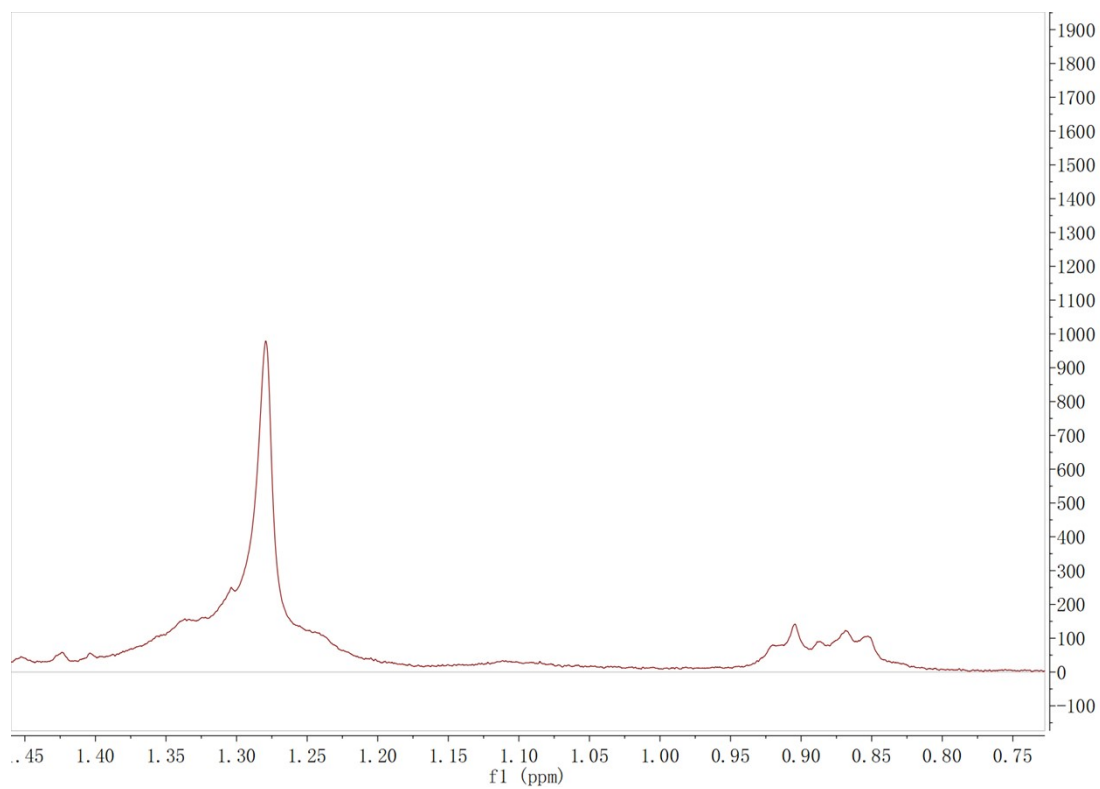


Figure S8. ^1H -NMR spectrum of the polymer from Table 2, entry 6.

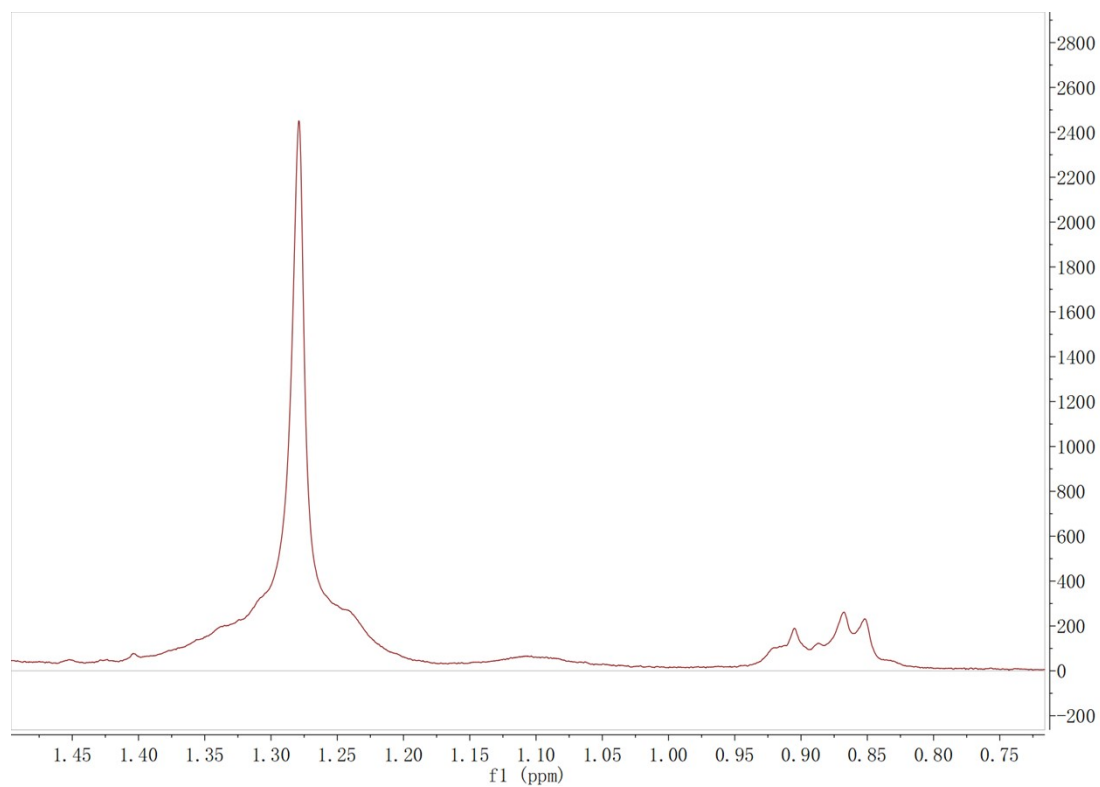


Figure S9. ^1H -NMR spectrum of the polymer from Table 2, entry 7.

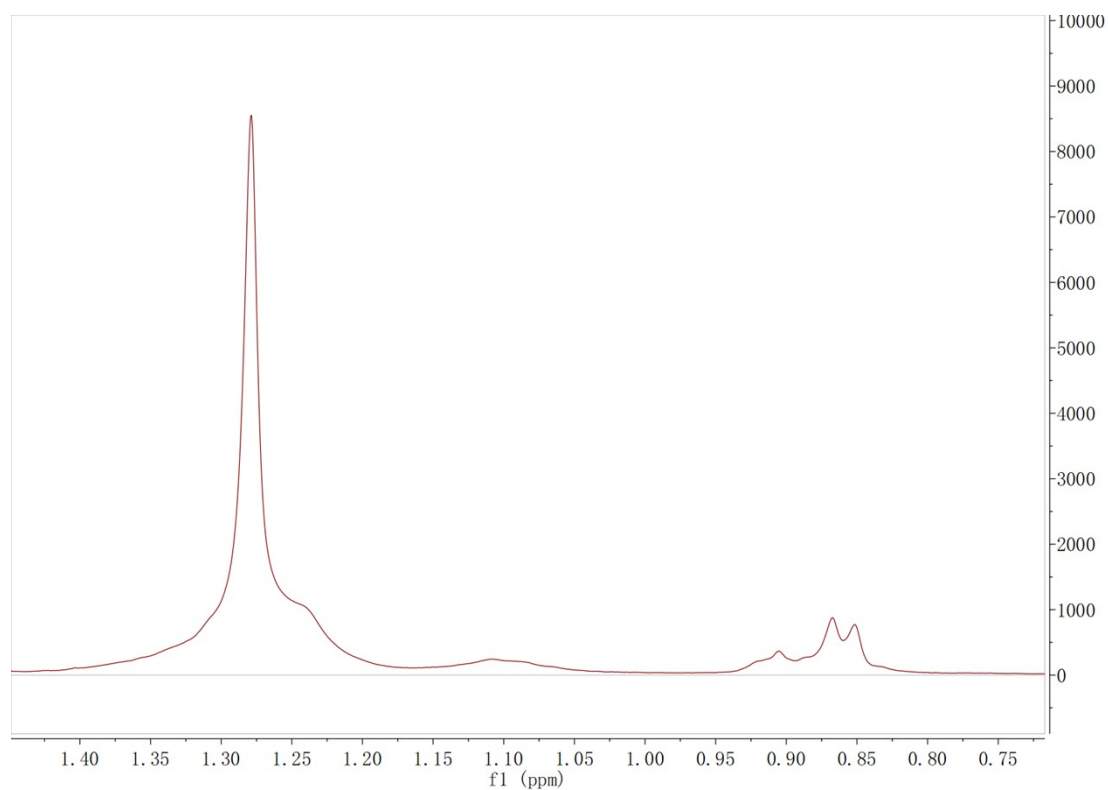


Figure S10. ^1H -NMR spectrum of the polymer from Table 2, entry 8.

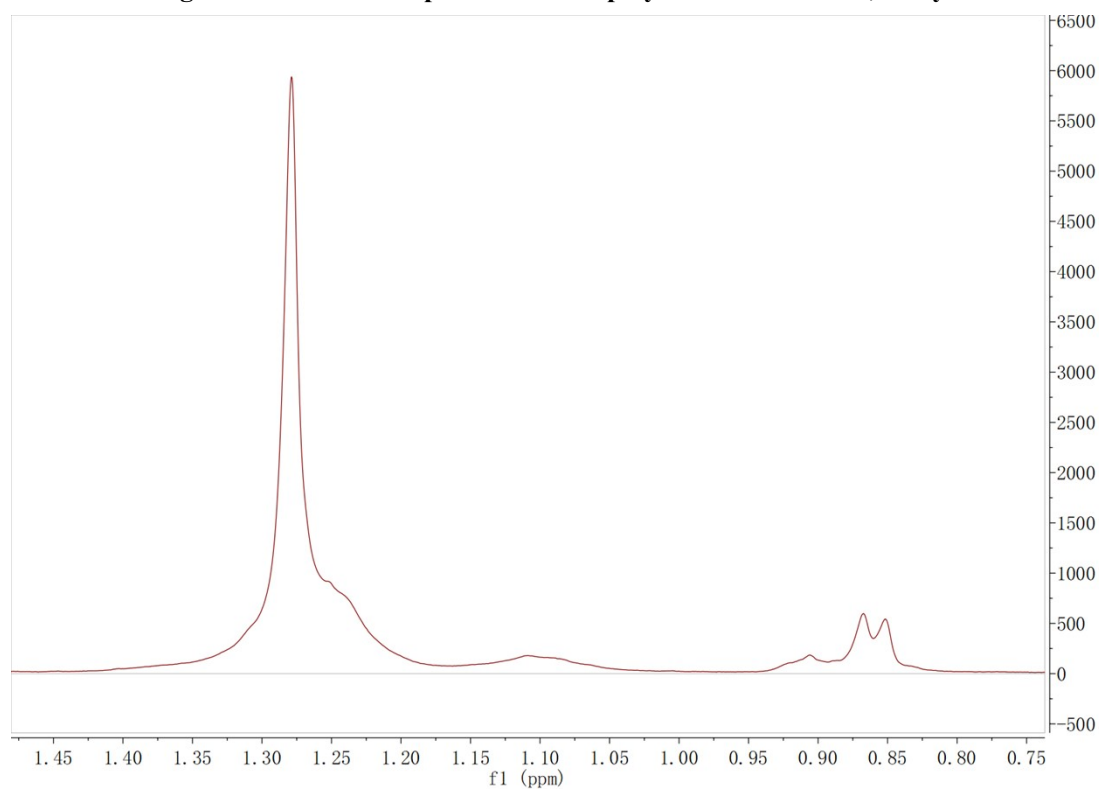


Figure S11. ^1H -NMR spectrum of the polymer from Table 2, entry 9.

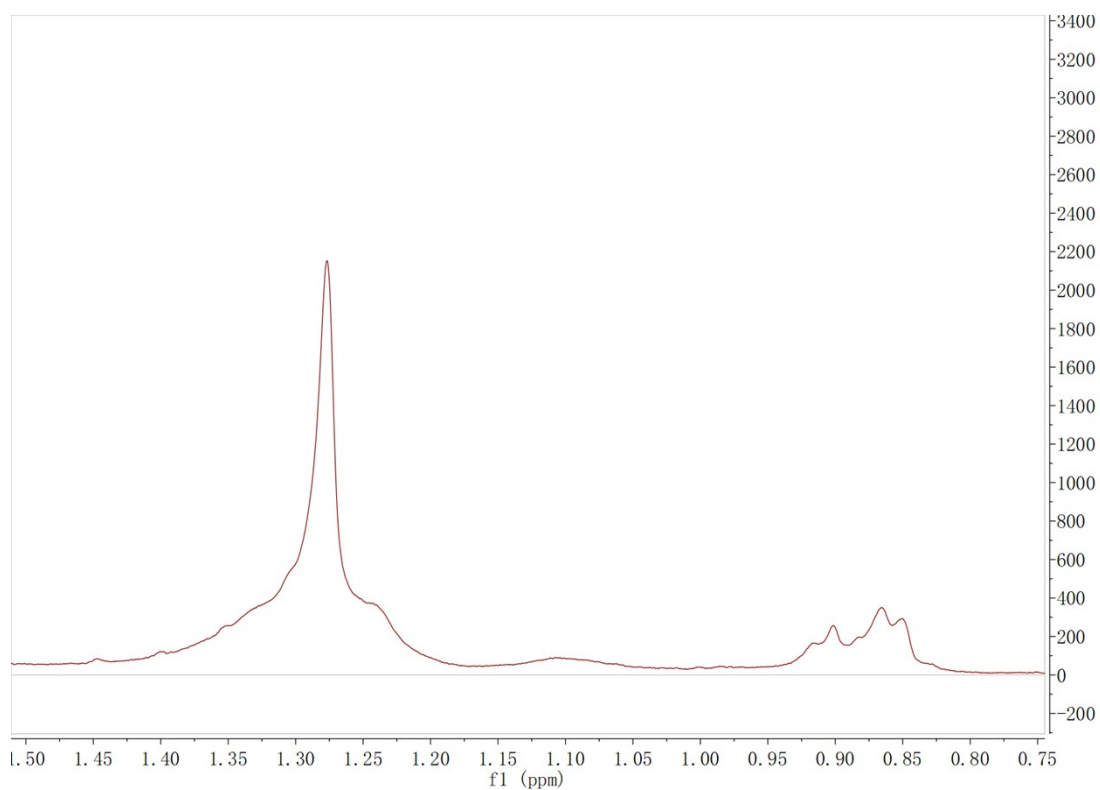


Figure S12. ^1H -NMR spectrum of the polymer from Table 2, entry 10.

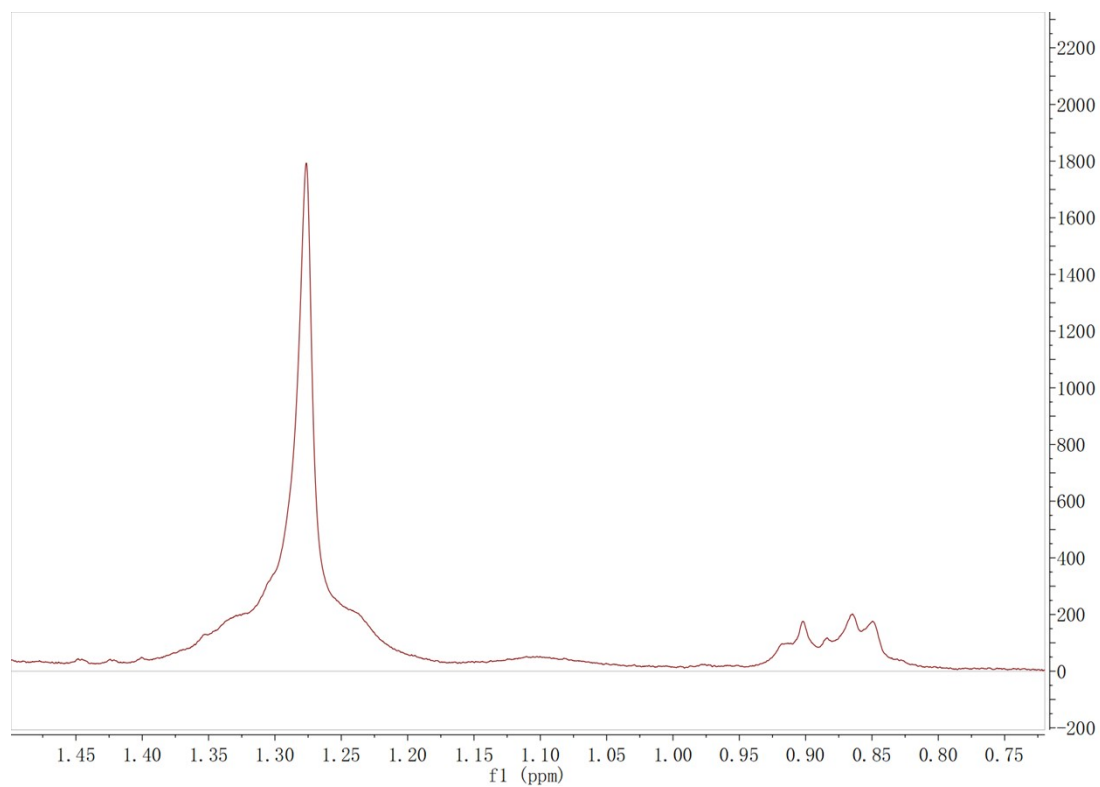


Figure S13. ^1H -NMR spectrum of the polymer from Table 2, entry 11.

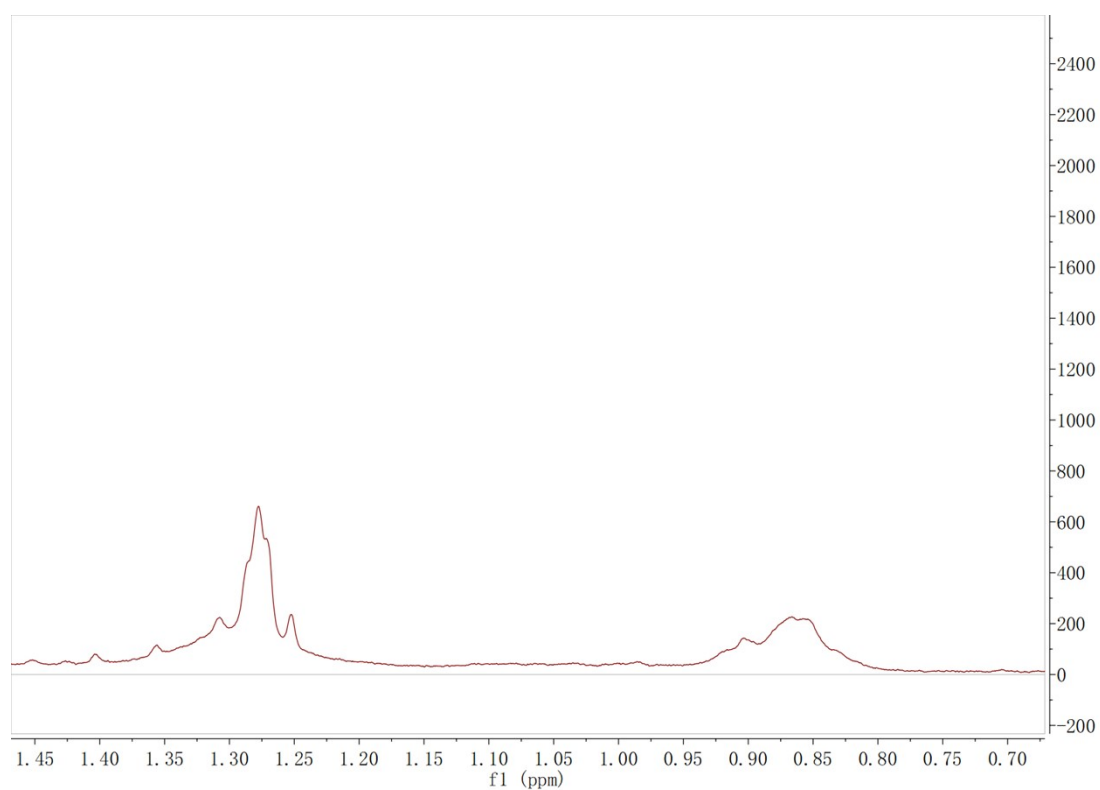


Figure S14. ^1H -NMR spectrum of the polymer from Table 2, entry 12.

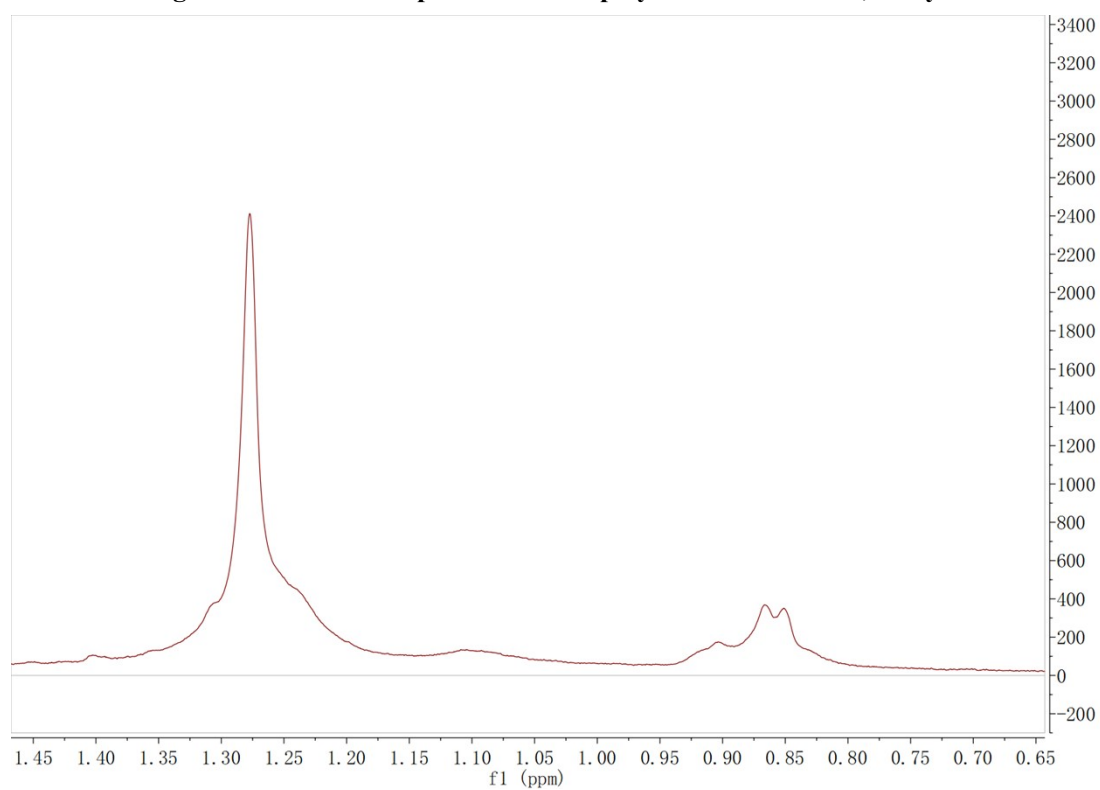


Figure S15. ^1H -NMR spectrum of the polymer from Table 2, entry 13.

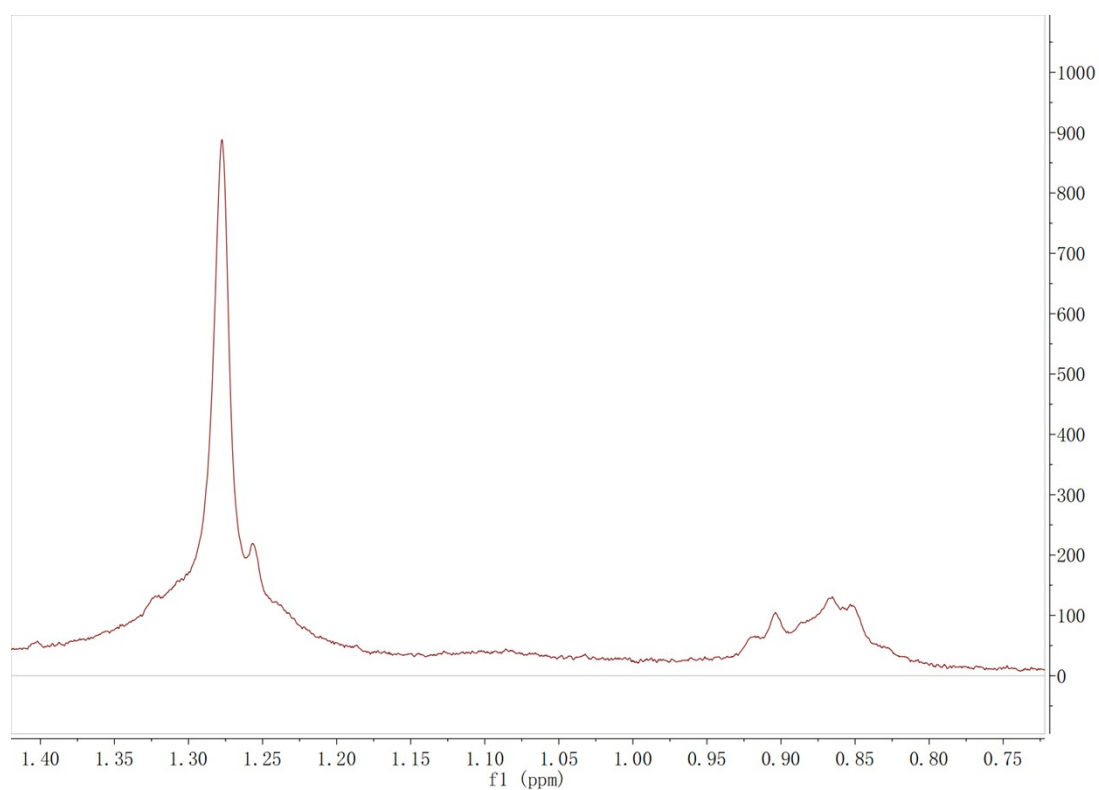


Figure S16. ^1H -NMR spectrum of the polymer from Table 2, entry 14.

4. GPC of polymer

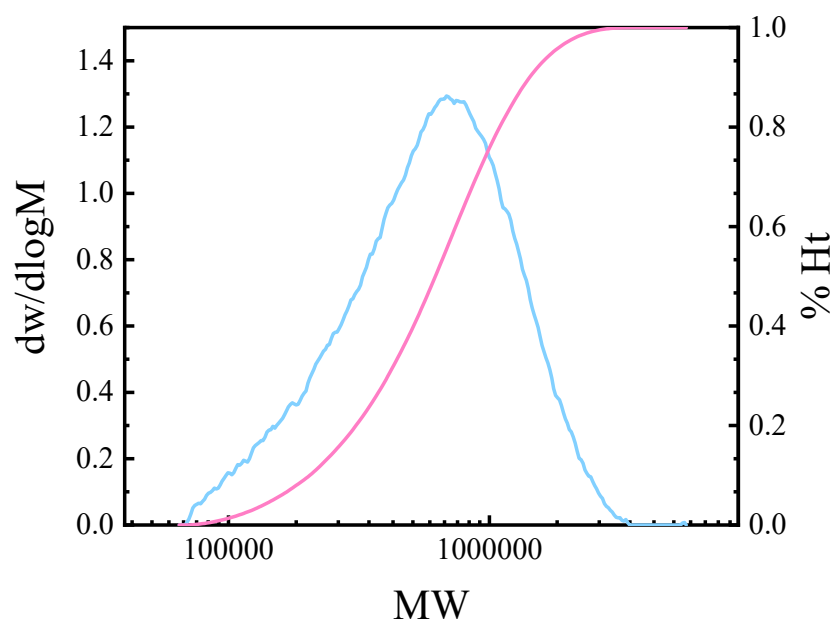


Figure S17. GPC of the polymer from Table 2, entry 2.