

Supporting Information

Effect of Length and Functionality of the Linker ‘between the Main Chain and the Chiral Pendant’ on the Helical Nature of Chiral Poly(Ionic Liquids)

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1. Supplementary figures

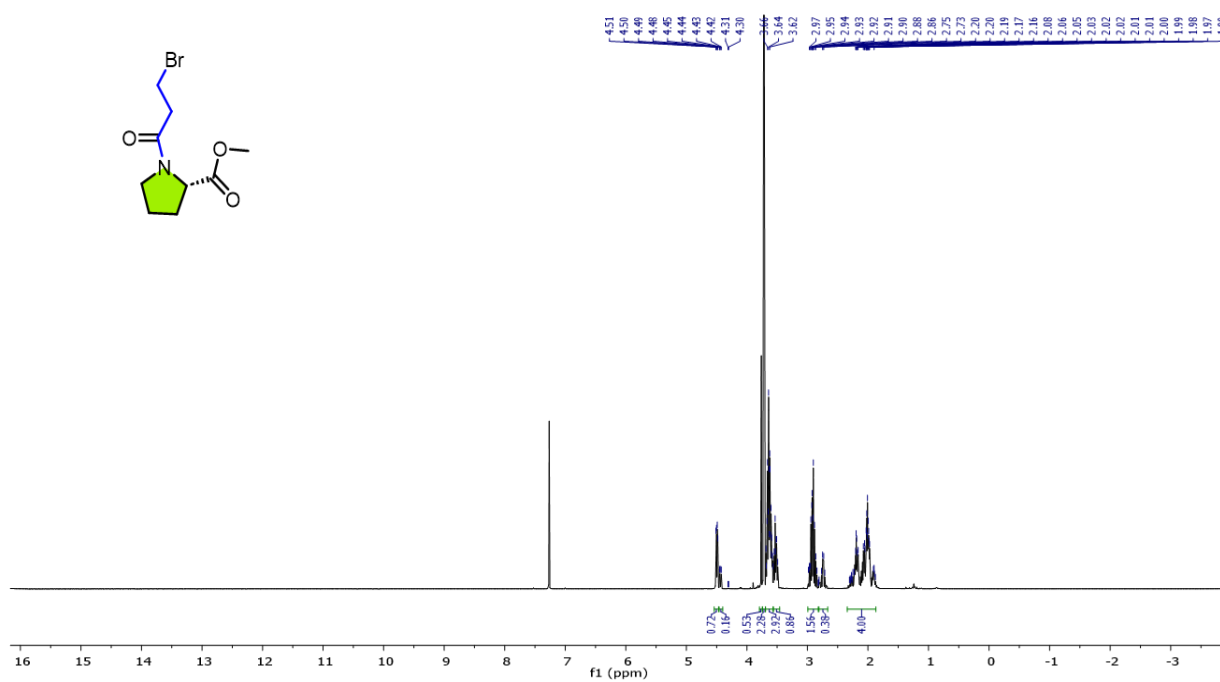


Fig. S1 ¹H NMR spectrum of (L)-3.

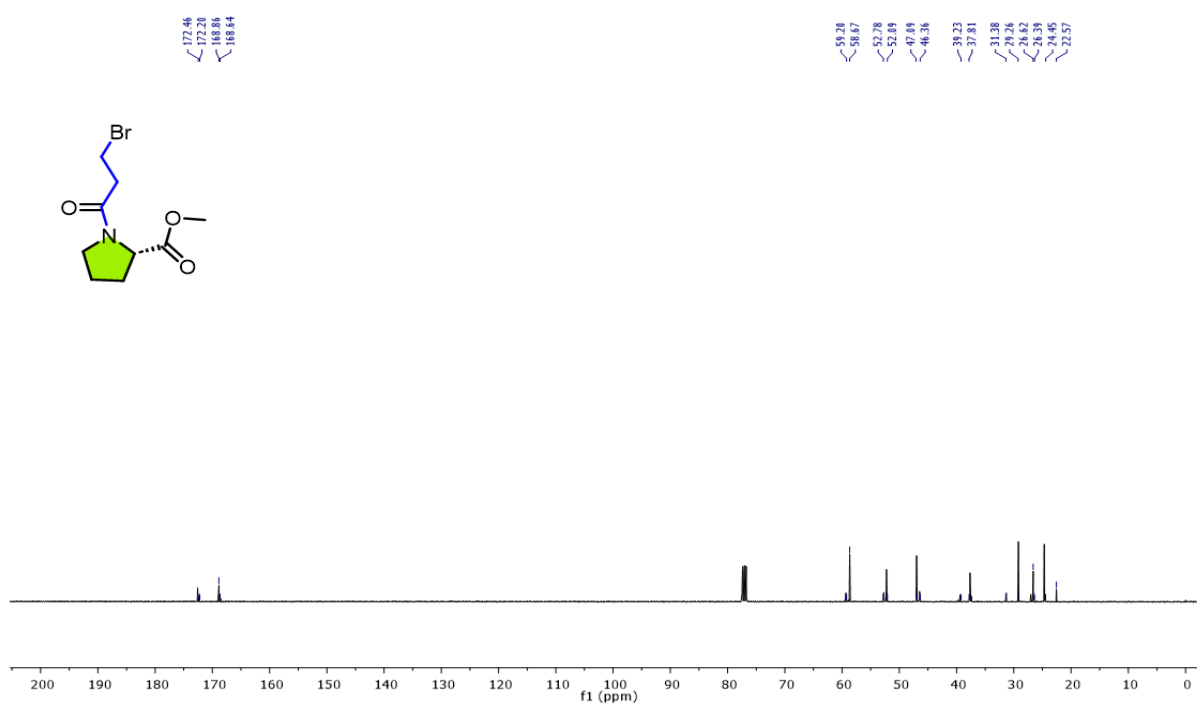


Fig. S2 ¹³C NMR spectrum of (L)-3.

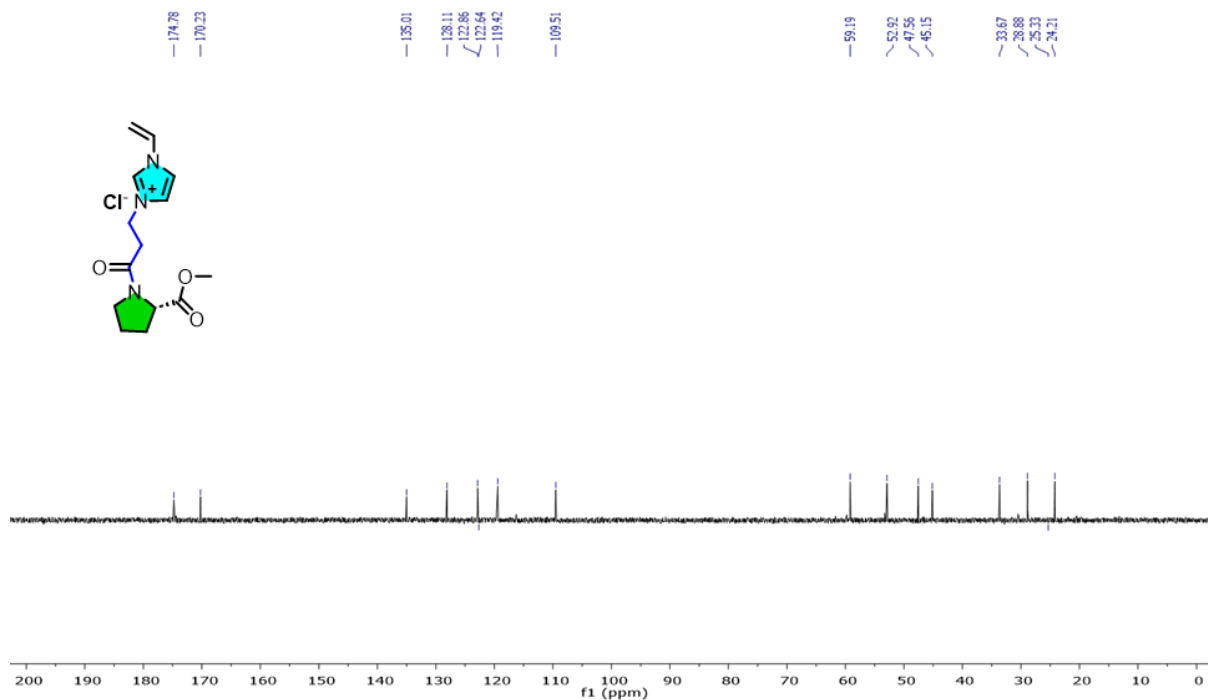


Fig. S3 ^{13}C NMR spectrum of mono-(L)-3-Cl.

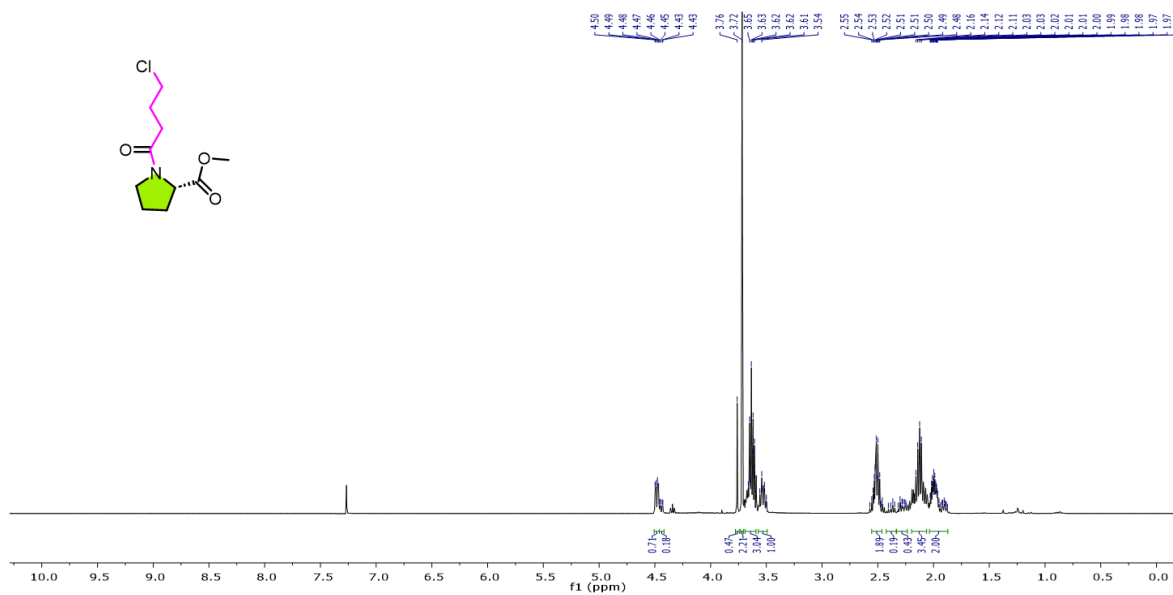


Fig. S4 ^1H NMR spectrum of (L)-4.

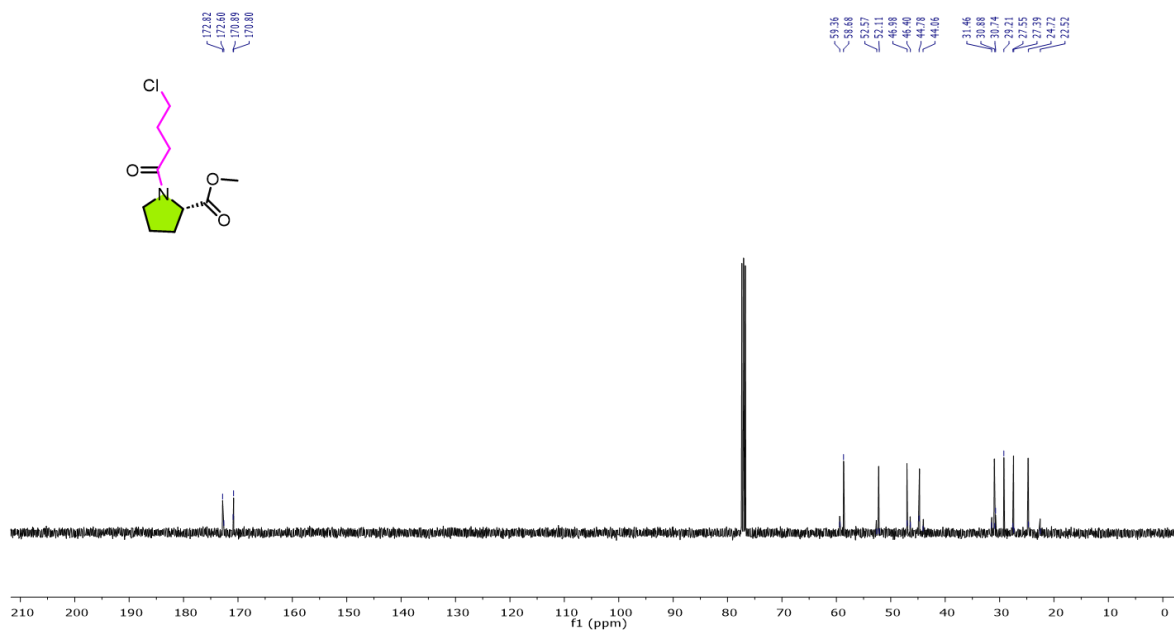


Fig. S5 ^{13}C NMR spectrum of (L)-4.

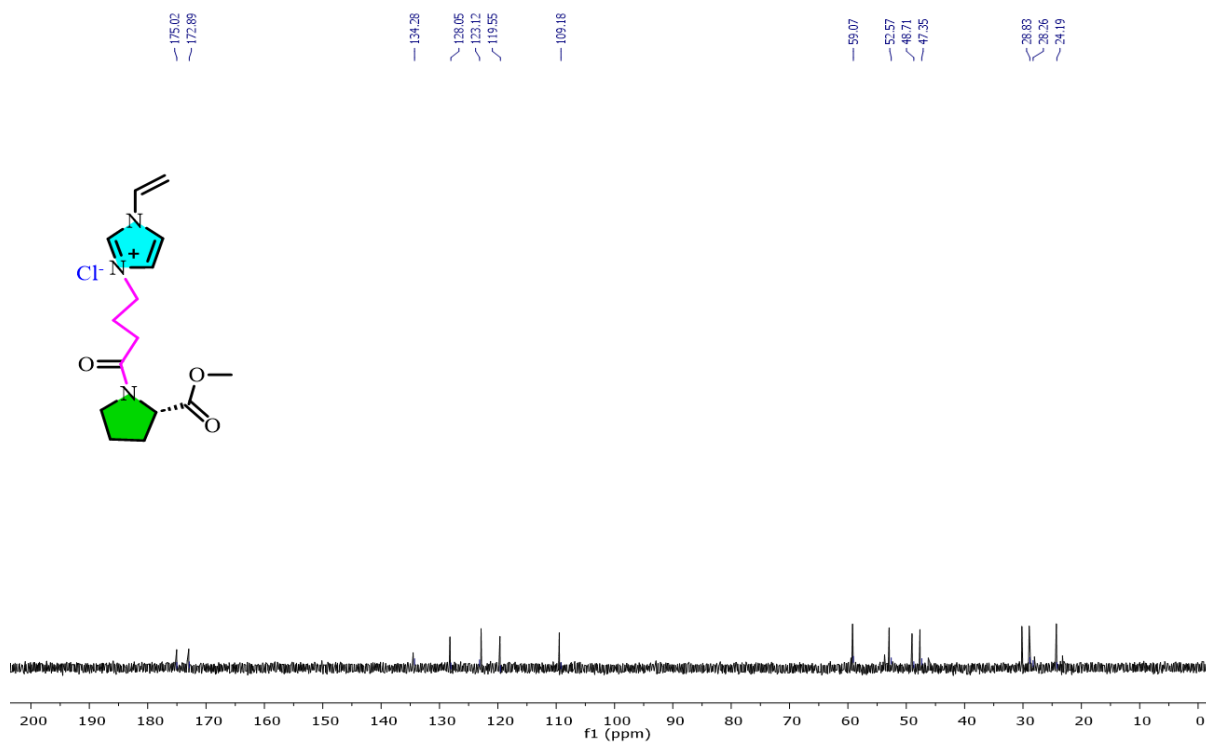


Fig. S6 ^{13}C NMR spectrum of mono-(L)-4-Cl.

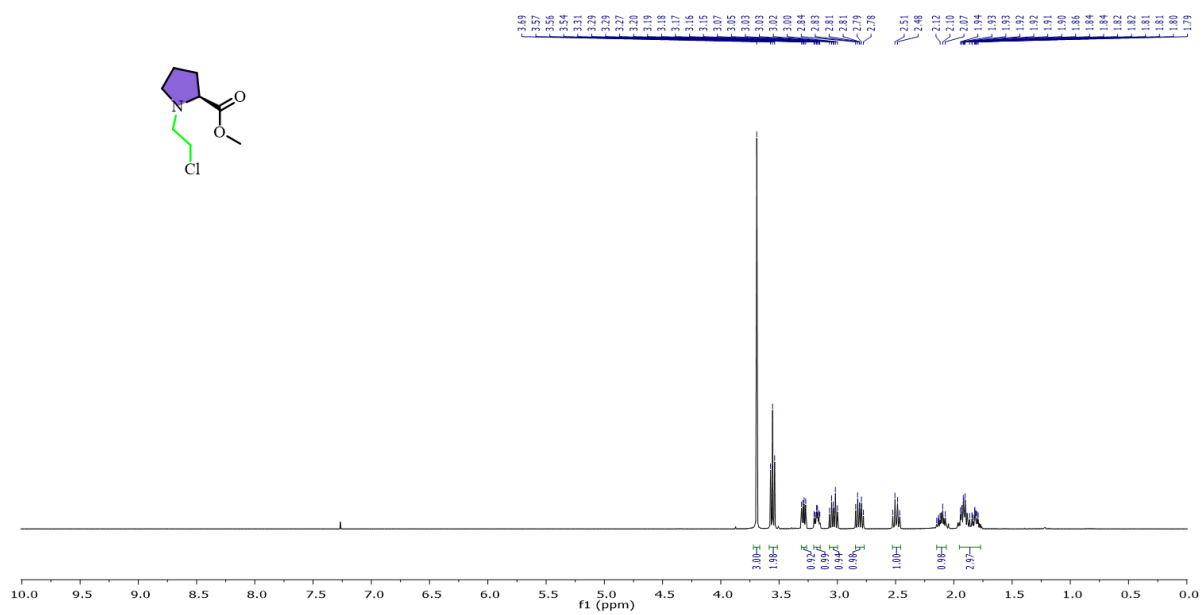


Fig. S7 ^1H NMR spectrum of (L)-5.

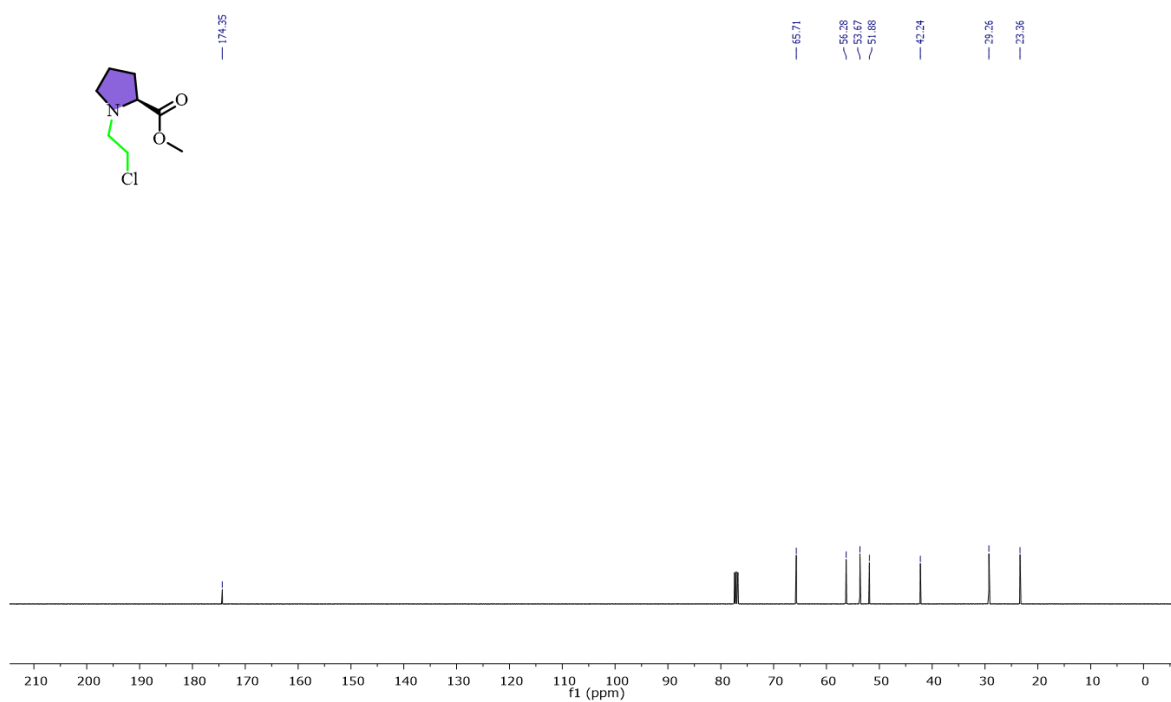


Fig. S8 ^{13}C NMR spectrum of (L)-5.

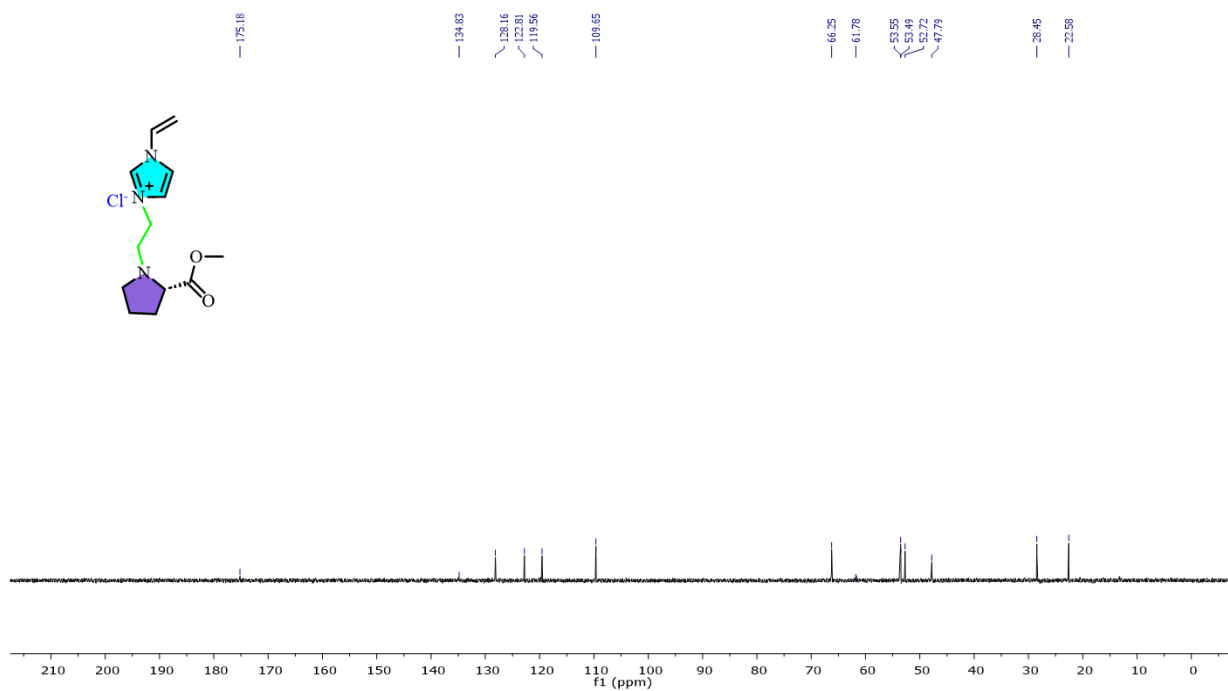


Fig. S9 ^{13}C NMR spectrum of mono-(L)-5-Cl.

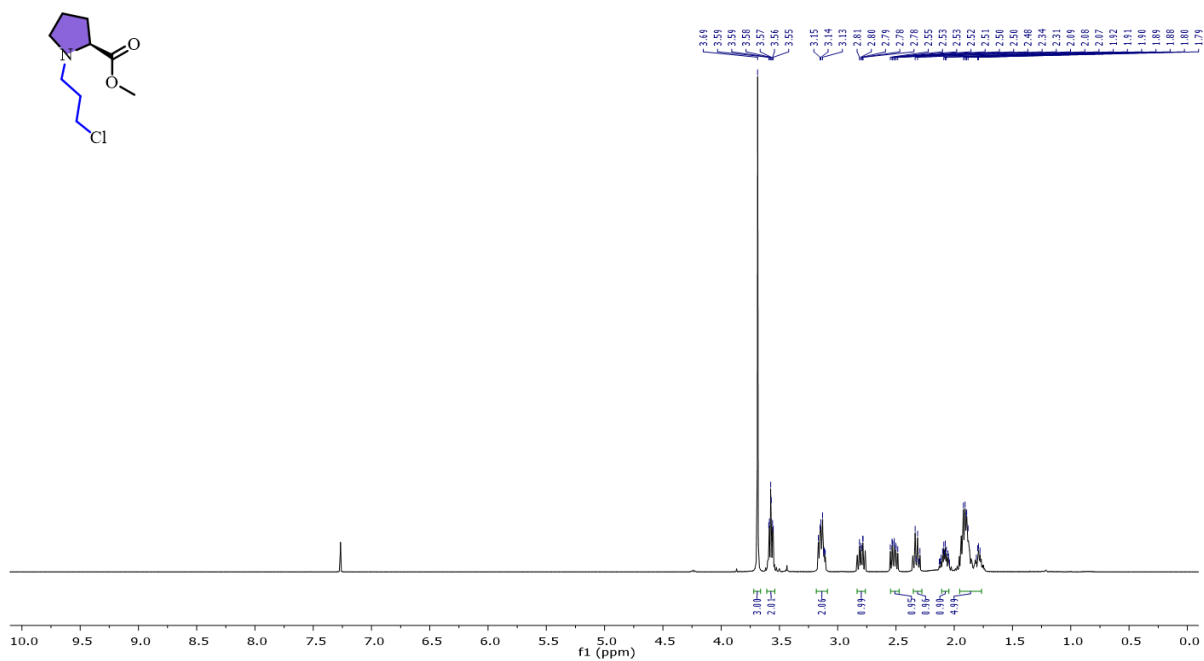


Fig. S10 ^1H NMR spectrum of (L)-5.

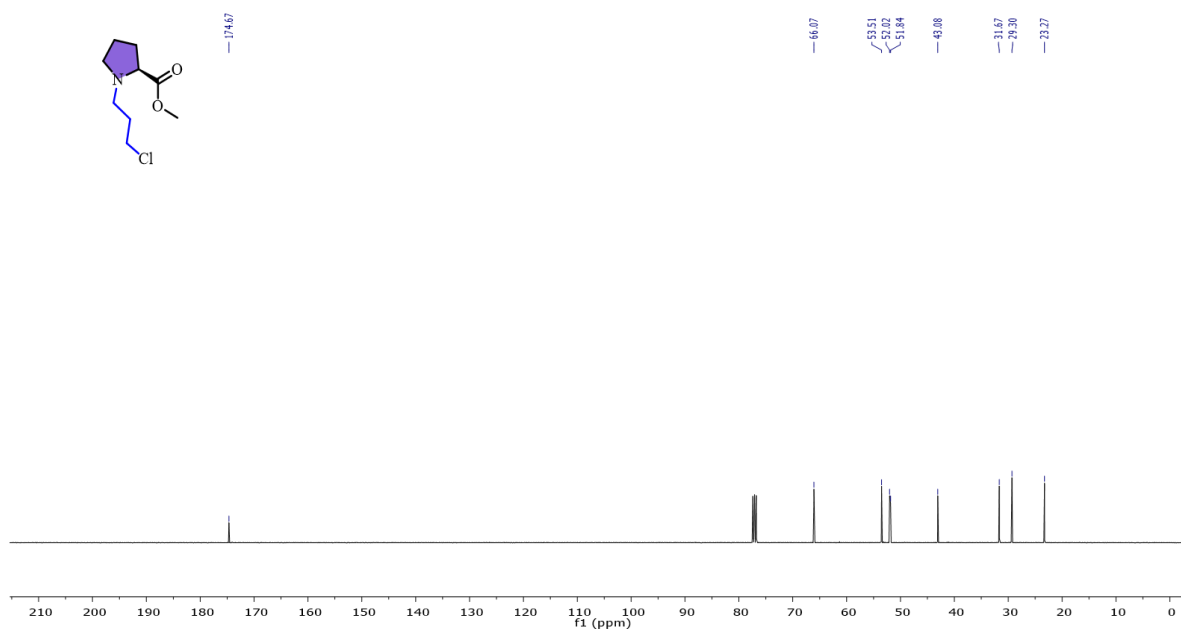


Fig. S11 ^{13}C NMR spectrum of (L)-5.

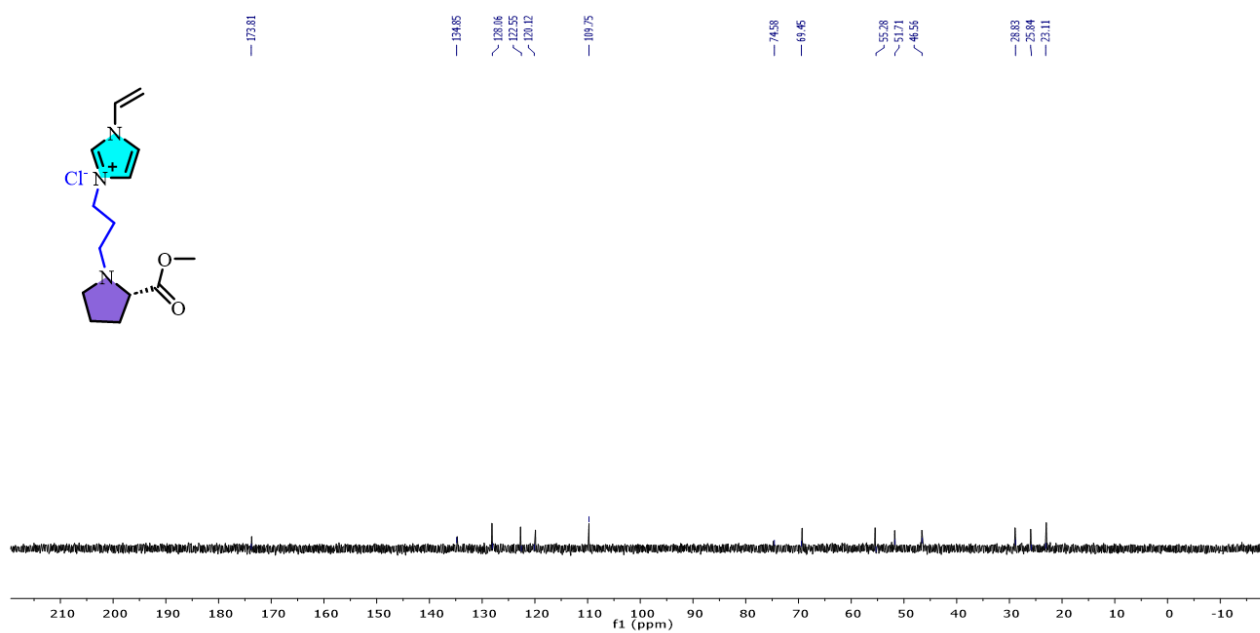


Fig. S12 ^{13}C NMR spectrum of mono-(L)-6-Cl.

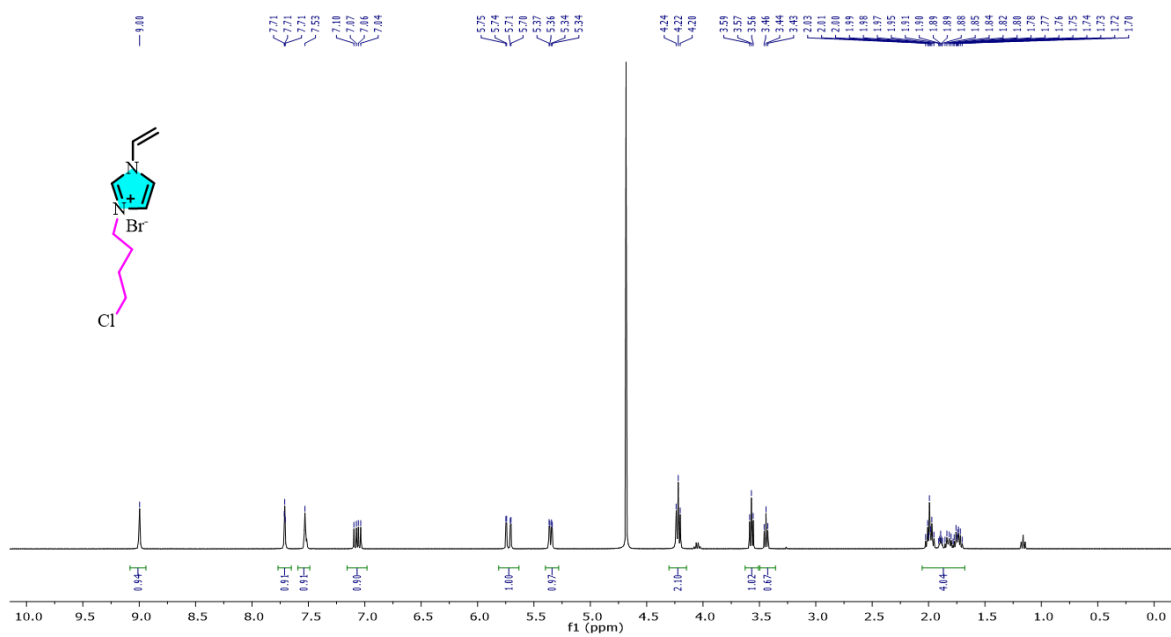


Fig. S13 ^1H NMR spectrum of (L)-7.

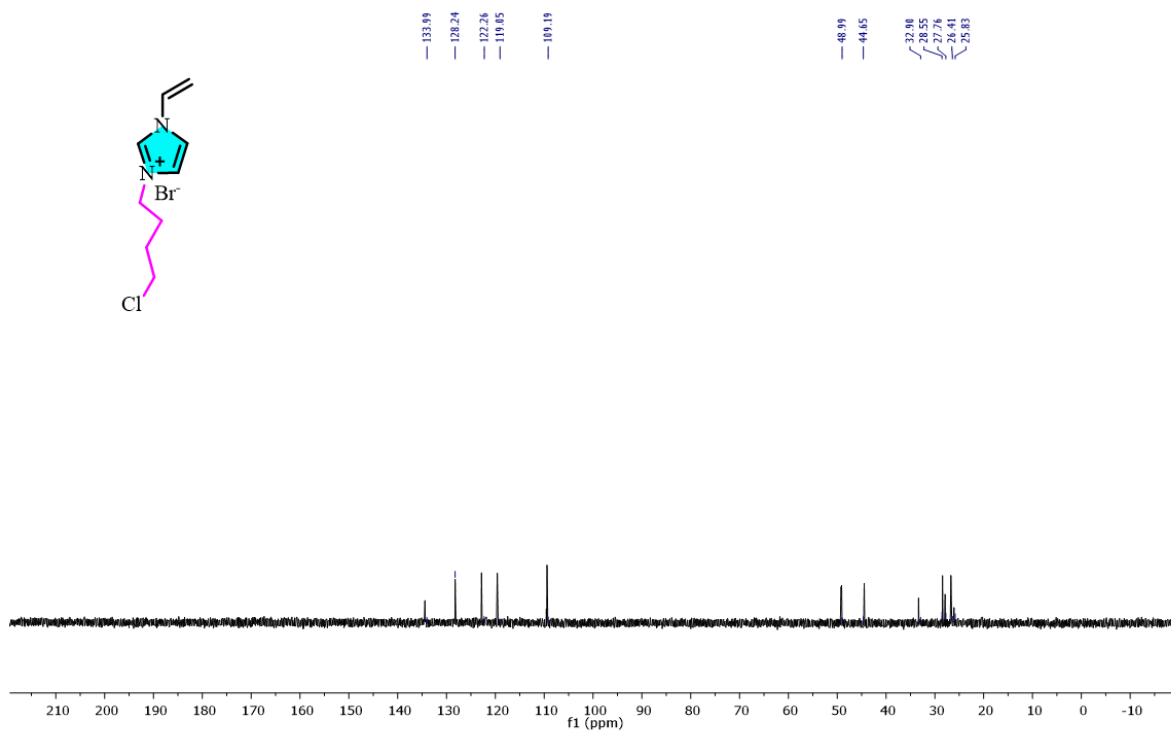


Fig. S14 ^{13}C NMR spectrum of (L)-7.

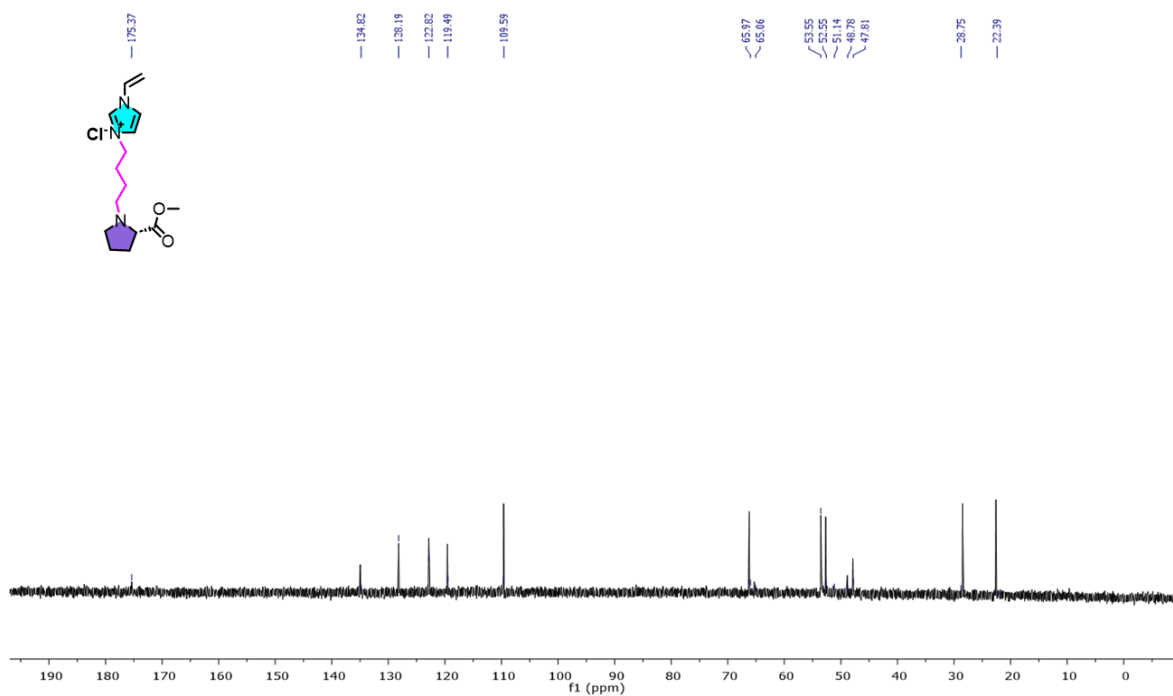


Fig. S15 ^{13}C NMR spectrum of **mono-(L)-7-Cl**.

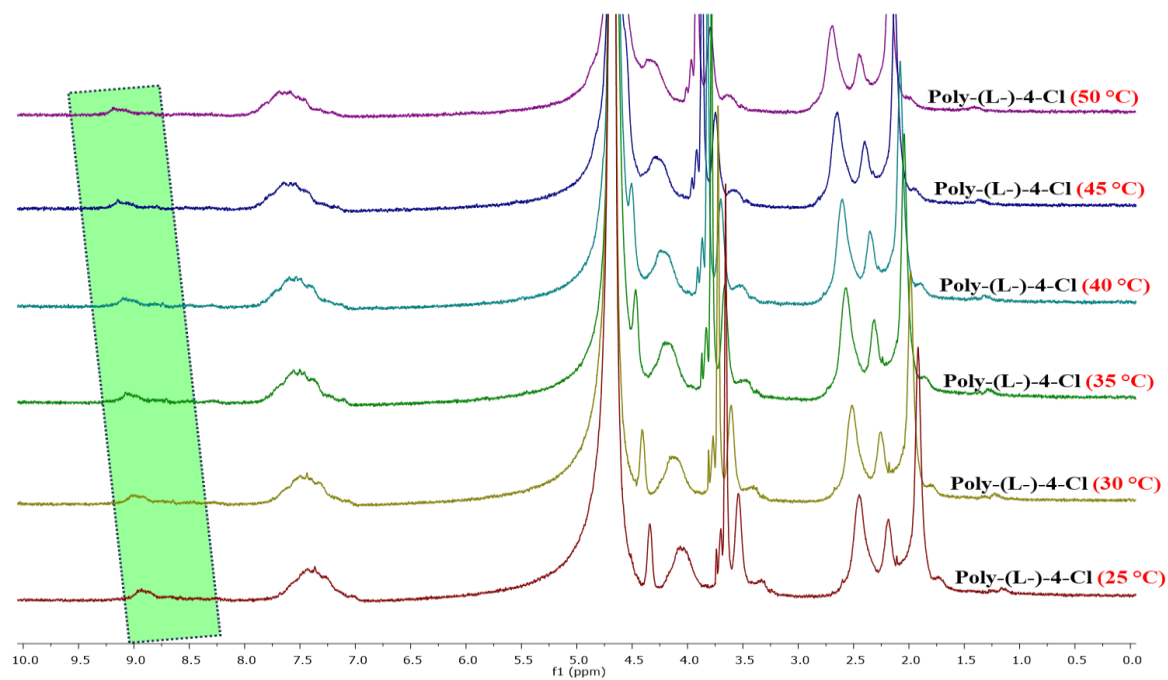
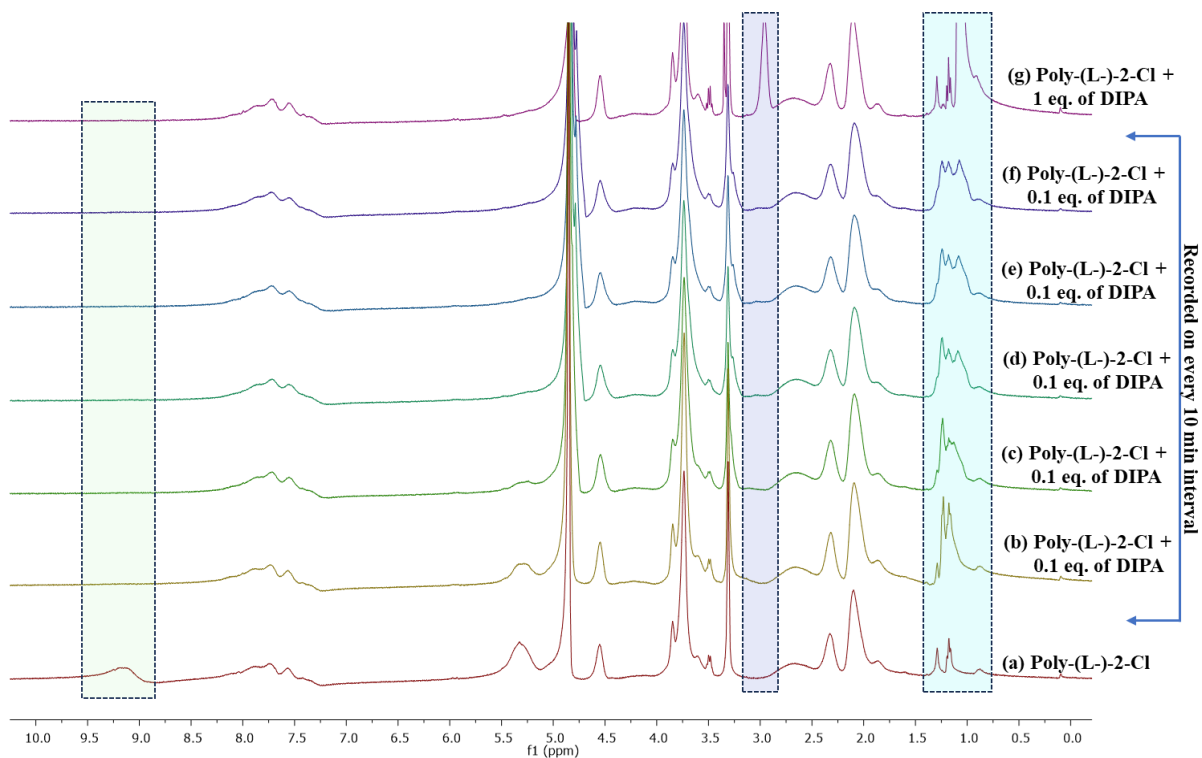
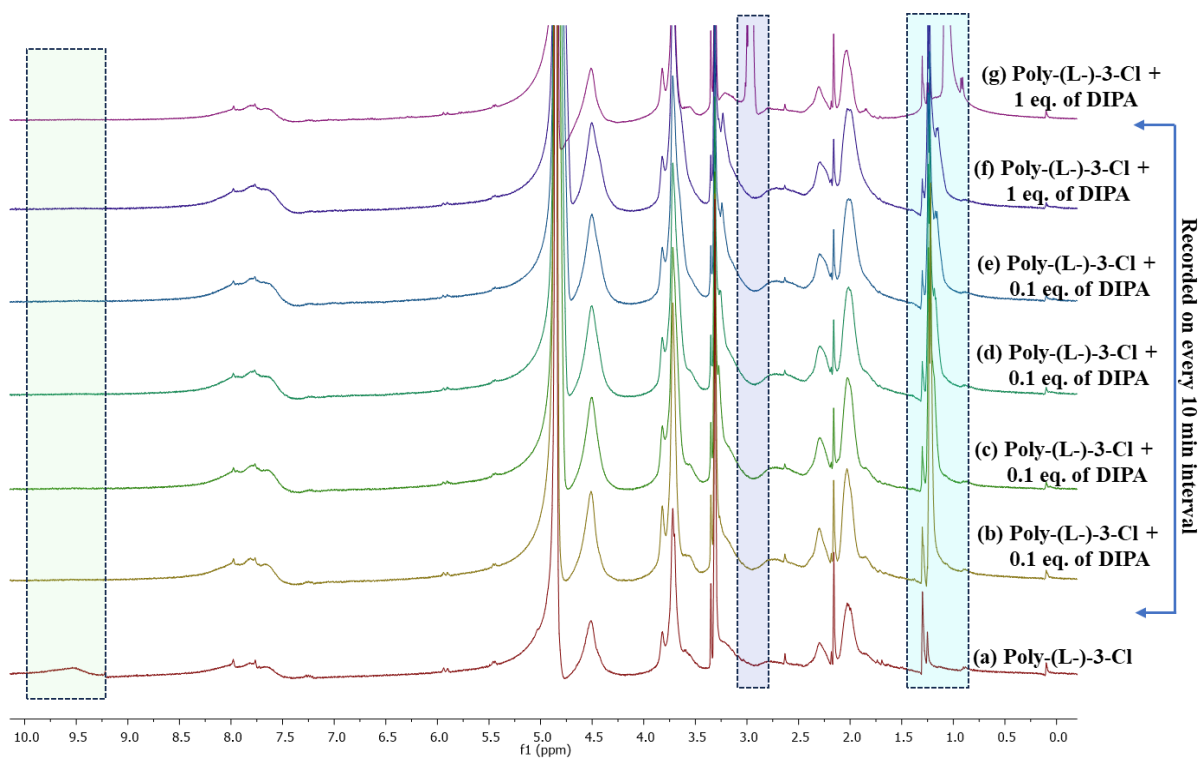


Fig. S16 ^1H (in D_2O) NMR of **poly-(L)-4-Cl** at different temperatures.

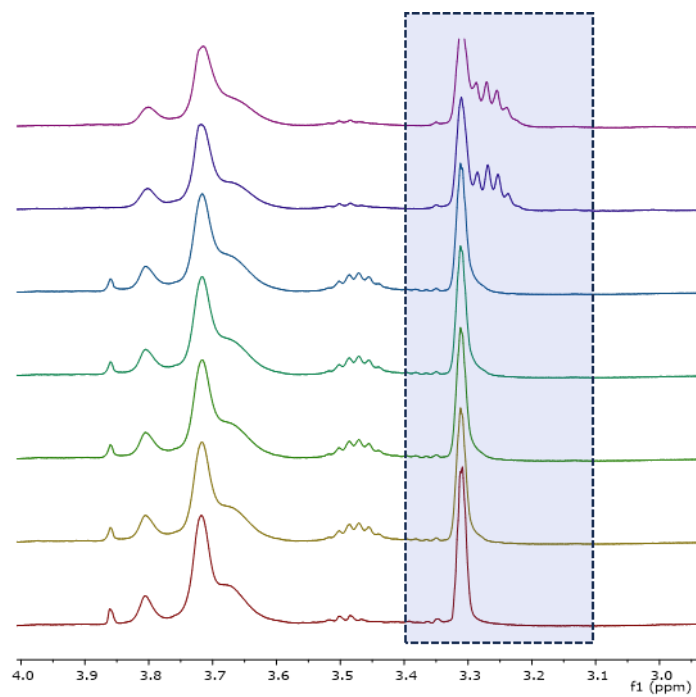
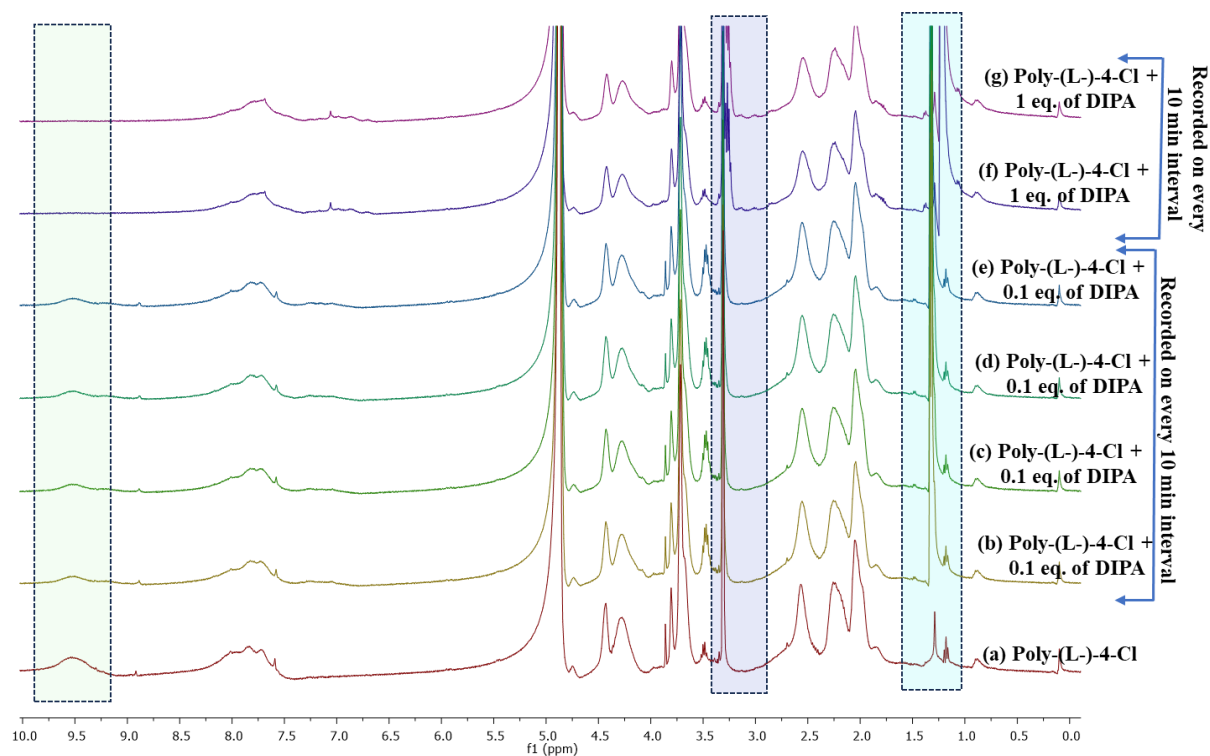
A)



B)



C)

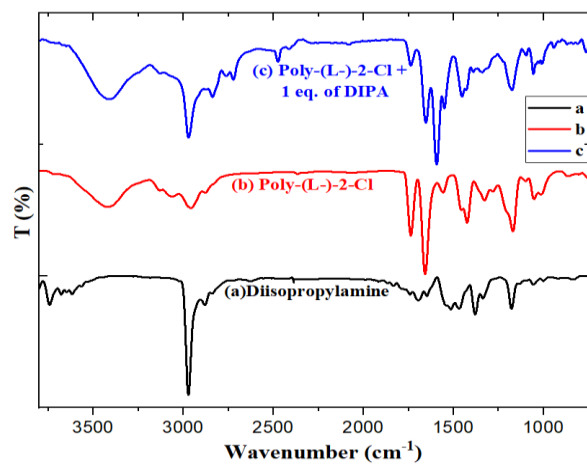


(Expanded region i.e. 3 – 4 ppm for **poly-(L)-4-Cl**)

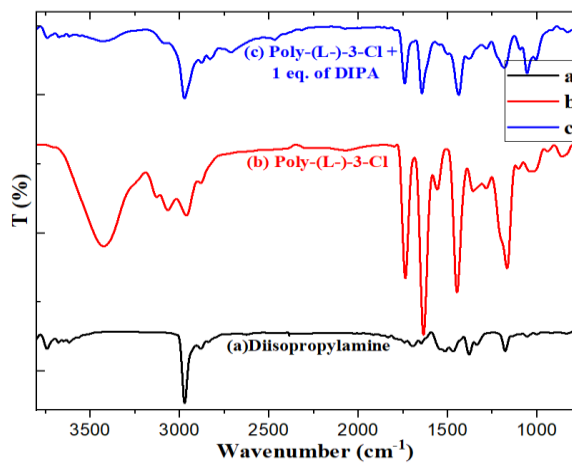
Fig. S17 ¹H (in MeOD) NMR of A) **poly-(L)-2-Cl** B) **poly-(L)-3-Cl** and C) **poly-(L)-4-Cl** in presence of 0.1 and 1 equivalent of diisopropylamine at different time interval.

FT-IR spectroscopy of chiral monomers and their corresponding chiral polymers in presence of diisopropylamine: * appearing due to some instrumental error.

A)



B)



C)

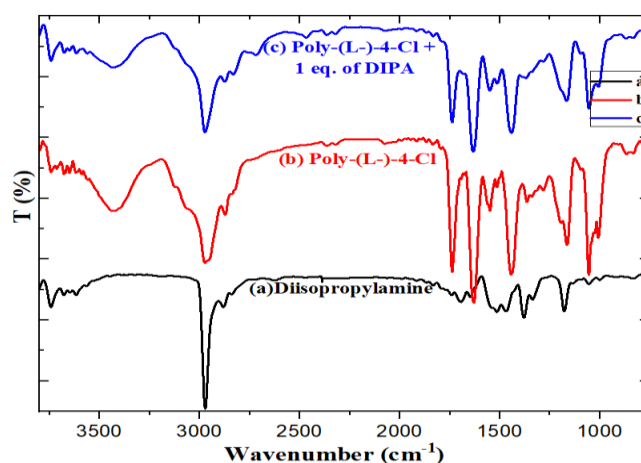


Fig. S18 FT-IR overlay of A) **poly-(L)-2-Cl**, B) **poly-(L)-3-Cl** and C) **poly-(L)-4-Cl** in presence of diisopropylamine.

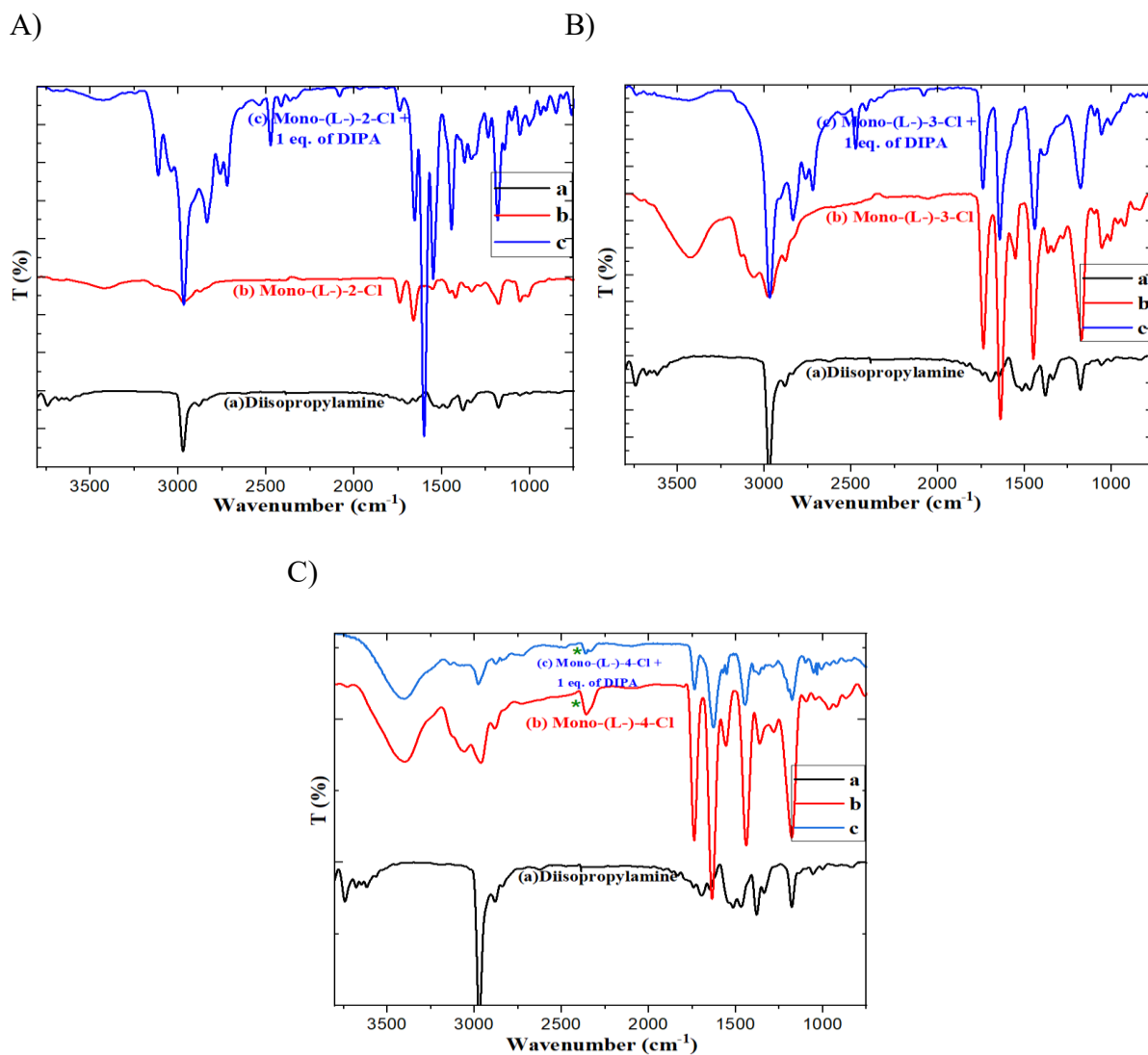
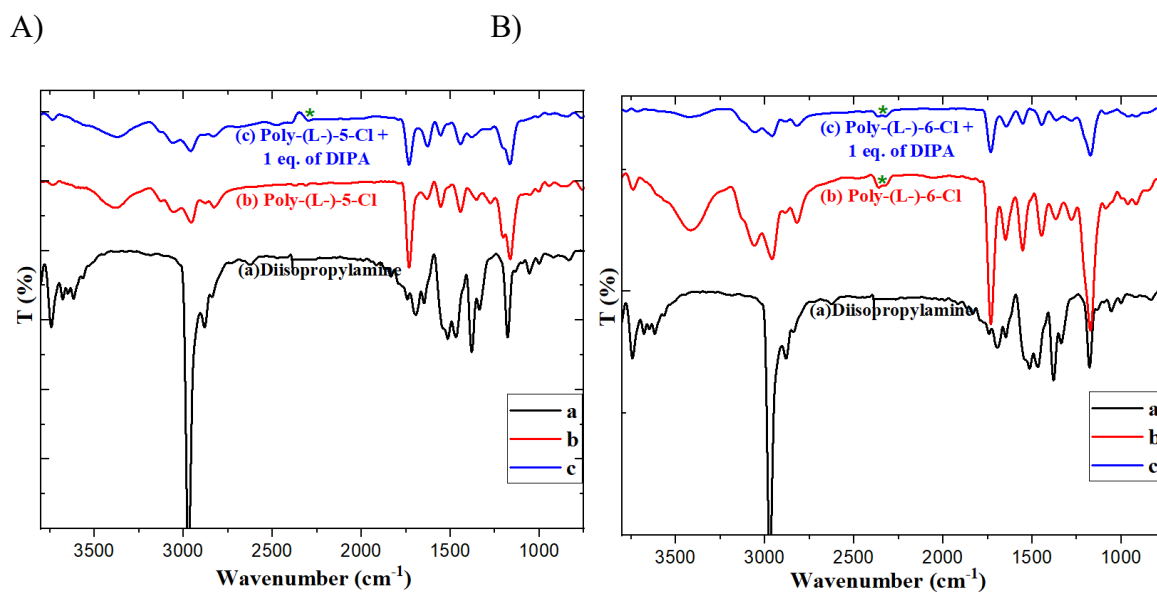


Fig. S19 FT-IR overlay of A) **mono-(L)-2-Cl**, B) **mono-(L)-3-Cl** and C) **mono-(L)-4-Cl** in presence of diisopropylamine.



C)

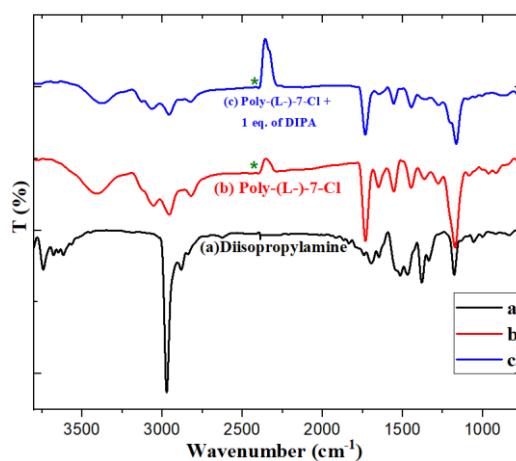
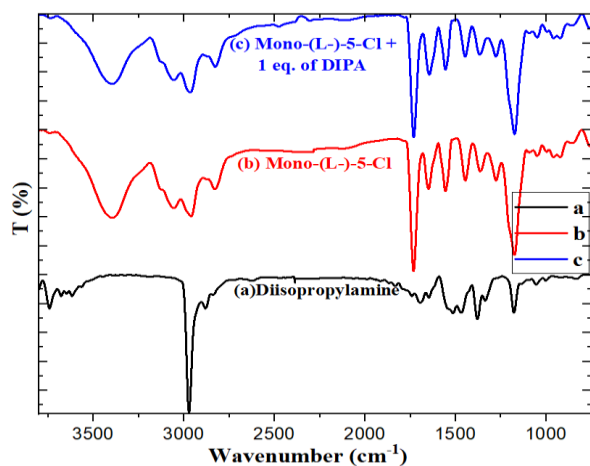
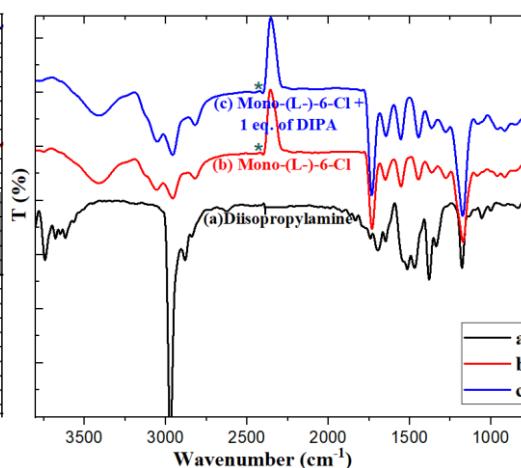


Fig. S20 FT-IR overlay of A) **poly-(L-)-5-Cl**, B) **poly-(L-)-6-Cl** and C) **poly-(L-)-7-Cl** in presence of diisopropylamine.

A)



B)



C)

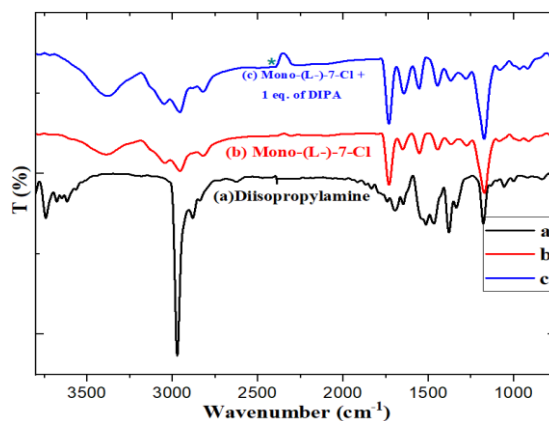


Fig. S21 FT-IR overlay of A) **mono-(L-)-5-Cl**, B) **mono-(L-)-6-Cl** and C) **poly-(L-)-7-Cl** in presence of diisopropylamine.

CD absorption spectra of chiral monomes:

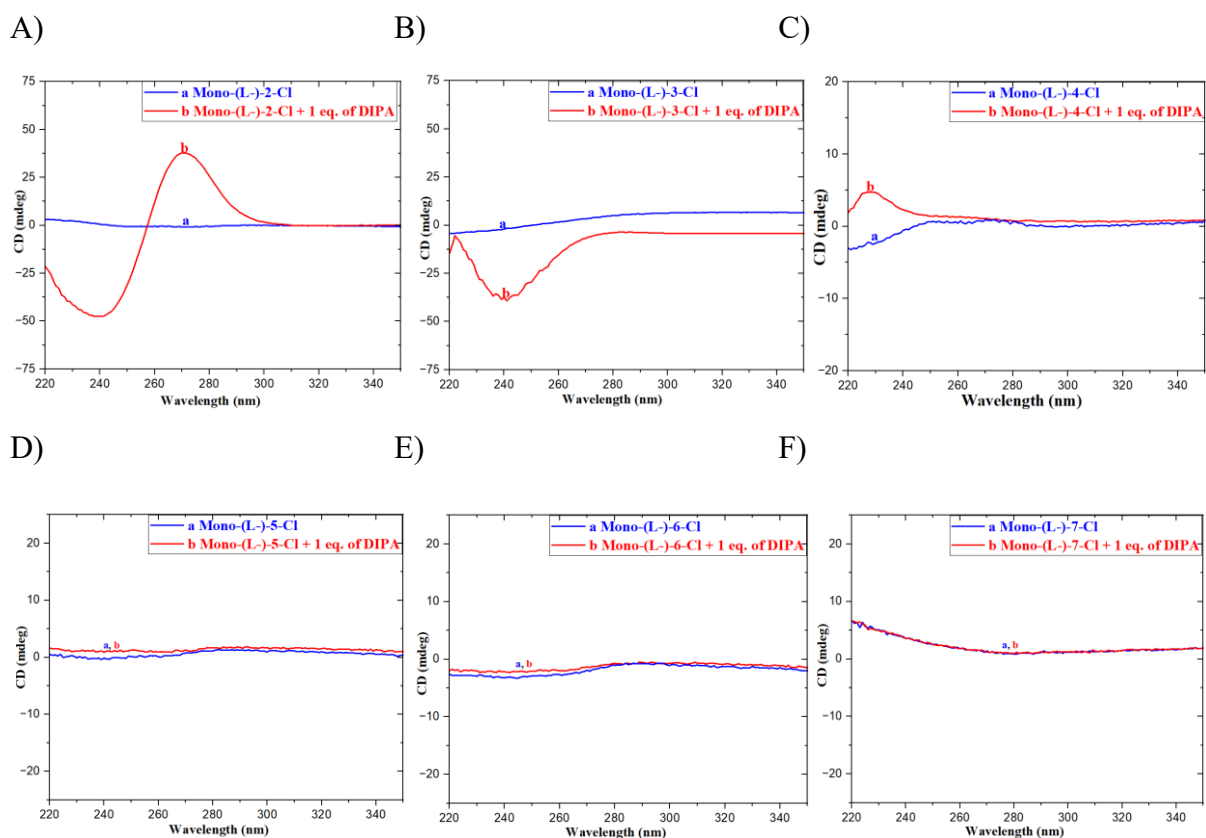


Fig. S22 CD absorption spectra of chiral monomers before and after addition of diisopropylamine.

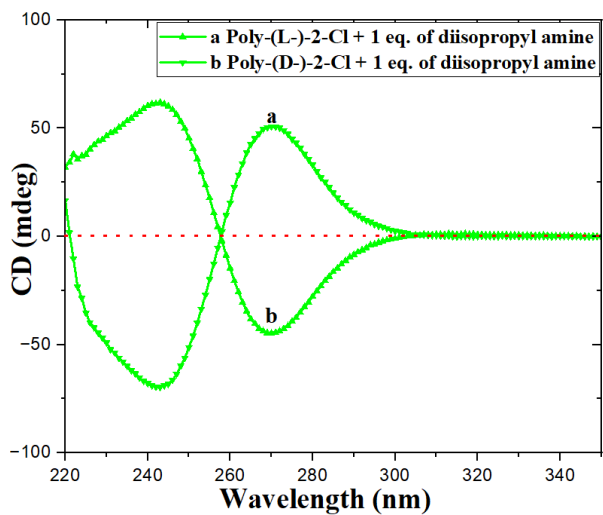


Fig. S23 CD absorption spectra of **poly-(L)-2-Cl** and **poly-(D)-2-Cl** in presence of diisopropylamine (solvent = methanol, Temp = 25 °C).