

Supplementary Information

New Multicomponent Reaction for the Direct Synthesis of β -Aryl- γ -nitroesters Promoted by Hydrotalcite-Derived Mixed Oxides as Heterogeneous Catalyst

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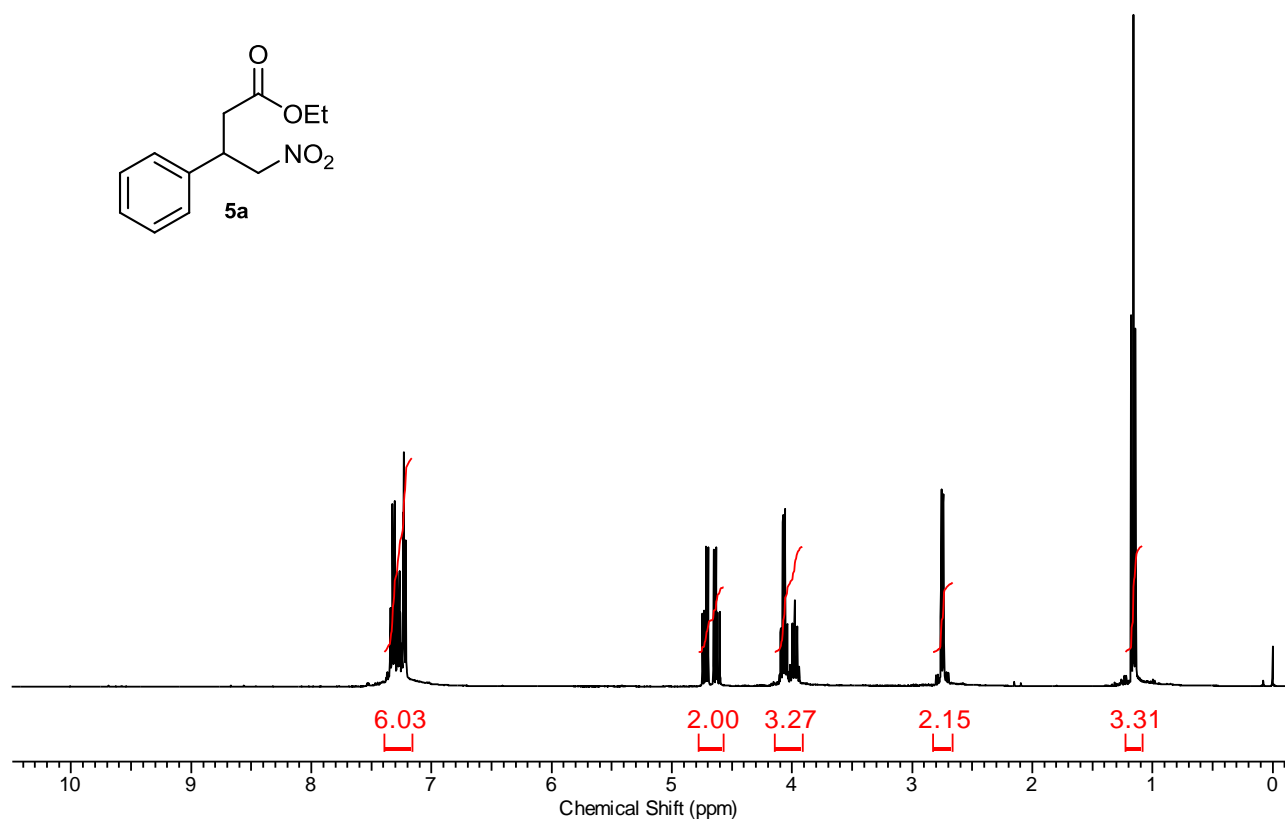


Figure S1. ¹H NMR (300 MHz, CDCl₃) of compound **5a**.

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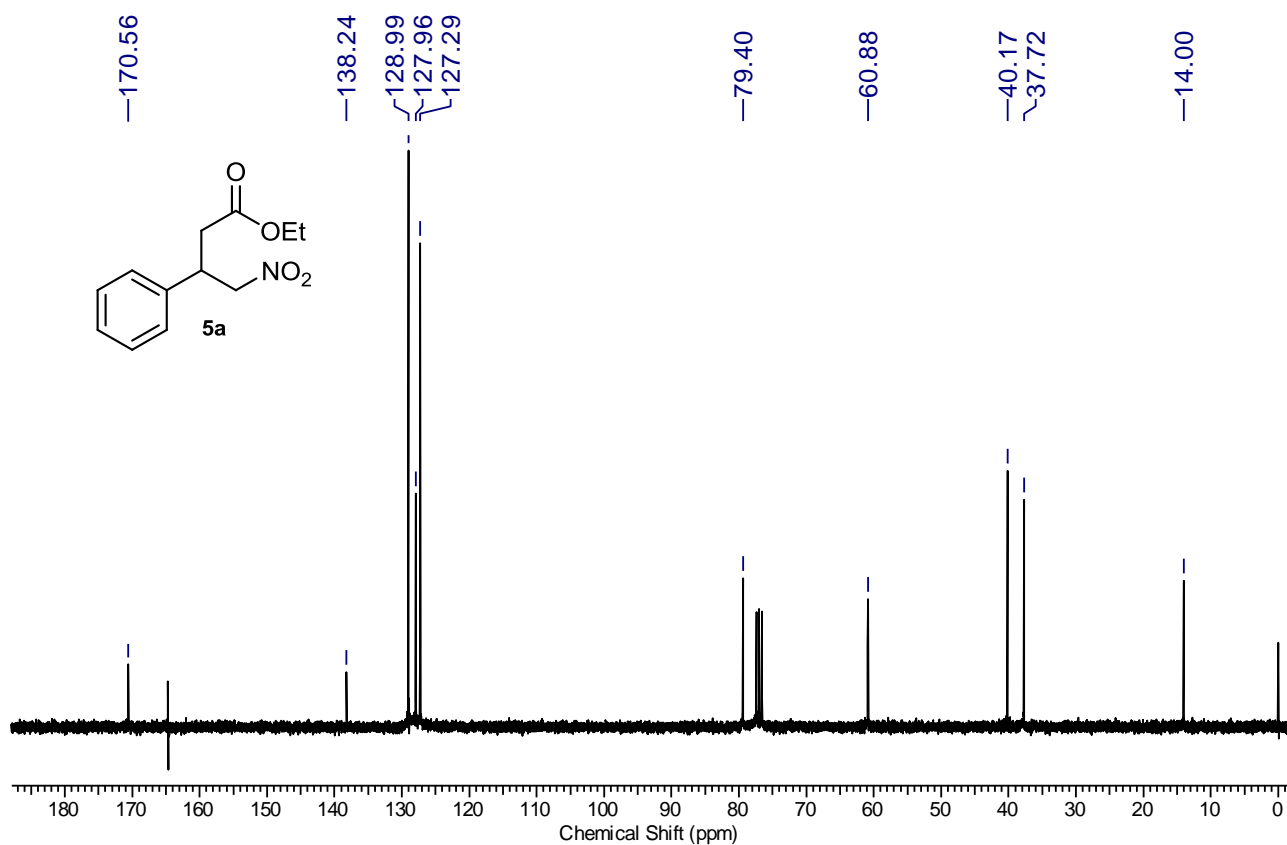


Figure S2. ¹³C NMR (75 MHz, CDCl₃) of compound **5a**.

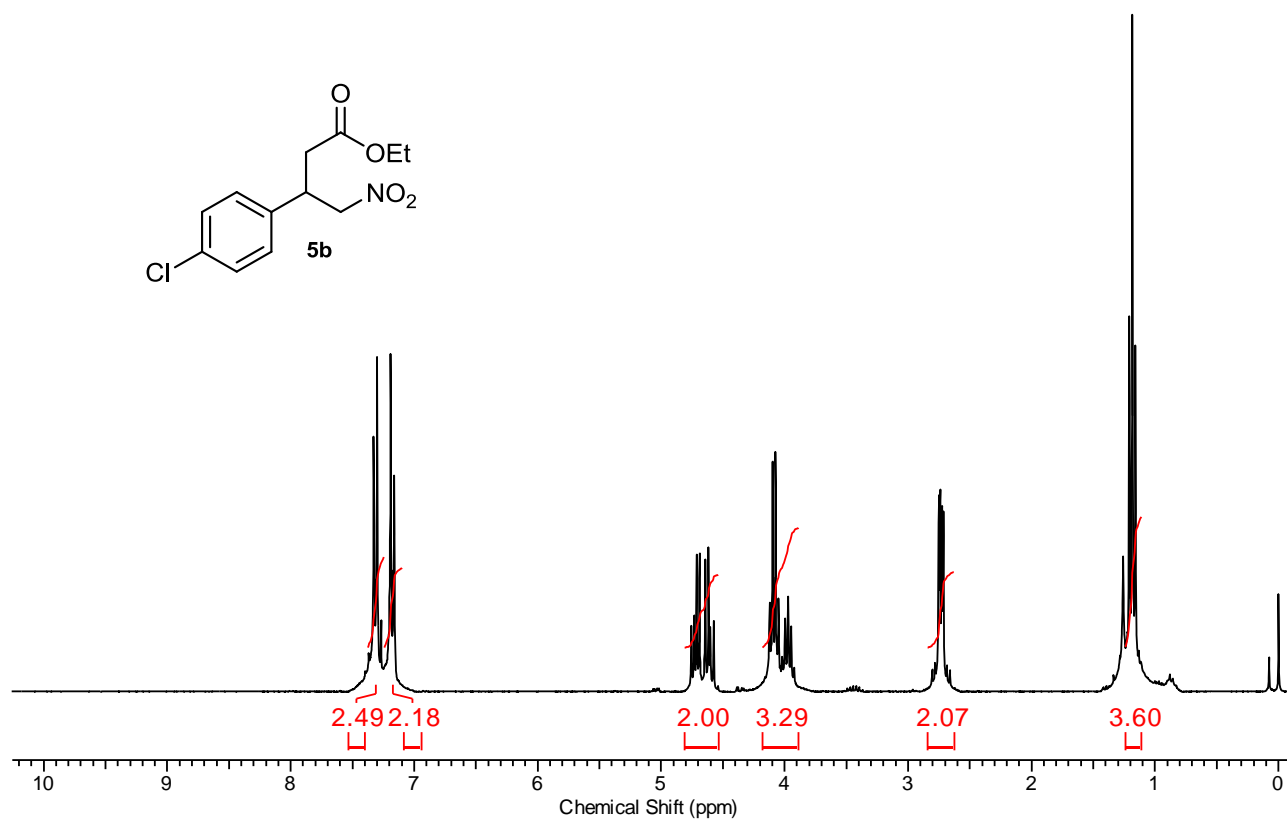


Figure S3. ¹H NMR (300 MHz, CDCl₃) of compound **5b**.

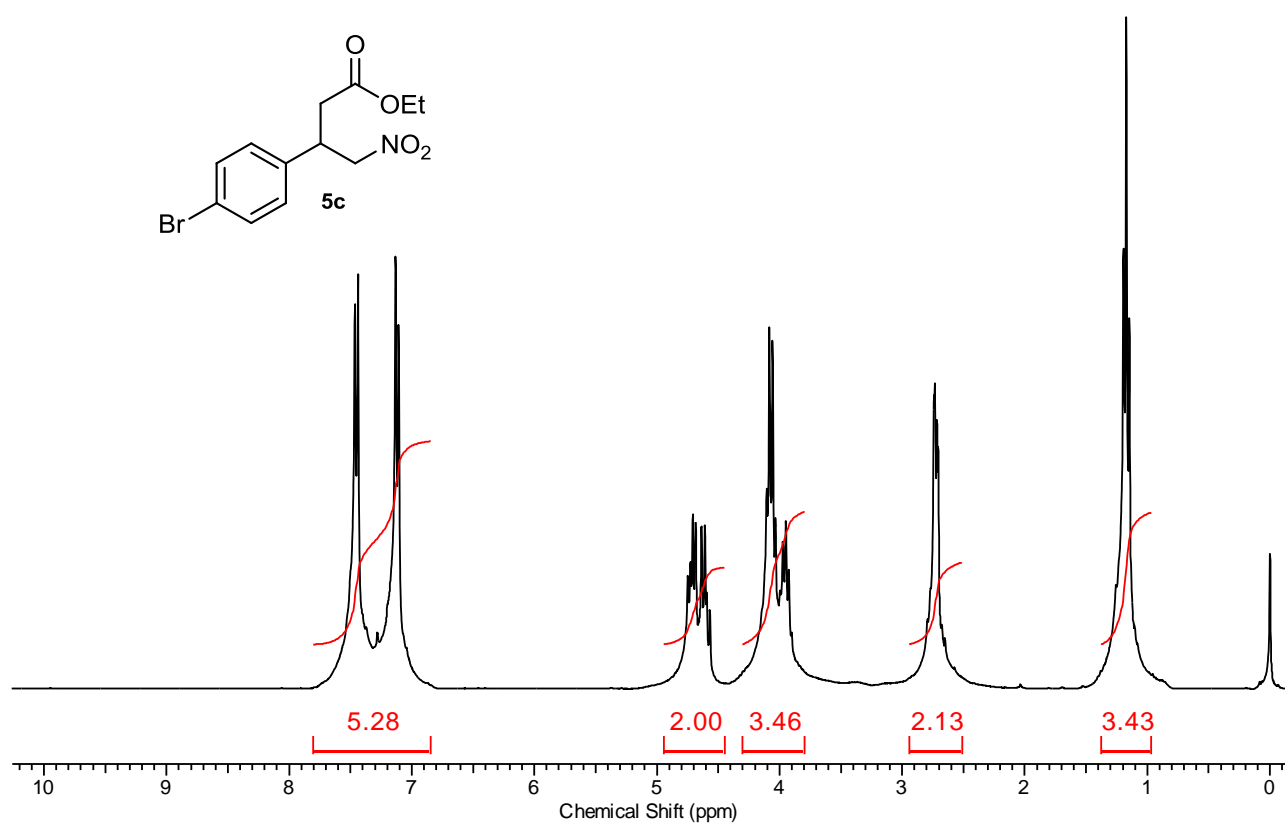


Figure S4. ¹H NMR (300 MHz, CDCl₃) of compound **5c**.

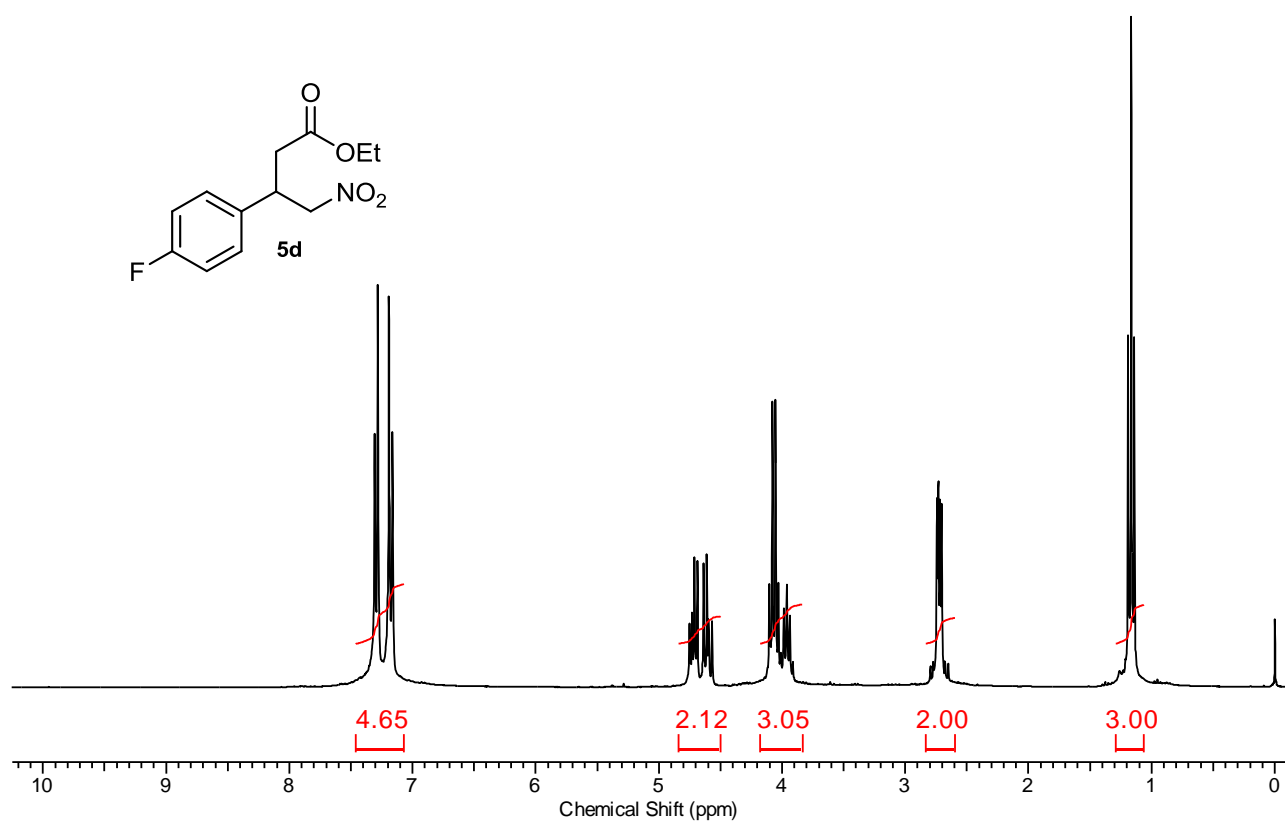


Figure S5. ¹H NMR (300 MHz, CDCl₃) of compound **5d**.

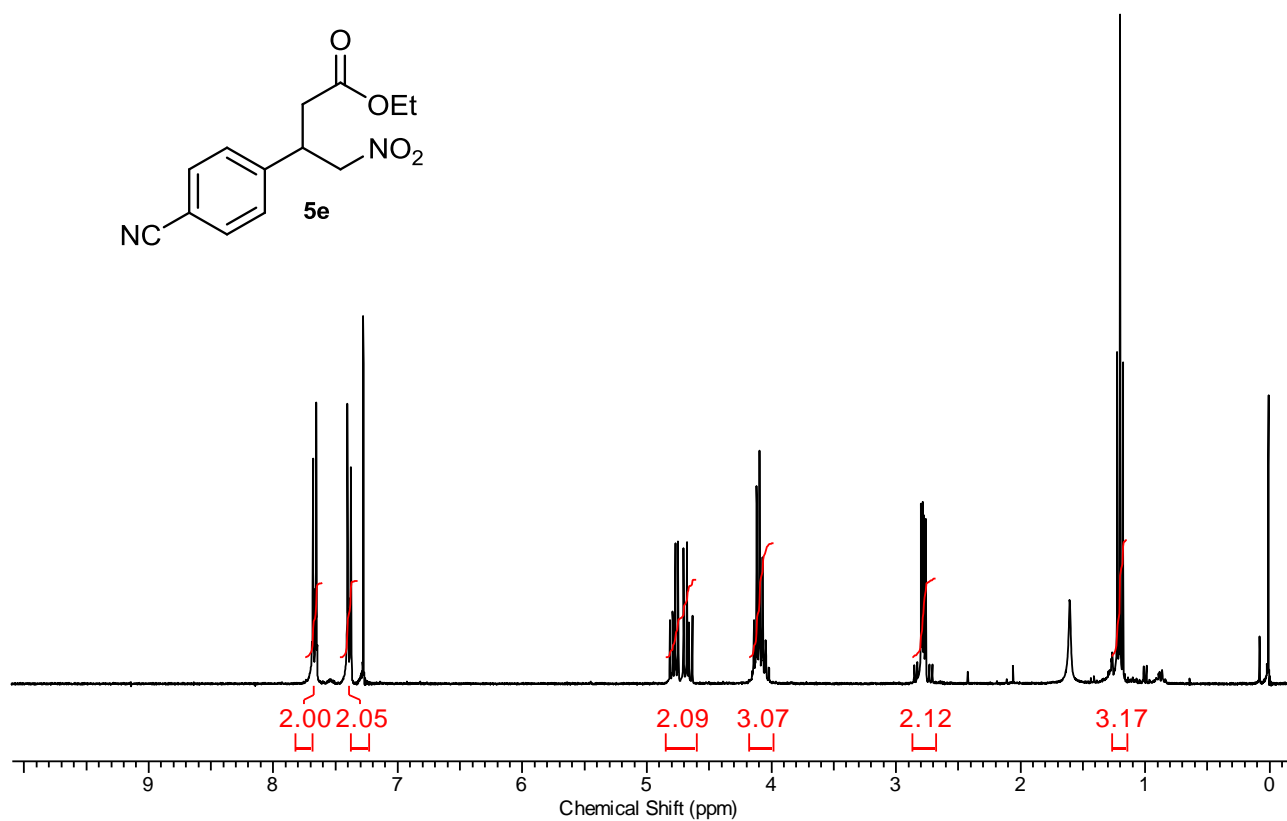


Figure S6. ¹H NMR (300 MHz, CDCl₃) of compound **5e**.

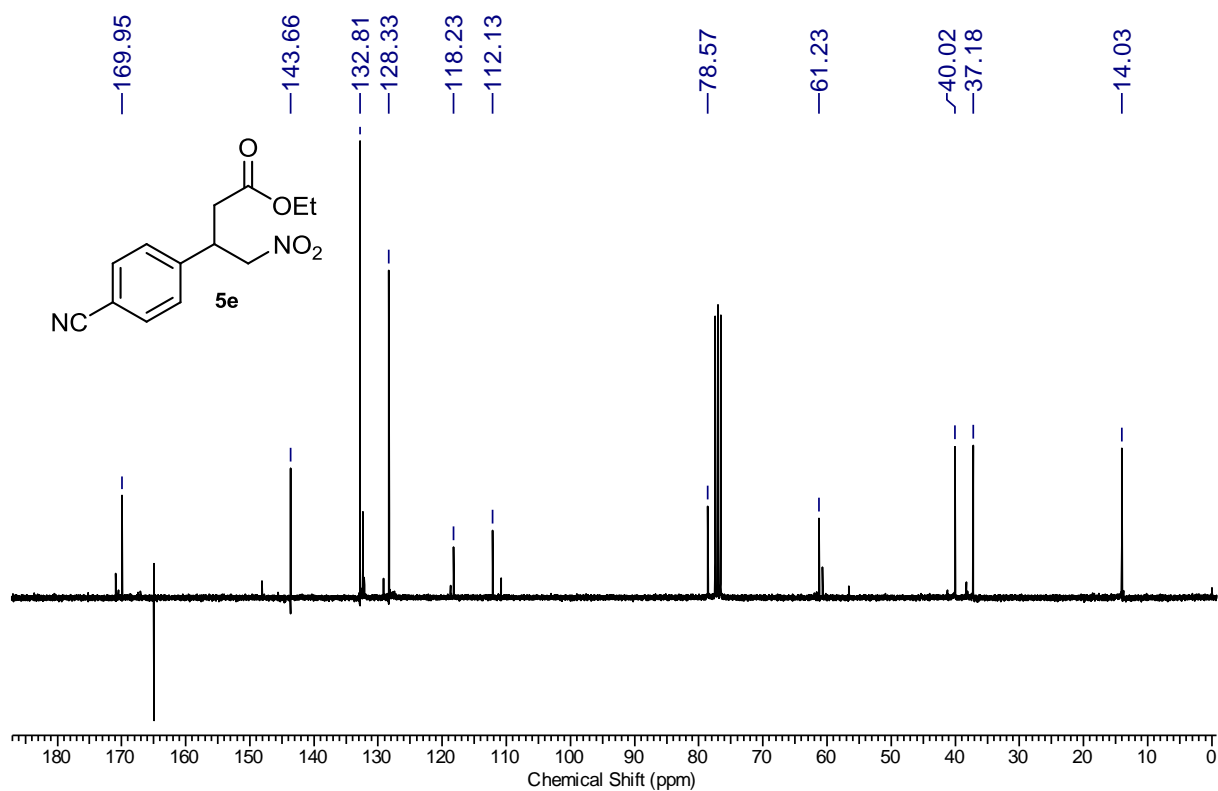


Figure S7. ¹³C NMR (75 MHz, CDCl₃) of compound **5e**.

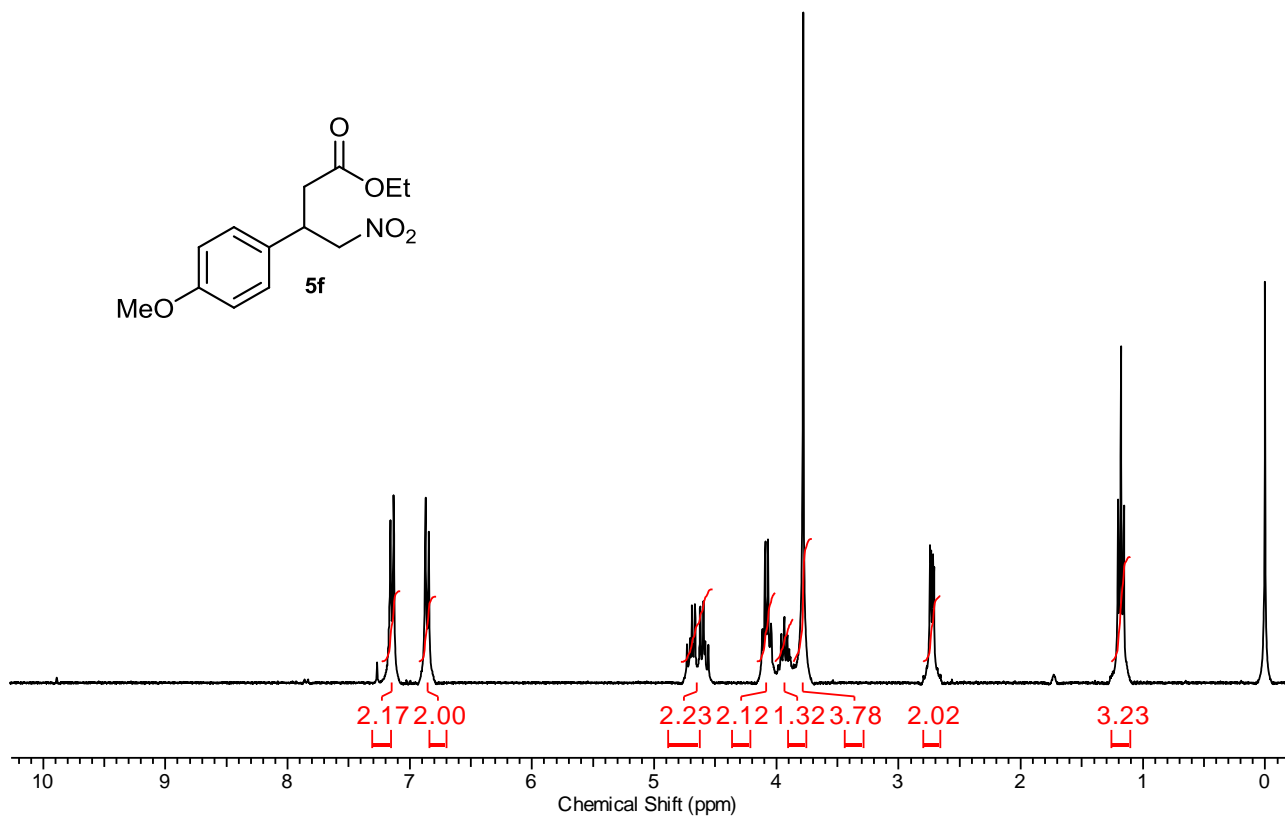


Figure S8. ¹H NMR (300 MHz, CDCl₃) of compound **5f**.

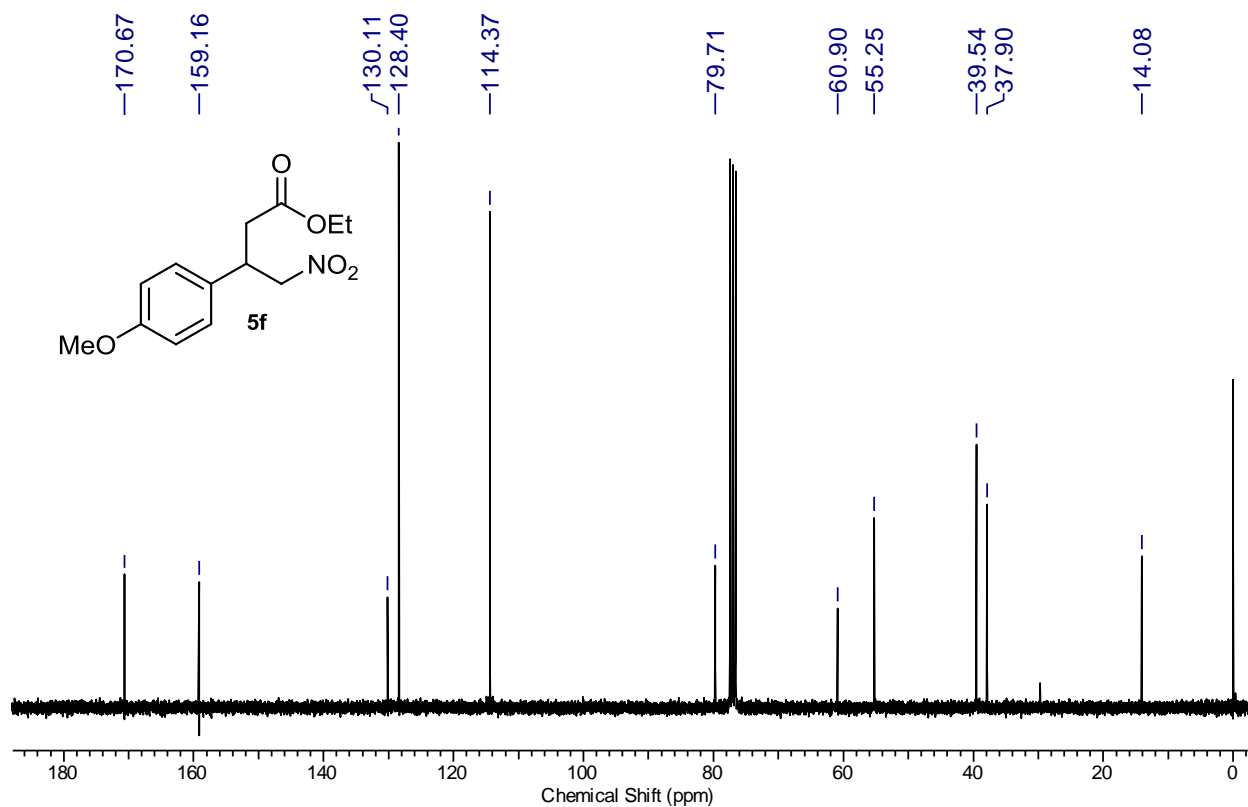


Figure S9. ¹³C NMR (75 MHz, CDCl₃) of compound **5f**.

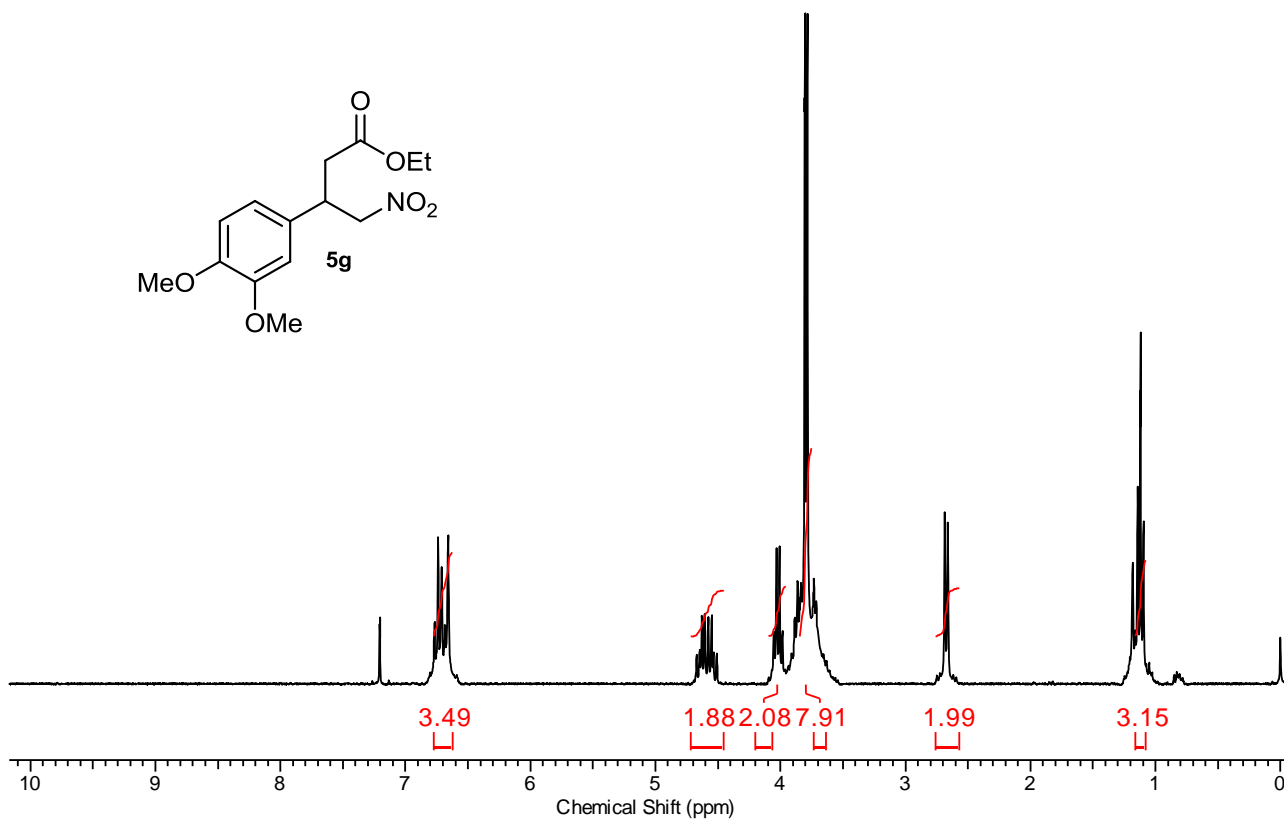


Figure S10. ¹H NMR (300 MHz, CDCl₃) of compound **5g**.

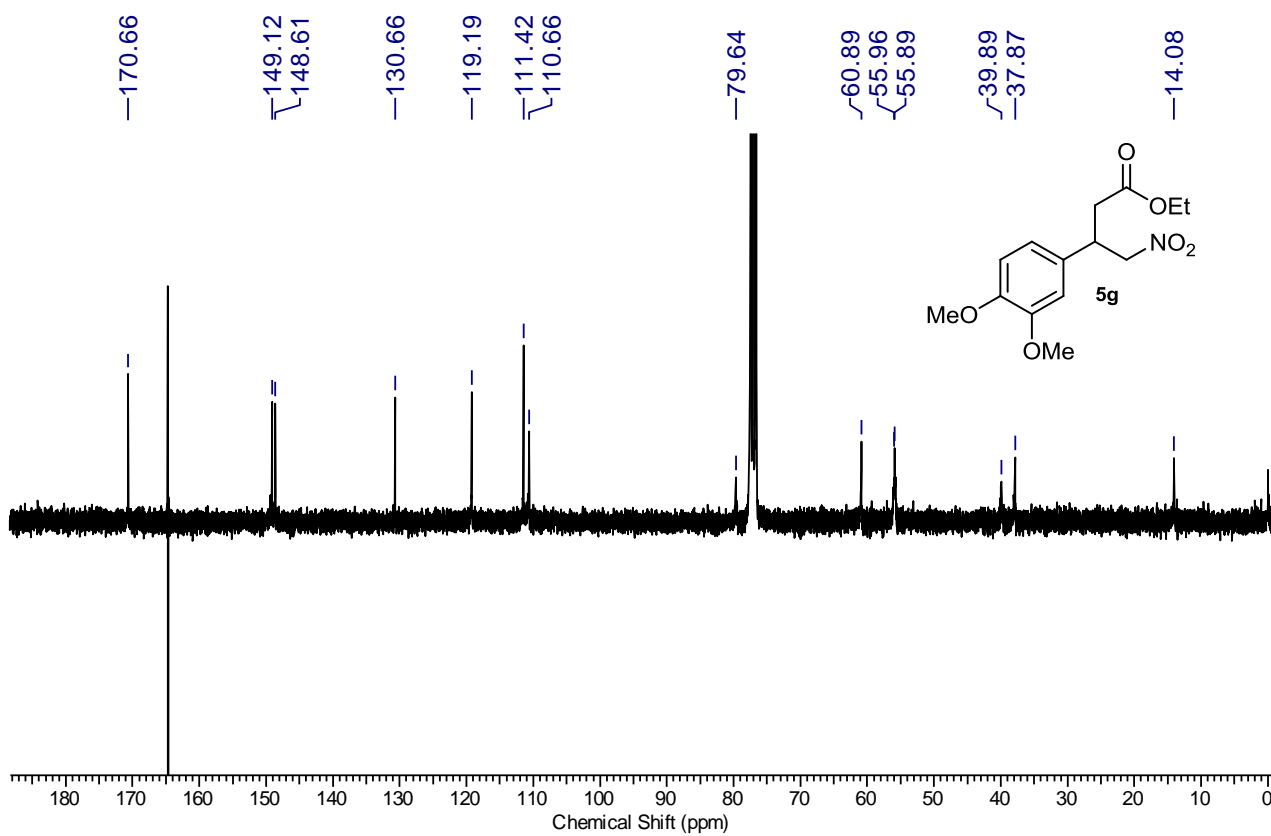


Figure S11. ¹³C NMR (75 MHz, CDCl₃) of compound 5g.

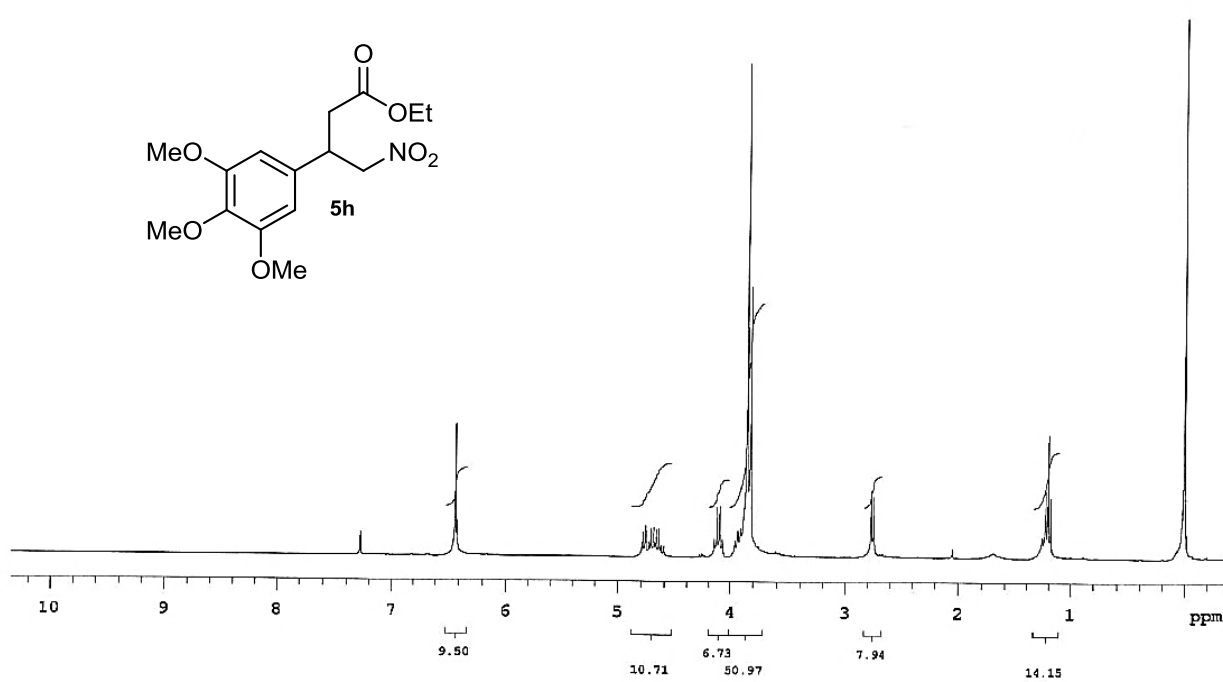


Figure S12. ¹H NMR (300 MHz, CDCl₃) of compound 5h.

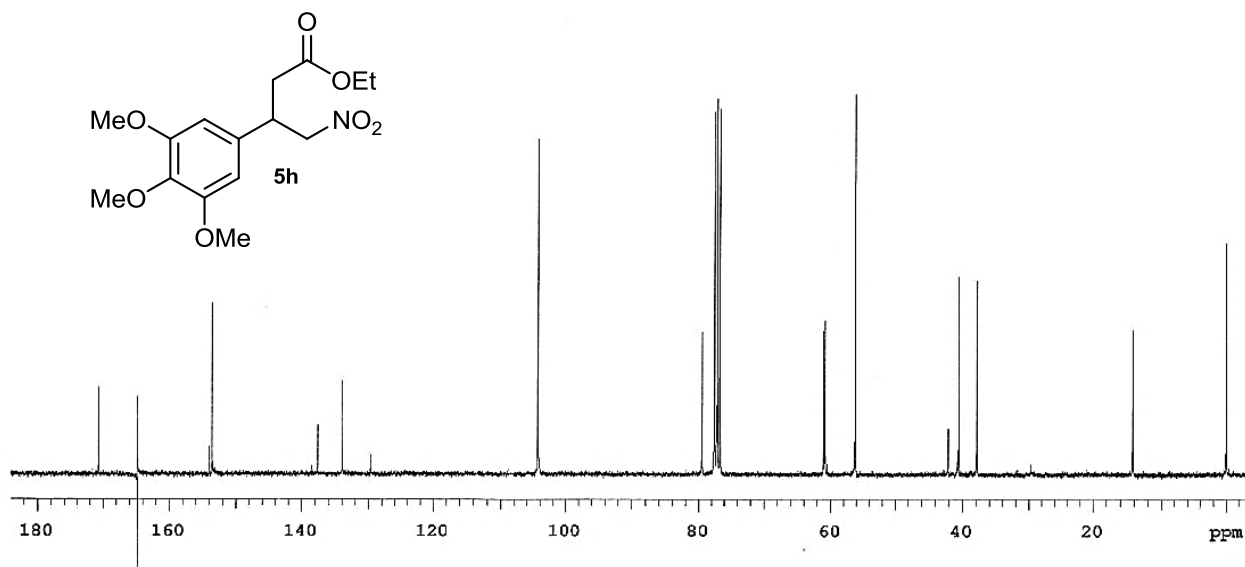


Figure S13. ^{13}C NMR (75 MHz, CDCl_3) of compound **5h**.

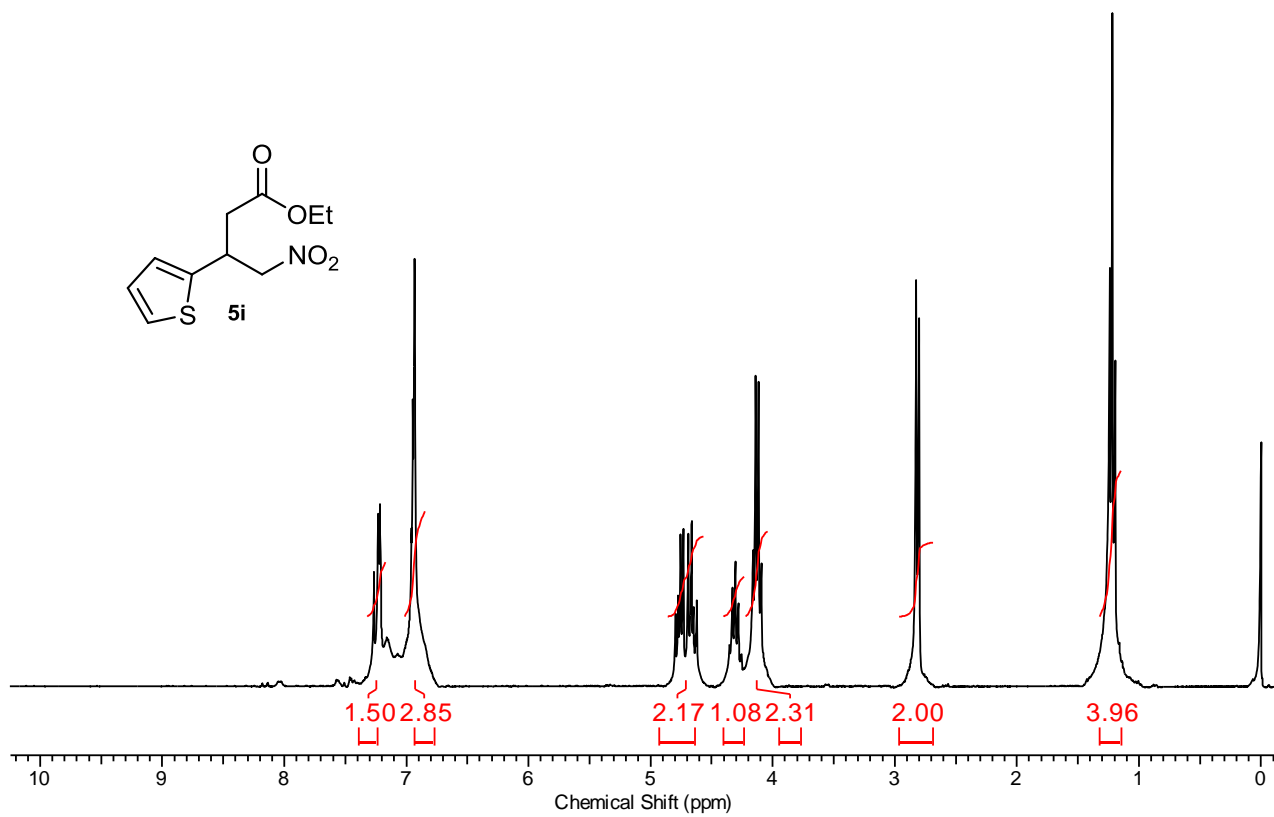


Figure S14. ^1H NMR (300 MHz, CDCl_3) of compound **5i**.

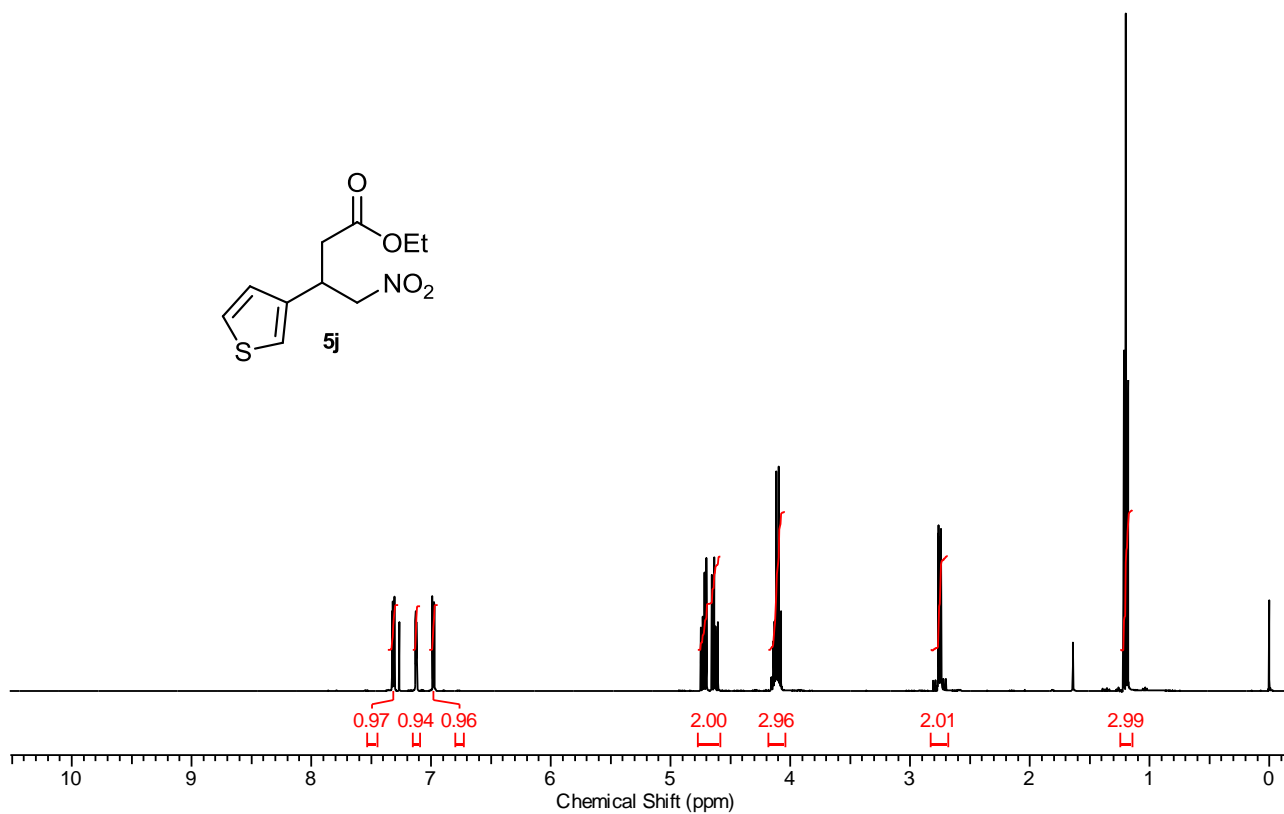


Figure S15. ¹H NMR (300 MHz, CDCl₃) of compound **5j**.

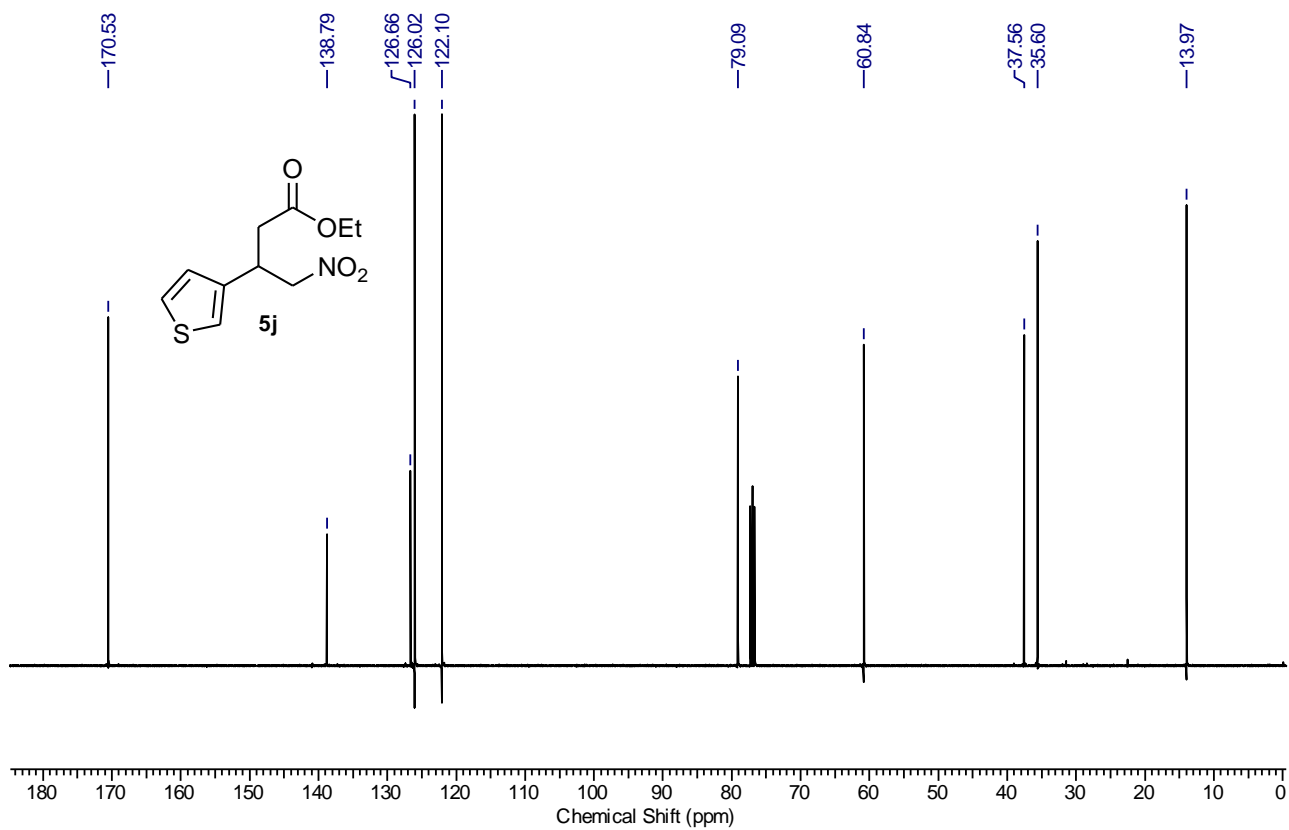


Figure S16. ¹³C NMR (75 MHz, CDCl₃) of compound **5j**.

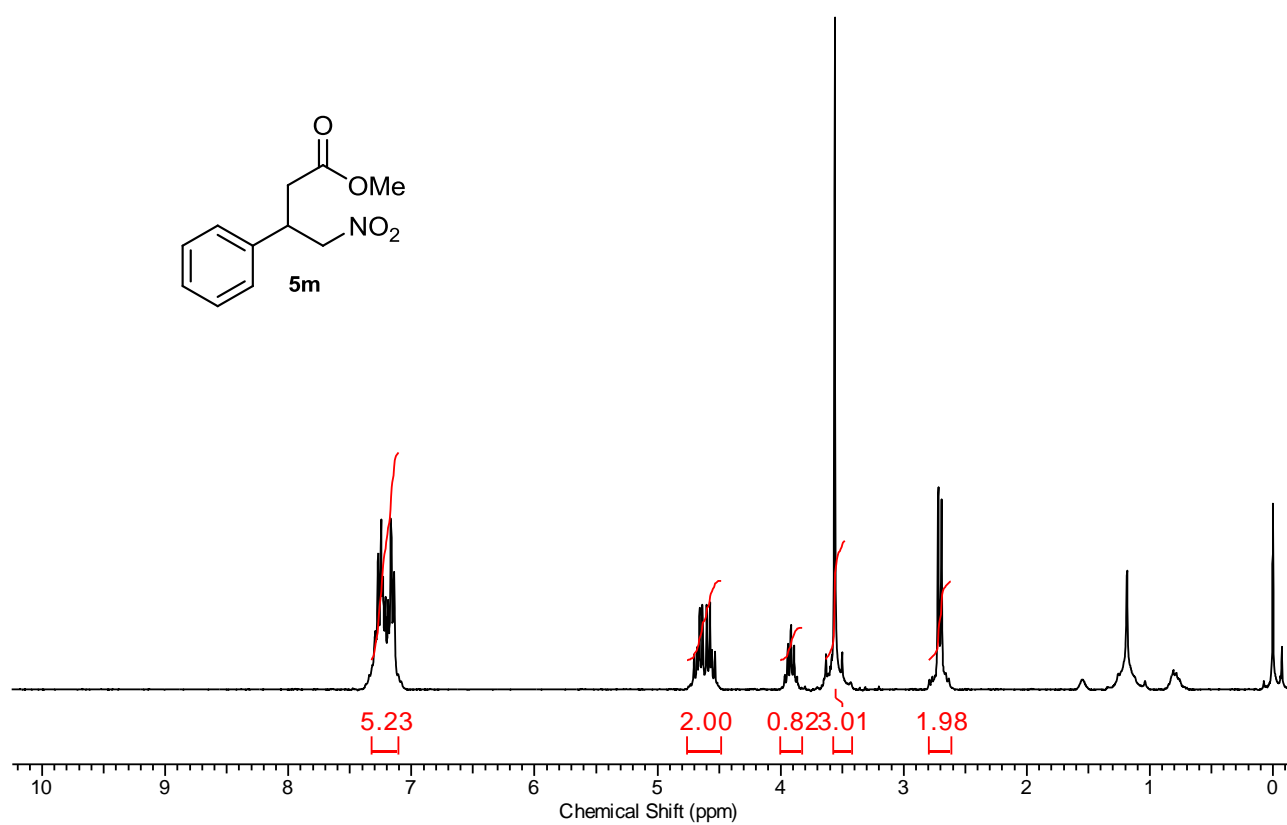


Figure S17. $^1\text{H NMR}$ (300 MHz, CDCl_3) of compound **5m**.

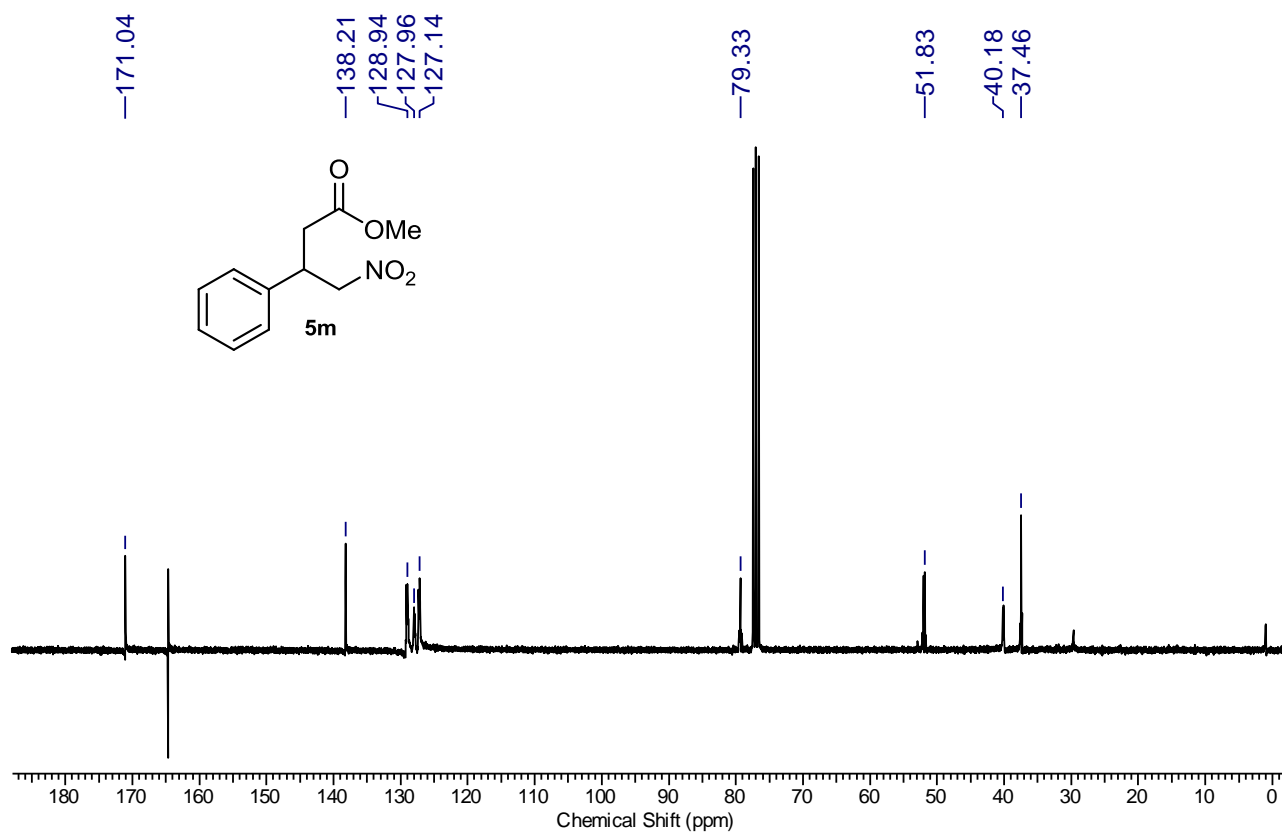


Figure S18. $^{13}\text{C NMR}$ (75 MHz, CDCl_3) of compound **5m**.

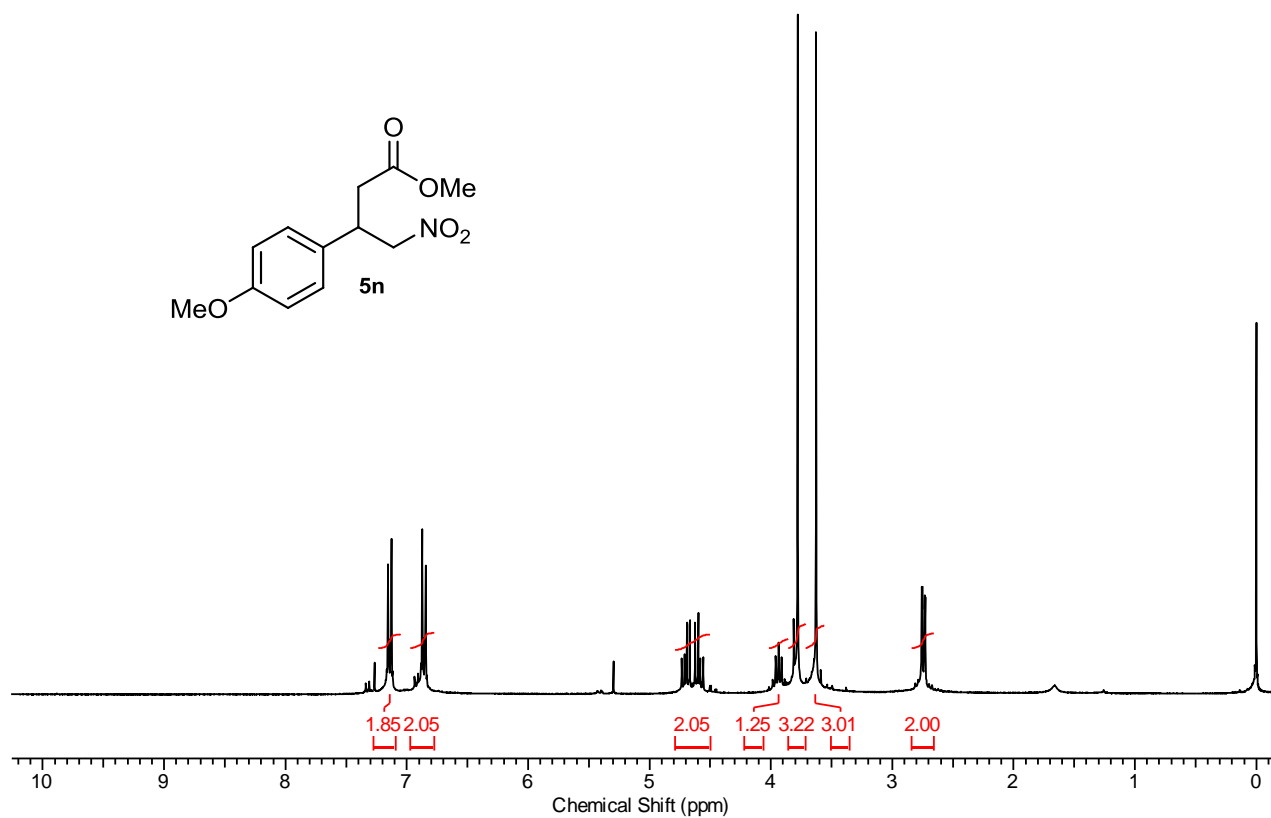


Figure S19. ¹H NMR (300 MHz, CDCl₃) of compound **5n**.

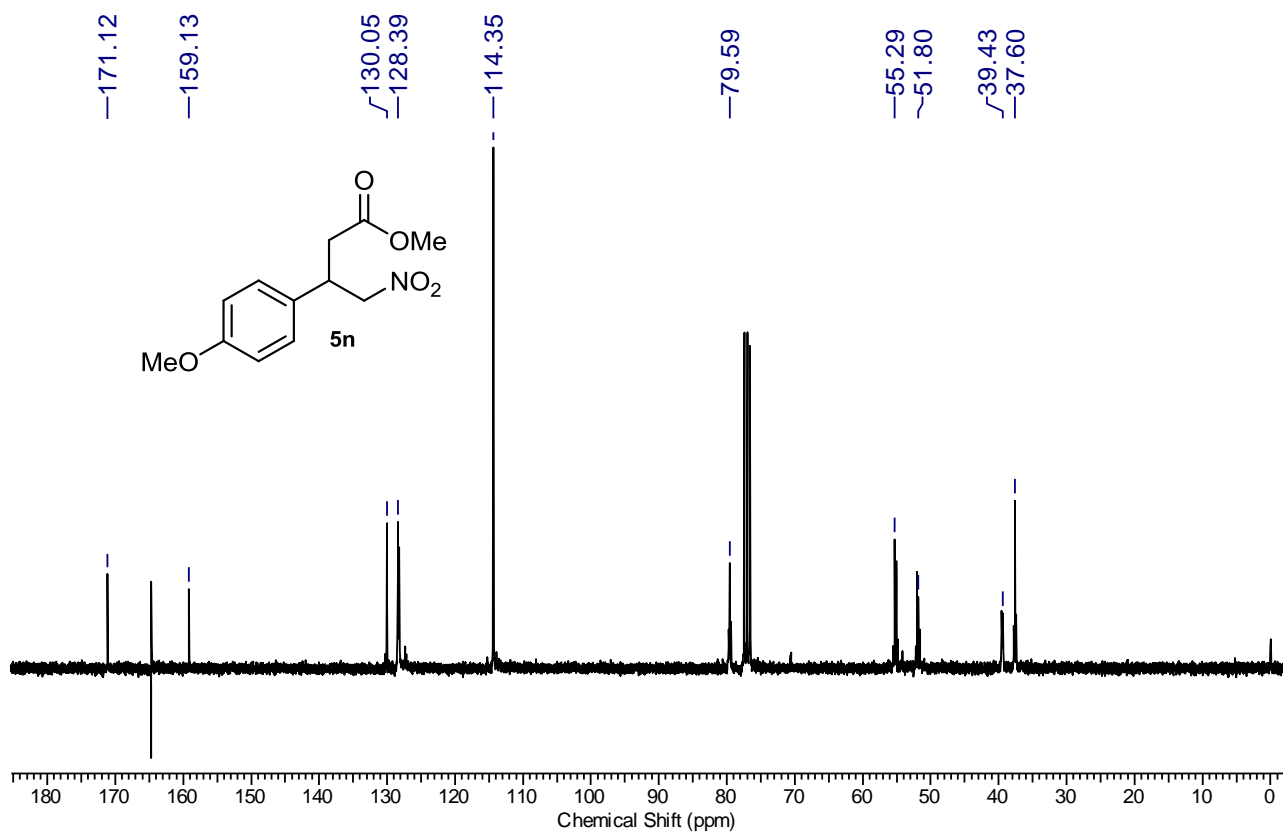


Figure S20. ¹³C NMR (75 MHz, CDCl₃) of compound **5n**.

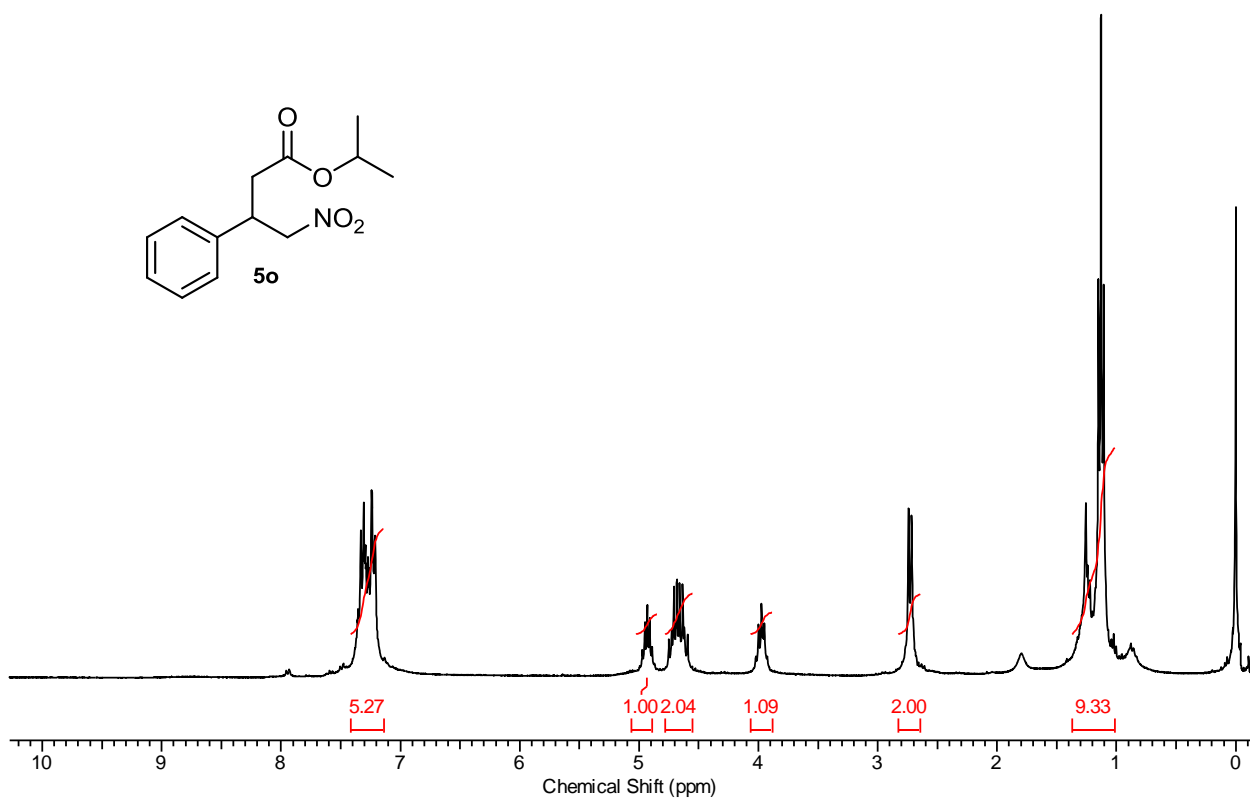


Figure S21. ¹H NMR (300 MHz, CDCl₃) of compound **5o**.

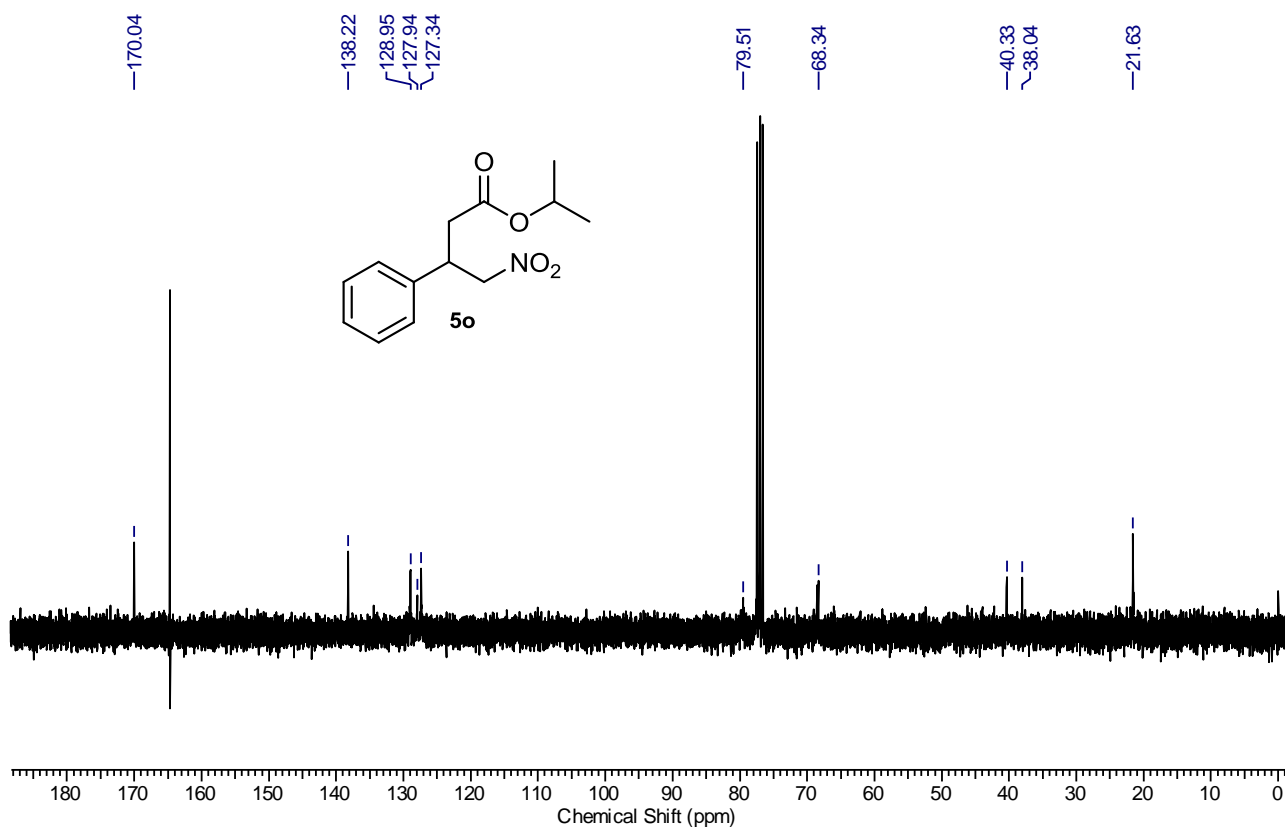


Figure S22. ¹³C NMR (75 MHz, CDCl₃) of compound **5o**.

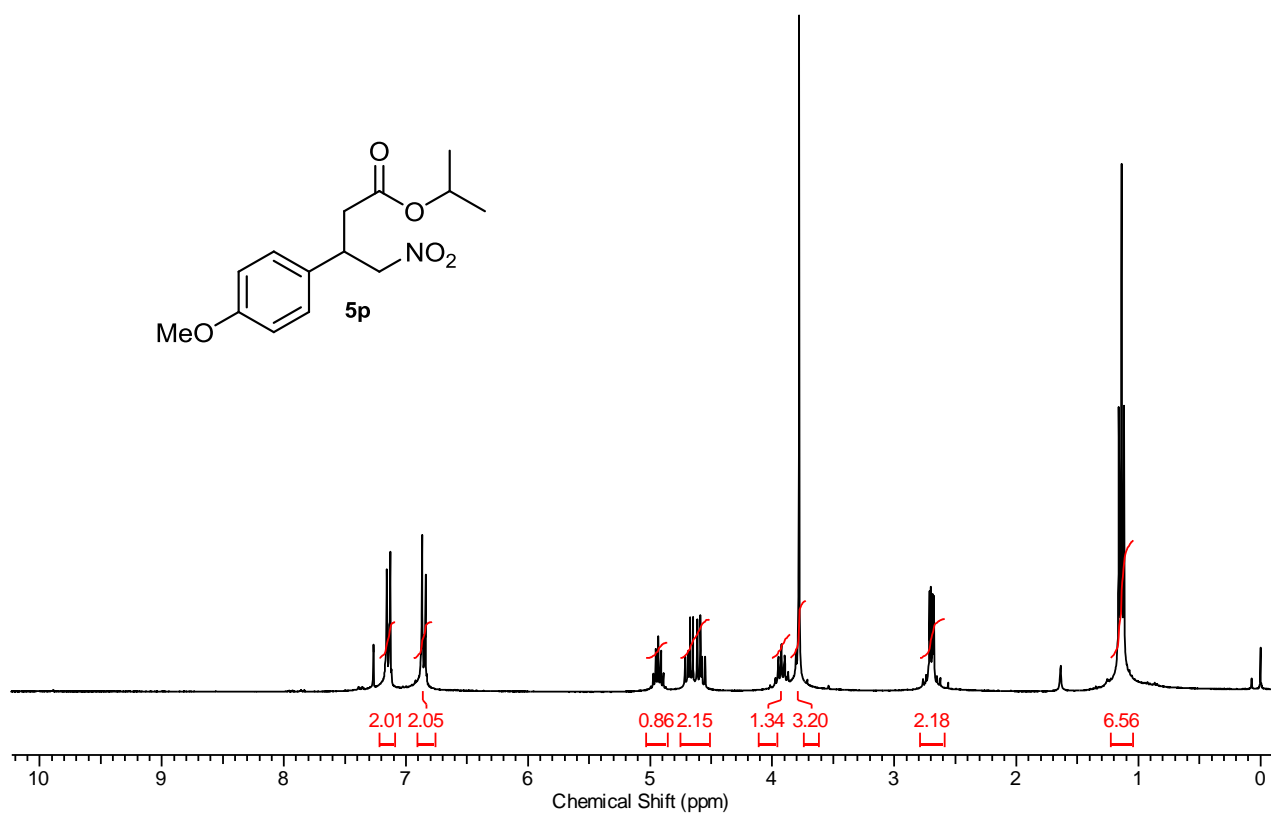


Figure S23. ¹H NMR (300 MHz, CDCl₃) of compound **5p**.

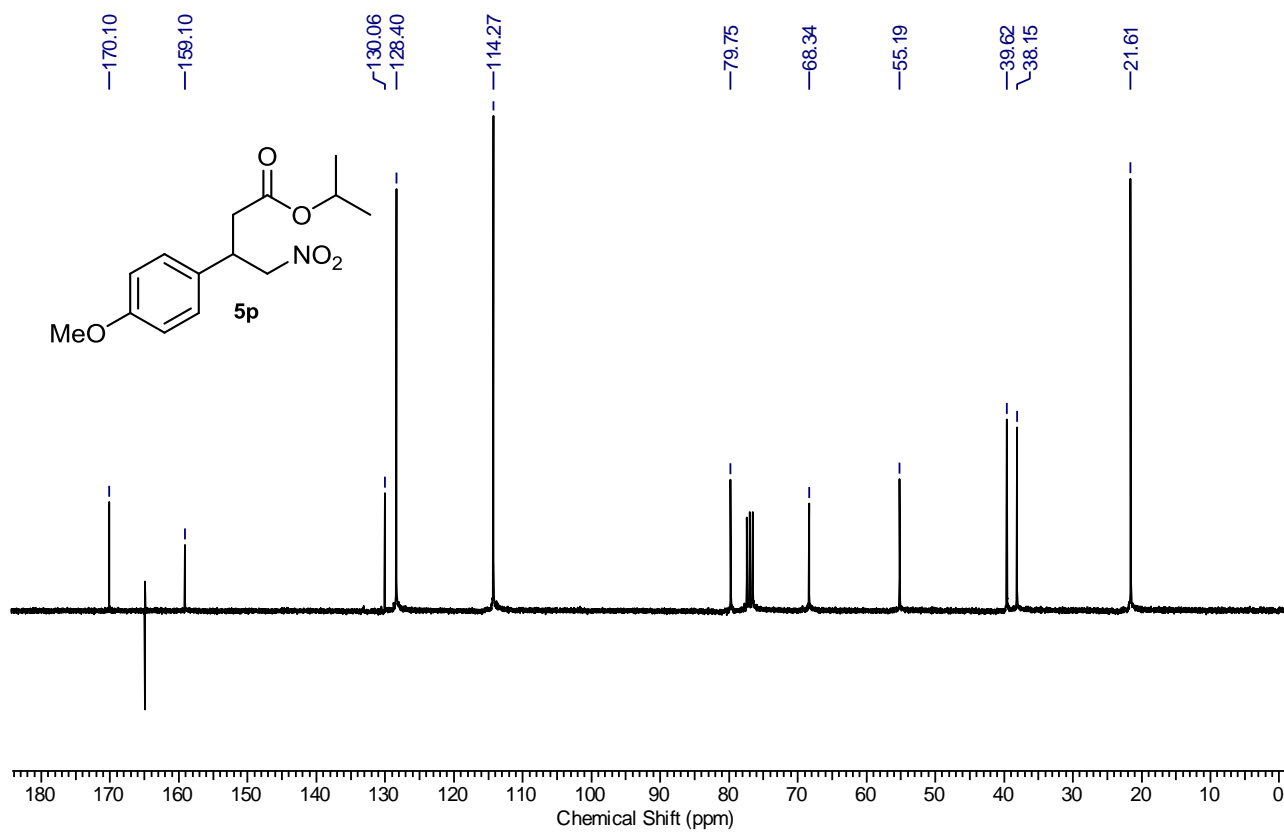


Figure S24. ¹³C NMR (75 MHz, CDCl₃) of compound **5p**.

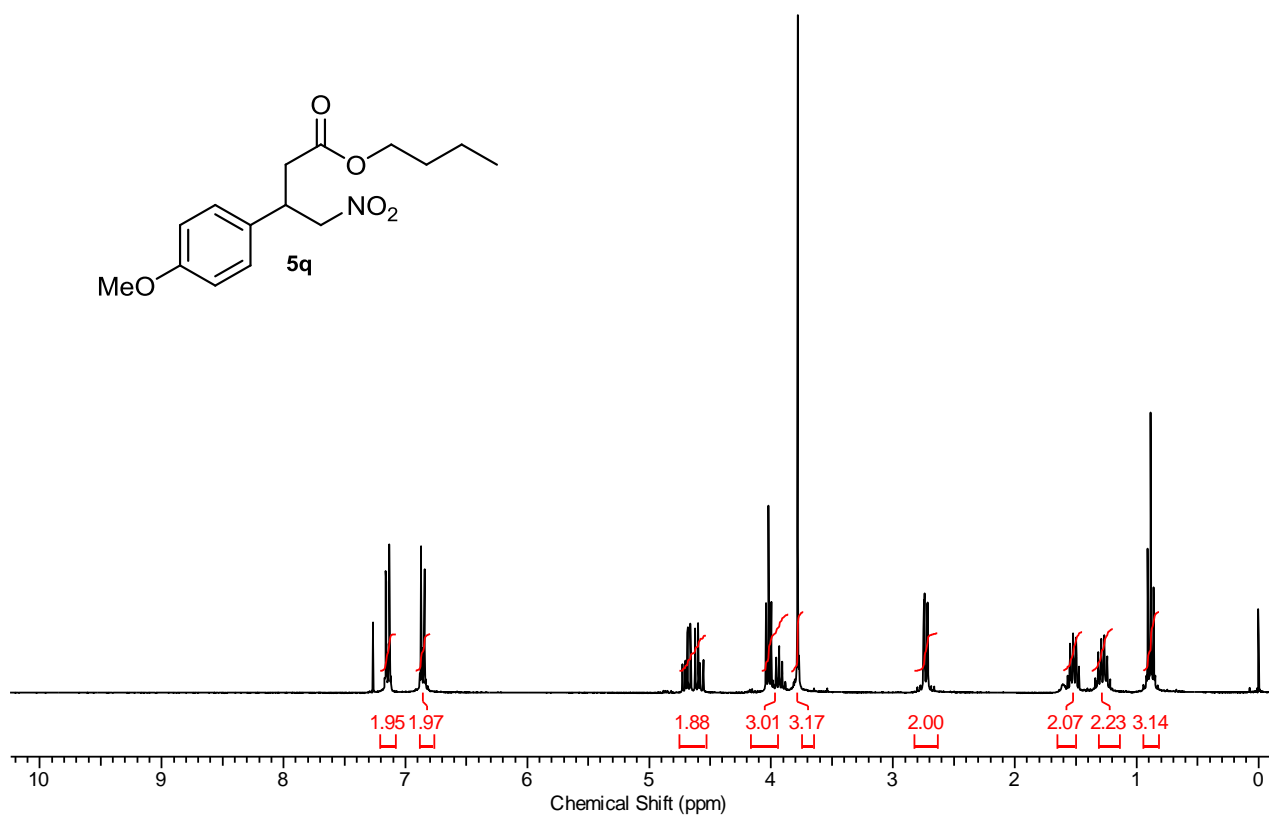


Figure S25. ¹H NMR (300 MHz, CDCl₃) of compound **5q**.

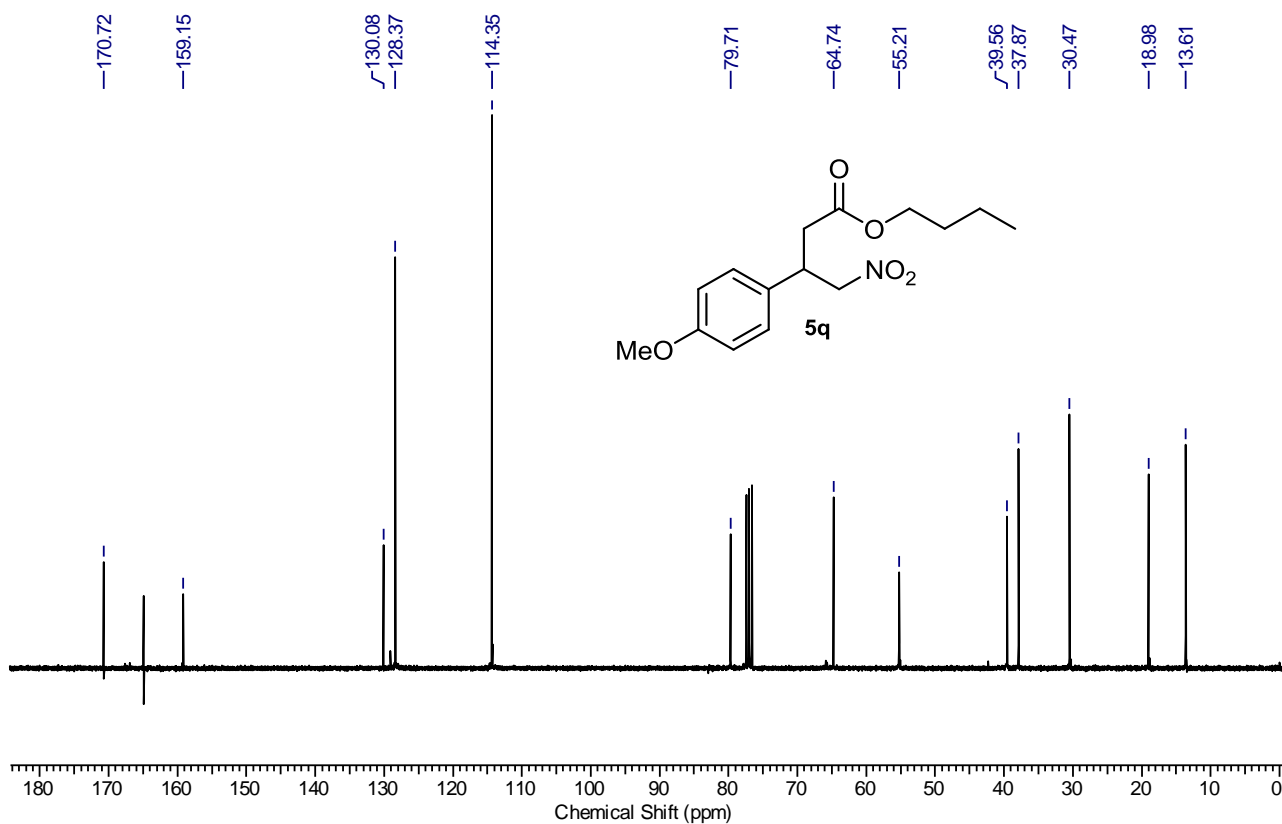


Figure S26. ¹³C NMR (75 MHz, CDCl₃) of compound **5q**.

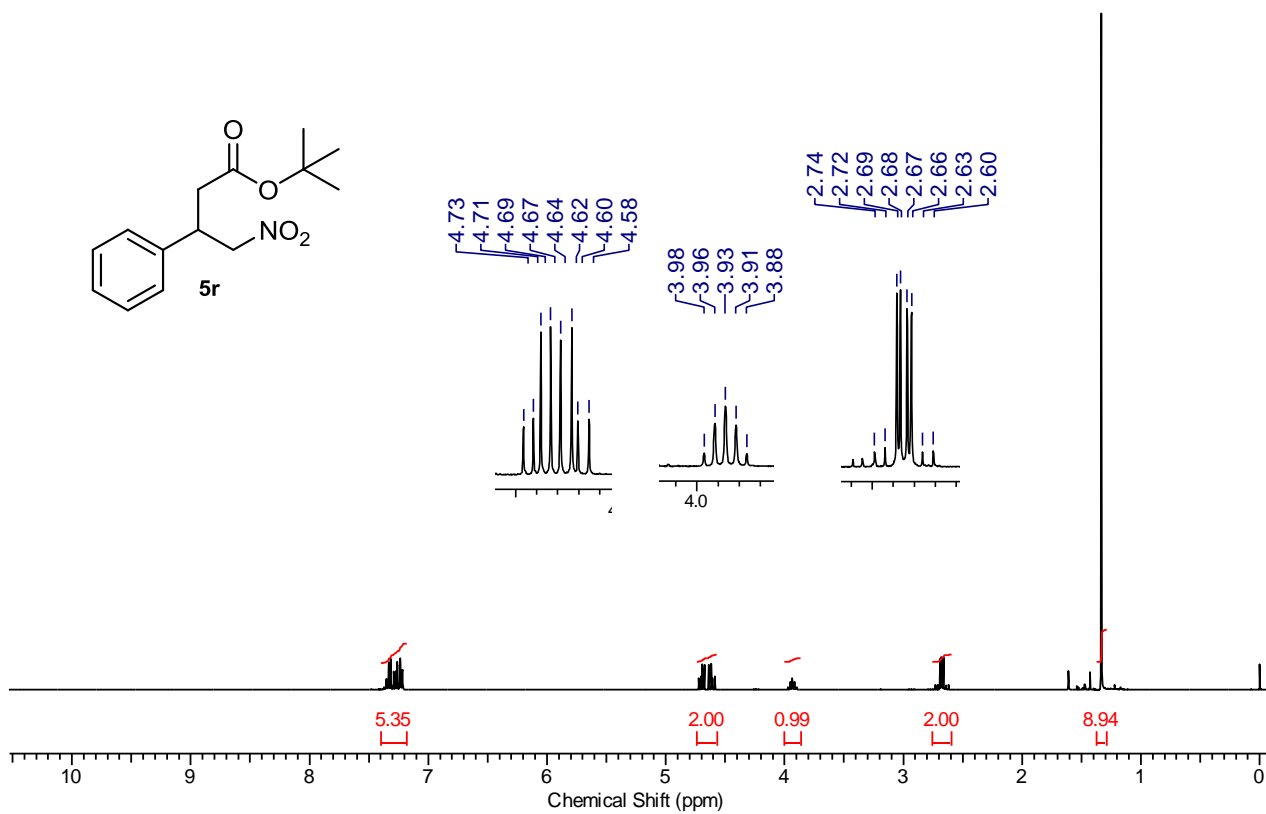


Figure S27. ¹H NMR(300 MHz, CDCl₃) of compound **5r**.

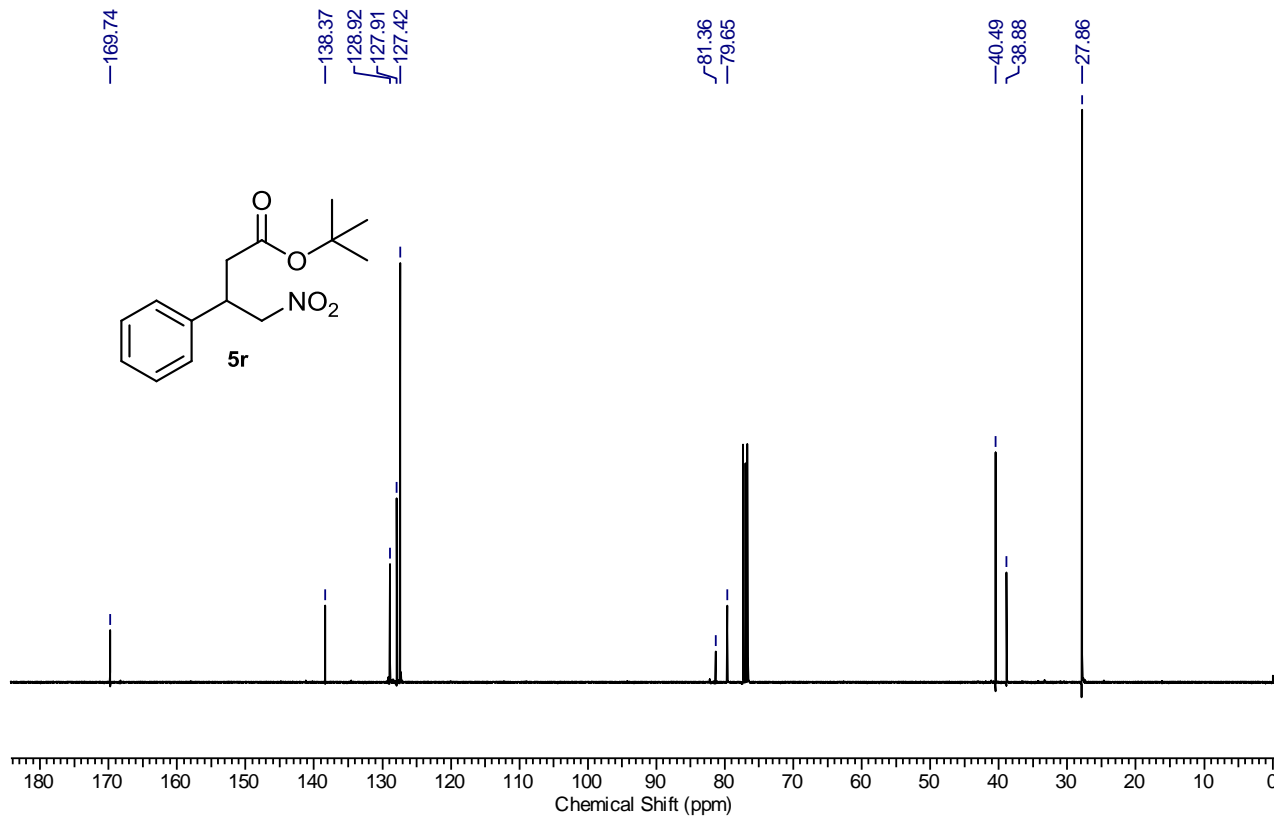


Figure S28. ¹³C NMR (75 MHz, CDCl₃) of compound **5r**.

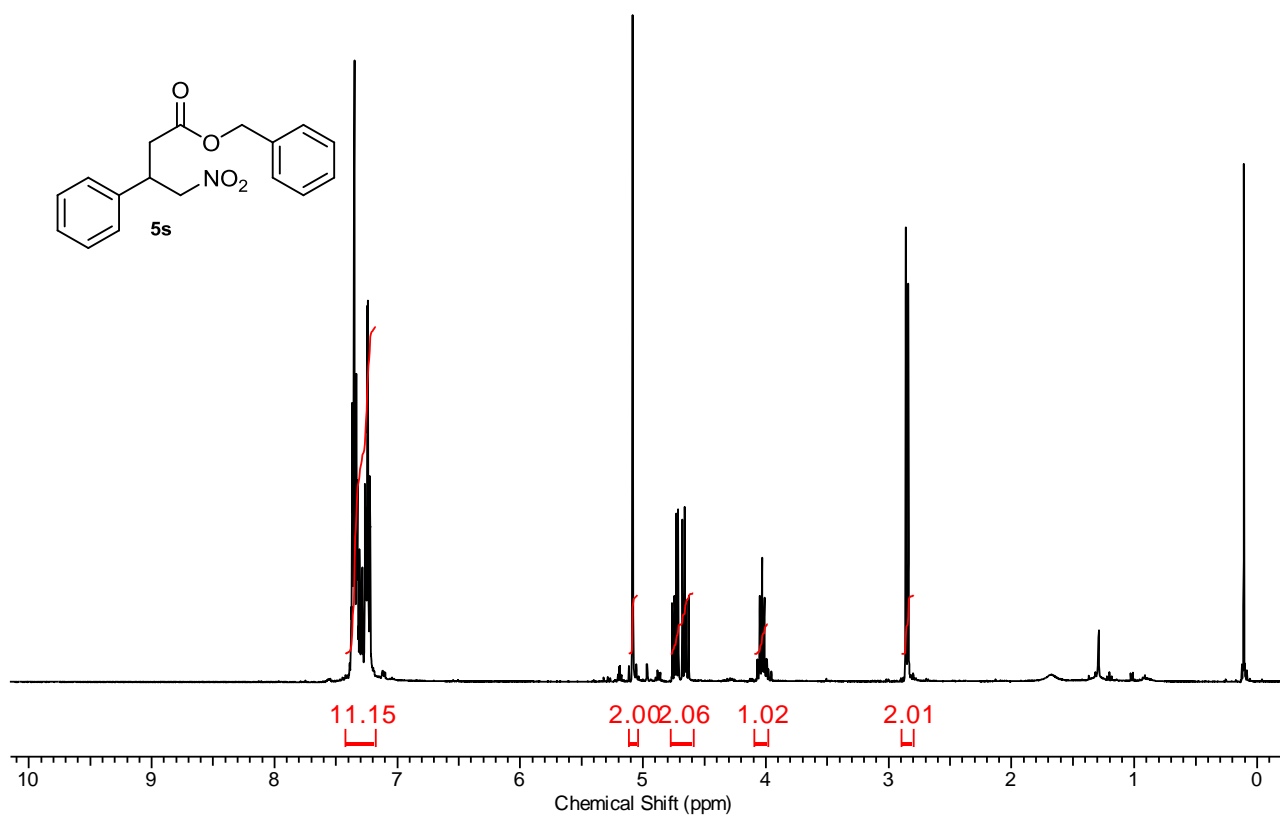


Figure S29. ¹H NMR (300 MHz, CDCl₃) of compound **5s**.

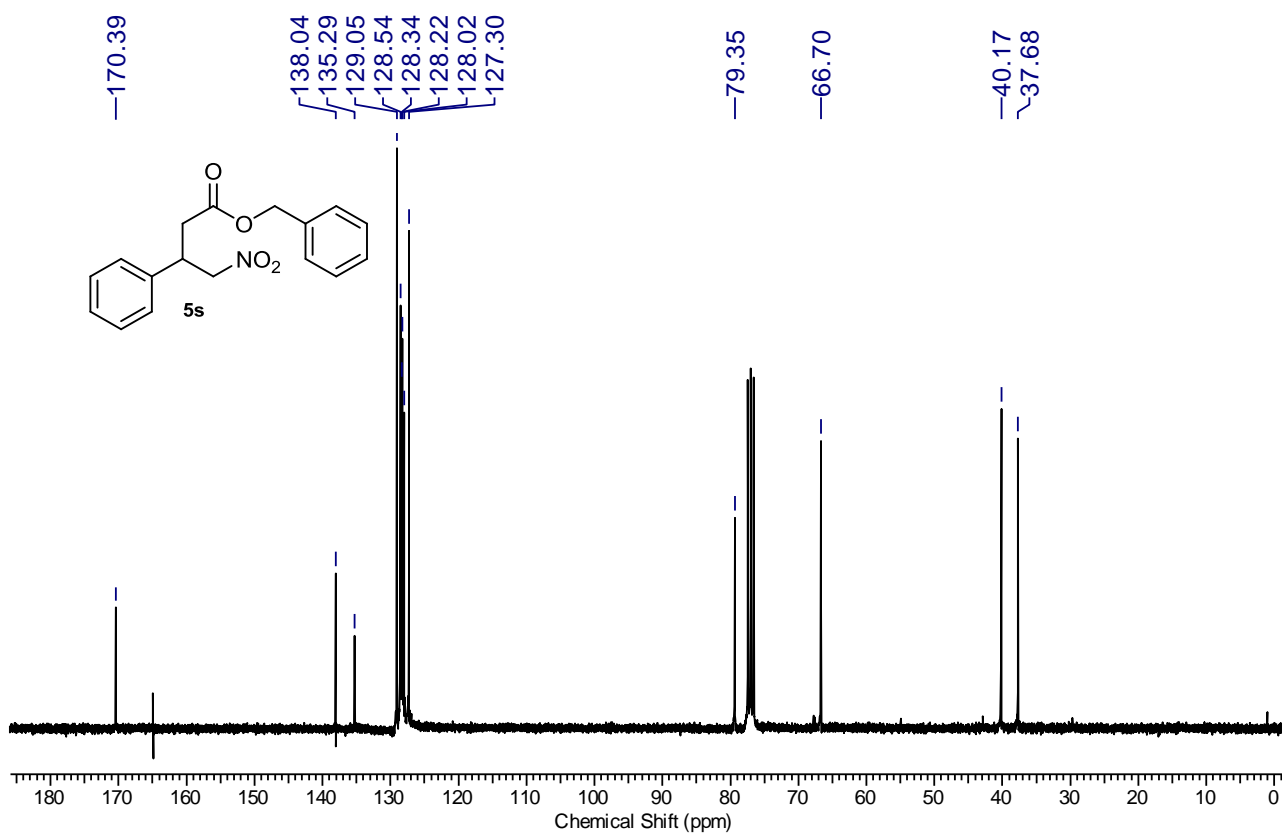


Figure S30. ¹³C NMR (75 MHz, CDCl₃) of compound **5s**.

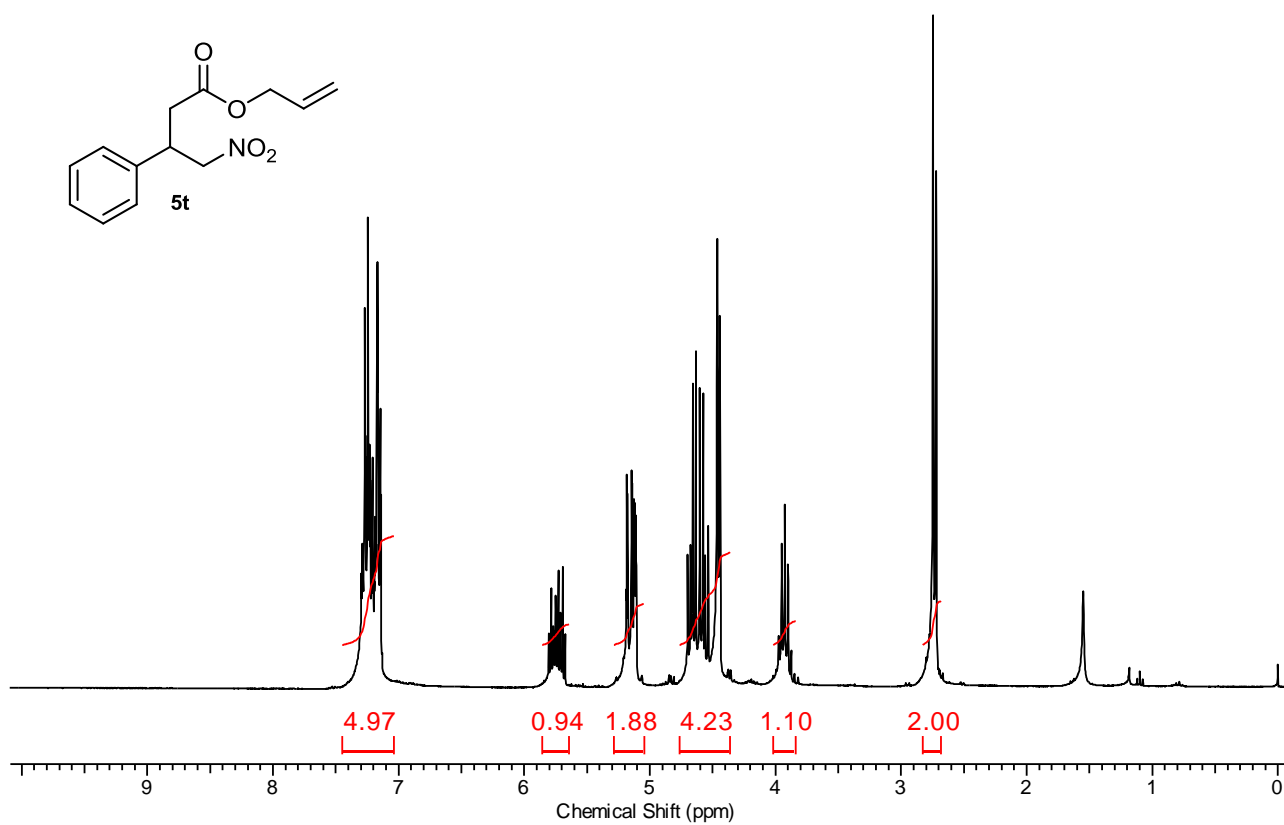


Figure S31. ^1H NMR (300 MHz, CDCl_3) of compound **5t**.

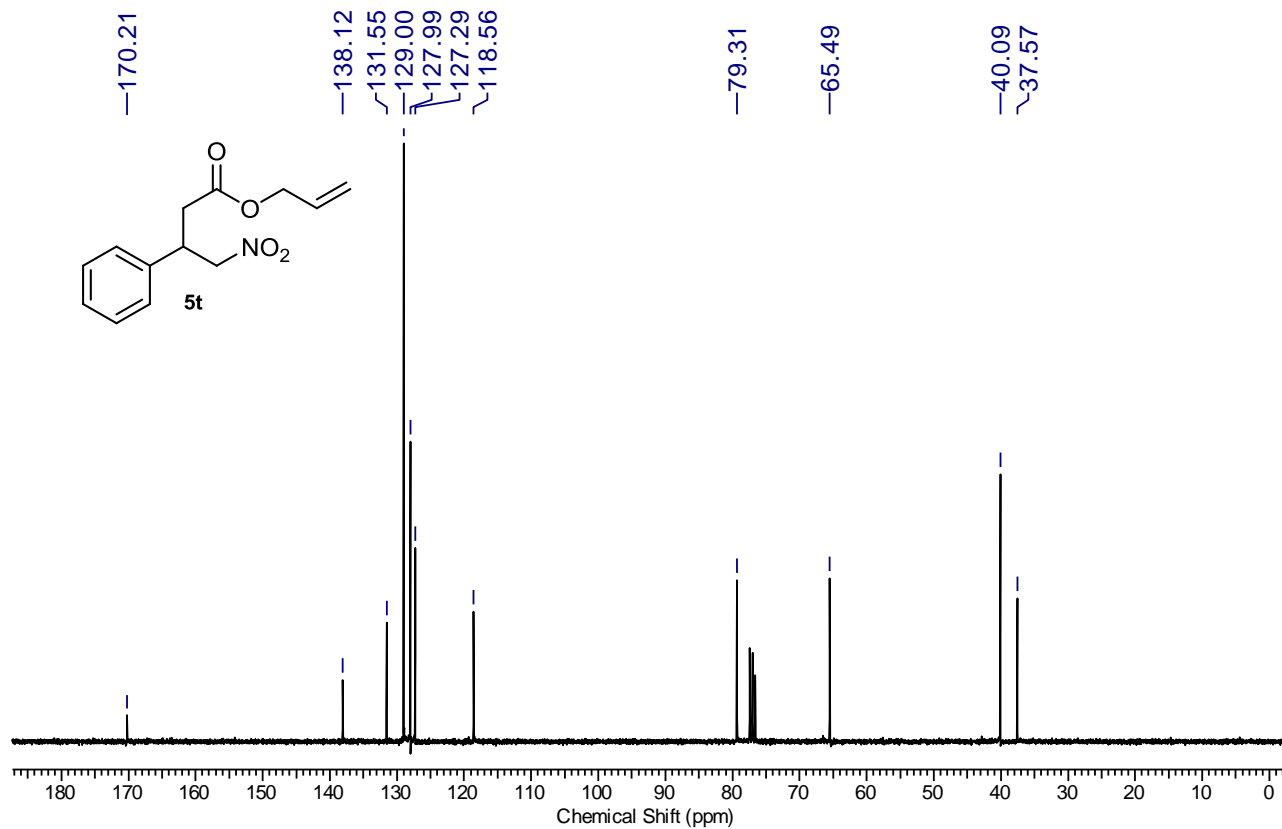


Figure S32. ^{13}C NMR (75 MHz, CDCl_3) of compound **5t**.

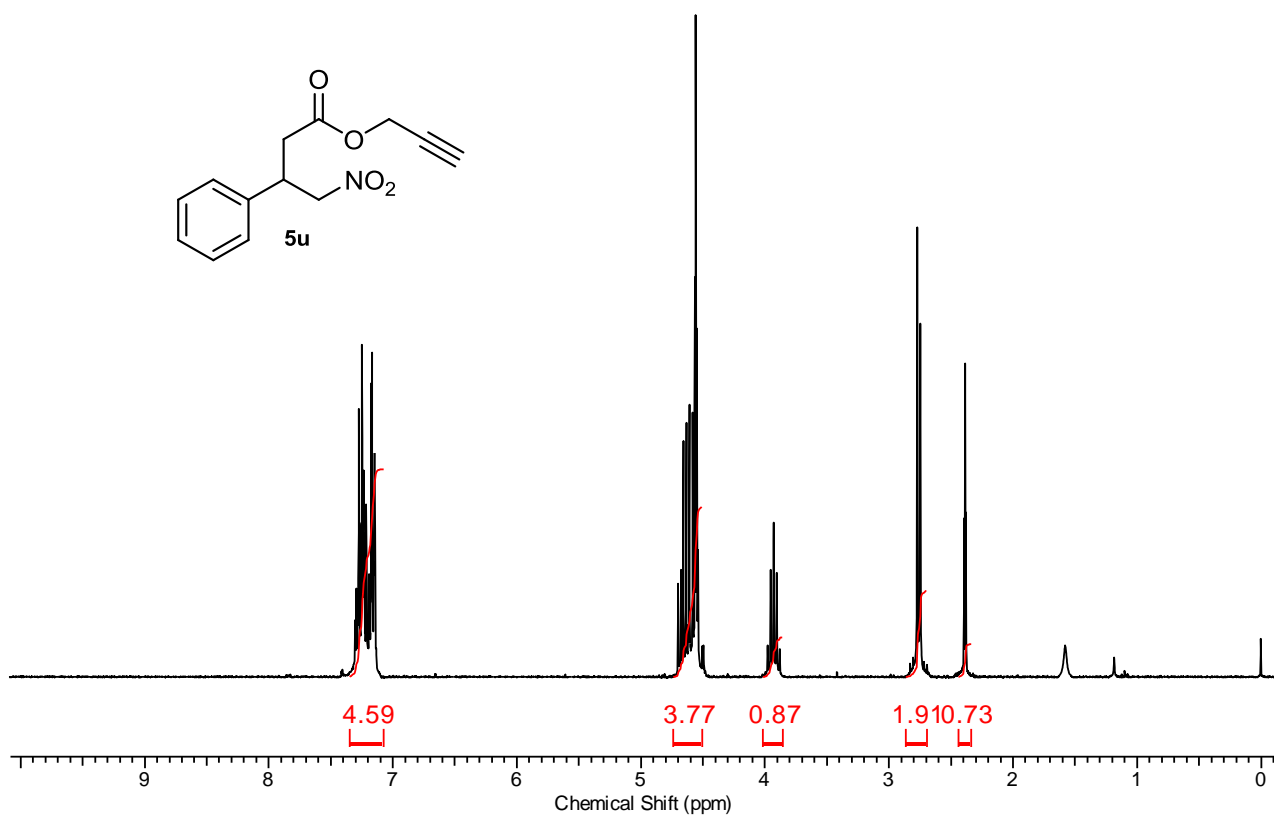


Figure S33. ¹H NMR (300 MHz, CDCl₃) of compound **5u**.

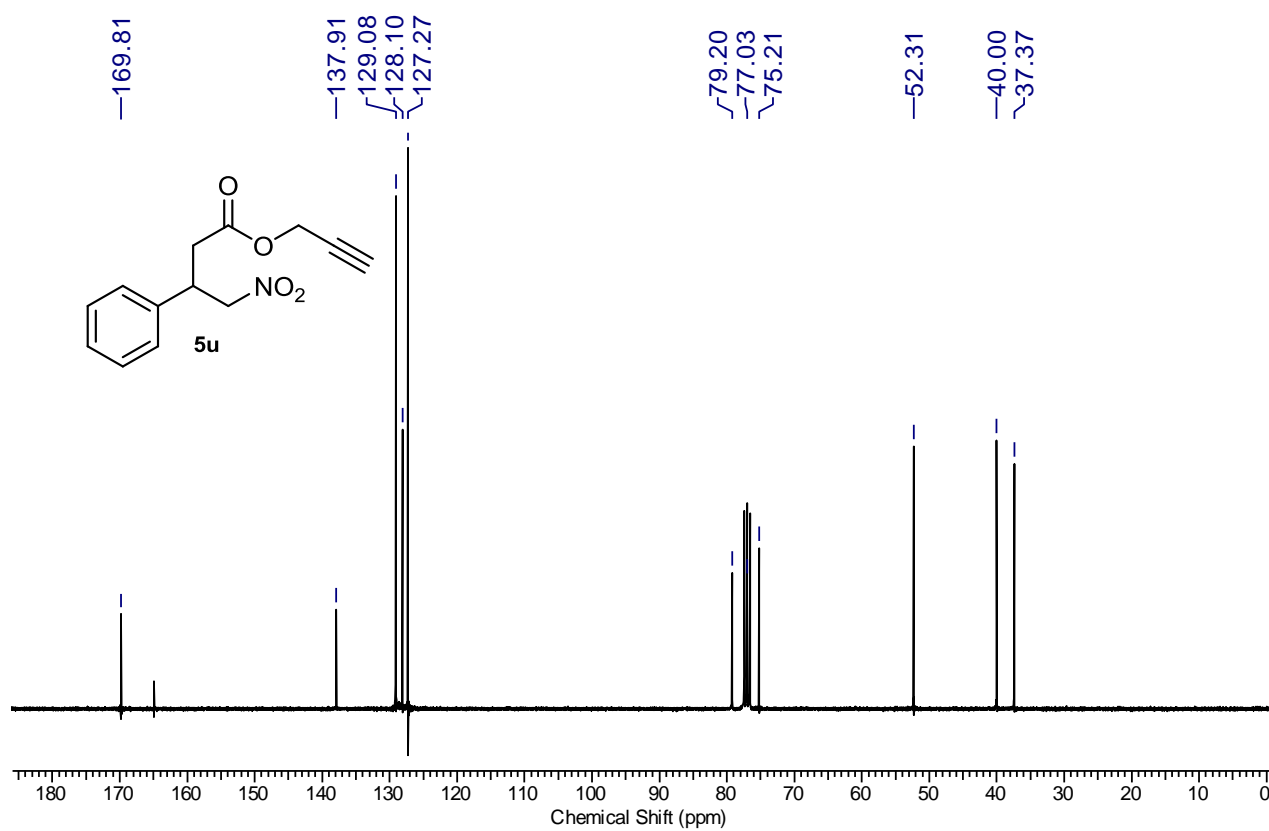


Figure S34. ¹³C NMR (75 MHz, CDCl₃) of compound **5u**.

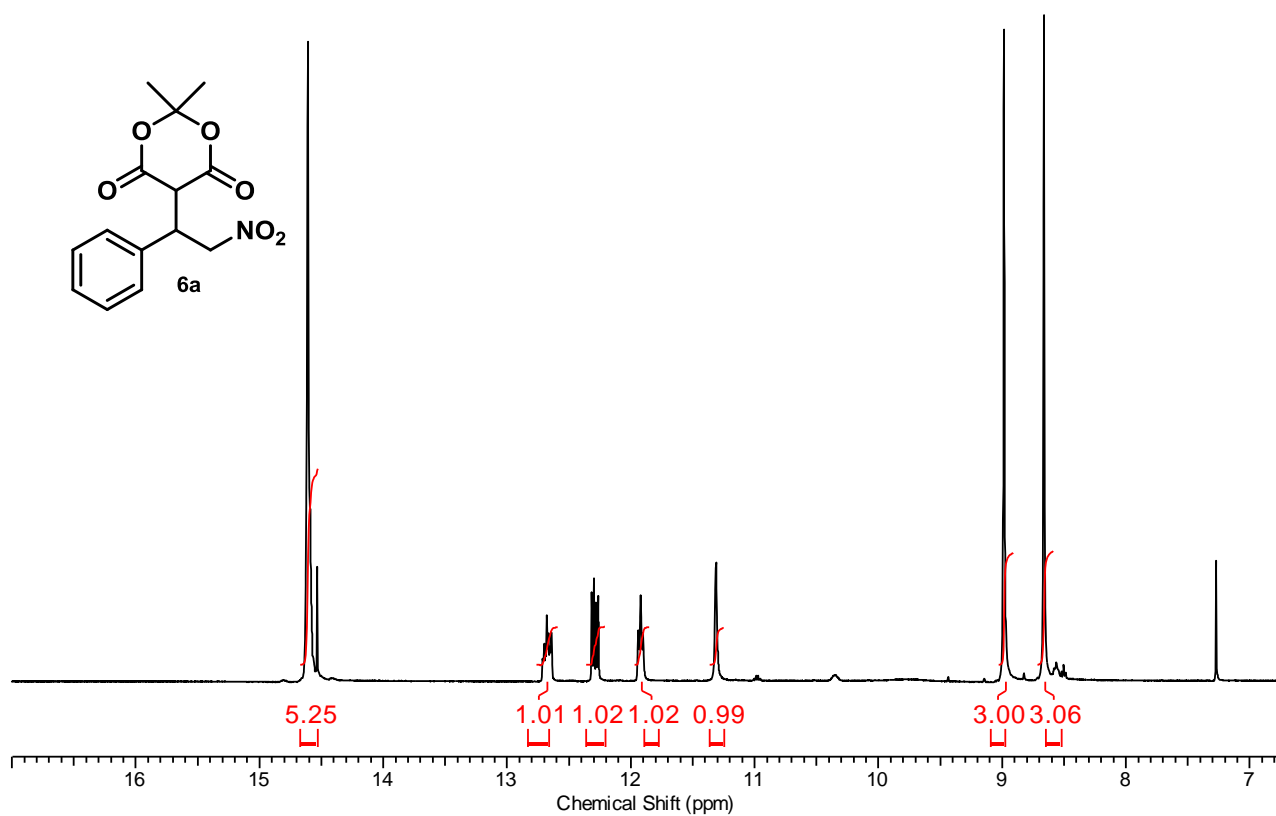


Figure S35. ¹H NMR (300 MHz, CDCl₃) of compound **6a**.

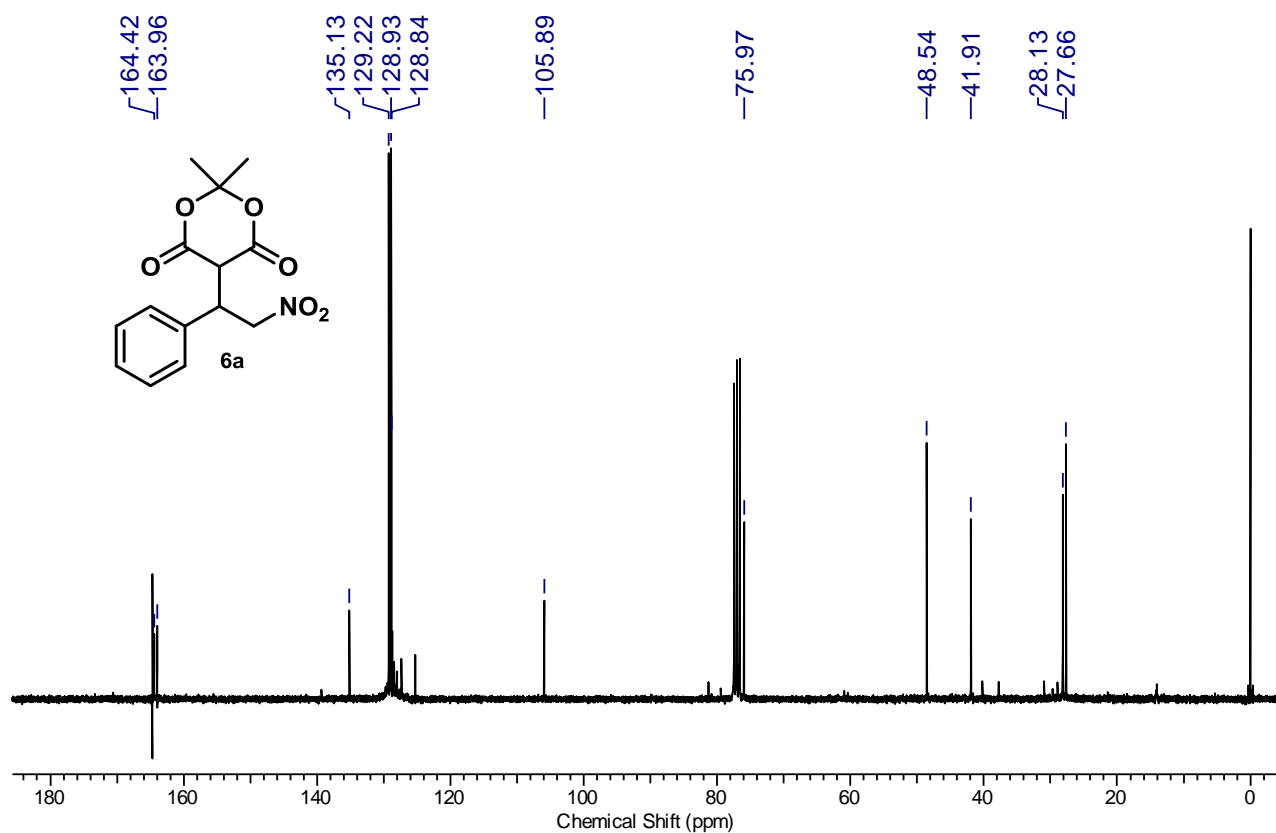


Figure S36. ¹³C NMR (75 MHz, CDCl₃) of compound **6a**.

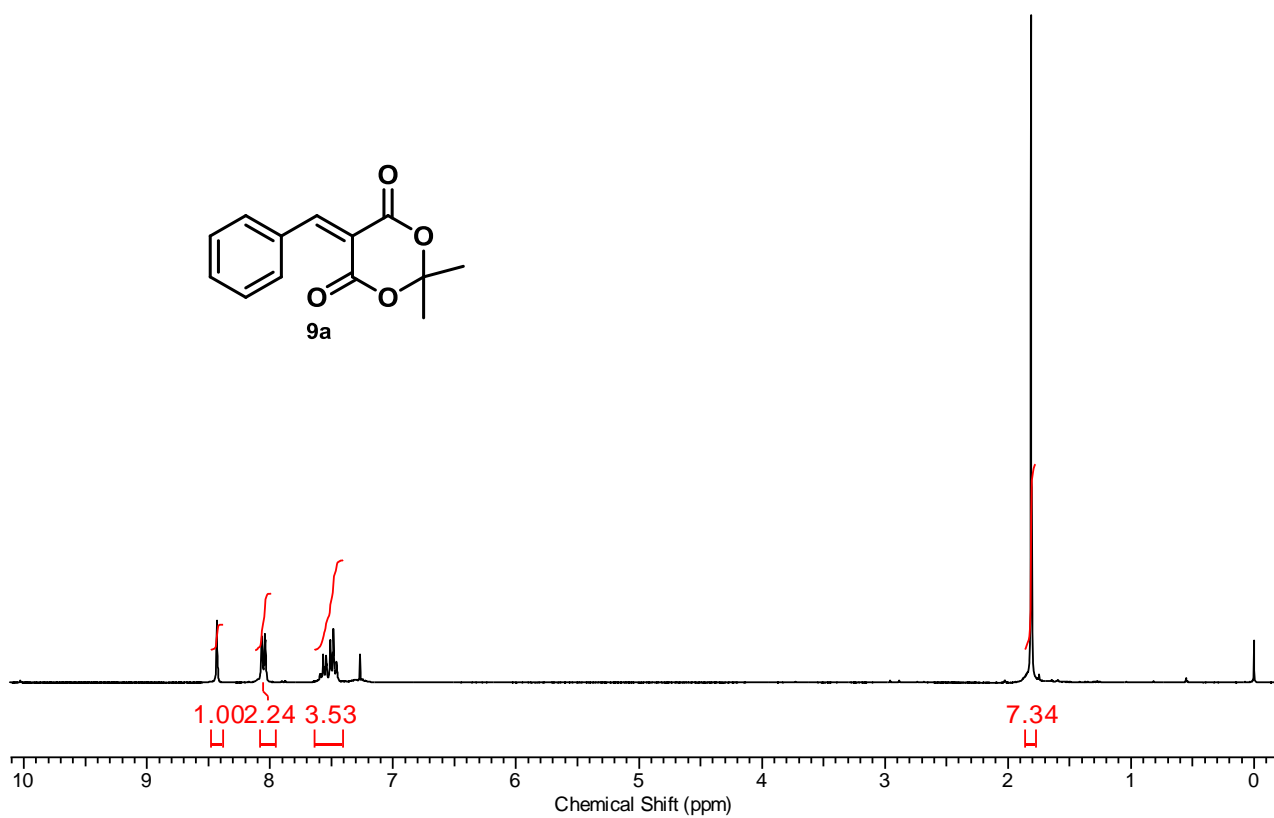


Figure S37. ^1H NMR (300 MHz, CDCl_3) of compound **9a**.

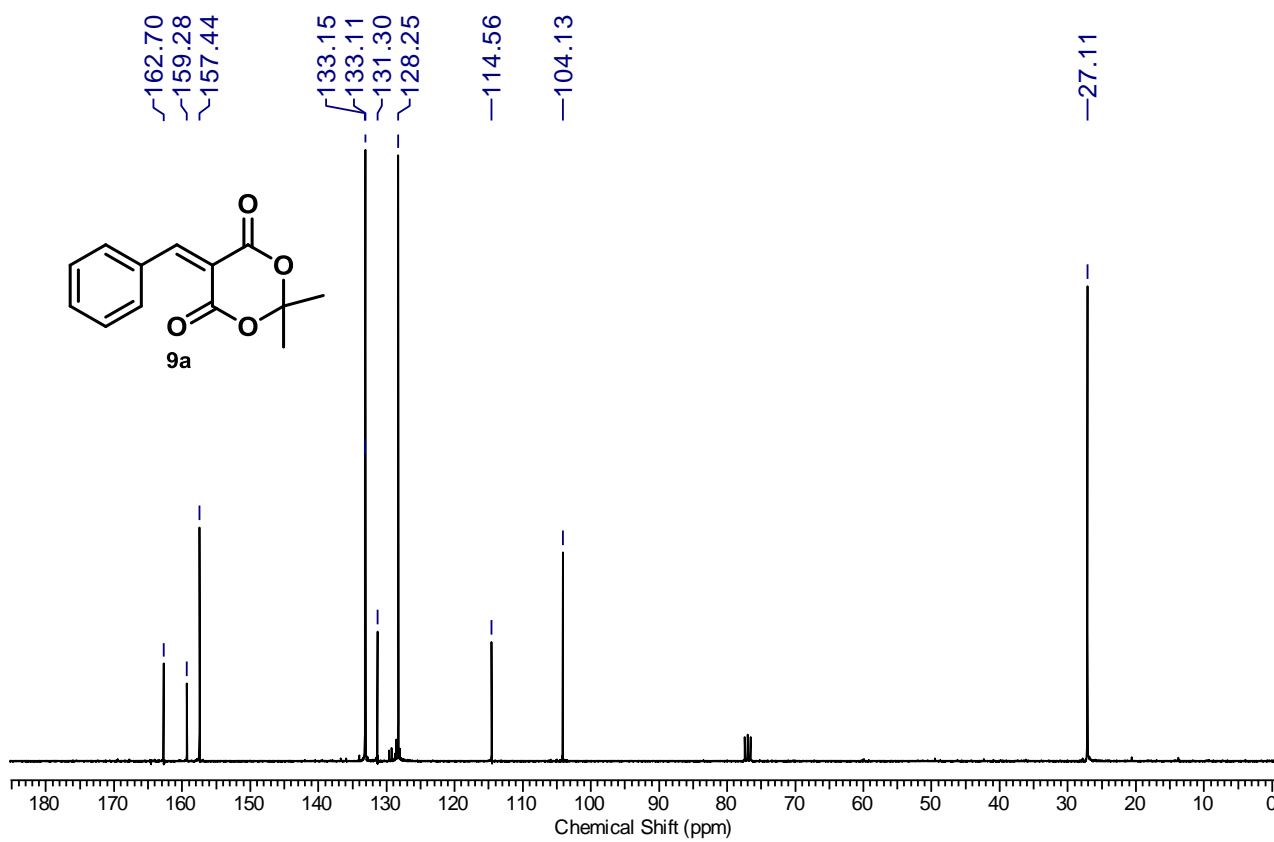


Figure S38. ^{13}C NMR (75 MHz, CDCl_3) of compound **9a**.

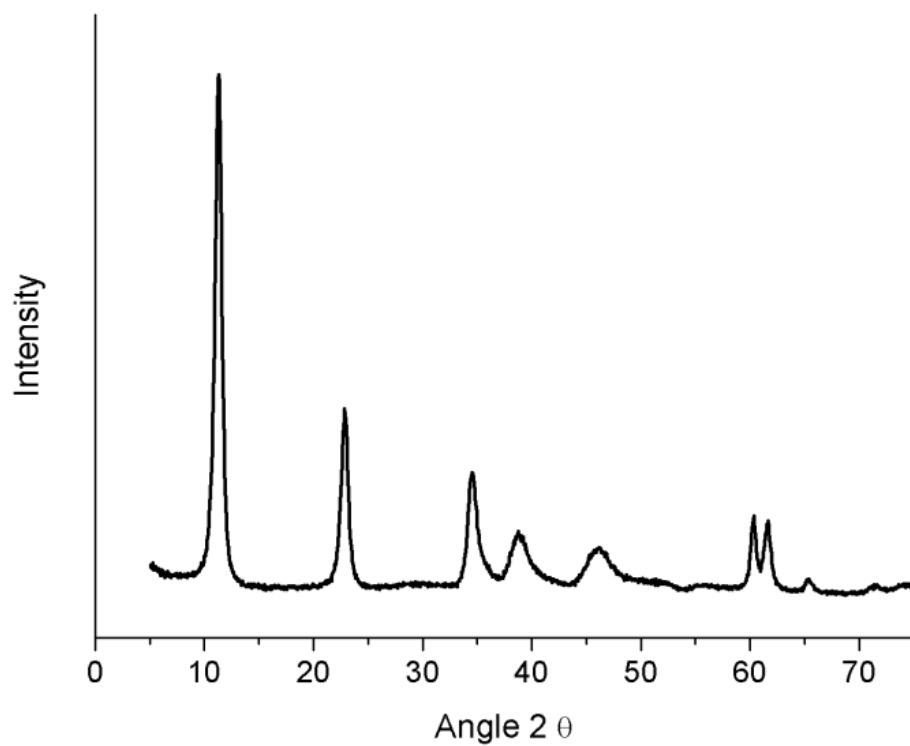


Figure S39. Powder X-ray diffraction of the synthesized hydrotalcite-HT.

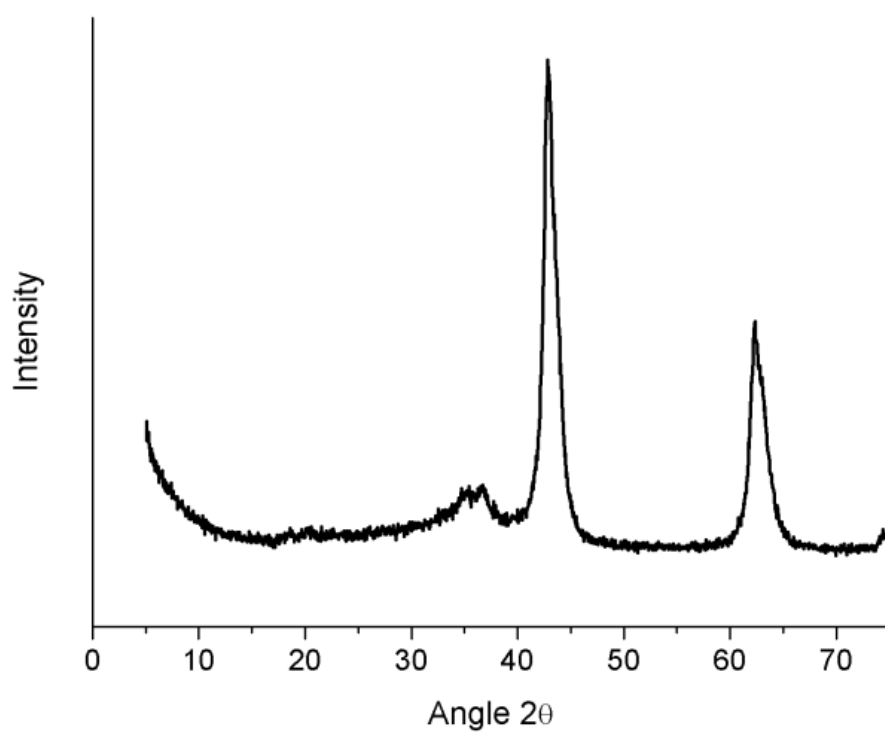


Figure S40. Powder X-ray diffraction of synthesized hydrotalcite-derived mixed oxides-HT_[Calc.].