

Supplementary Materials

General Remarks

¹H-NMR and ¹³C-NMR data were recorded in CDCl₃. The chemical shifts are reported as delta (δ) units in parts per million (ppm) relative to the solvent residual peak as the internal reference. Coupling constants (J) for all spectra are reported in Hertz (Hz). Reactions were monitored by thin-layer chromatography on 0.25 mm E. Merck silica gel 60 plates (F254) using UV light, vanillin and *p*-anisaldehyde as visualizing agents. Potassium allyltrifluoroborate [S1] and potassium (*E*)-crotyltrifluoroborate [S2] were prepared according to the literature procedures.

References

- S1. Molander, G.A.; Figueroa, R.A. *cis*-Dihydroxylation of unsaturated potassium alkyl- and aryltrifluoroborates. *Org. Lett.* 2006, 8, 75–78.
- S2. Batey, R.A.; Thadani, A.V.; Smil, D.V. Potassium allyl- and crotyltrifluoroborates: Stable and efficient agents for allylation and crotylation. *Tetrahedron Lett.* 1999, 40, 4289–4292.

Figure S1. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3a**.

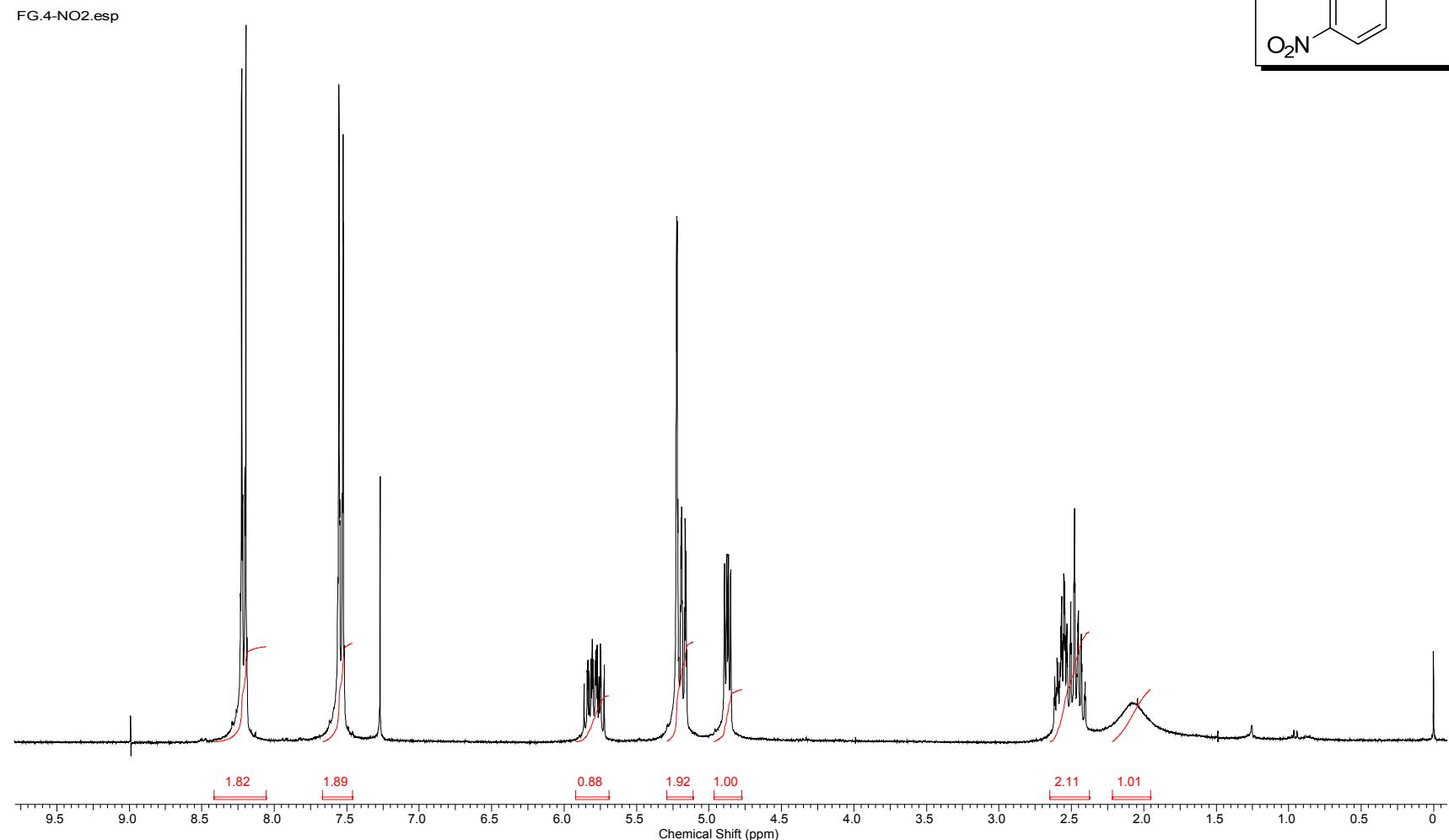


Figure S2. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3a**.

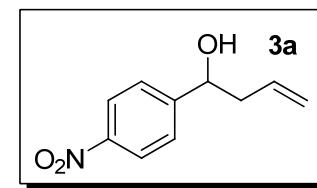
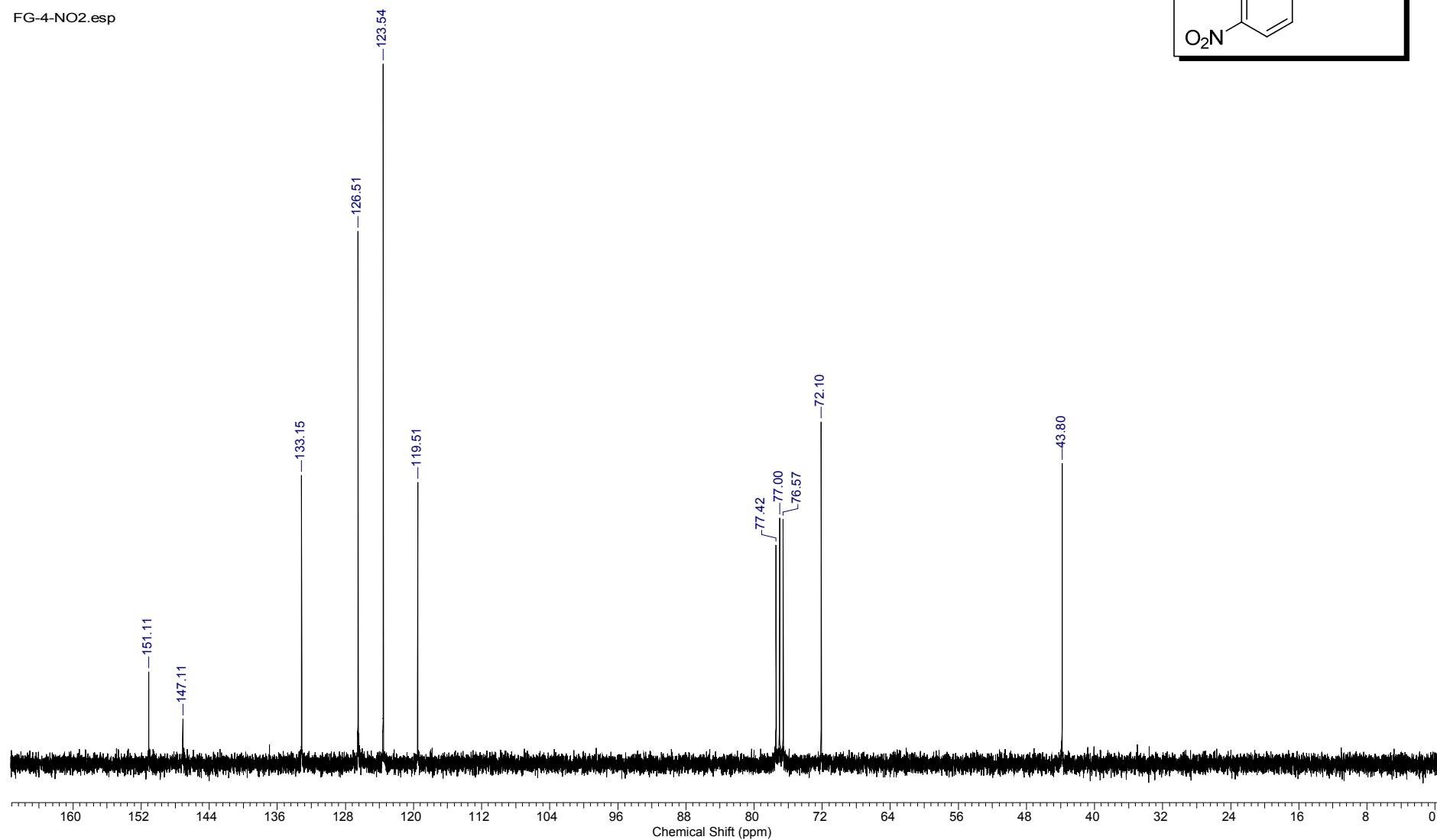
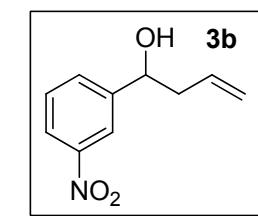
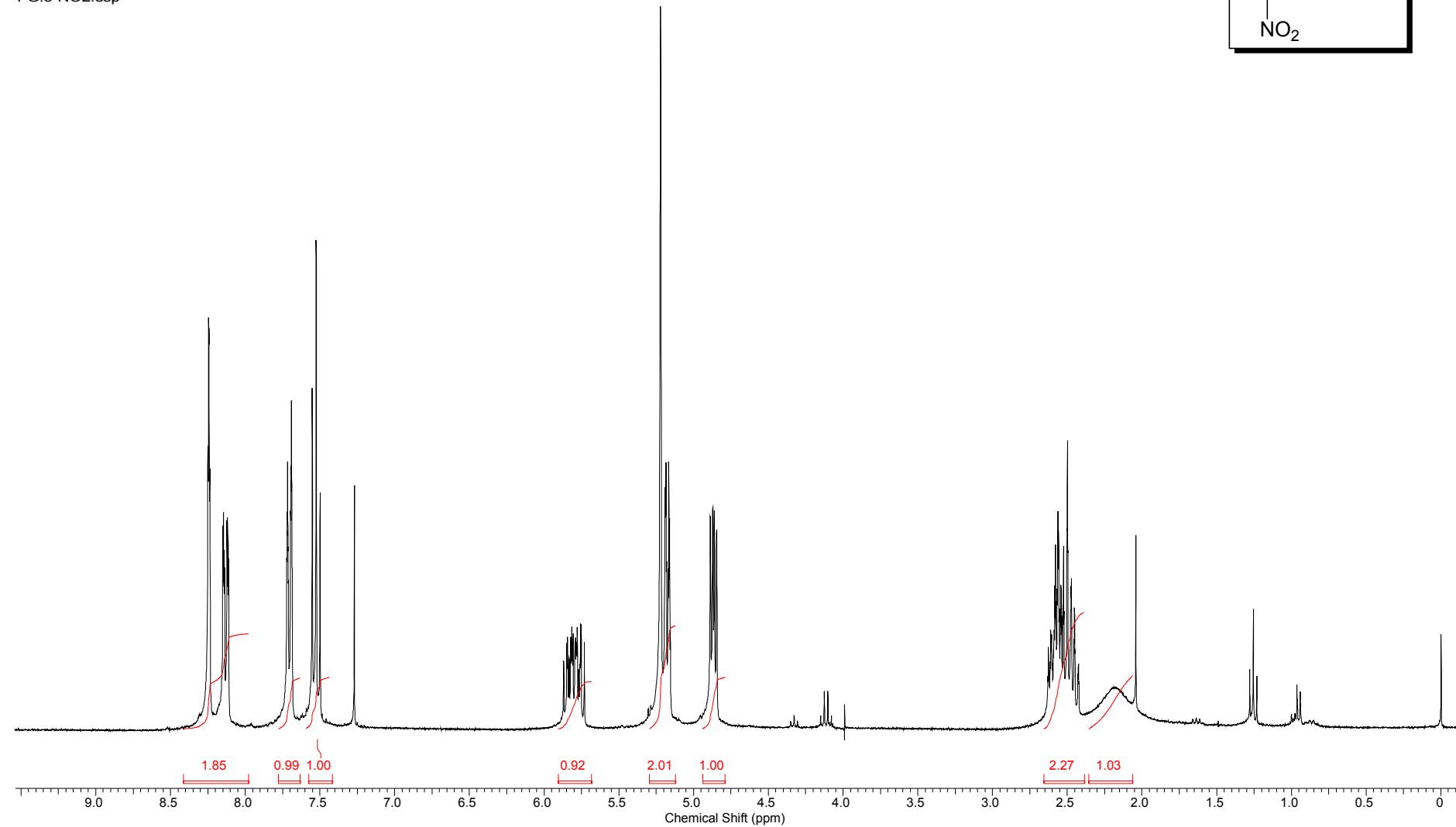
FG-4-NO₂.esp

Figure S3. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3b**.

FG.3-NO2.esp



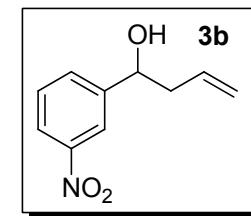
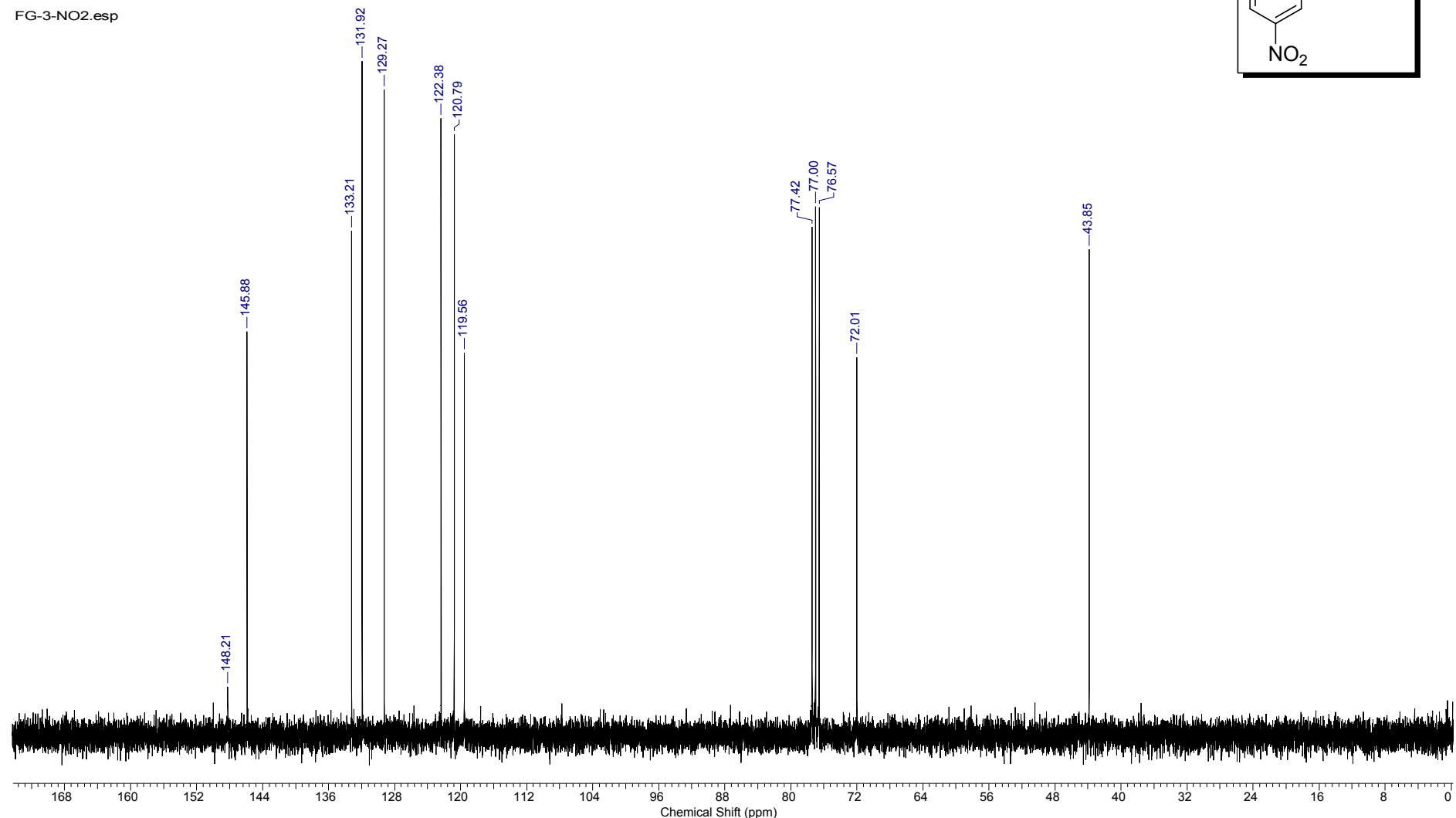
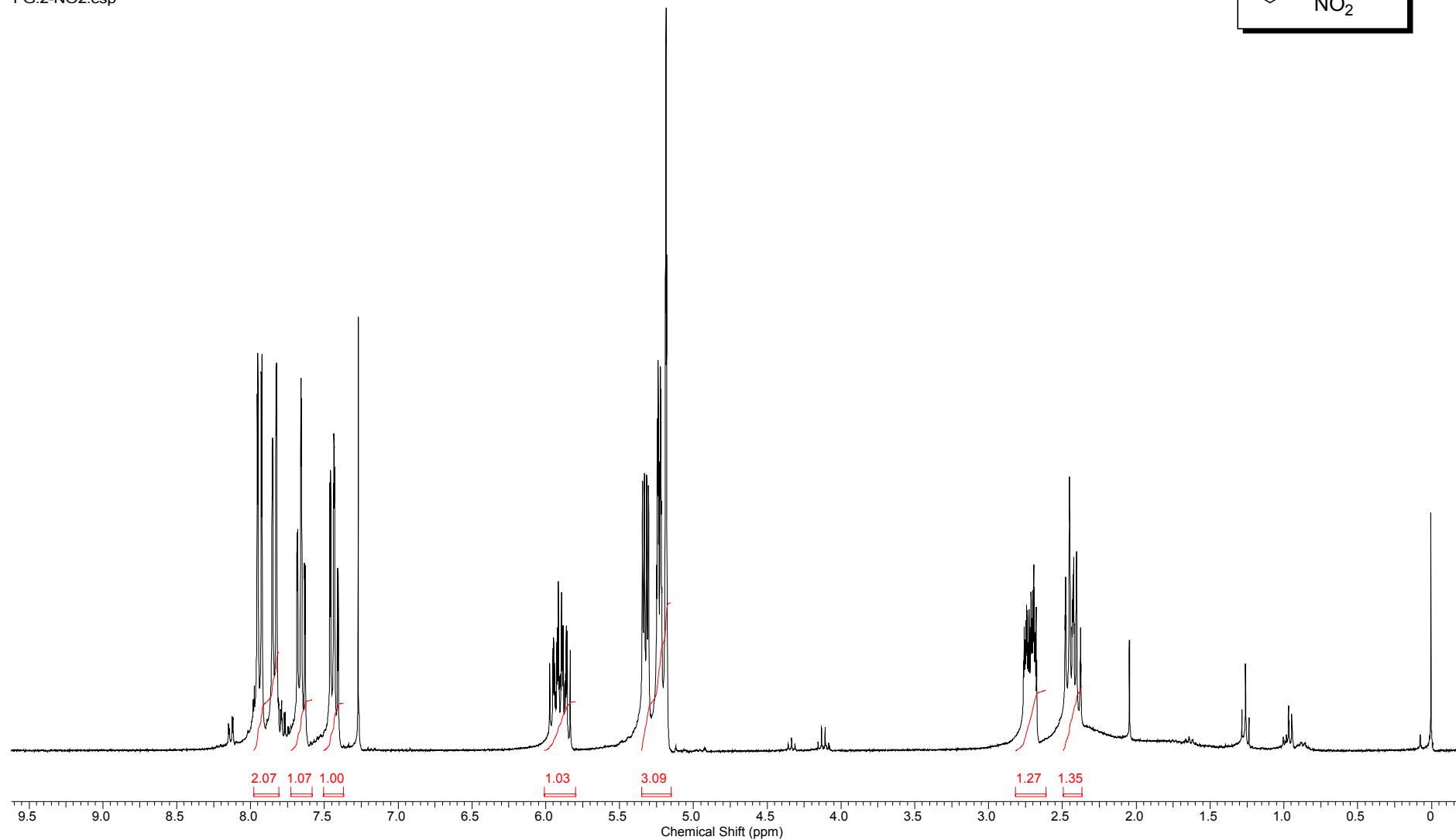
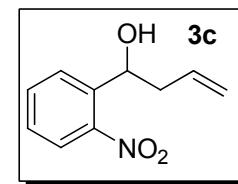
FG-3-NO₂.esp**Figure S4.** ¹³C-NMR spectrum (75 MHz, CDCl₃) of **3b**.

Figure S5. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3c**.

FG.2-NO2.esp



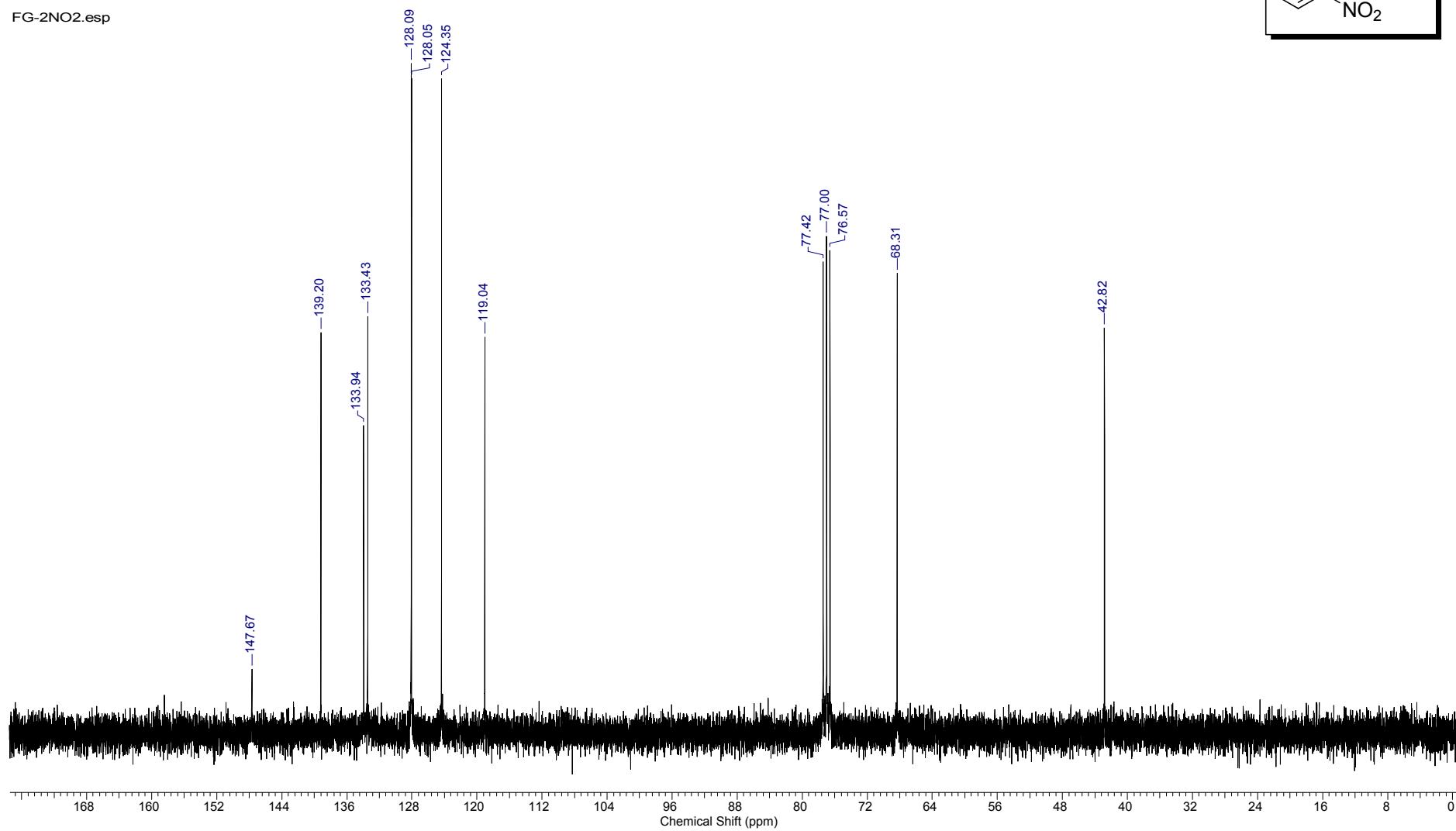
FG-2NO₂.esp**Figure S6.** ¹³C-NMR spectrum (75 MHz, CDCl₃) of **3c**.

Figure S7. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3d**.

FG.p-Fluor.esp

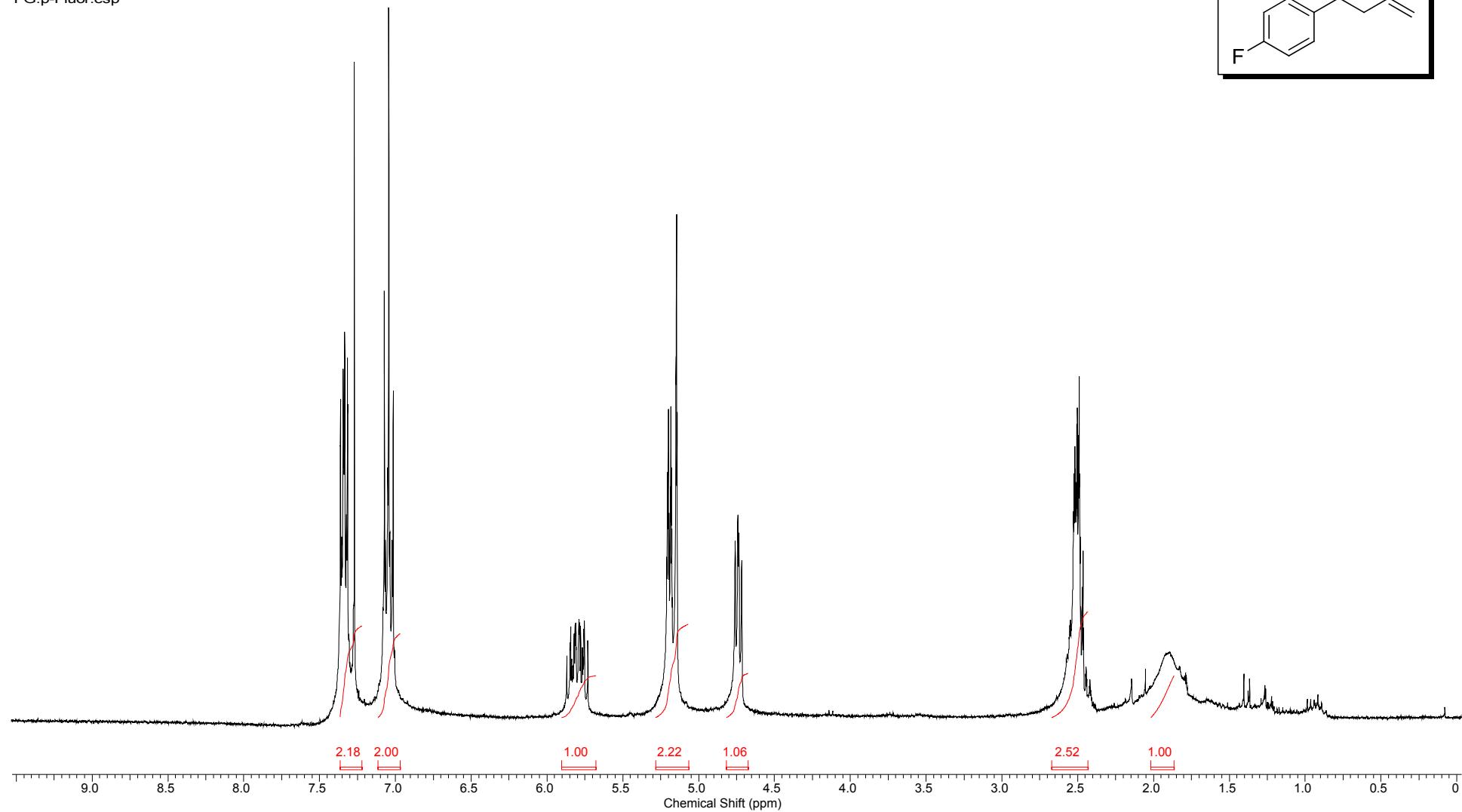
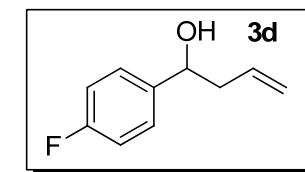


Figure S8. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3d**.

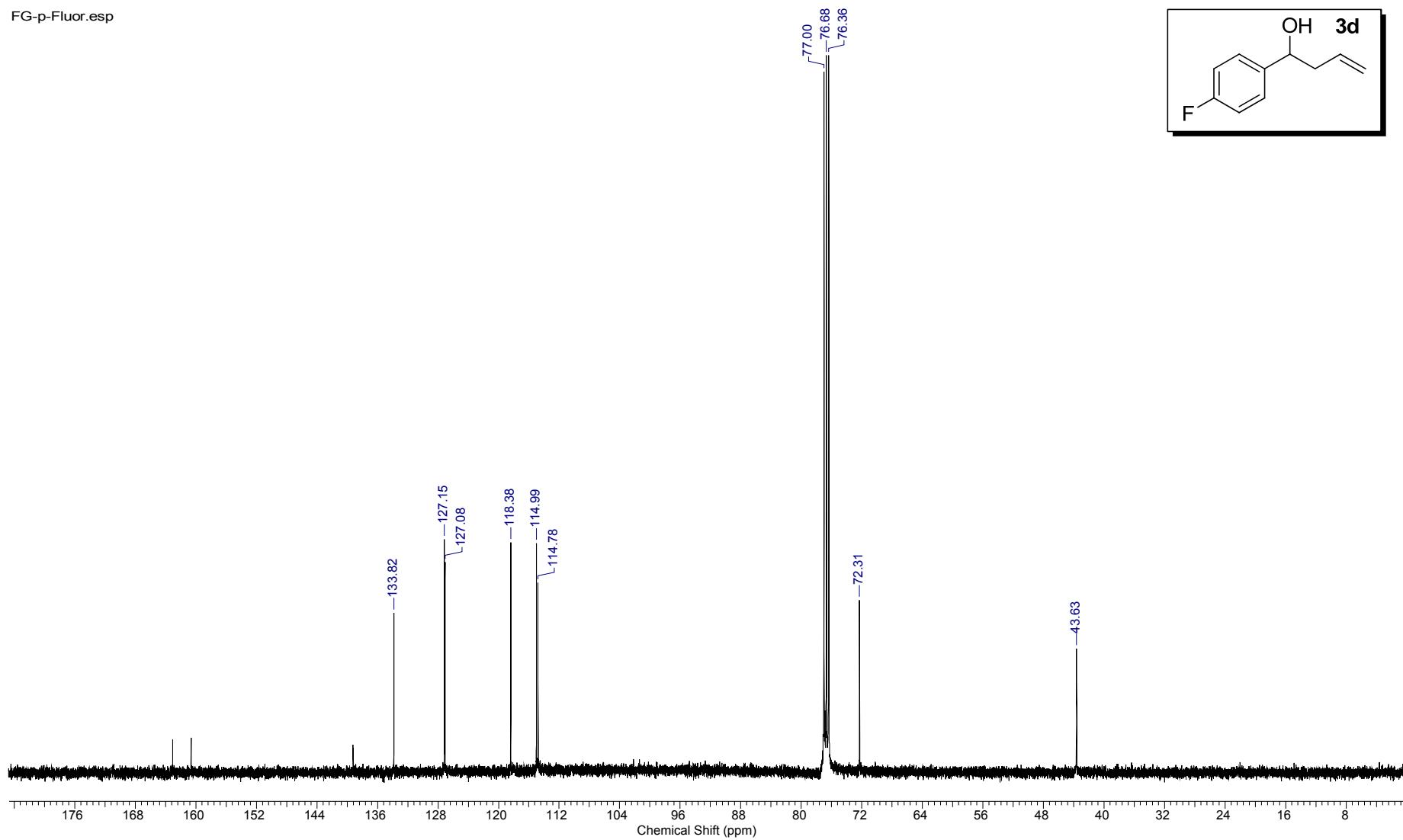


Figure S9. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3e**.

FG.p-Cl.esp

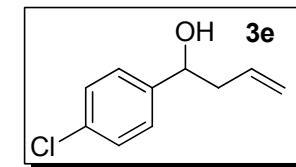
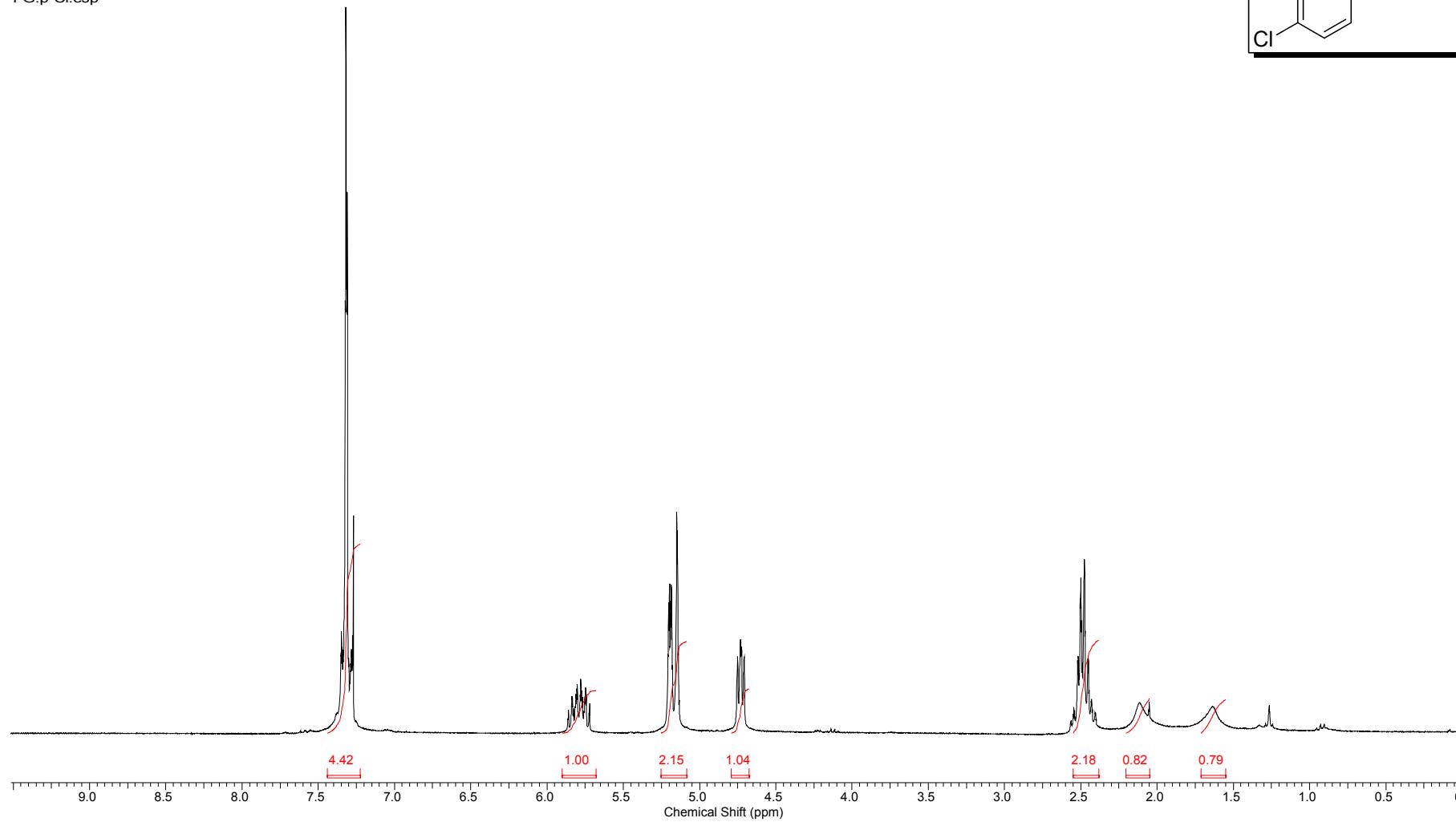


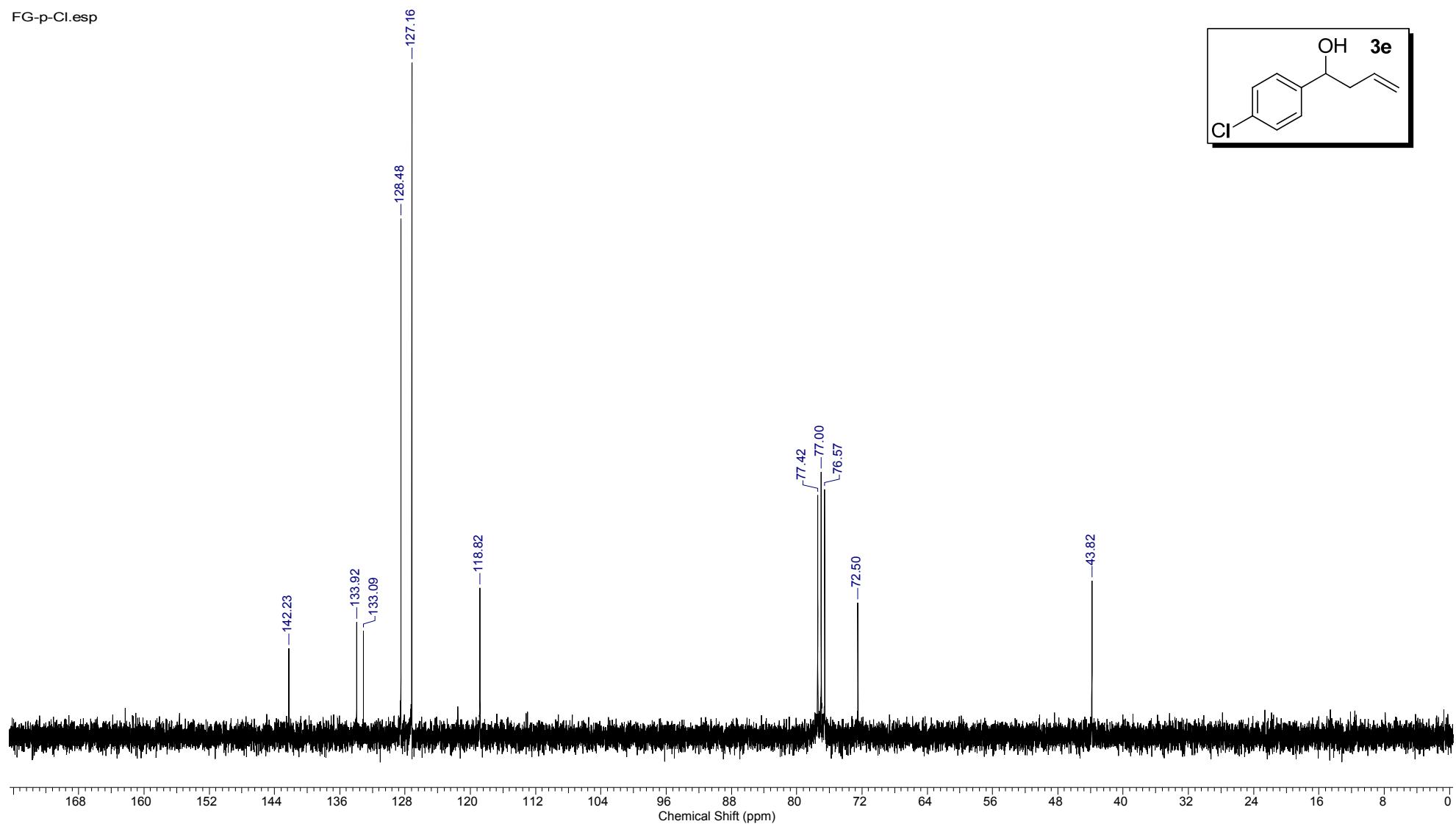
Figure S10. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3e**.

Figure S11. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3f**.

FG-p-Br.esp

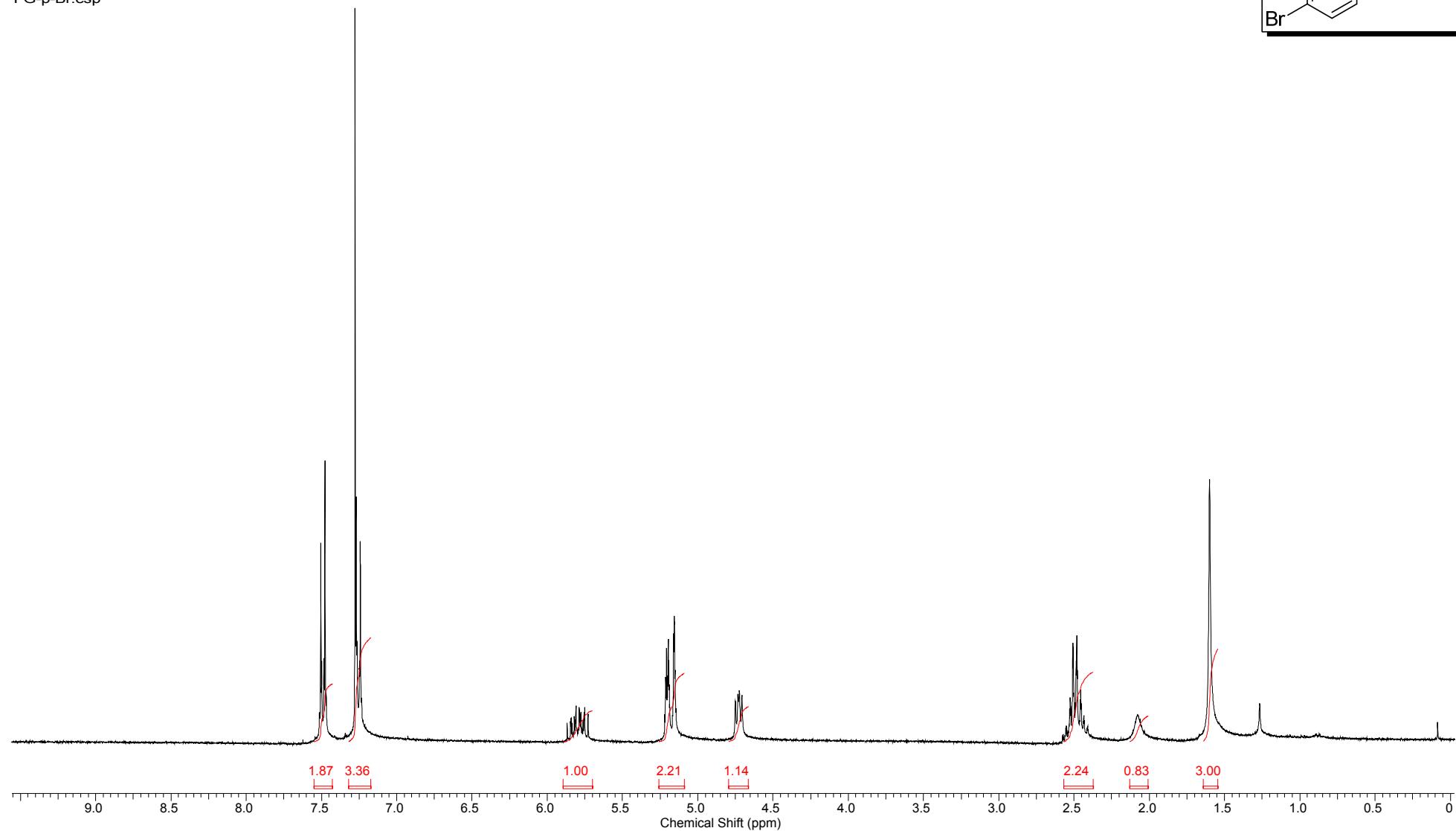
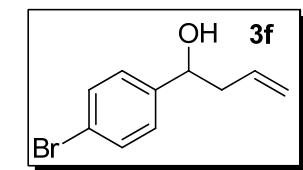


Figure S12. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of 3f.

FG.p-Br.esp

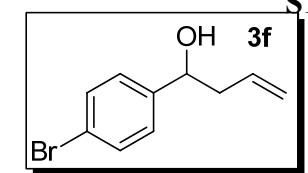
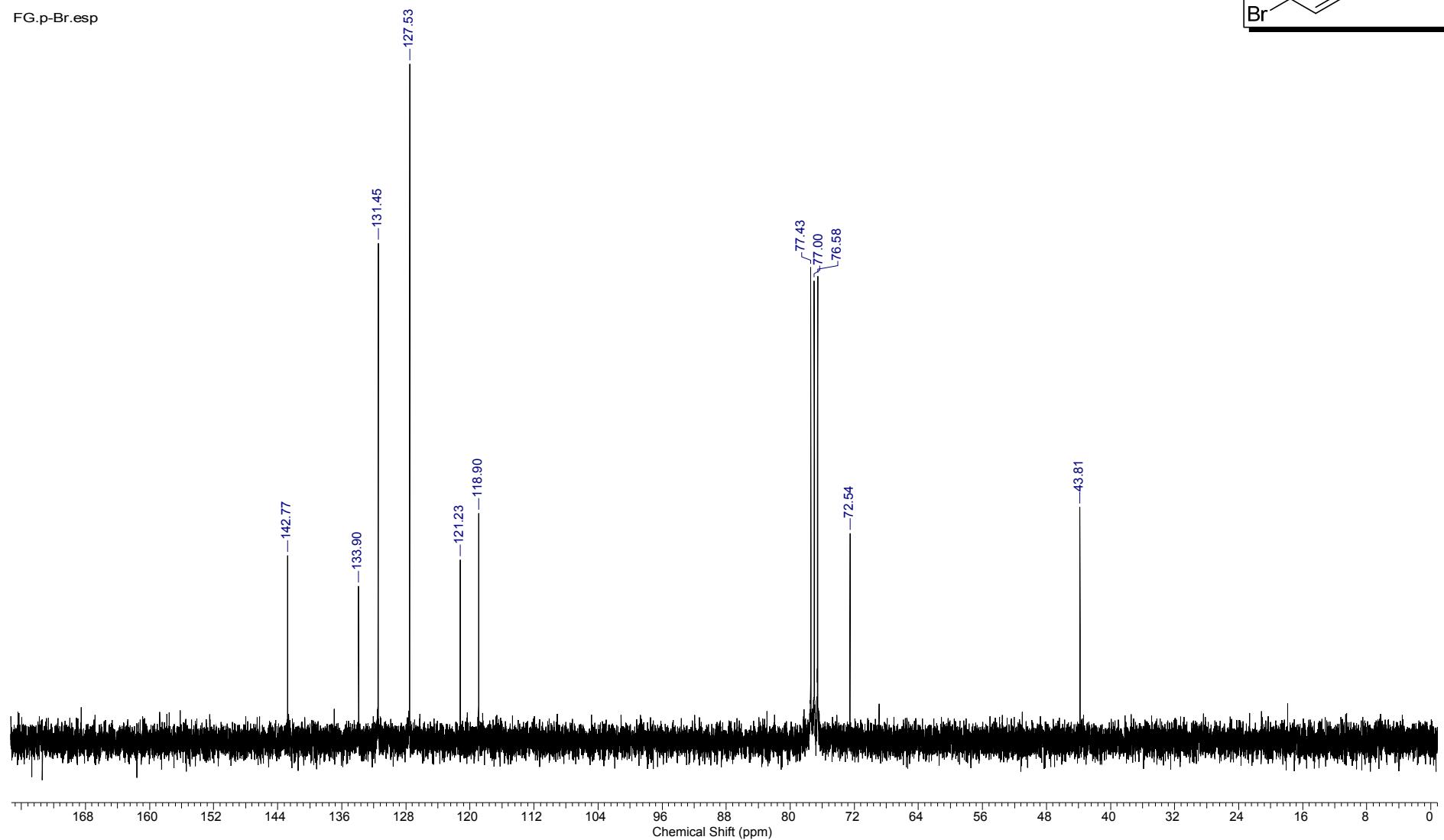
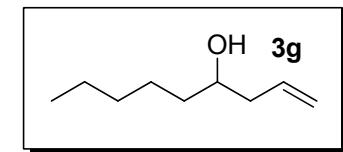


Figure S13. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3g**.



FG. Hex.esp

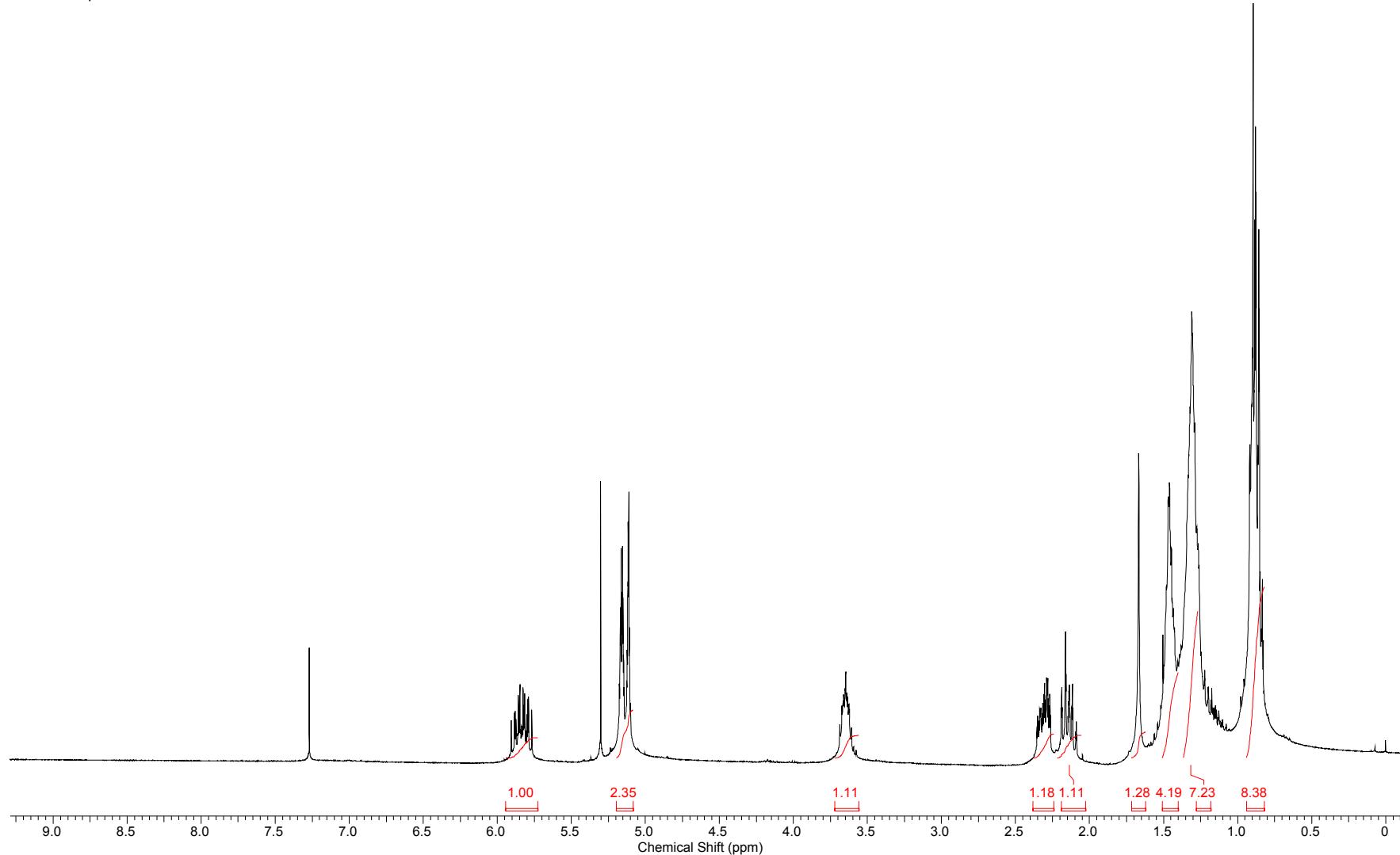


Figure S14. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3g**.

FG-Hex.esp

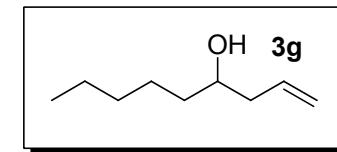
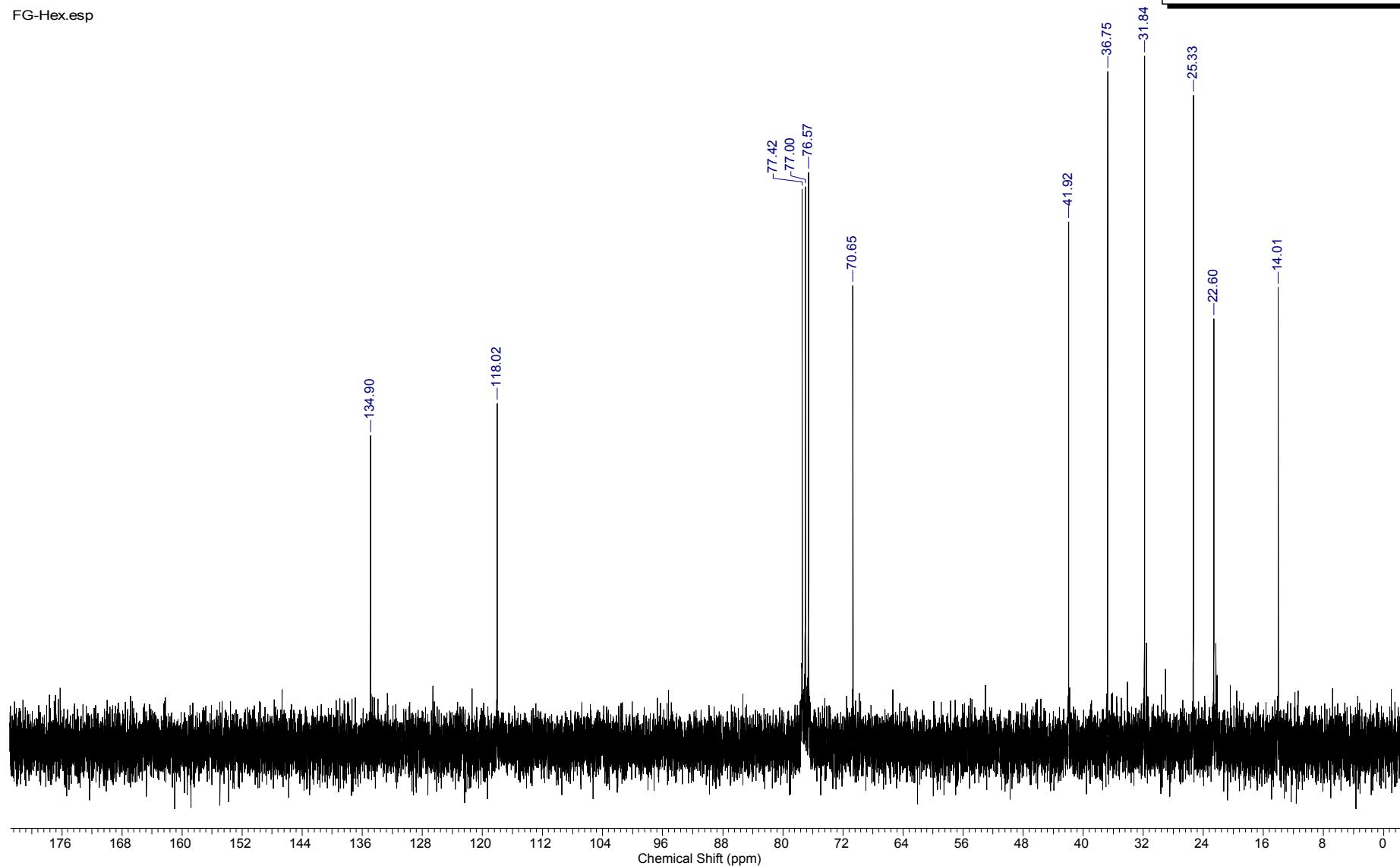


Figure S15. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3h**.

FG.Cin.esp

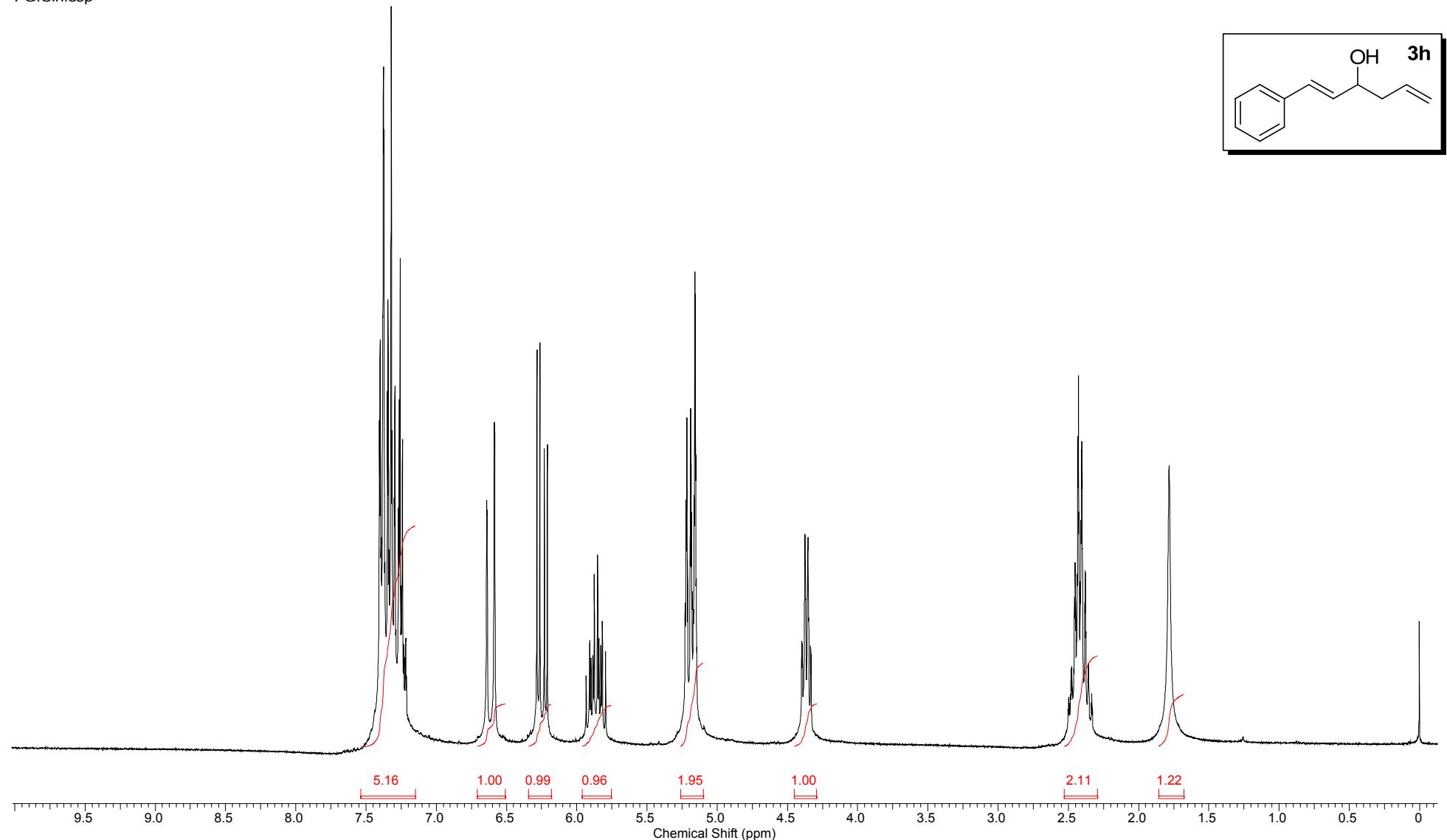


Figure S16. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3h**.

FG-Cin.esp

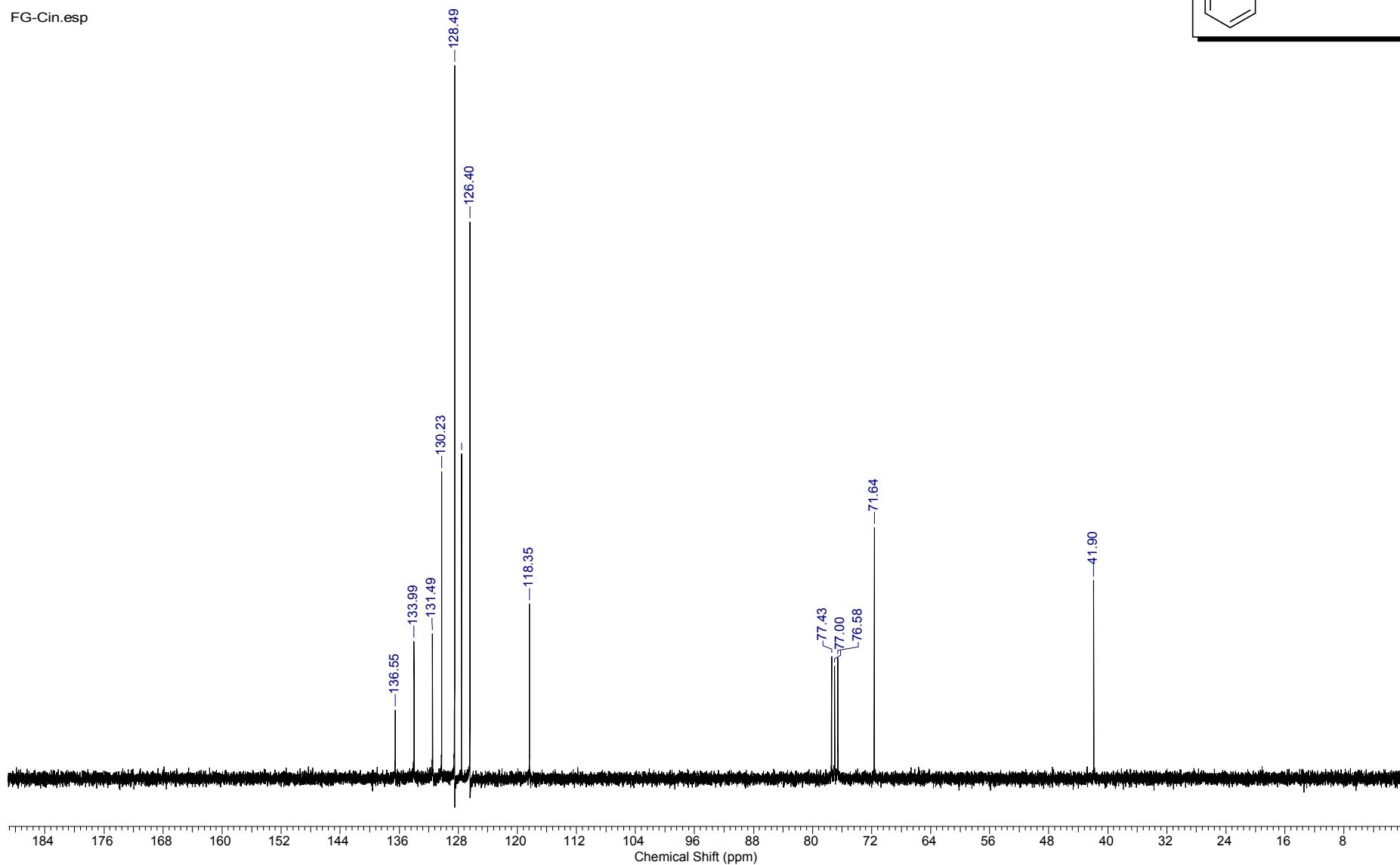
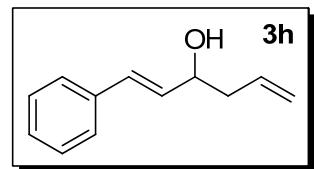
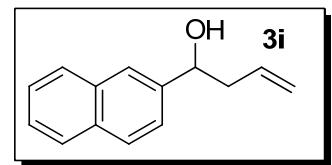
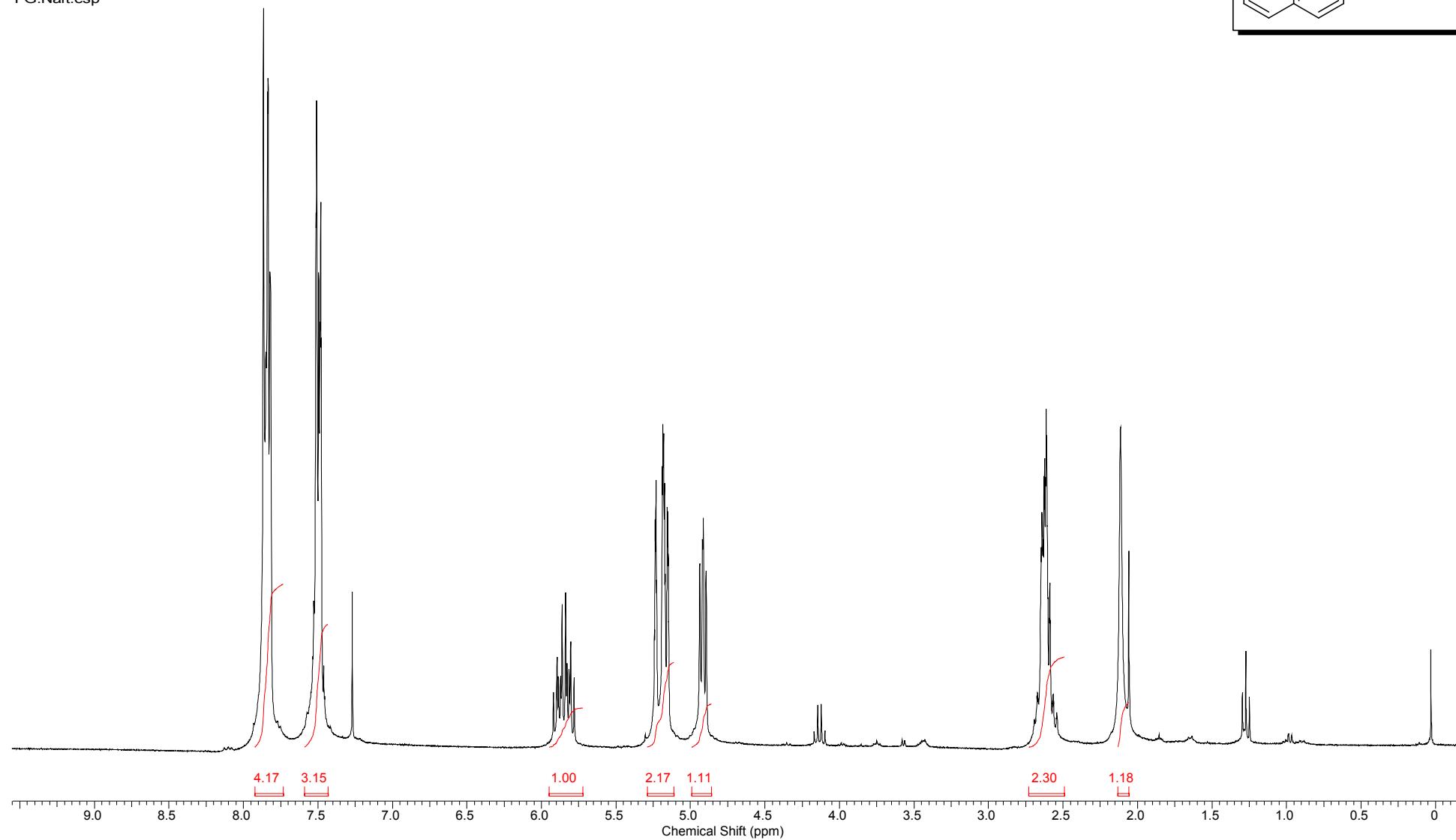


Figure S17. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3i**.

FG.Naft.esp



FG-Naft.esp

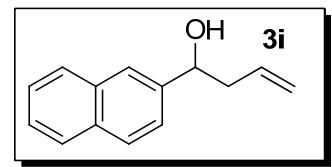
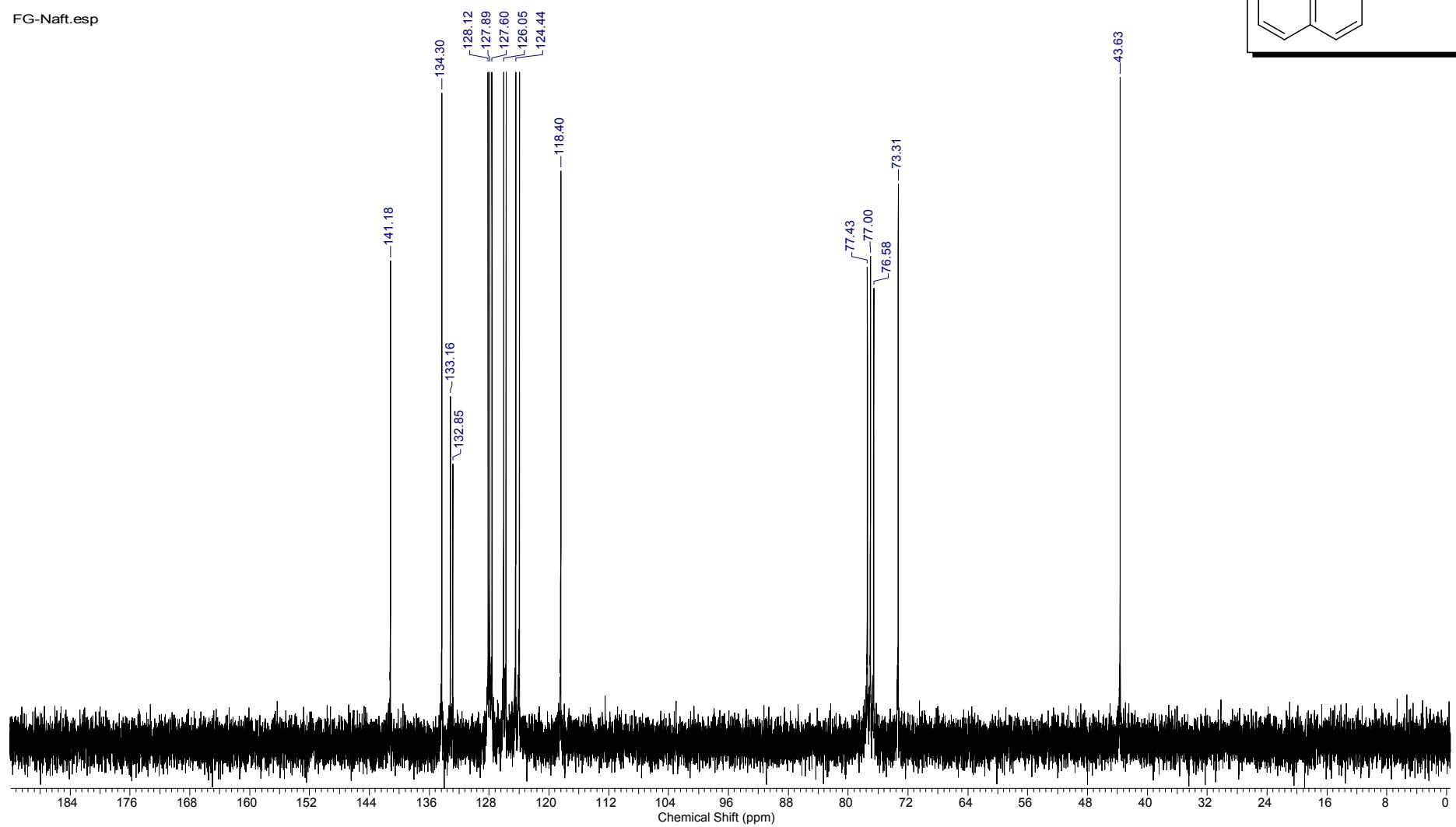


Figure S19. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3j**.

FG-BZ.esp

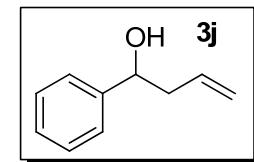
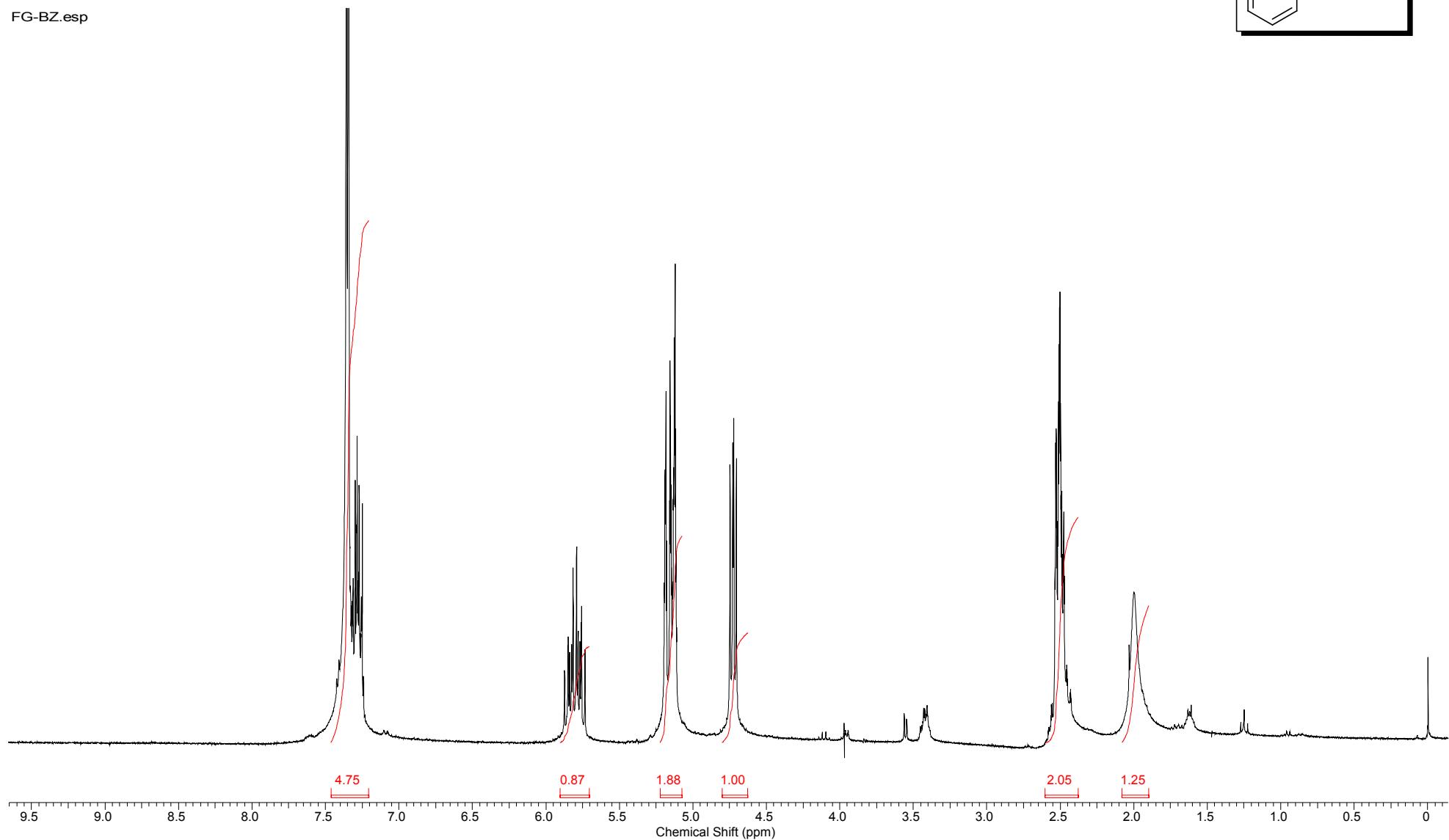
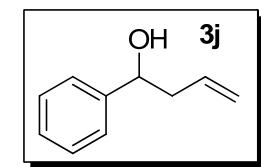


Figure S20. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of 3j.



FG.BZ.esp

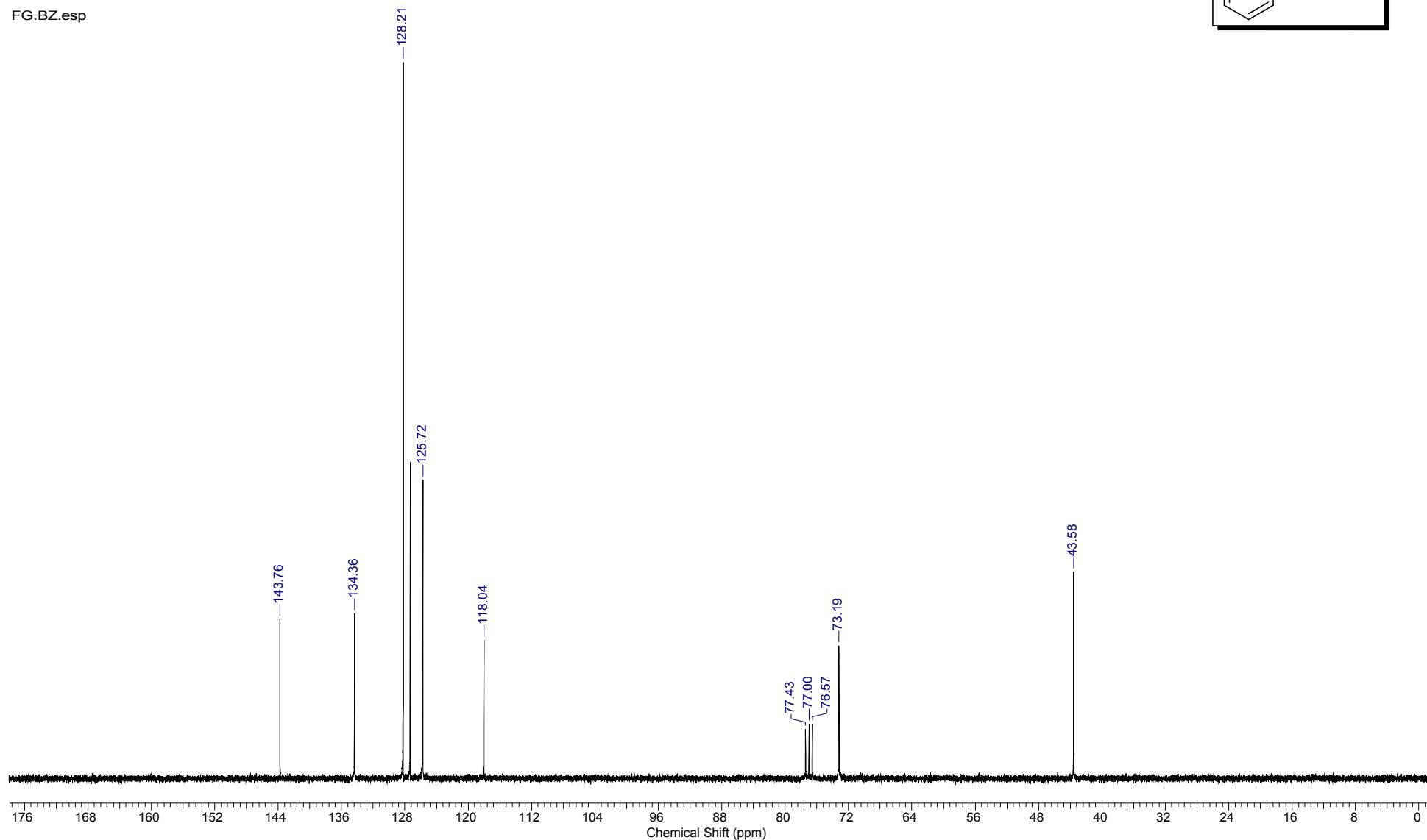


Figure S21. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3k**.

FG-p-Tol.esp

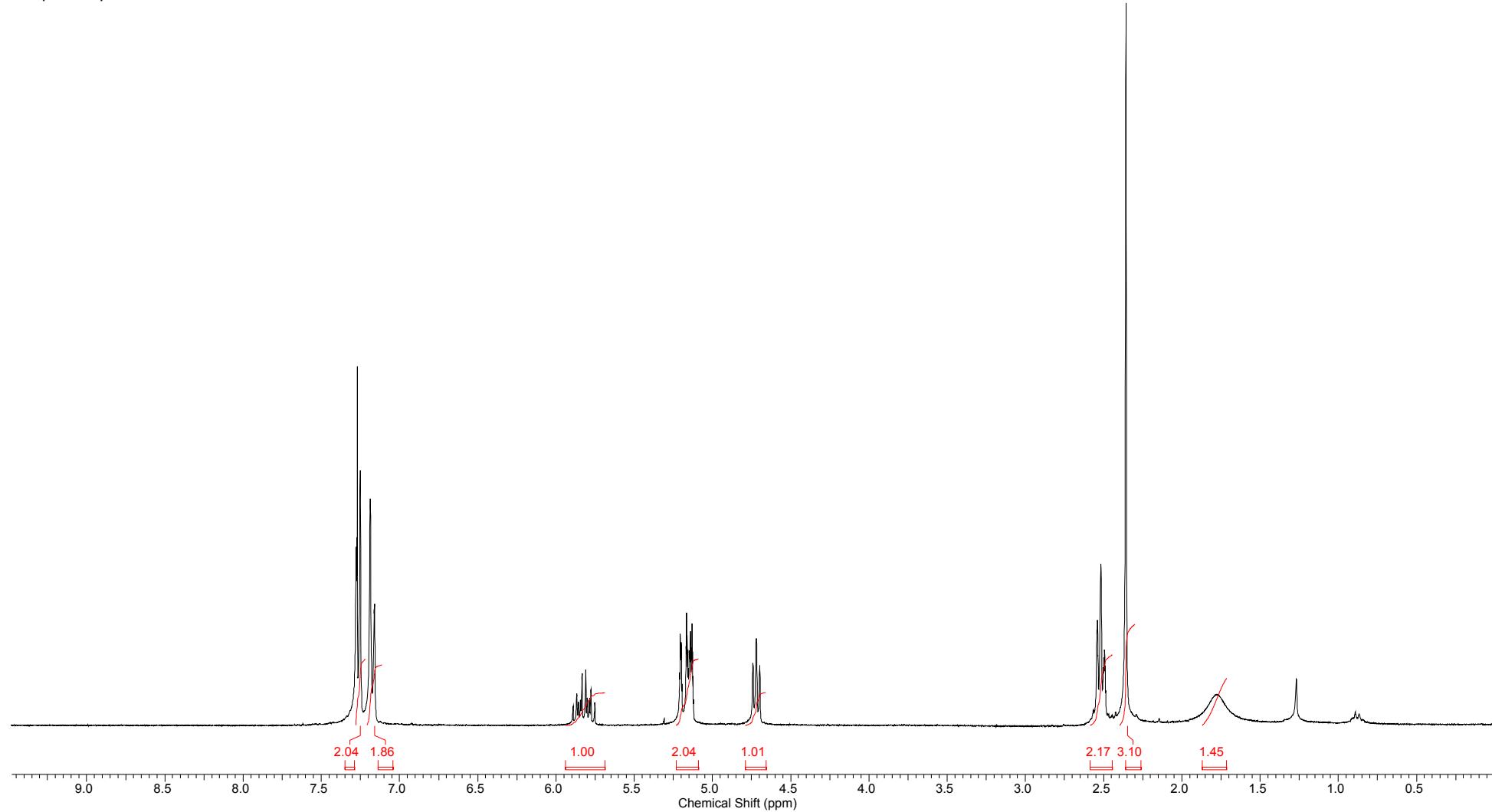
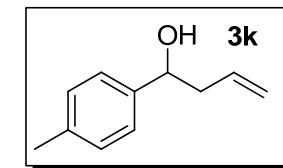
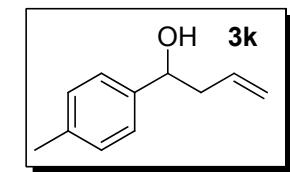


Figure S22. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3k**.

FG.p-Tol.esp

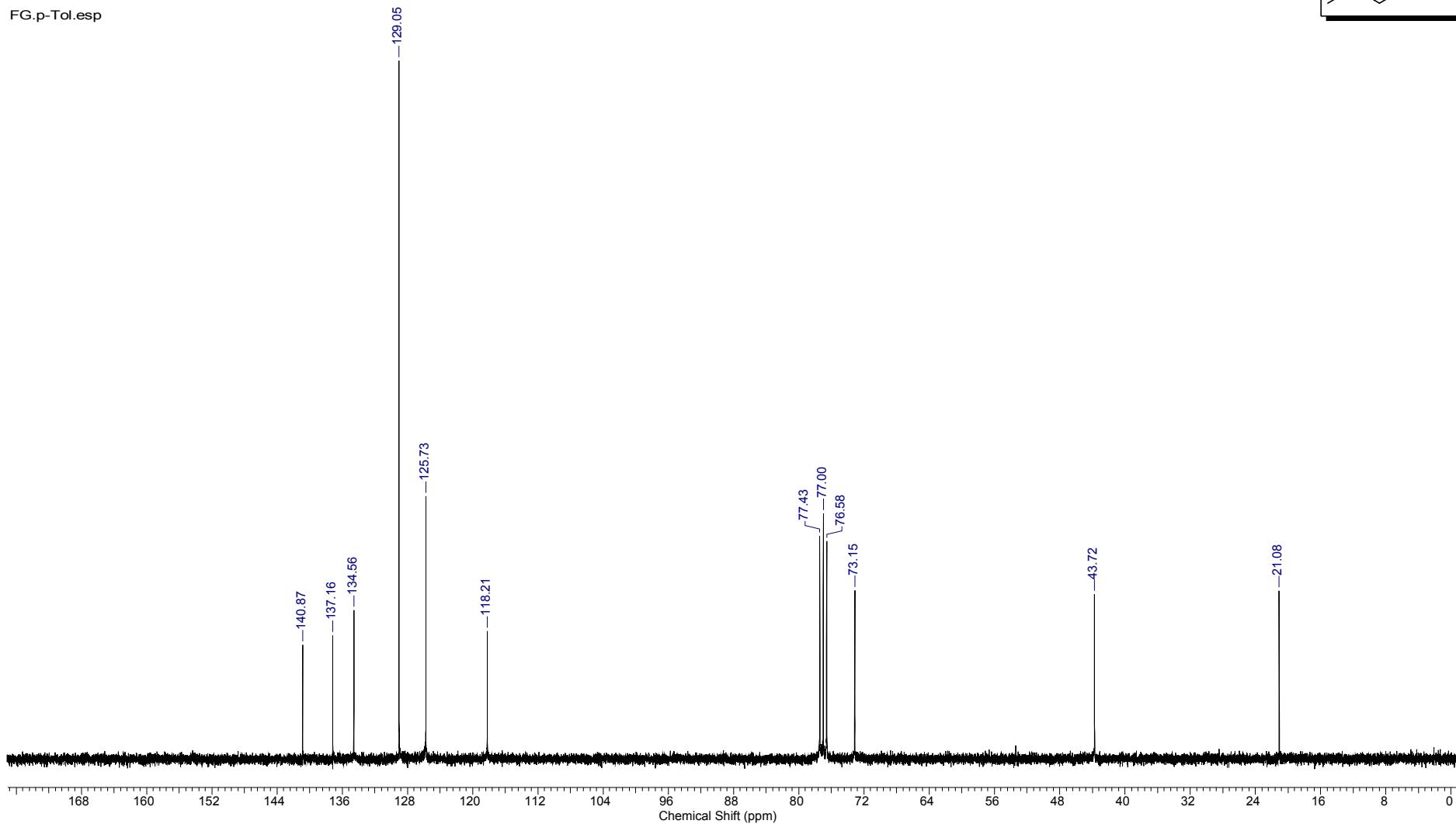


Figure S23. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3l**.

FG.4-OMe.esp

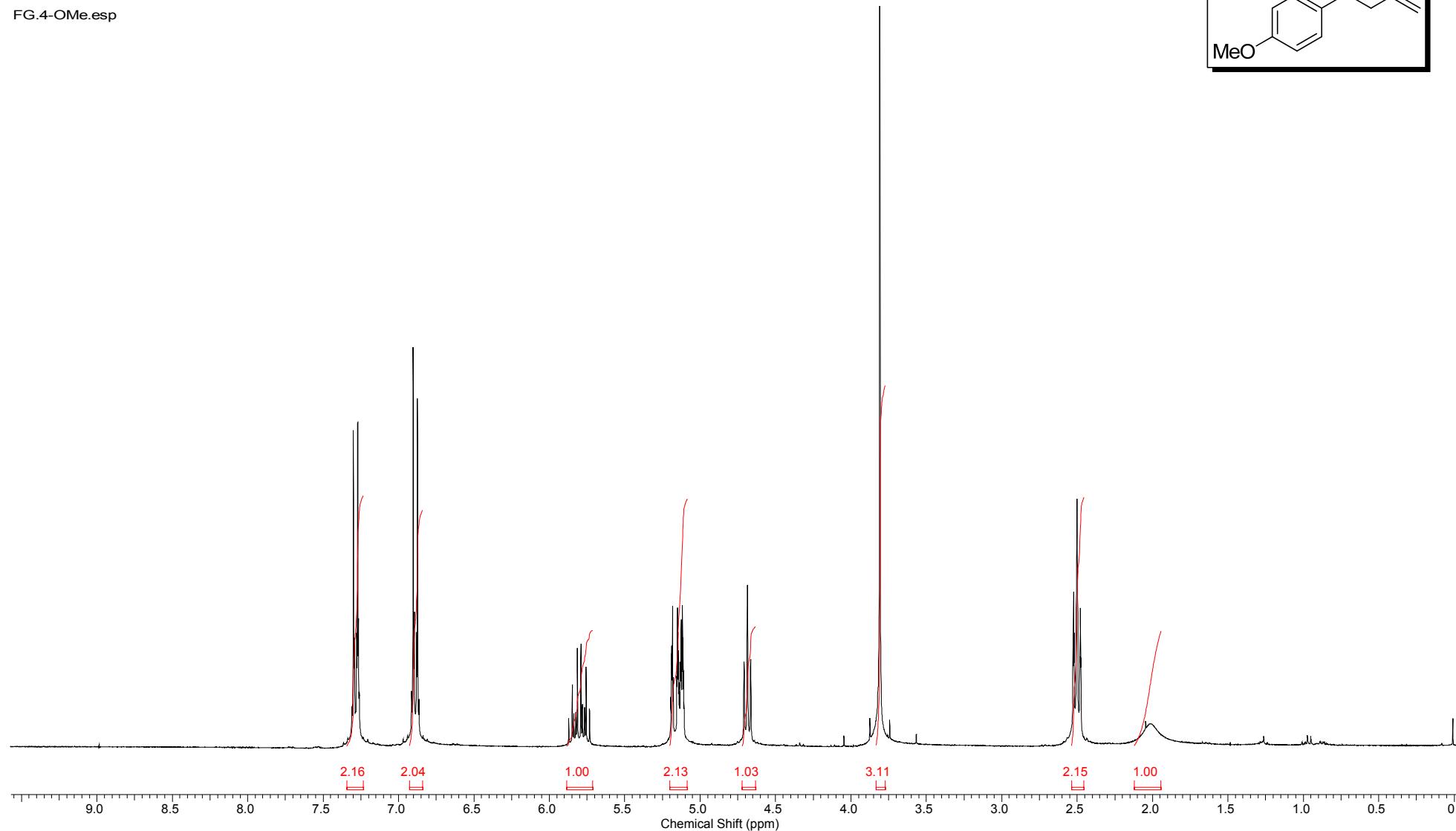


Figure S24. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3l**.

FG-4-OMe.esp

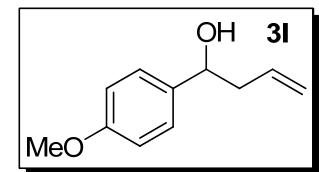
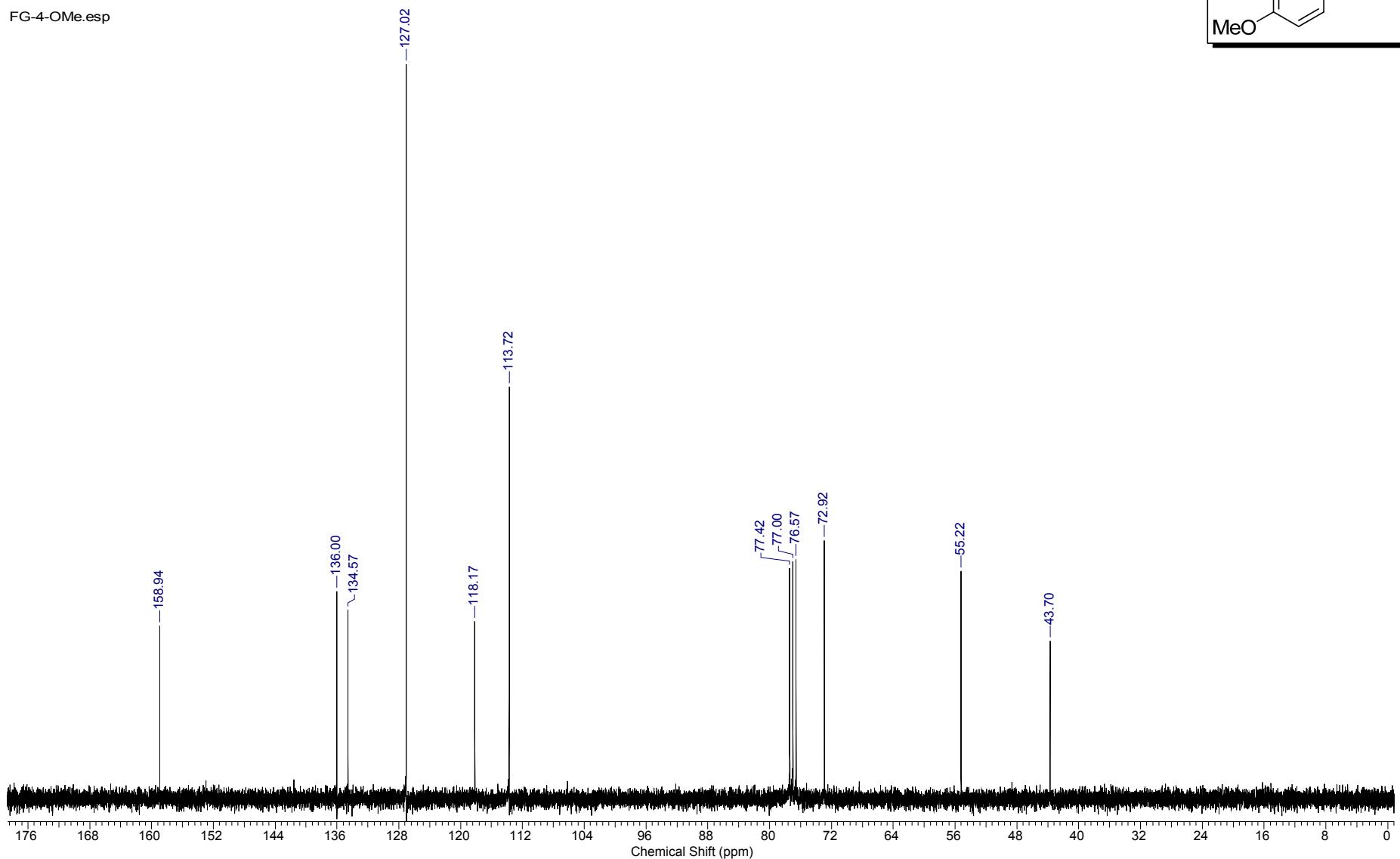


Figure S25. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3m**.

FG-3OMe.esp

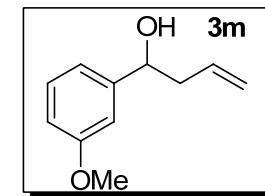
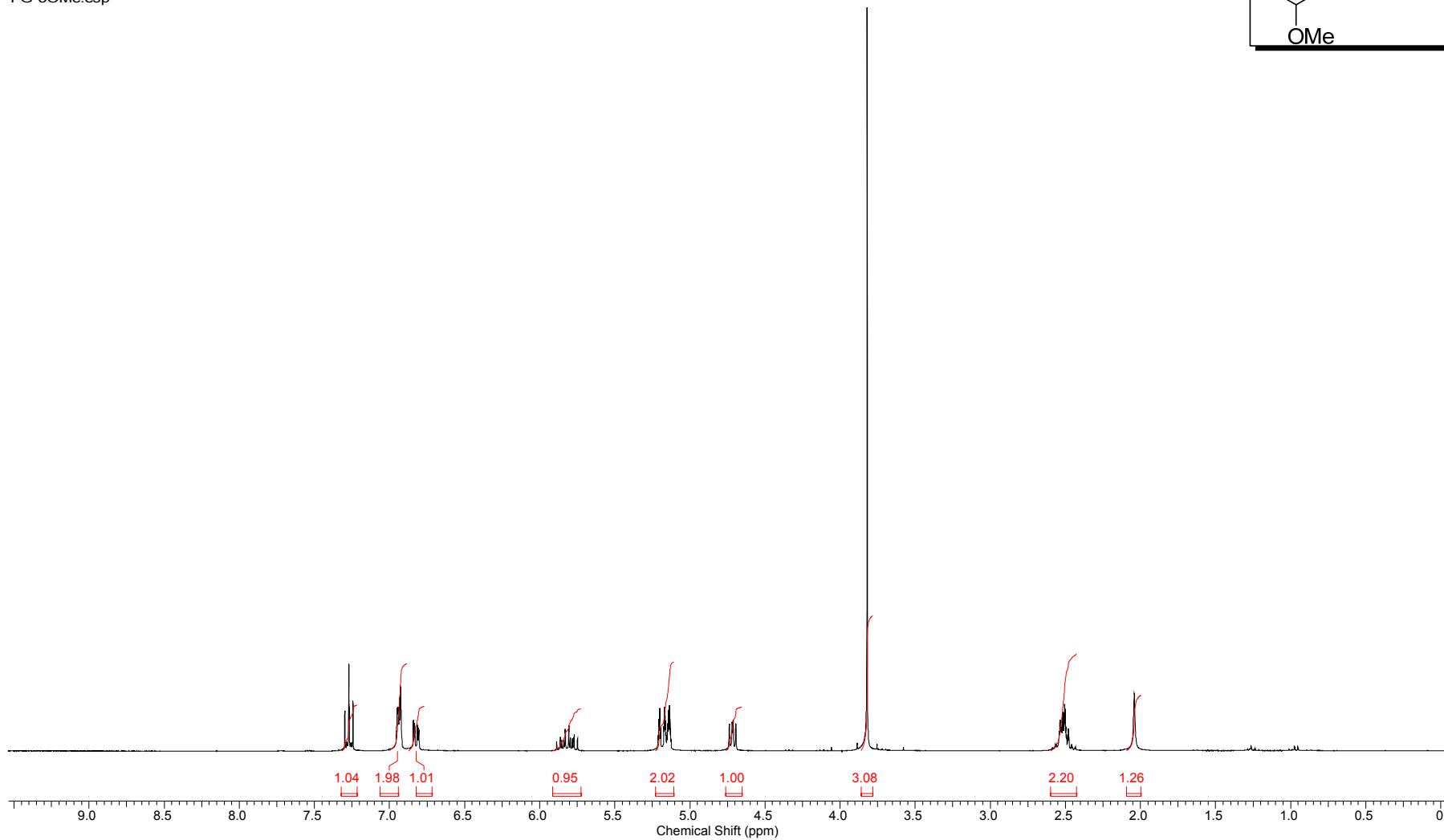


Figure S26. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3m**.

FG-3-OMe.esp

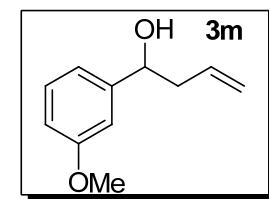
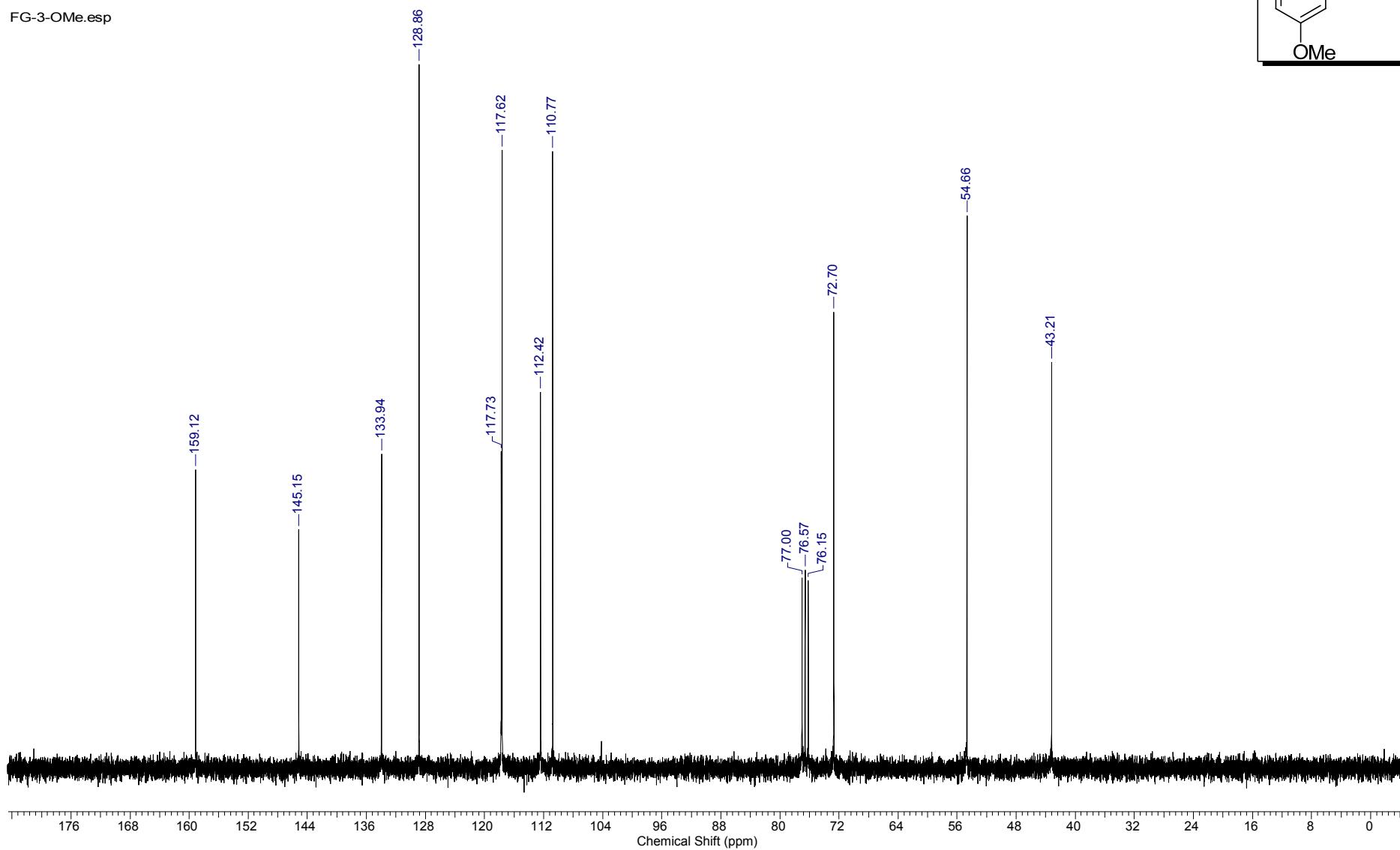


Figure S27. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3n**.

FG.2-OMe.esp

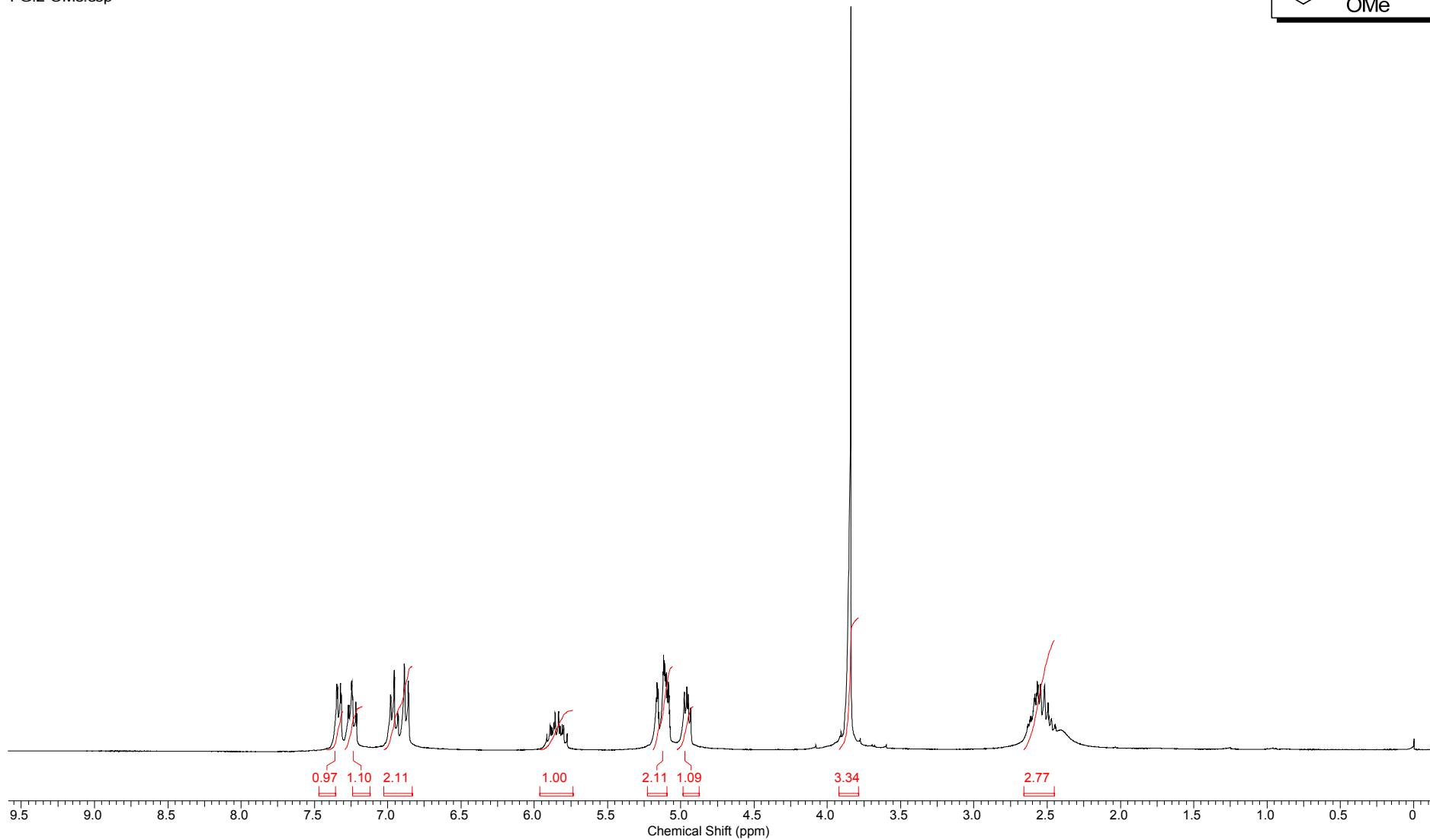


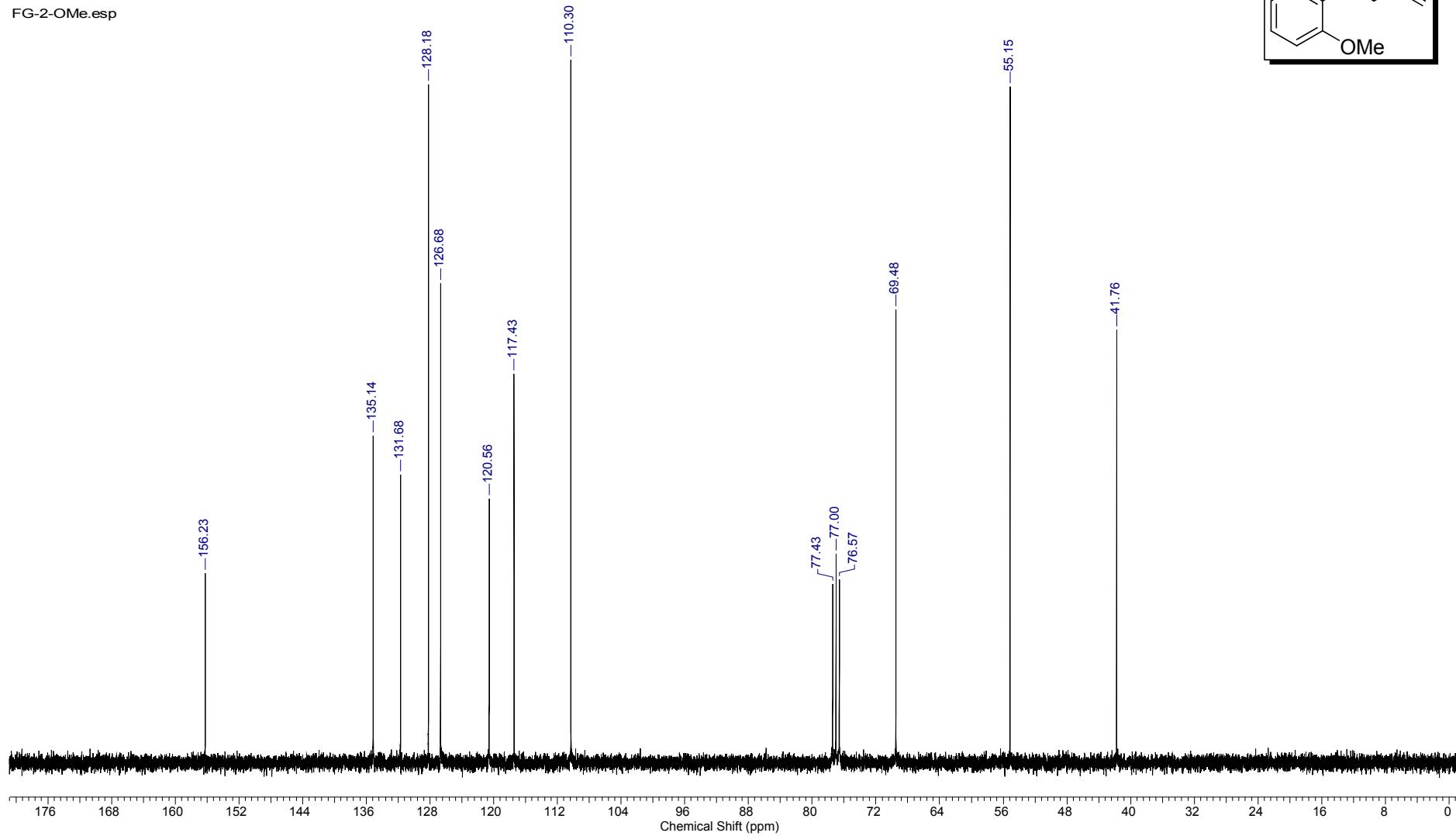
Figure S28. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3n**.

Figure S29. ^1H -NMR spectrum (300 MHz, CDCl_3) of **3o**.

FG-Furf.esp

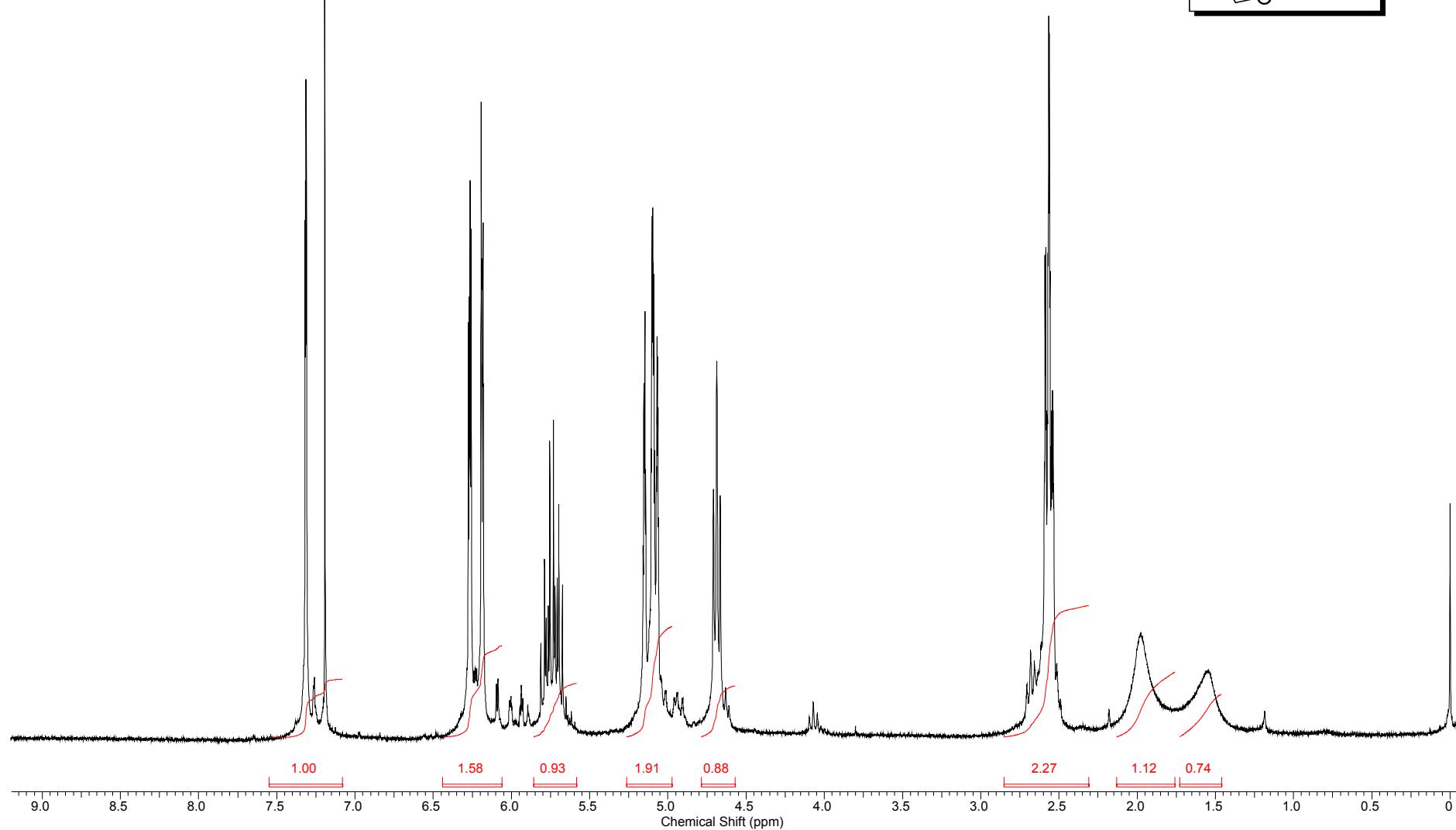
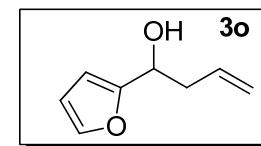


Figure S30. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **3o**.

FG.Furf.esp

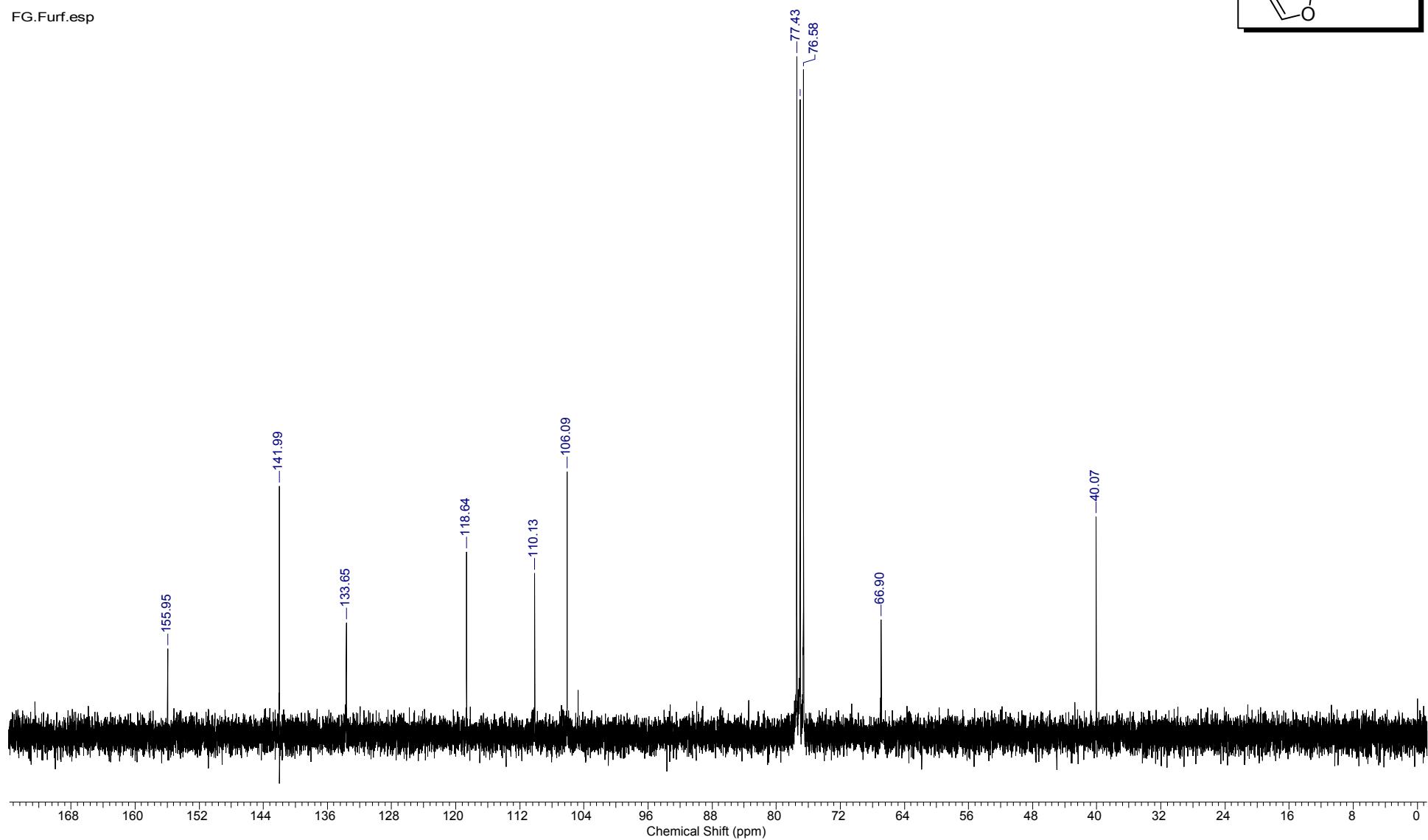


Figure S31. ^1H -NMR spectrum (300 MHz, CDCl_3) of **5**.

K1107_2

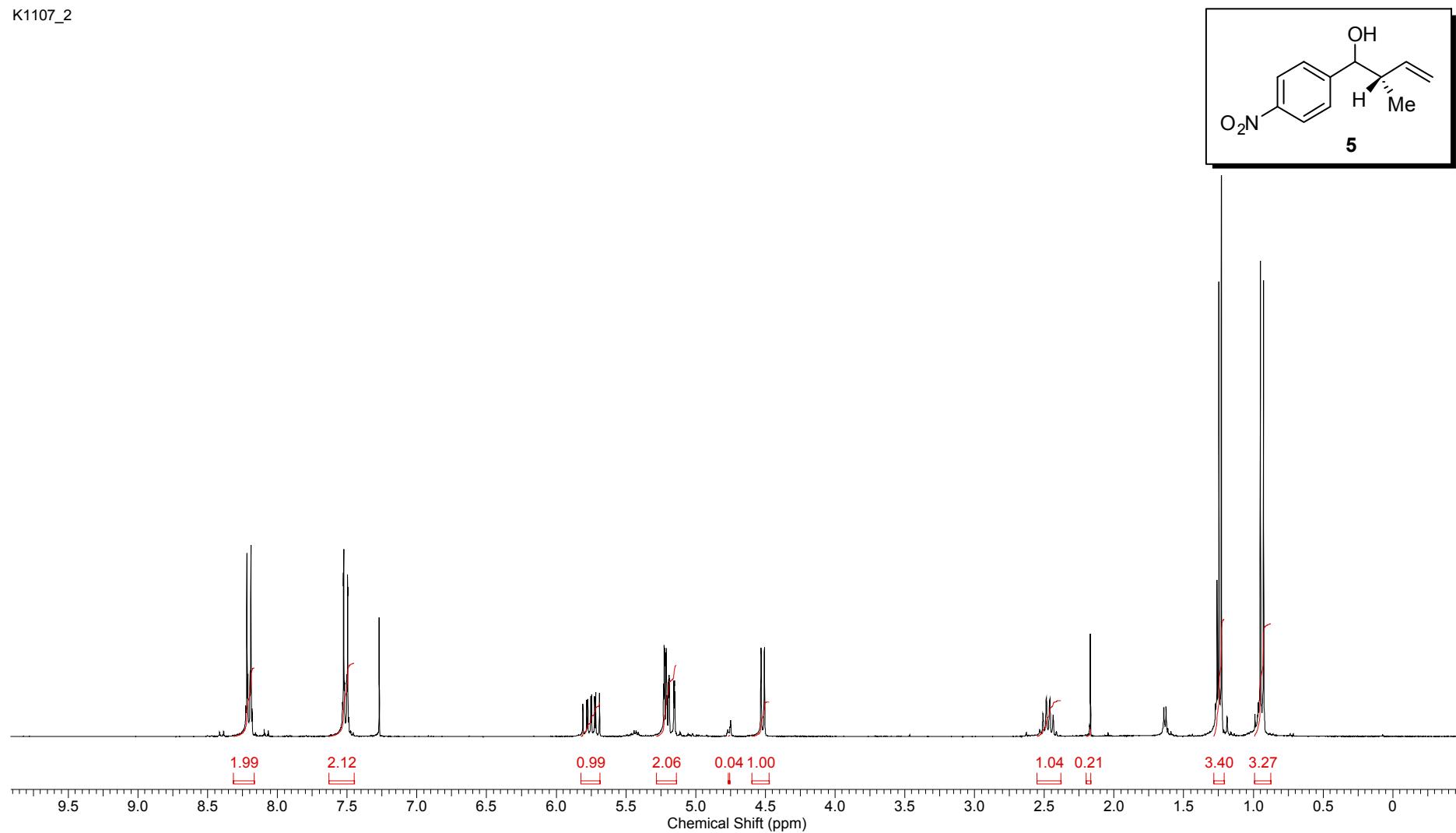


Figure S32. ^1H -NMR spectrum (300 MHz, CDCl_3) of **6**.

K0919_17

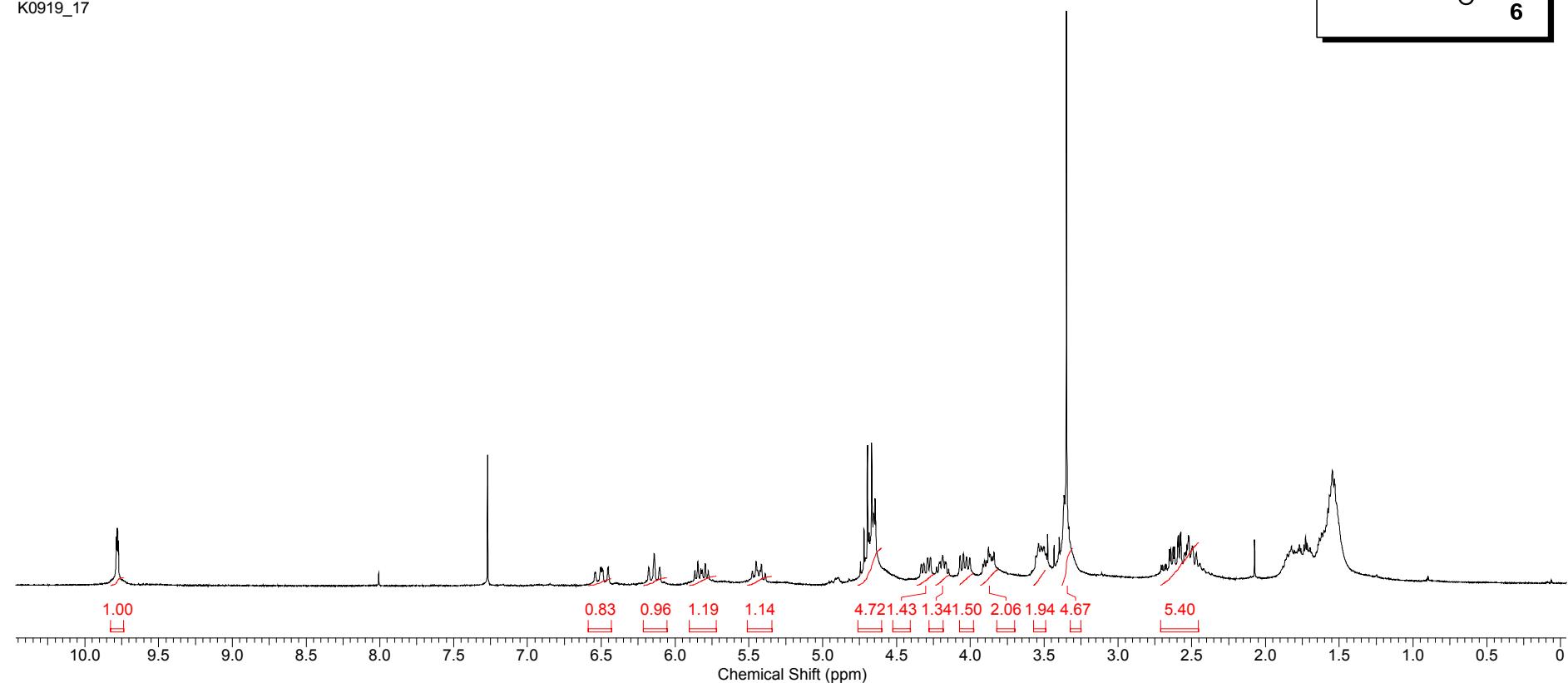


Figure S33. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of **6**.

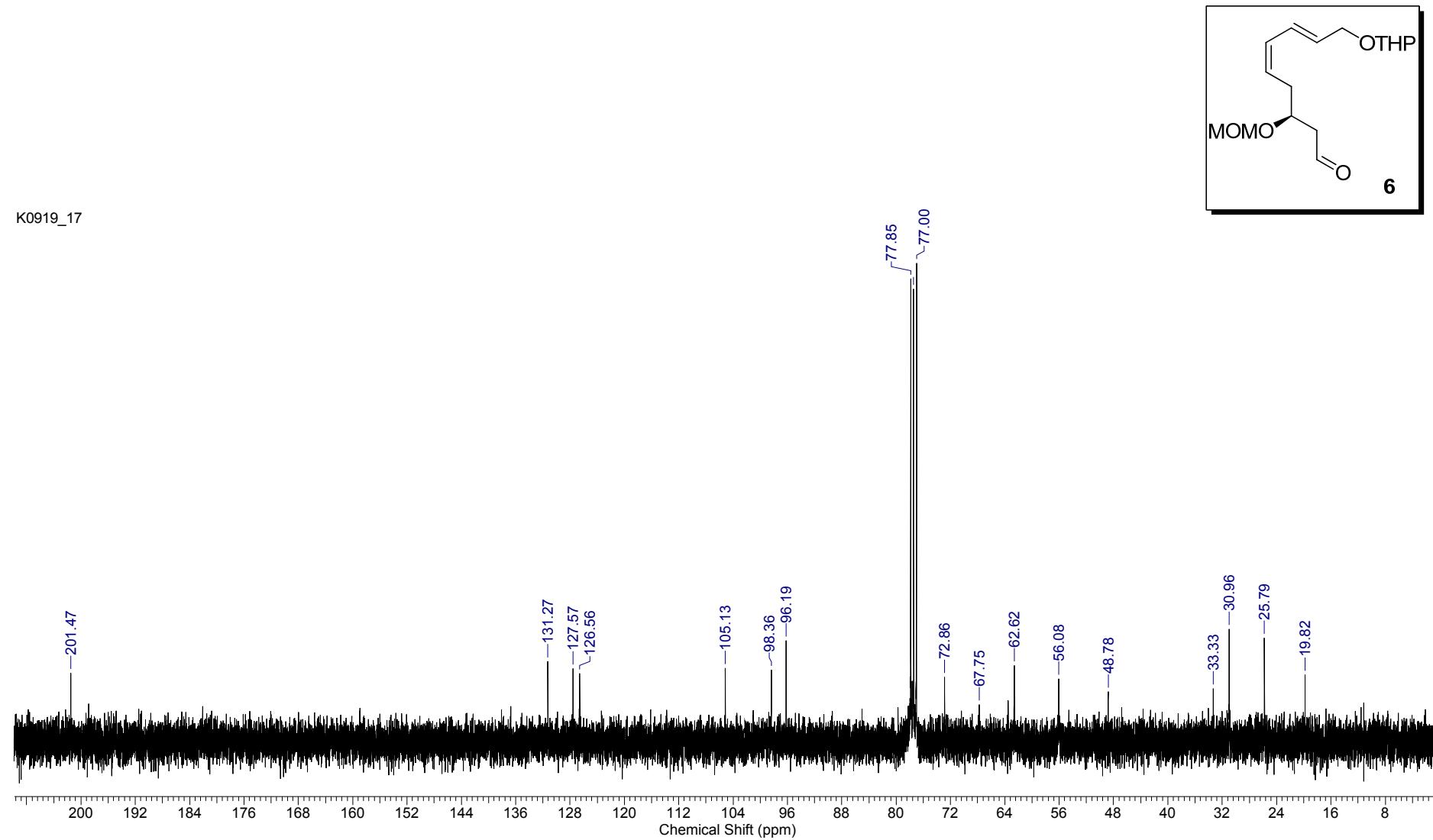


Figure S34. ^1H -NMR spectrum (300 MHz, CDCl_3) of 7.

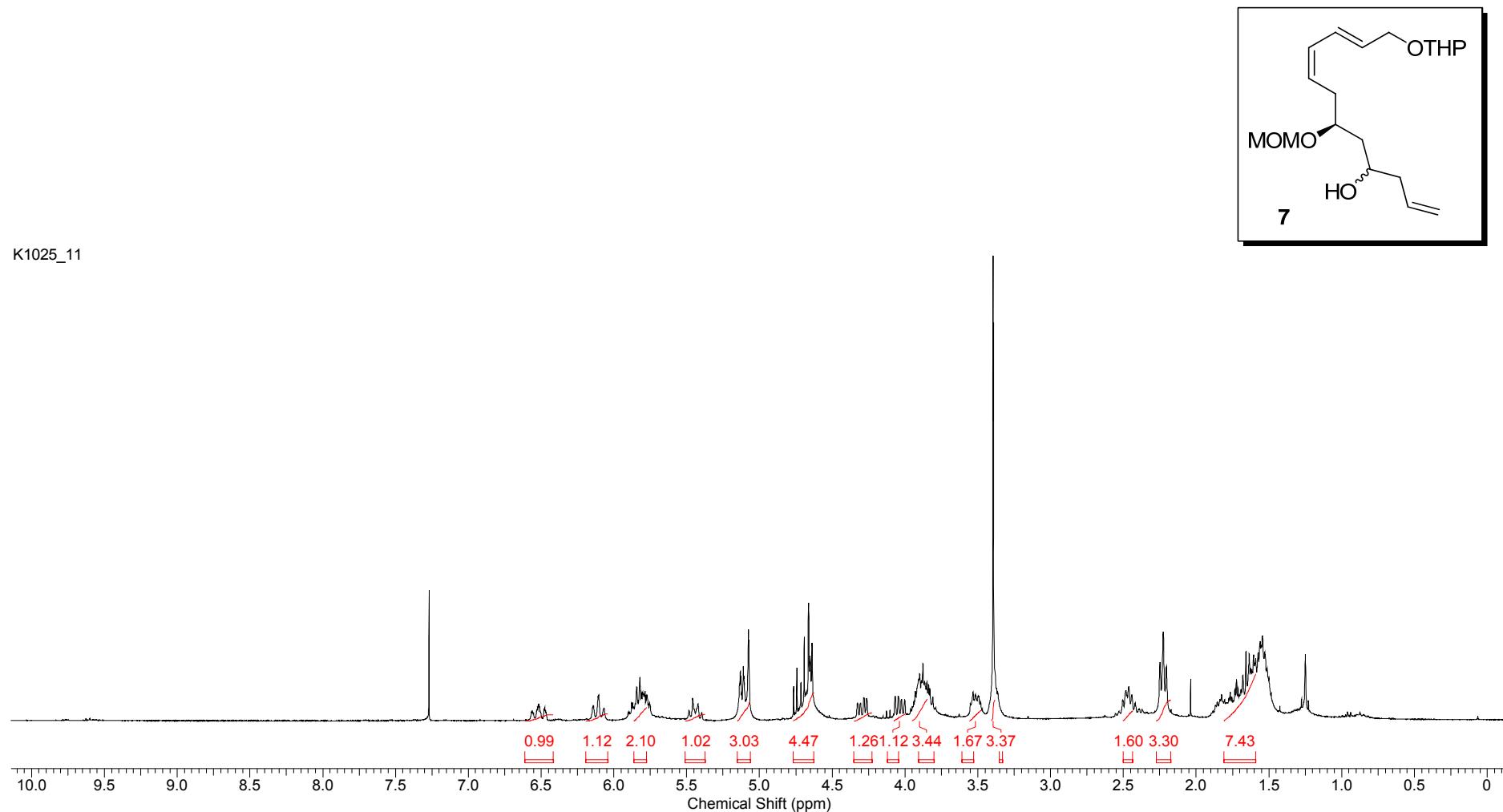
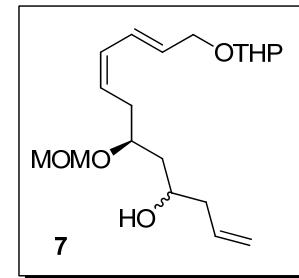


Figure S35. ^{13}C -NMR spectrum (75 MHz, CDCl_3) of 7.



K1025-11

