

Supporting Information

Preparation of 1,2-substituted benzimidazoles via copper-catalyzed three component coupling reaction

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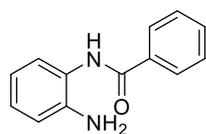
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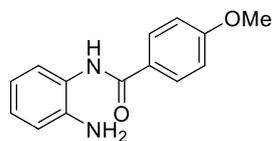
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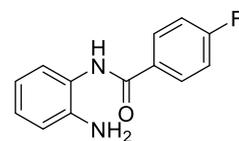
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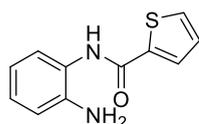
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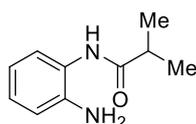
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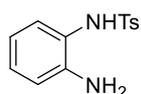
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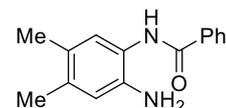
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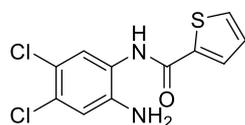
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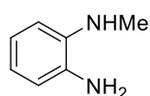
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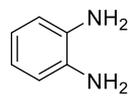
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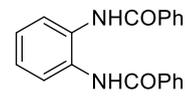
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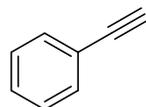


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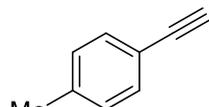


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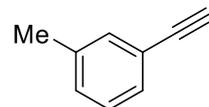
2. Structures of the starting materials 2a-2l



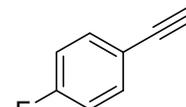
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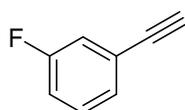
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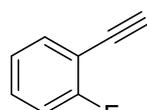
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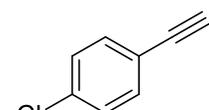
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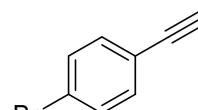
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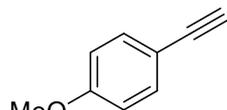
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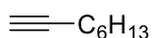
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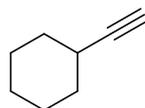
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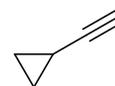
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2j



2k



2l

3. NMR Spectra

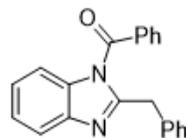
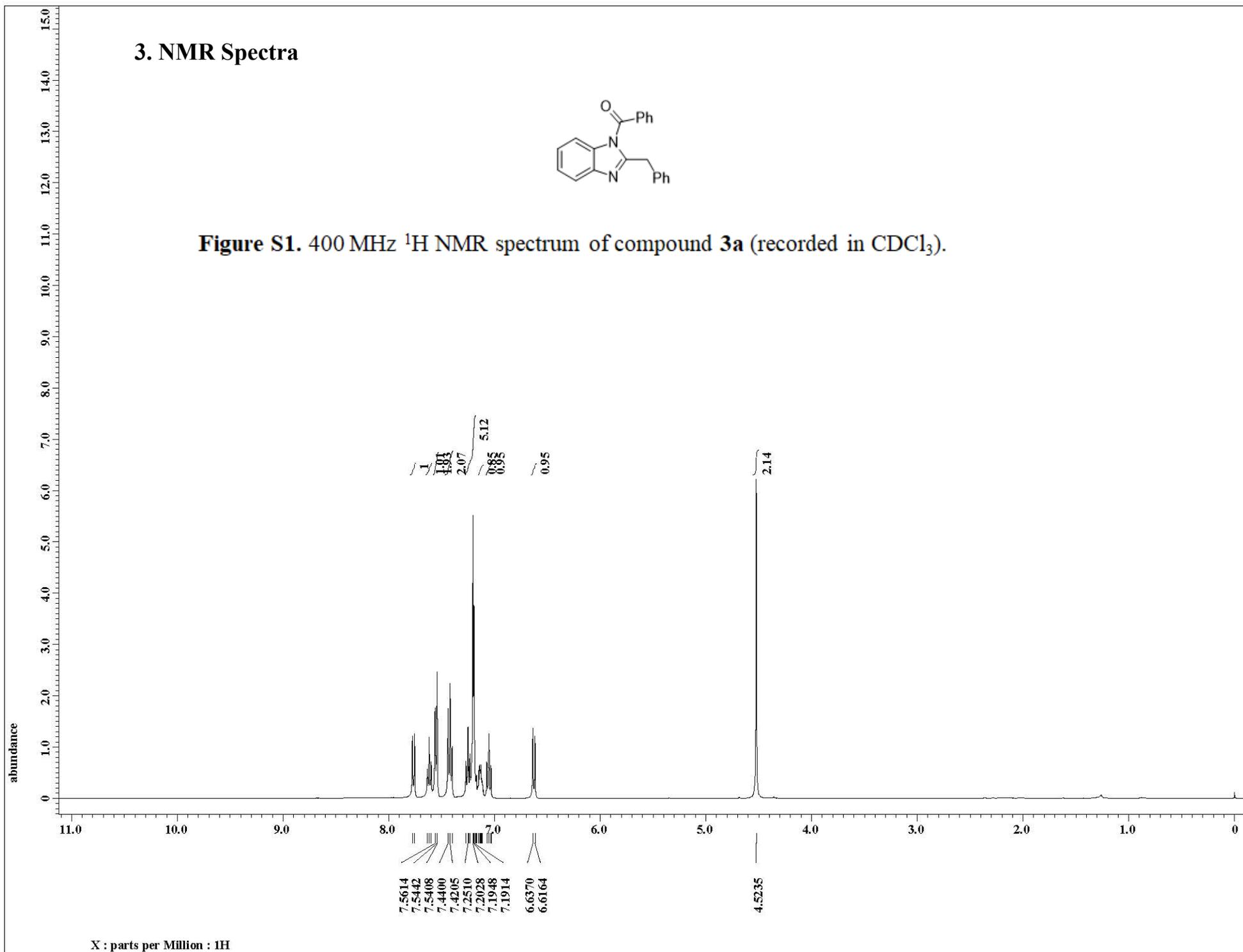


Figure S1. 400 MHz ^1H NMR spectrum of compound **3a** (recorded in CDCl_3).



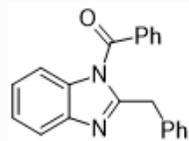
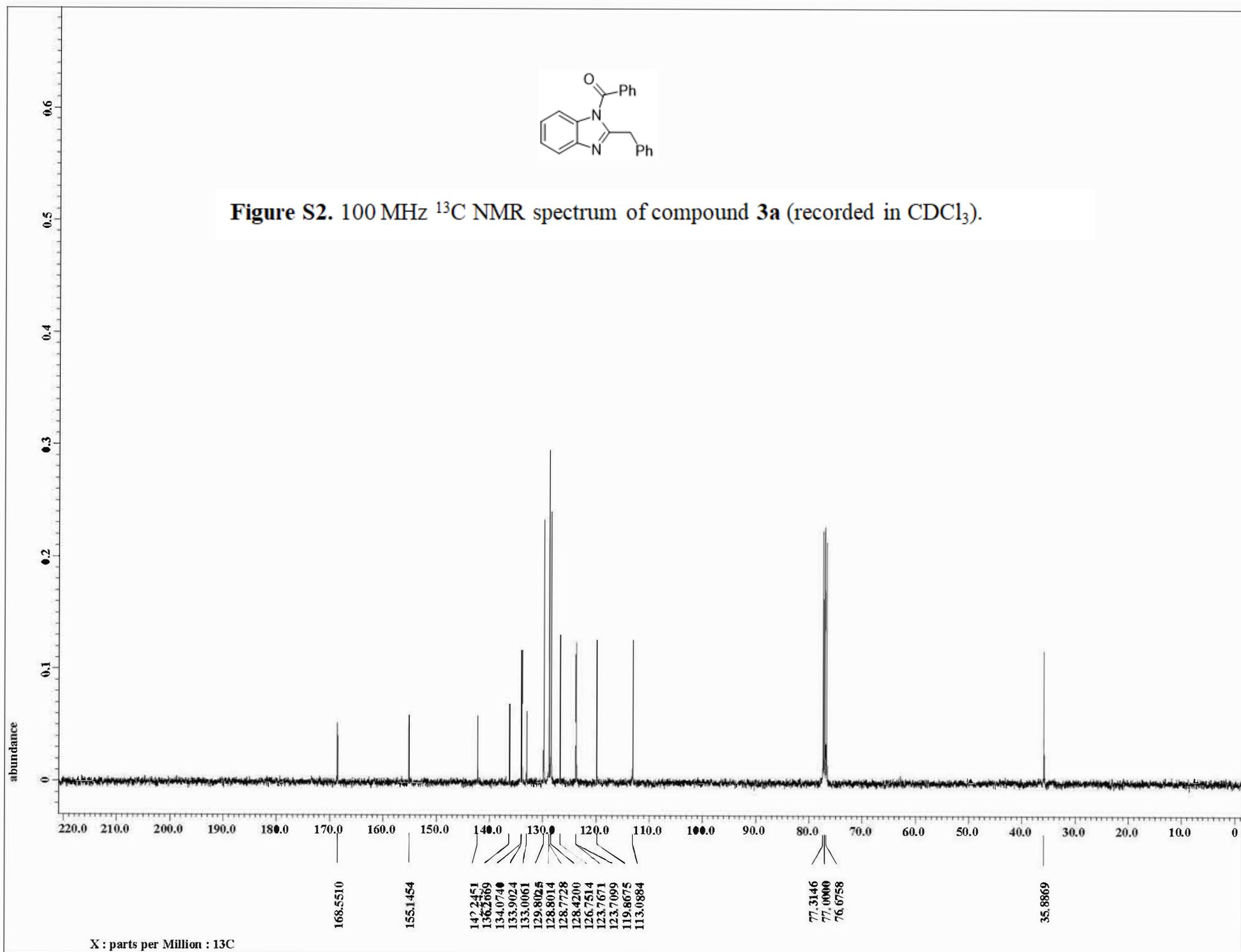


Figure S2. 100 MHz ^{13}C NMR spectrum of compound **3a** (recorded in CDCl_3).



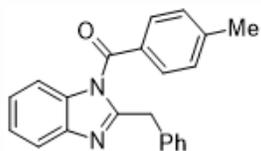
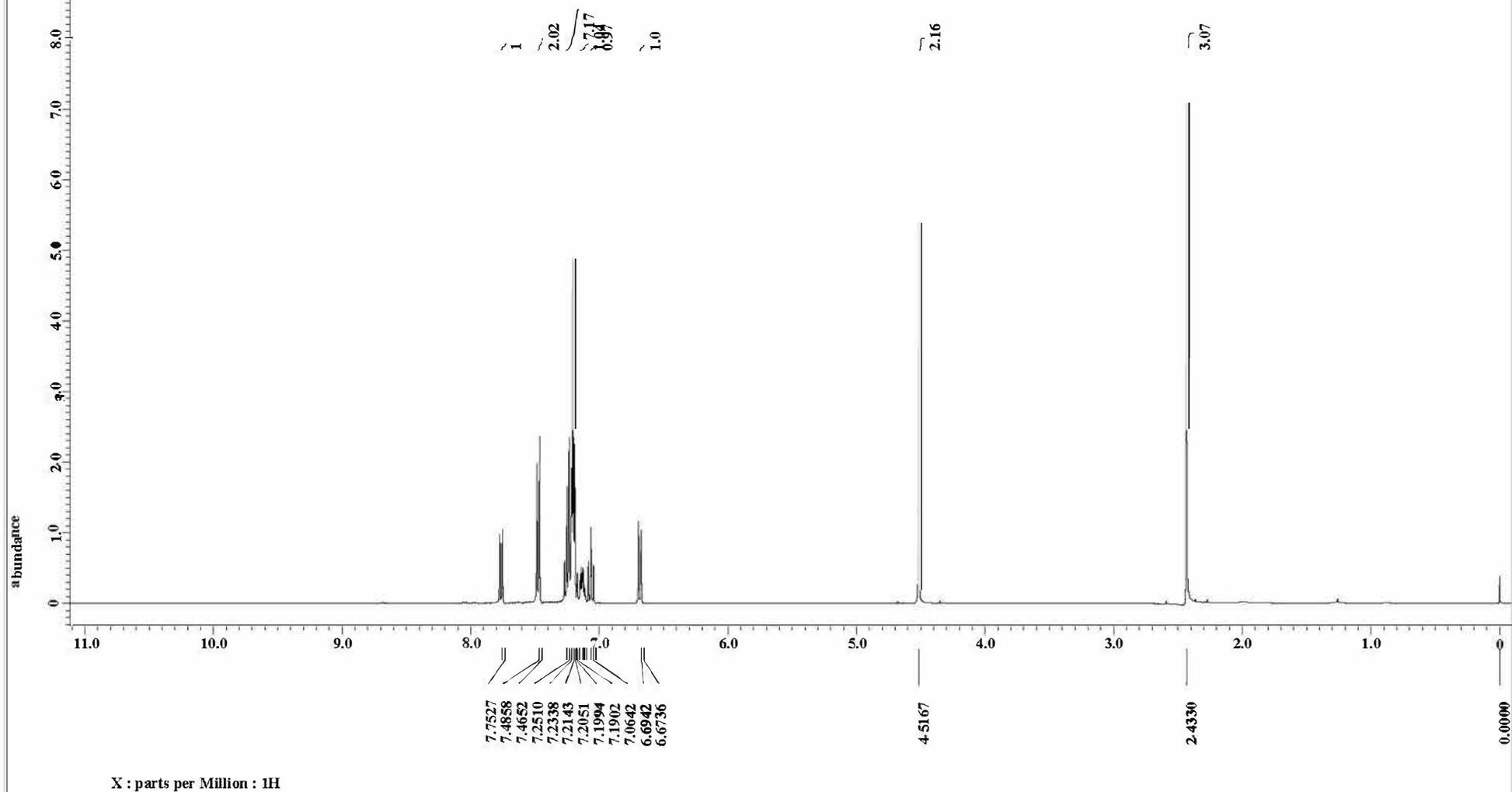


Figure S3. 400 MHz ^1H NMR spectrum of compound **3b** (recorded in CDCl_3).



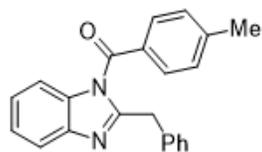
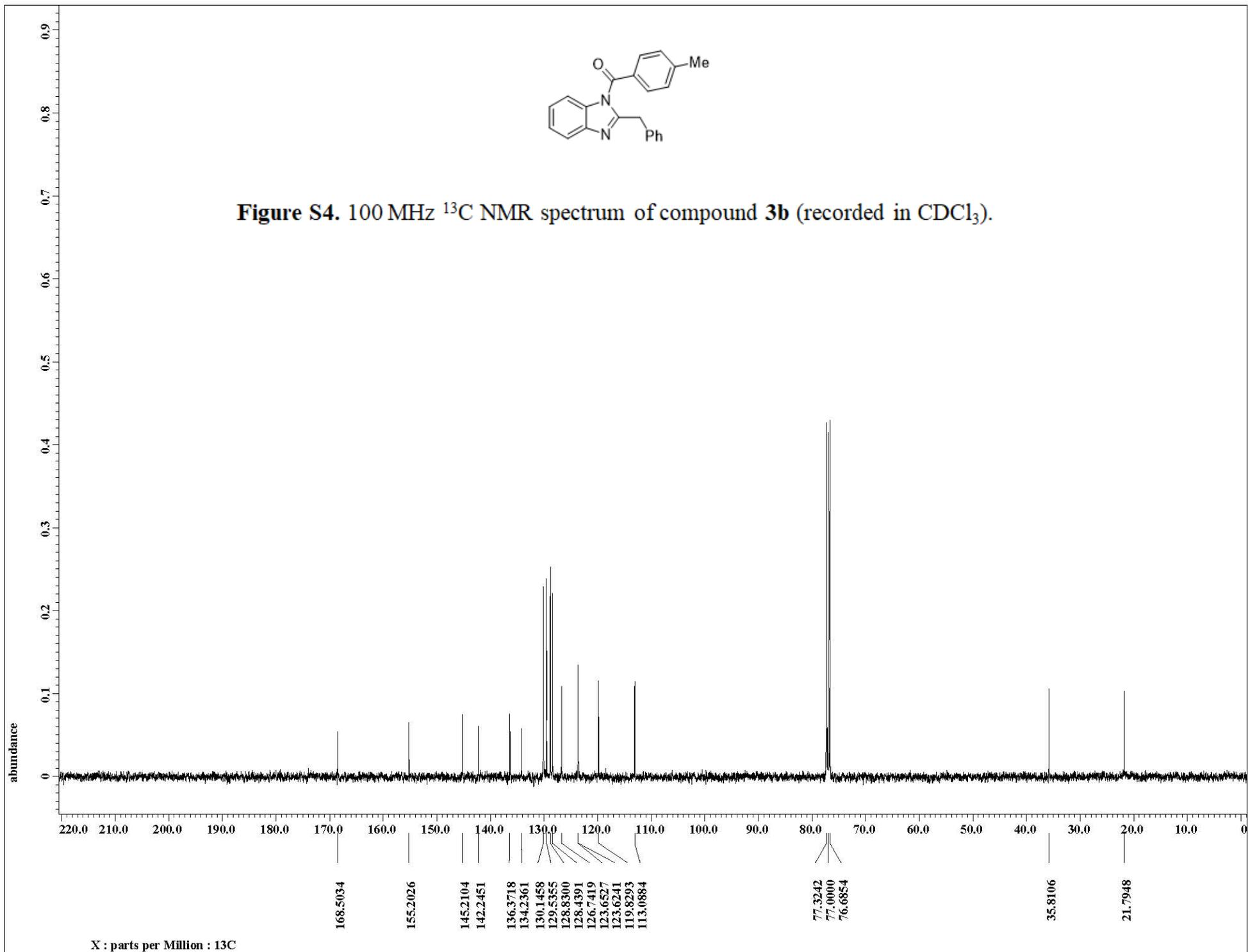


Figure S4. 100 MHz ^{13}C NMR spectrum of compound **3b** (recorded in CDCl_3).



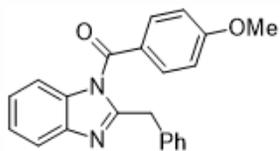
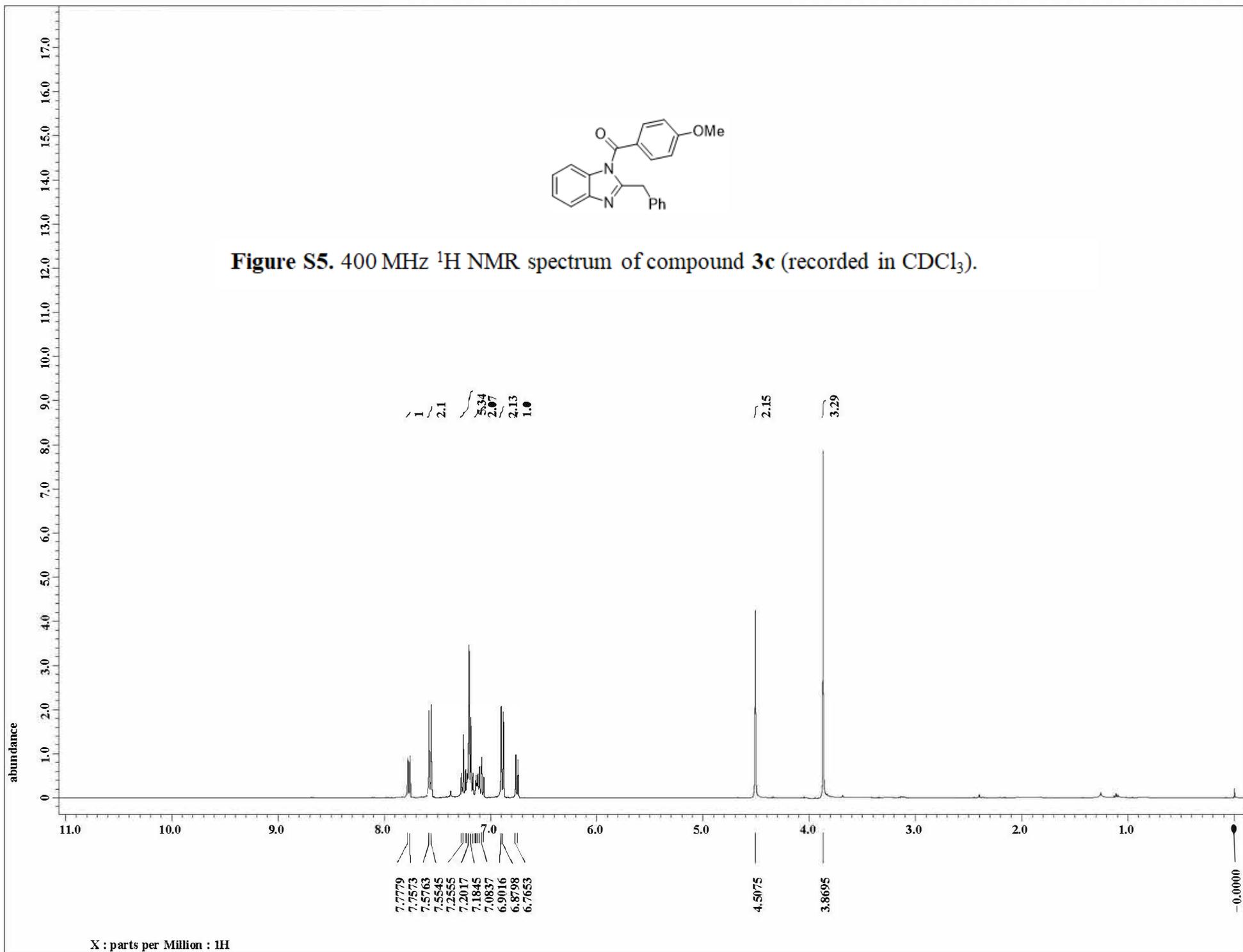


Figure S5. 400 MHz ^1H NMR spectrum of compound **3c** (recorded in CDCl_3).



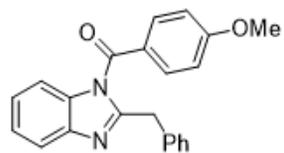
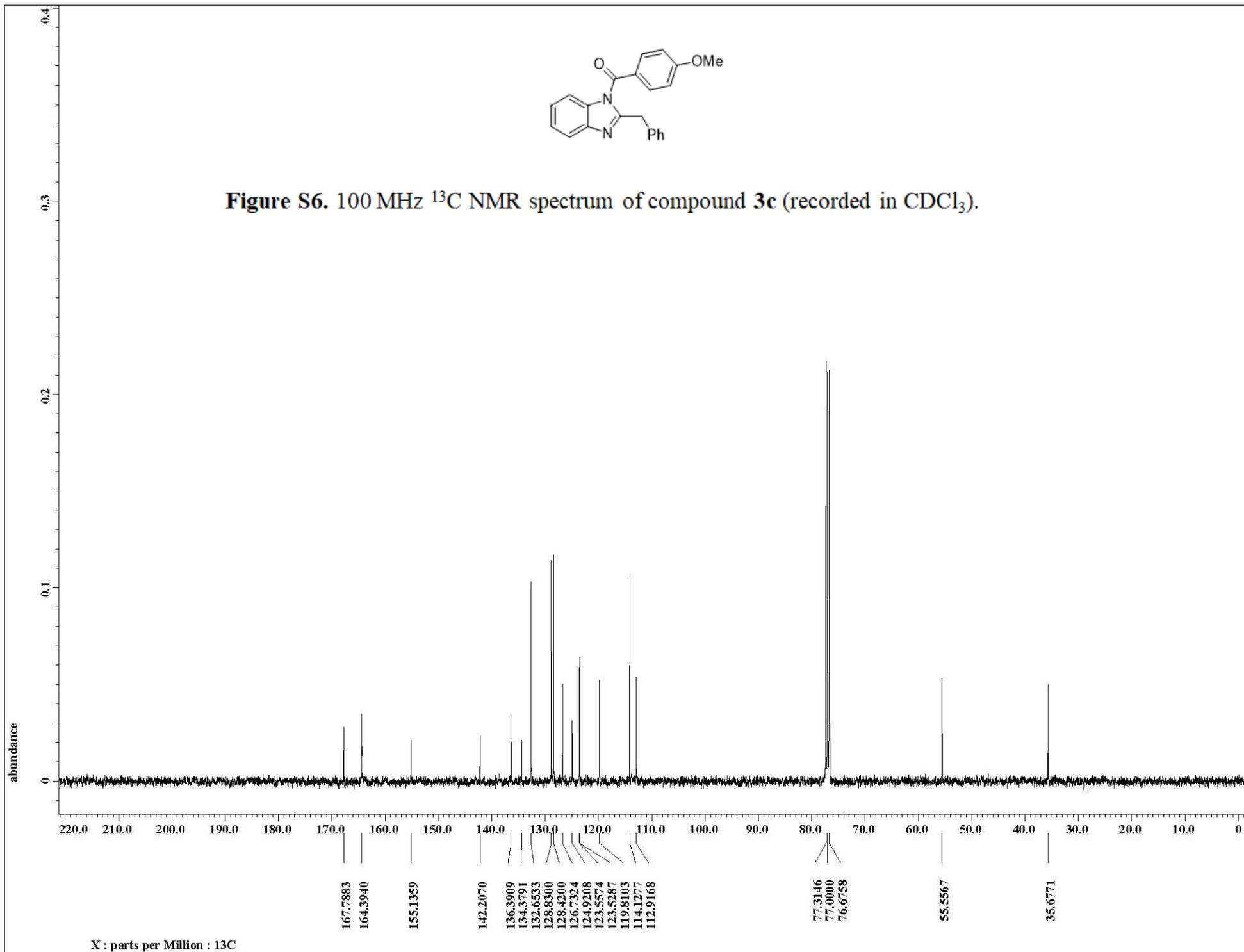


Figure S6. 100 MHz ^{13}C NMR spectrum of compound **3c** (recorded in CDCl_3).



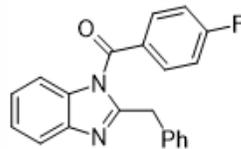
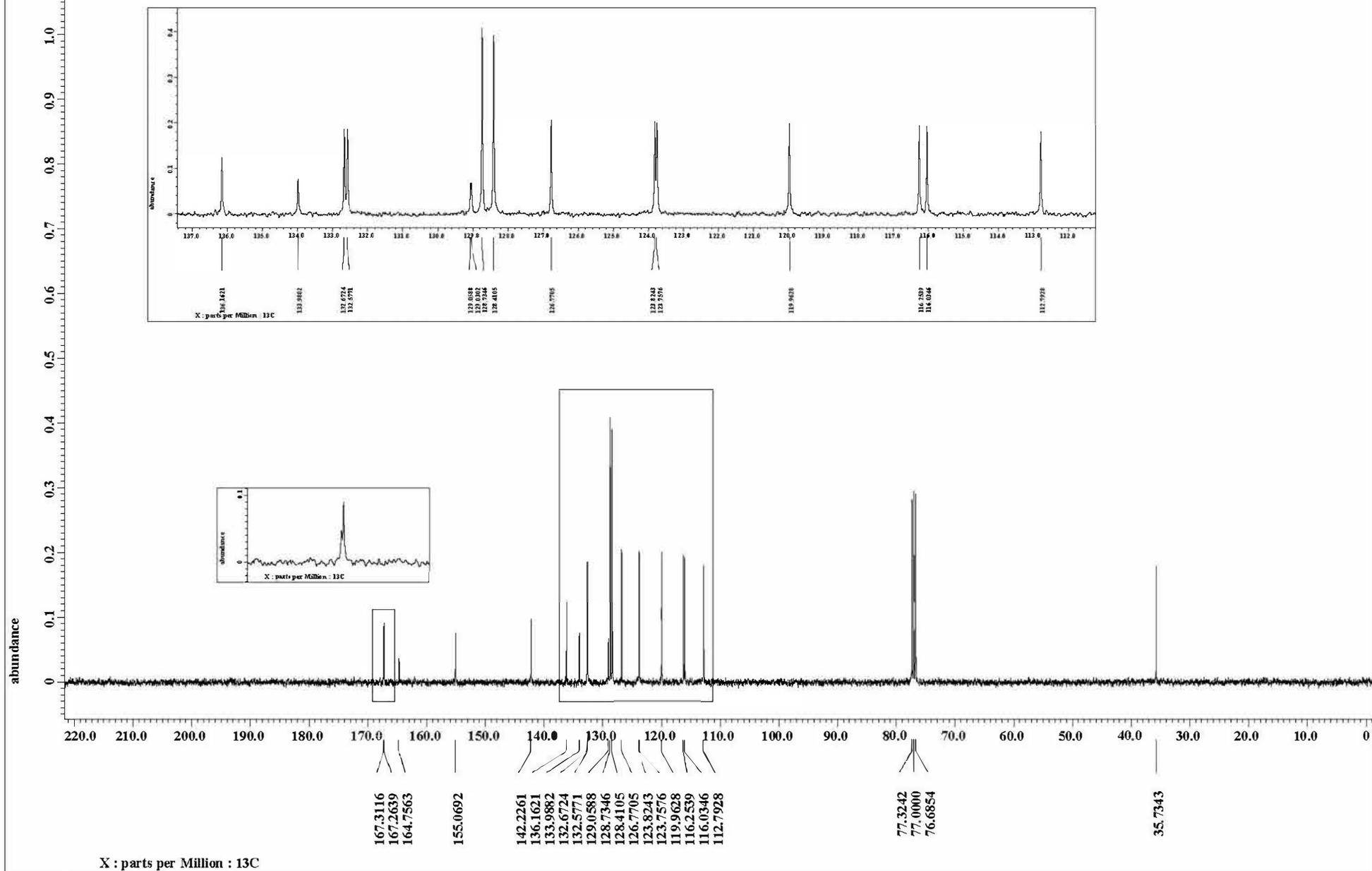


Figure S7. 400 MHz ^1H NMR spectrum of compound **3d** (recorded in CDCl_3).



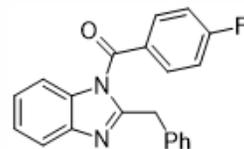
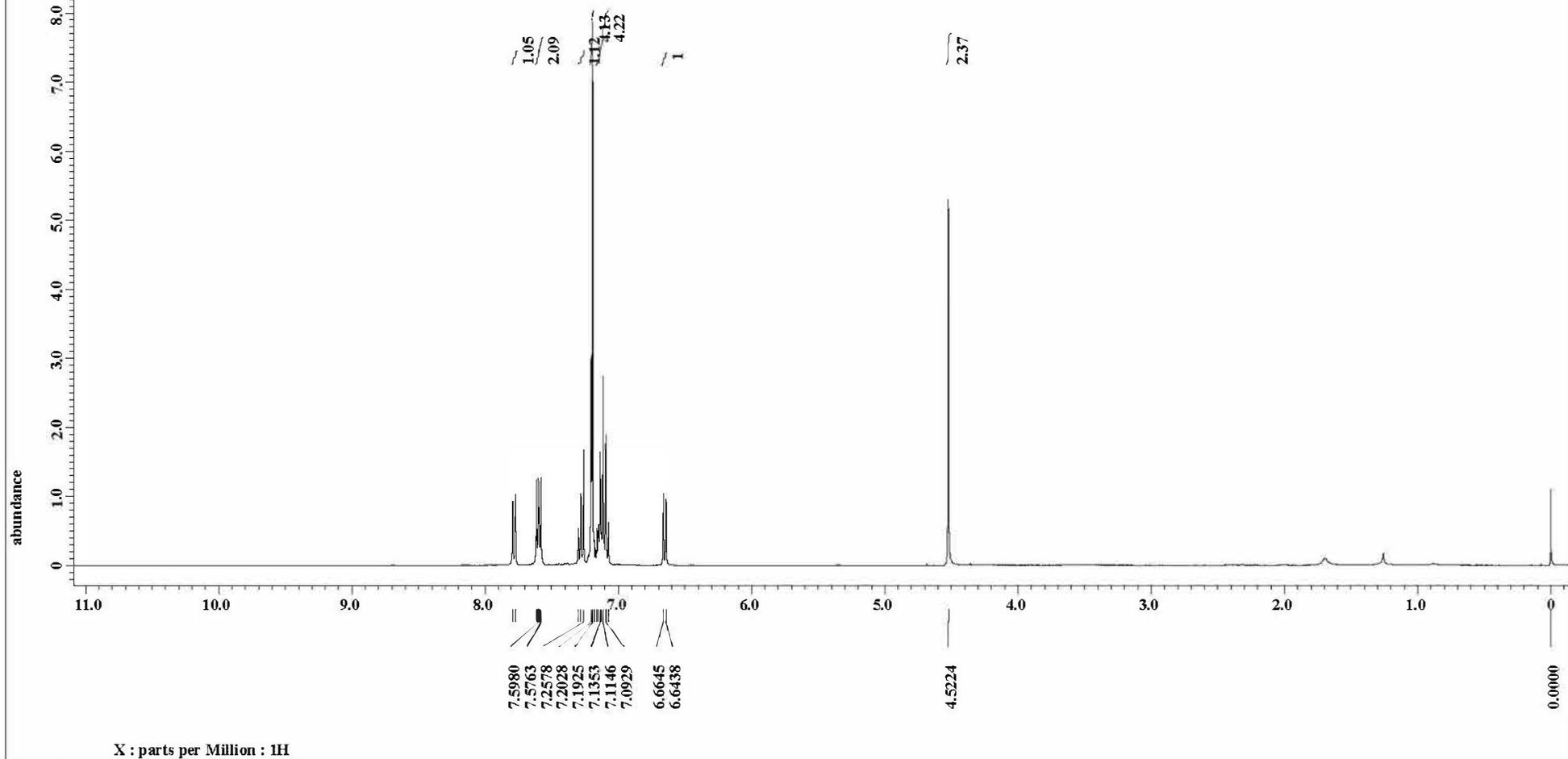


Figure S8. 100 MHz ^{13}C NMR spectrum of compound **3d** (recorded in CDCl_3).



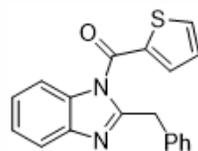
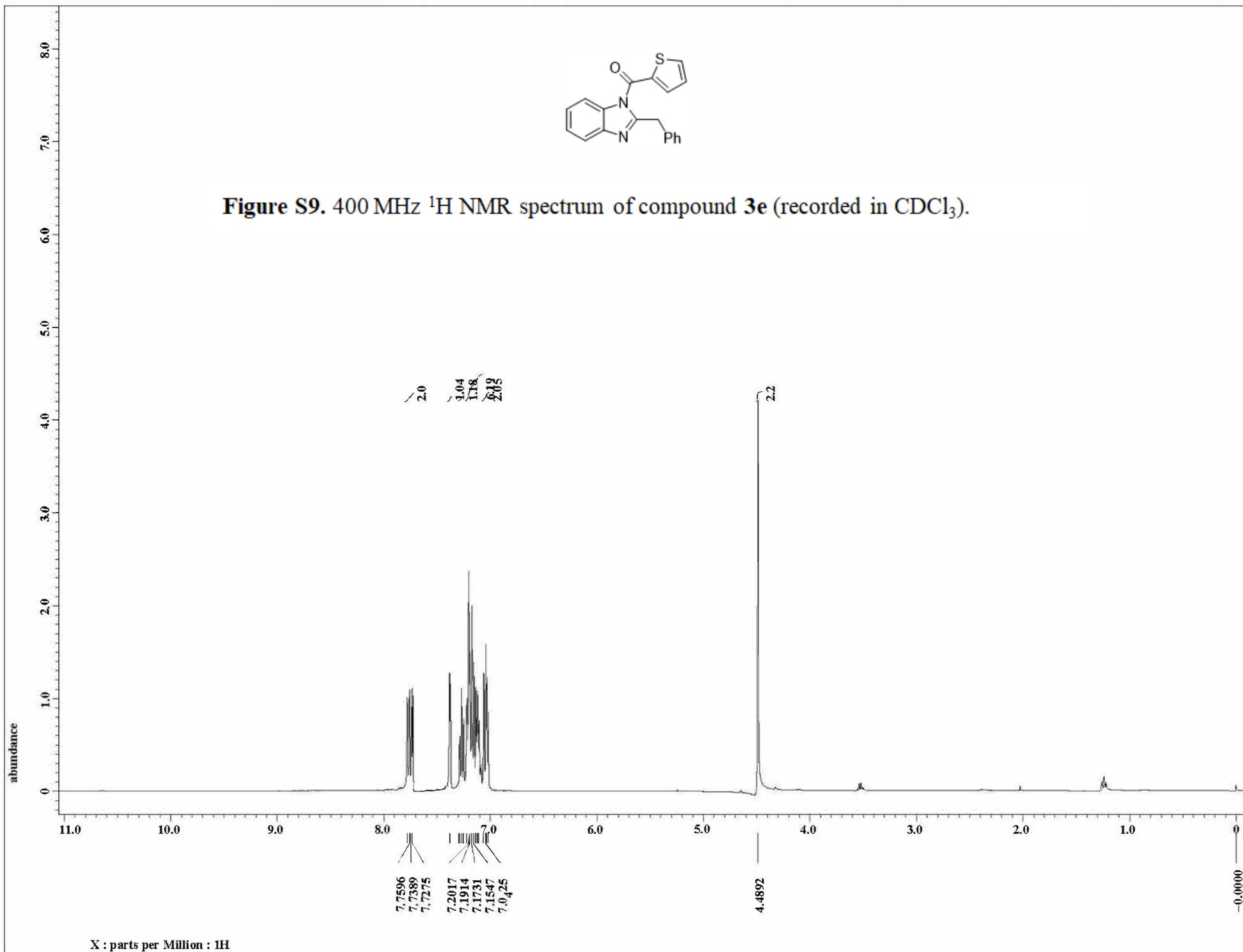


Figure S9. 400 MHz ^1H NMR spectrum of compound 3e (recorded in CDCl_3).



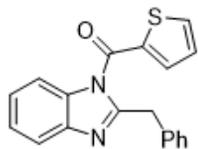
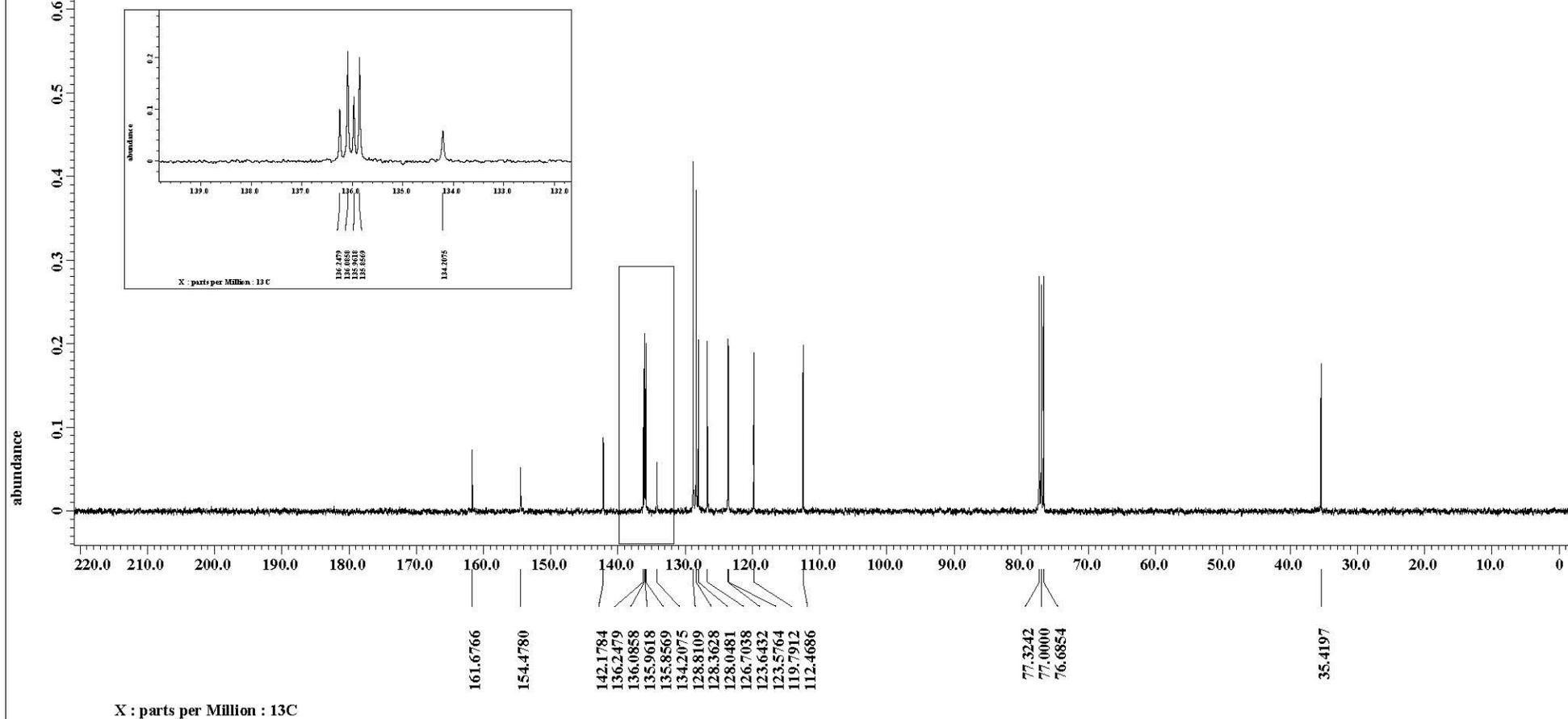


Figure S10. 100 MHz ^{13}C NMR spectrum of compound **3e** (recorded in CDCl_3).



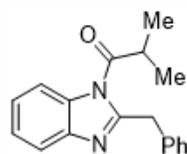
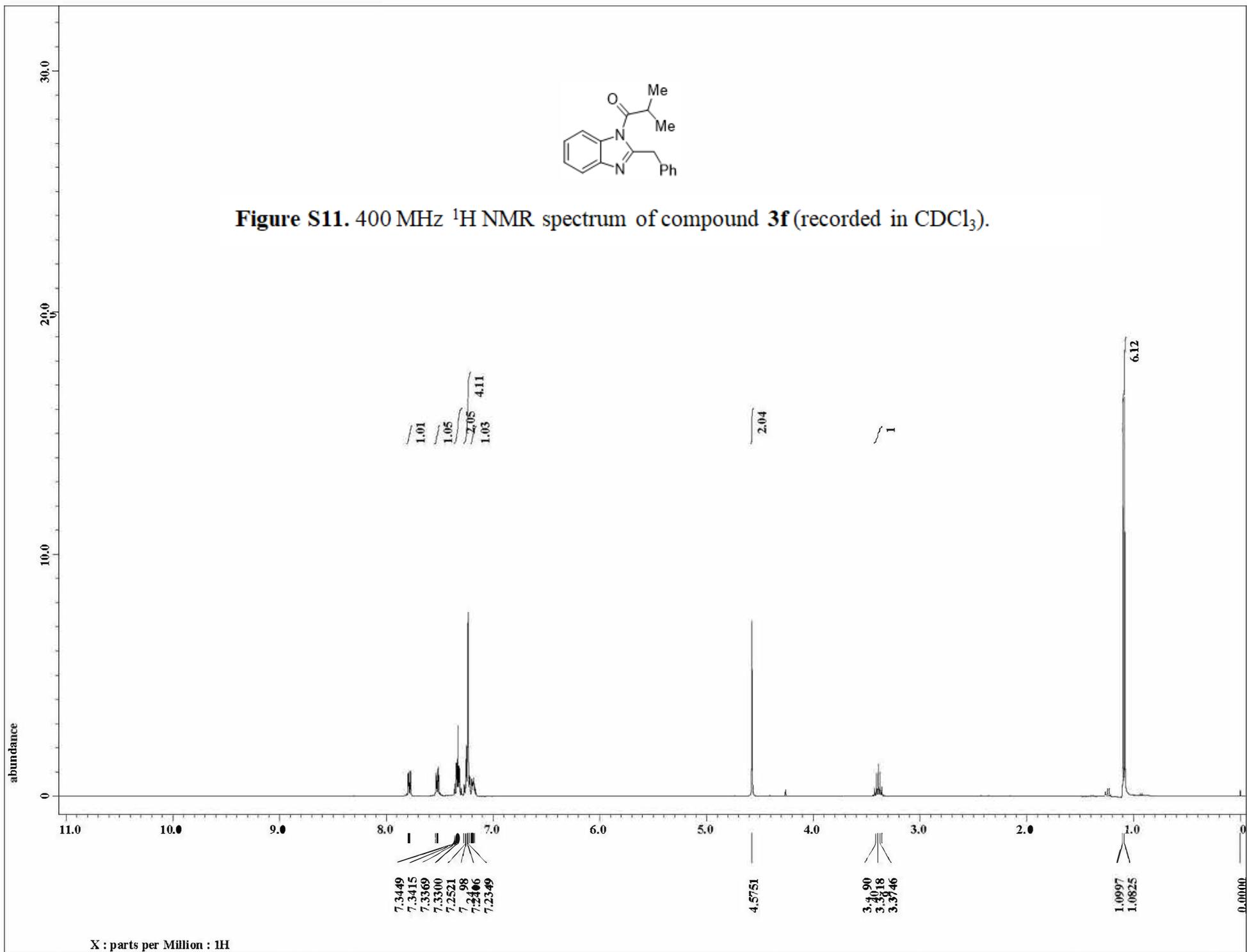


Figure S11. 400 MHz ^1H NMR spectrum of compound **3f** (recorded in CDCl_3).



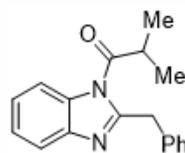
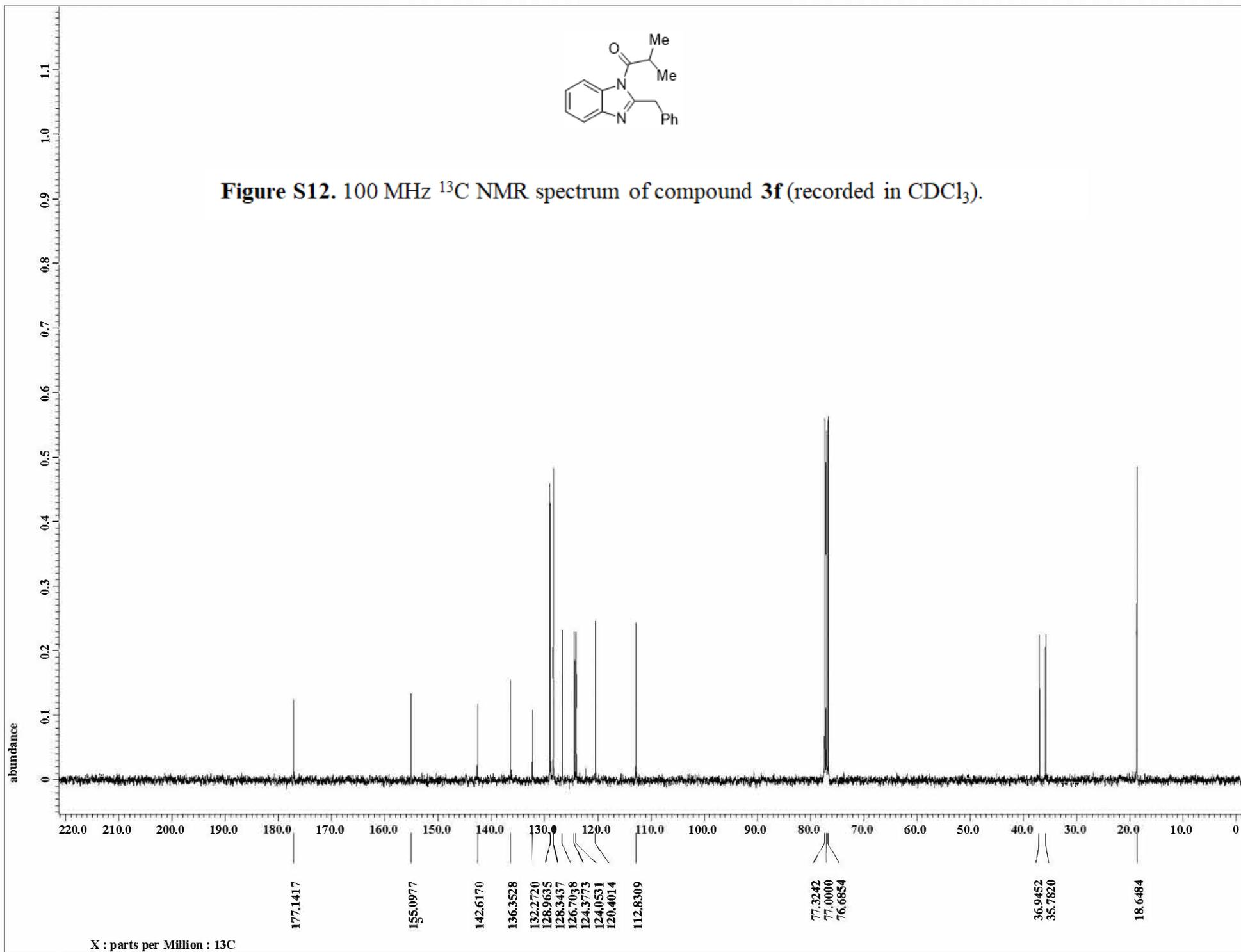


Figure S12. 100 MHz ^{13}C NMR spectrum of compound **3f** (recorded in CDCl_3).



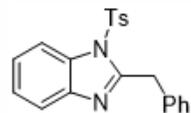
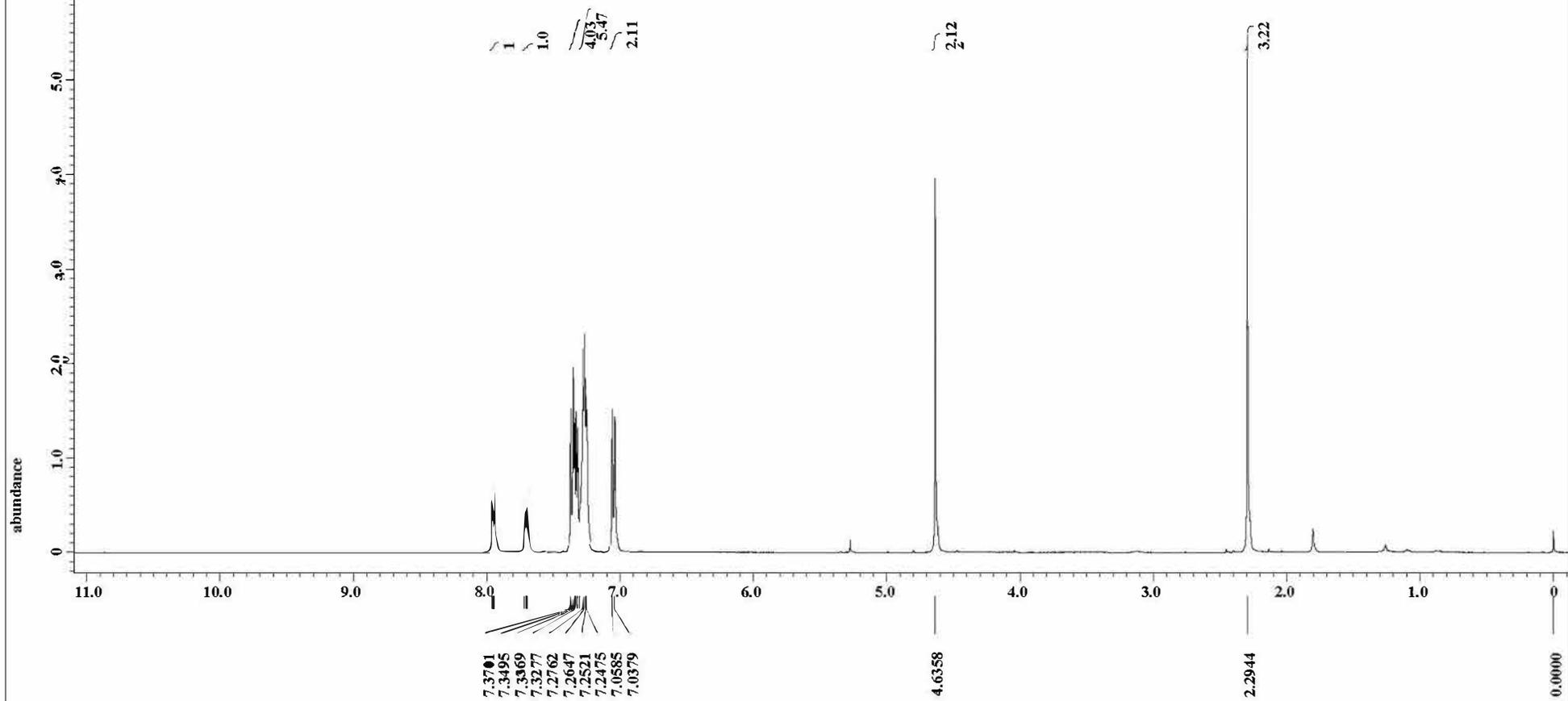


Figure S13. 400 MHz ^1H NMR spectrum of compound **3g** (recorded in CDCl_3).



X : parts per Million : 1H

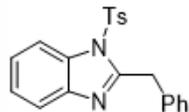
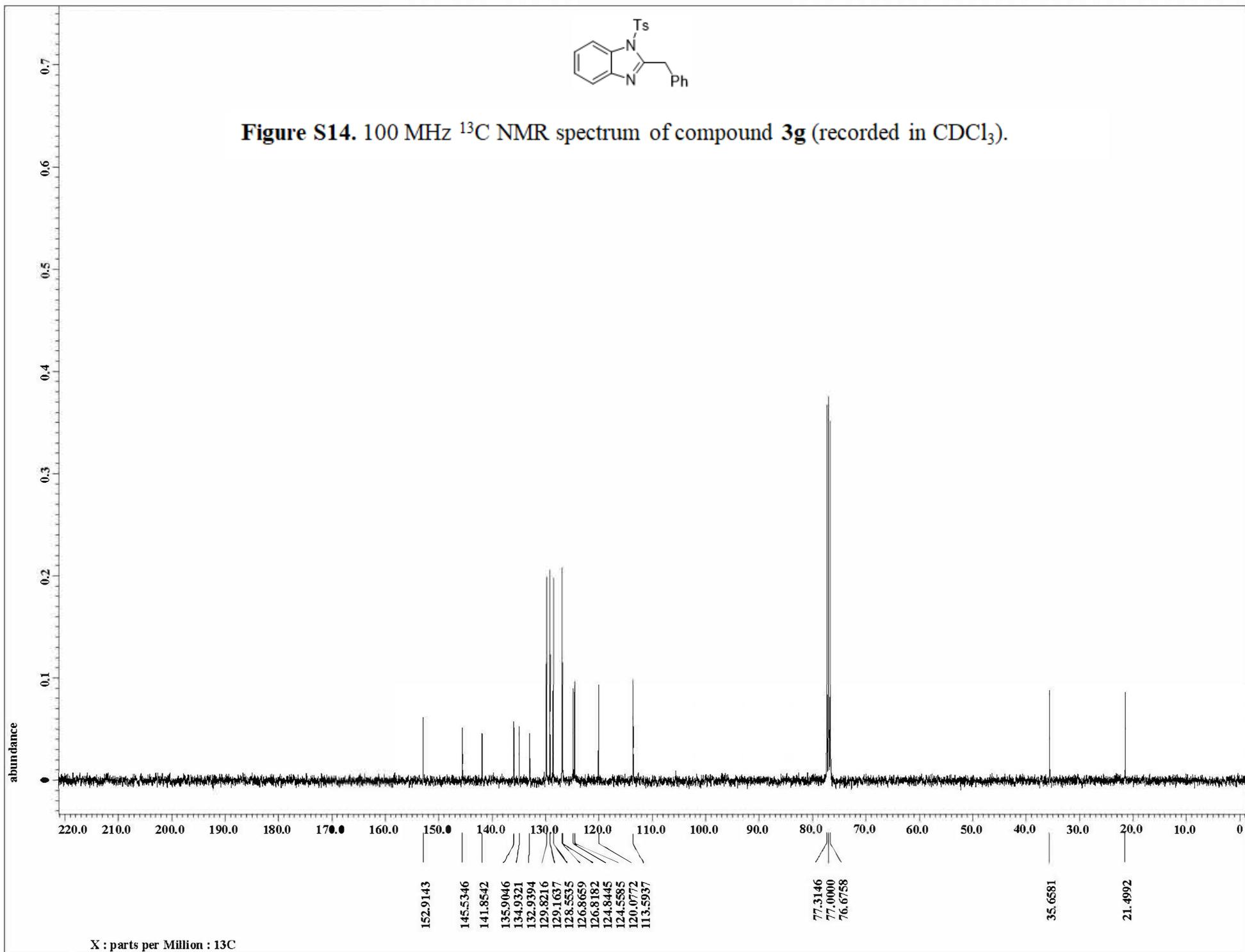


Figure S14. 100 MHz ^{13}C NMR spectrum of compound **3g** (recorded in CDCl_3).



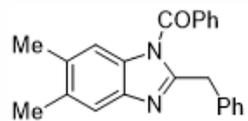
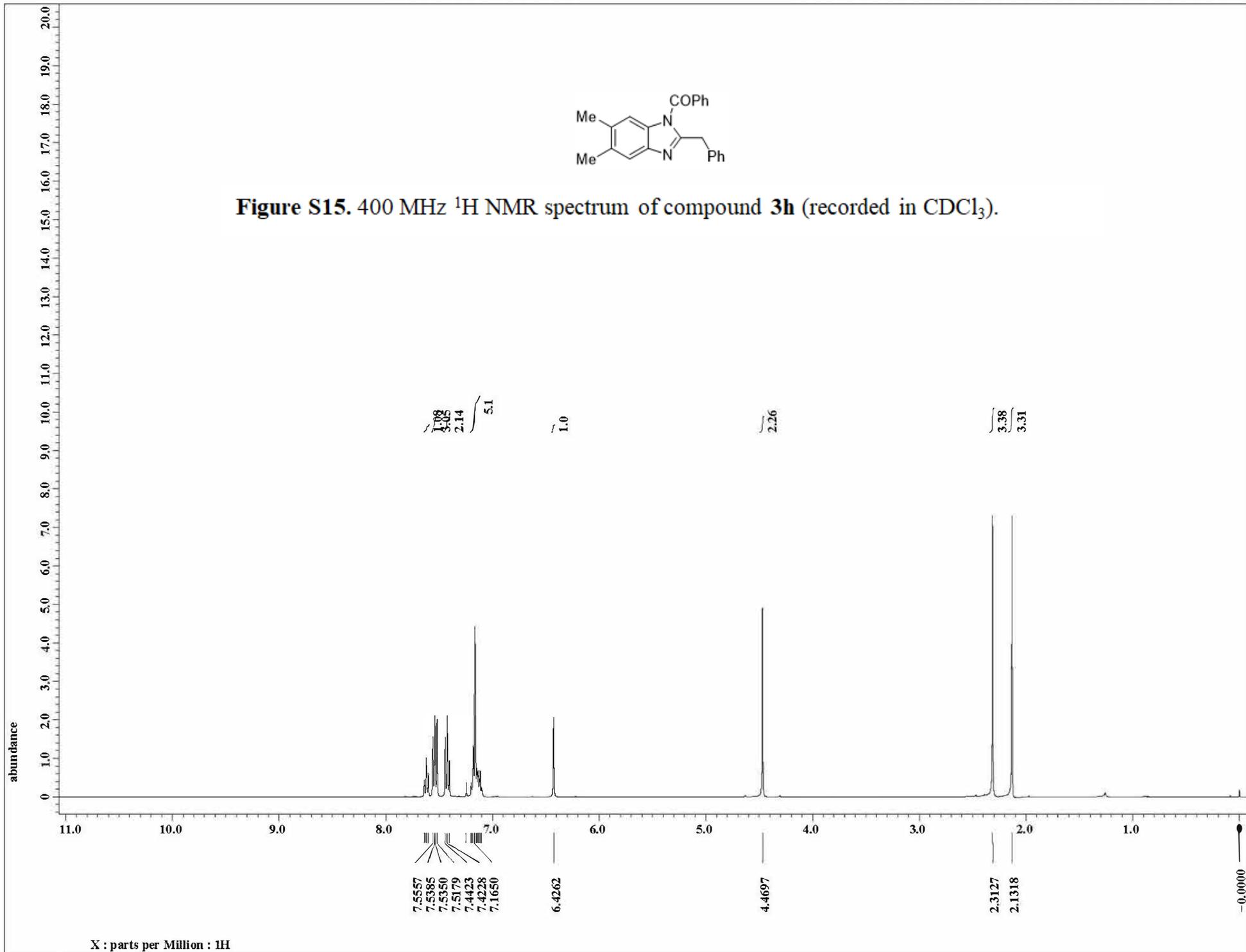


Figure S15. 400 MHz ^1H NMR spectrum of compound **3h** (recorded in CDCl_3).



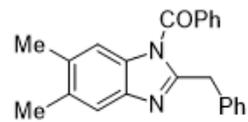
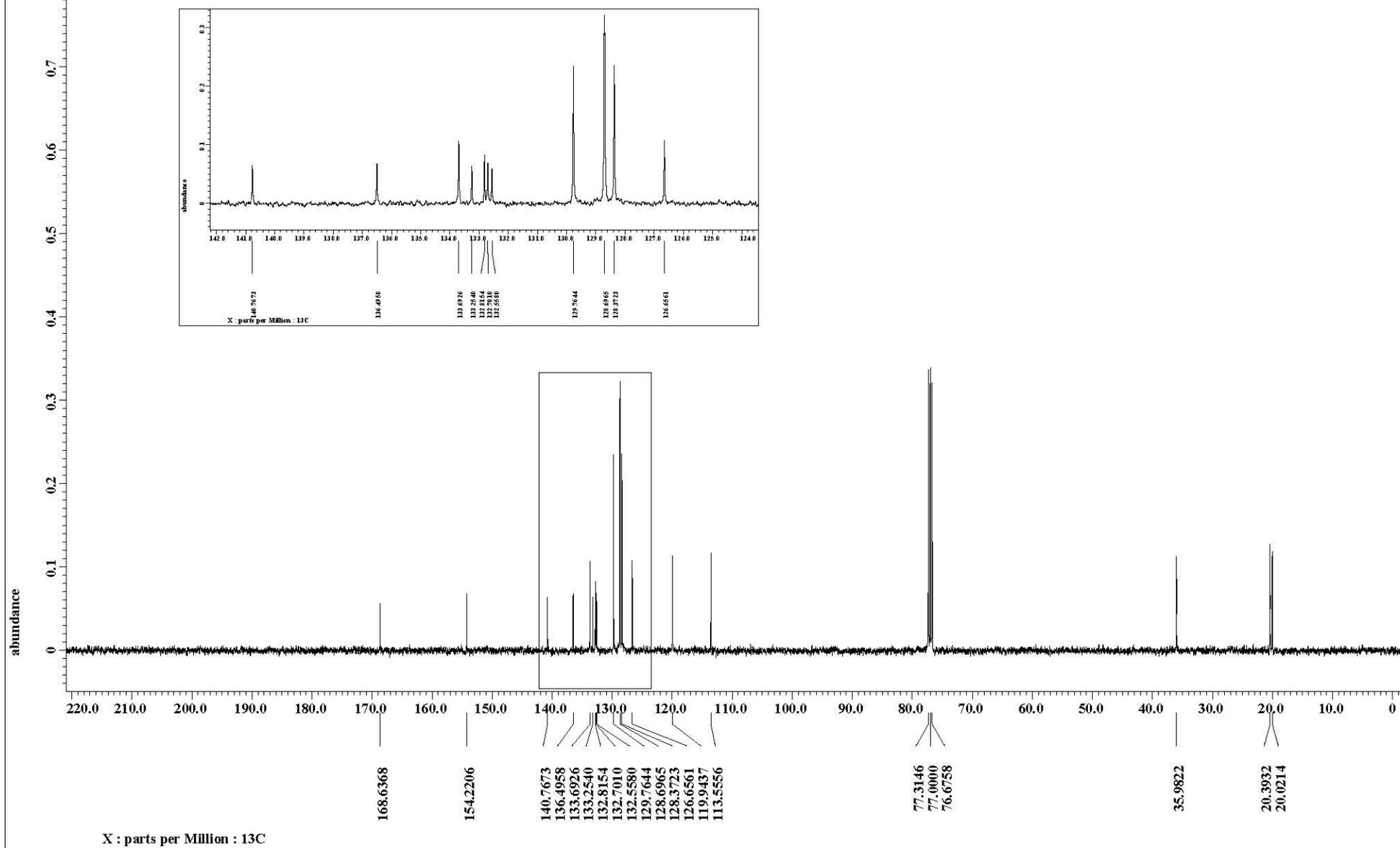


Figure S16. 100 MHz ^{13}C NMR spectrum of compound **3h** (recorded in CDCl_3).



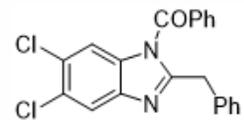
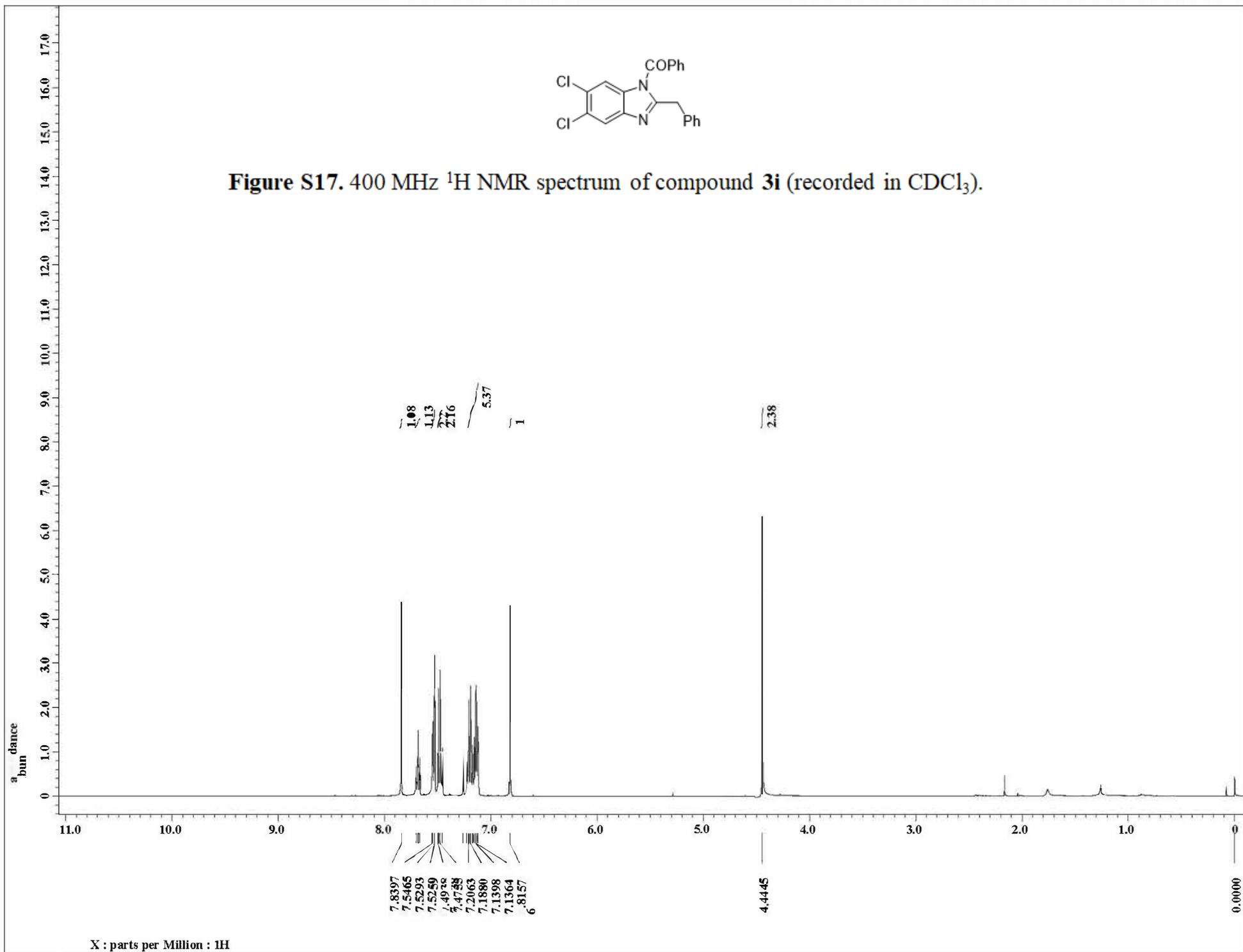


Figure S17. 400 MHz ^1H NMR spectrum of compound **3i** (recorded in CDCl_3).



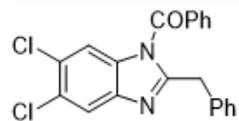
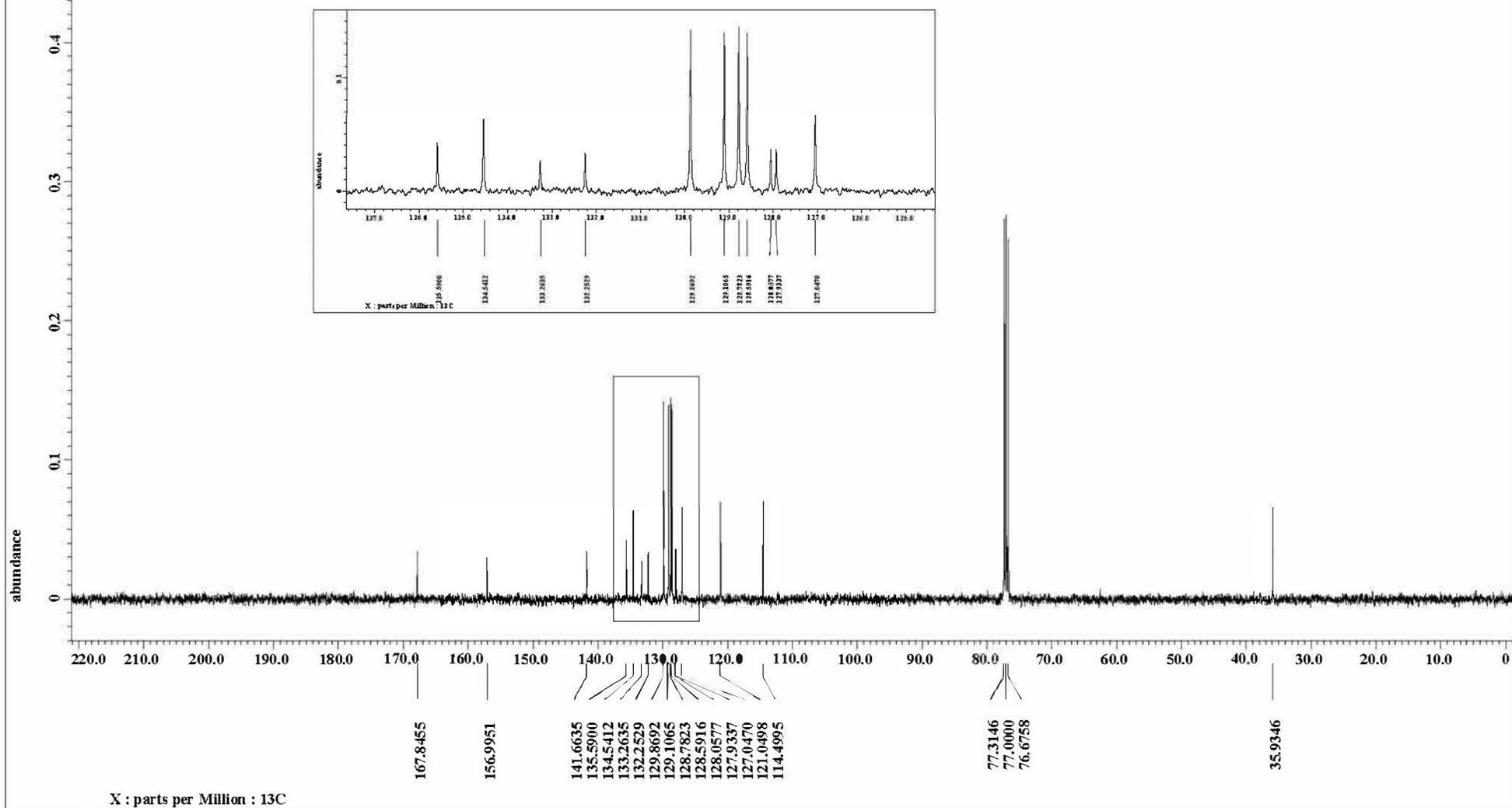


Figure S18. 100 MHz ^{13}C NMR spectrum of compound **3i** (recorded in CDCl_3).



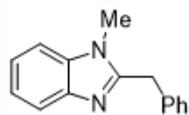
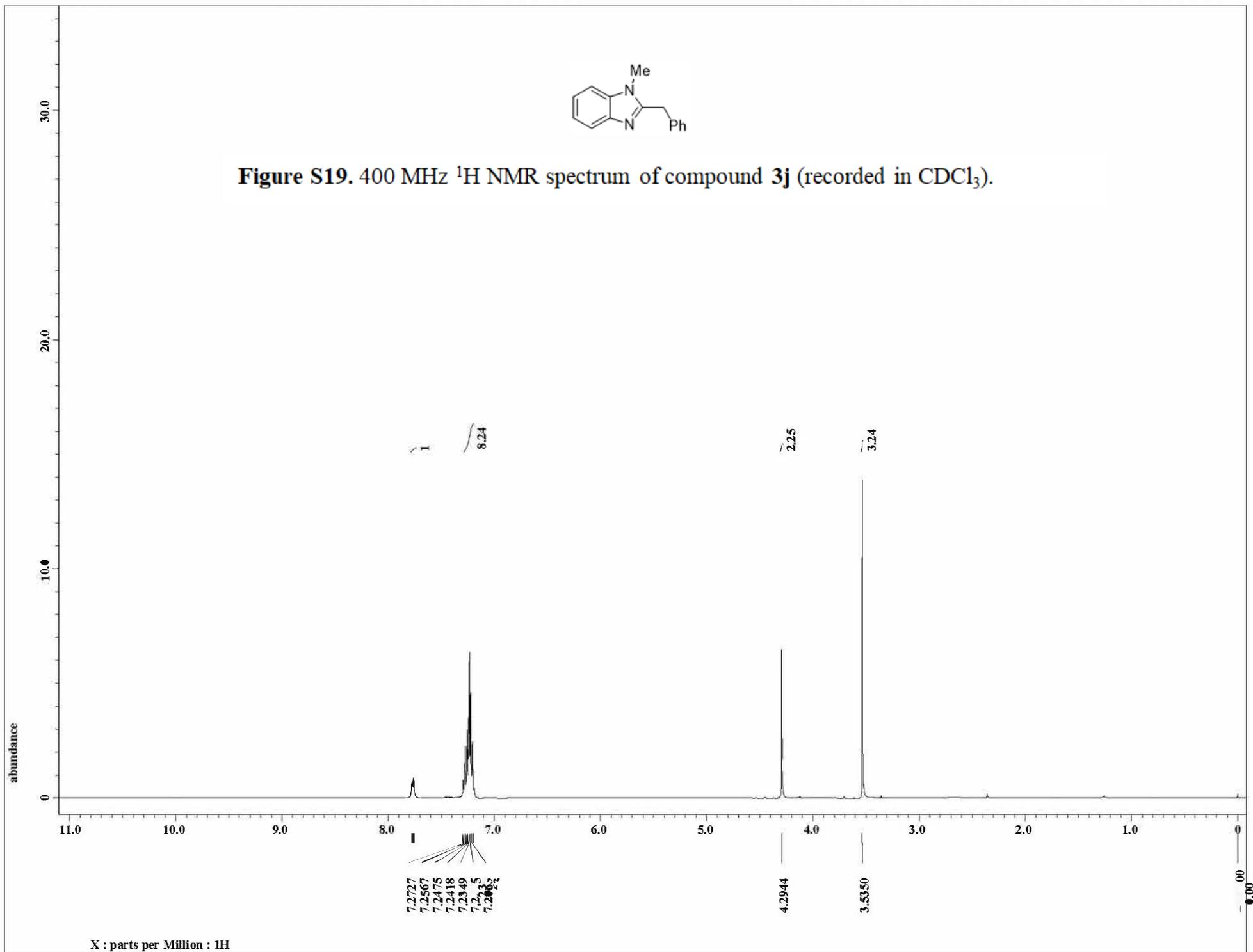


Figure S19. 400 MHz ^1H NMR spectrum of compound **3j** (recorded in CDCl_3).



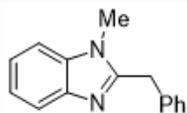
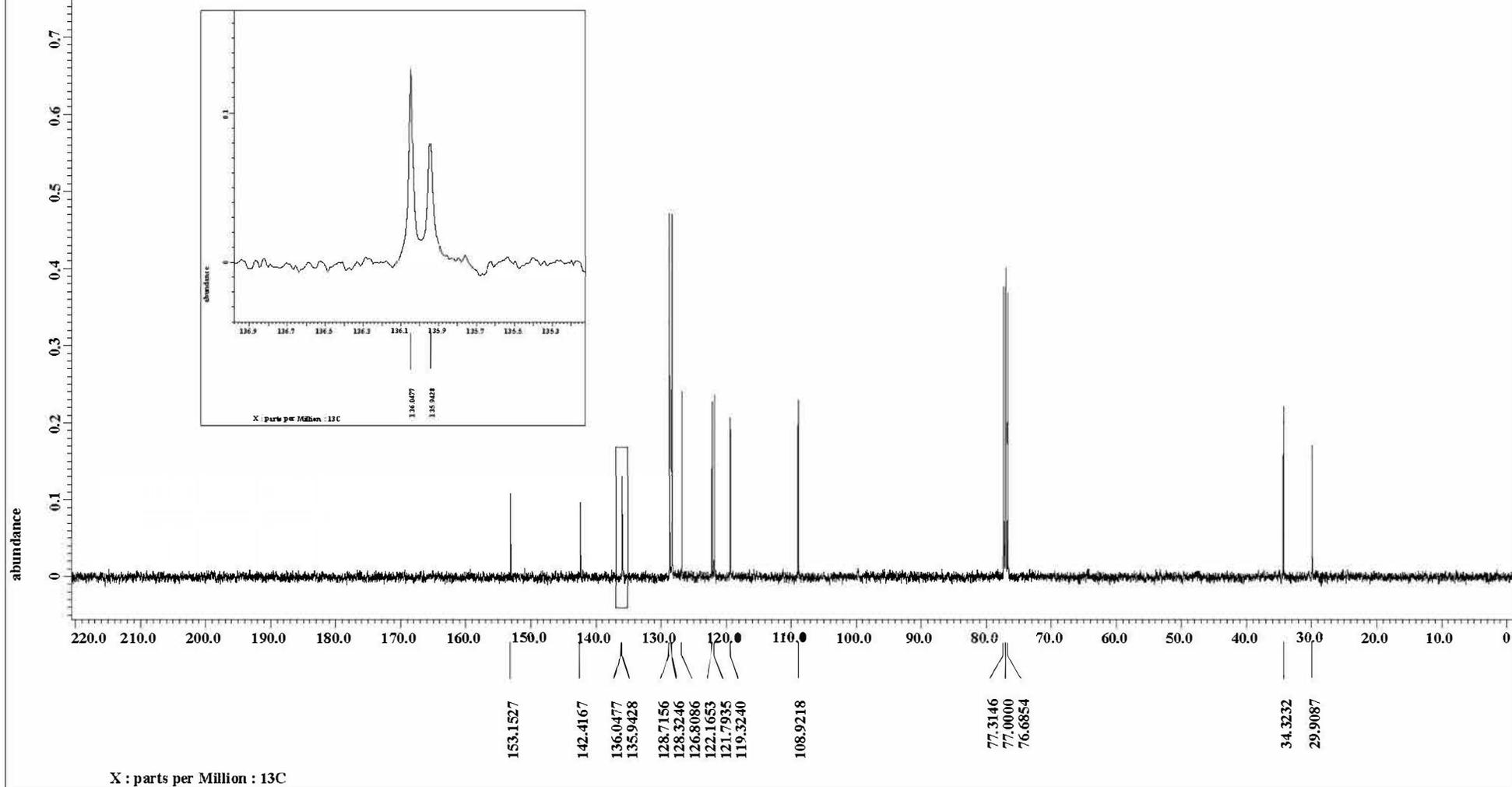


Figure S20. 100 MHz ^{13}C NMR spectrum of compound **3j** (recorded in CDCl_3).



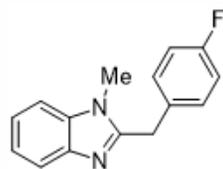
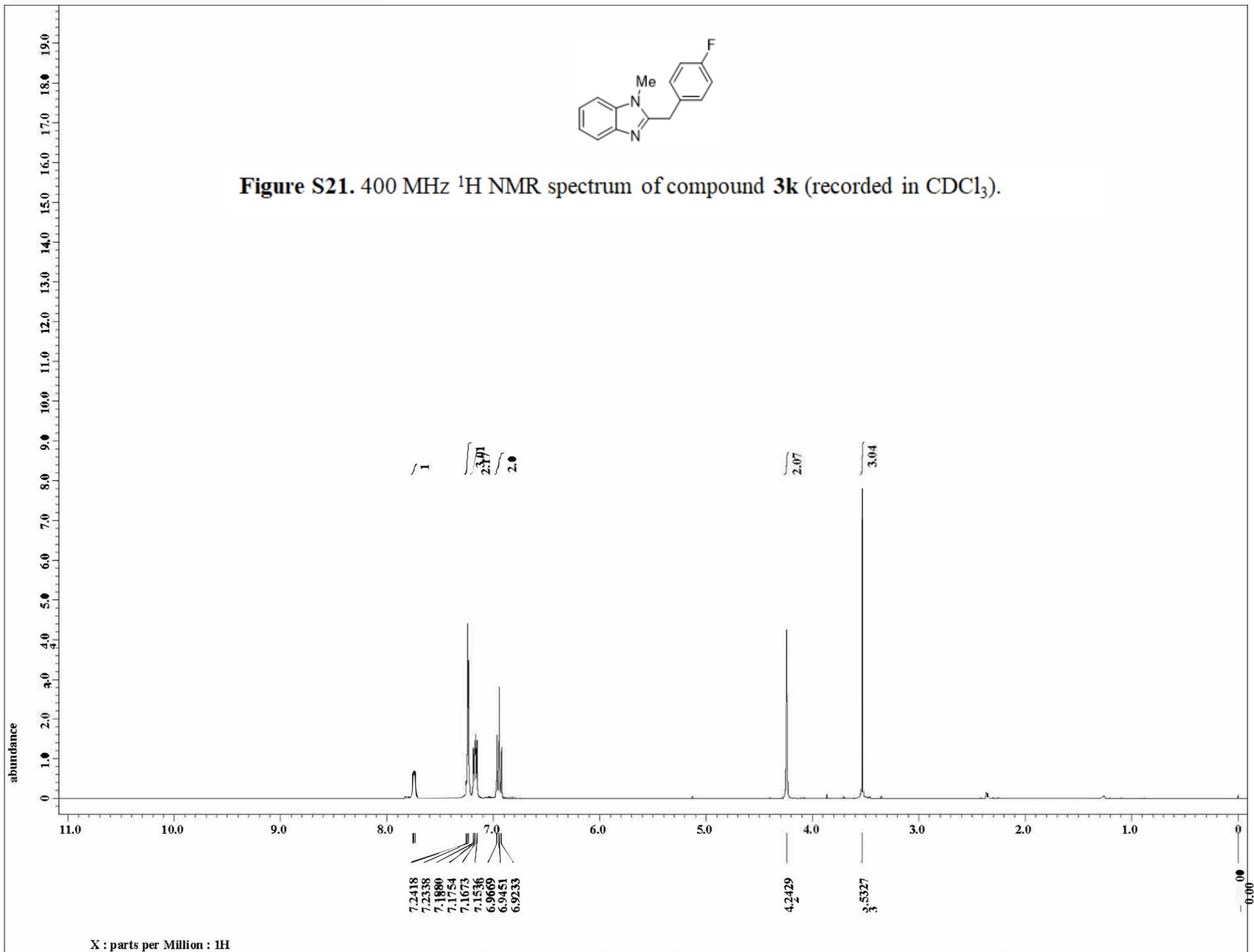


Figure S21. 400 MHz ^1H NMR spectrum of compound **3k** (recorded in CDCl_3).



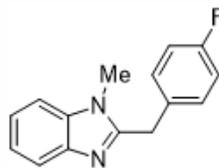
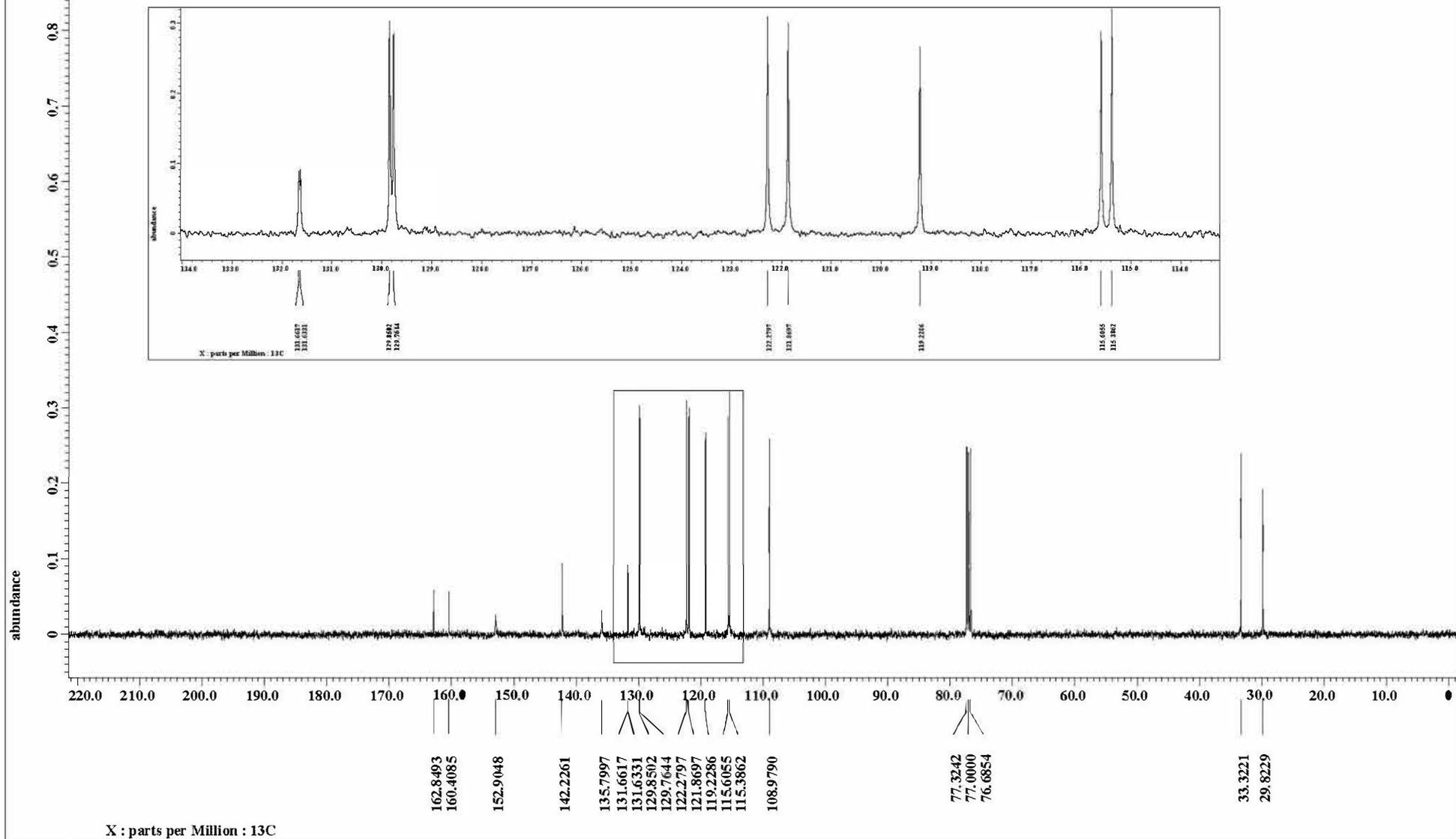


Figure S22. 100 MHz ^{13}C NMR spectrum of compound 3k (recorded in CDCl_3).



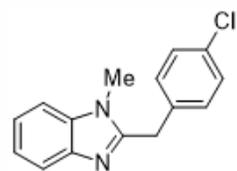
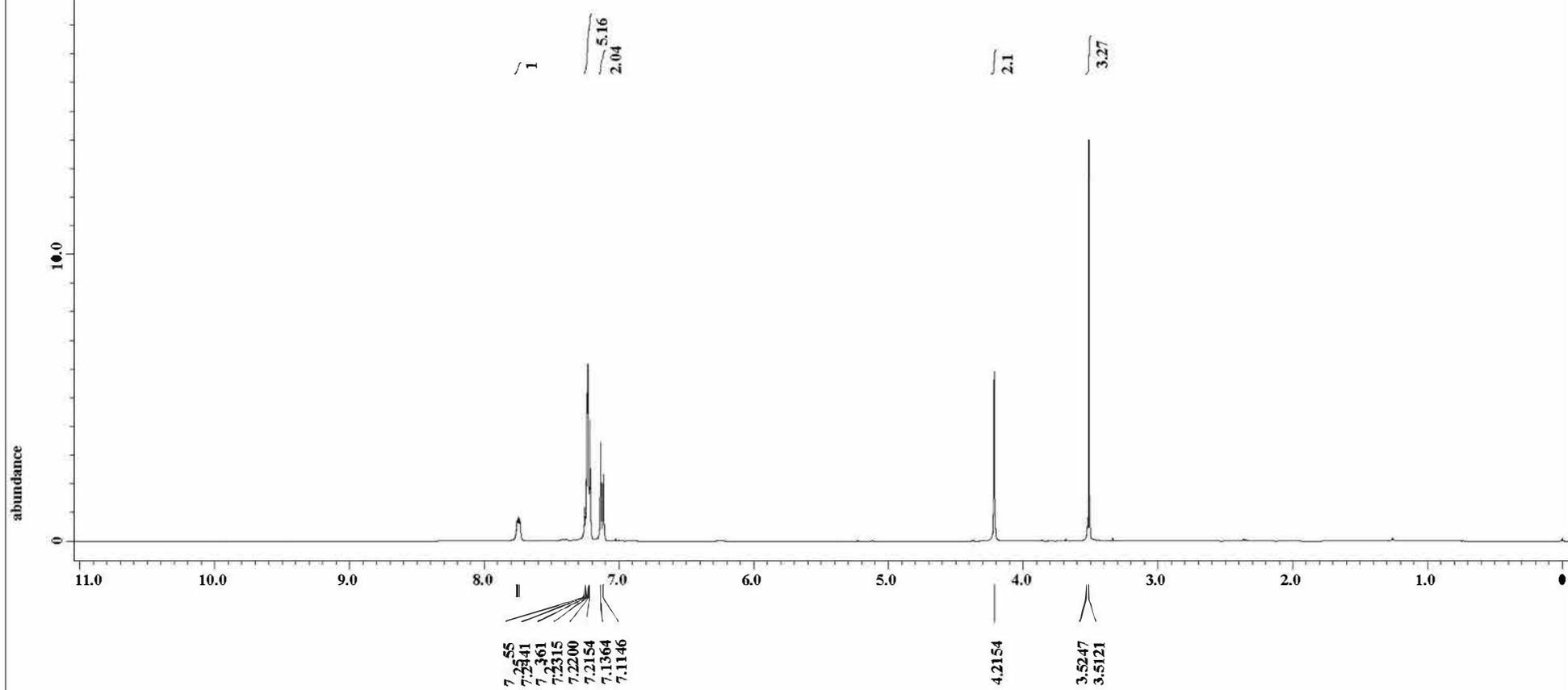


Figure S23. 400 MHz ^1H NMR spectrum of compound **3I** (recorded in CDCl_3).



X : parts per Million : ^1H

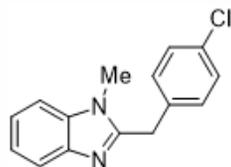
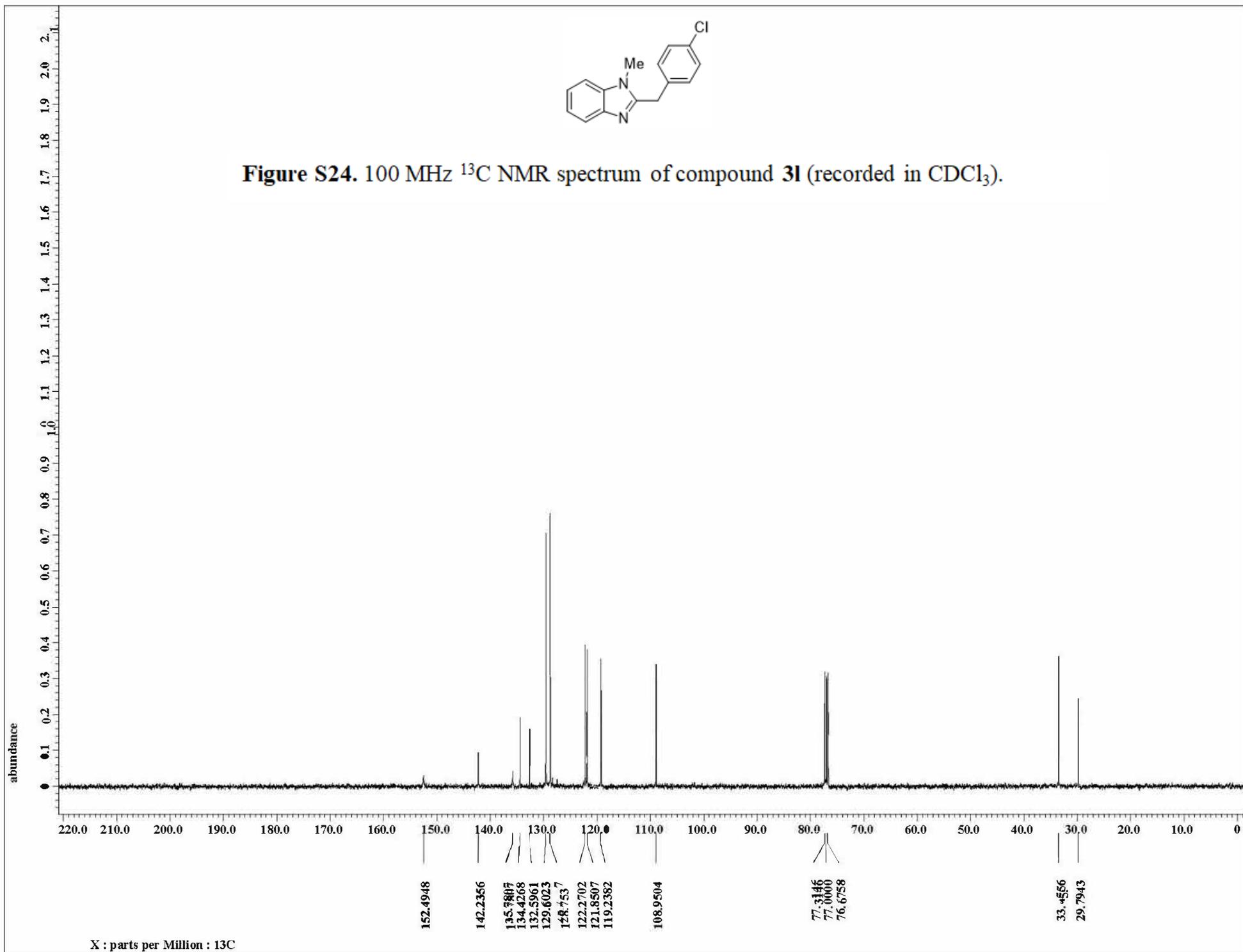


Figure S24. 100 MHz ^{13}C NMR spectrum of compound **31** (recorded in CDCl_3).



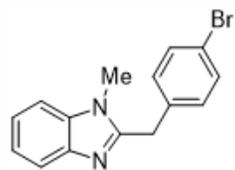
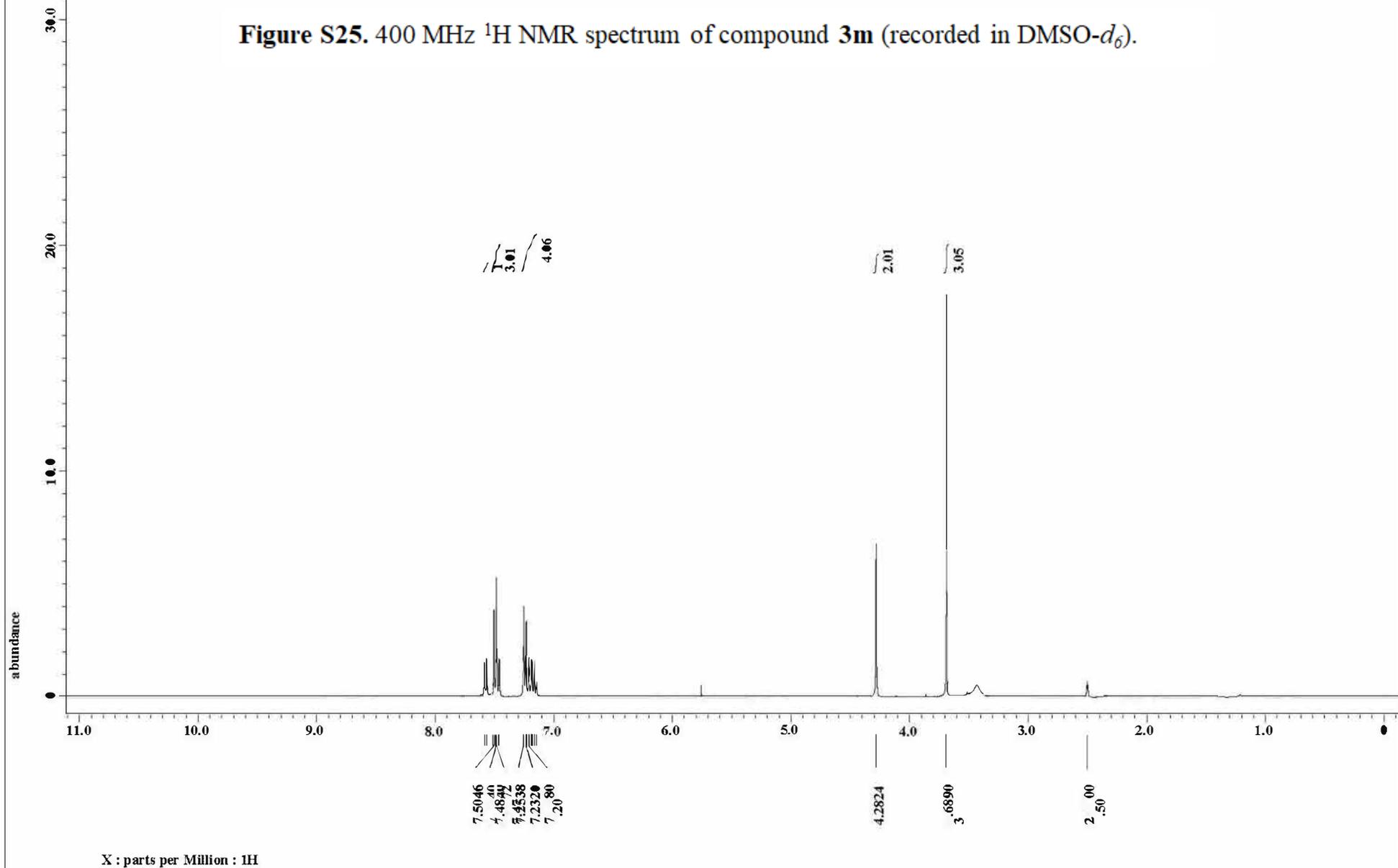


Figure S25. 400 MHz ^1H NMR spectrum of compound **3m** (recorded in $\text{DMSO-}d_6$).



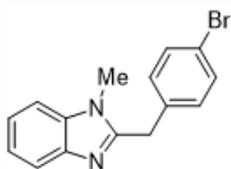
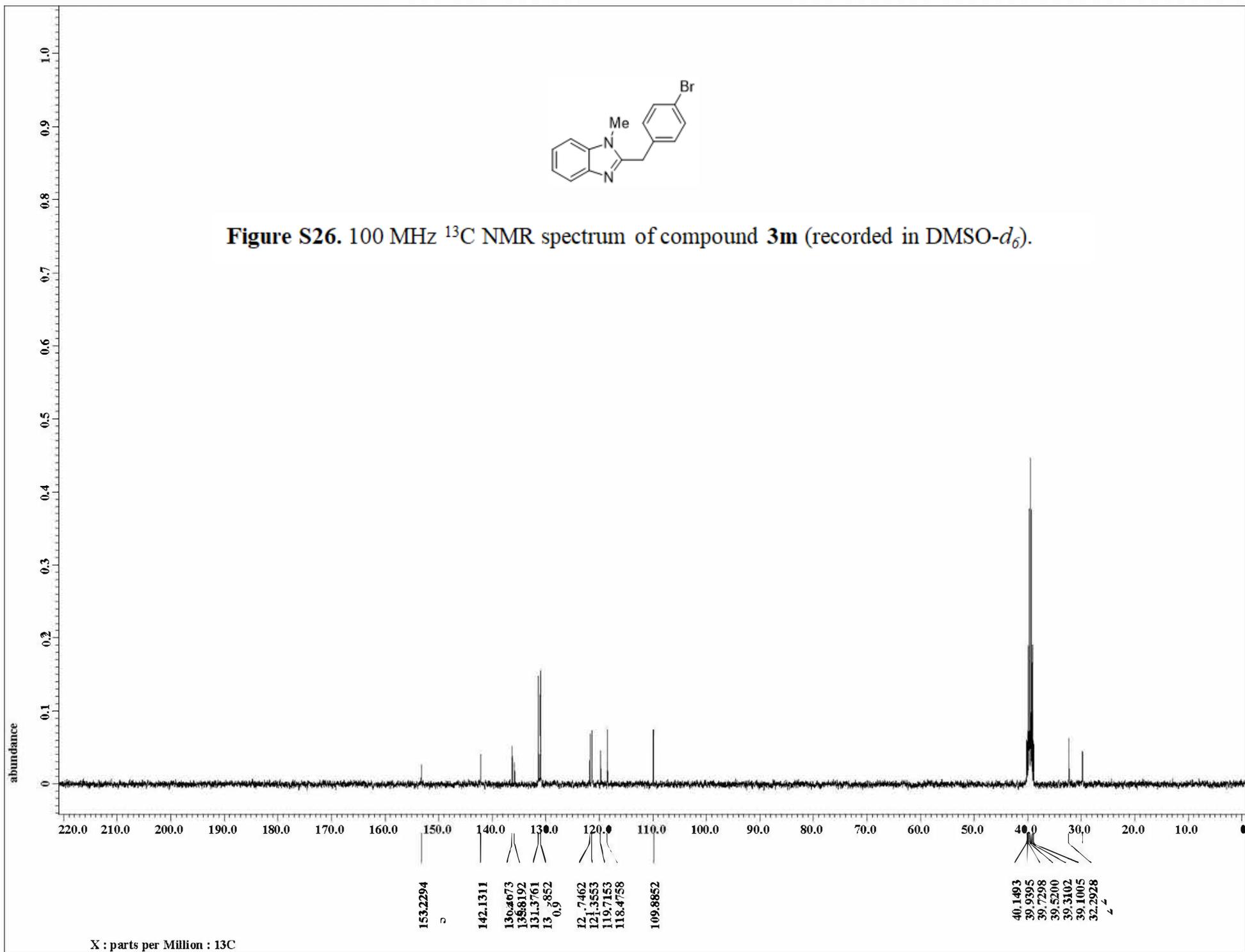


Figure S26. 100 MHz ^{13}C NMR spectrum of compound **3m** (recorded in $\text{DMSO-}d_6$).



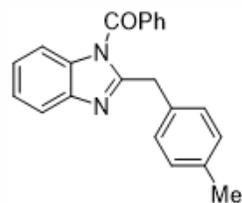
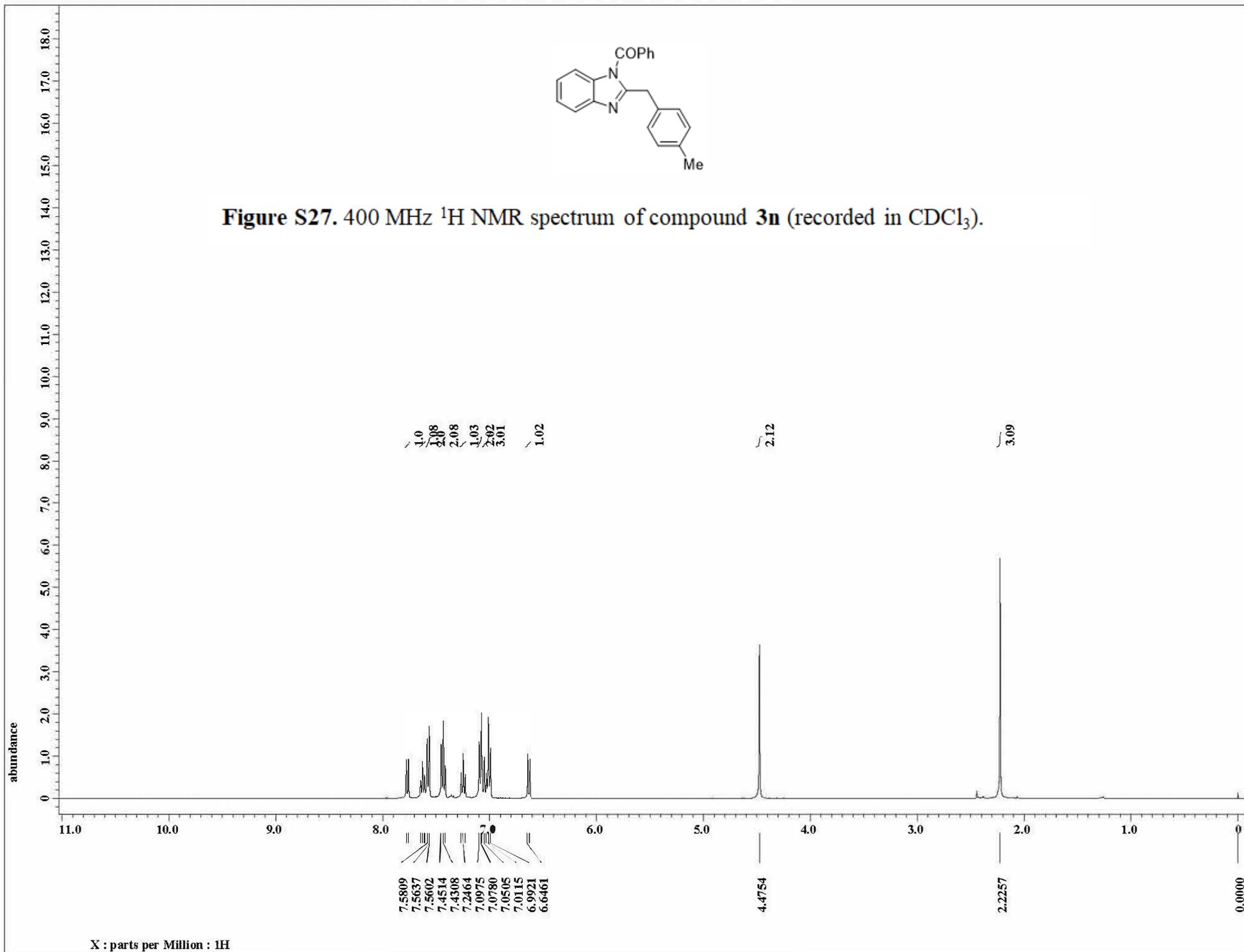


Figure S27. 400 MHz ^1H NMR spectrum of compound **3n** (recorded in CDCl_3).



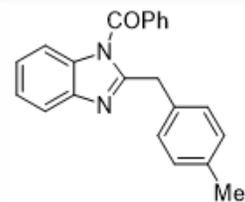
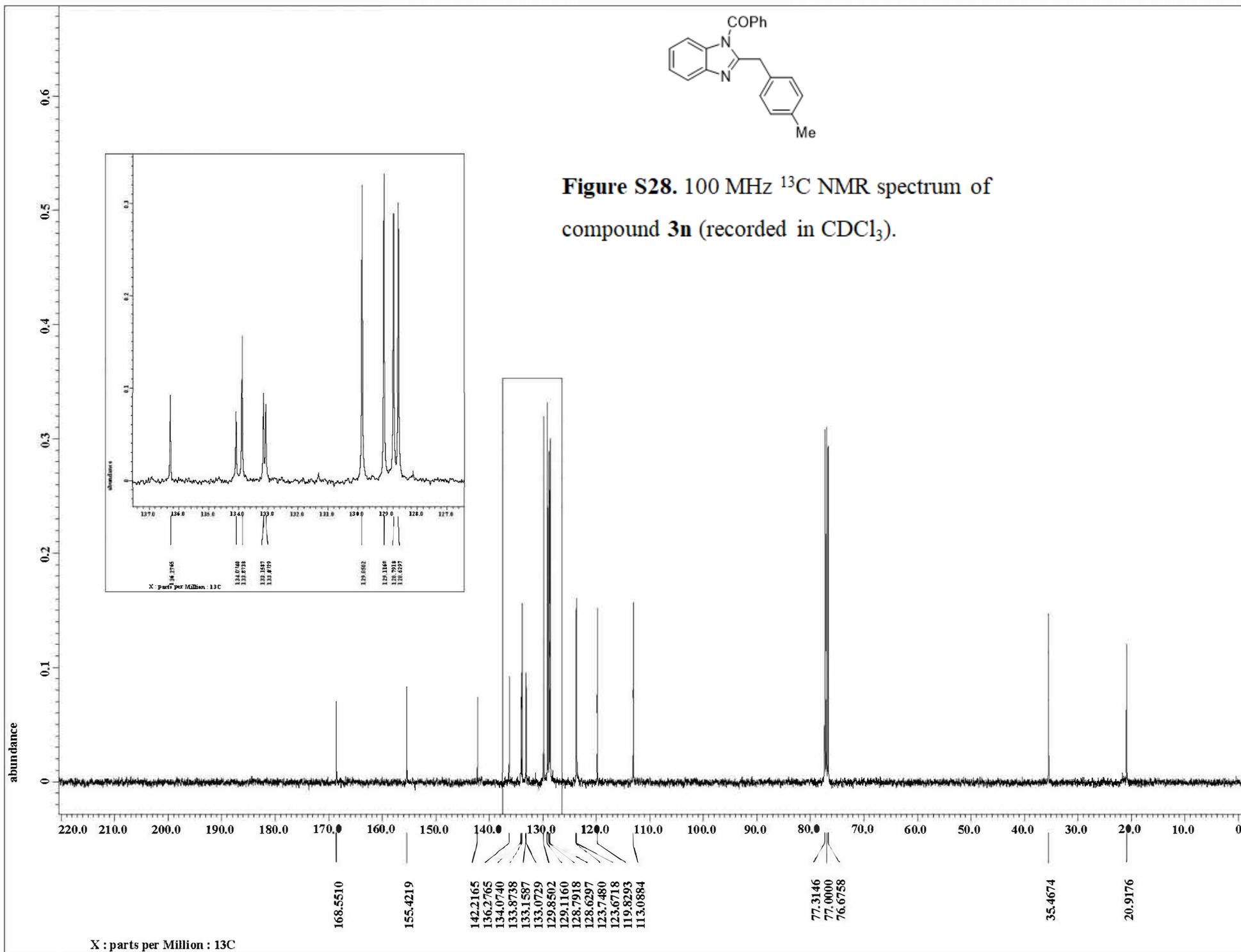


Figure S28. 100 MHz ^{13}C NMR spectrum of compound **3n** (recorded in CDCl_3).



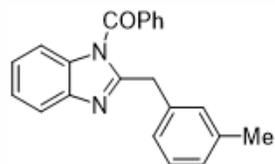
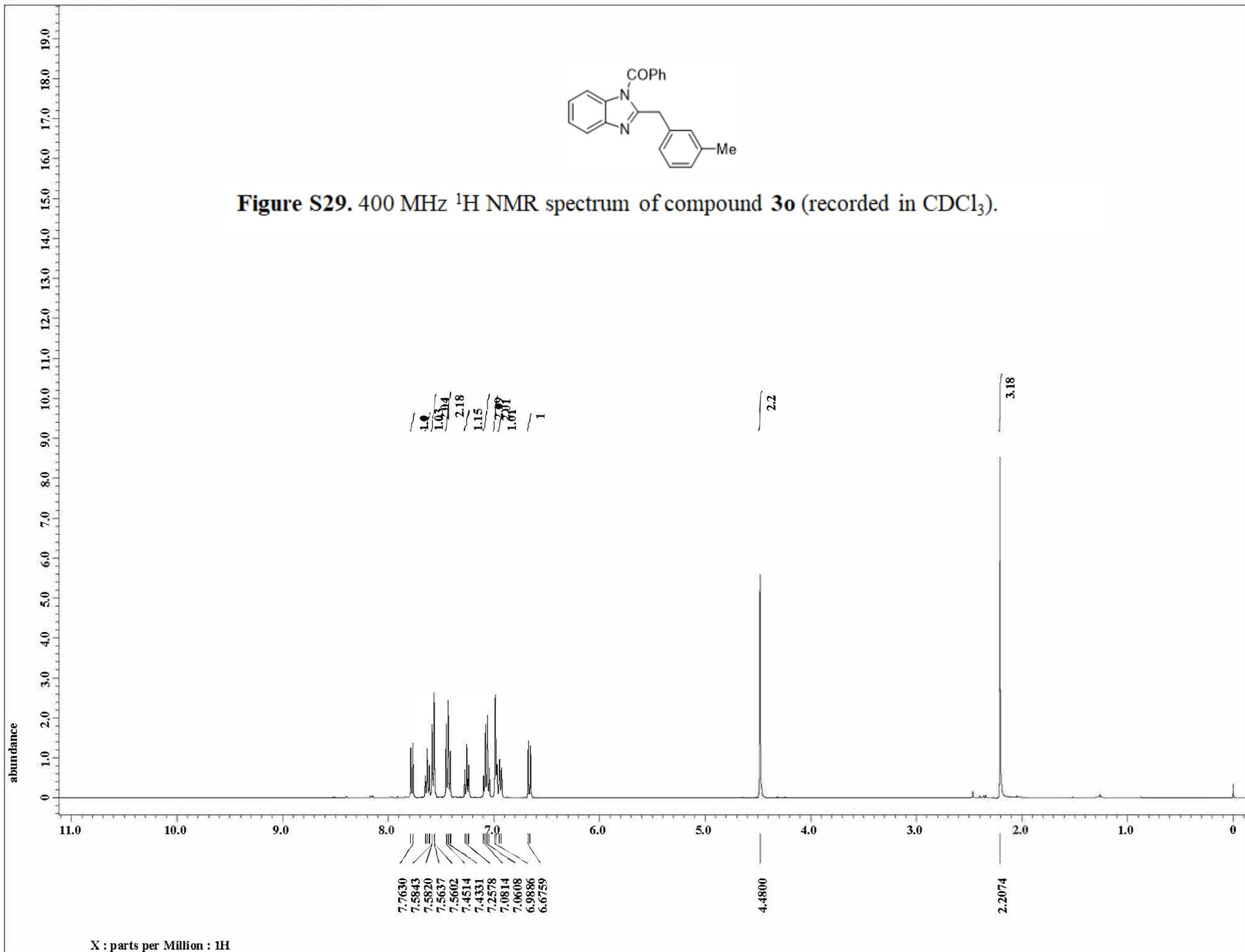


Figure S29. 400 MHz ^1H NMR spectrum of compound **3o** (recorded in CDCl_3).



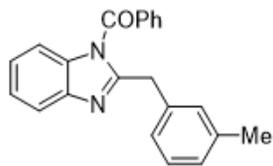
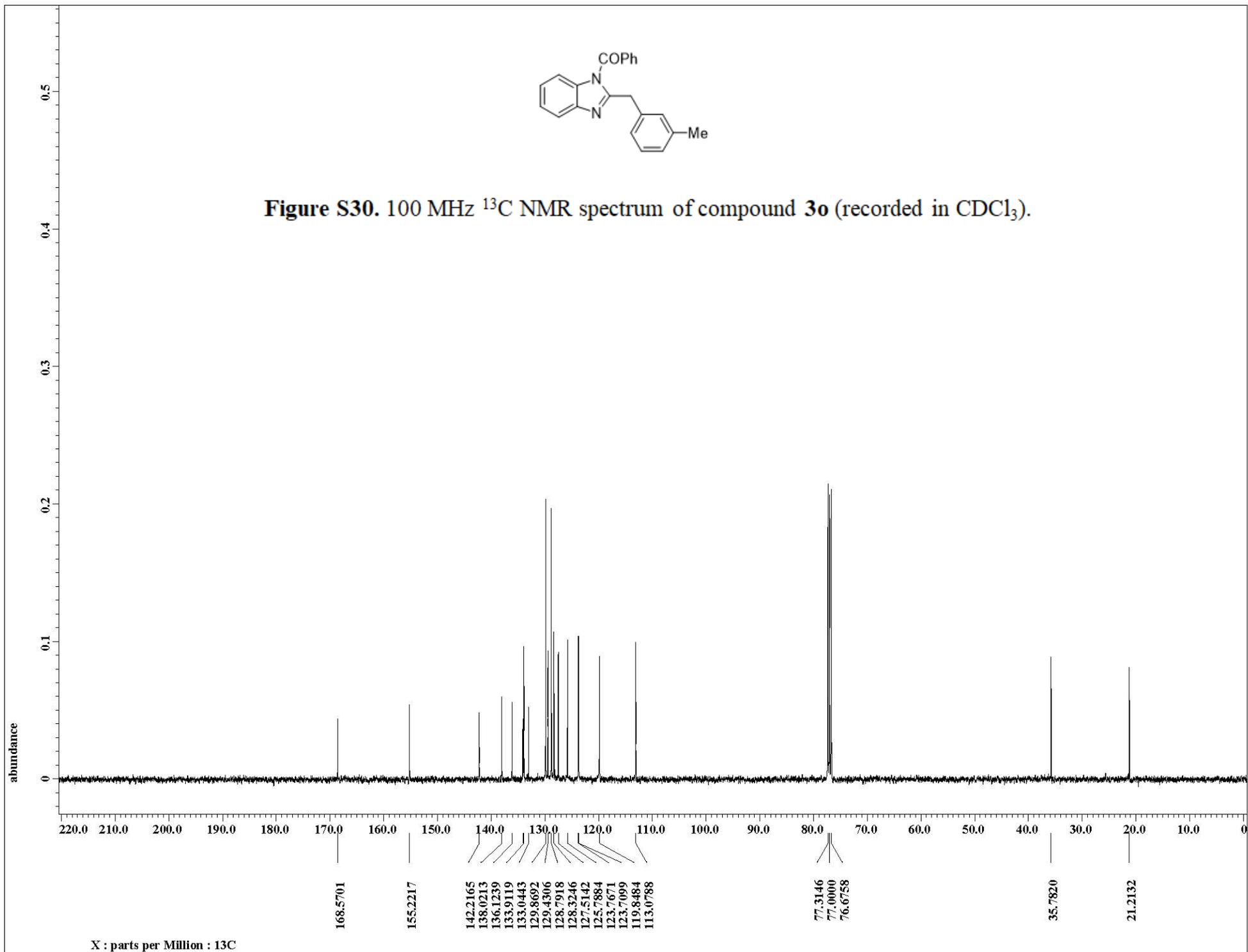


Figure S30. 100 MHz ^{13}C NMR spectrum of compound **3o** (recorded in CDCl_3).



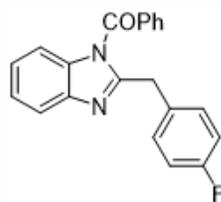
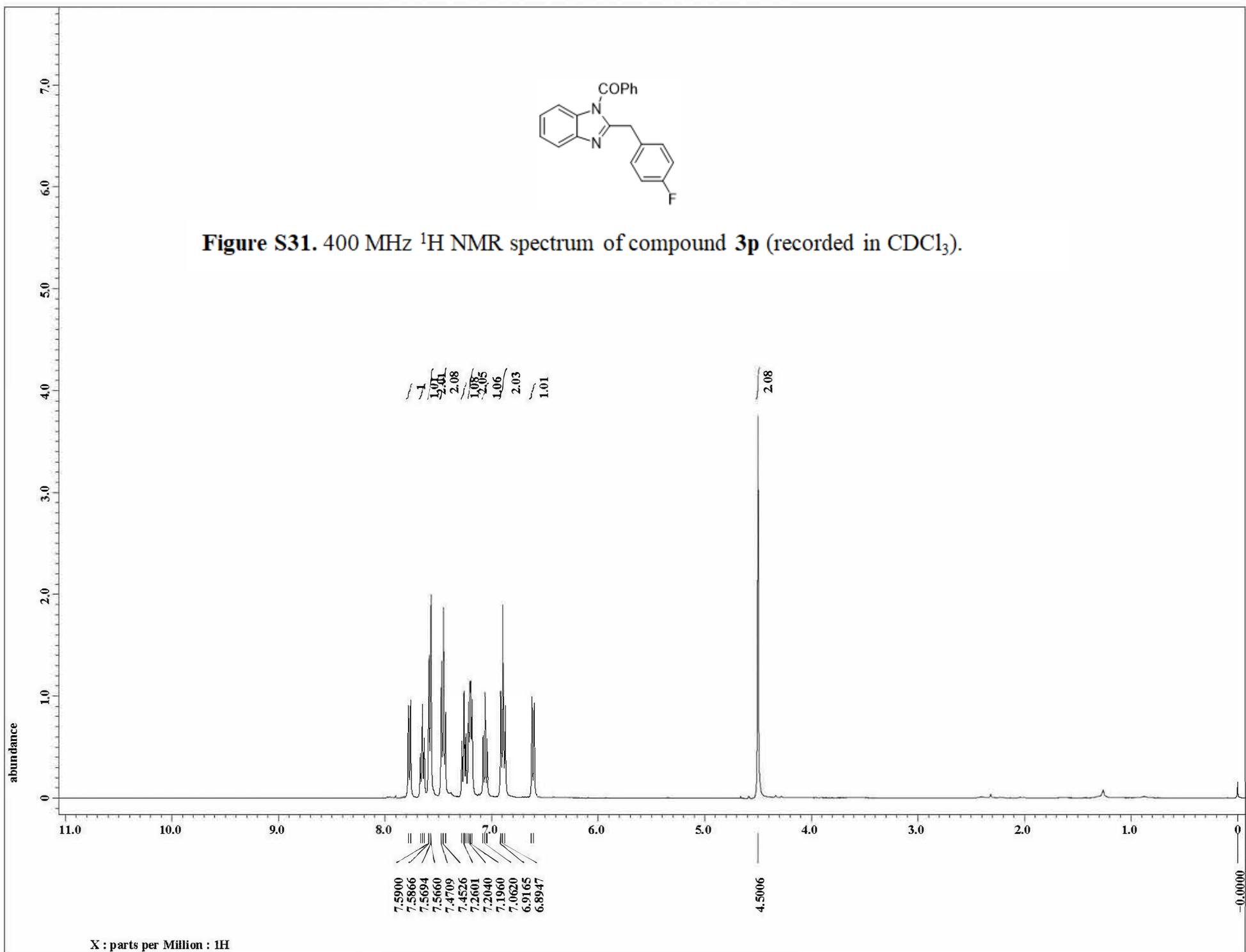


Figure S31. 400 MHz ^1H NMR spectrum of compound 3p (recorded in CDCl_3).



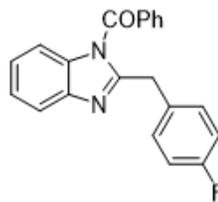
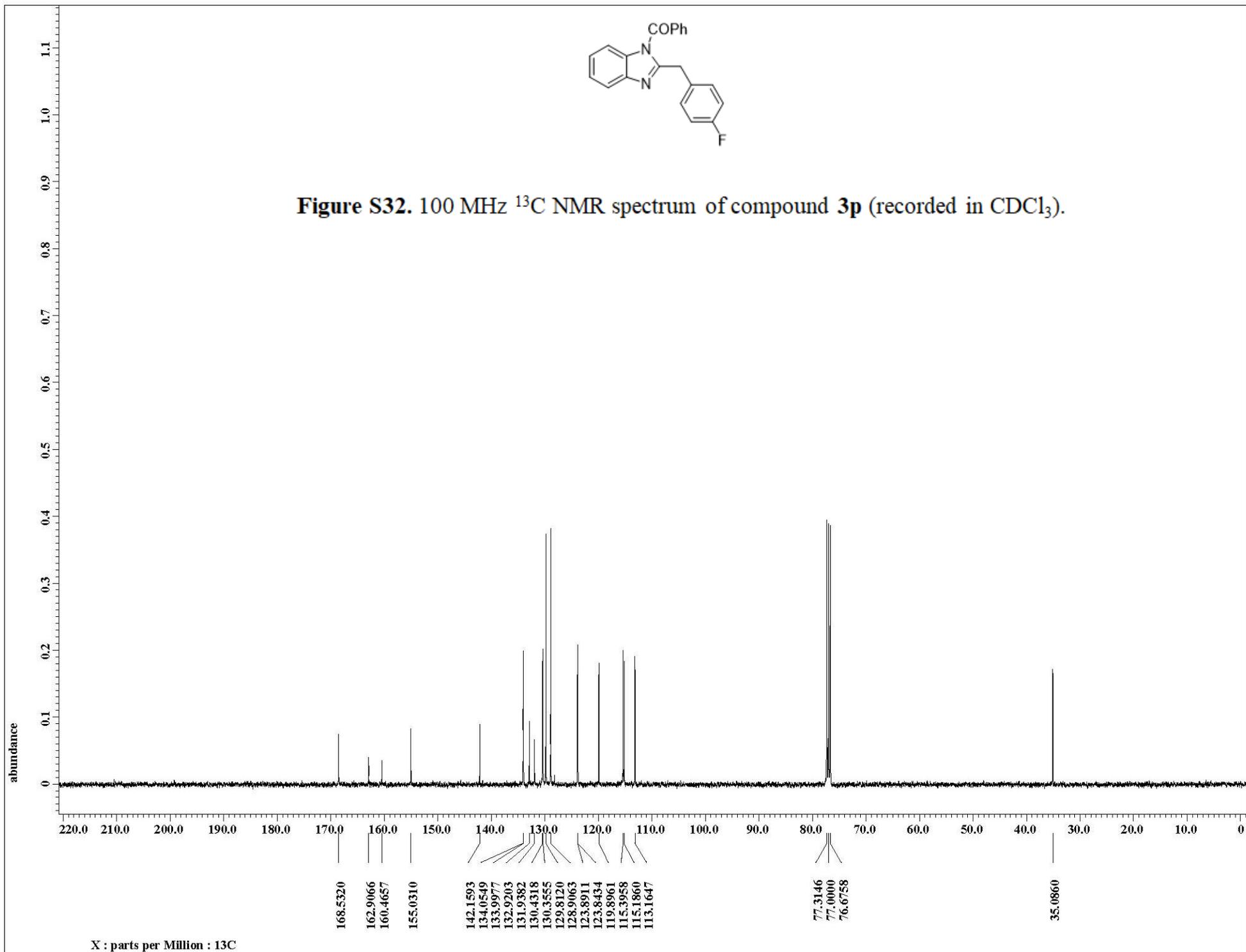


Figure S32. 100 MHz ^{13}C NMR spectrum of compound **3p** (recorded in CDCl_3).



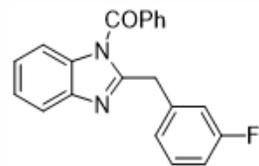
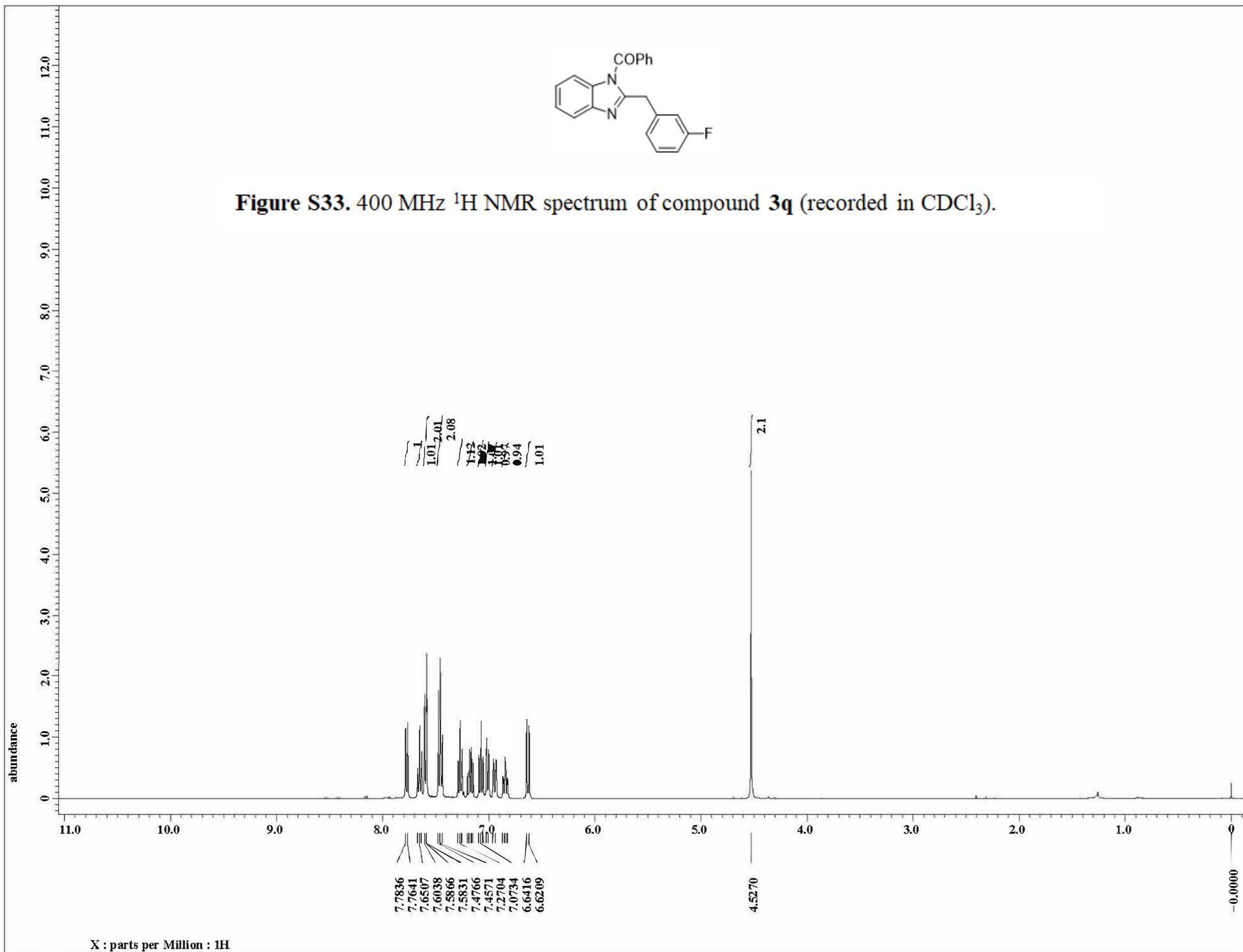


Figure S33. 400 MHz ^1H NMR spectrum of compound **3q** (recorded in CDCl_3).



X : parts per Million : ^1H

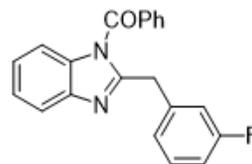
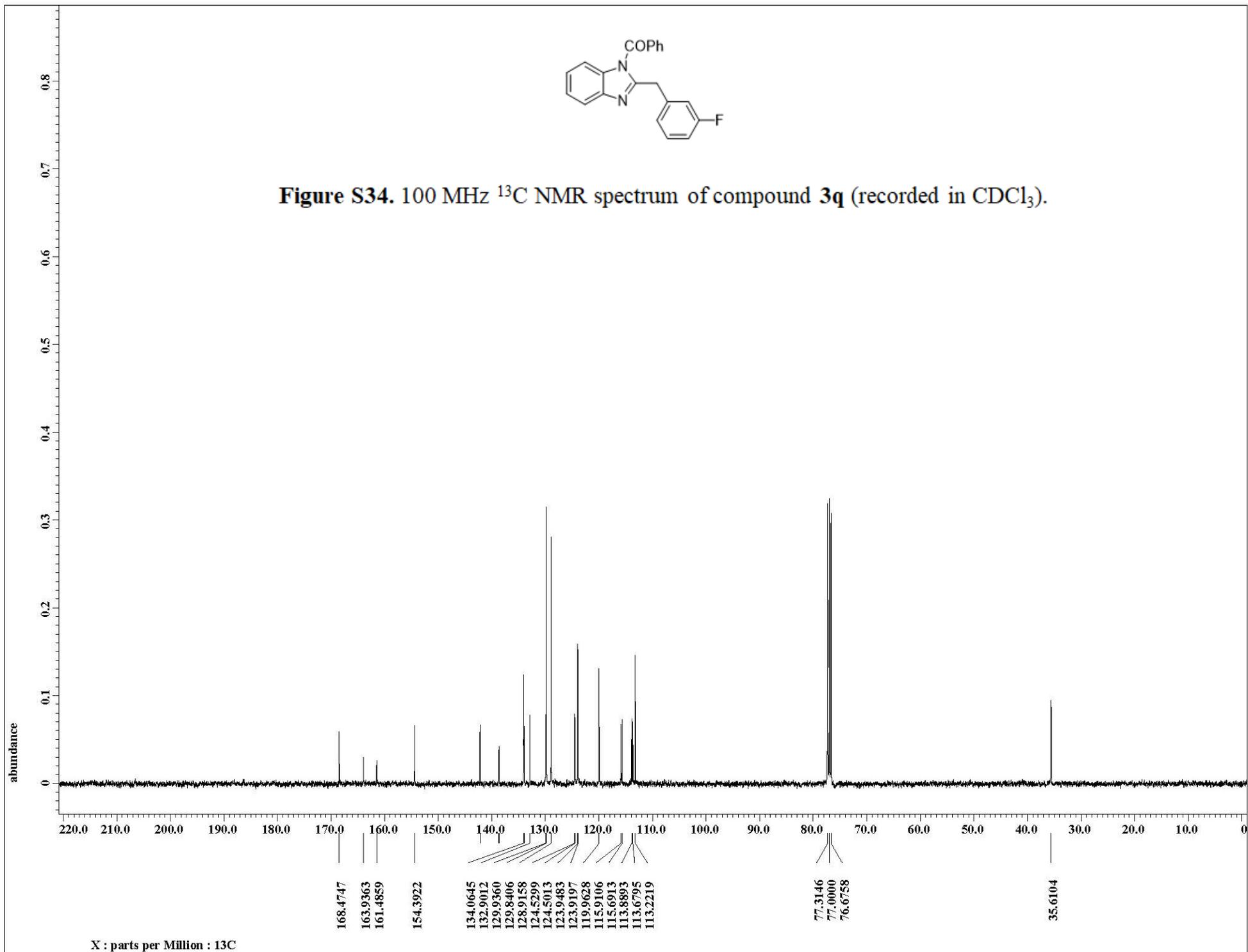


Figure S34. 100 MHz ^{13}C NMR spectrum of compound **3q** (recorded in CDCl_3).



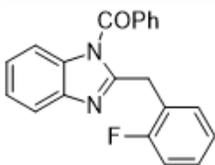
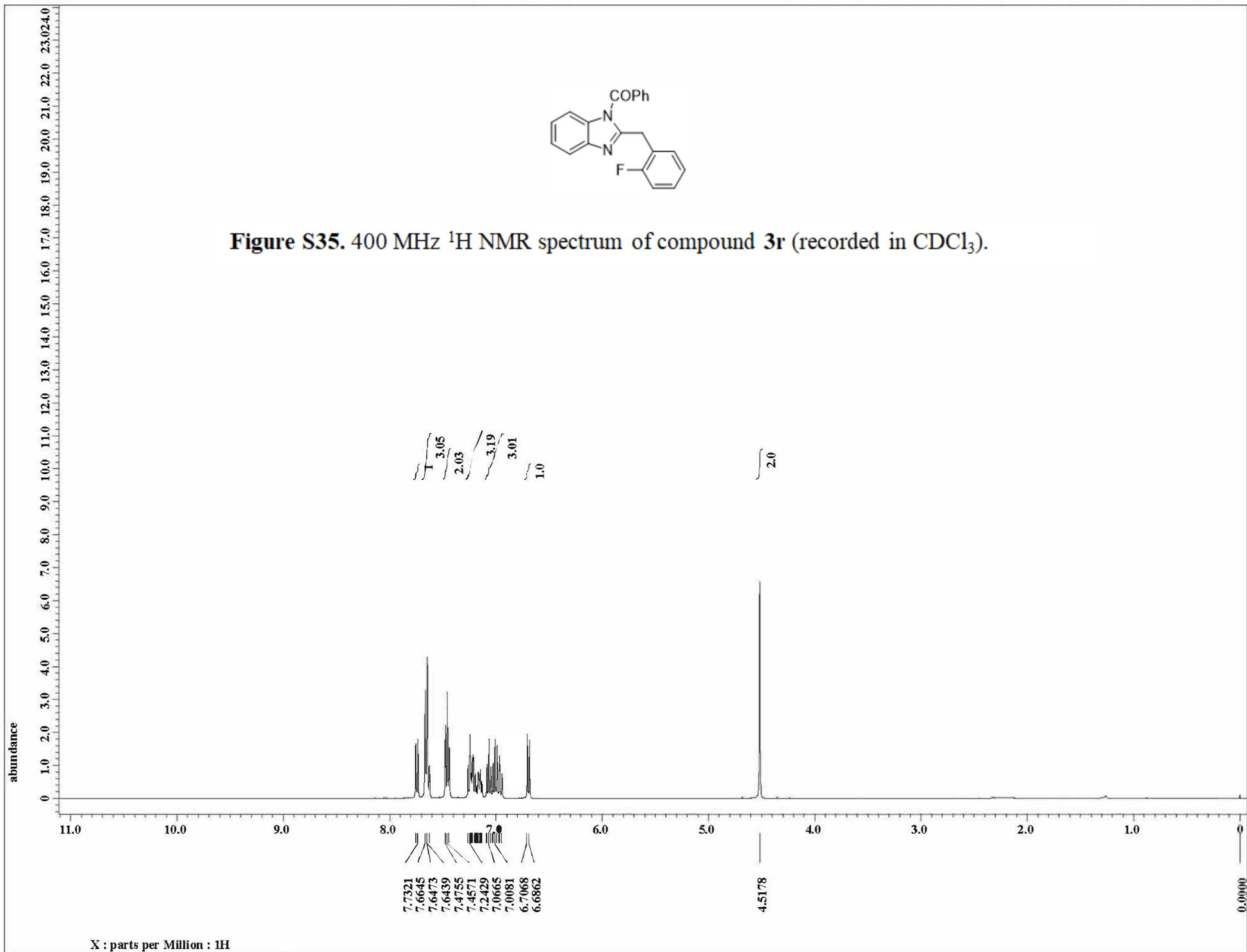


Figure S35. 400 MHz ^1H NMR spectrum of compound **3r** (recorded in CDCl_3).



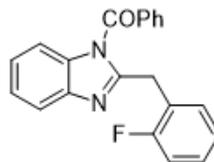
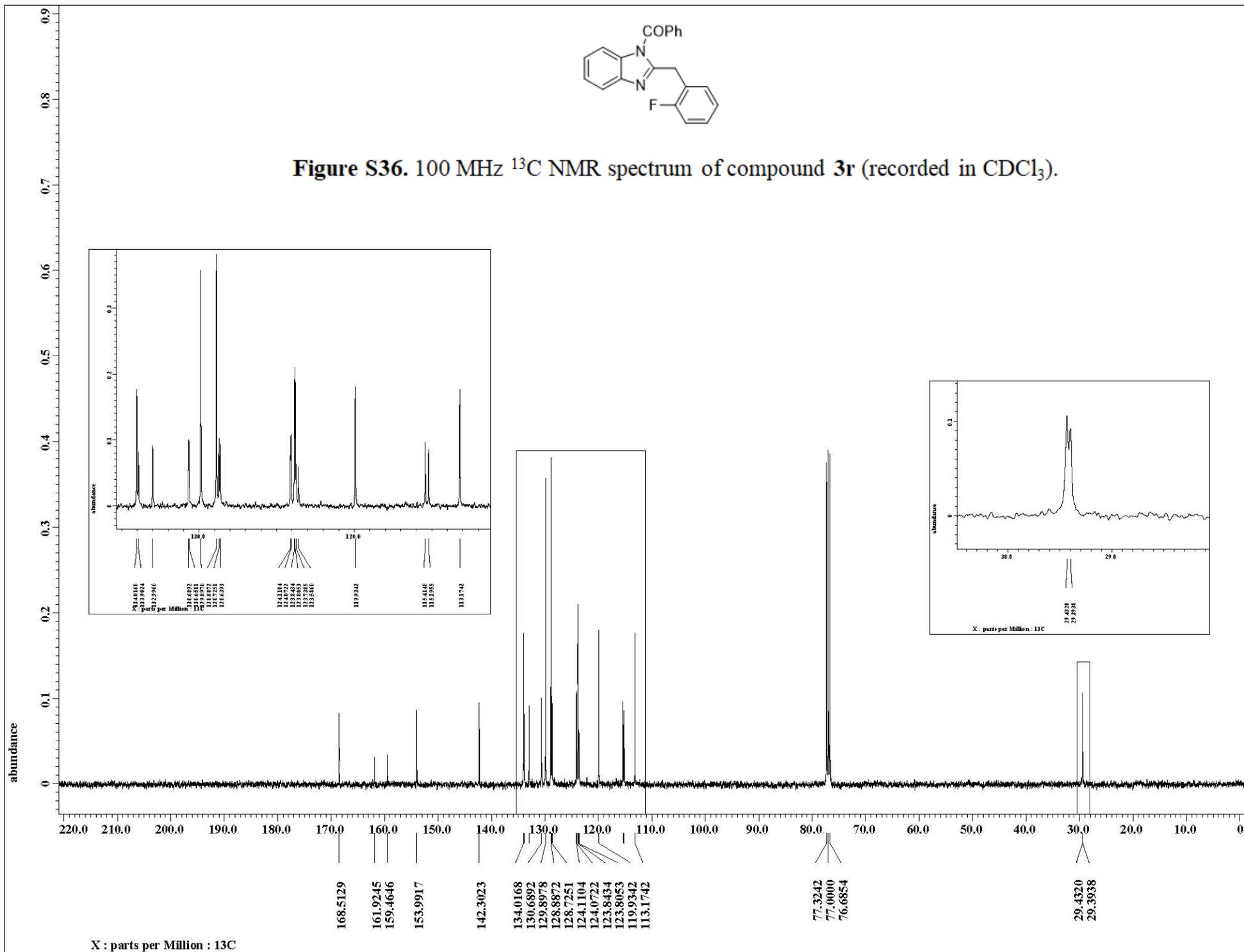


Figure S36. 100 MHz ^{13}C NMR spectrum of compound **3r** (recorded in CDCl_3).



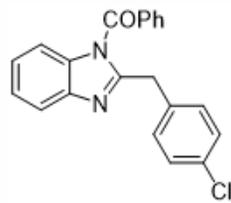
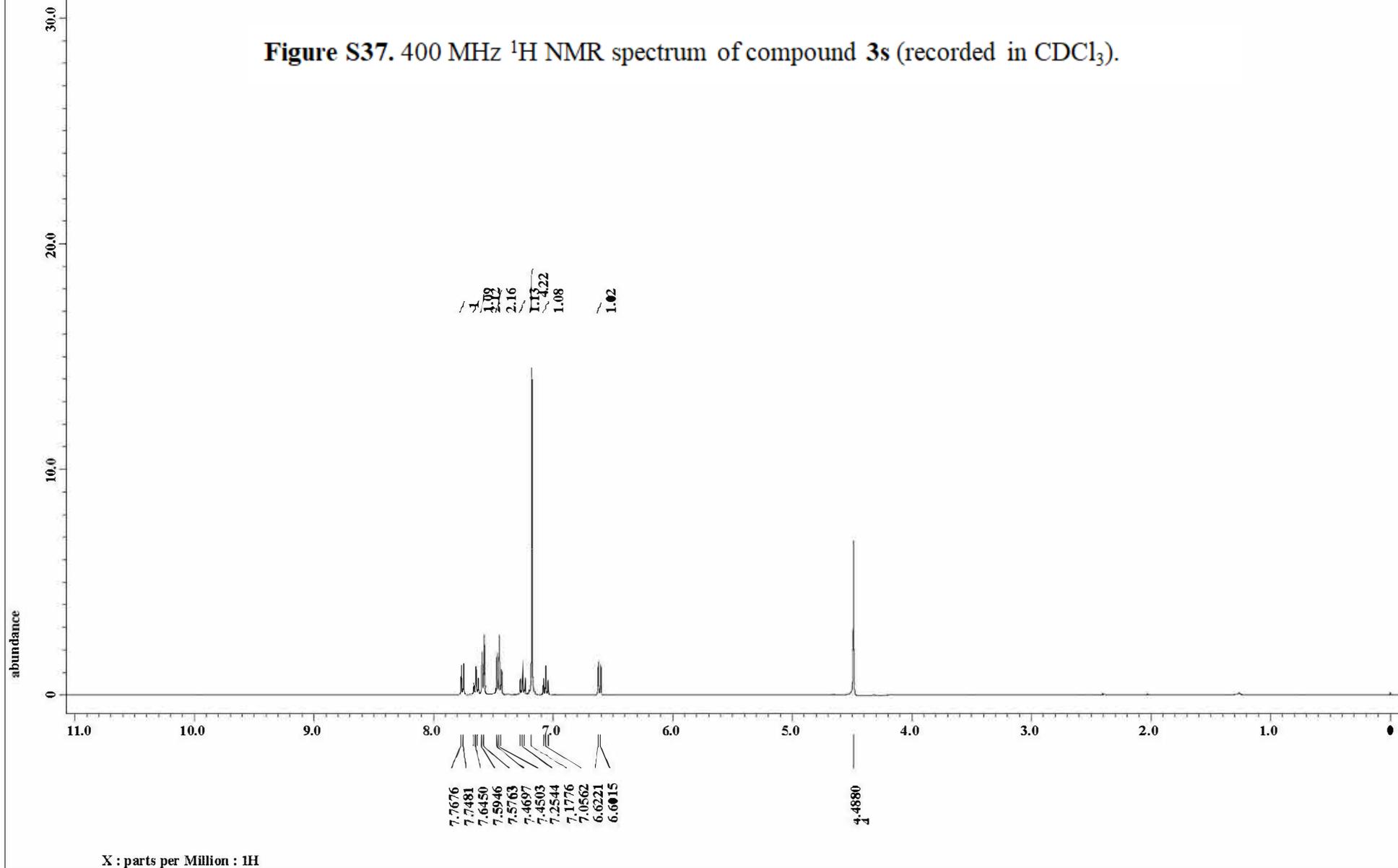


Figure S37. 400 MHz ^1H NMR spectrum of compound **3s** (recorded in CDCl_3).



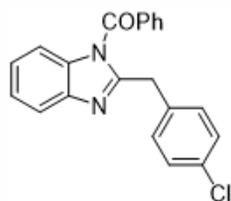
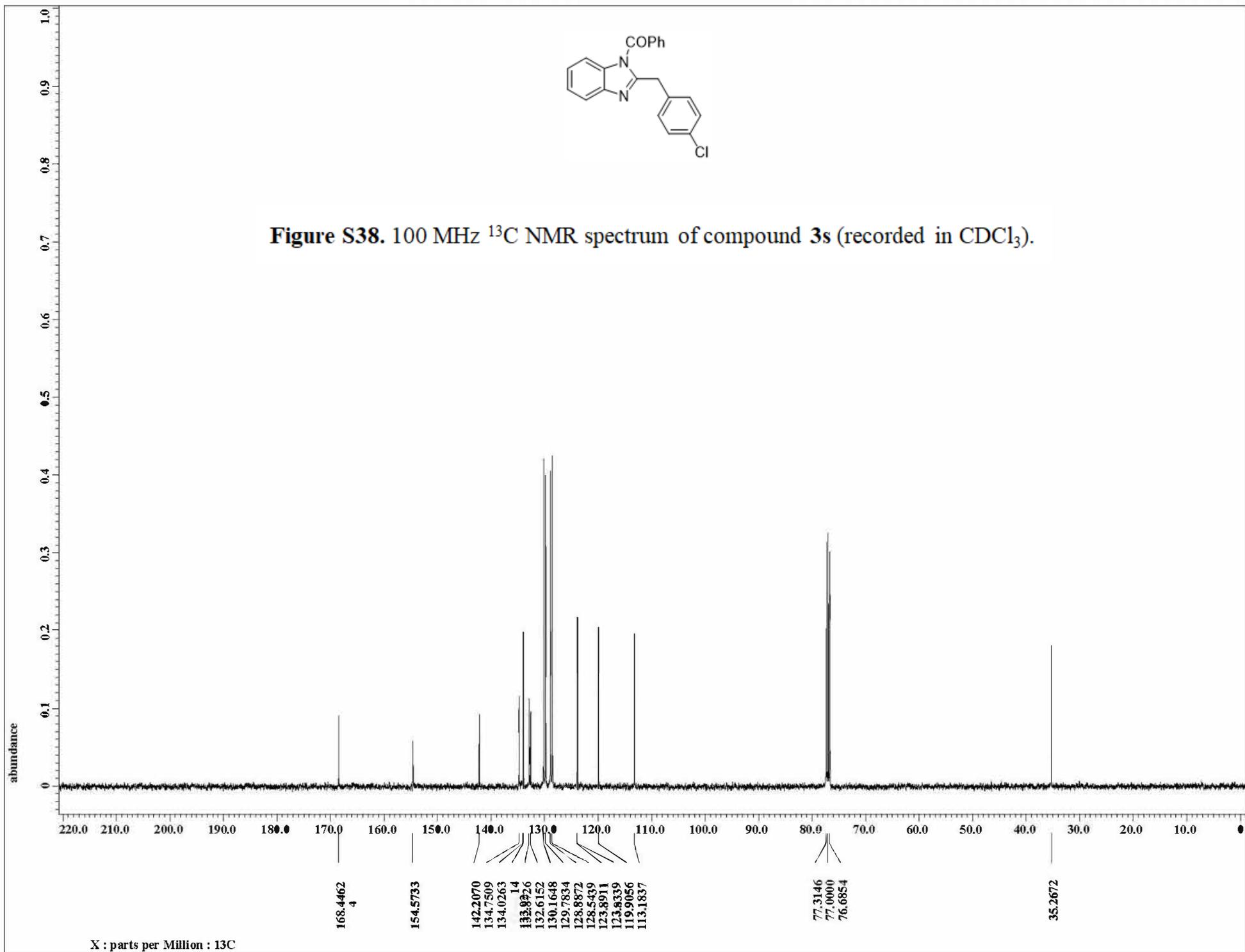


Figure S38. 100 MHz ^{13}C NMR spectrum of compound 3s (recorded in CDCl_3).



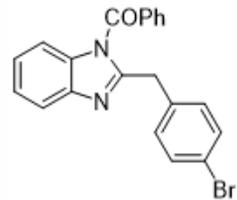
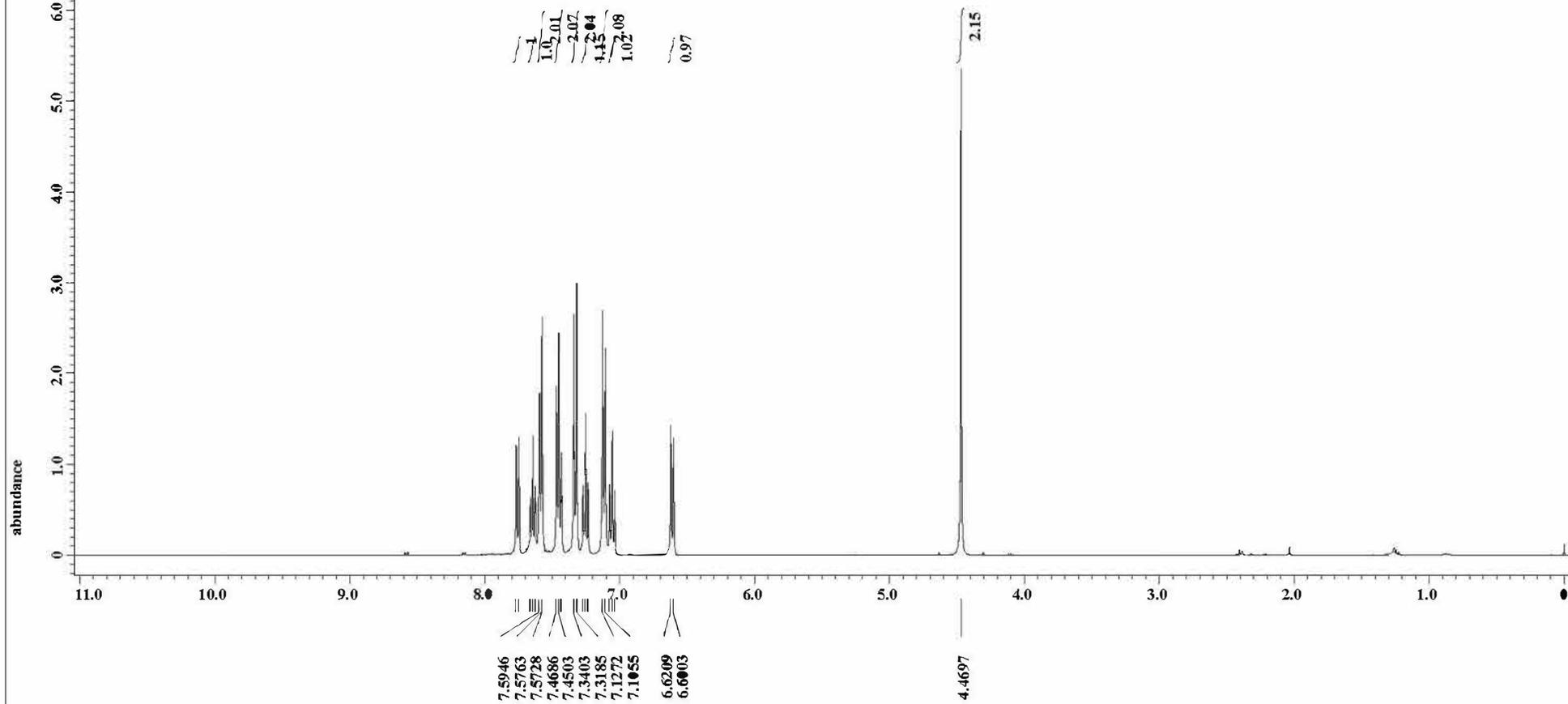
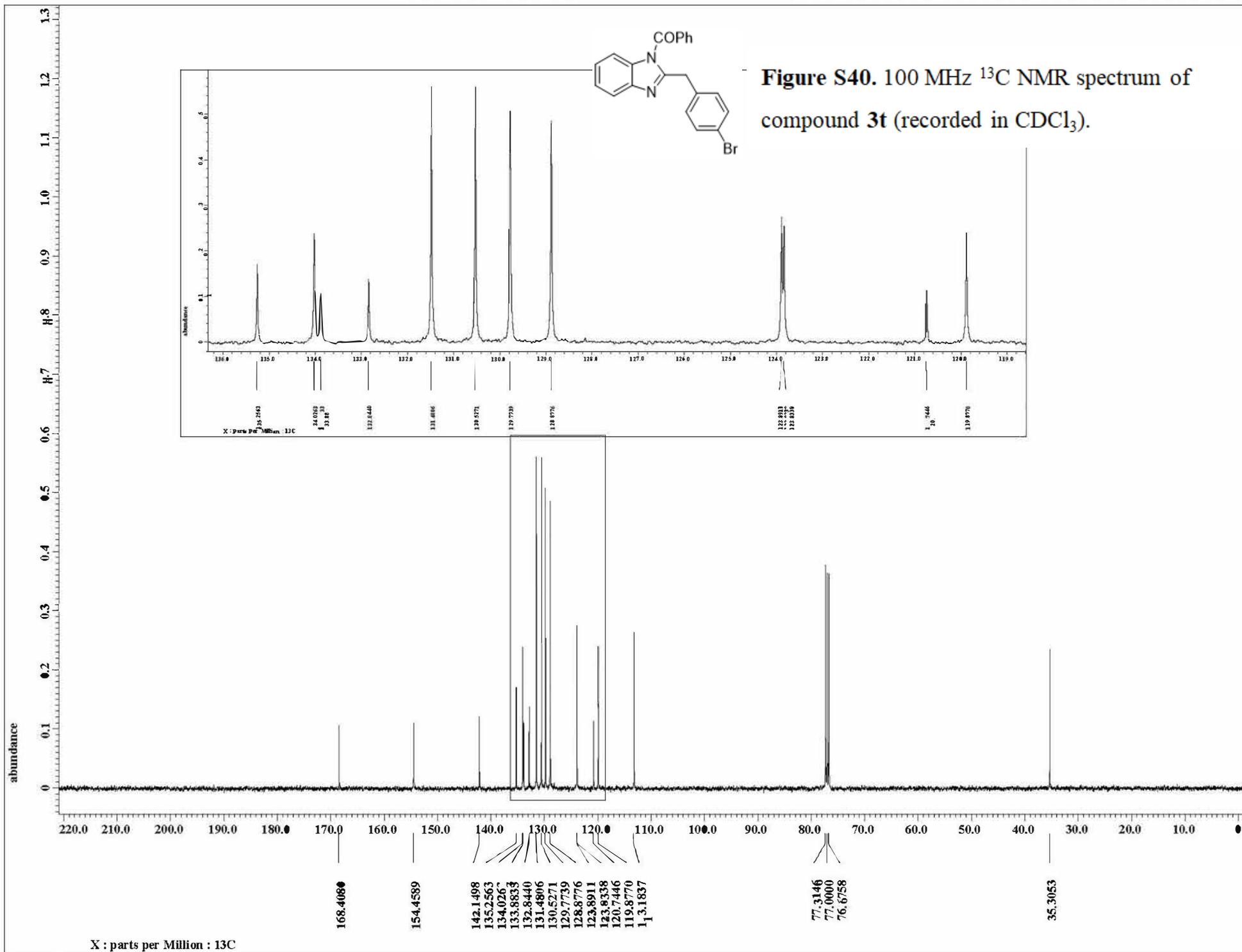


Figure S39. 400 MHz ^1H NMR spectrum of compound **3t** (recorded in CDCl_3).



X : parts per Million : 1H



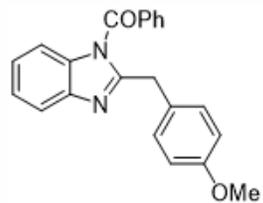
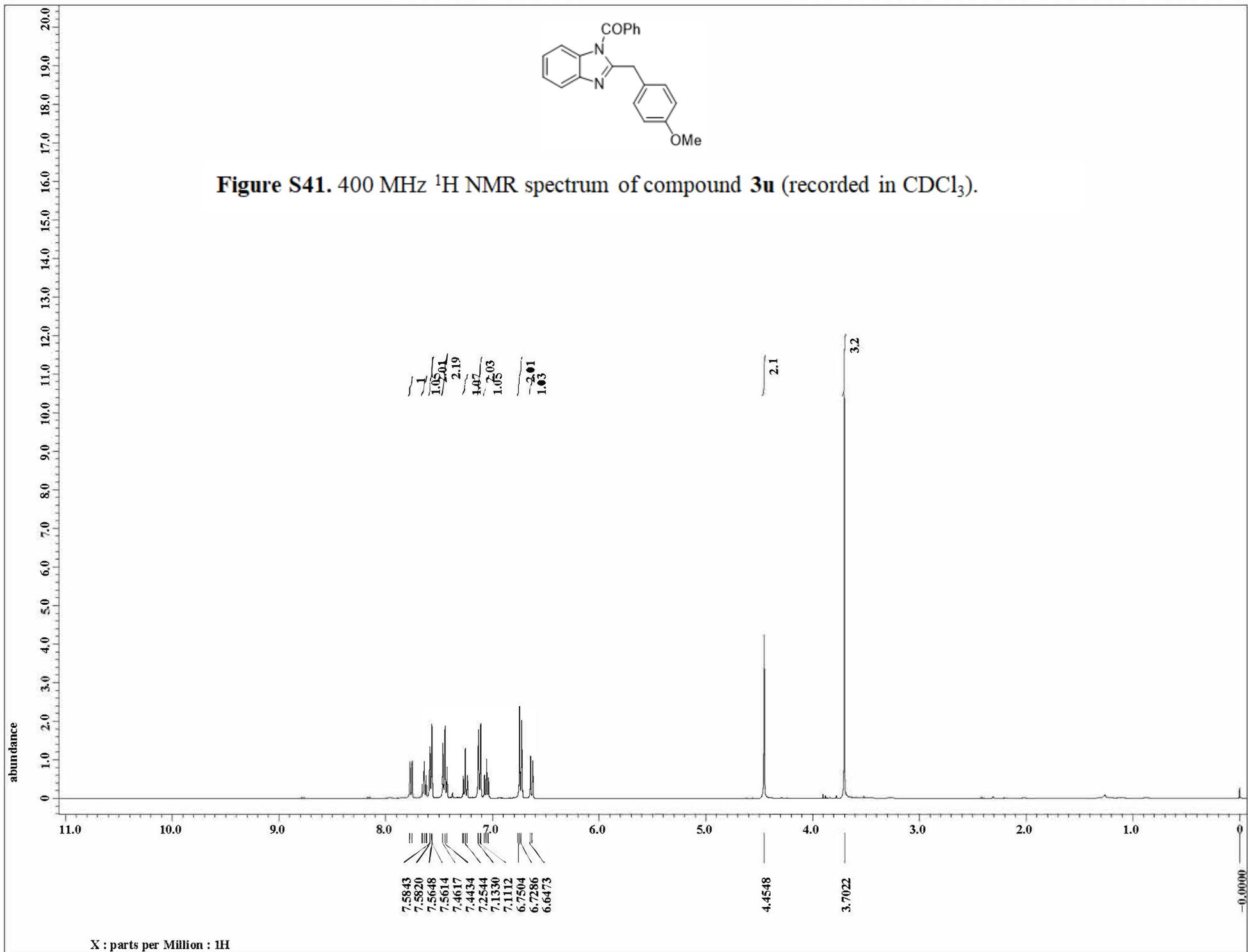


Figure S41. 400 MHz ^1H NMR spectrum of compound **3u** (recorded in CDCl_3).



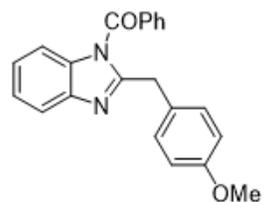
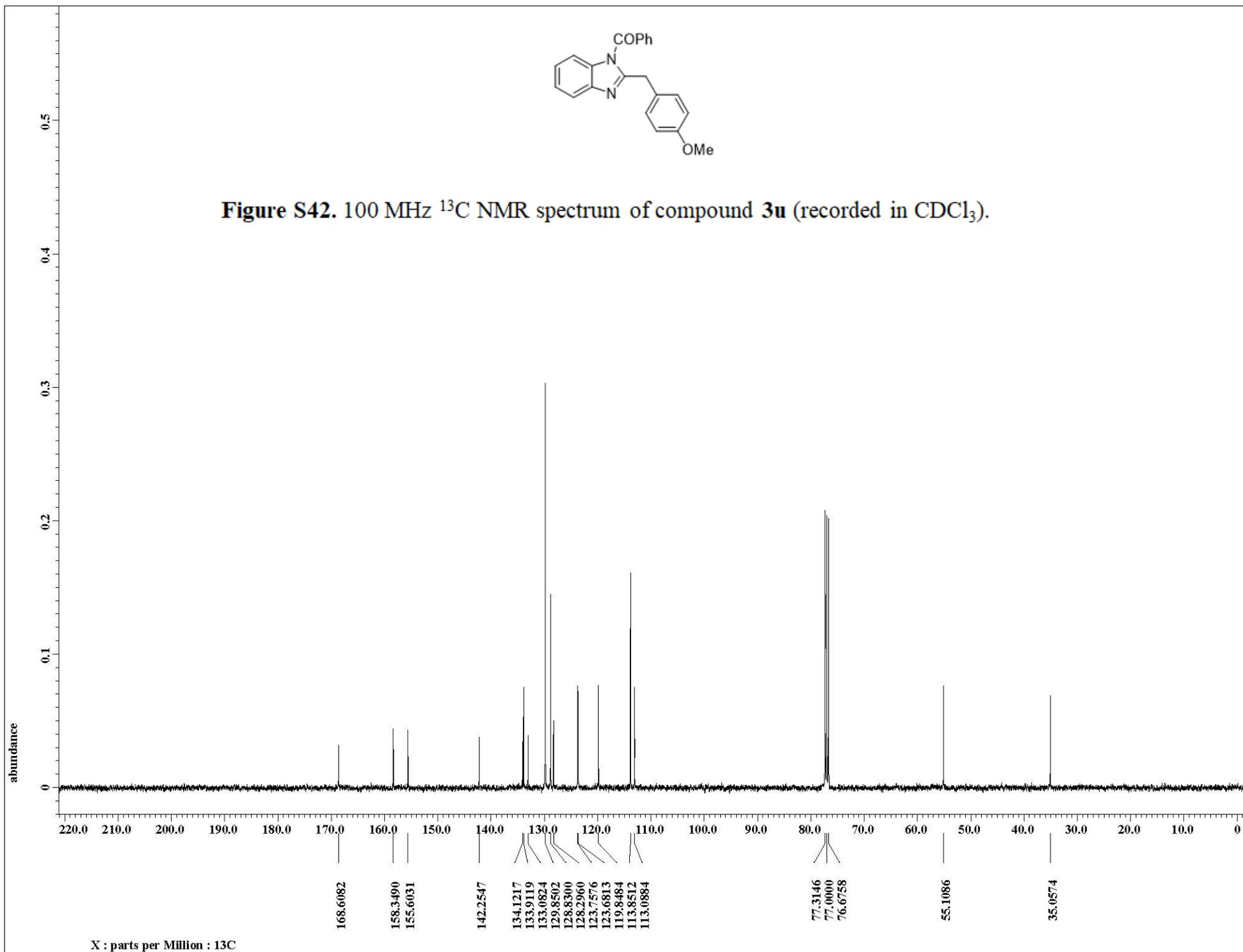


Figure S42. 100 MHz ^{13}C NMR spectrum of compound 3u (recorded in CDCl_3).



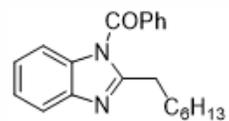
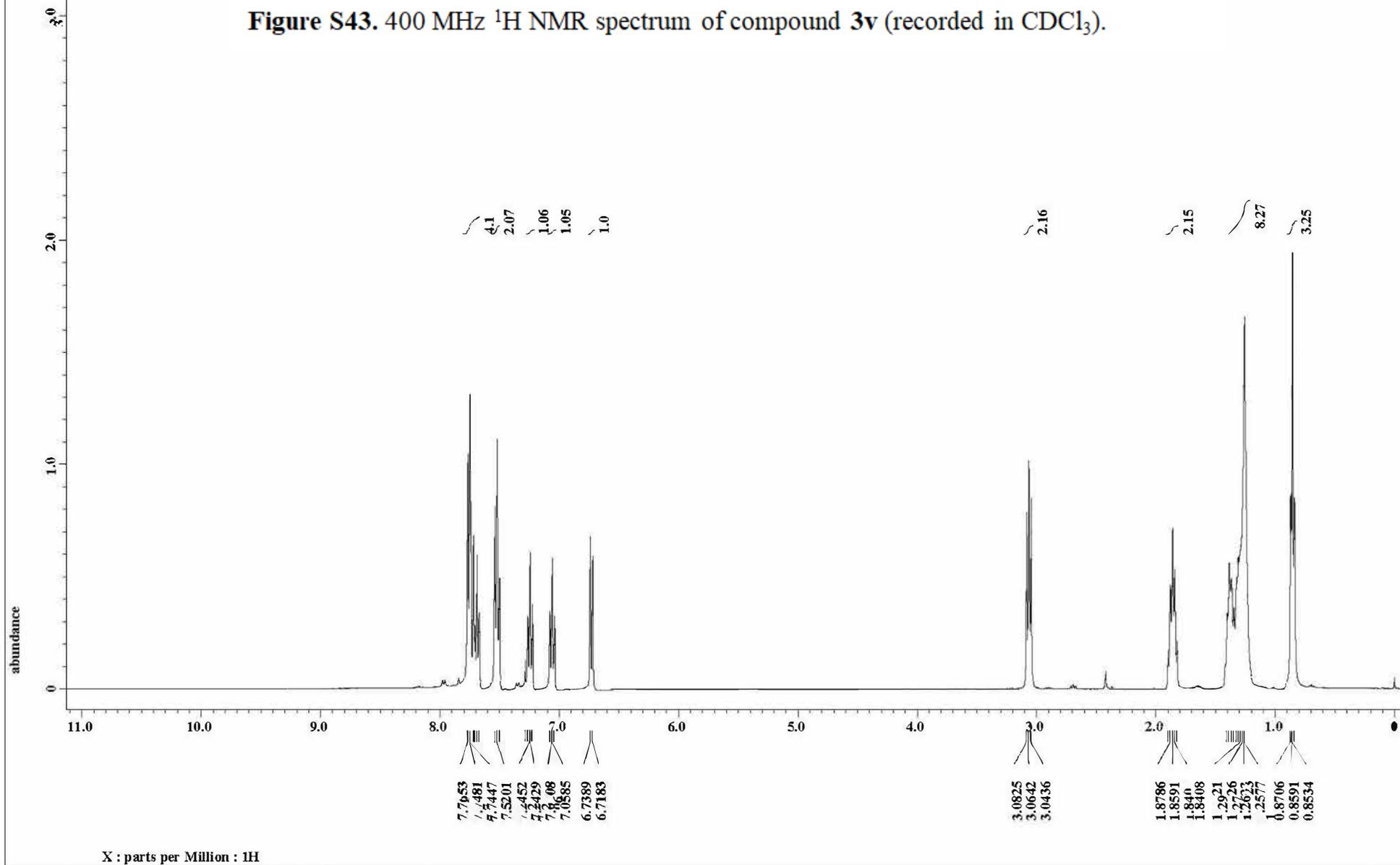


Figure S43. 400 MHz ^1H NMR spectrum of compound **3v** (recorded in CDCl_3).



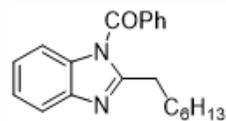
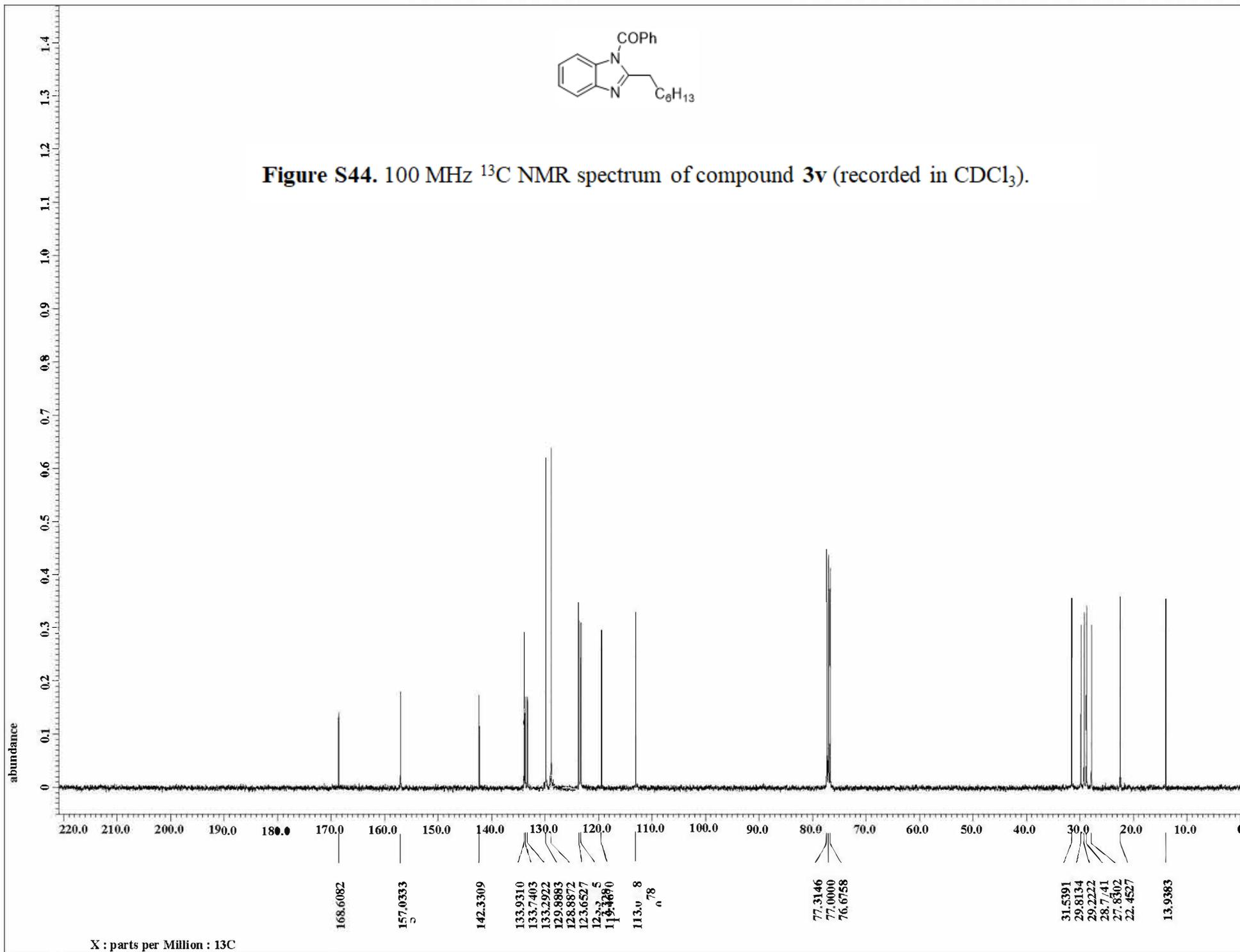


Figure S44. 100 MHz ^{13}C NMR spectrum of compound 3v (recorded in CDCl_3).



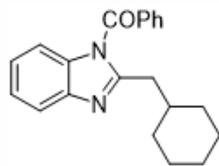
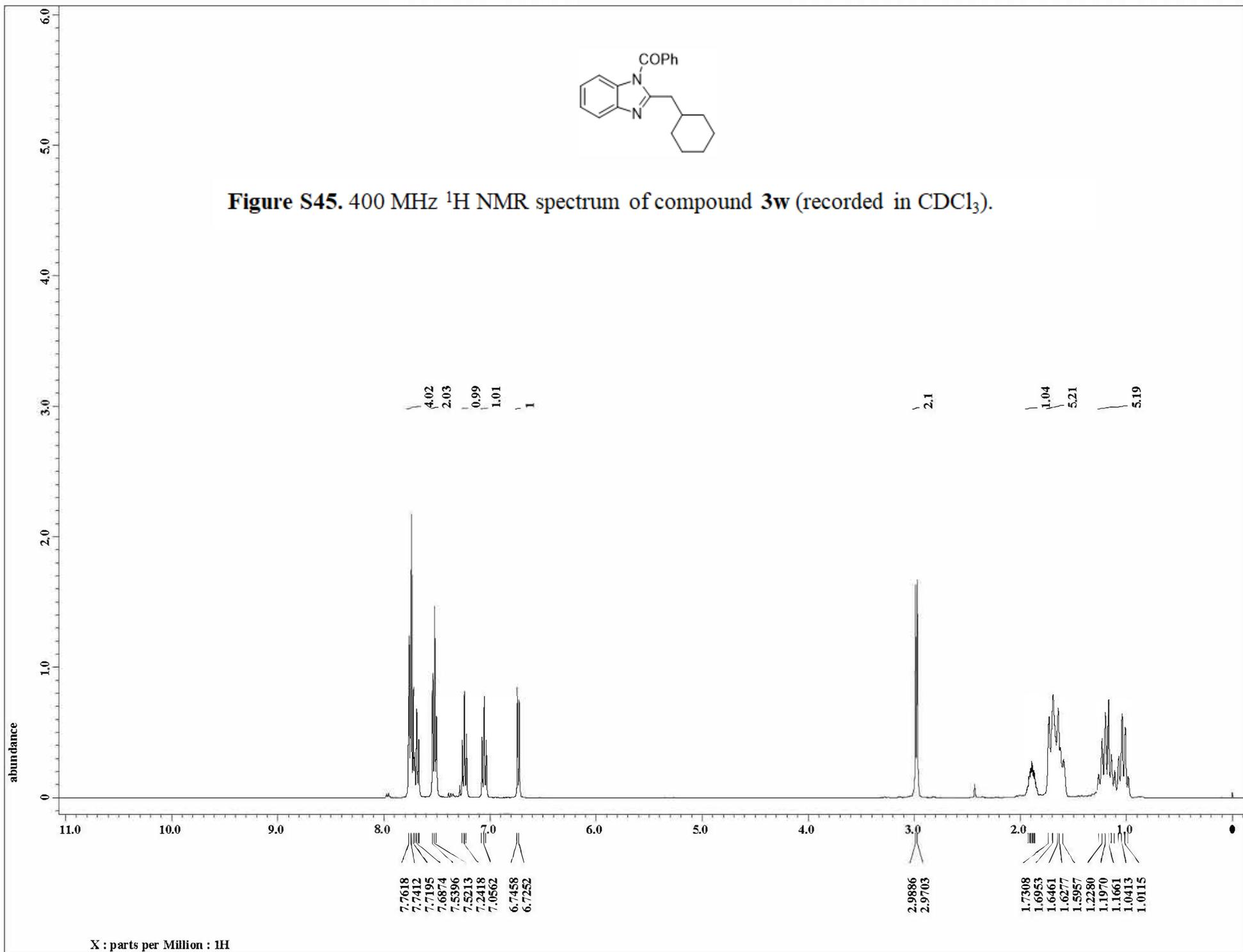


Figure S45. 400 MHz ^1H NMR spectrum of compound **3w** (recorded in CDCl_3).



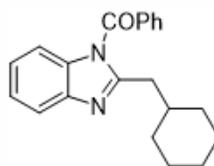
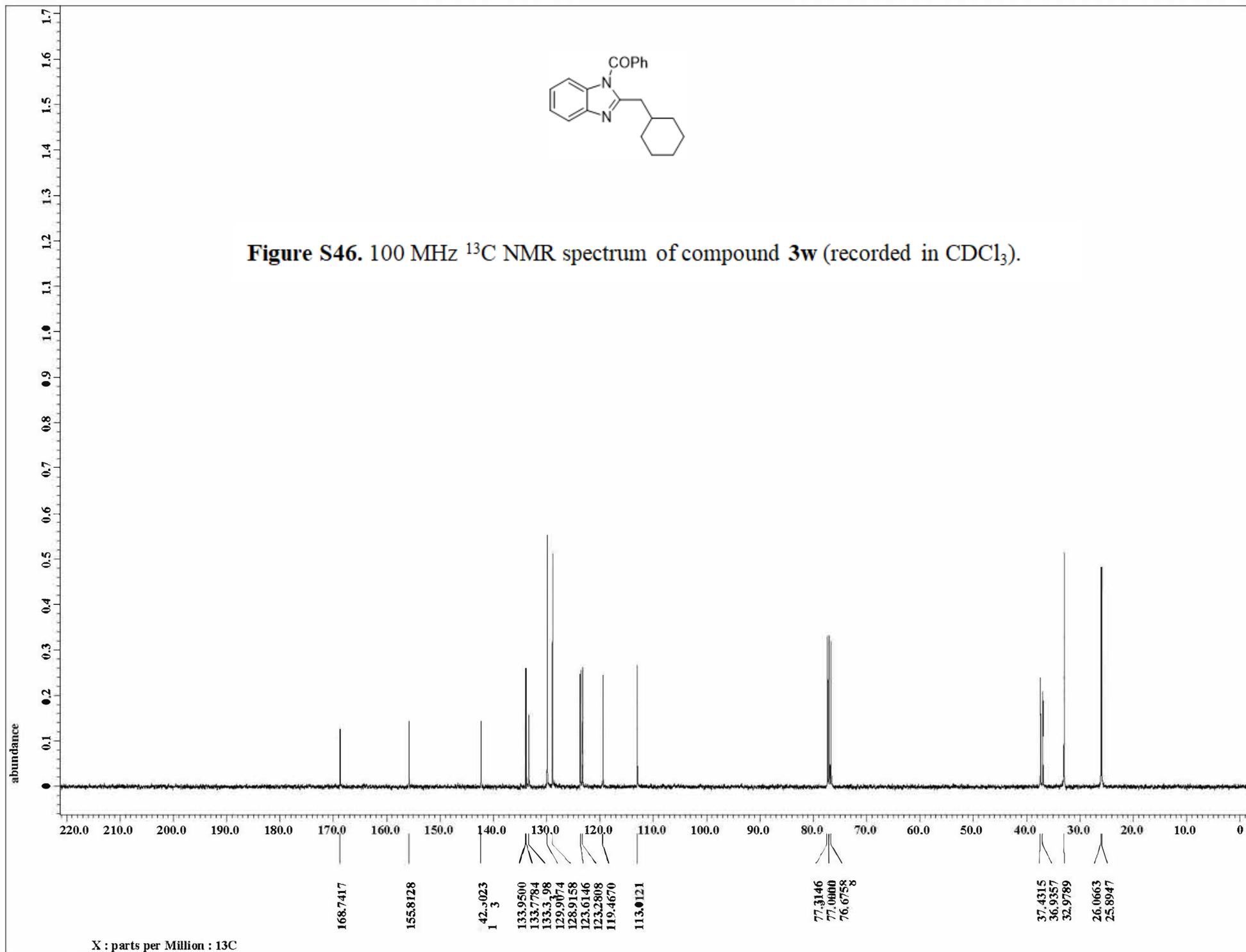


Figure S46. 100 MHz ^{13}C NMR spectrum of compound 3w (recorded in CDCl_3).



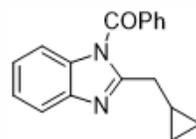
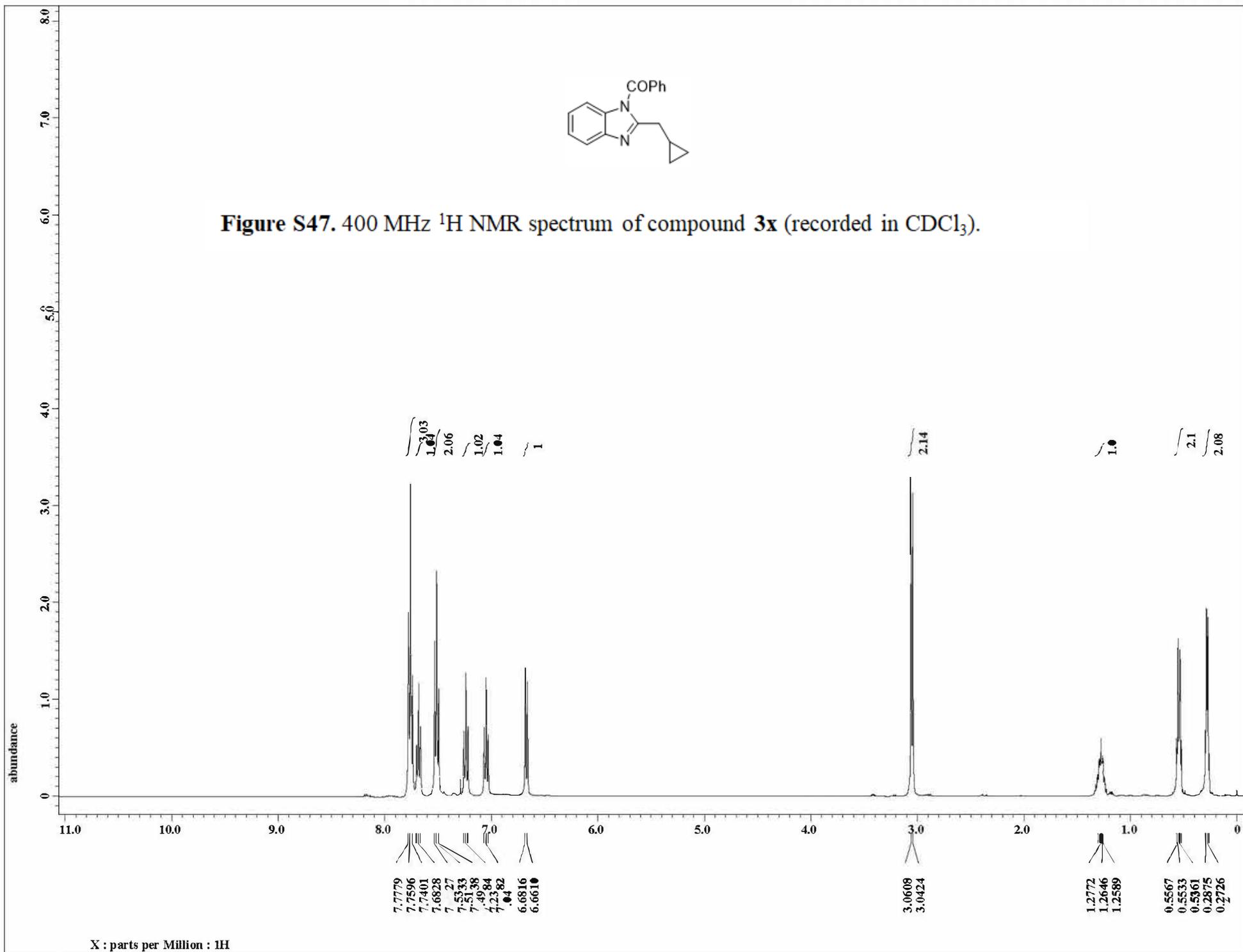


Figure S47. 400 MHz ^1H NMR spectrum of compound **3x** (recorded in CDCl_3).



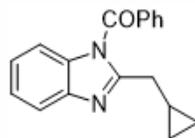


Figure S48. 100 MHz ^{13}C NMR spectrum of compound **3x** (recorded in CDCl_3).

