

Supporting Information

Pd-*N*-heterocyclic carbene complex catalyzed C-H Bond activation of 2-isobutylthiazole at C5 position with aryl bromides

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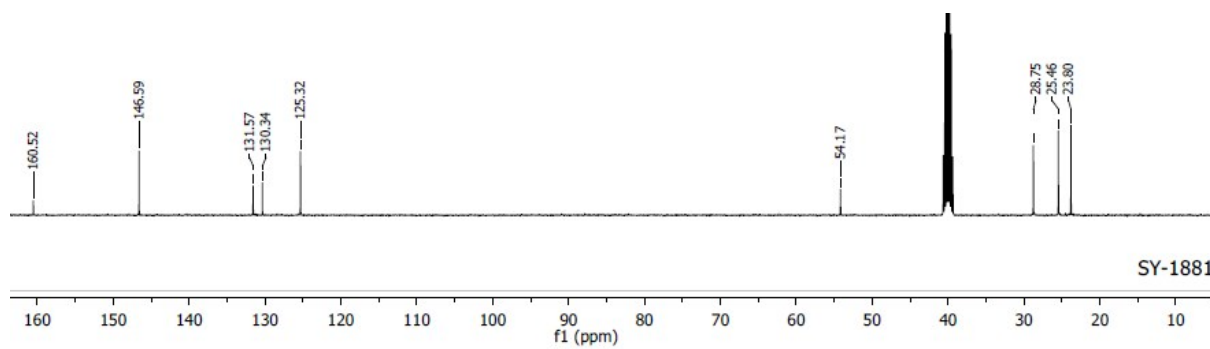
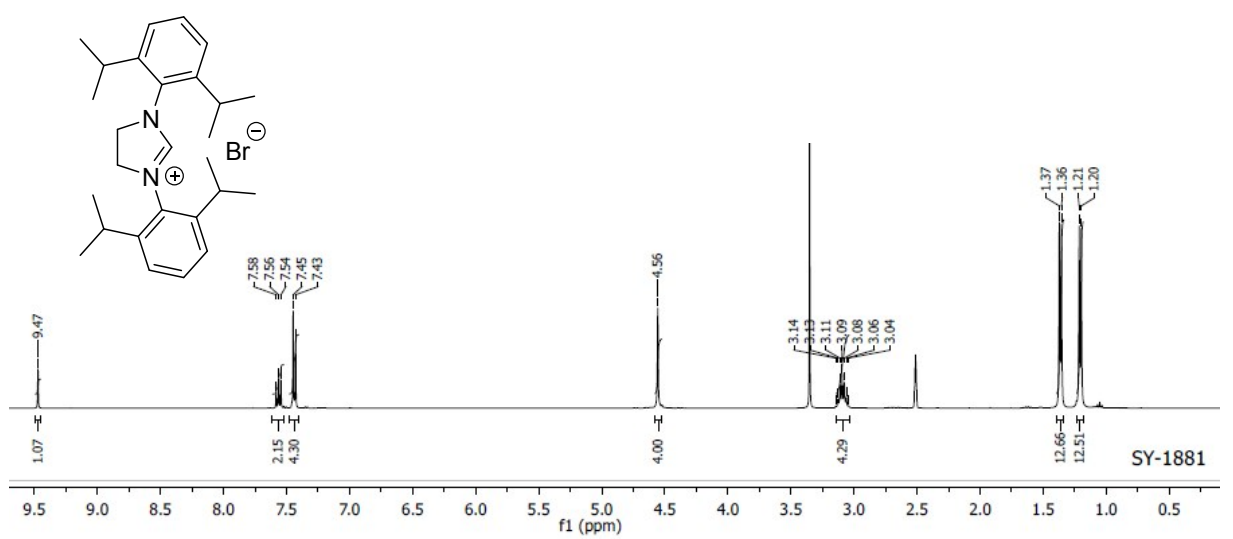


Figure S1. ¹H NMR and ¹³C NMR spectra of **1**

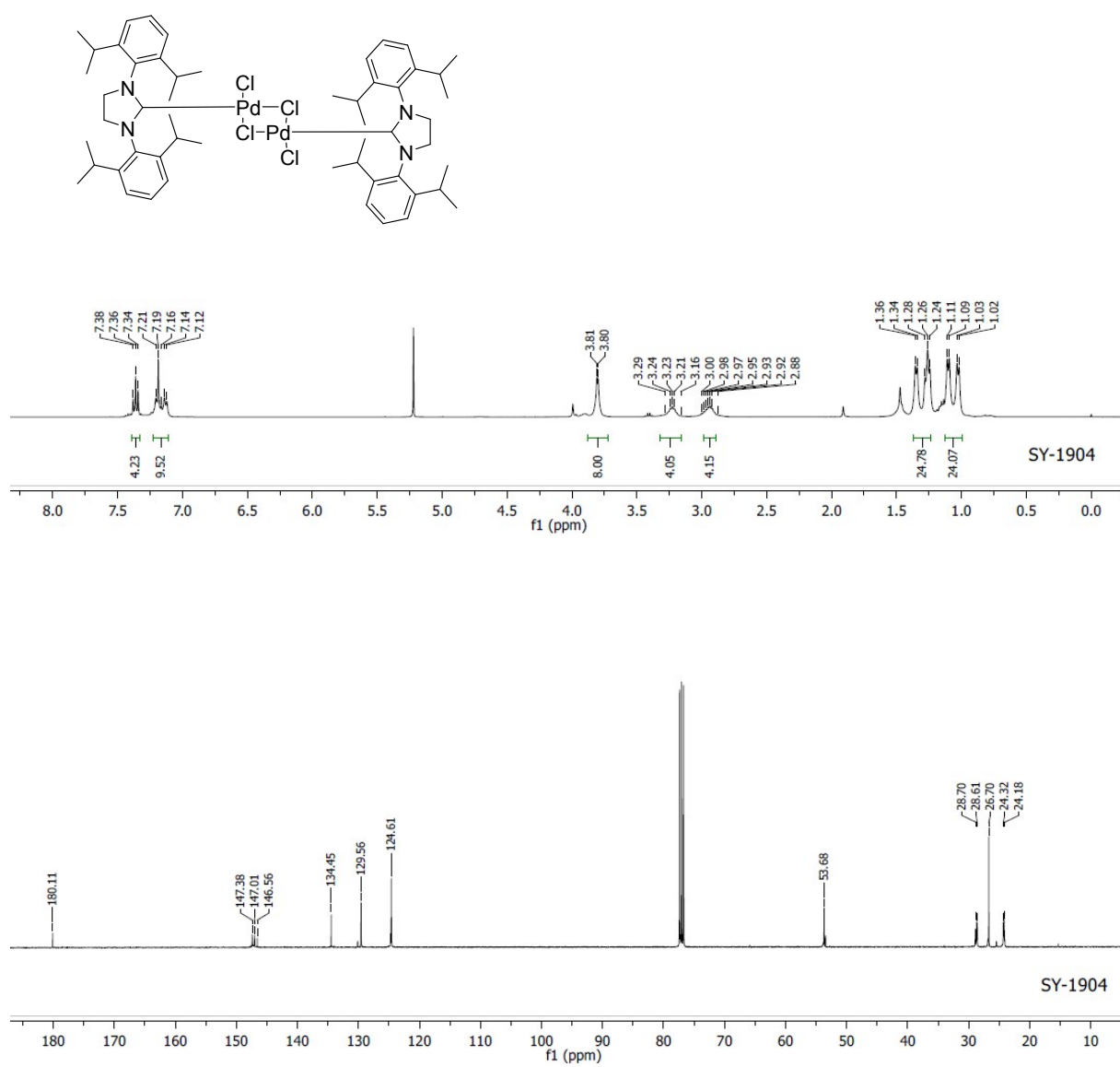


Figure S2. ¹H NMR and ¹³C NMR spectra of **2**

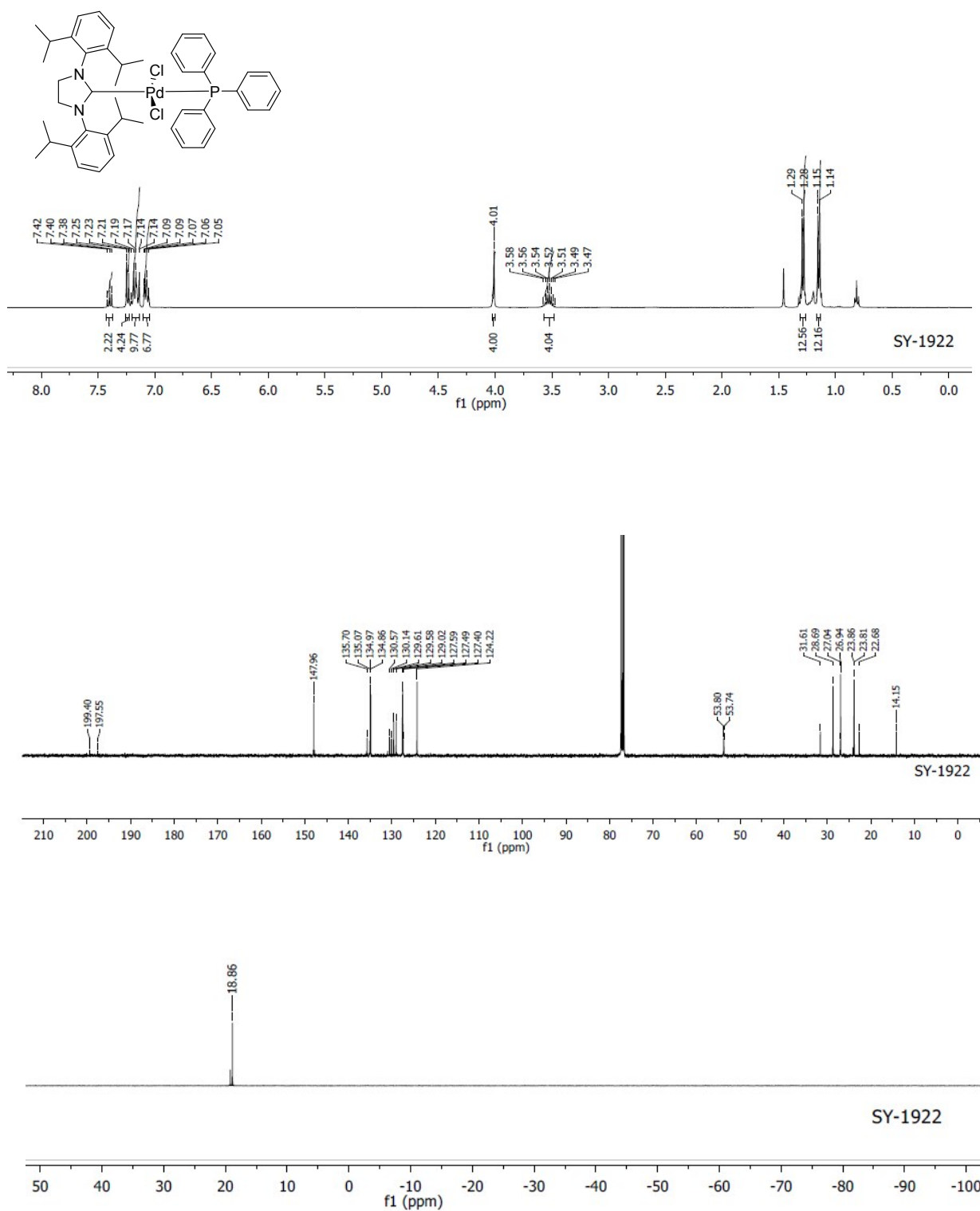


Figure S3. ¹H NMR, ¹³C NMR and ³¹P NMR spectra of **3**

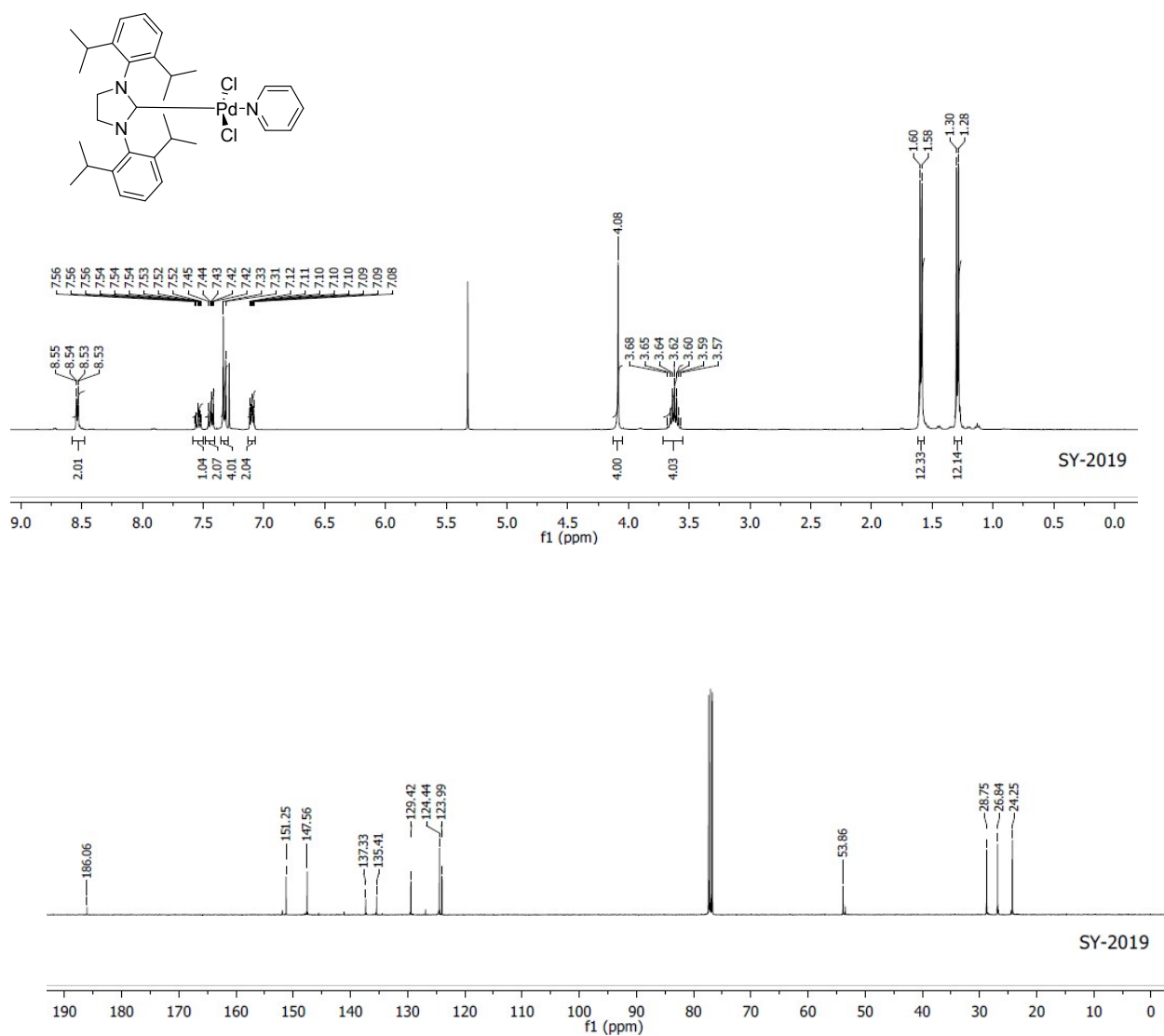


Figure S4. ¹H NMR and ¹³C NMR spectra of 4

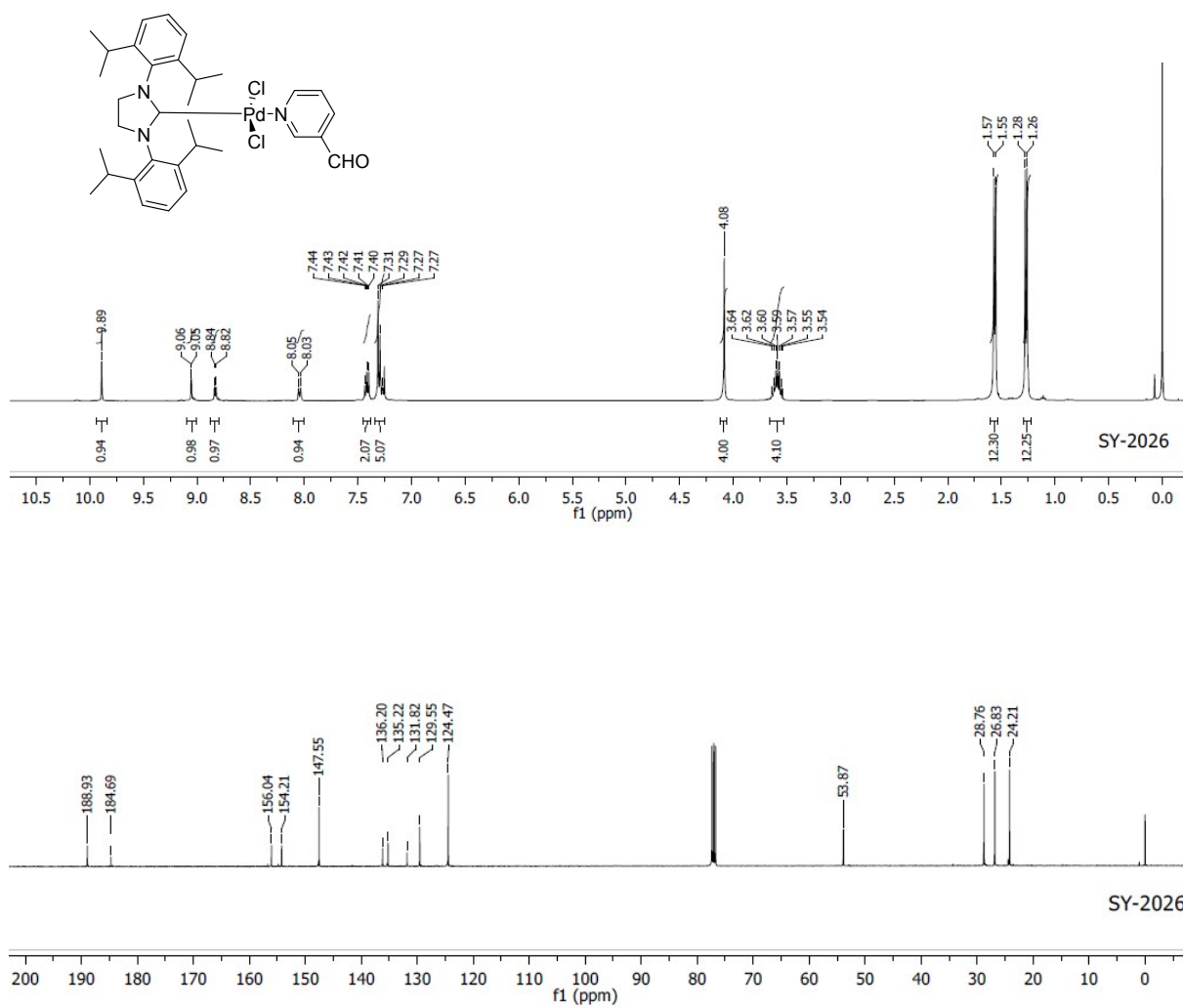


Figure S5. ¹H NMR and ¹³C NMR spectra of 5

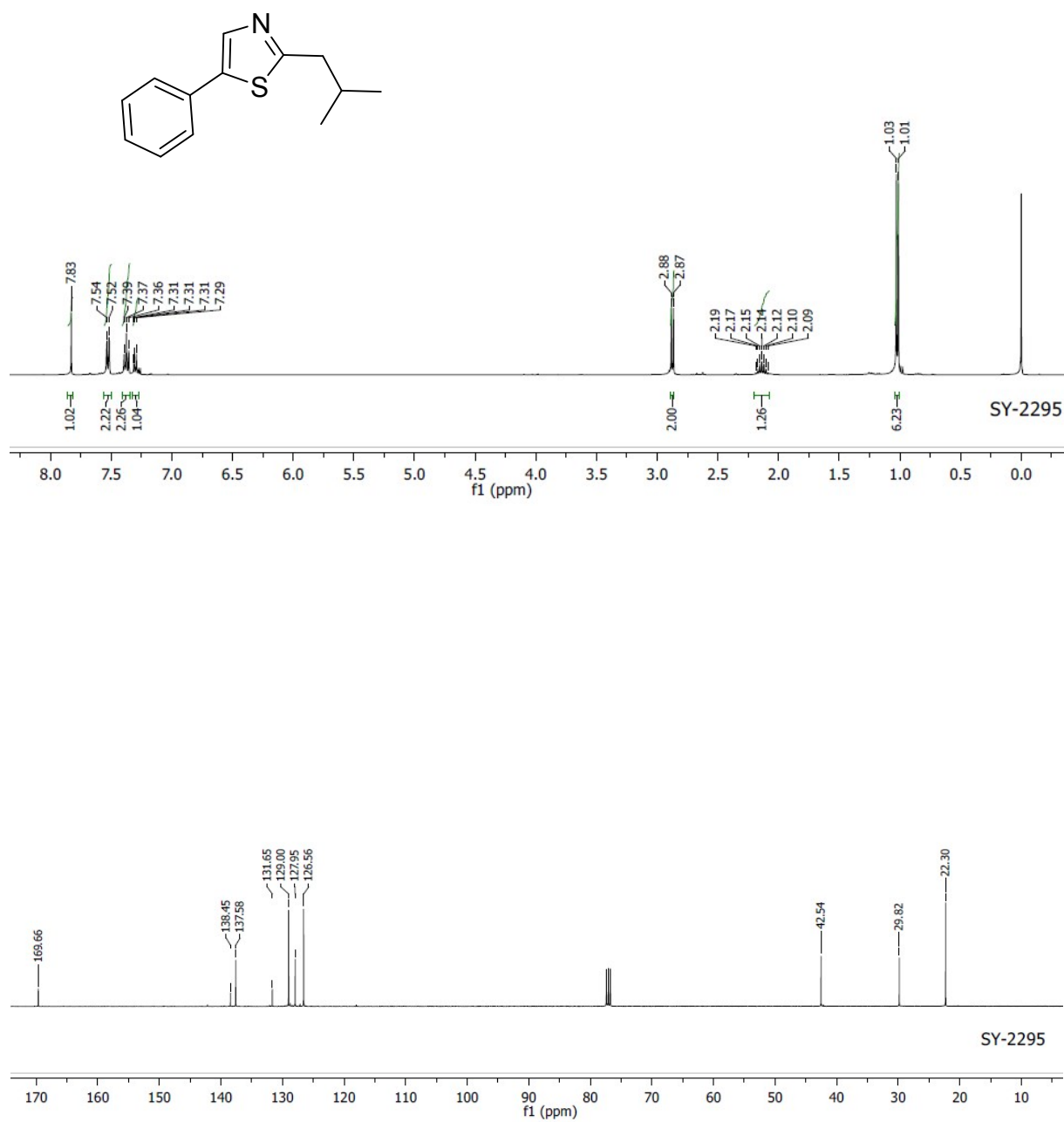


Figure S6. ¹H NMR and ¹³C NMR spectra of **6a**

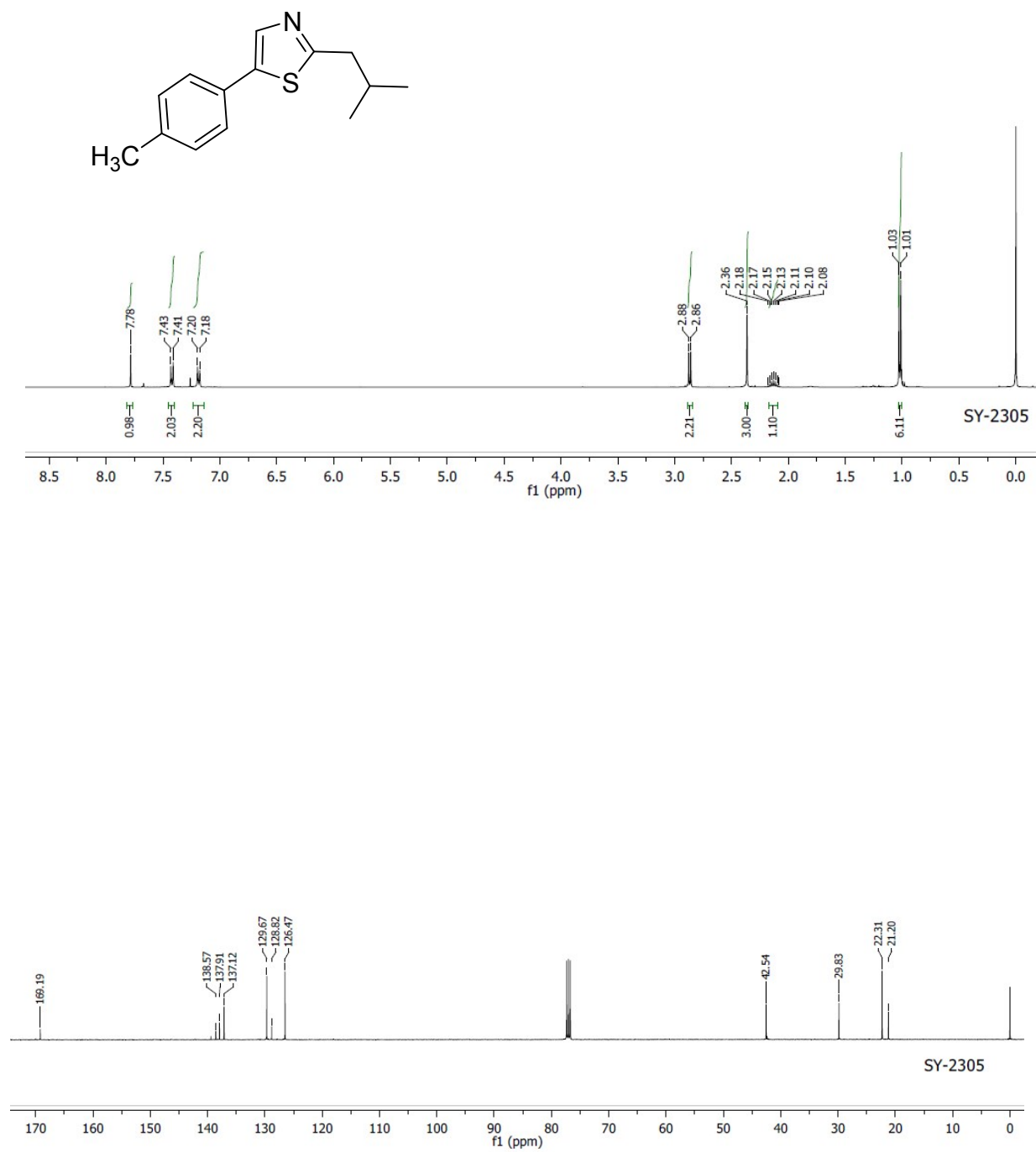


Figure S7. ^1H NMR and ^{13}C NMR spectra of **6b**

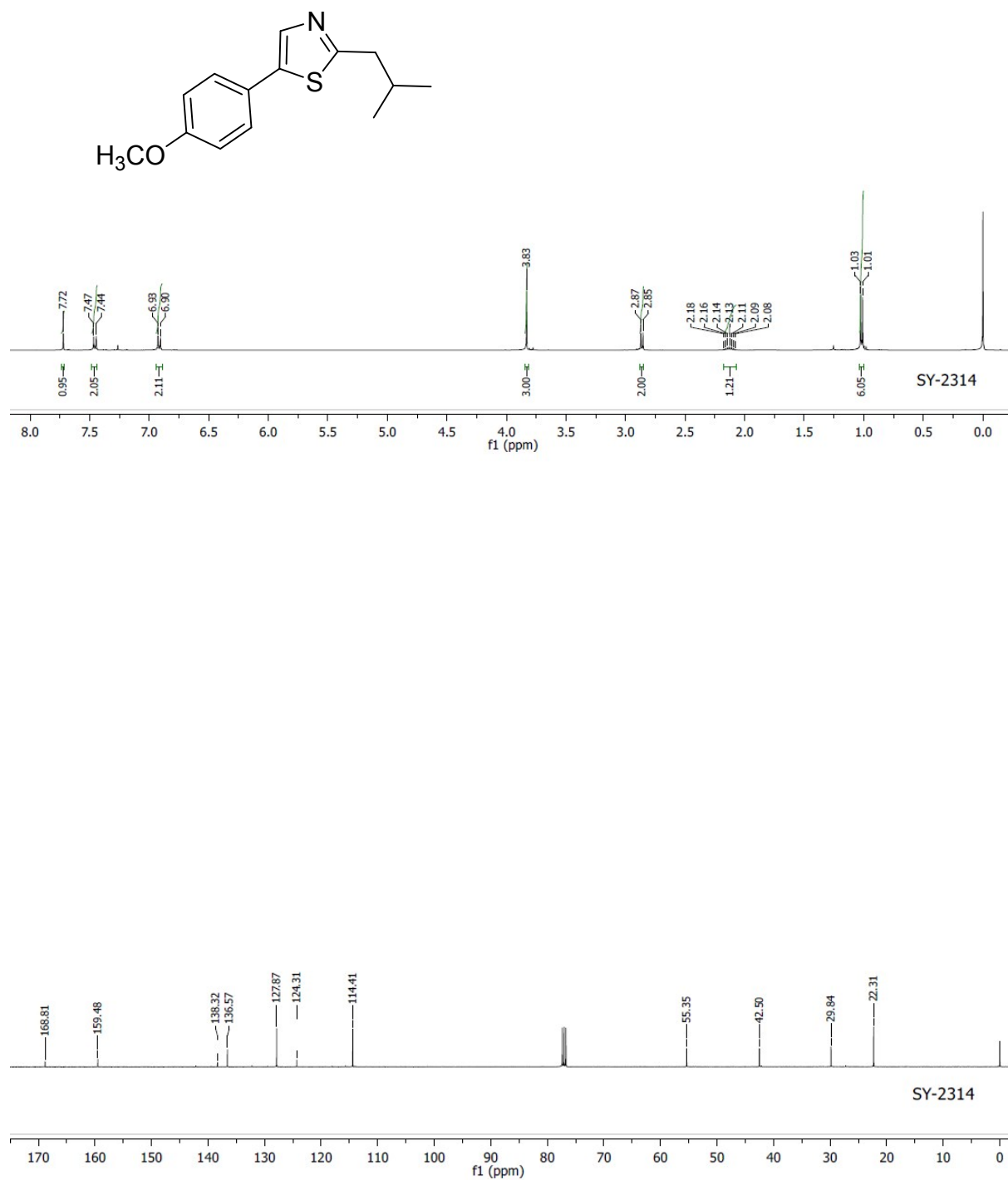


Figure S8. ¹H NMR and ¹³C NMR spectra of **6c**

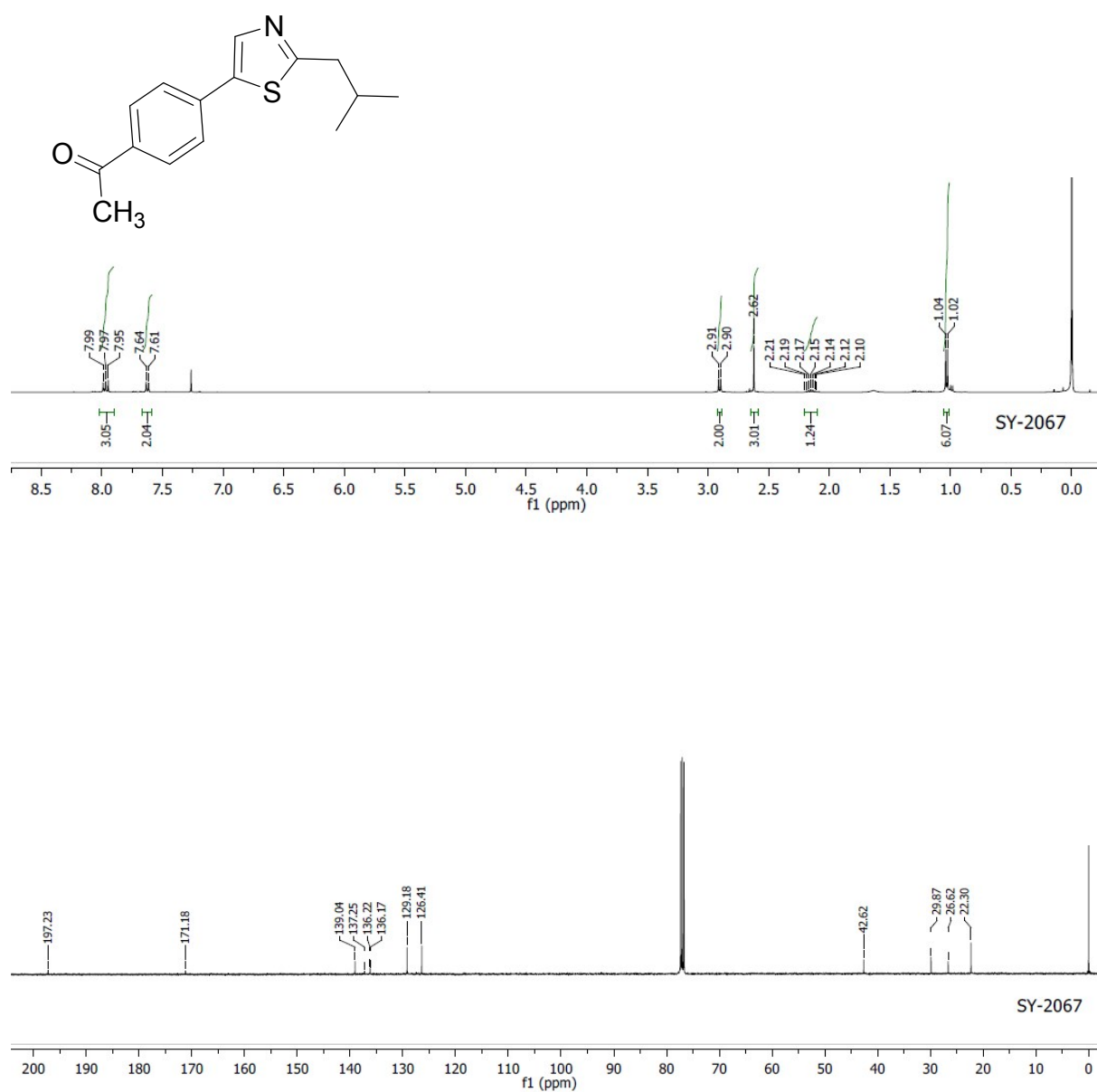


Figure S9. ¹H NMR and ¹³C NMR spectra of **6d**

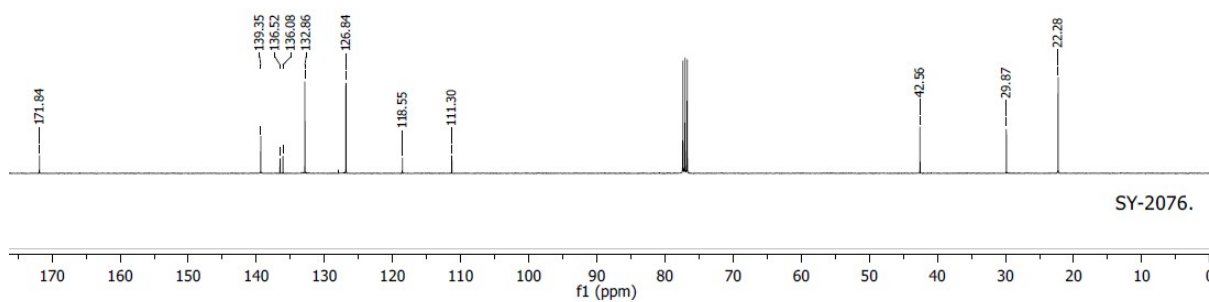
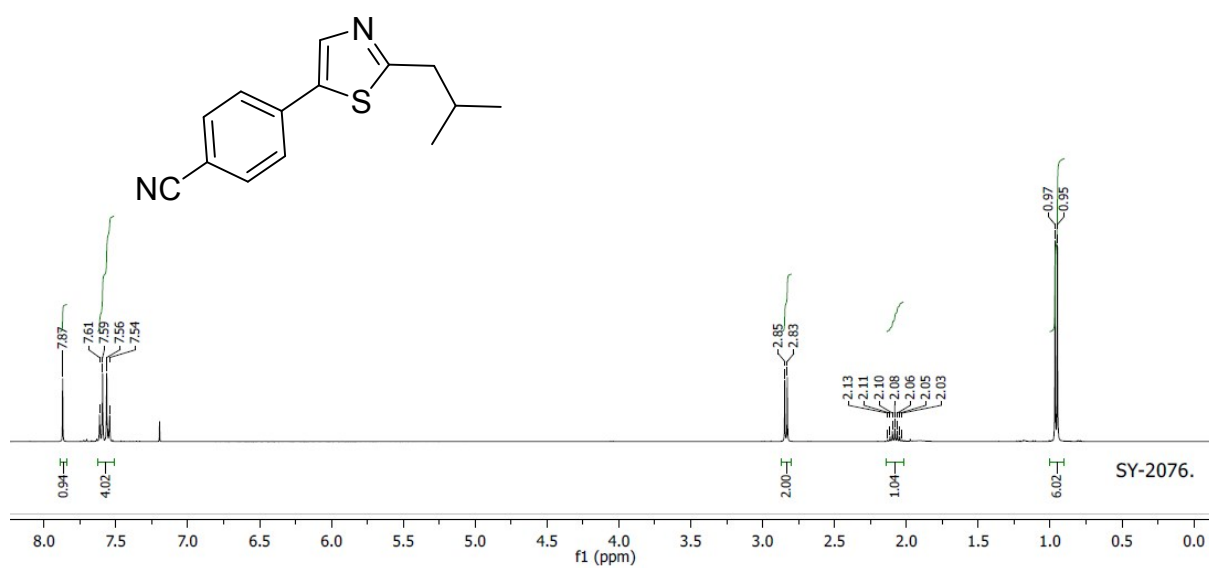


Figure S10. ¹H NMR and ¹³C NMR spectra of **6e**

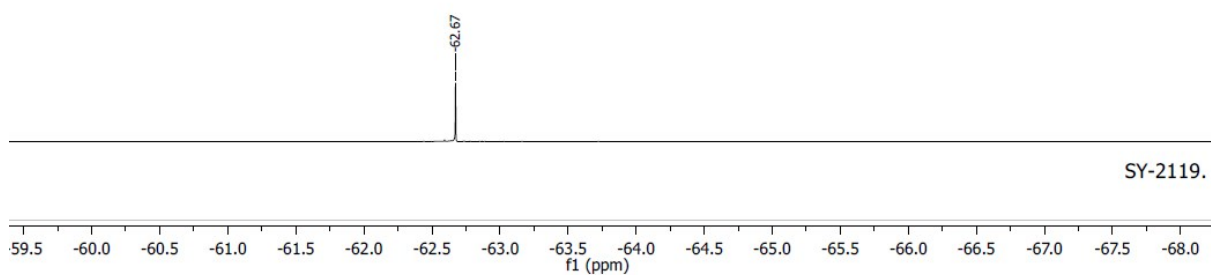
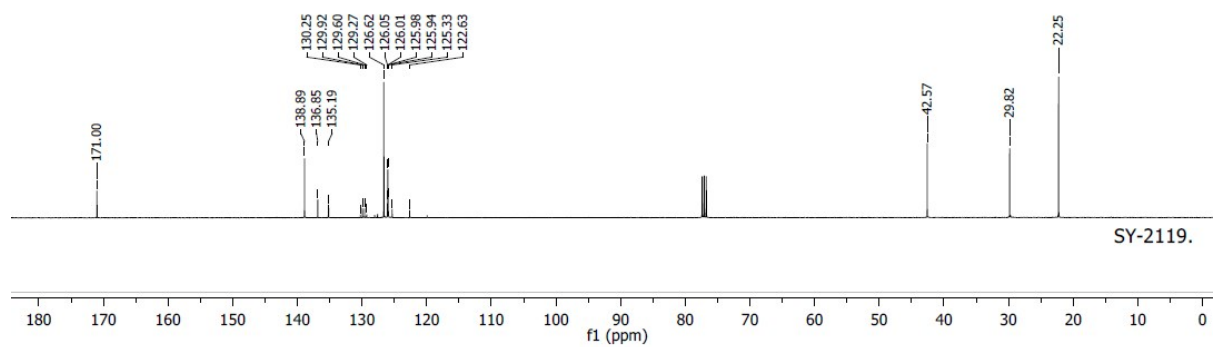
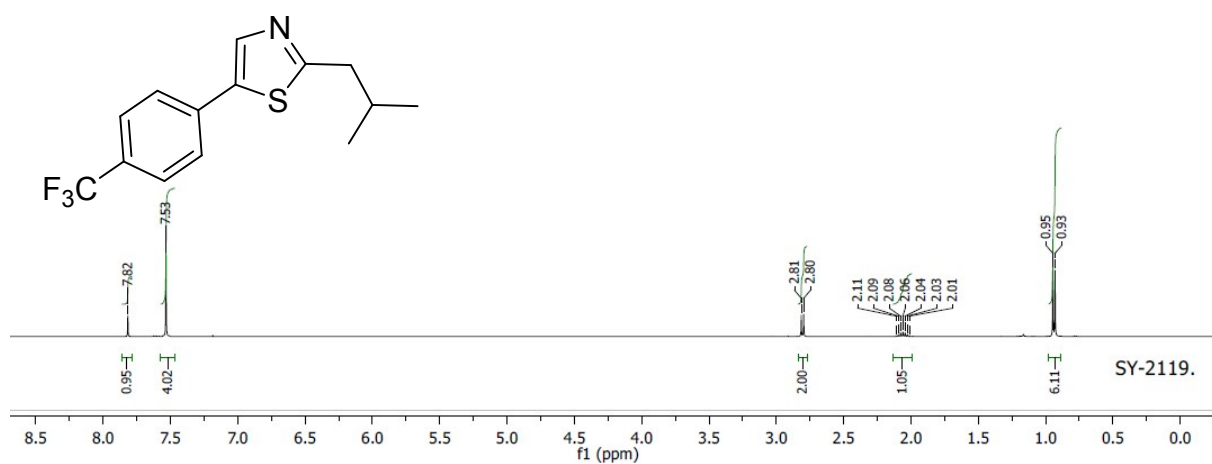


Figure S11. ¹H NMR, ¹³C NMR and ¹⁹F NMR spectra of **6f**

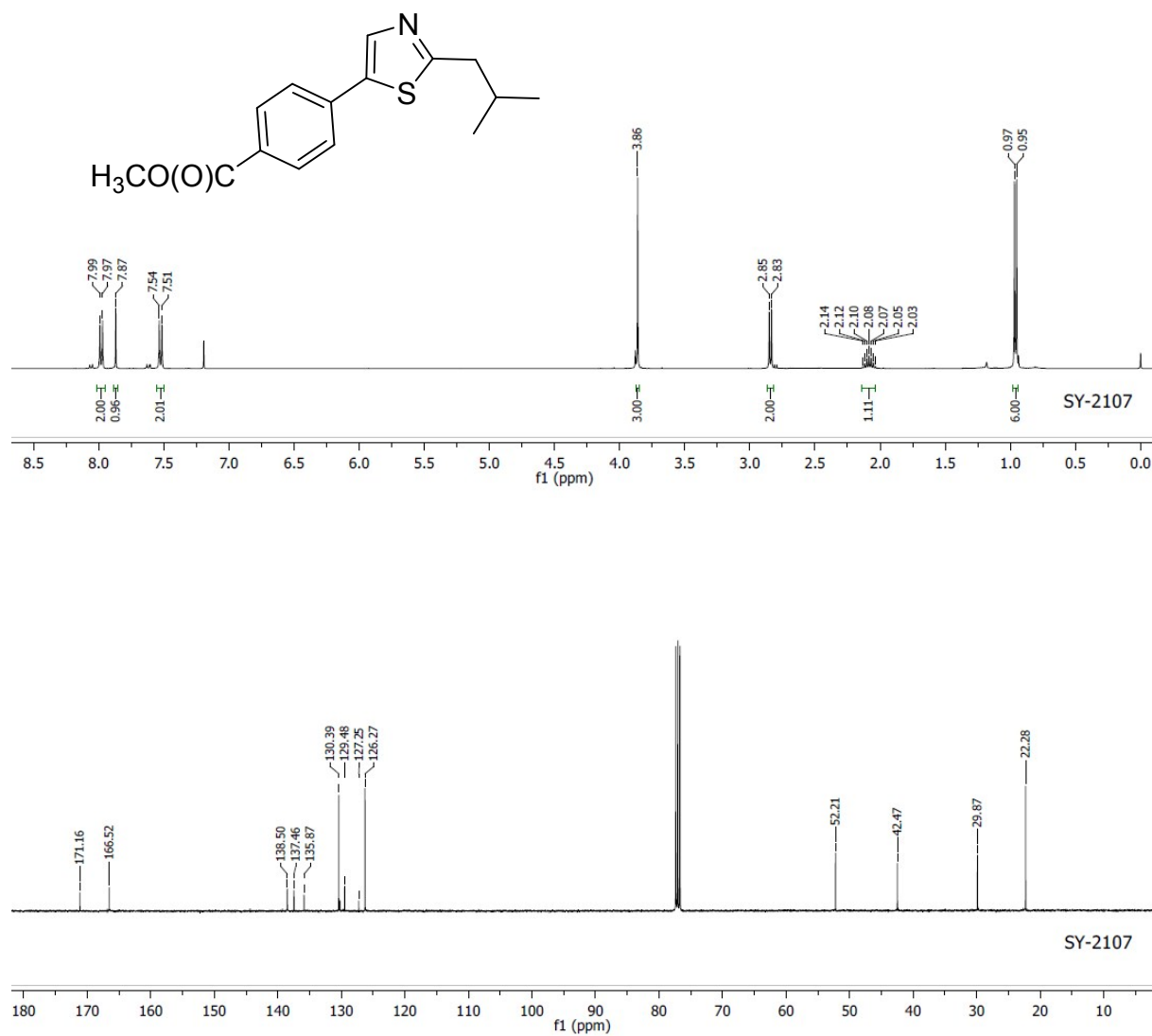


Figure S12. ¹H NMR and ¹³C NMR spectra of **6g**

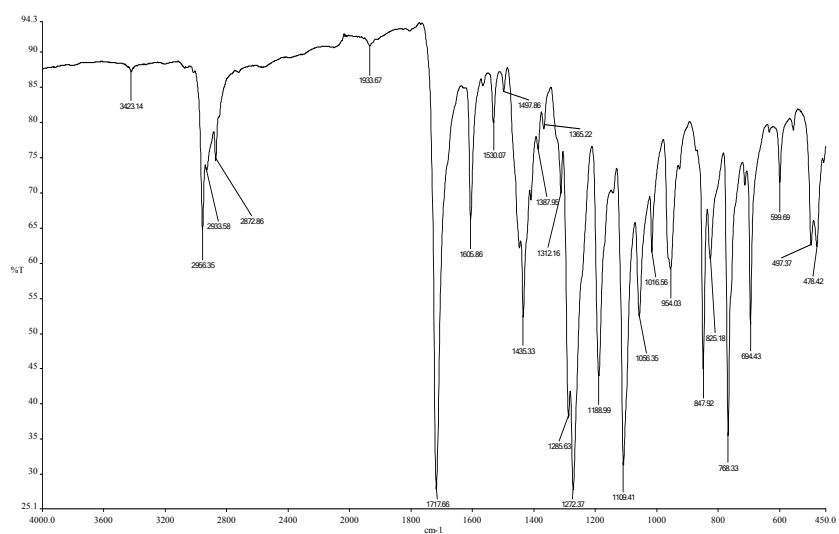


Figure S13. IR spectra of 6g

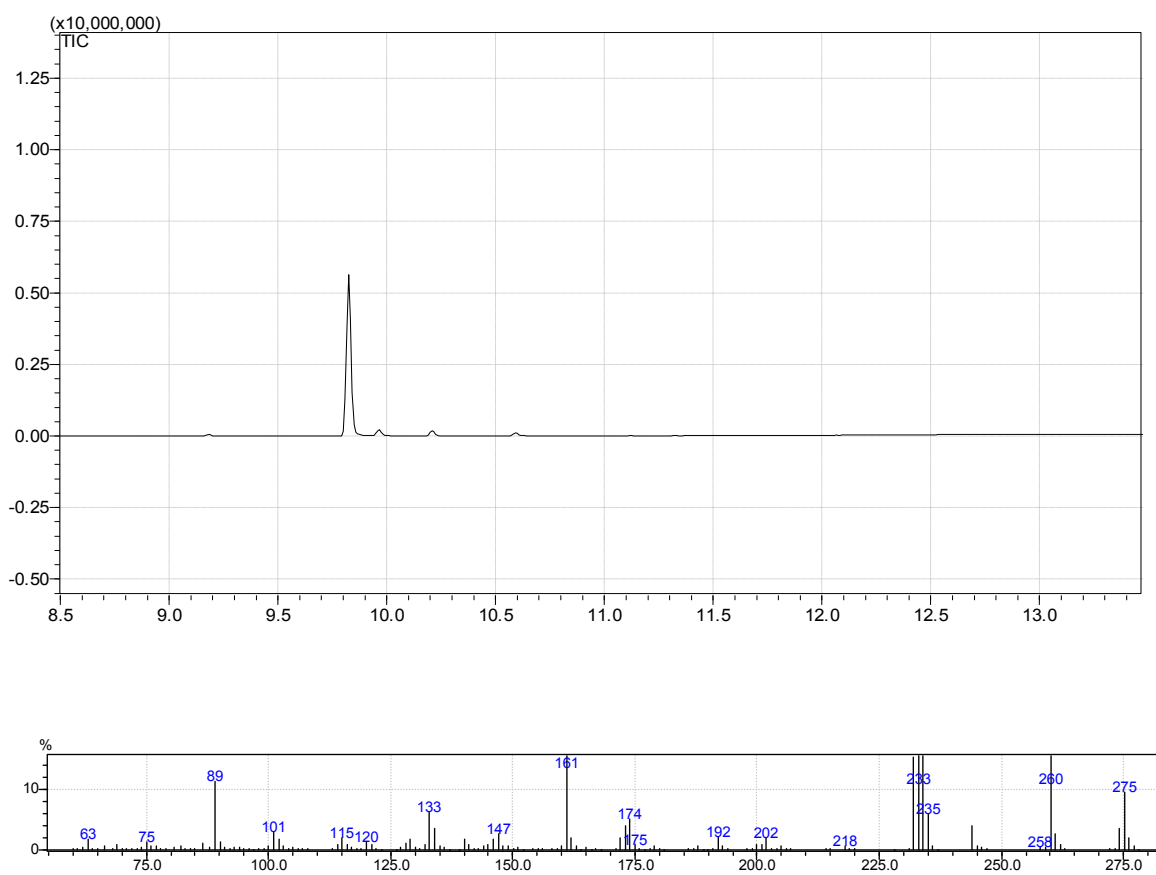


Figure S14. GC-MS spectra of 6g

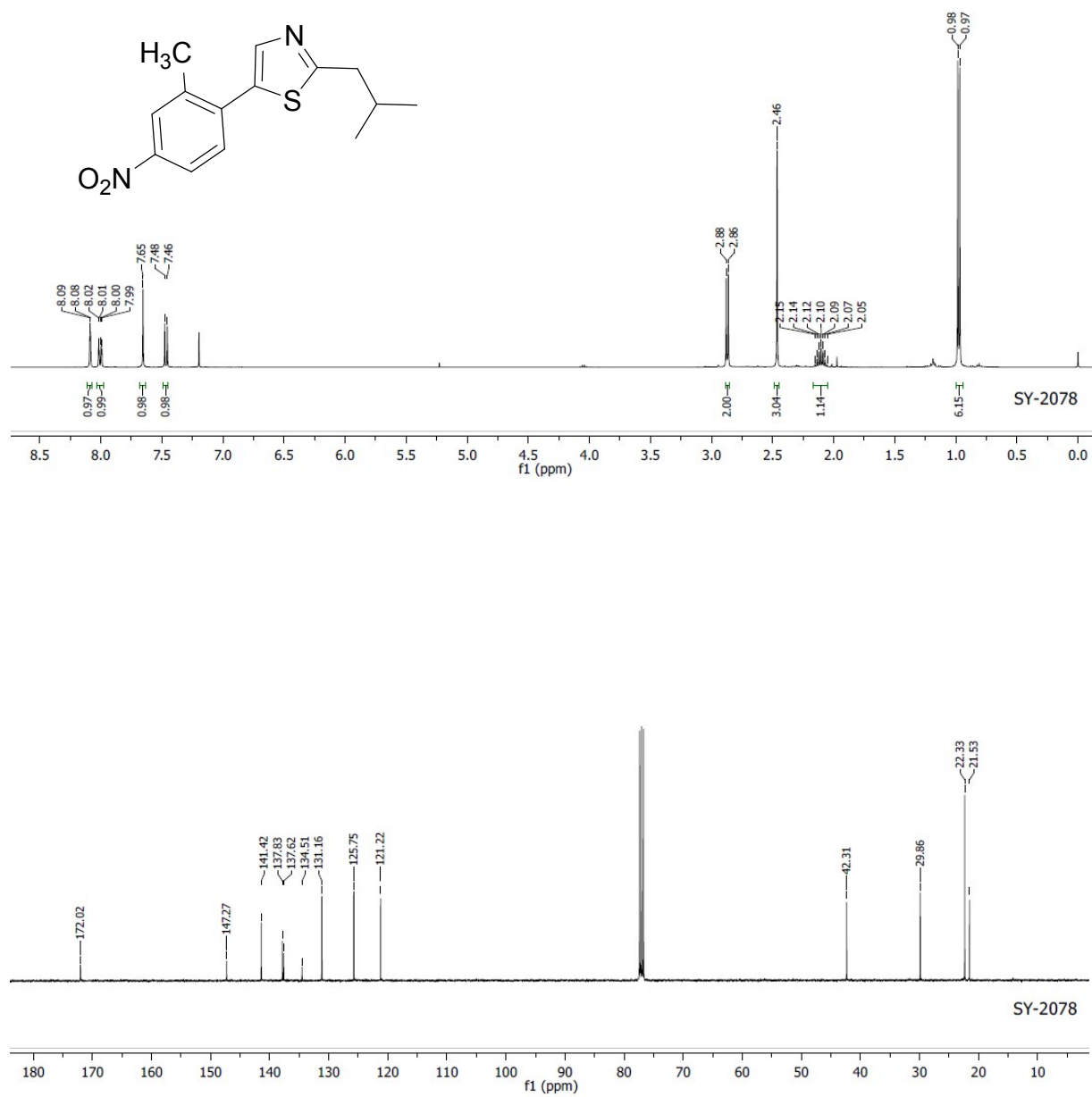


Figure S15. ¹H NMR and ¹³C NMR spectra of **6h**

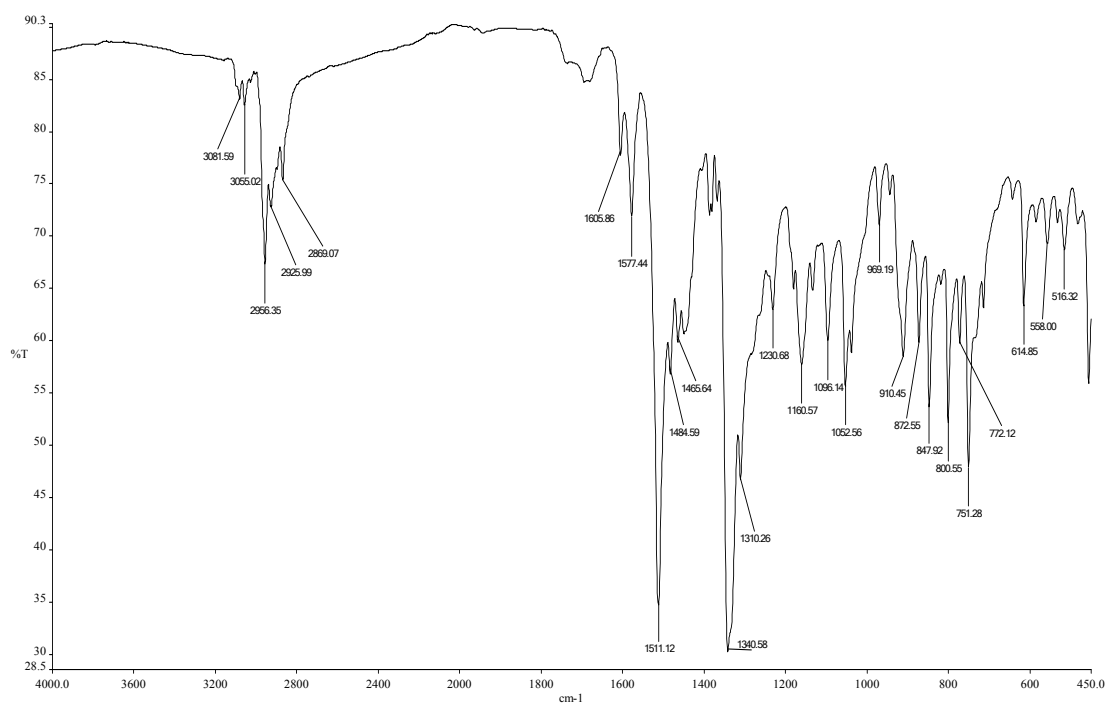


Figure S16. IR spectra of 6h

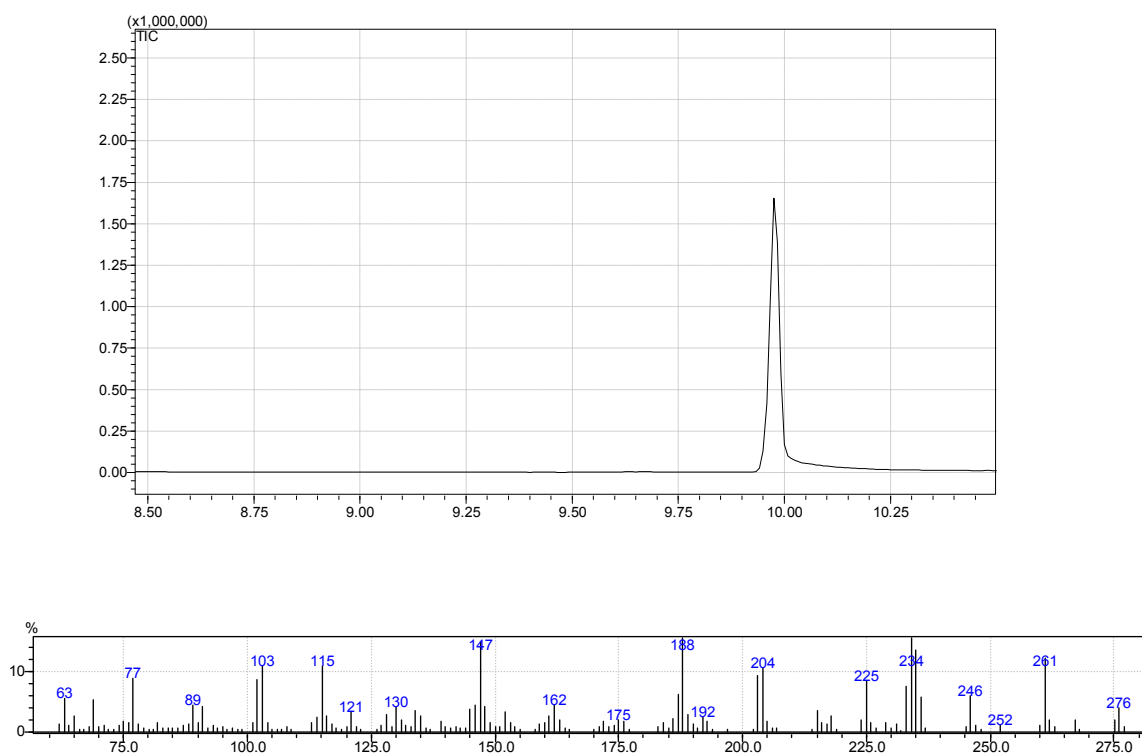


Figure S17. GC-MS spectra of 6h

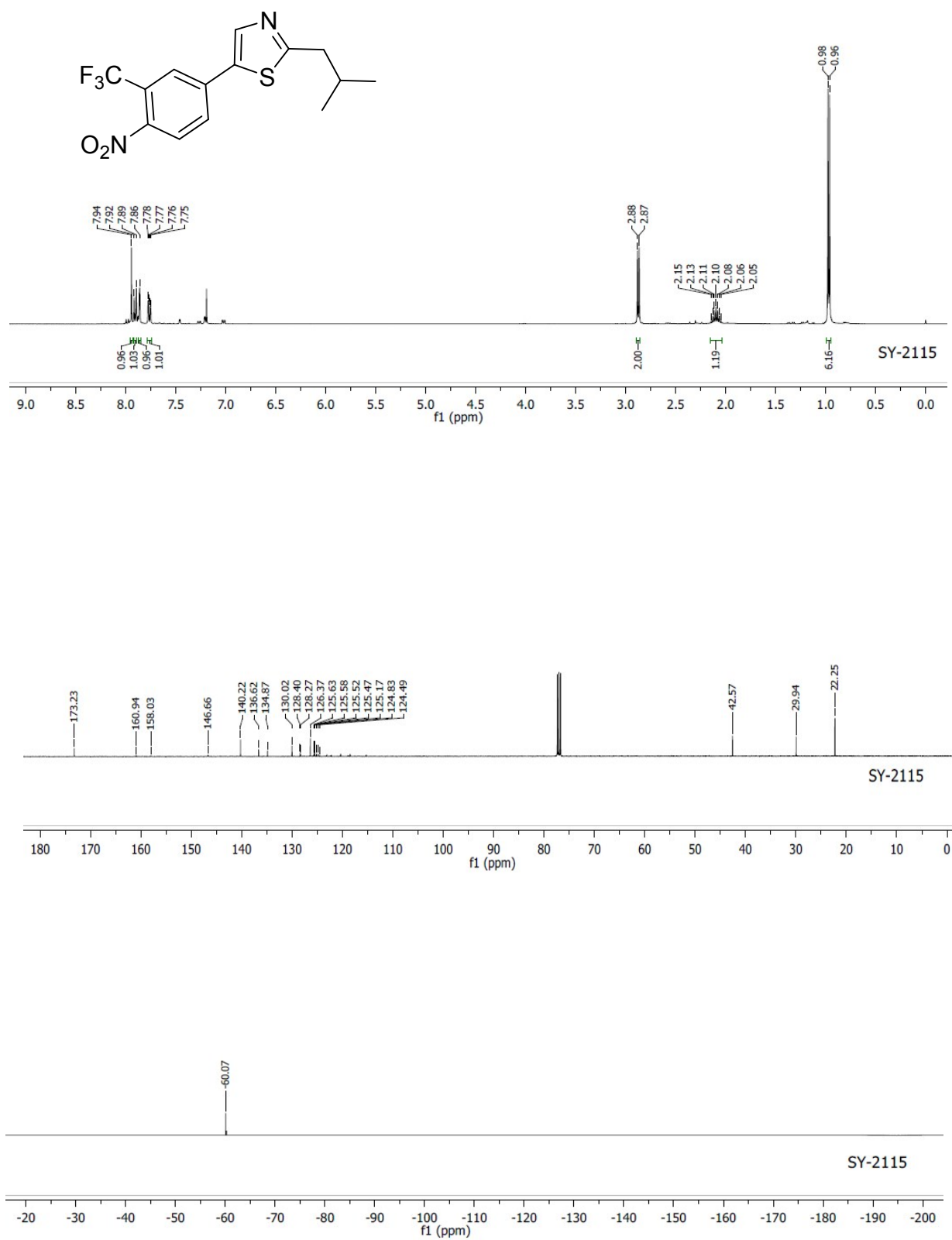


Figure S18. ¹H NMR, ¹³C NMR and ¹⁹F NMR spectra of **6i**

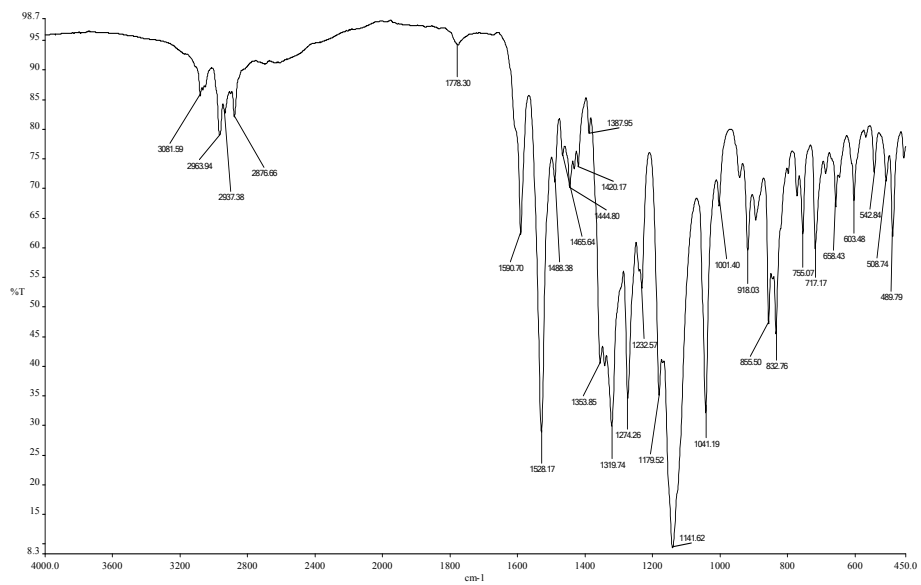


Figure S19. IR spectra of 6i

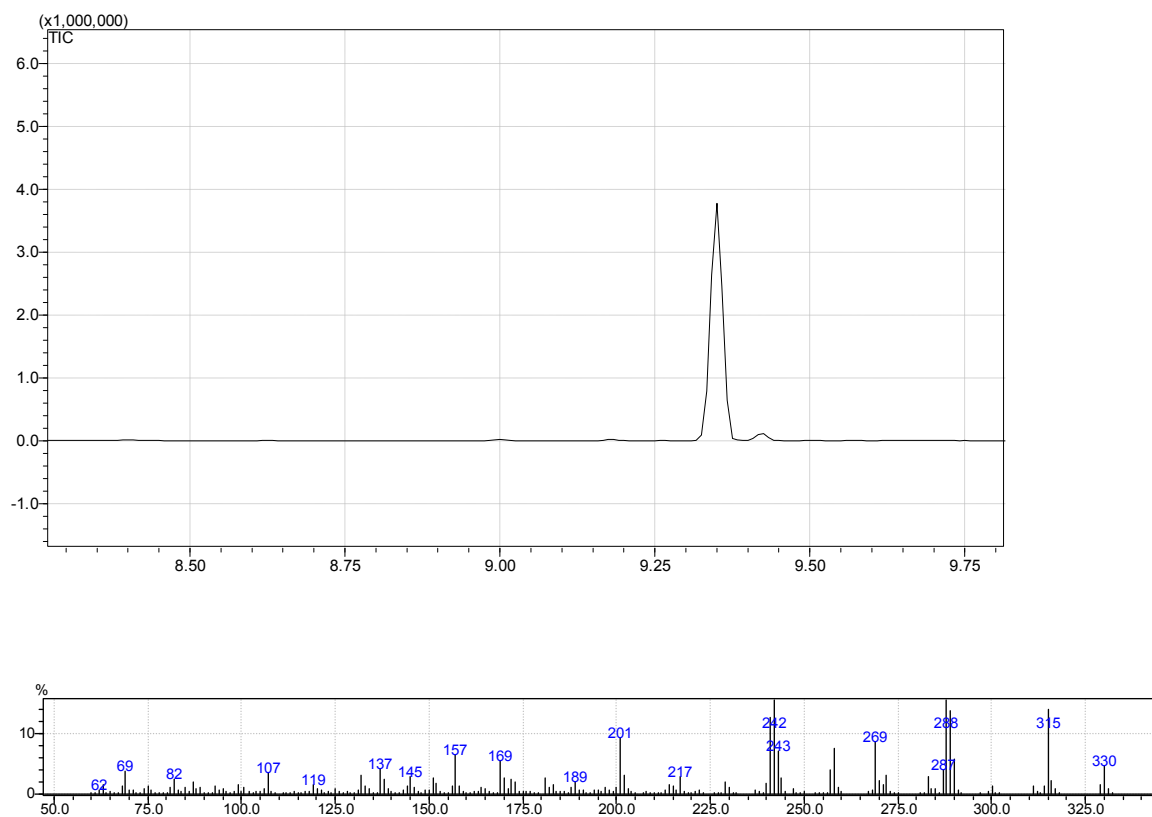


Figure S20. GC-MS spectra of 6i

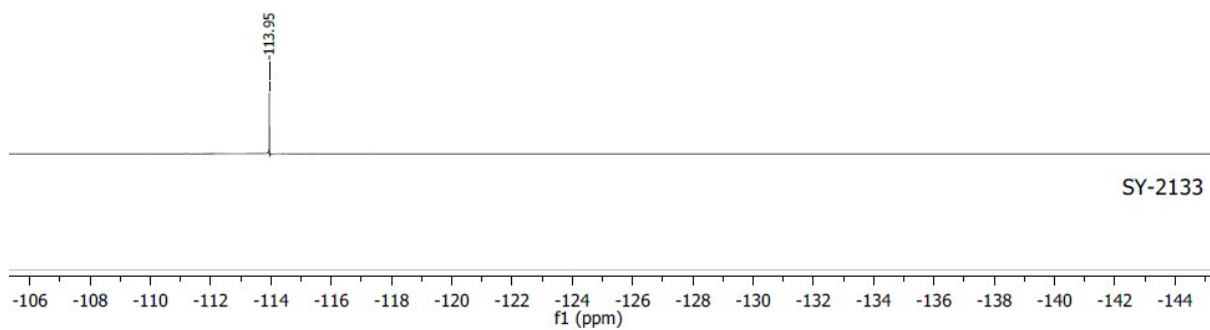
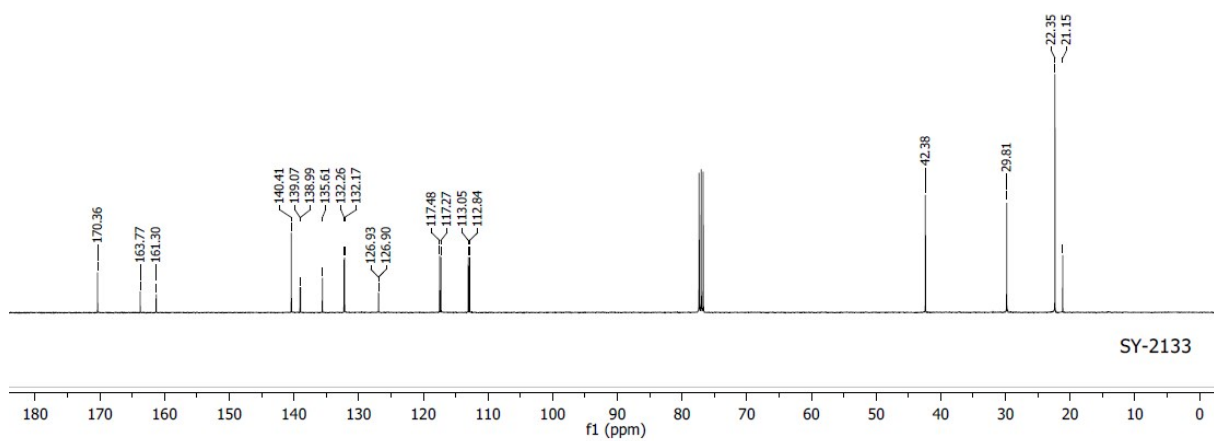
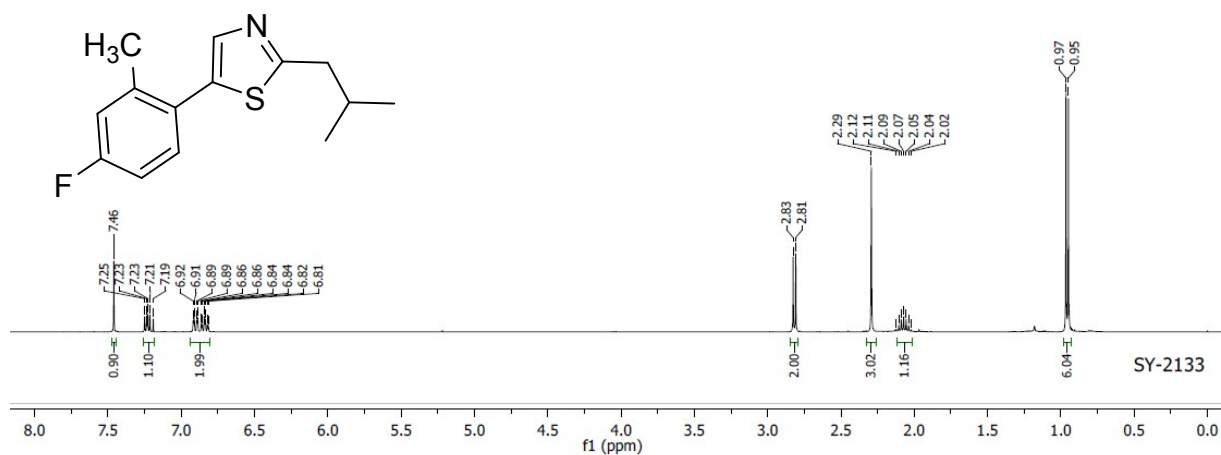


Figure S21. ^1H NMR, ^{13}C NMR and ^{19}F NMR spectra of **6j**

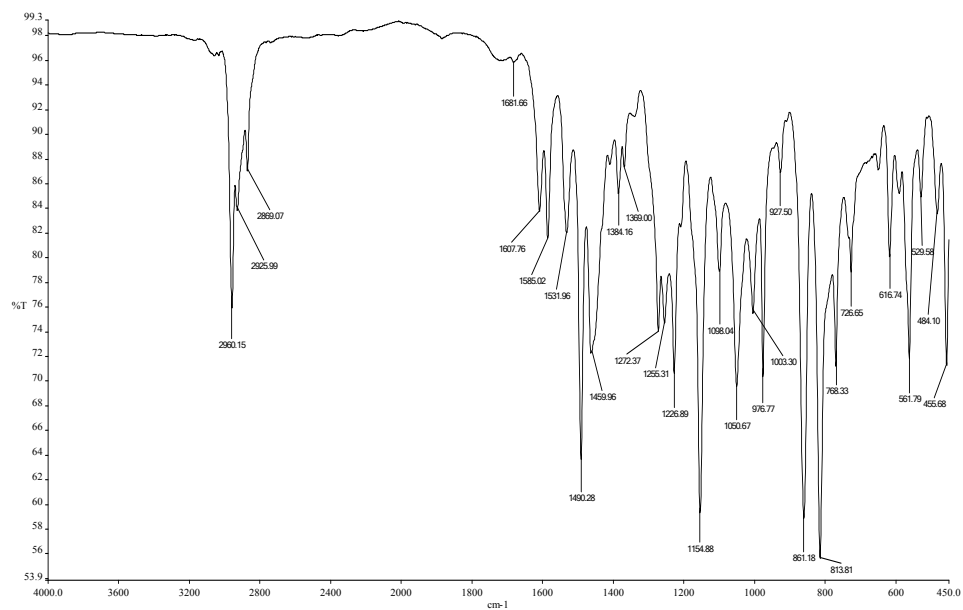


Figure S22. IR spectra of 6j

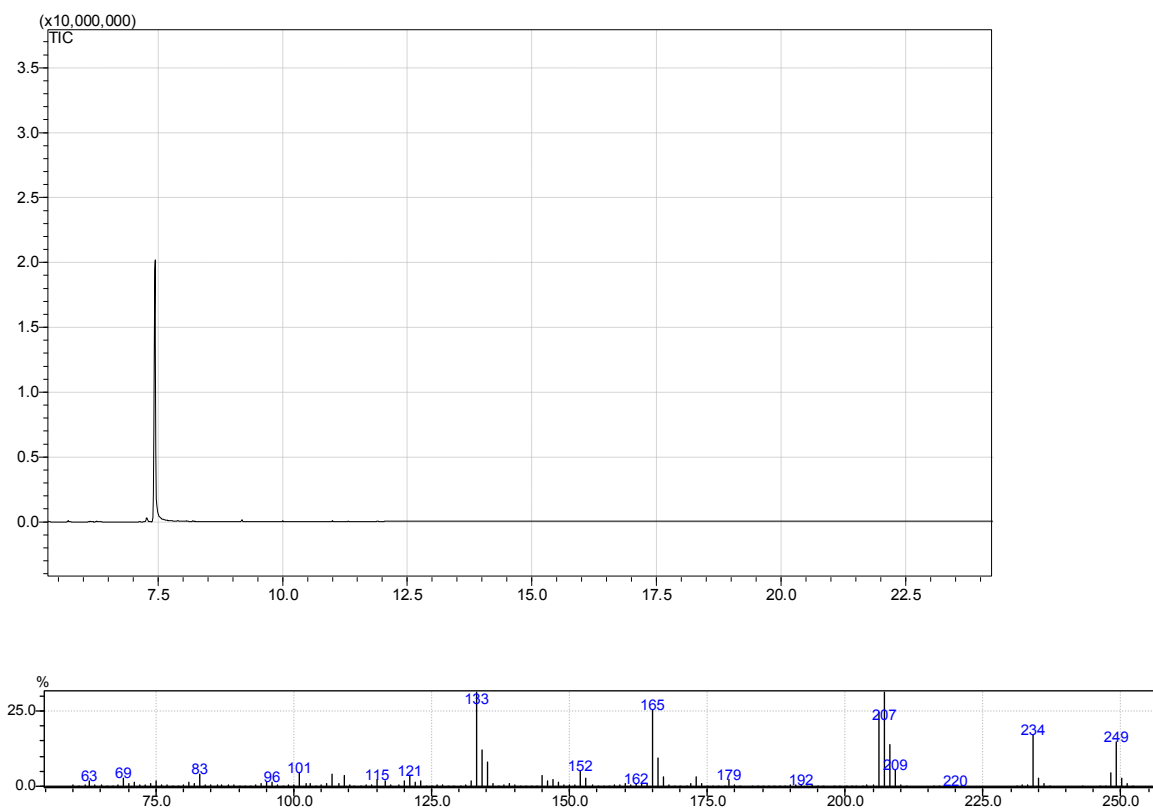


Figure S23. GC-MS spectra of 6j

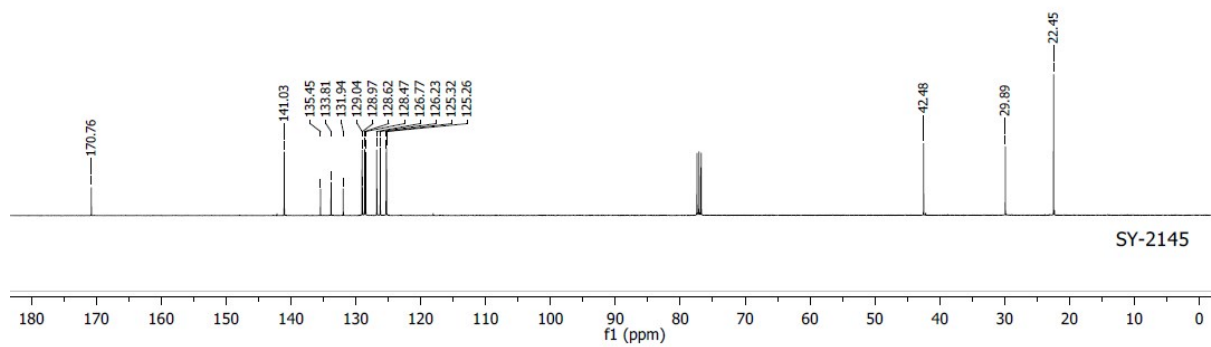
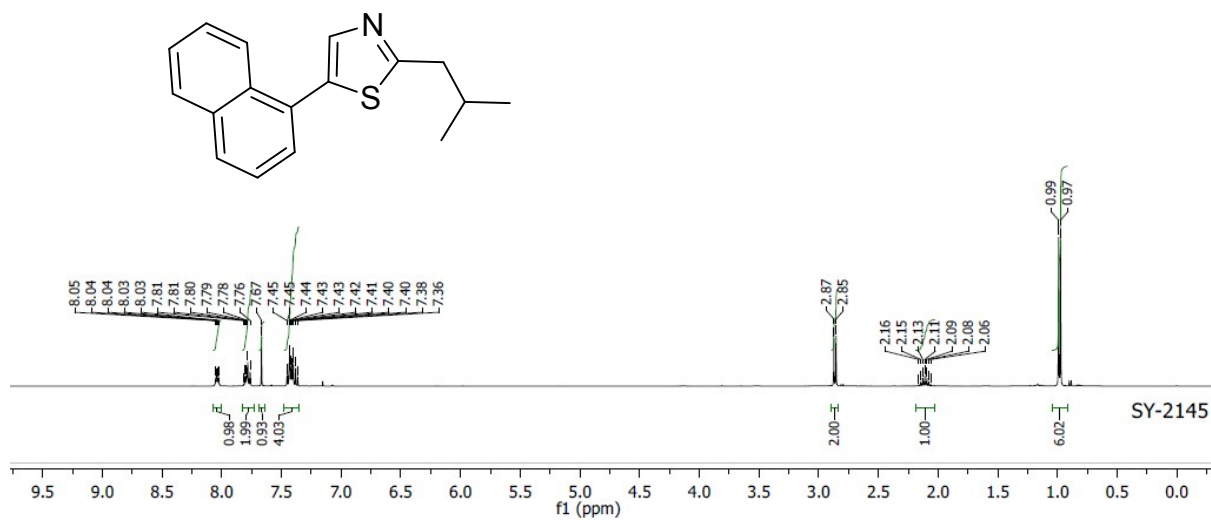


Figure S24. ¹H NMR and ¹³C NMR spectra of **61**

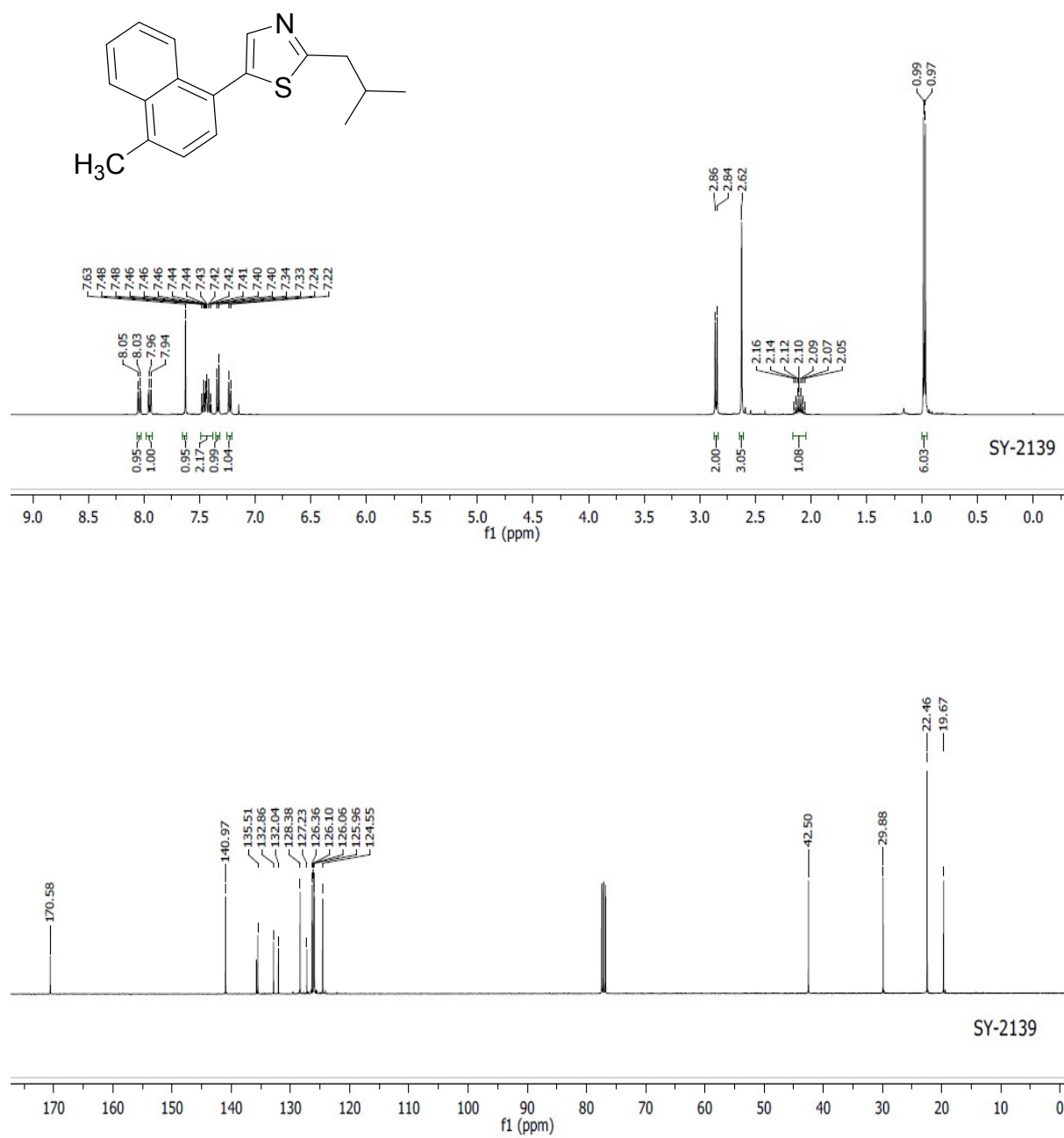


Figure S25. ¹H NMR and ¹³C NMR spectra of **6m**

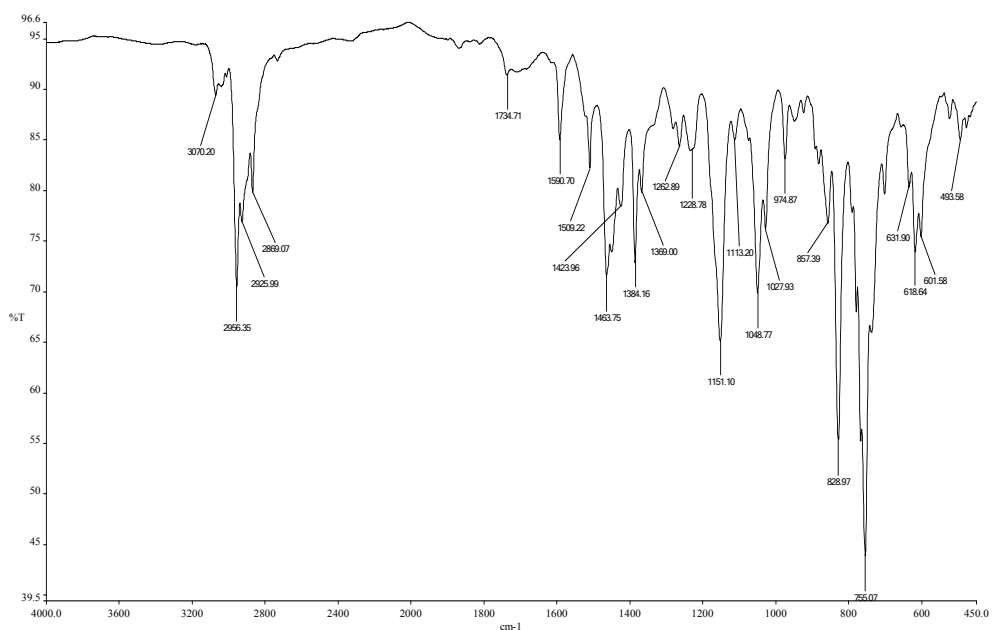


Figure S26. IR spectra of 6m

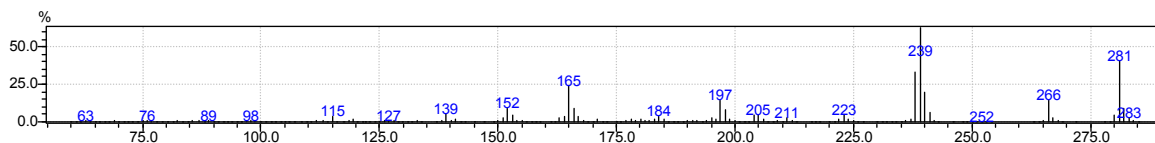
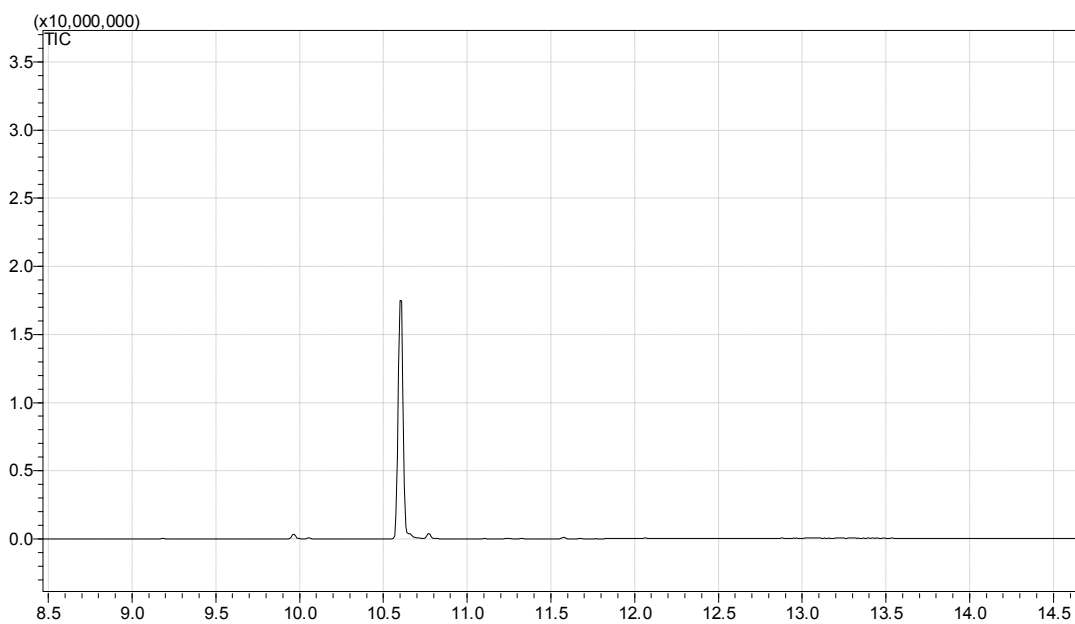


Figure S27. GC-MS spectra of 6m

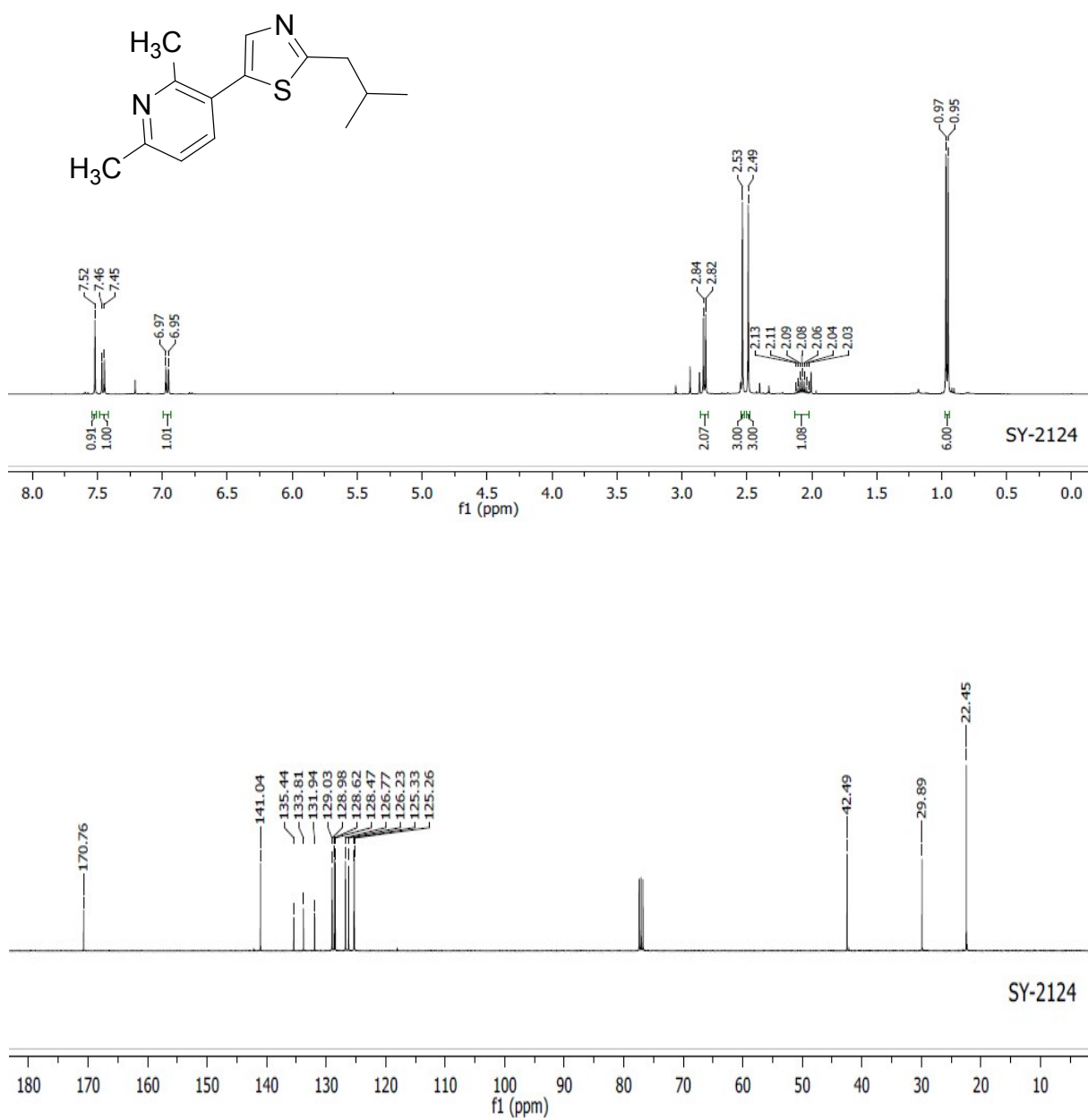


Figure S28. ¹H NMR and ¹³C NMR spectra of **6n**

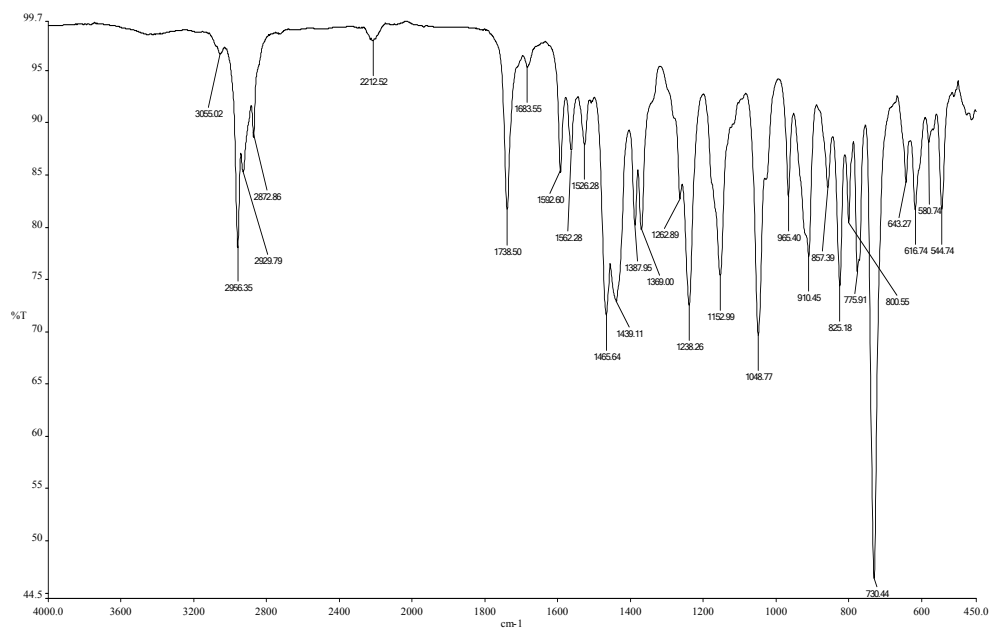


Figure S29. IR spectra of 6n

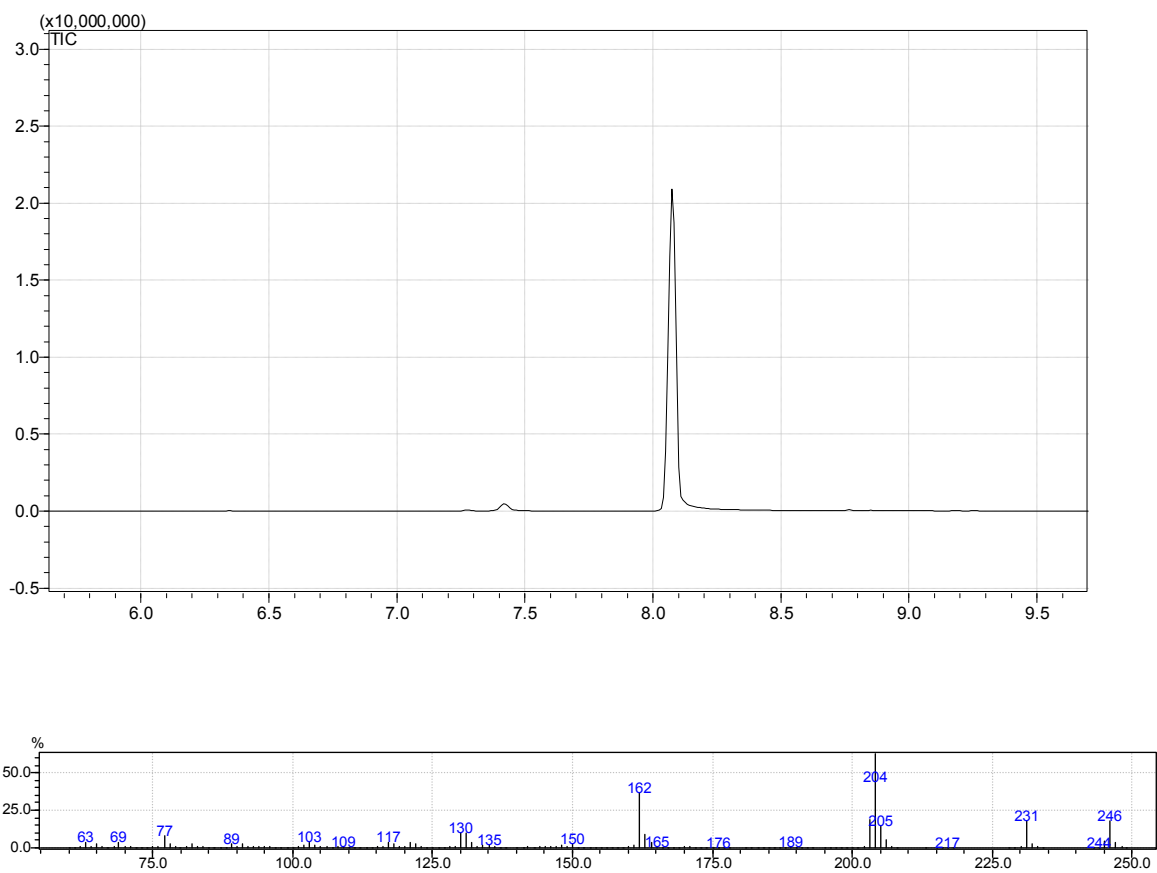


Figure S30. GC-MS spectra of 6n

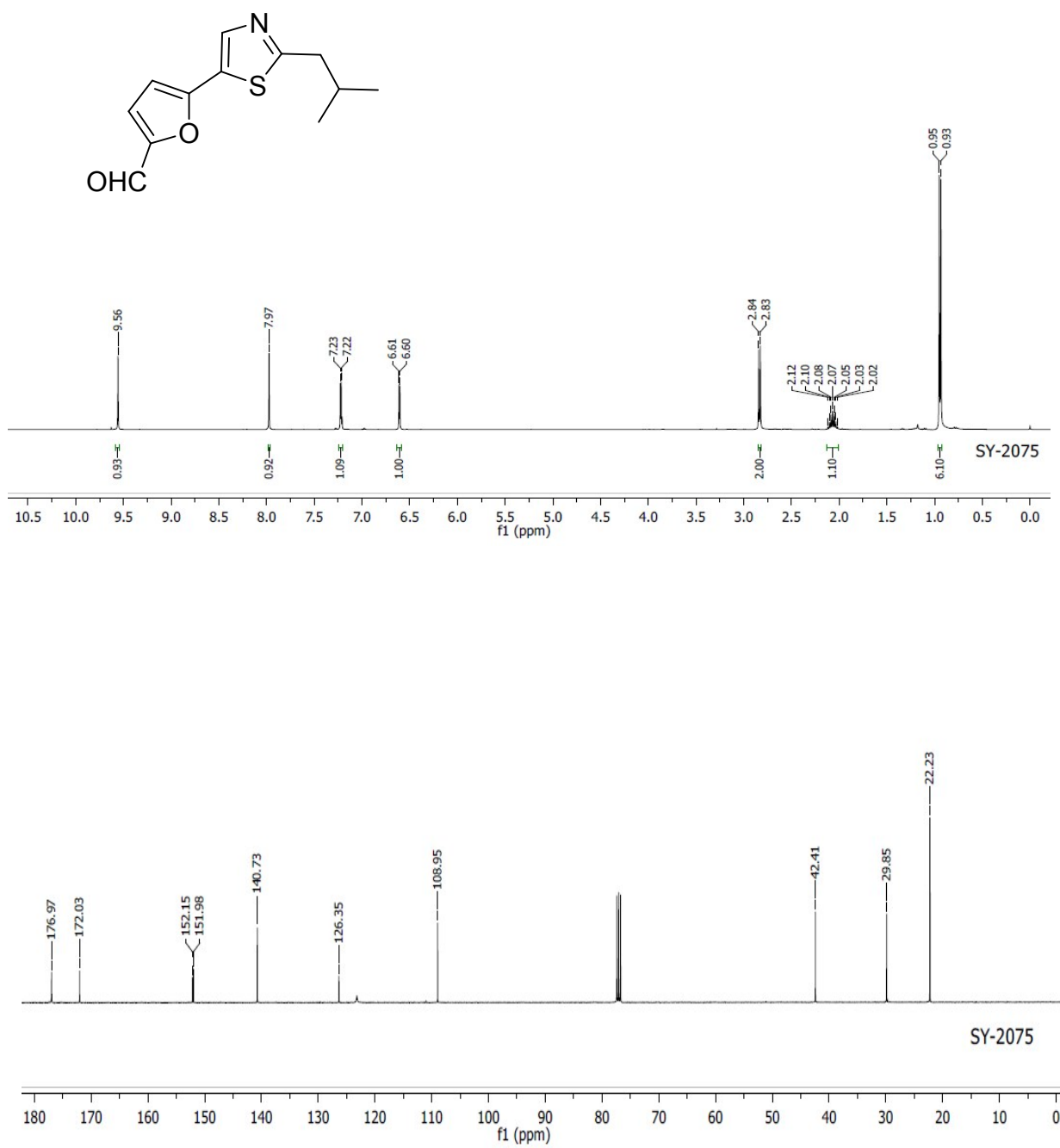


Figure S31. ^1H NMR and ^{13}C NMR spectra of **60**

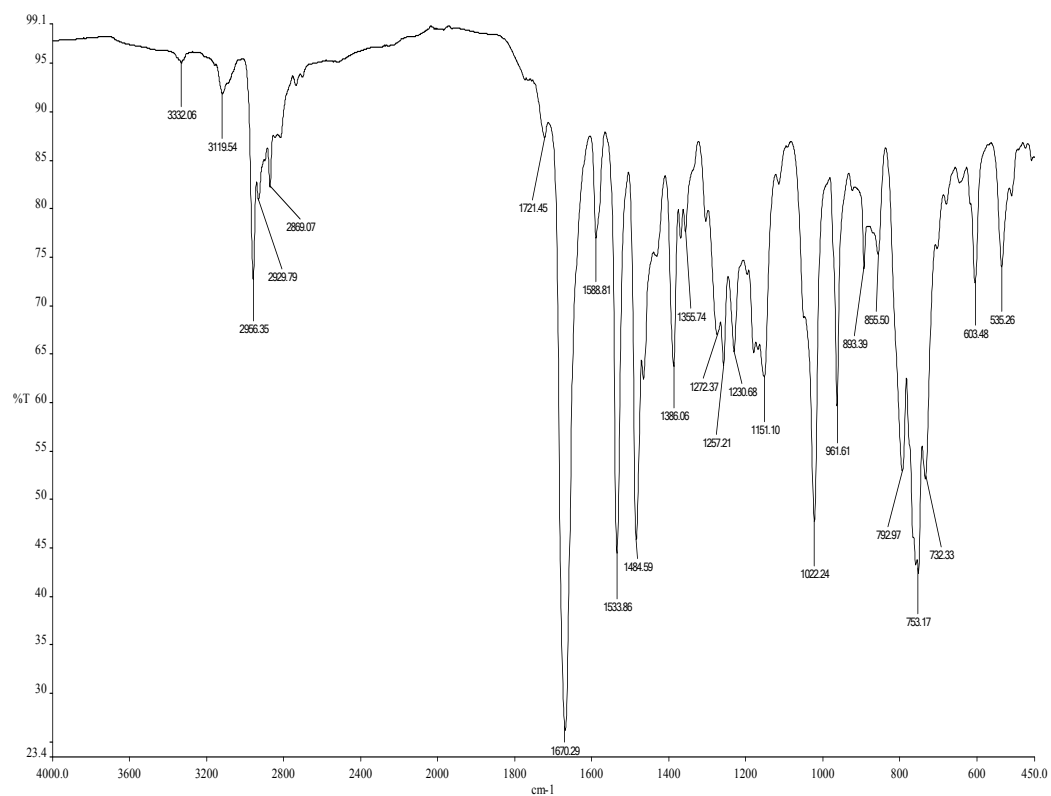


Figure S32. IR spectra of 60

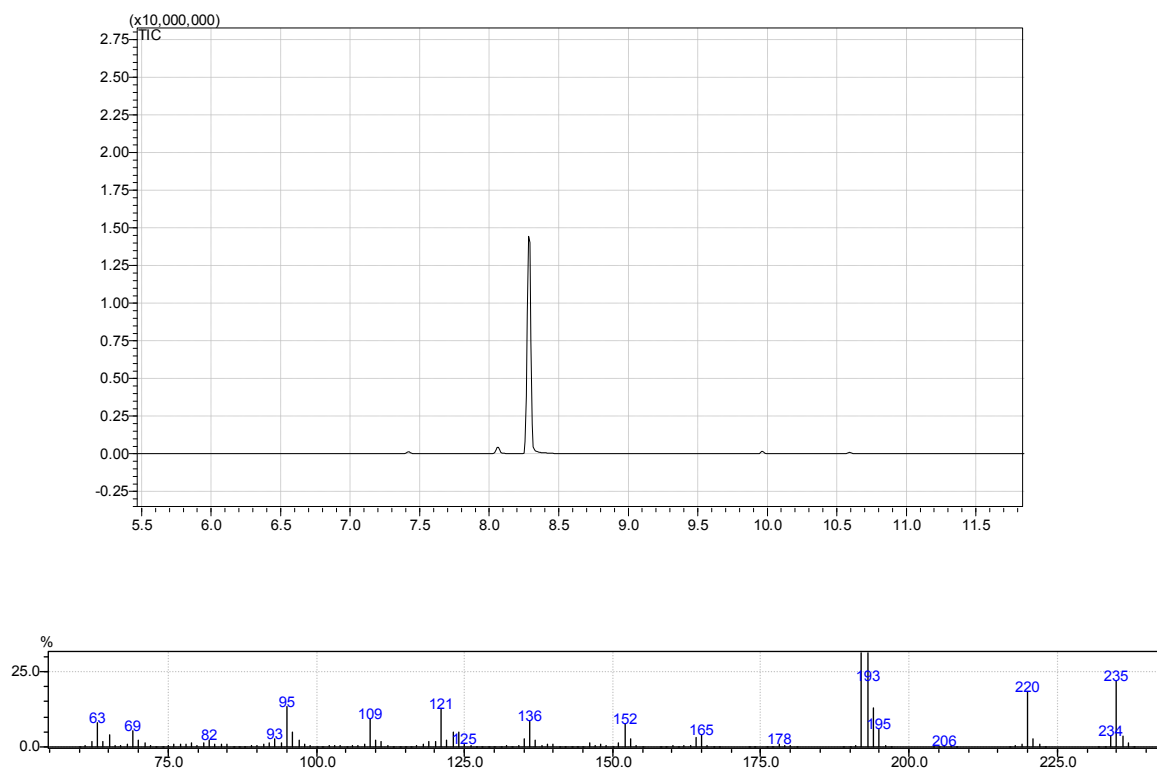


Figure S33. GC-MS spectra of 60

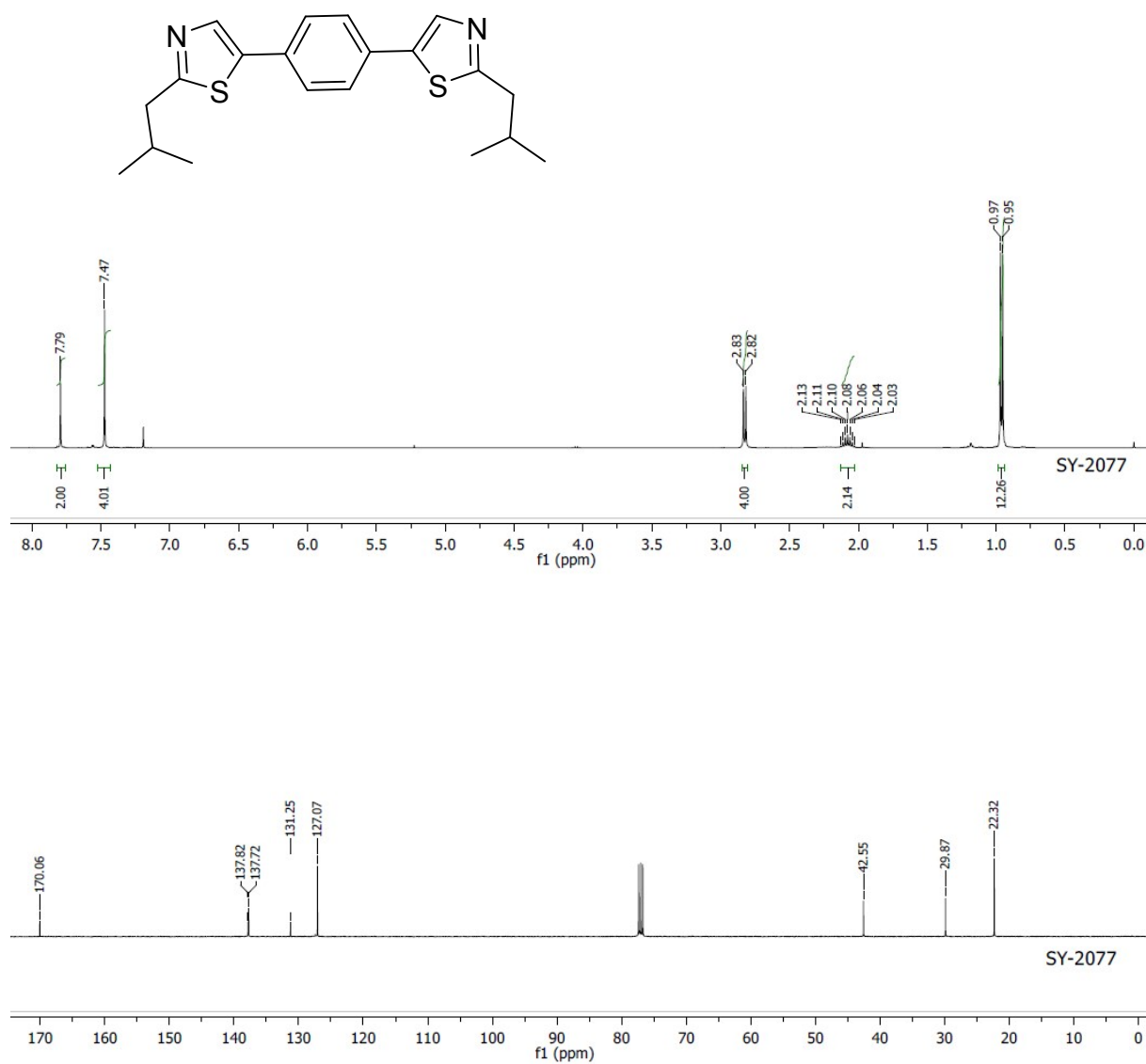


Figure S34. ¹H NMR and ¹³C NMR spectra of **6p**

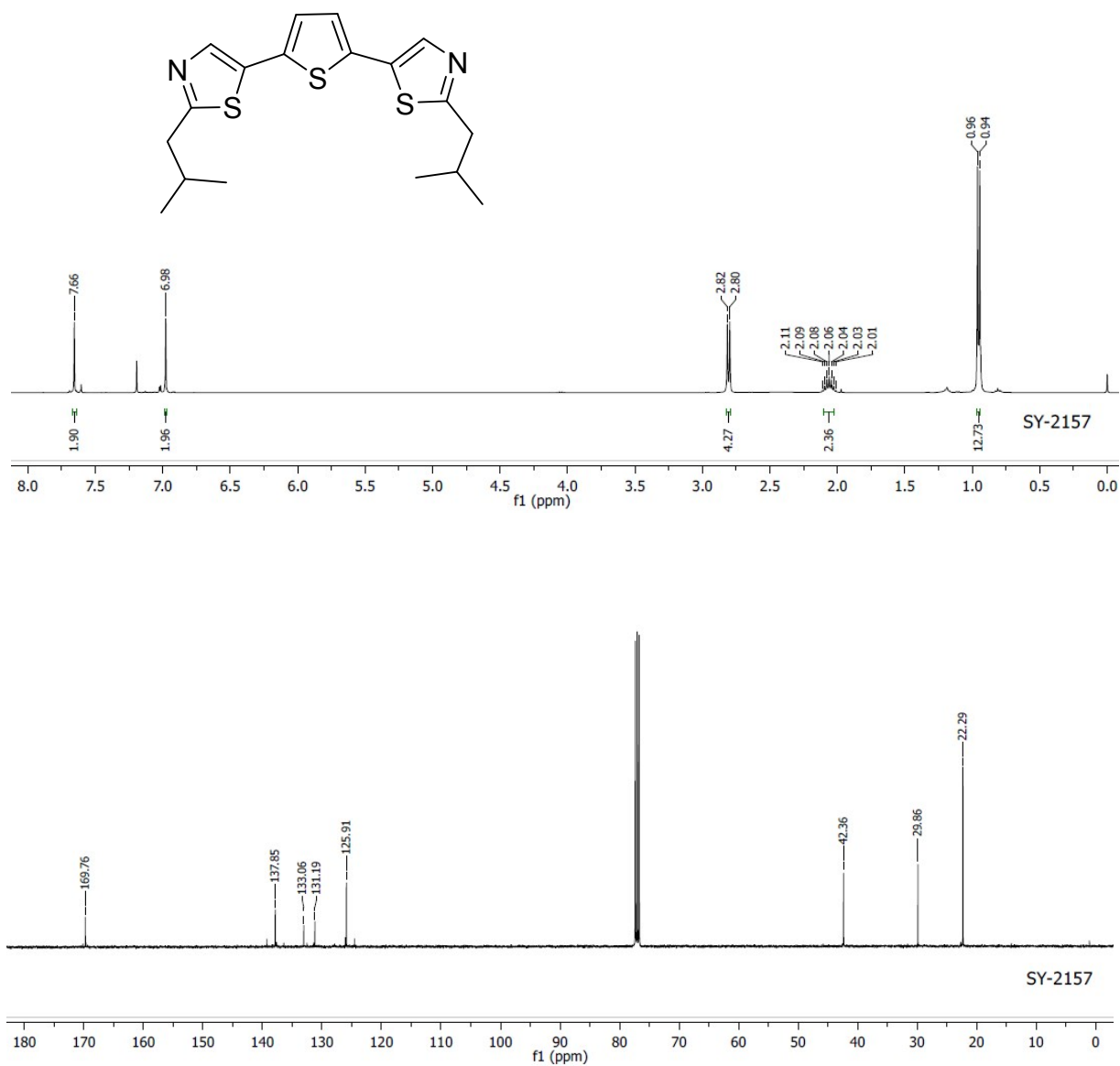


Figure S35. ¹H NMR and ¹³C NMR spectra of 6r

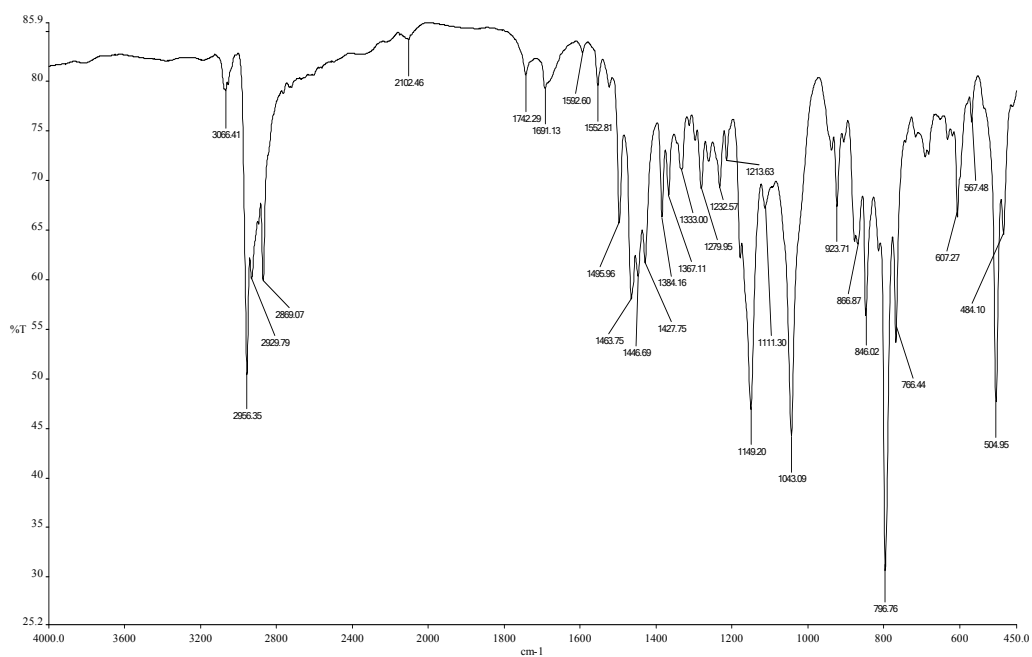


Figure S36. IR spectra of 6r

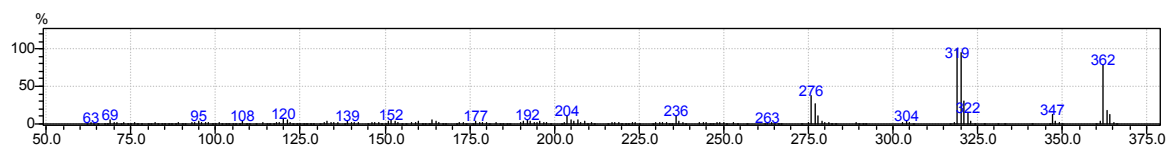
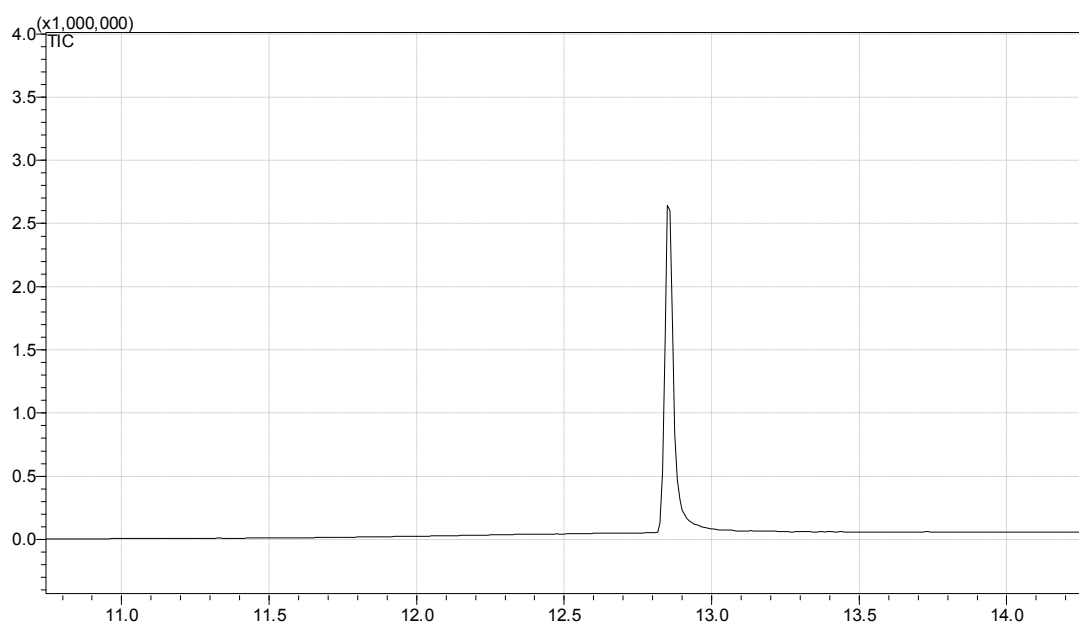


Figure S37. GC-MS spectra of 6r

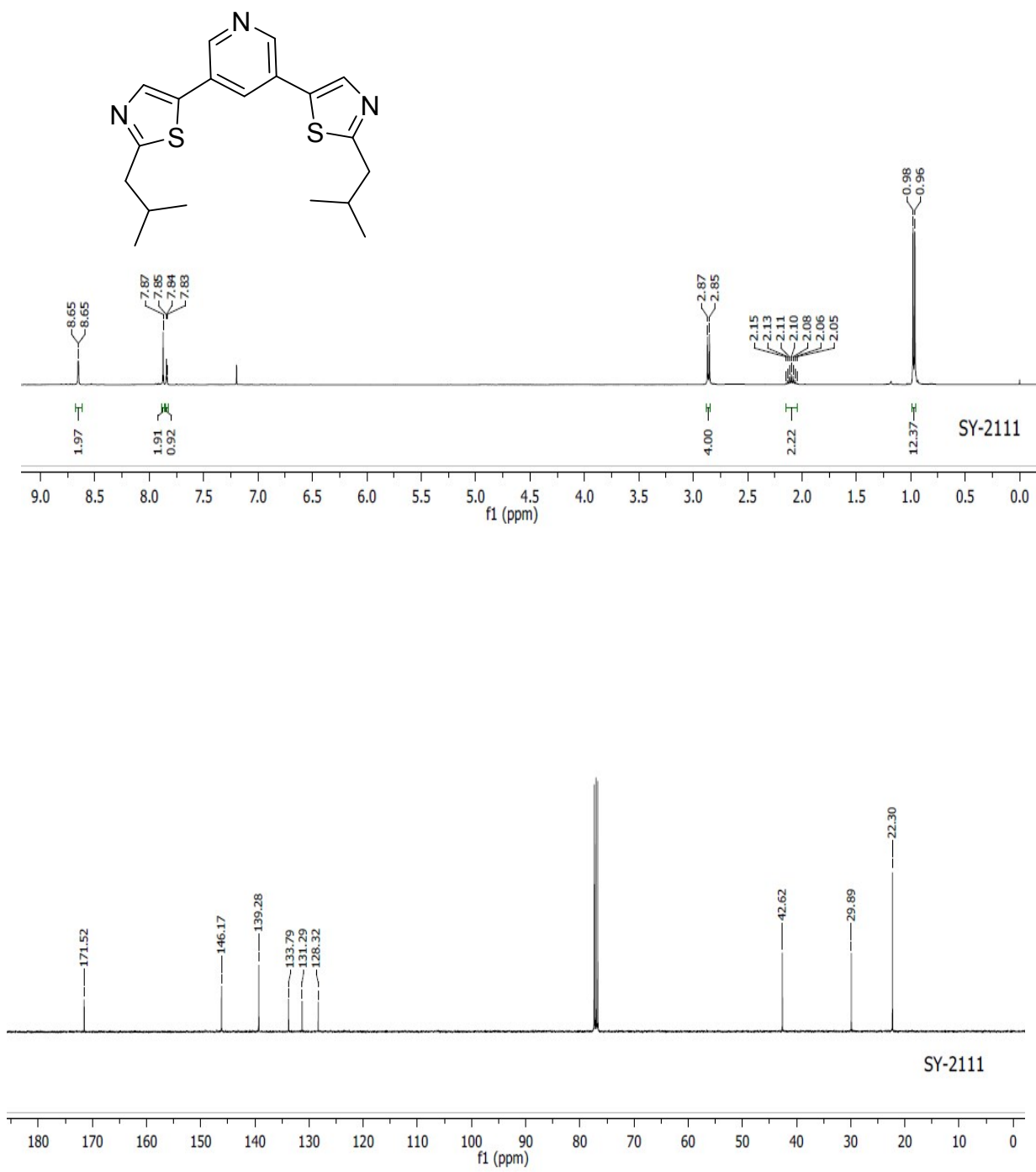


Figure S38. ¹H NMR and ¹³C NMR spectra of 6s

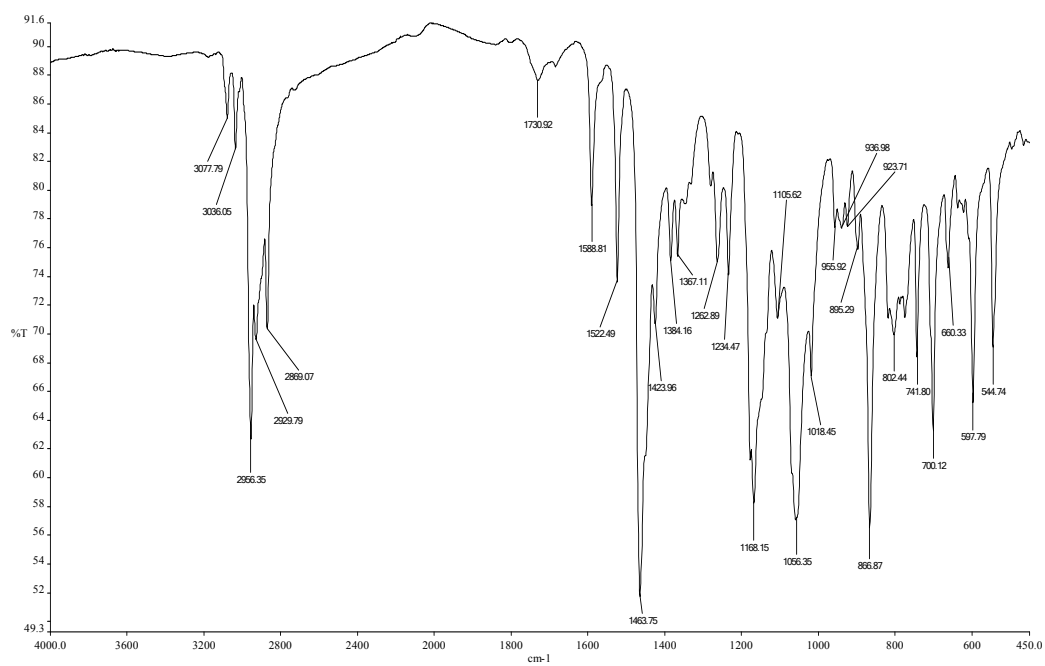


Figure S39. IR spectra of 6s

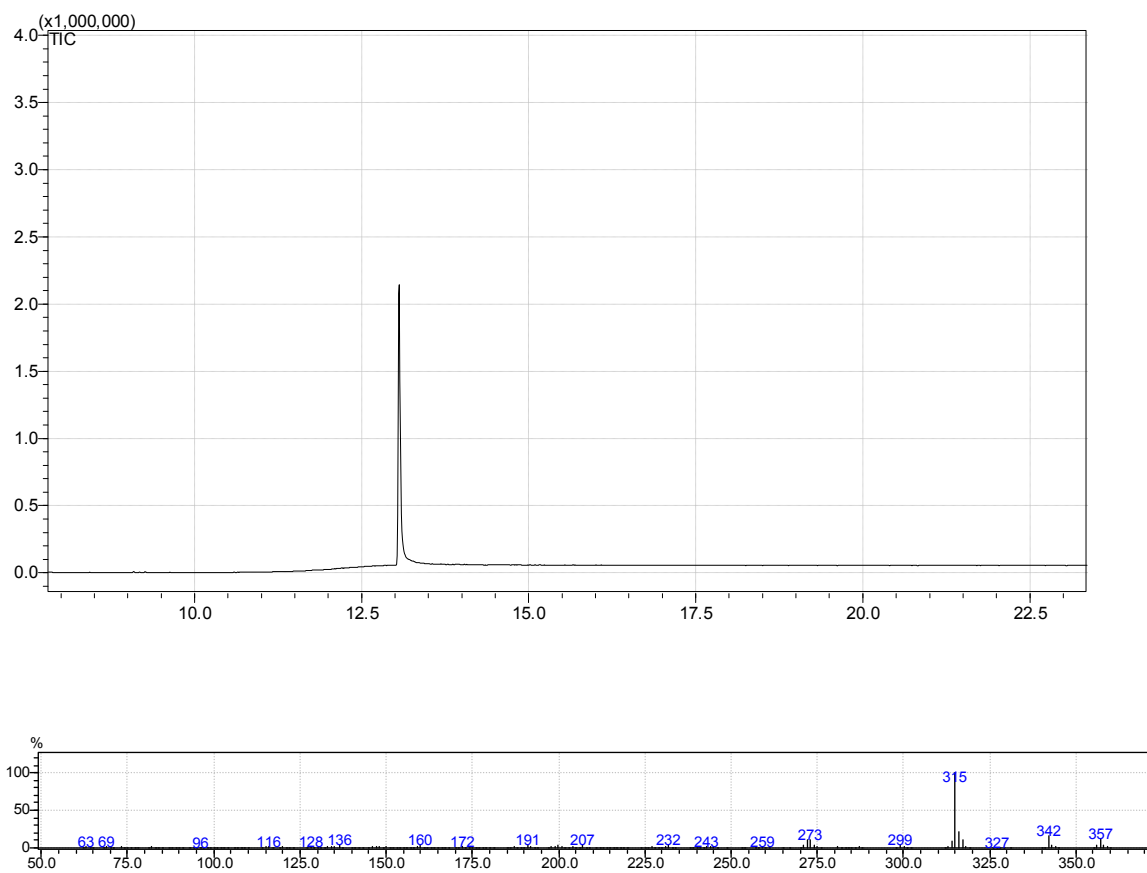


Figure S40. GC-MS spectra of 6s

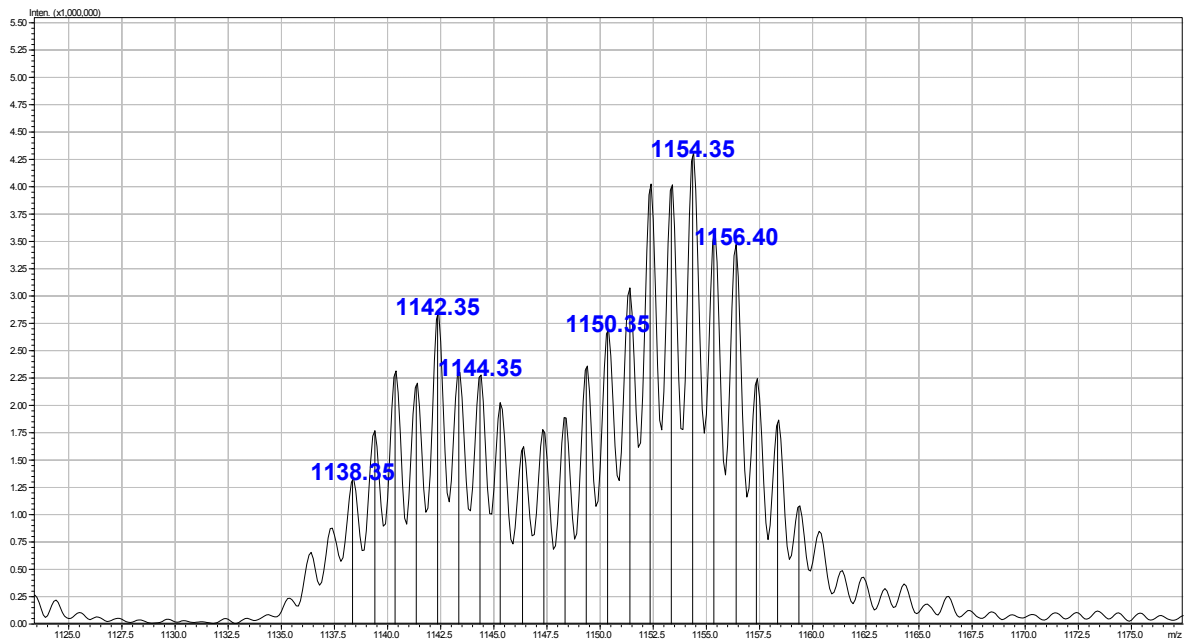
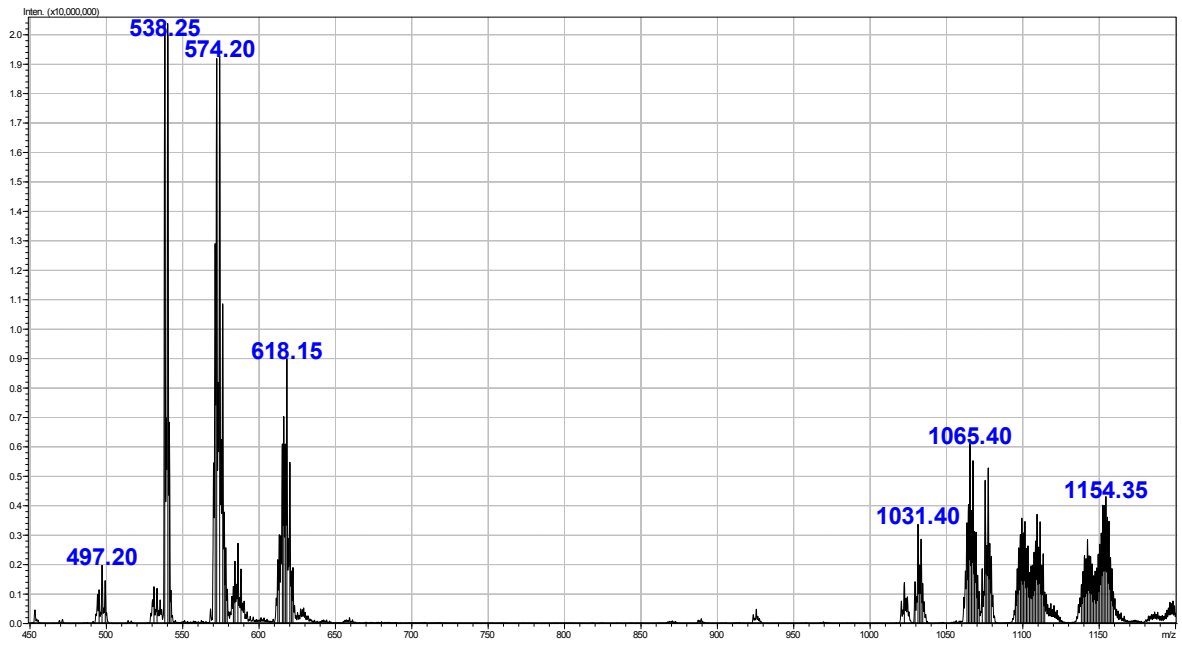


Figure S41. LC-MSMS spectra of 2

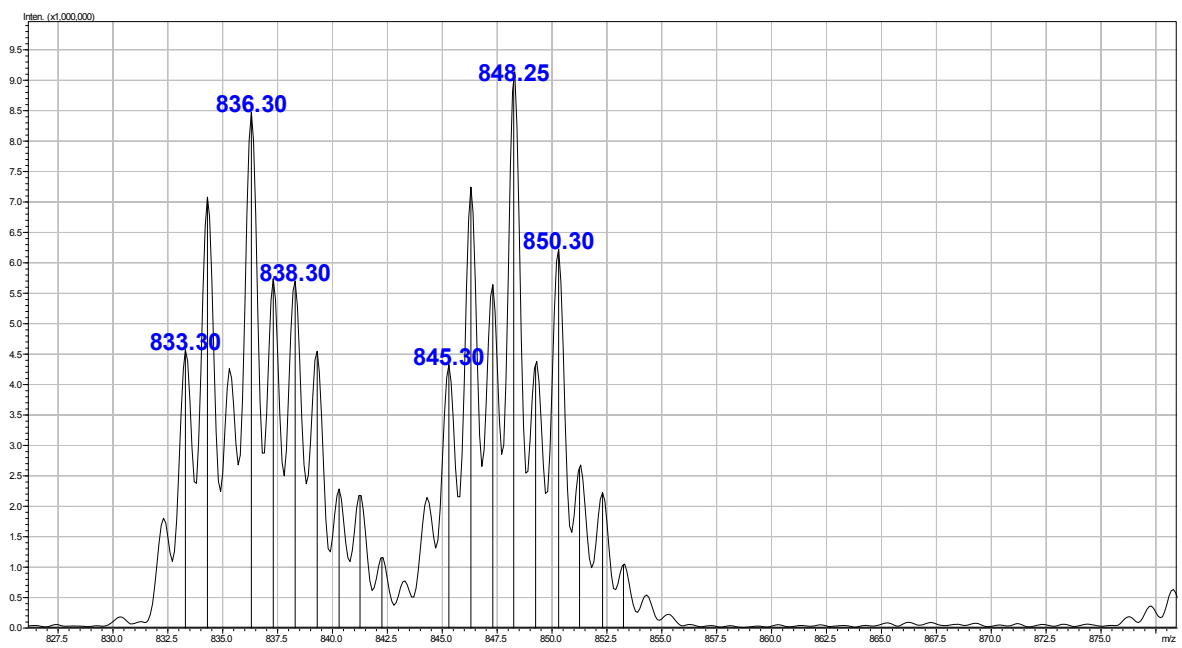
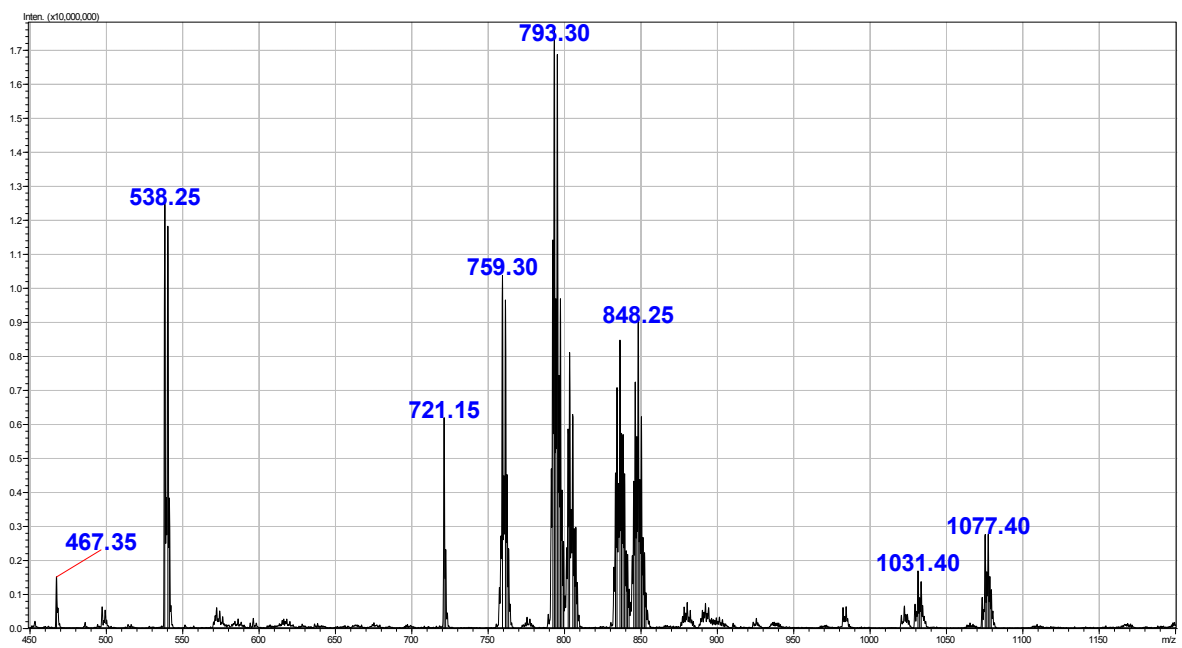


Figure S42. LC-MSMS spectra of 3

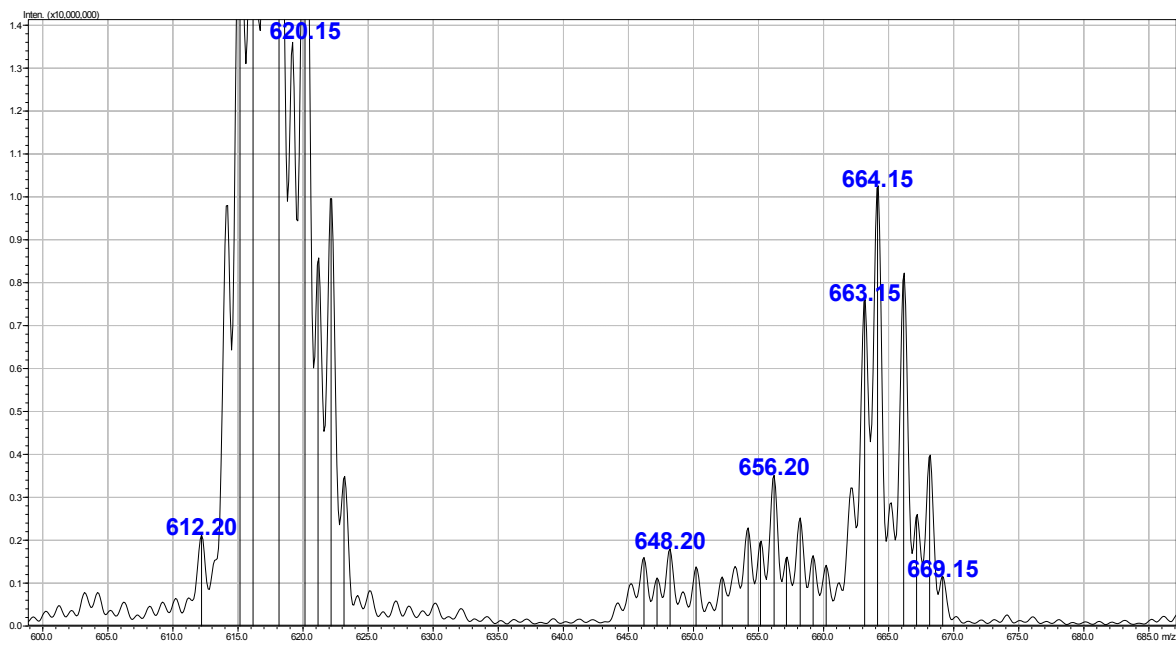
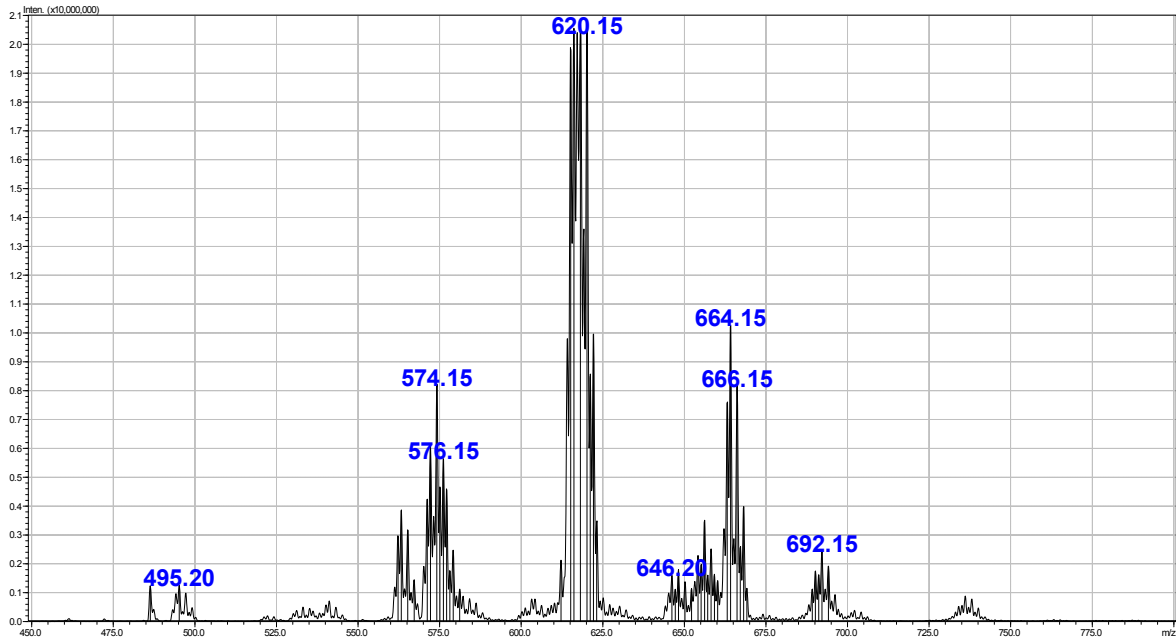


Figure S43. LC-MSMS spectra of 4

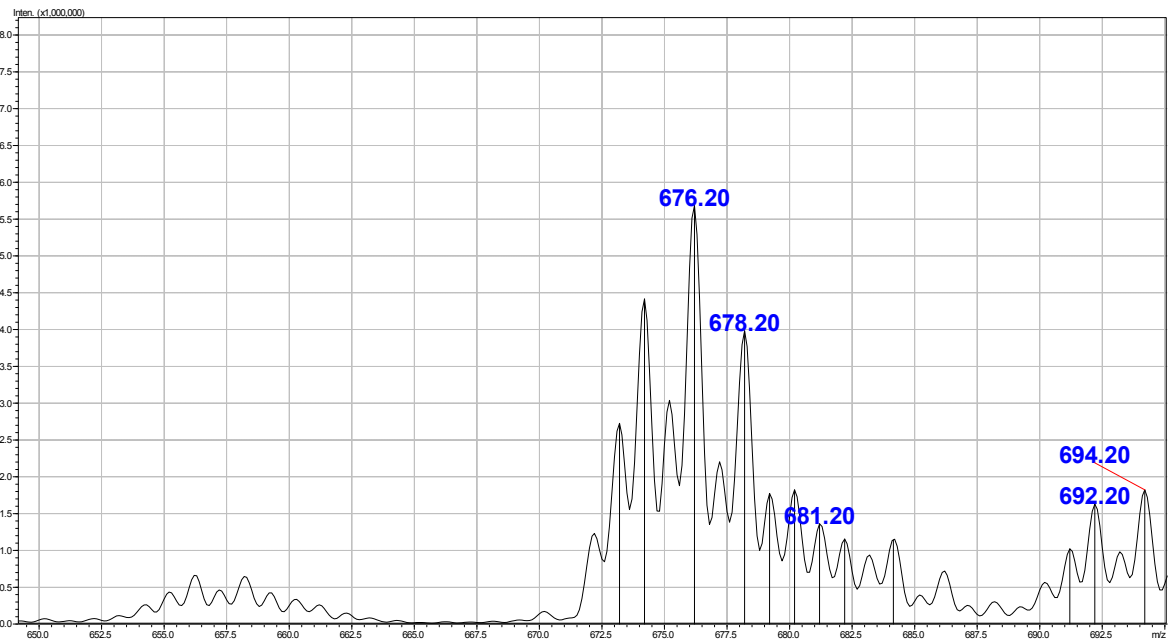
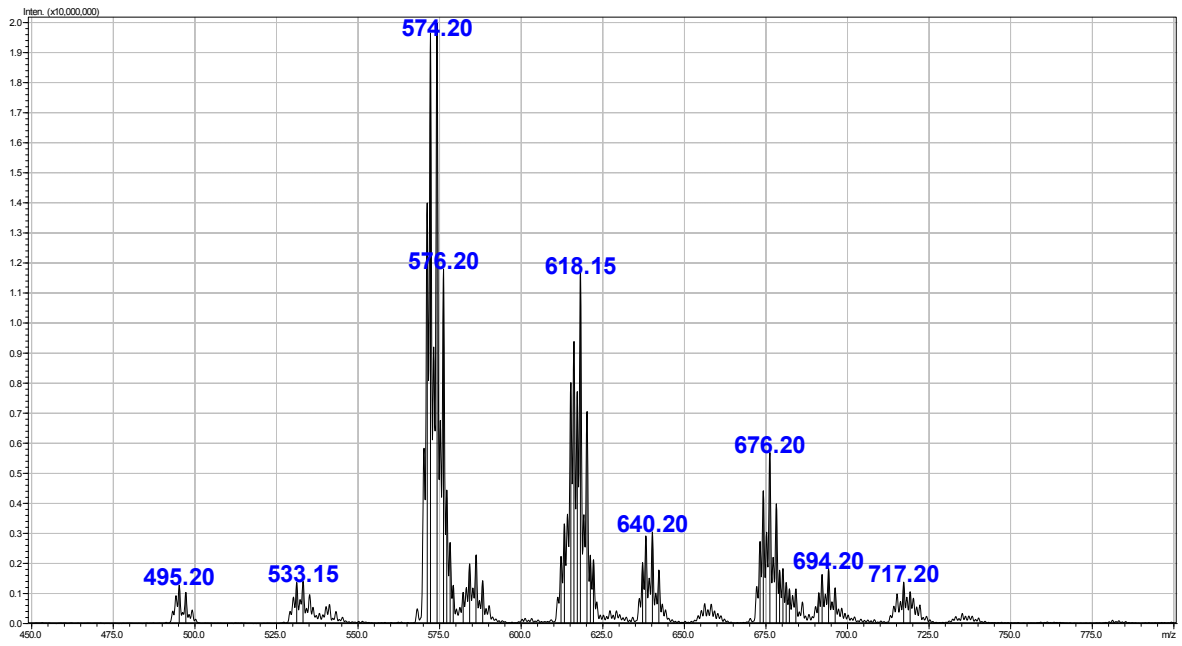


Figure S44. LC-MSMS spectra of 5