

## Supplementary Material

### Alkoxy-functionalized Schiff-base ligation at aluminium and zinc: synthesis, structures and ROP capability

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**Figure S1.** <sup>1</sup>H NMR spectrum of (400 MHz, CD<sub>3</sub>CN) spectra of **1-3**.

**Figure S2.** <sup>1</sup>H NMR spectrum of (400 MHz, CD<sub>3</sub>CN) spectra of **5-7**.

**Figure S3.** FTIR of complex **1**.

**Figure S4.** FTIR of complex **2**.

**Figure S5.** FTIR of complex **3**.

**Figure S6.** FTIR of complex **4**.

**Figure S7.** FTIR of complex **5**.

**Figure S8.** FTIR of complex **6**.

**Figure S9.** FTIR of complex **7**.

**Figure S10.** FTIR of complex **8**.

**Figure S11.** FTIR of complex L<sup>1</sup>H.

**Figure S12.** FTIR of complex L<sup>2</sup>H.

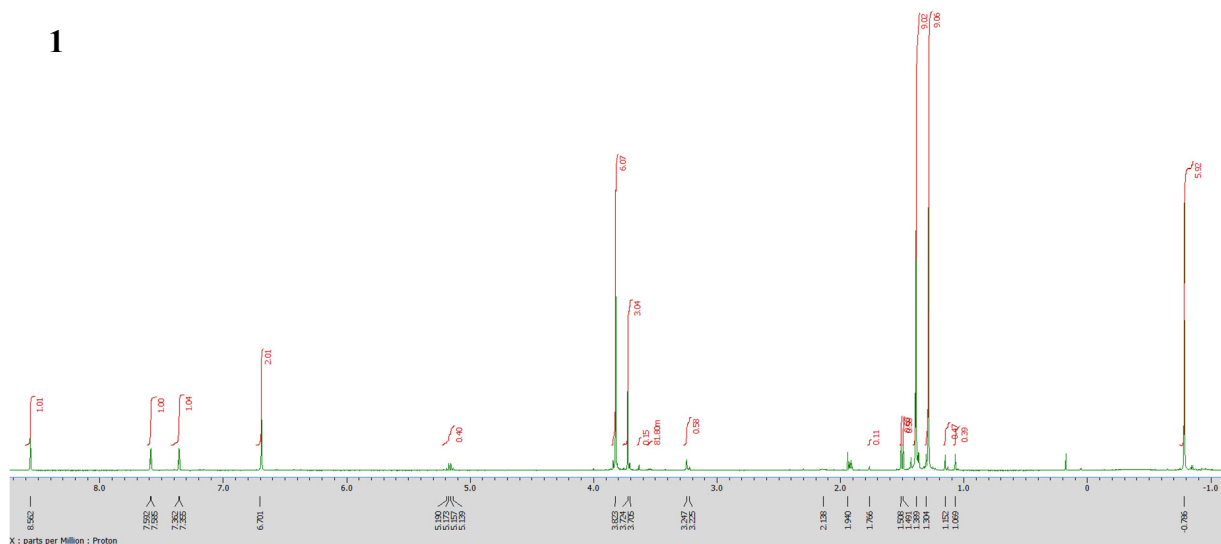
**Figure S13.** FTIR of complex L<sup>3</sup>H

**Figure S14.** Gel permeation chromatography for poly(CL-co-BOD)

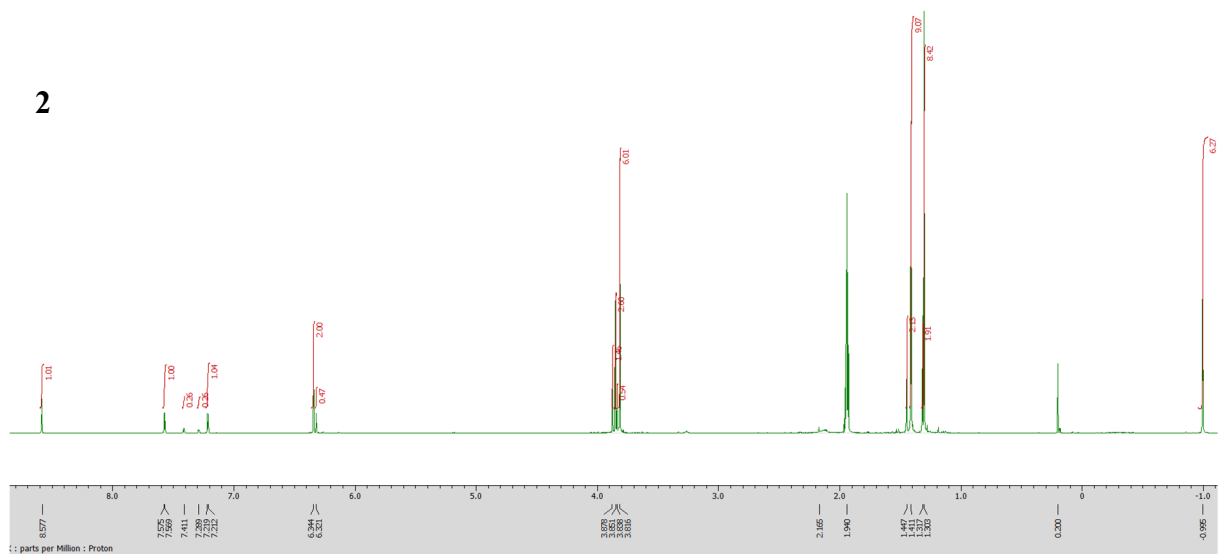
**Figure S15.** Plot of  $\ln[\text{CL}]_0/[\text{CL}]_t$  vs.  $t$ ,  $[\epsilon\text{-CL}]:[\mathbf{1}]:[\text{BnOH}] = 250:1:0$ , at 100 °C according to the conditions in Table 3, entry 22

# 1. $^1\text{H}$ NMR Spectra of complexes **1-3**

**1**



**2**



3

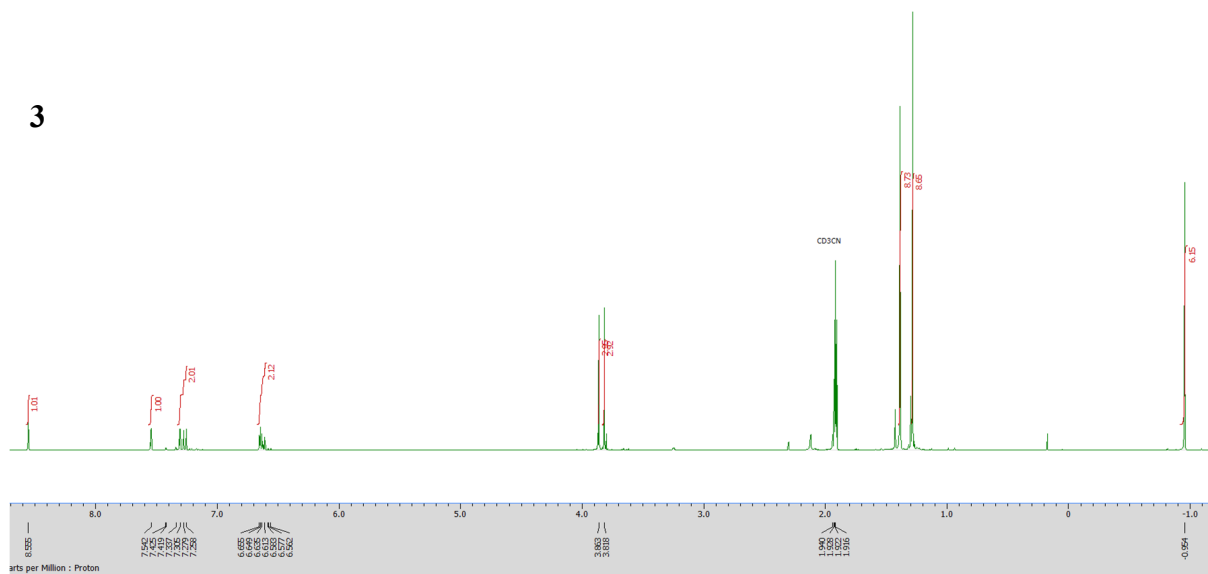
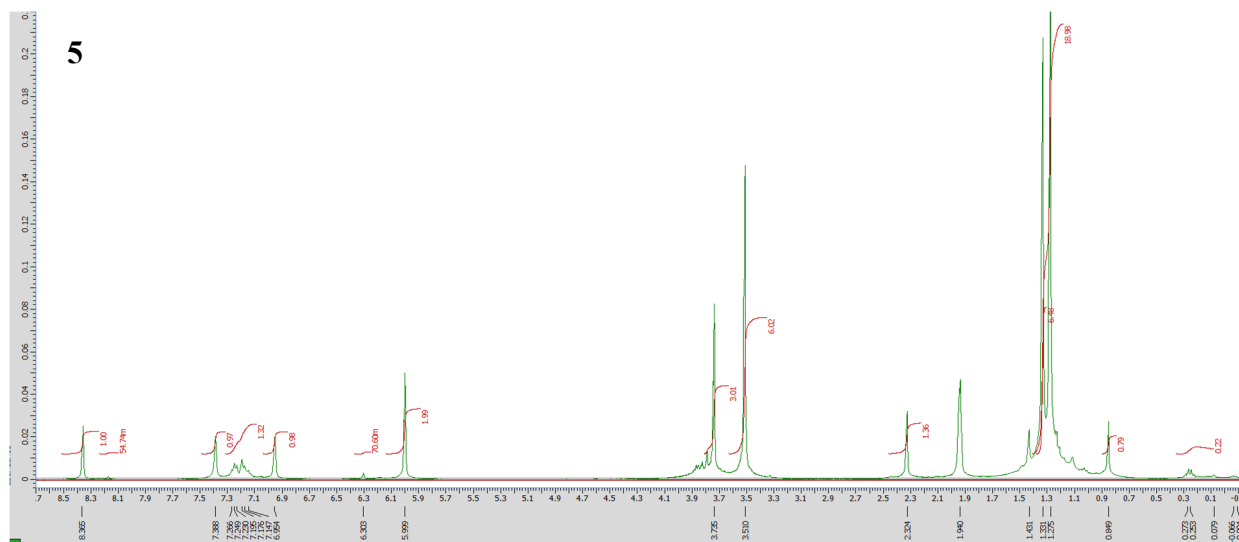
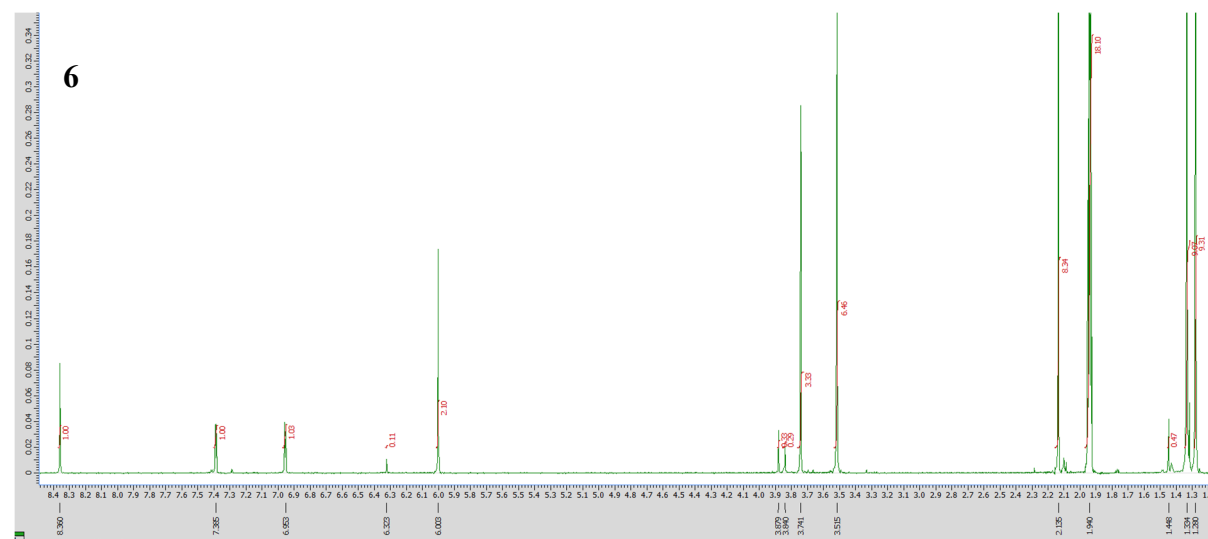


Figure S1. <sup>1</sup>H NMR spectrum of (400 MHz, CD<sub>3</sub>CN) spectra of 1-3

5



6



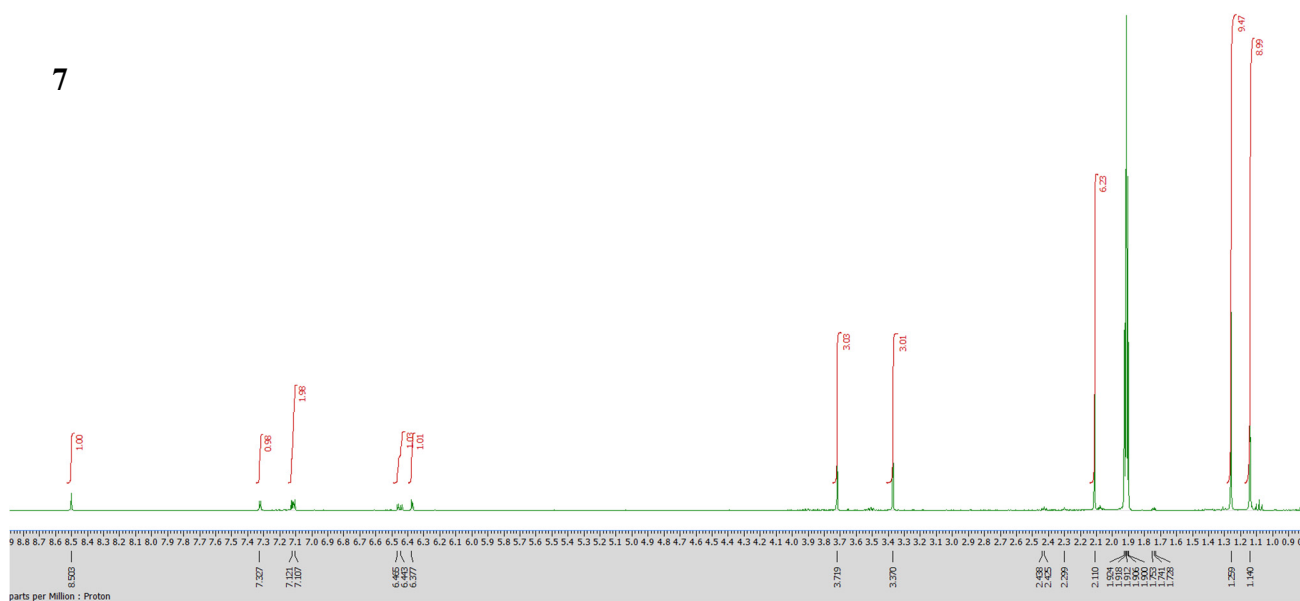


Figure S2.  $^1\text{H}$  NMR of (400 MHz,  $\text{CD}_3\text{CN}$ ) spectra of **5-7**



Figure S3. FTIR of complex **1**



Figure S4. FTIR of complex 2

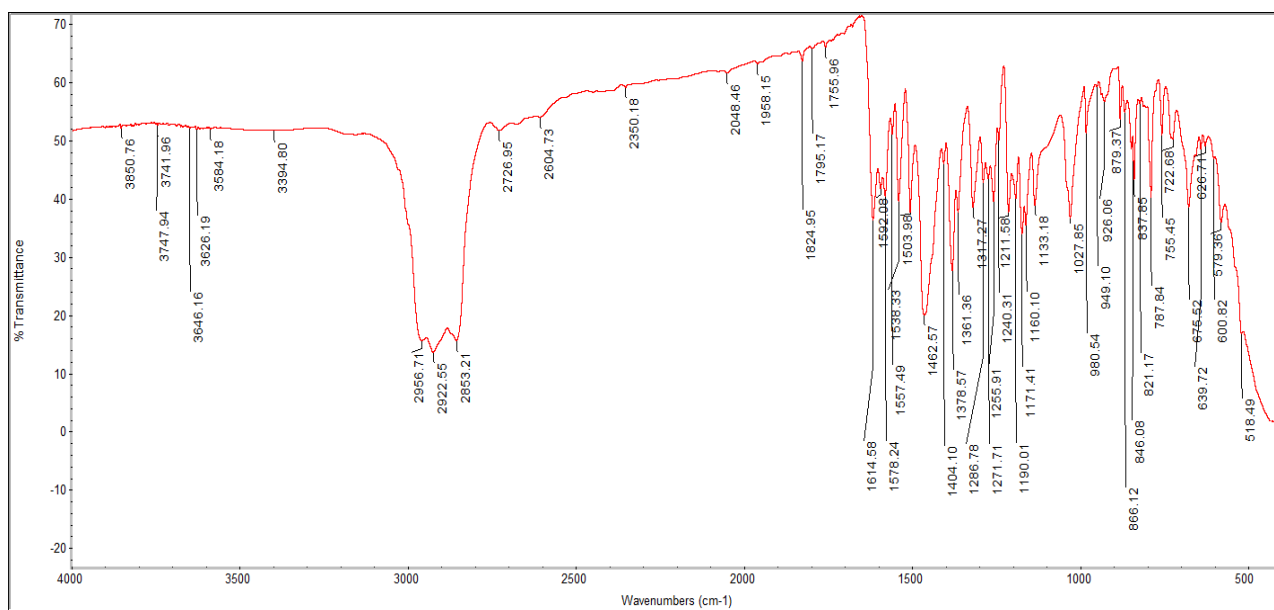


Figure S5. FTIR of complex 3

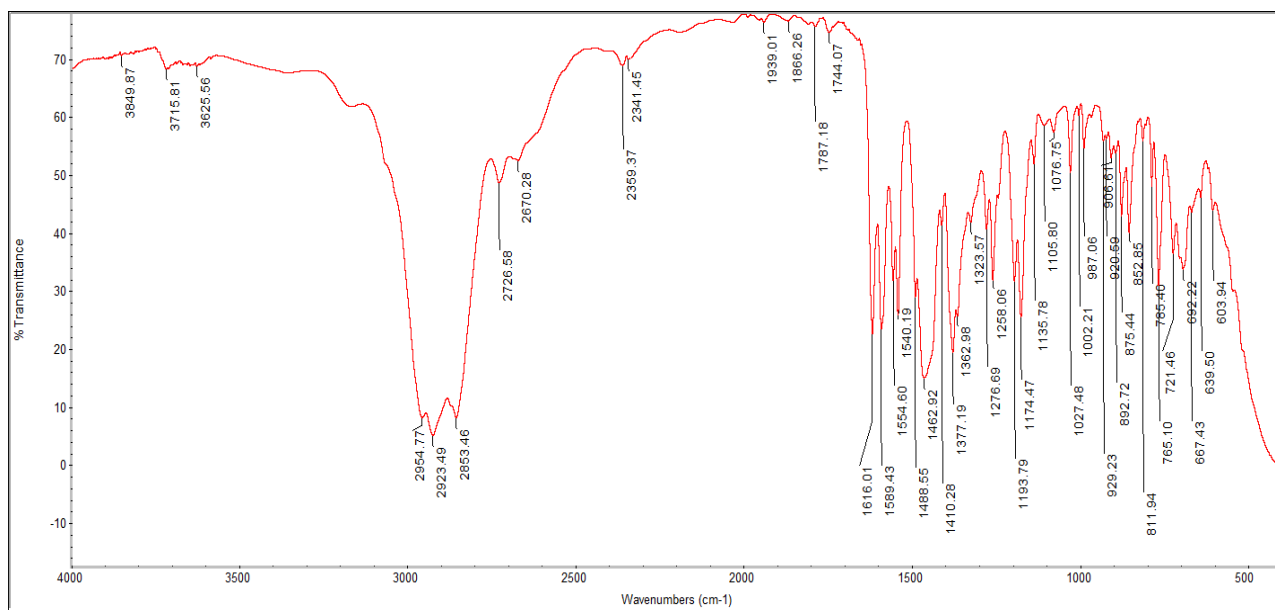


Figure S6. FTIR of complex 4

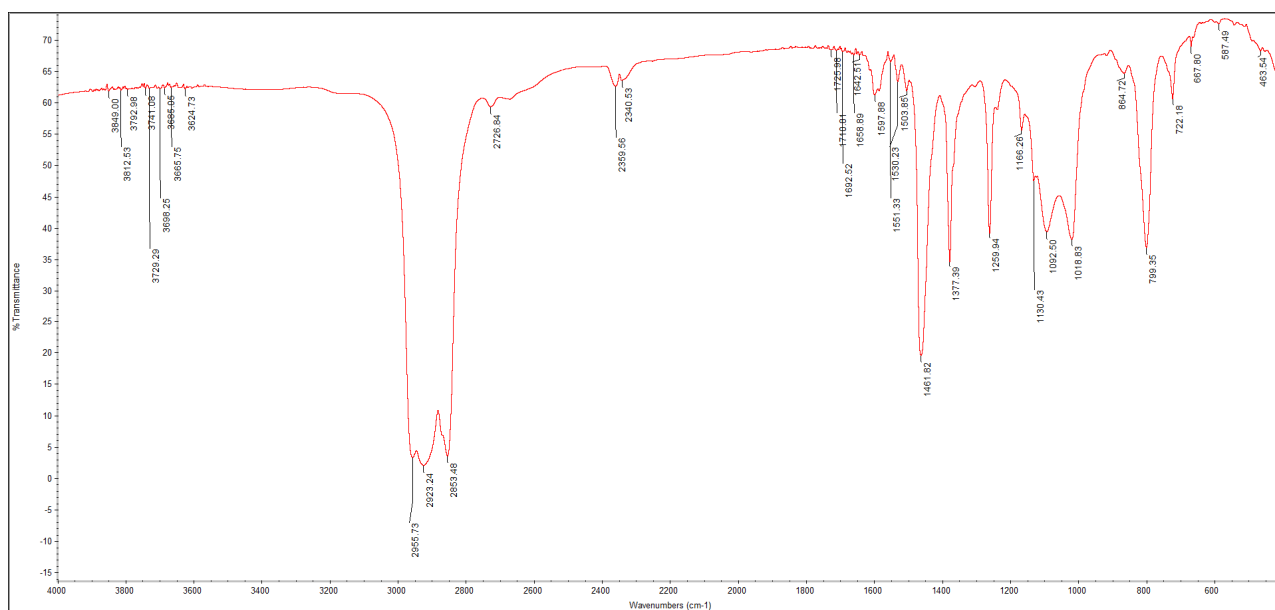


Figure S7. FTIR of complex 5

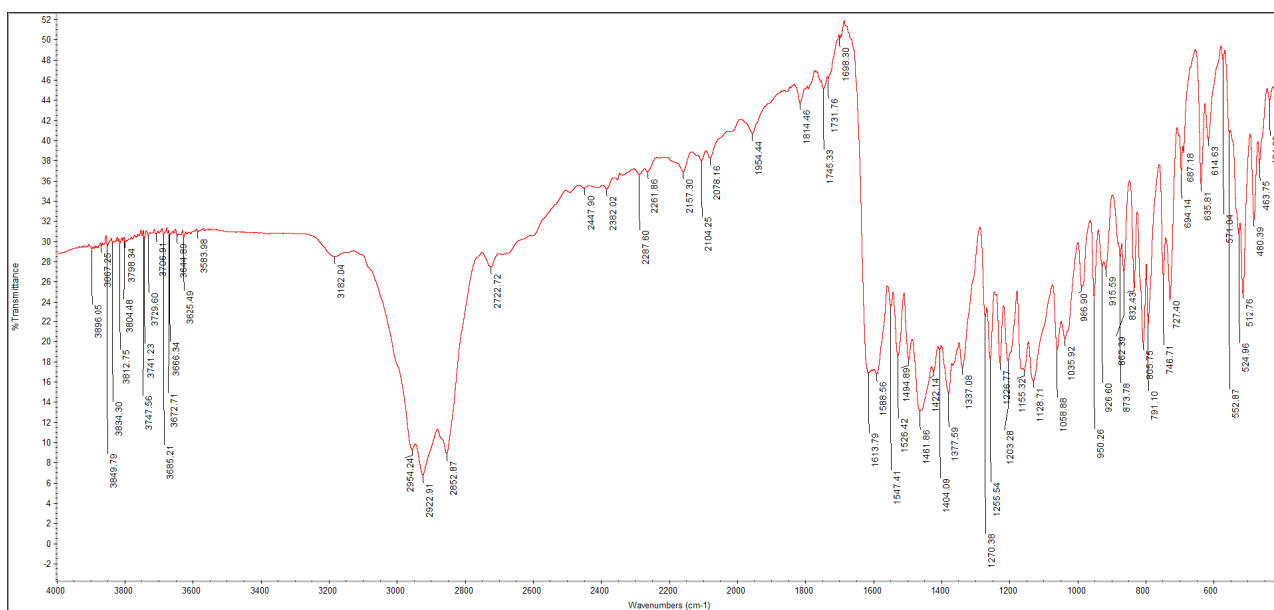


Figure S8. FTIR of complex 6

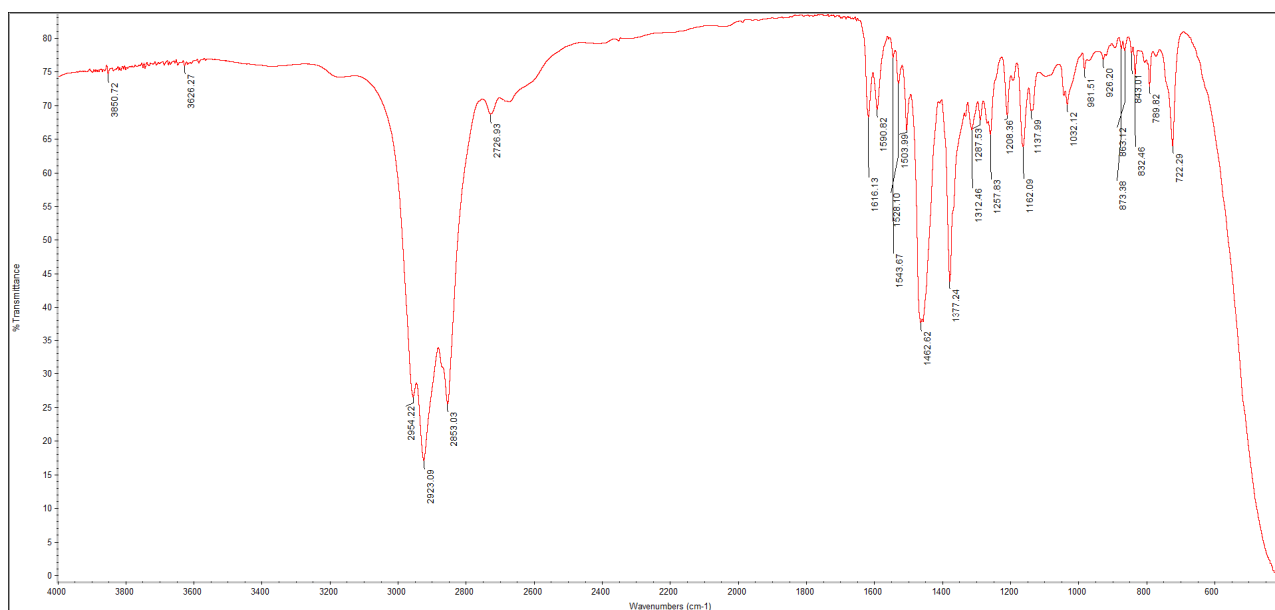


Figure S9. FTIR of complex 7



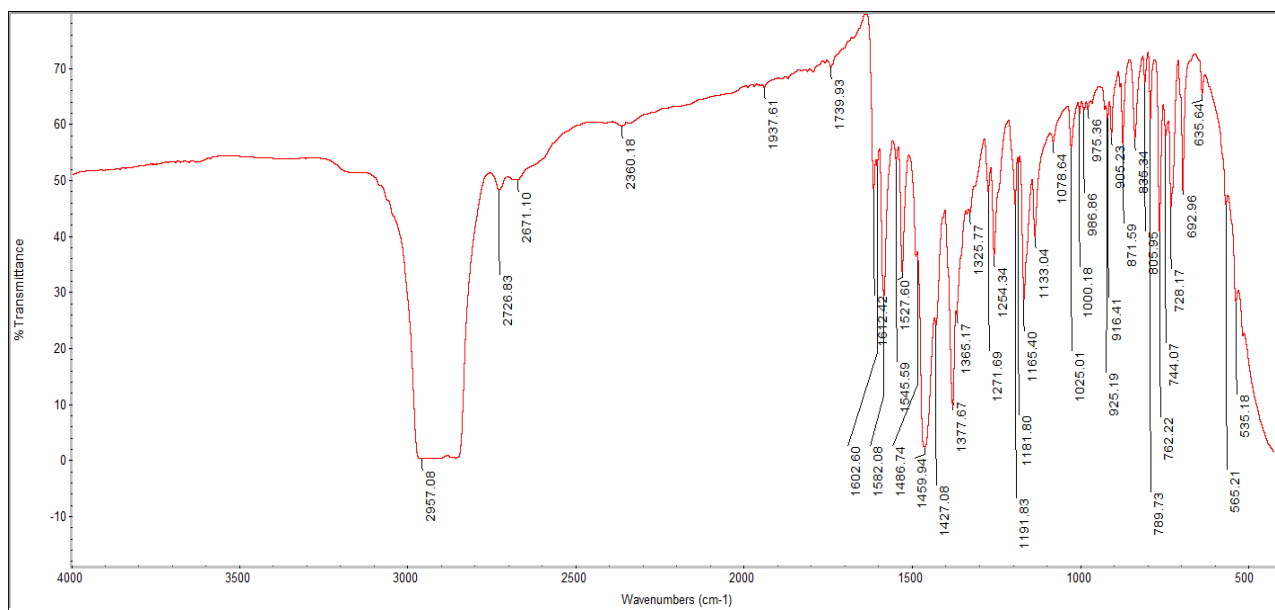


Figure S10. FTIR of complex **8**

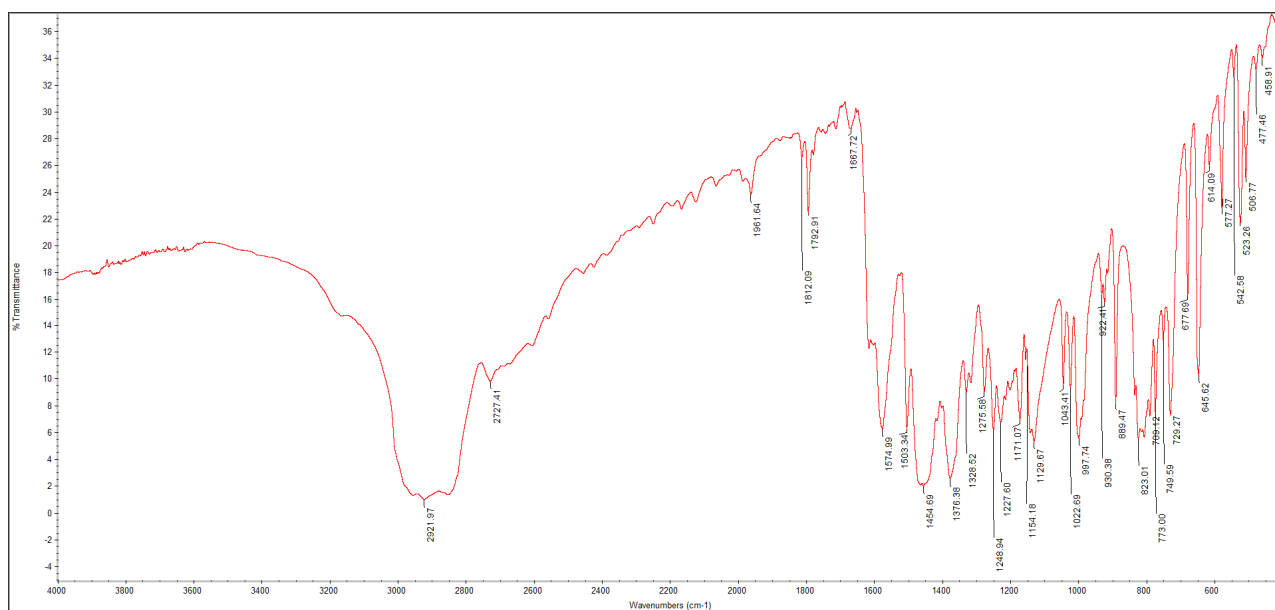


Figure S11. FTIR of **L<sup>1</sup>H**

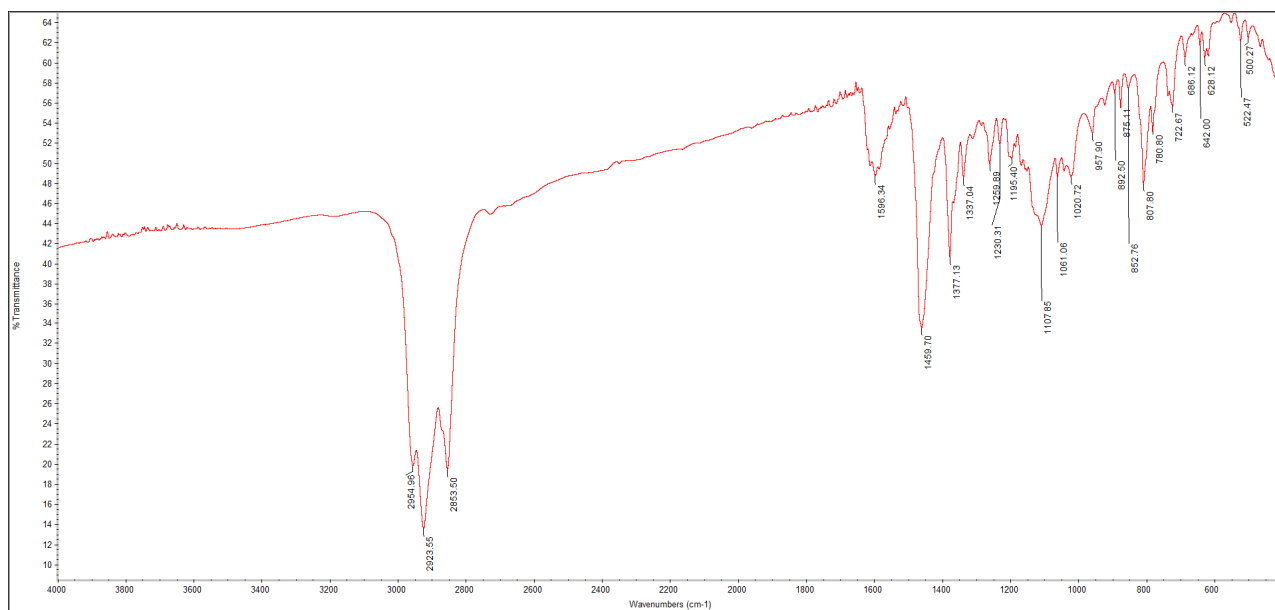


Figure S12. FTIR of  $L^2H$

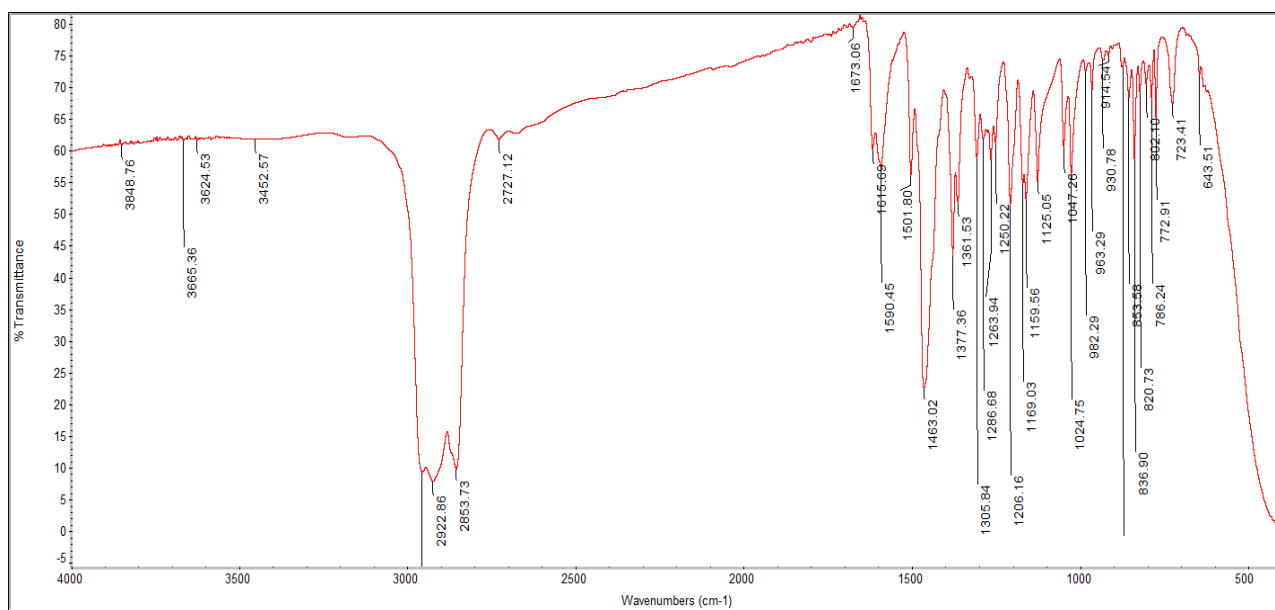


Figure S13. FTIR of  $L^3H$

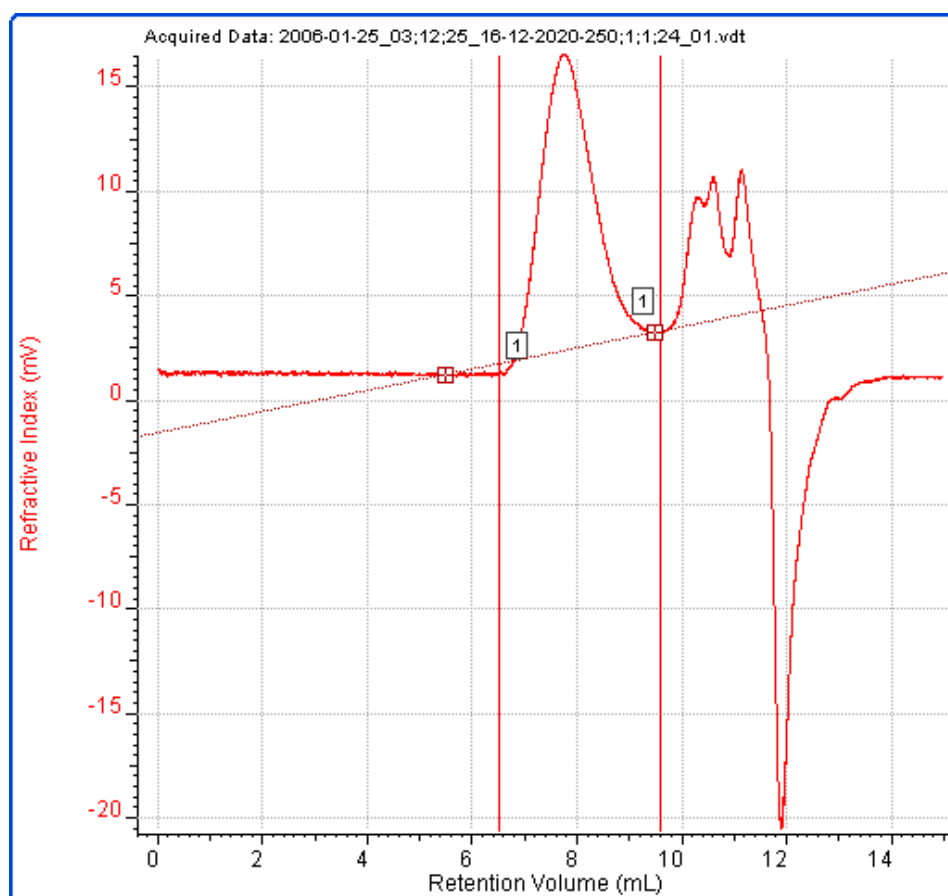


Figure S14. GPC of poly(CL-co-BOD)

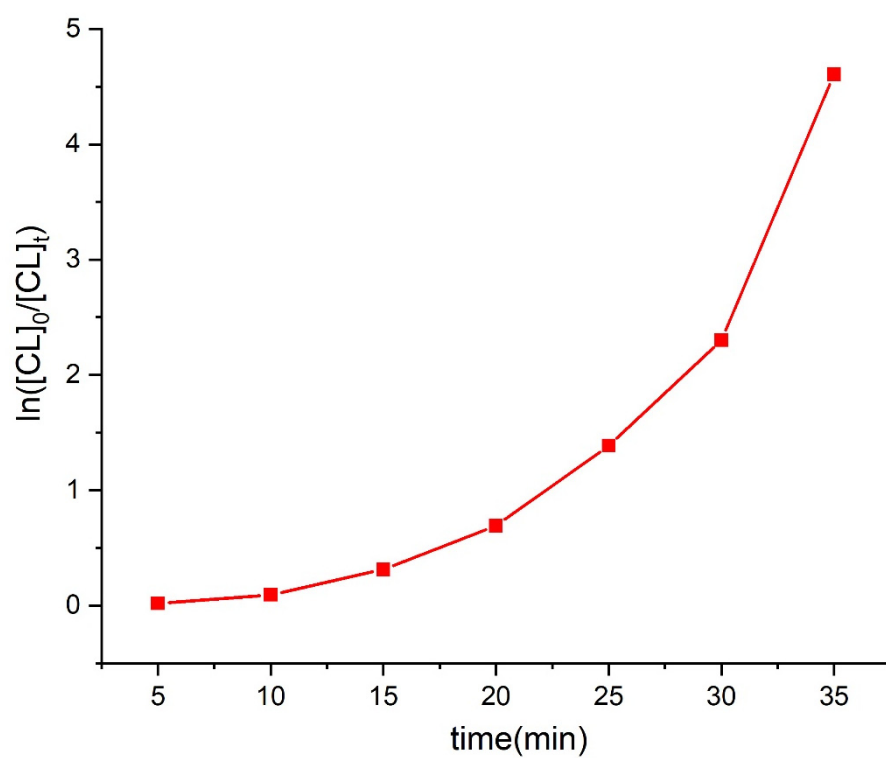


Figure S15. Plot of  $\ln[CL]_0/[CL]_t$  vs  $t$ ,  $[\epsilon\text{-CL}]:[\mathbf{1}]:[\text{BnOH}] = 250:1:0$ , at 100 °C according to the conditions in Table 3, entry 22