

Supporting Information

**SYNTHESIS OF LAMELLARINS VIA REGIOSELECTIVE ASSEMBLY OF
1,2-DIARYLATED [1]BENZOPYRANO[3,4-*b*]PYRROL-4(3*H*)-ONE CORE**

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¹H and ¹³C NMR spectra

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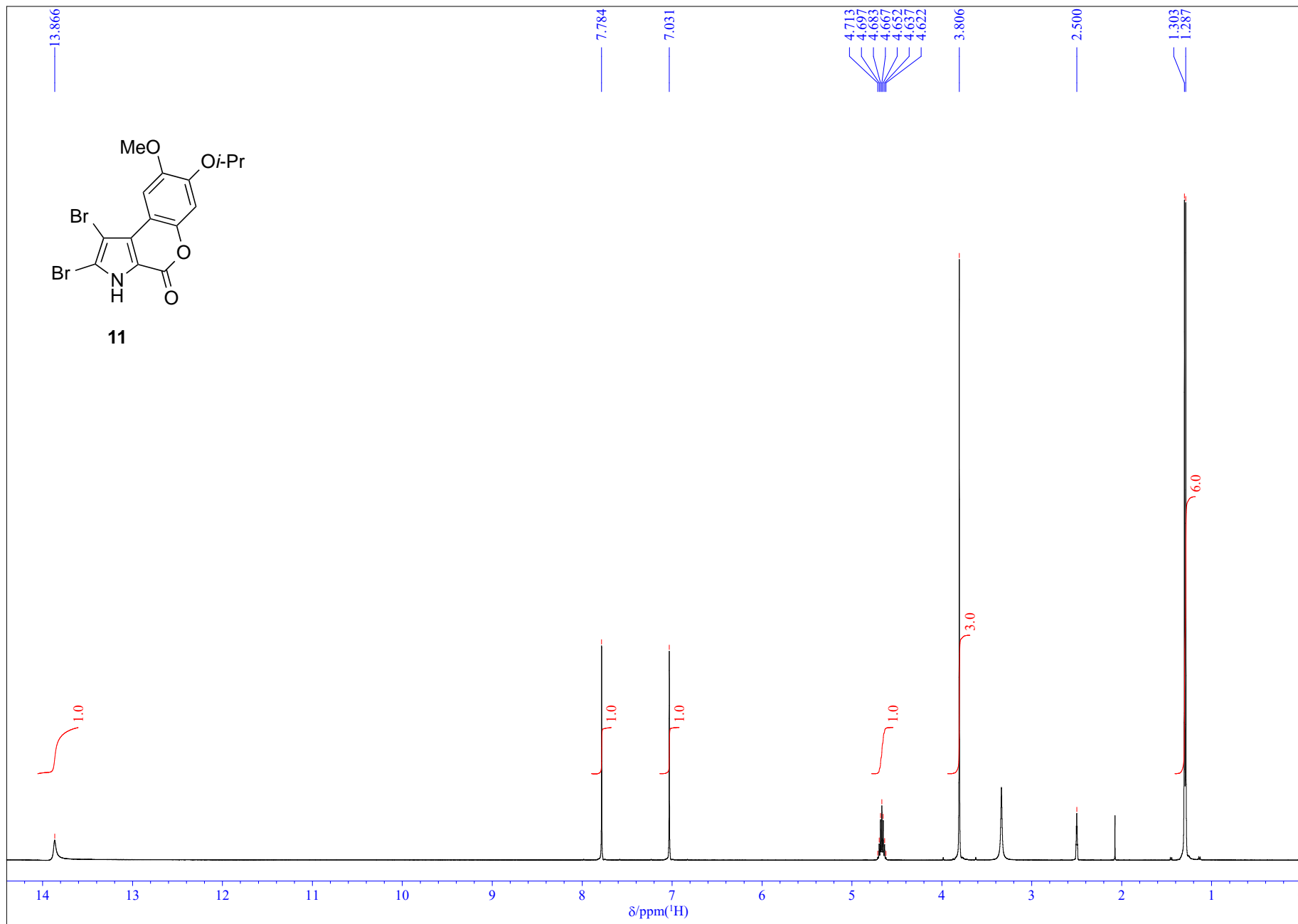


Figure S1. ^1H NMR spectrum of compound **11** (400 MHz, $\text{DMSO-}d_6$).

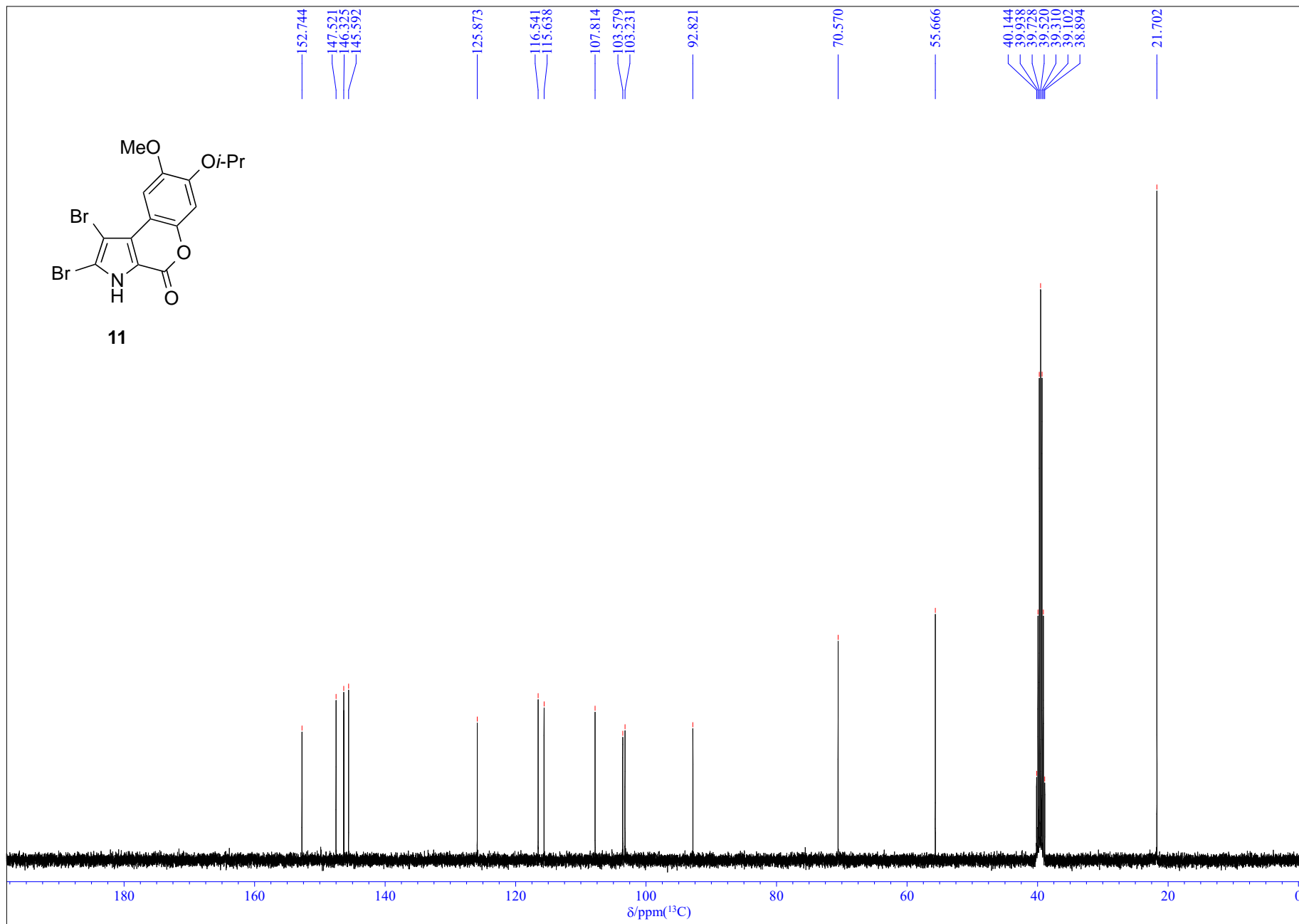


Figure S2. ^{13}C NMR spectrum of compound **11** (100 MHz, $\text{DMSO-}d_6$).

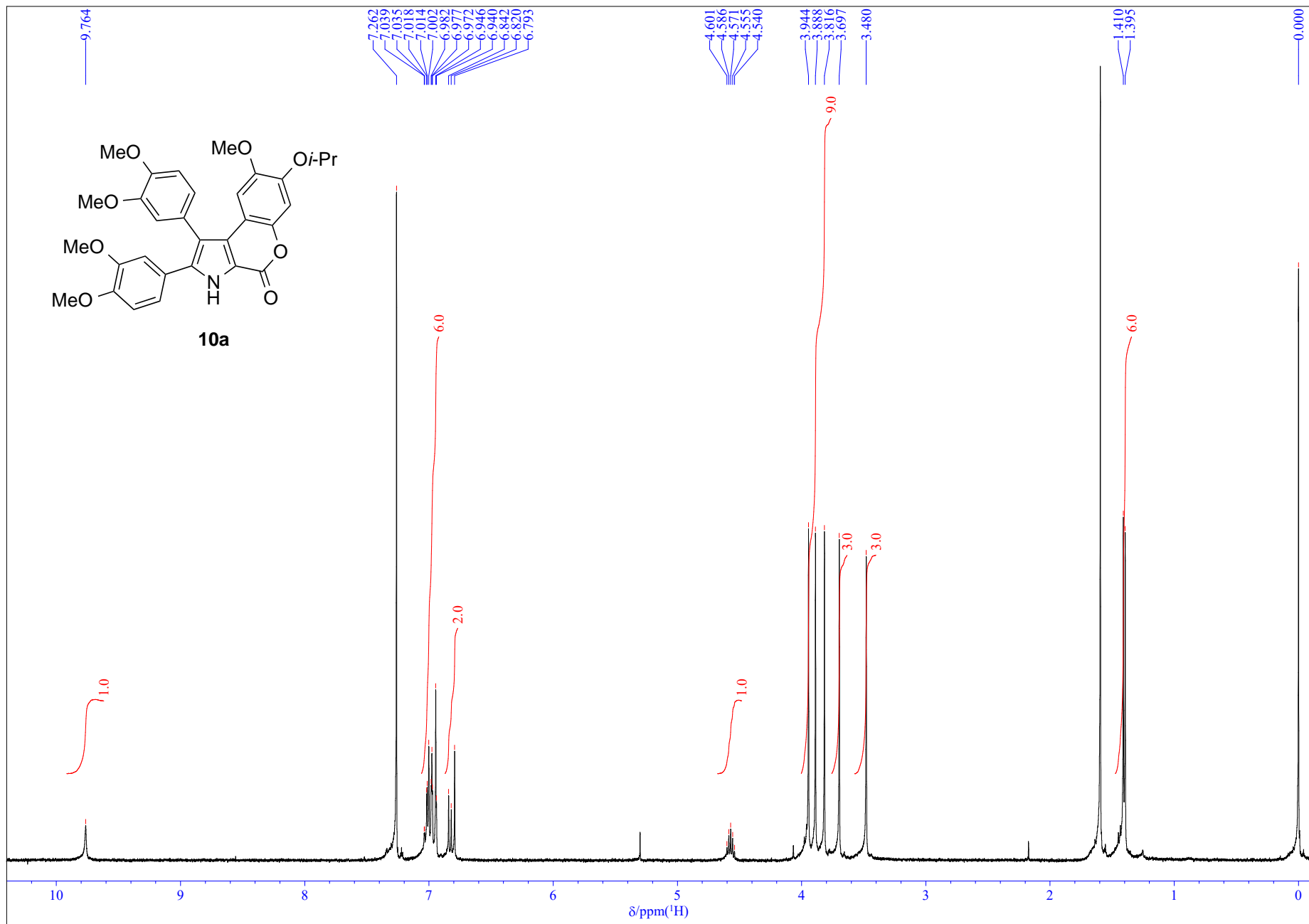


Figure S3. ¹H NMR spectrum of compound **10a** (400 MHz, CDCl₃).

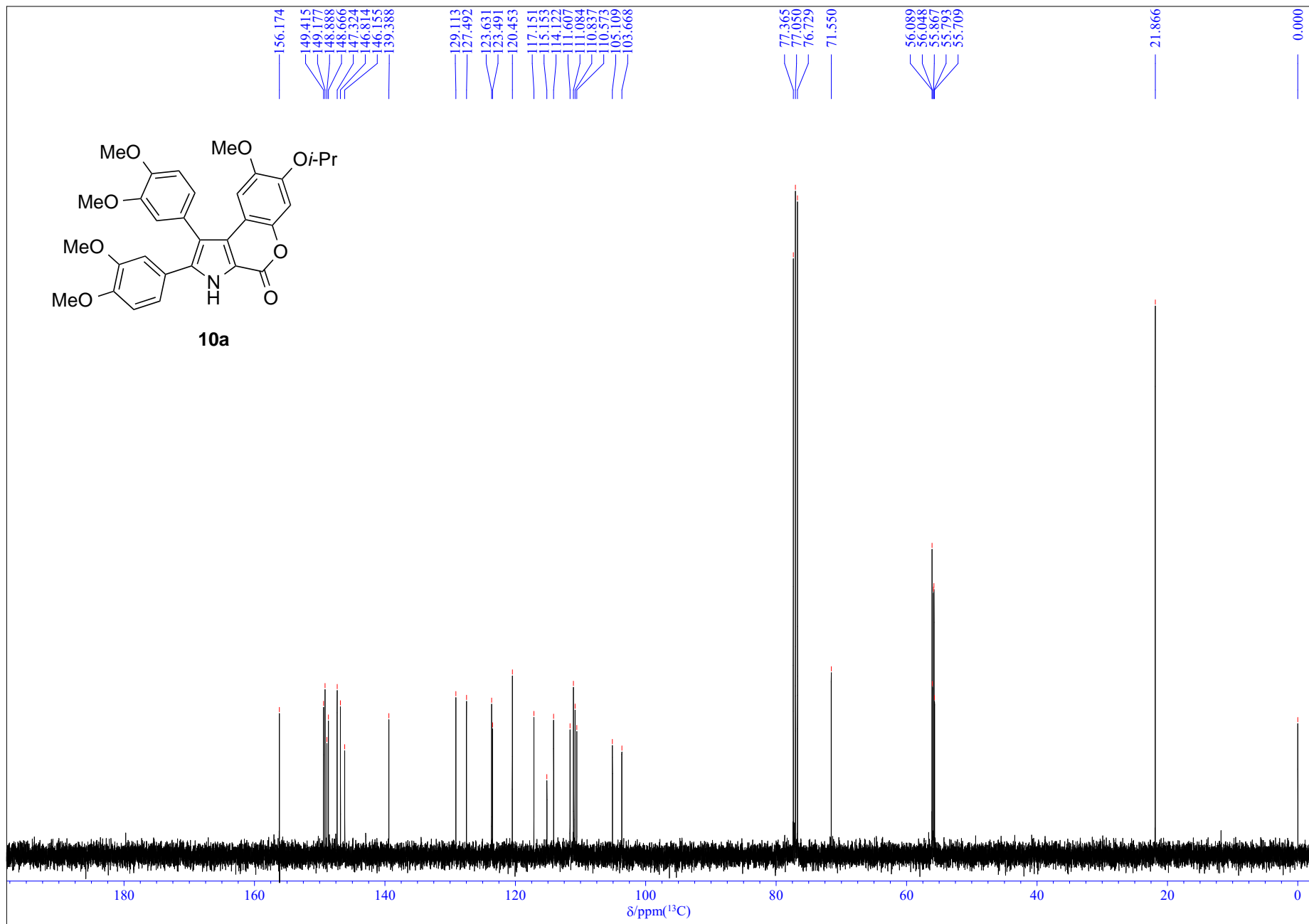


Figure S4. ${}^{13}\text{C}$ NMR spectrum of compound **10a** (100 MHz, CDCl_3).

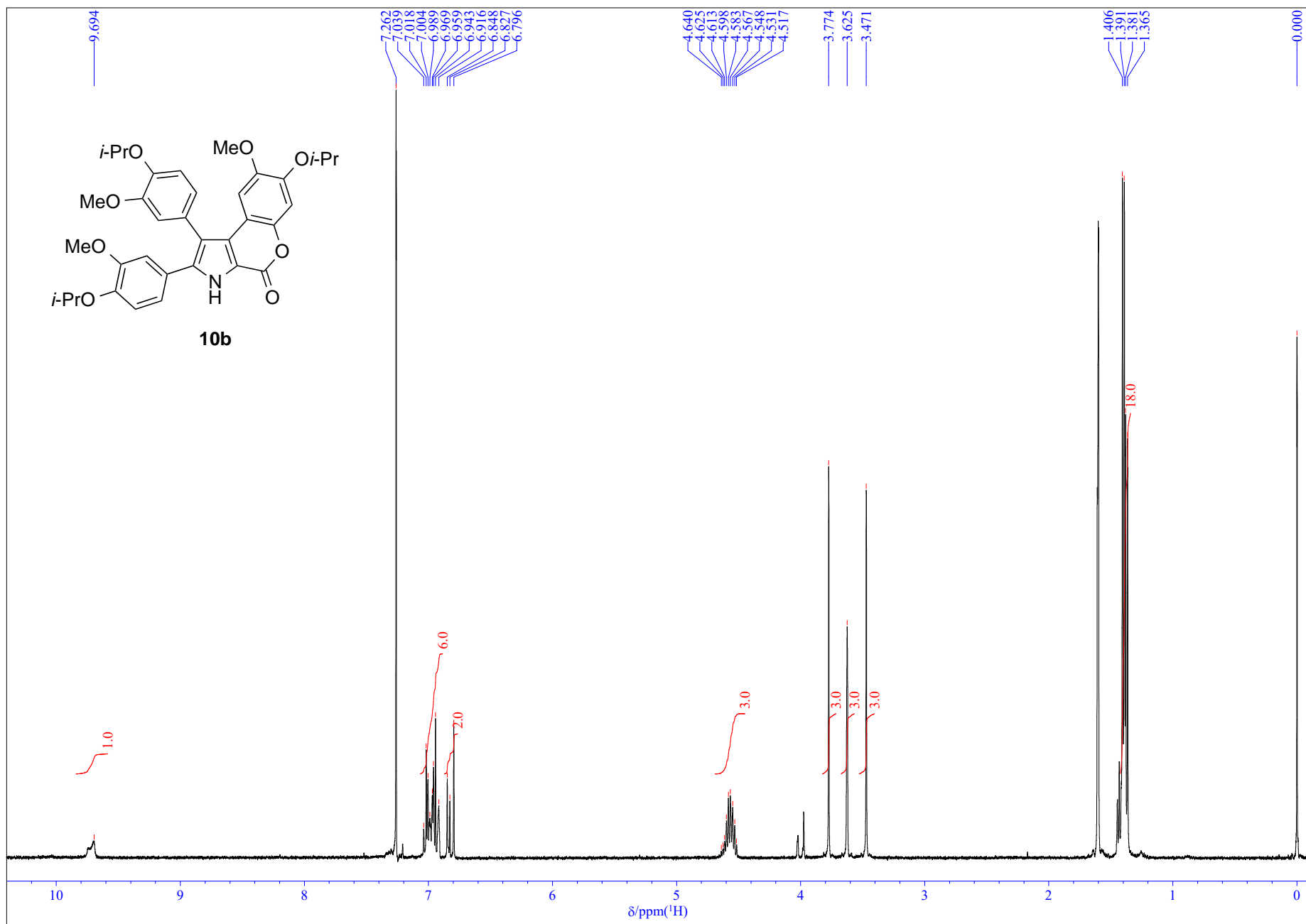


Figure S5. ¹H NMR spectrum of compound **10b** (400 MHz, CDCl₃).

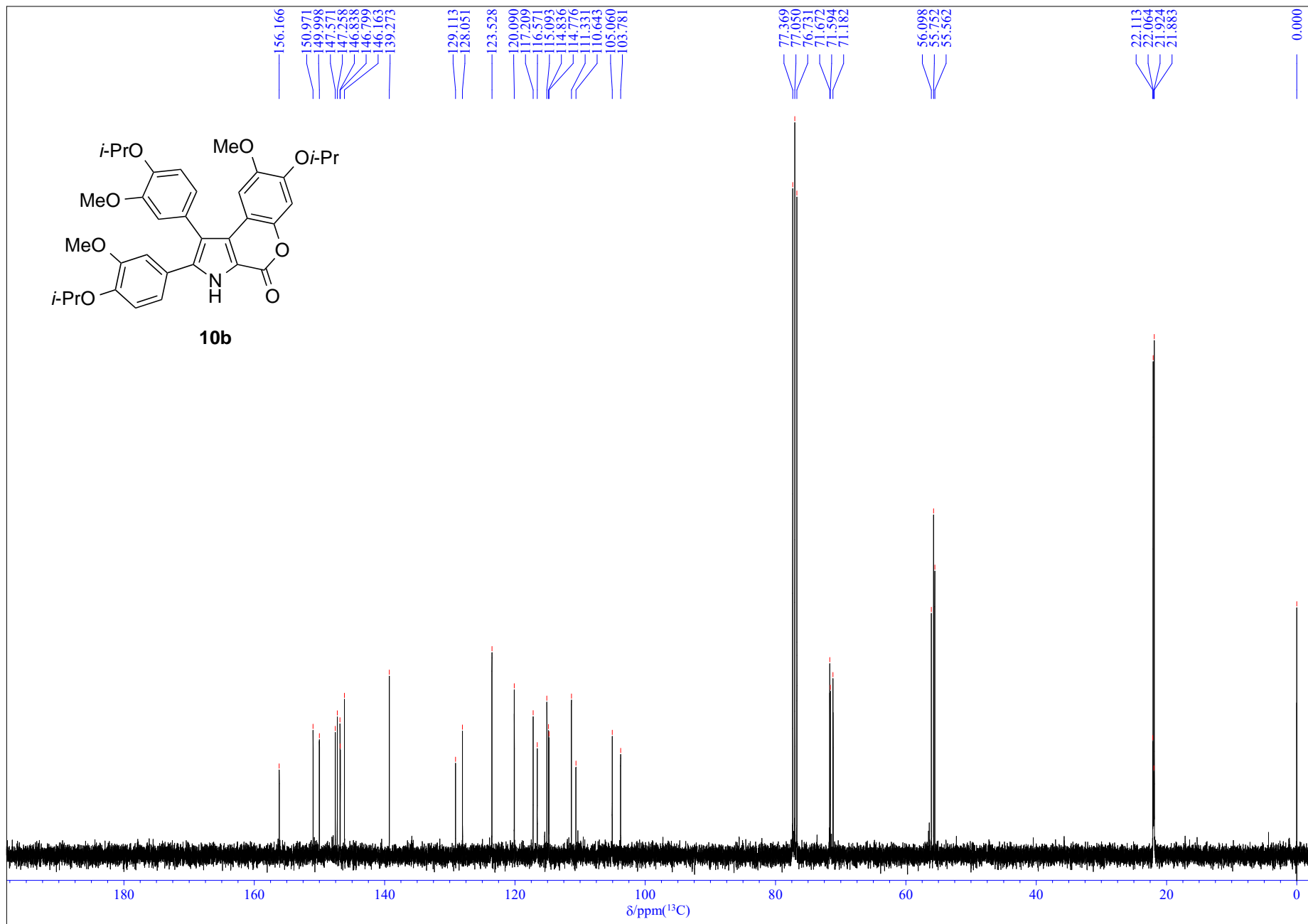


Figure S6. ^{13}C NMR spectrum of compound **10b** (100 MHz, CDCl_3).

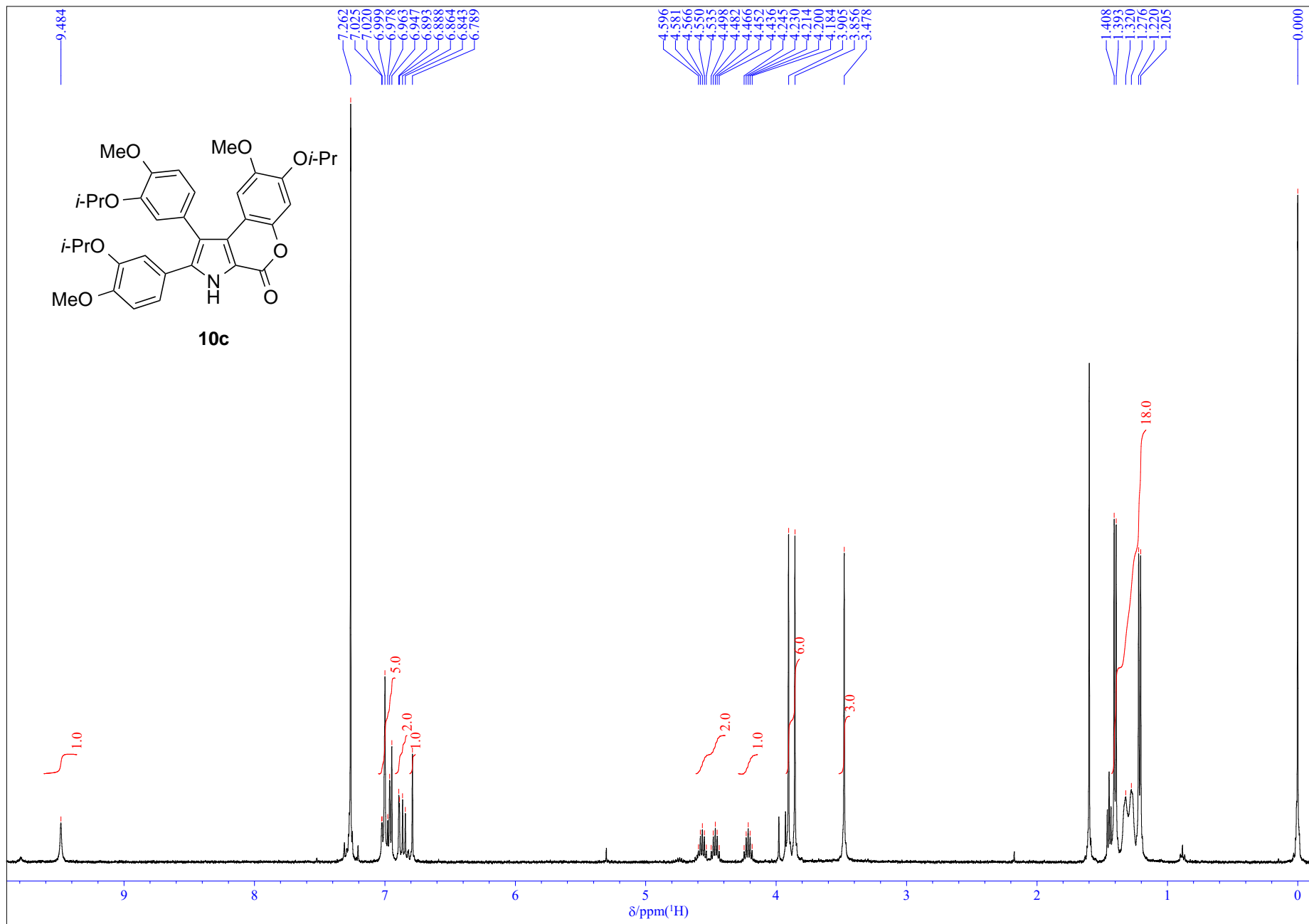


Figure S7. ^1H NMR spectrum of compound **10c** (400 MHz, CDCl_3).

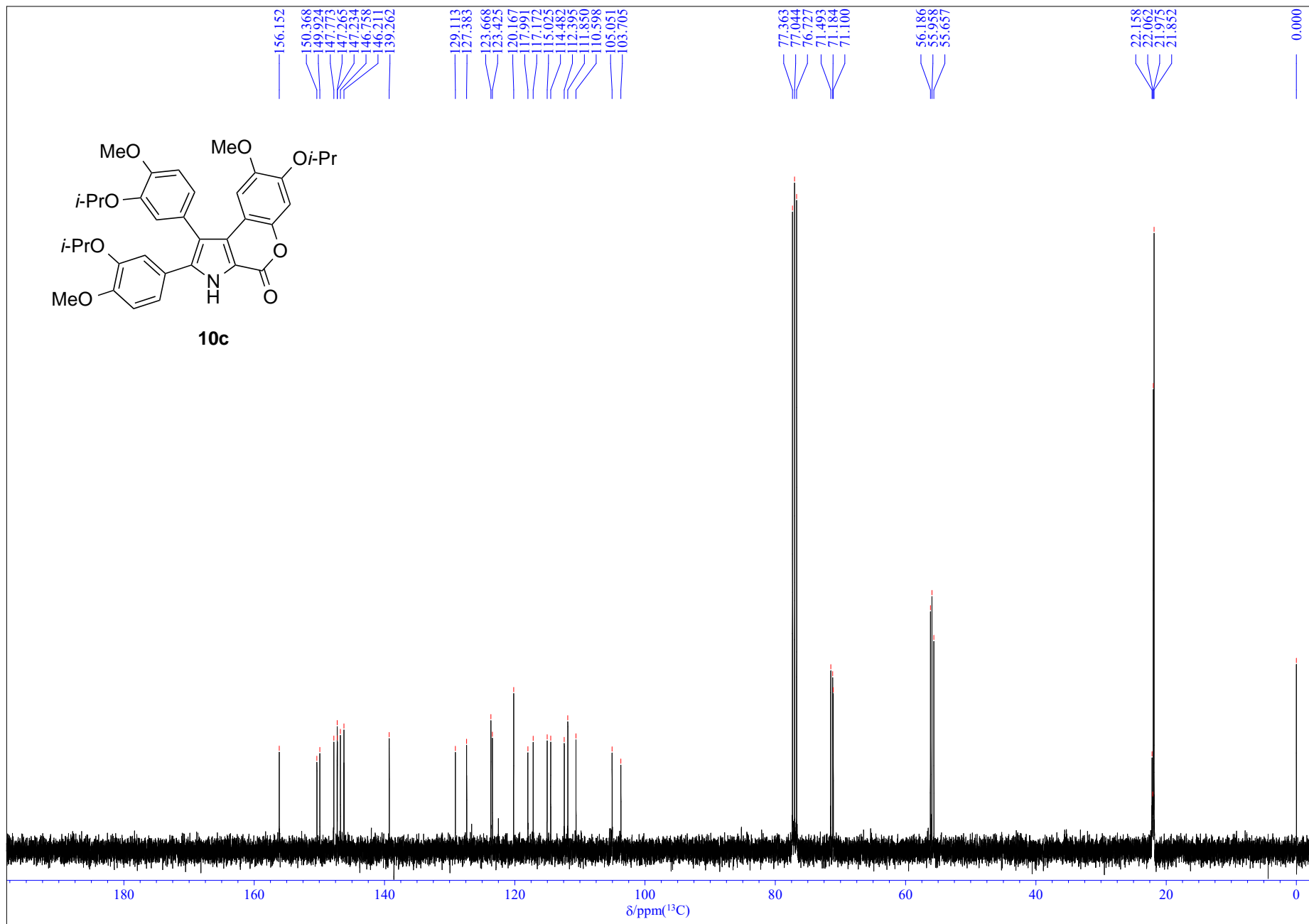


Figure S8. ${}^{13}\text{C}$ NMR spectrum of compound **10c** (100 MHz, CDCl_3).

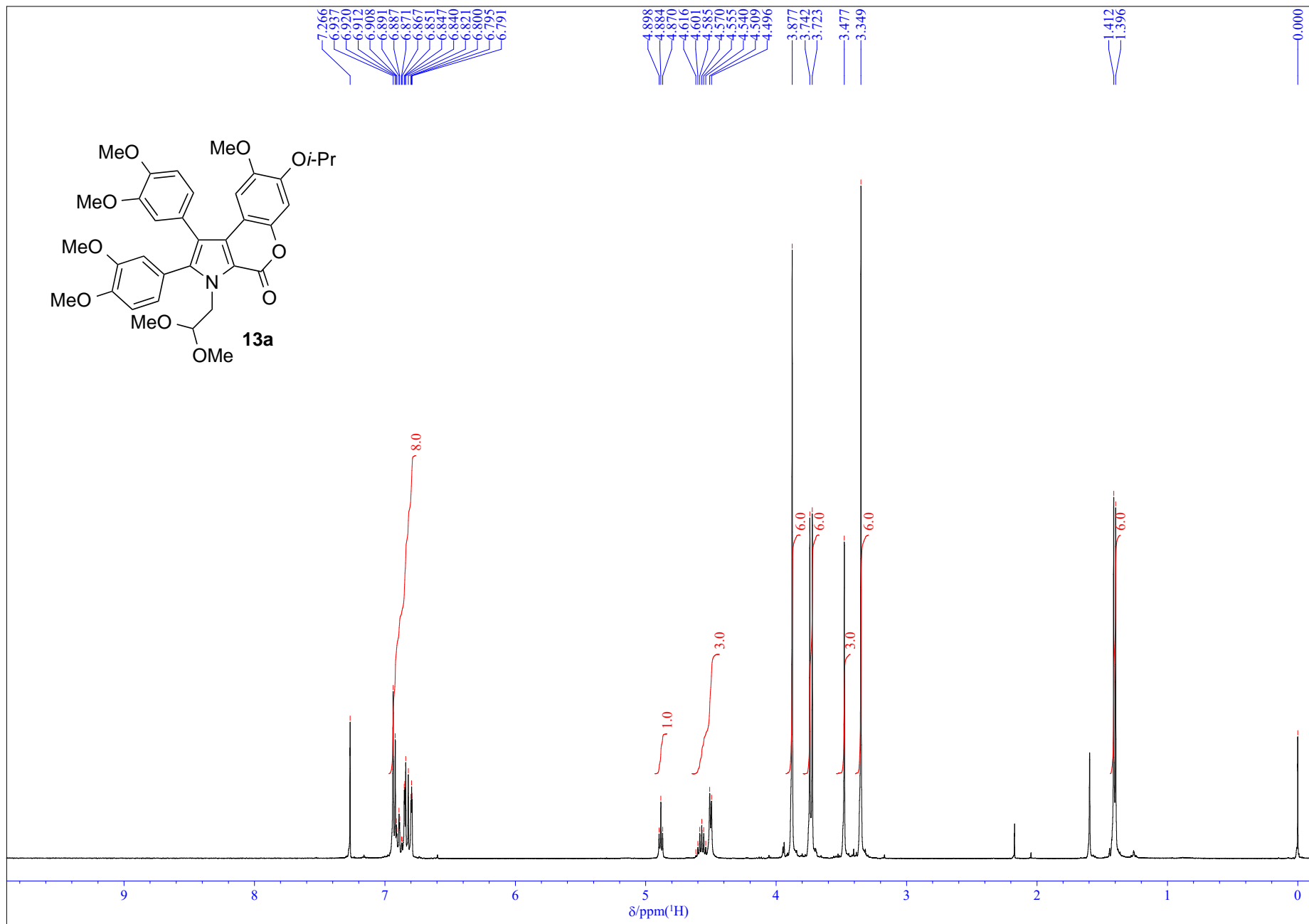


Figure S9. ¹H NMR spectrum of compound **13a** (400 MHz, CDCl₃).

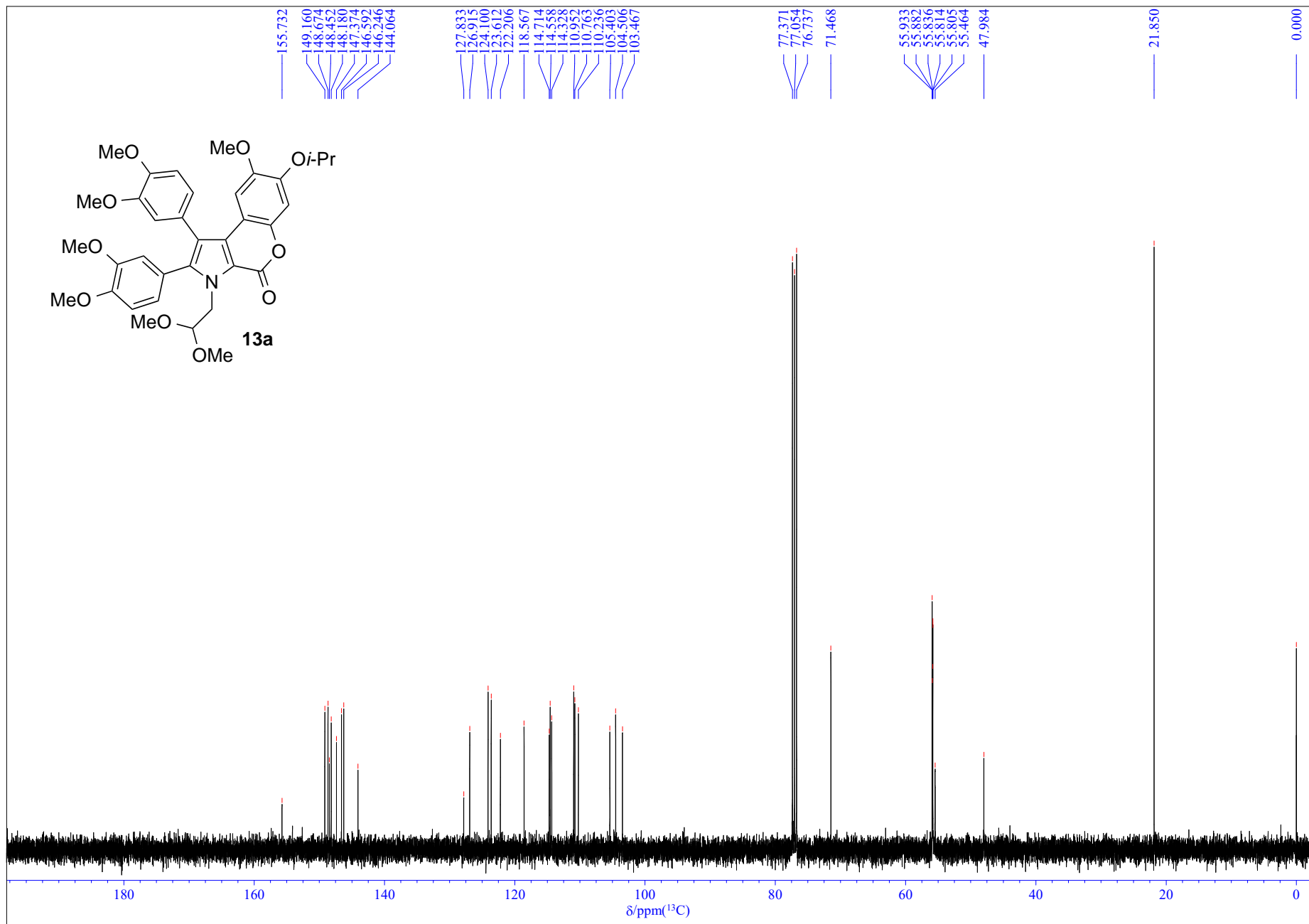


Figure S10. ^{13}C NMR spectrum of compound **13a** (100 MHz, CDCl_3).

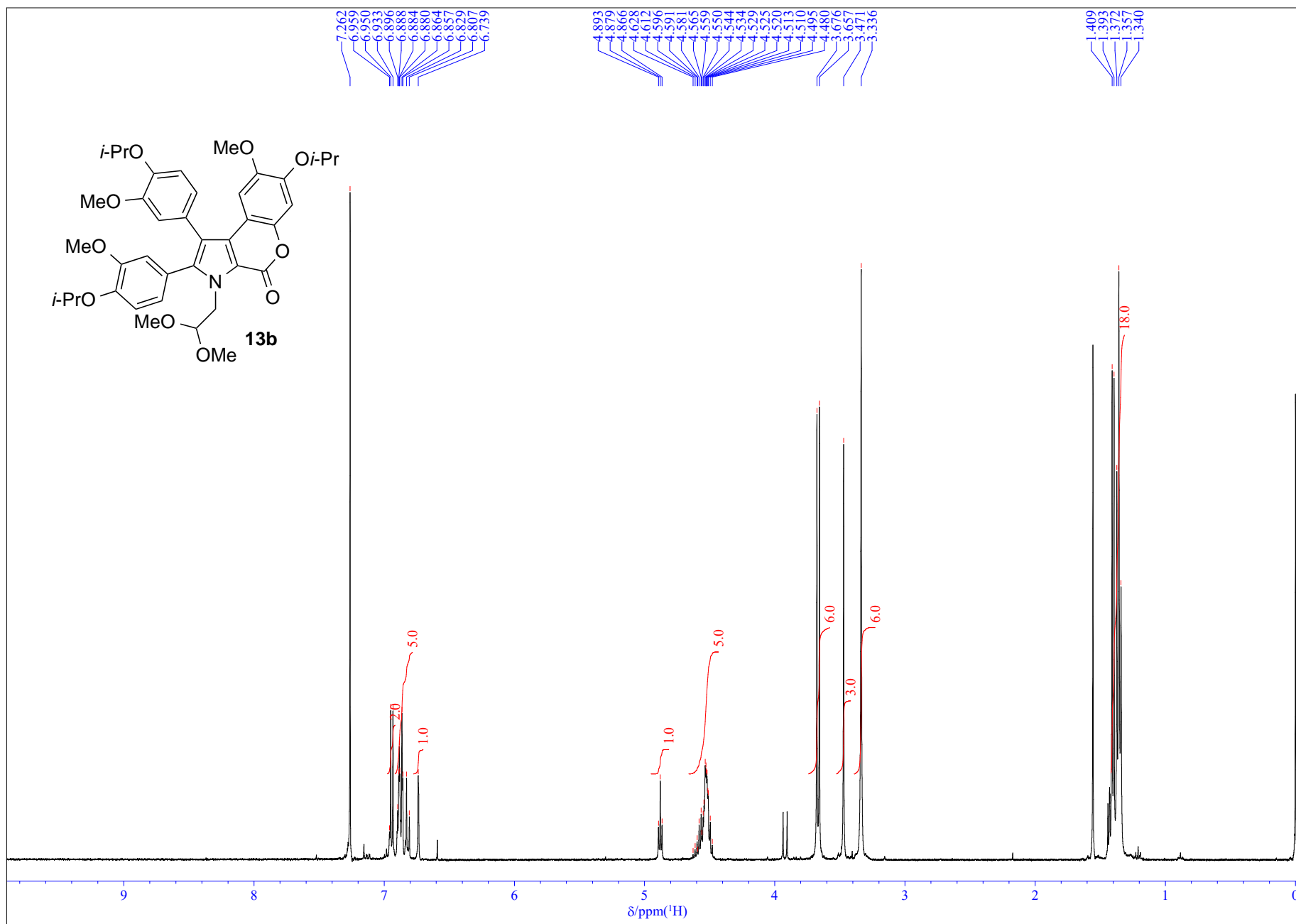


Figure S11. ¹H NMR spectrum of compound **13b** (400 MHz, CDCl₃).

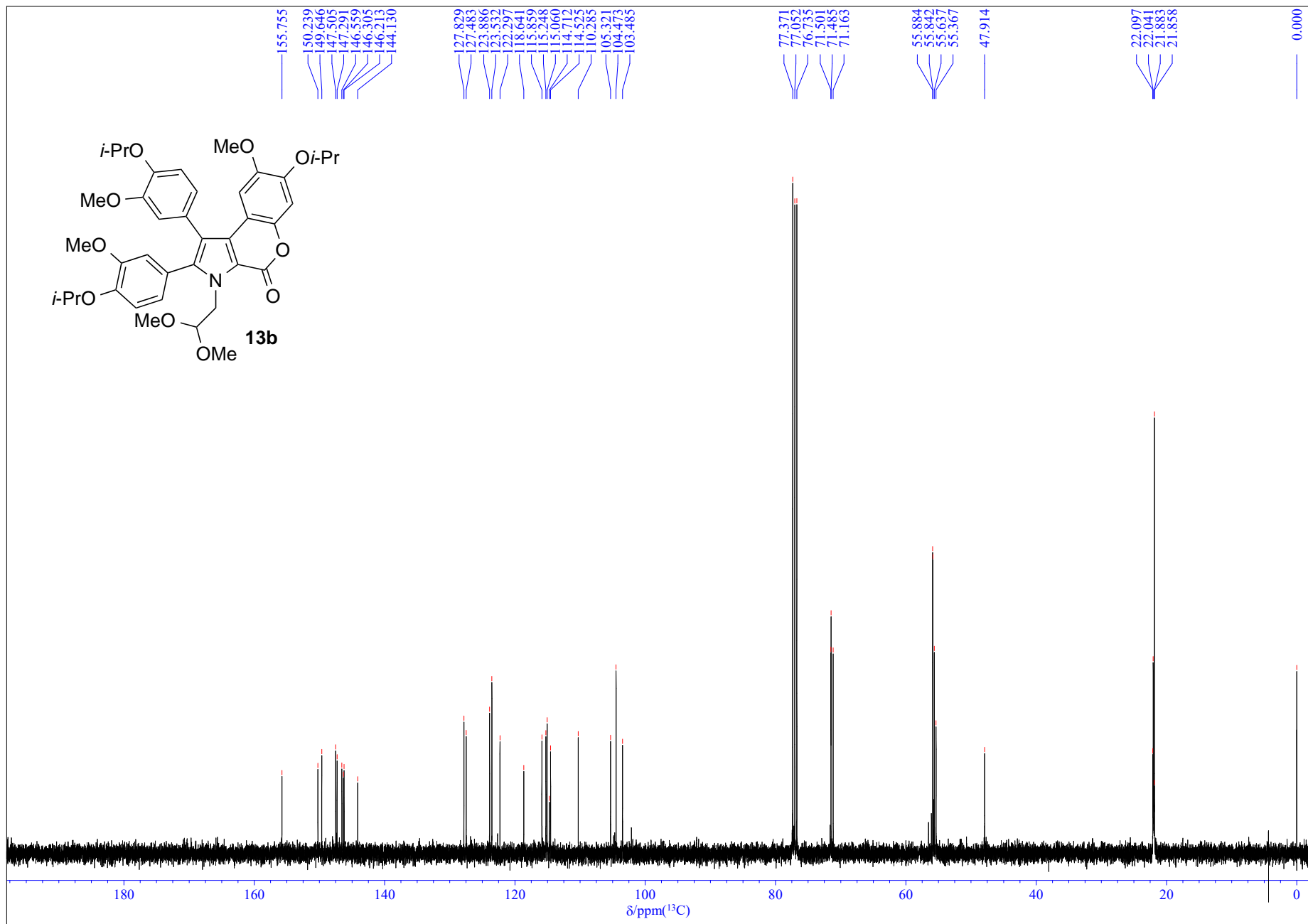


Figure S12. ^{13}C NMR spectrum of compound **13b** (100 MHz, CDCl_3).

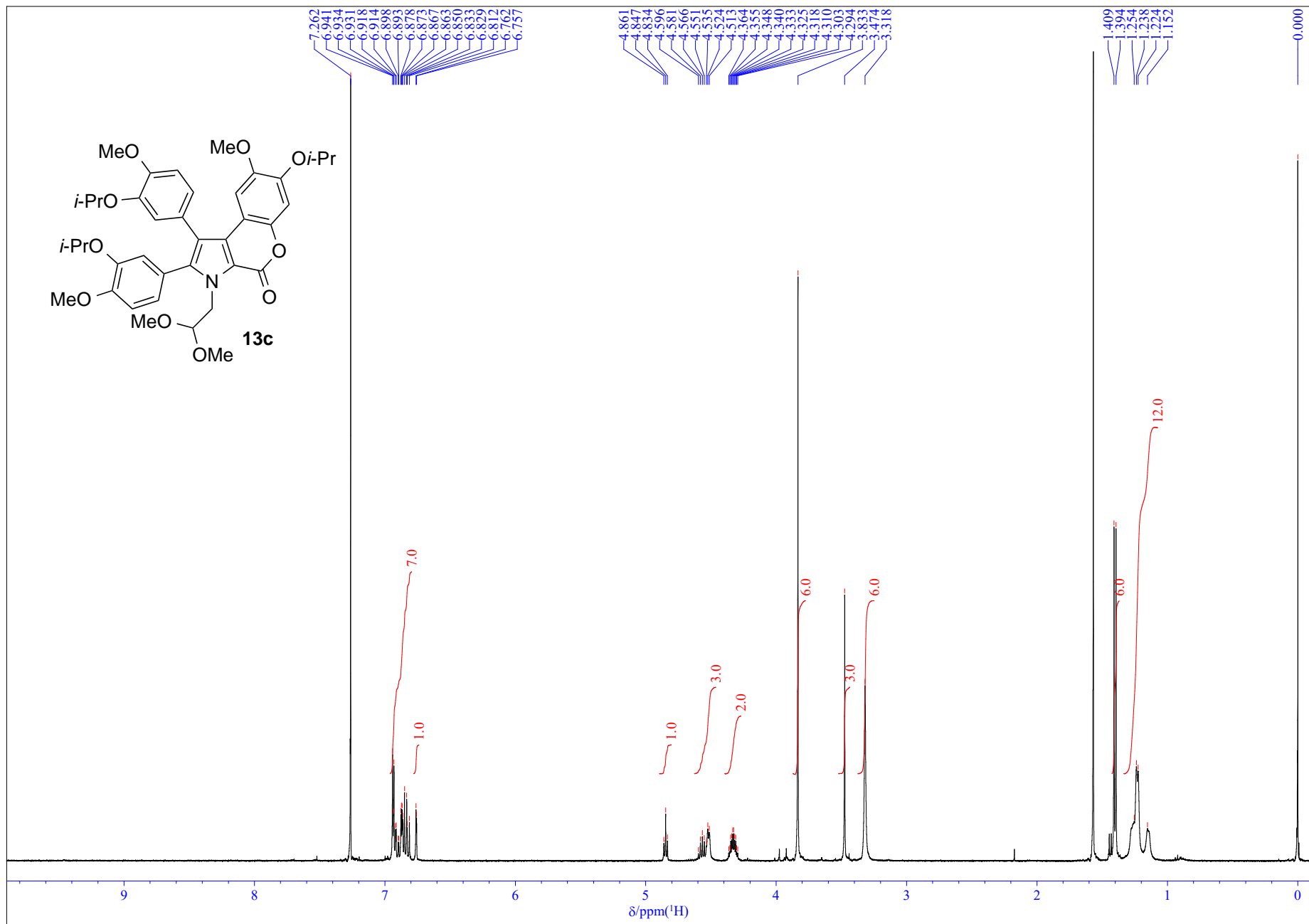


Figure S13. ¹H NMR spectrum of compound **13c** (400 MHz, CDCl₃).

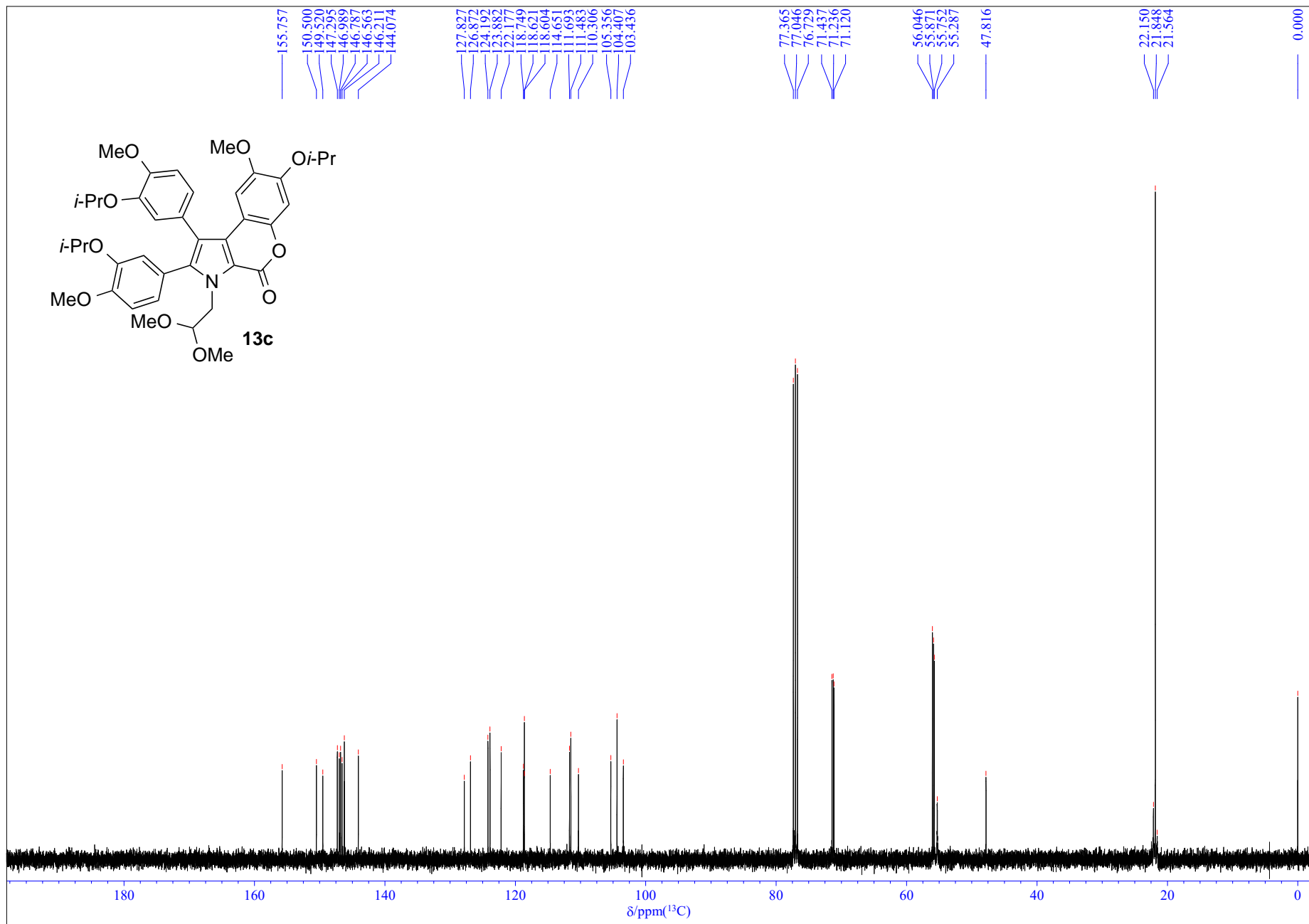


Figure S14. ^{13}C NMR spectrum of compound **13c** (100 MHz, CDCl_3).

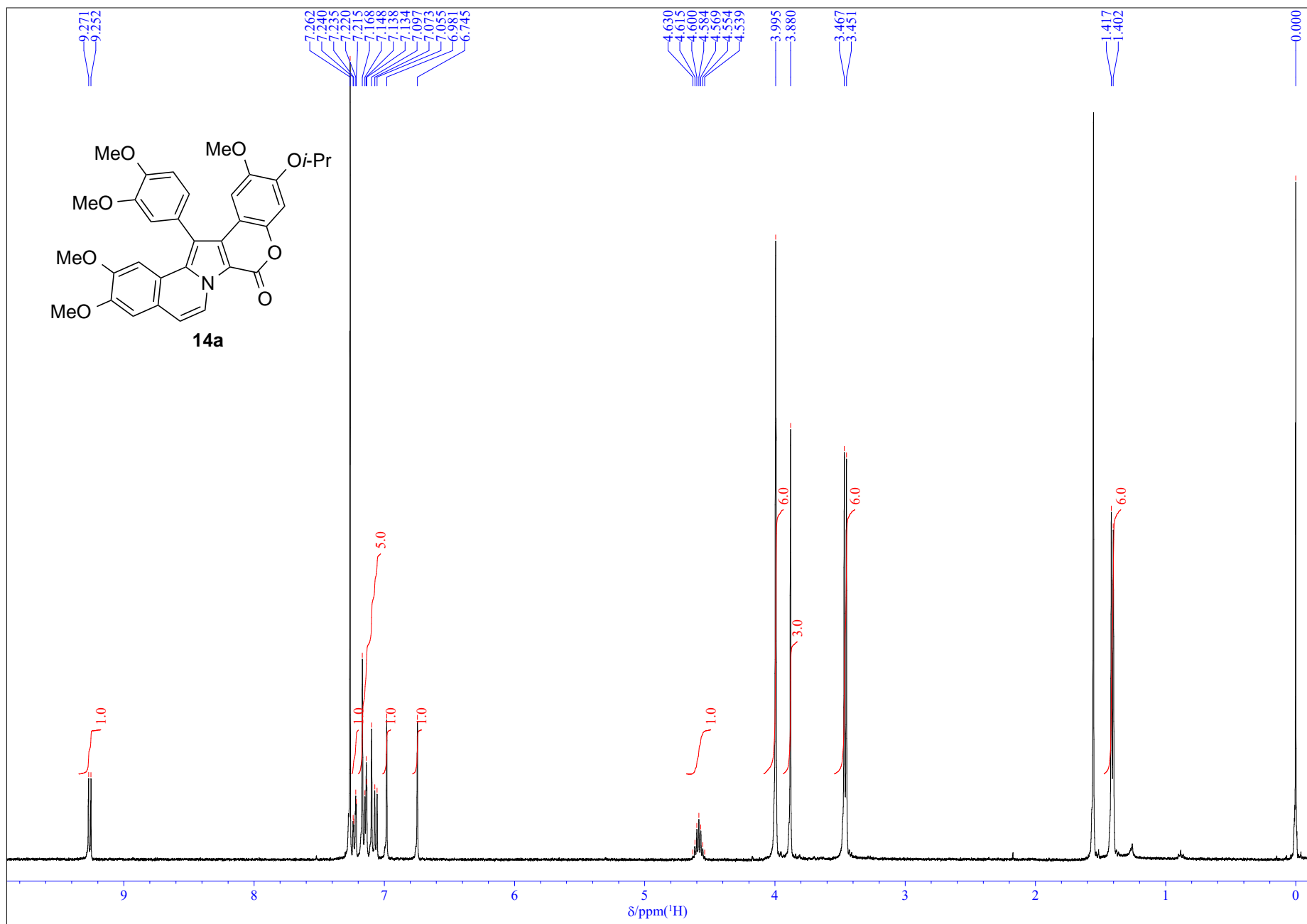


Figure S15. ^1H NMR spectrum of compound **14a** (400 MHz, CDCl_3).

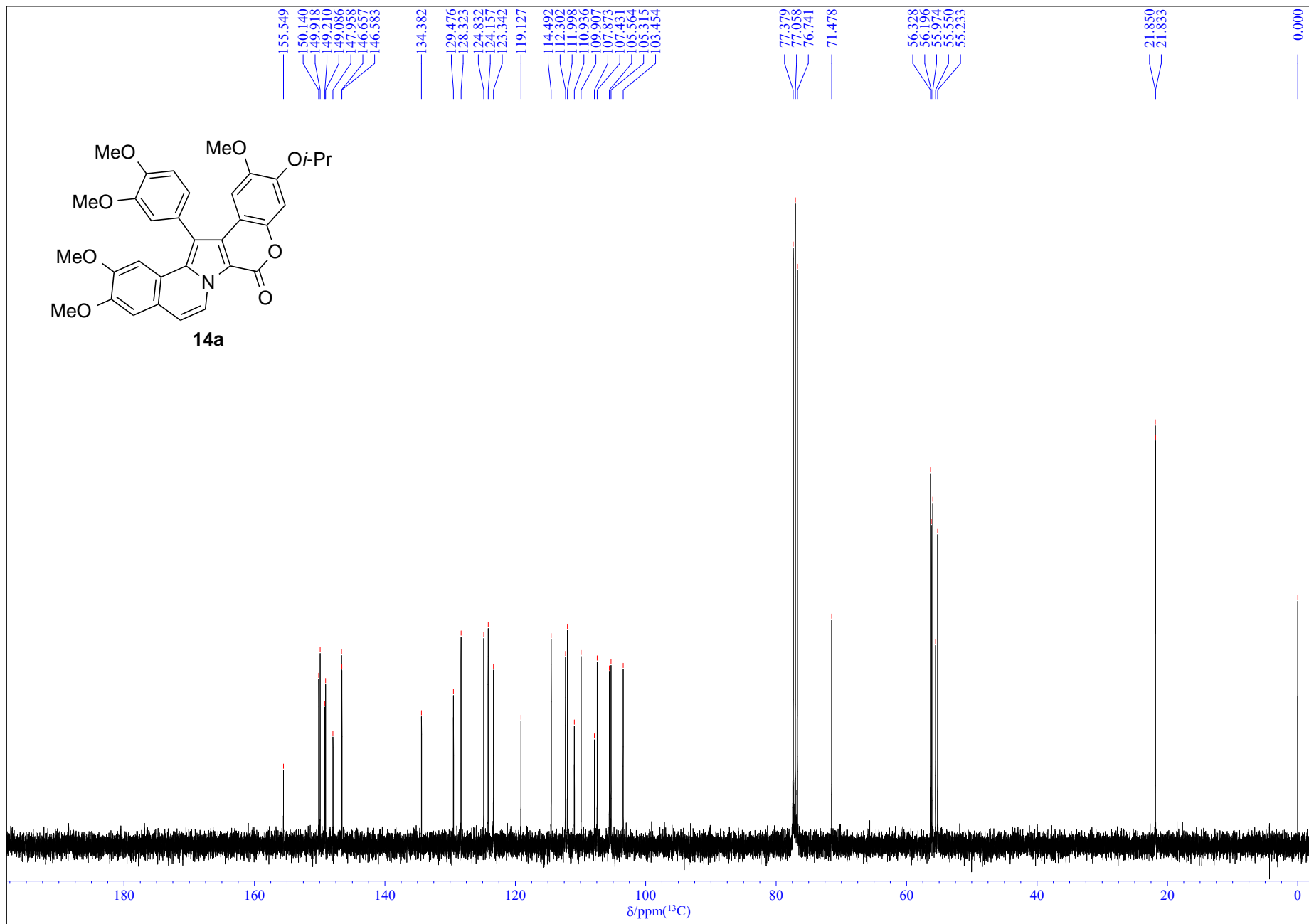


Figure S16. ${}^{13}\text{C}$ NMR spectrum of compound **14a** (100 MHz, CDCl_3).

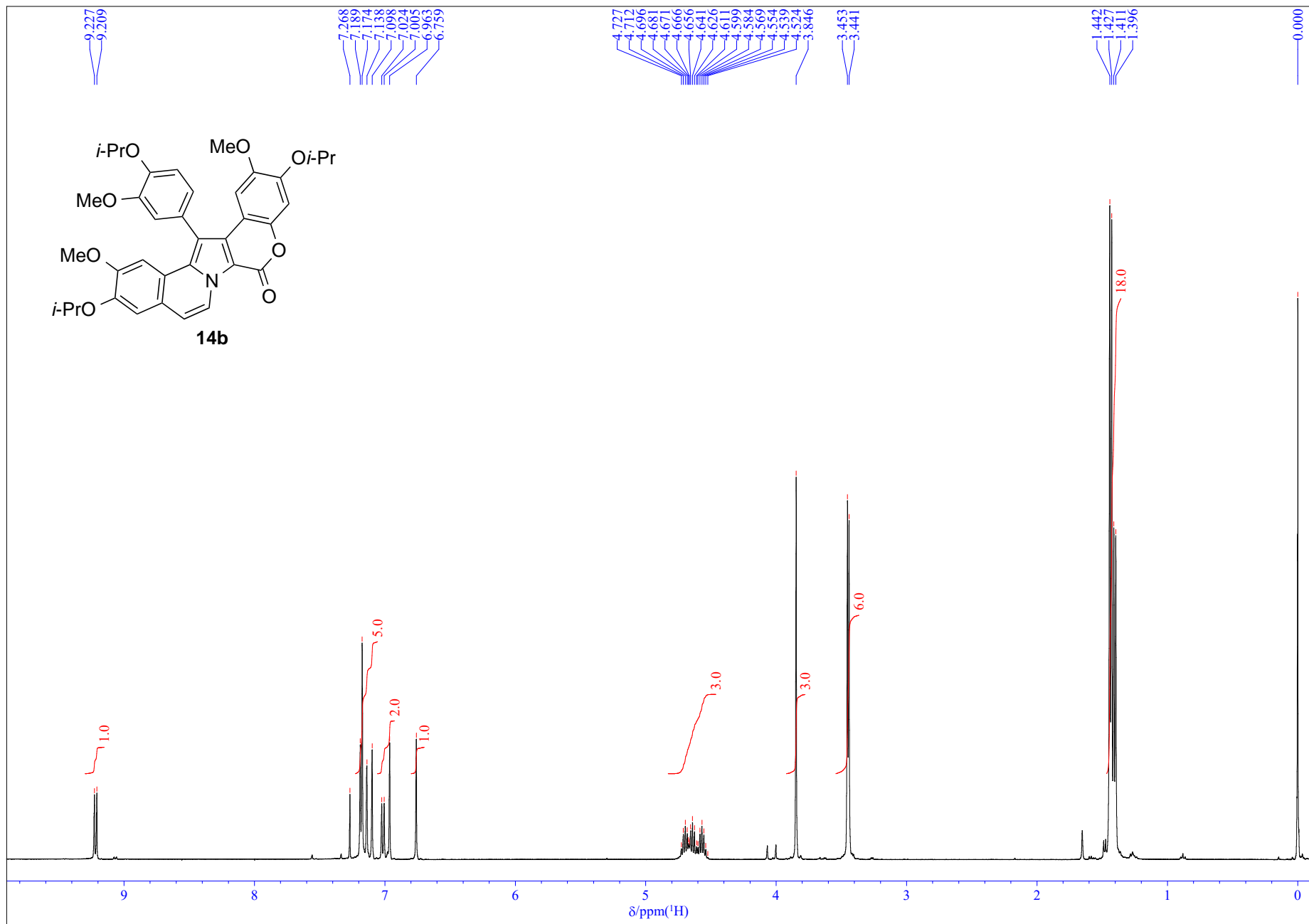


Figure S17. ¹H NMR spectrum of compound **14b** (400 MHz, CDCl₃).

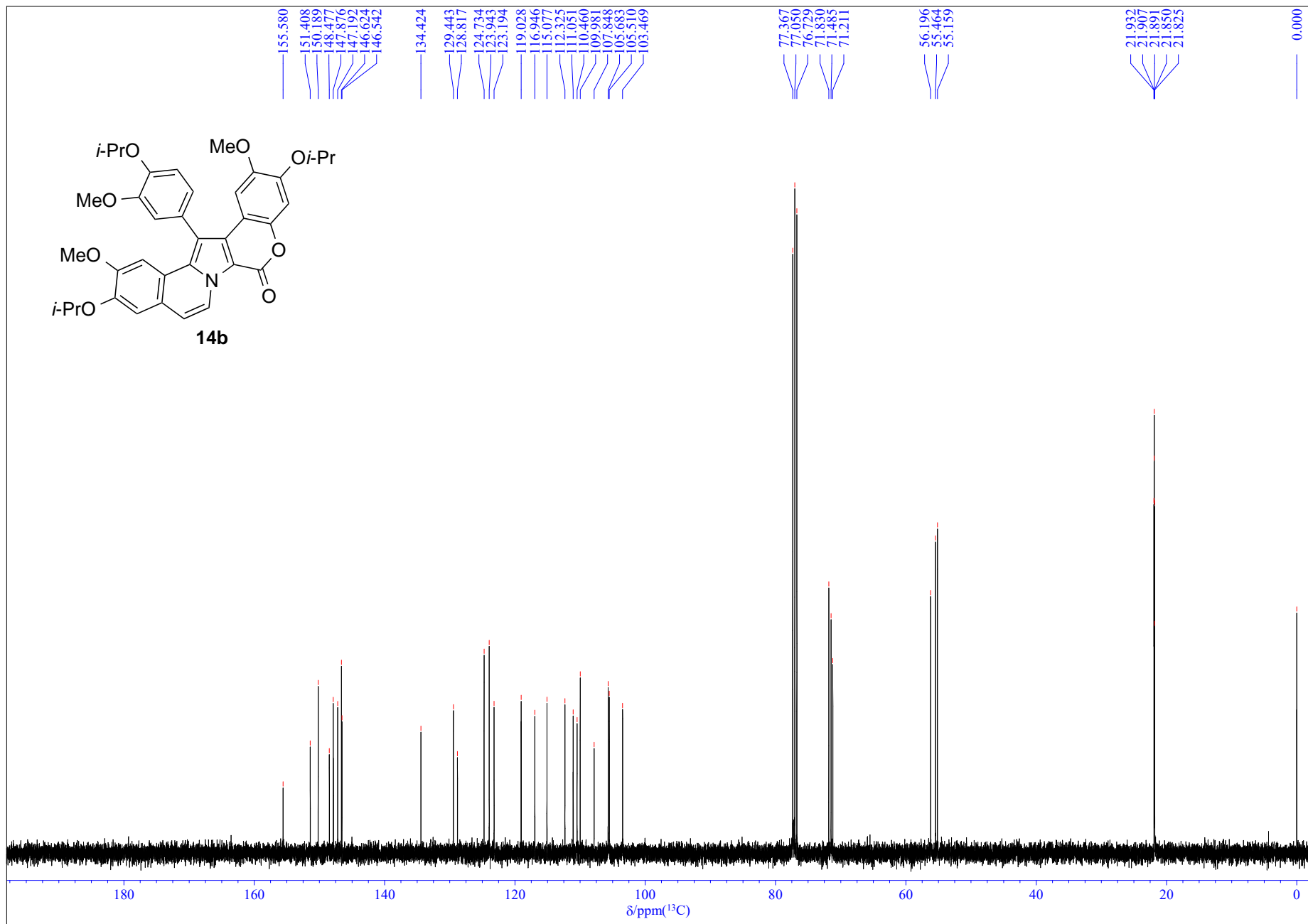


Figure S18. ^{13}C NMR spectrum of compound **14b** (100 MHz, CDCl_3).

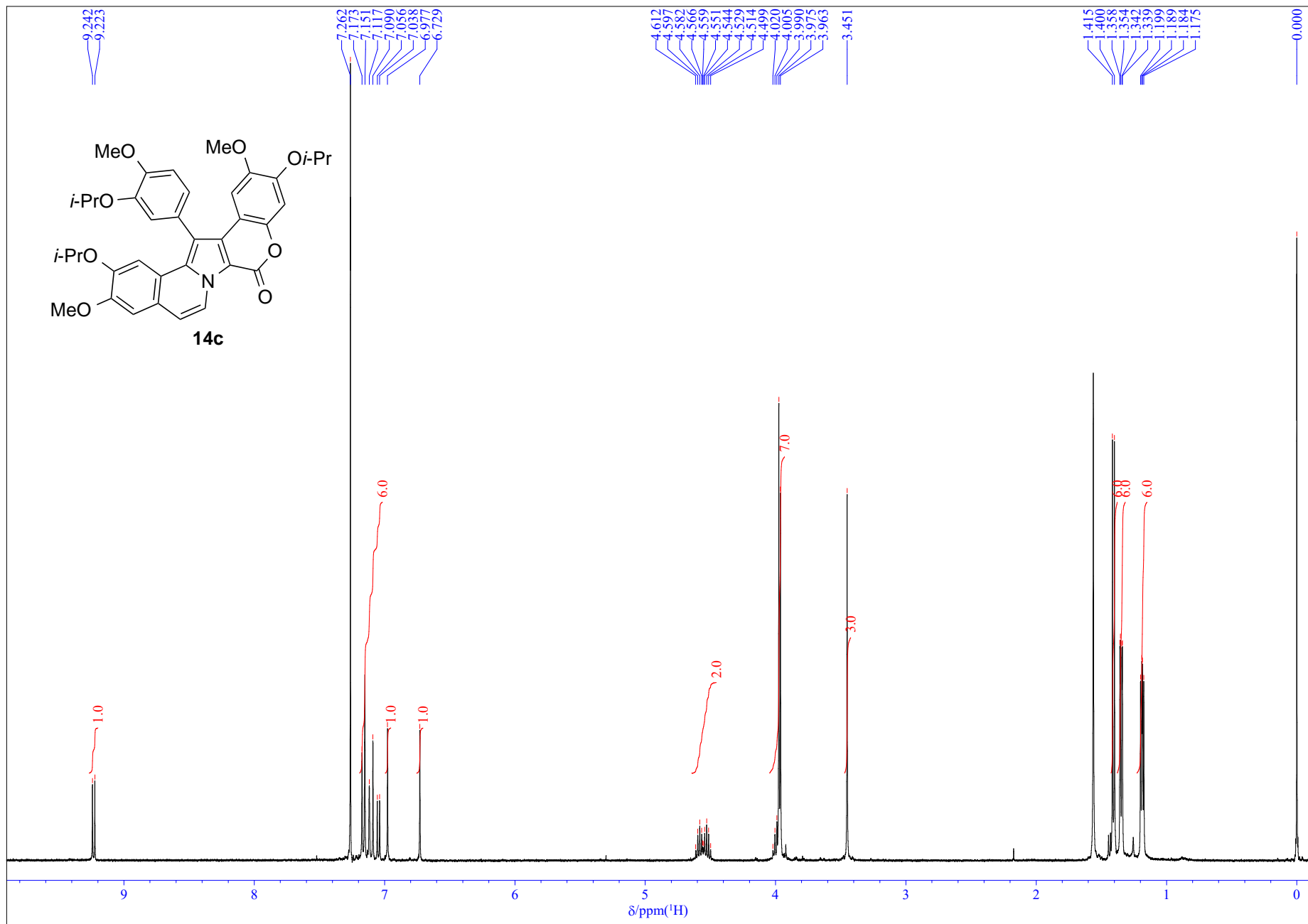


Figure S19. ¹H NMR spectrum of compound **14c** (400 MHz, CDCl₃).

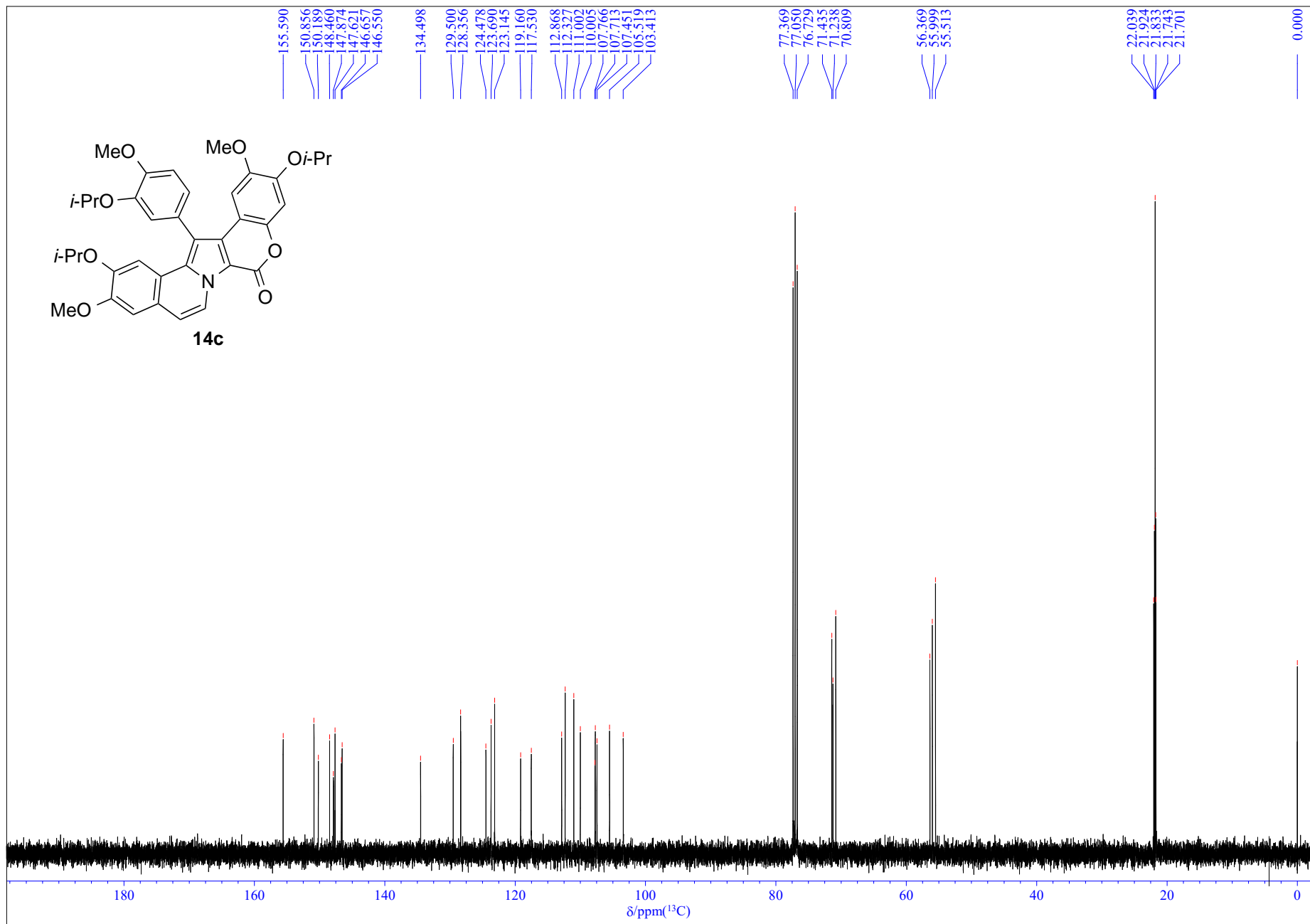


Figure S20. ^{13}C NMR spectrum of compound **14c** (100 MHz, CDCl_3).

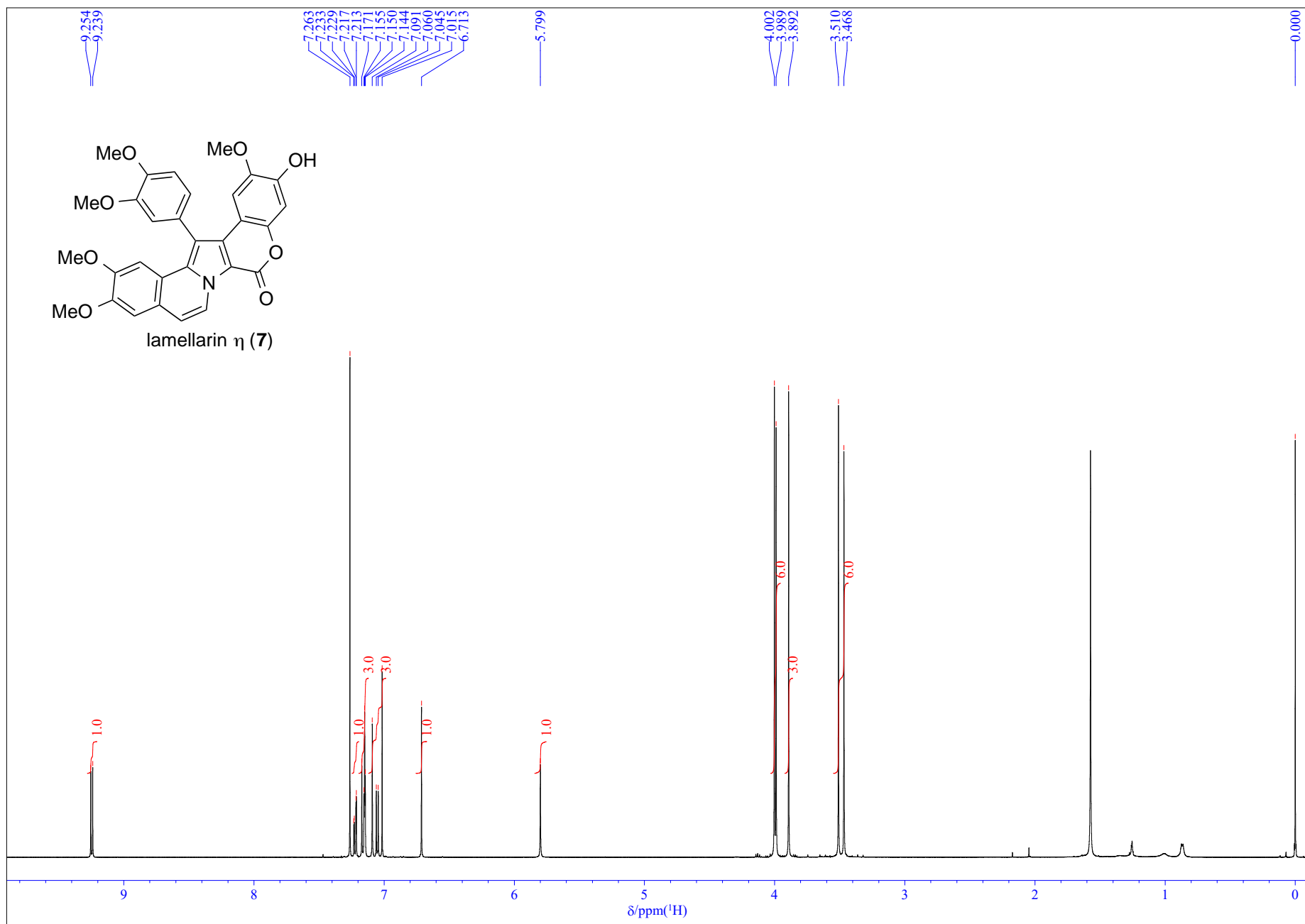


Figure S21. ¹H NMR spectrum of lamellarin η (7) (500 MHz, CDCl₃).

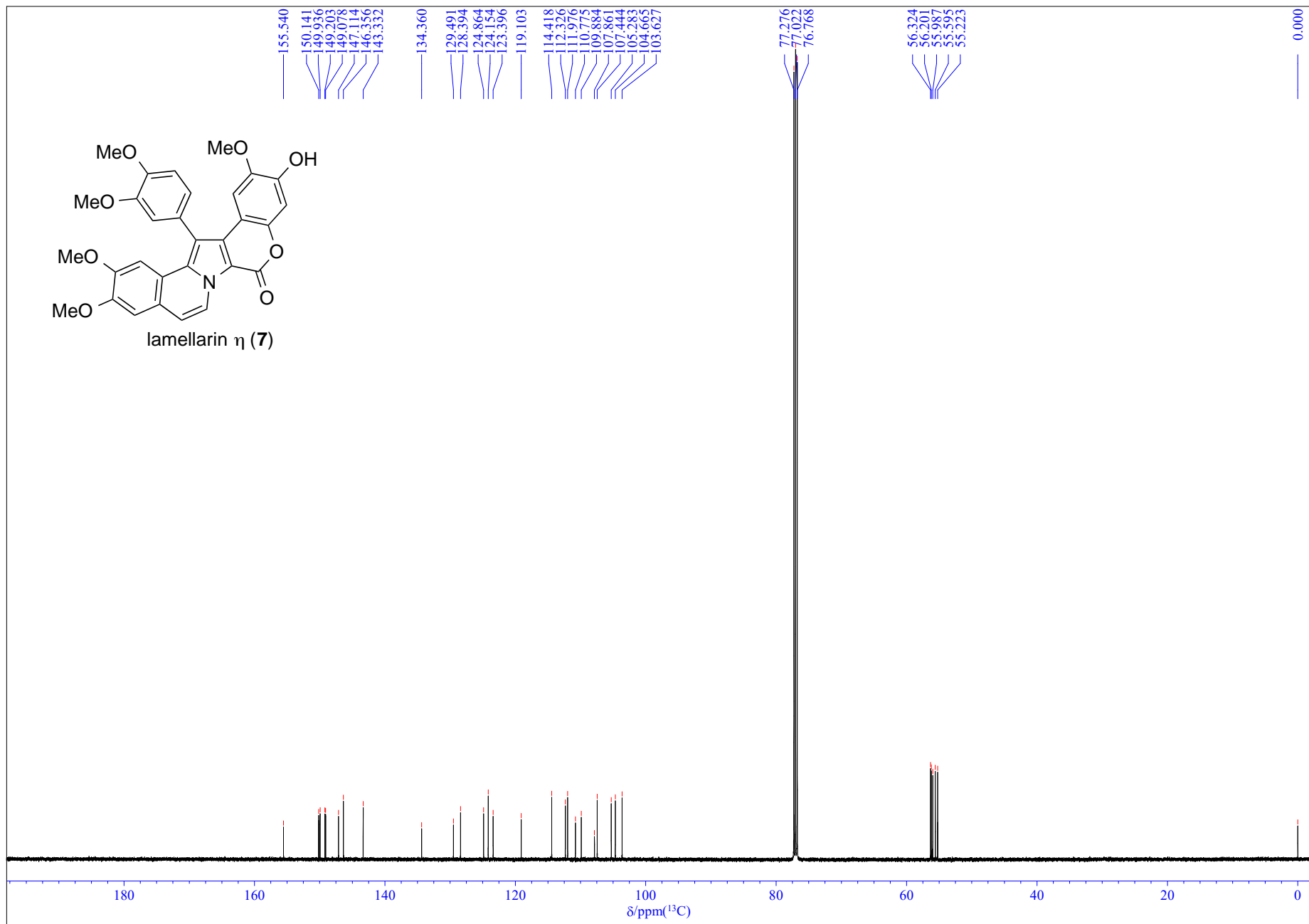


Figure S22. ¹³C NMR spectrum of lamellarin η (7) (126 MHz, CDCl₃).

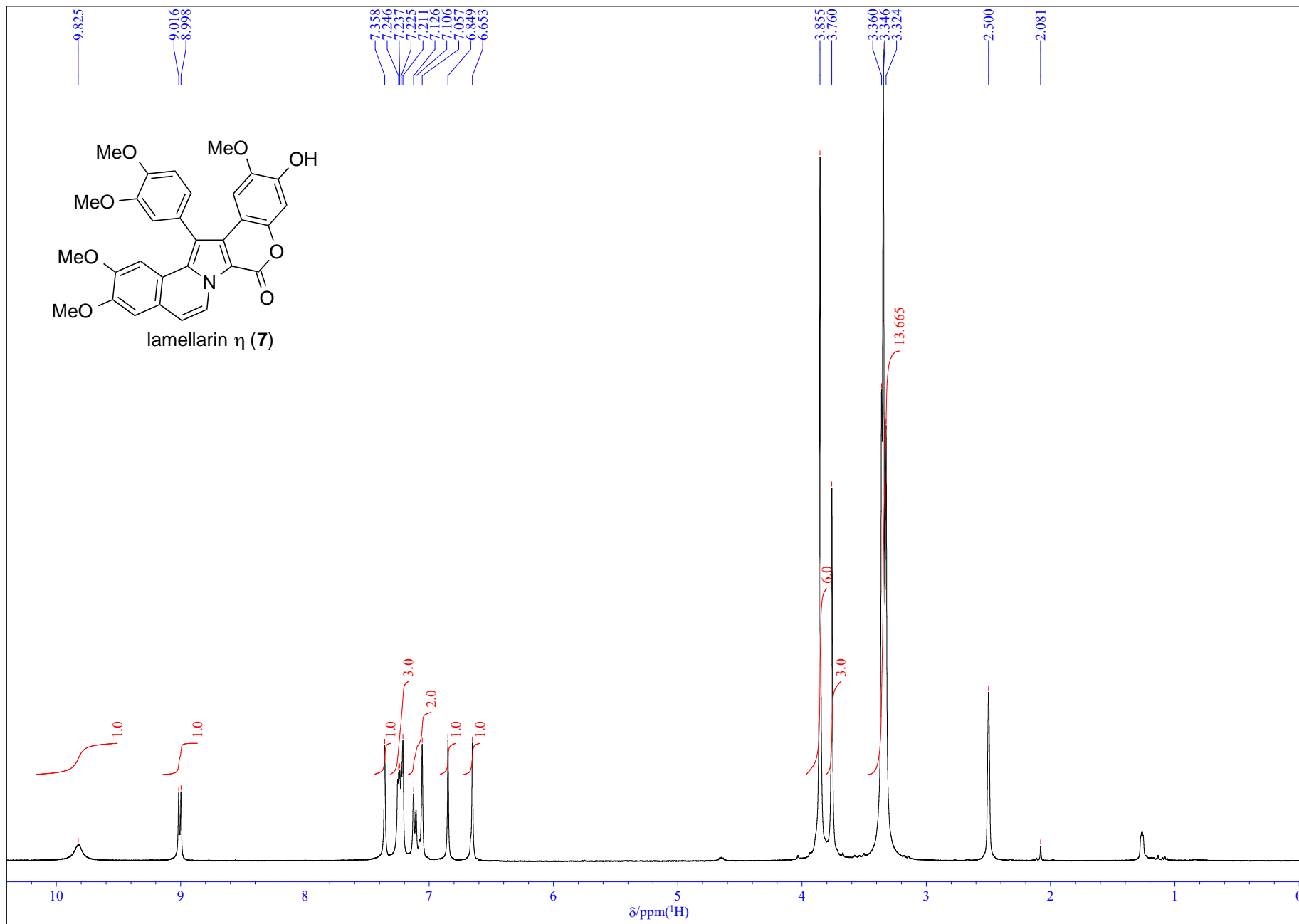


Figure S23. ^1H NMR spectrum of lamellarin η (7) (400 MHz, $\text{DMSO-}d_6$).

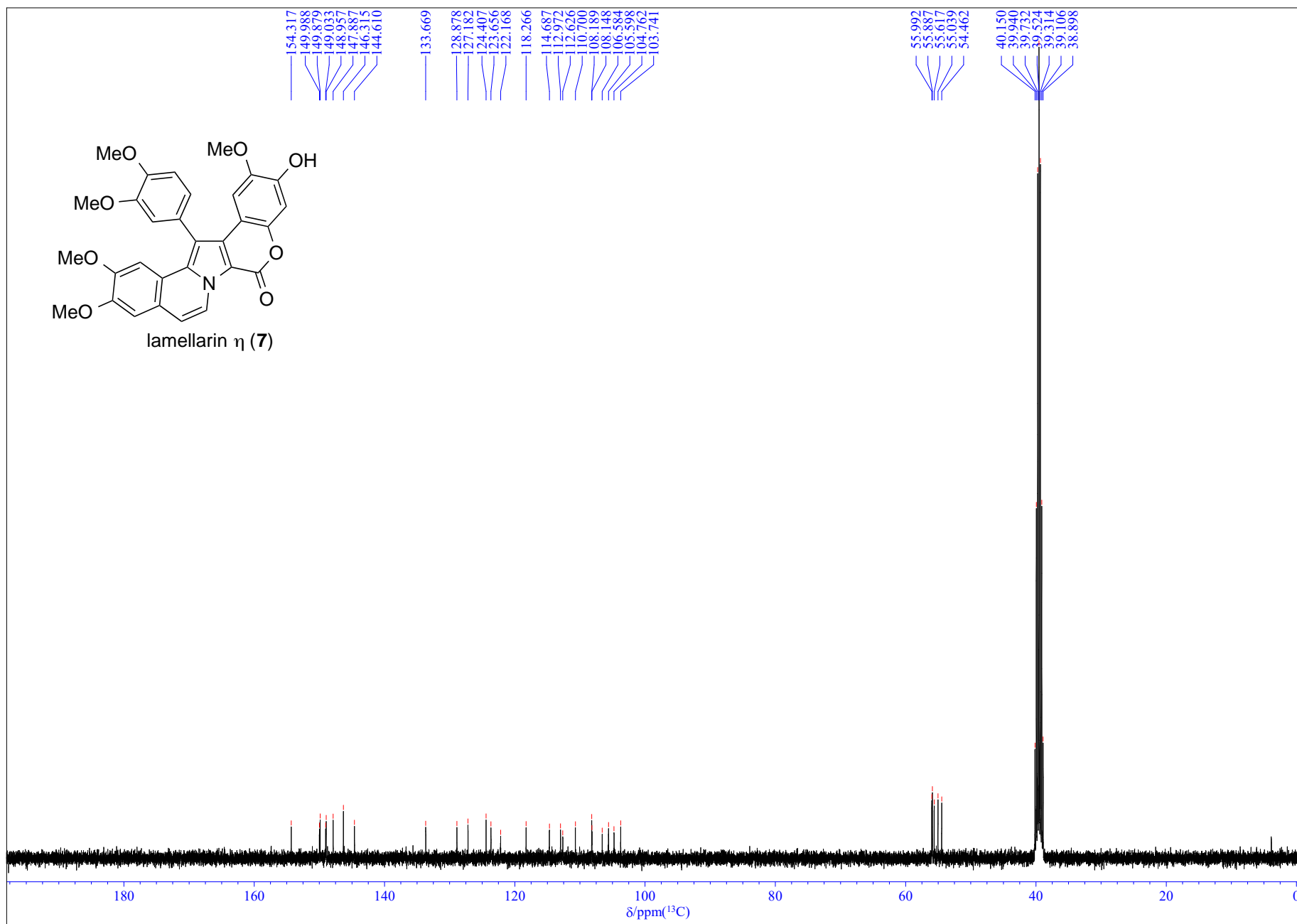


Figure S24. ^{13}C NMR spectrum of lamellarin η (7) (100 MHz, $\text{DMSO-}d_6$).

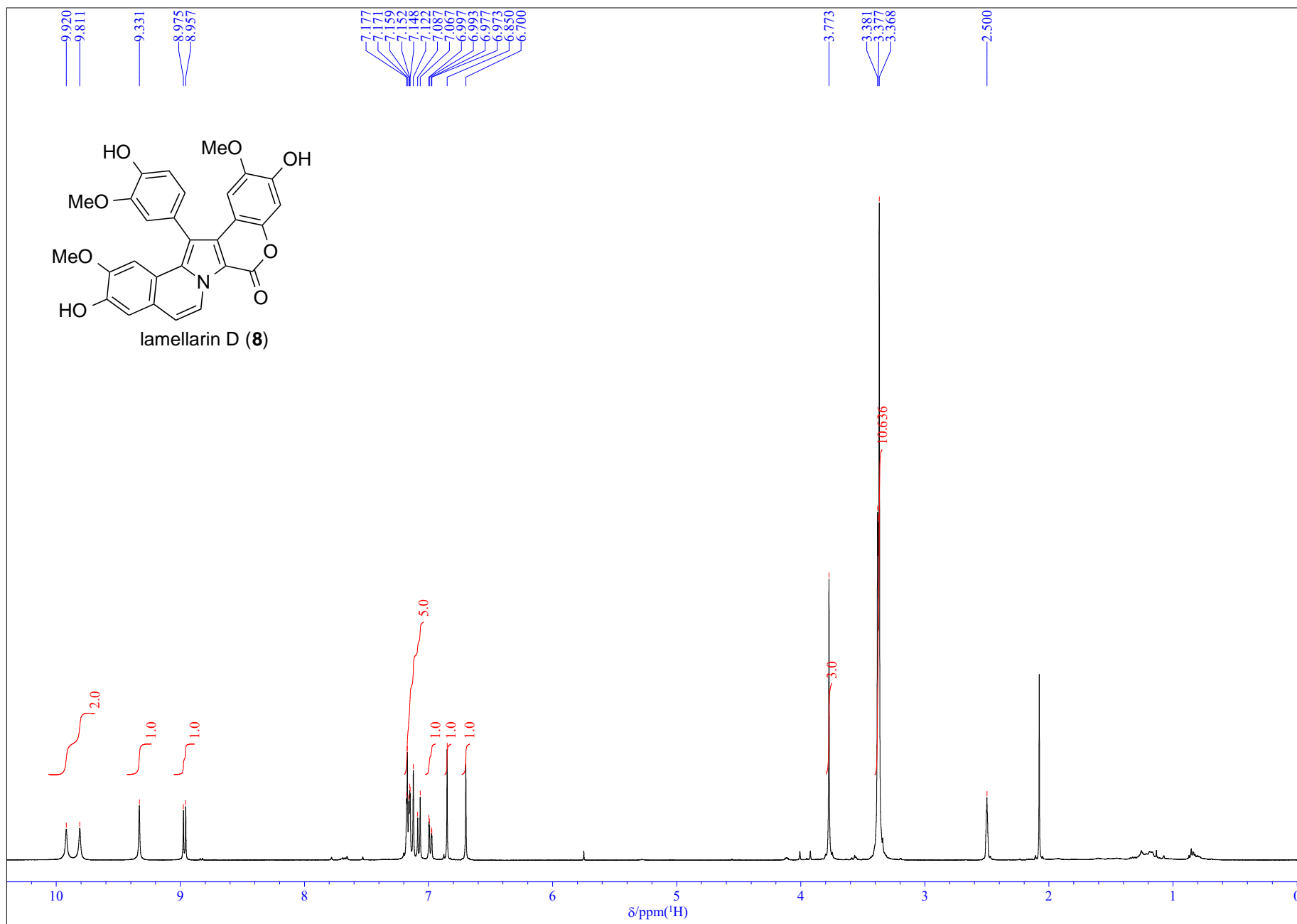


Figure S25. ¹H NMR spectrum of lamellarin D (8) (400 MHz, DMSO-d₆).

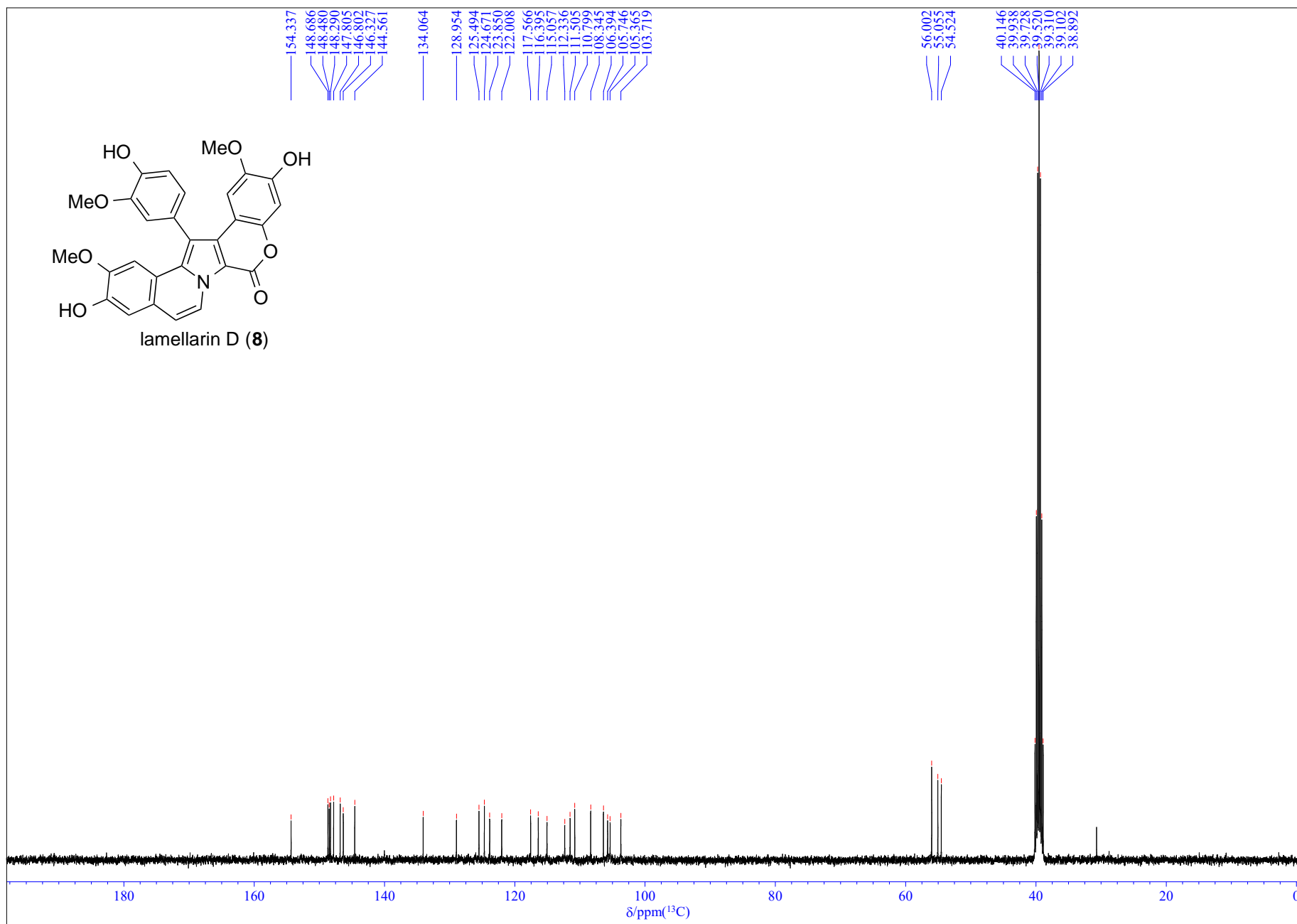


Figure S26. ^{13}C NMR spectrum of lamellarin D (8) (100 MHz, $\text{DMSO-}d_6$).

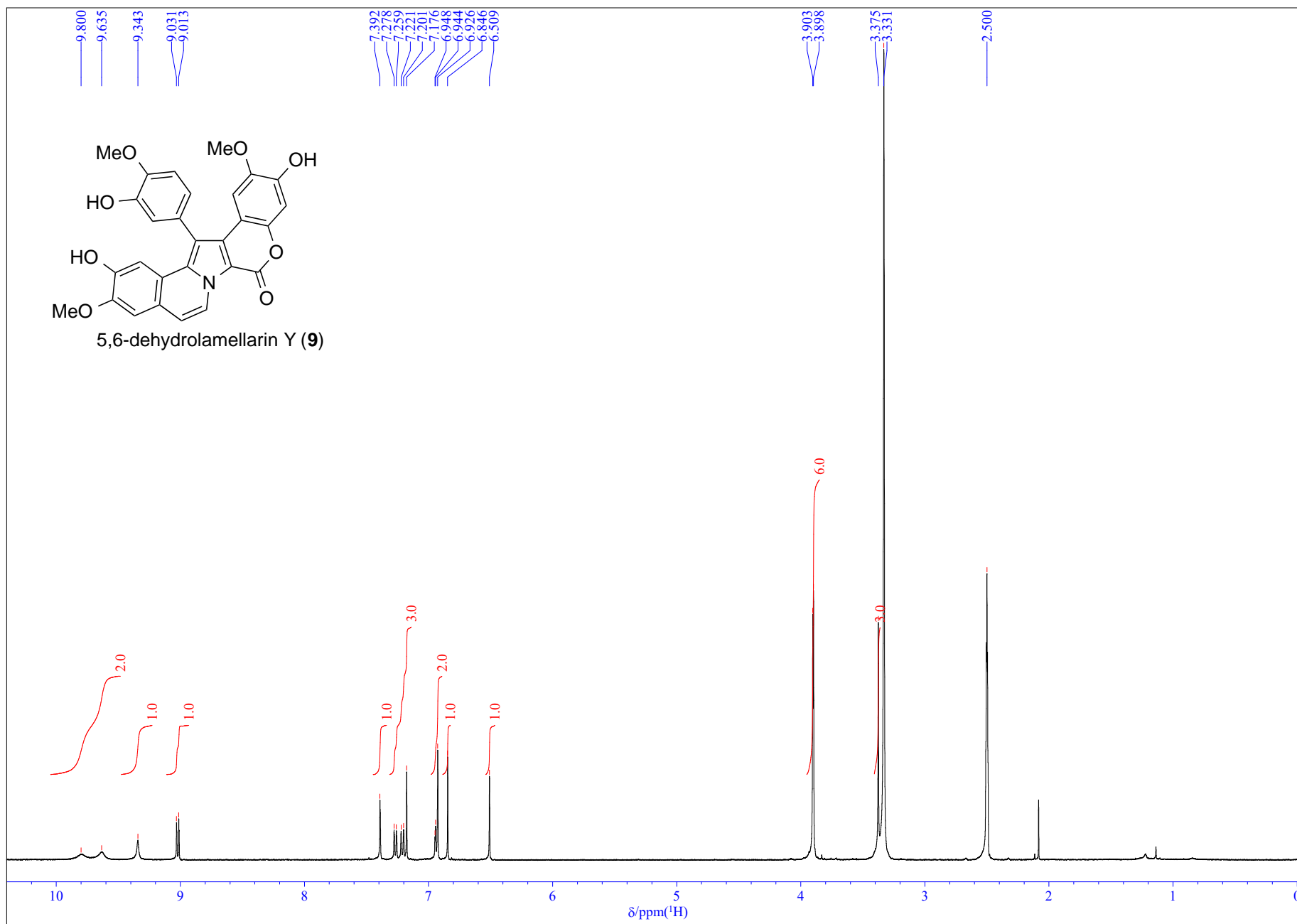


Figure S27. ¹H NMR spectrum of 5,6-dehydrolamellarin Y (9) (400 MHz, DMSO-d₆).

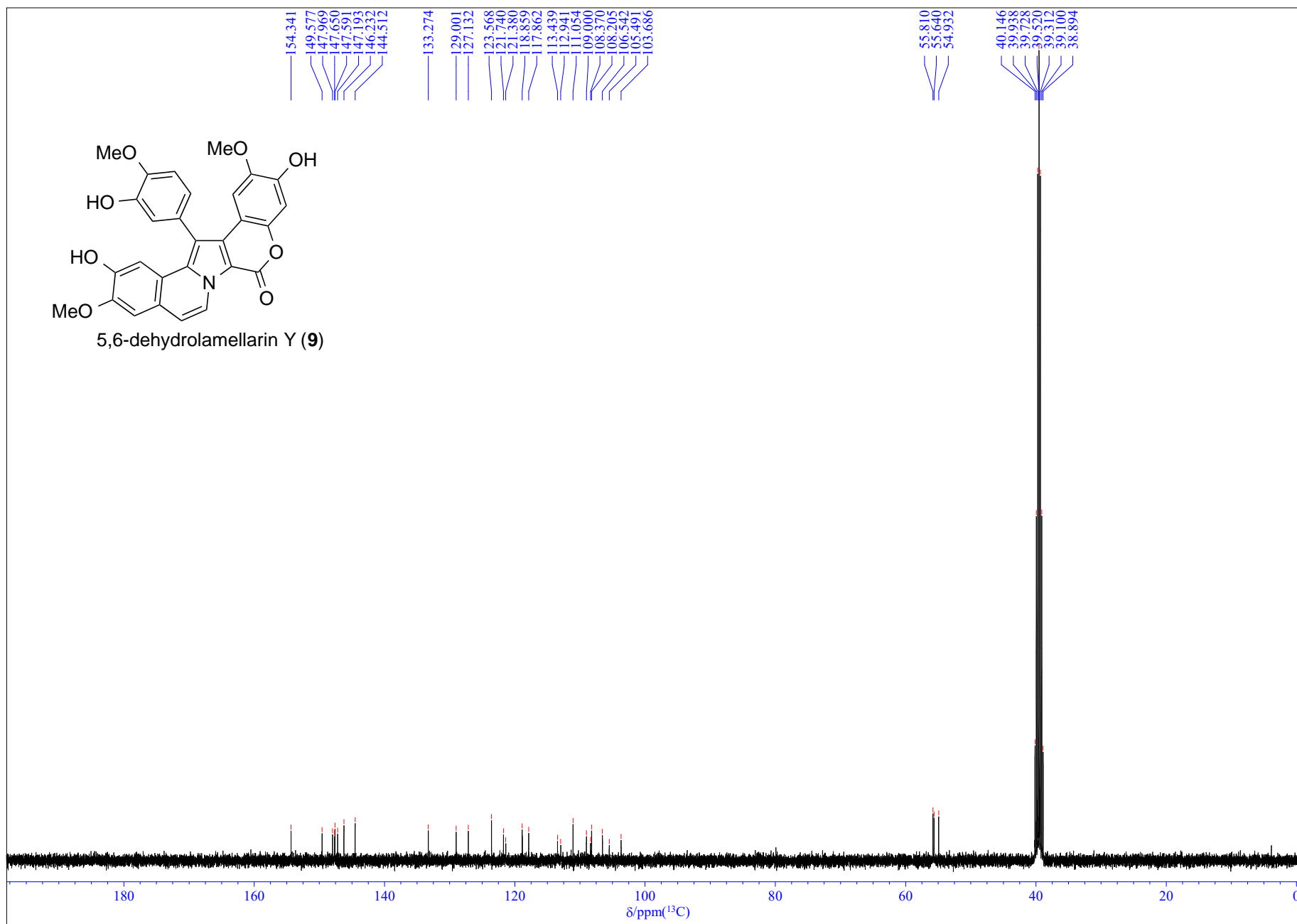


Figure S28. ^{13}C NMR spectrum of 5,6-dehydrolamellarin Y (9) (100 MHz, $\text{DMSO}-d_6$).

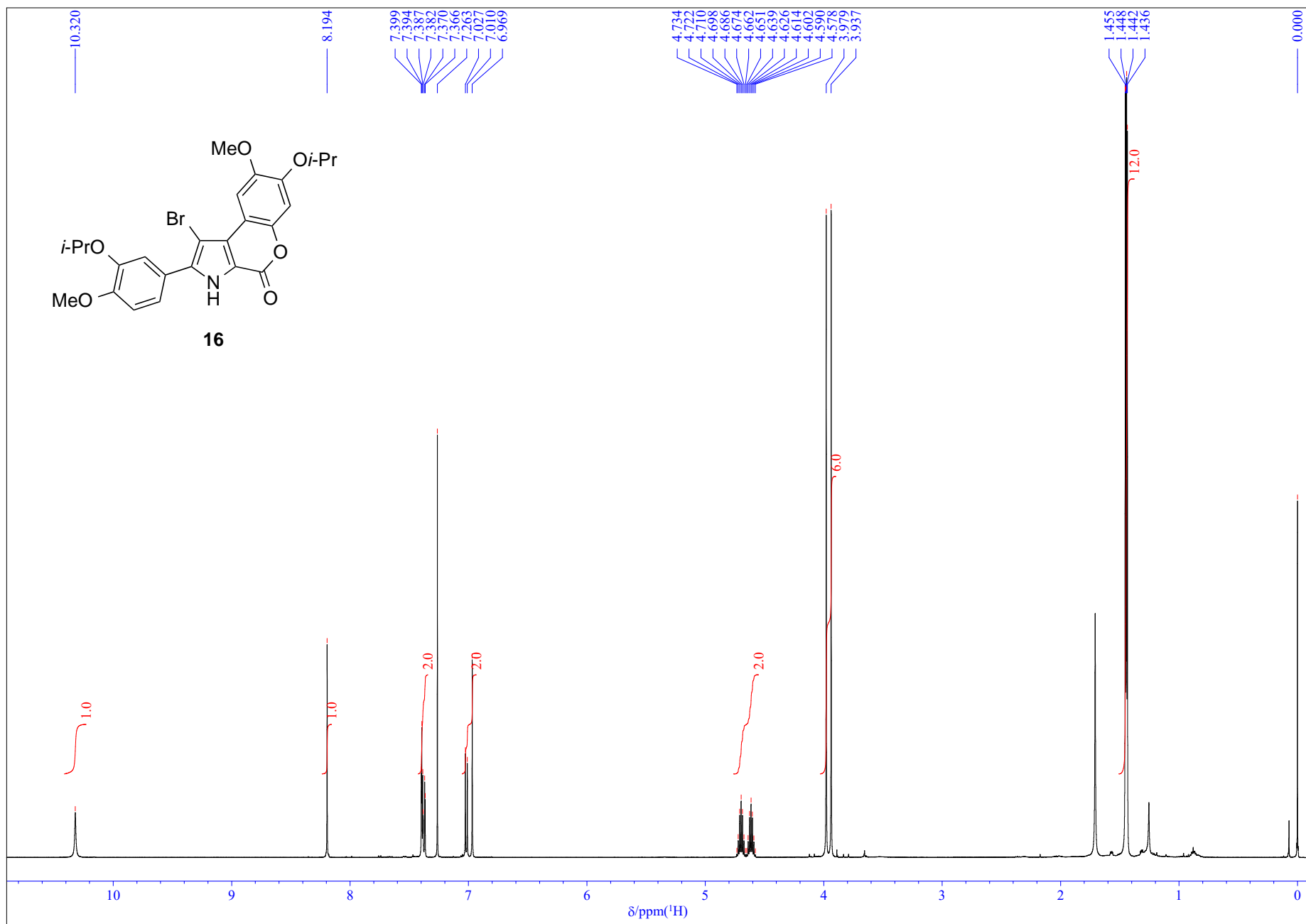


Figure S29. ^1H NMR spectrum of compound **16** (500 MHz, CDCl_3).

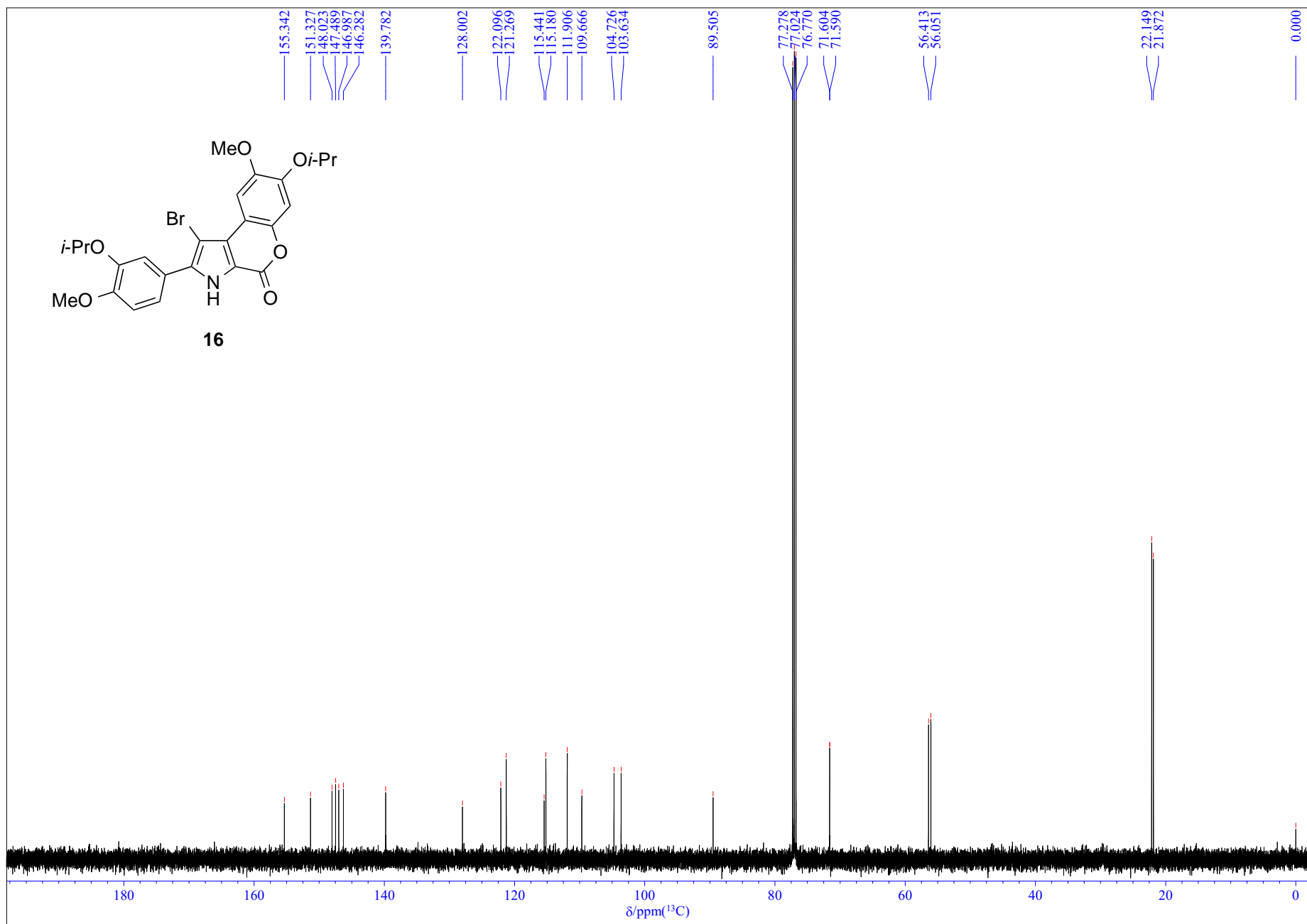


Figure S30. ^{13}C NMR spectrum of compound **16** (126 MHz, CDCl_3).

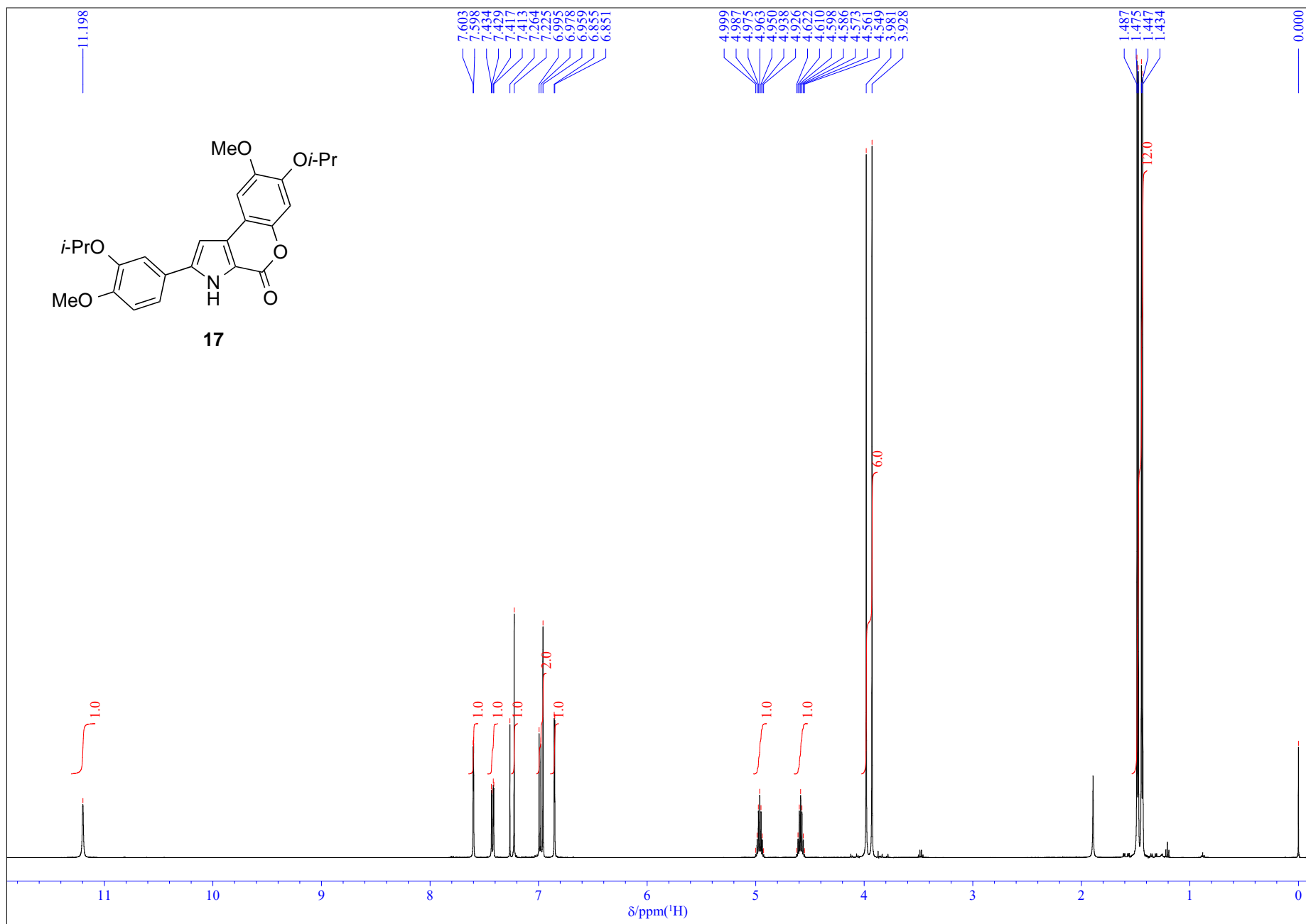


Figure S31. ¹H NMR spectrum of compound **17** (500 MHz, CDCl₃).

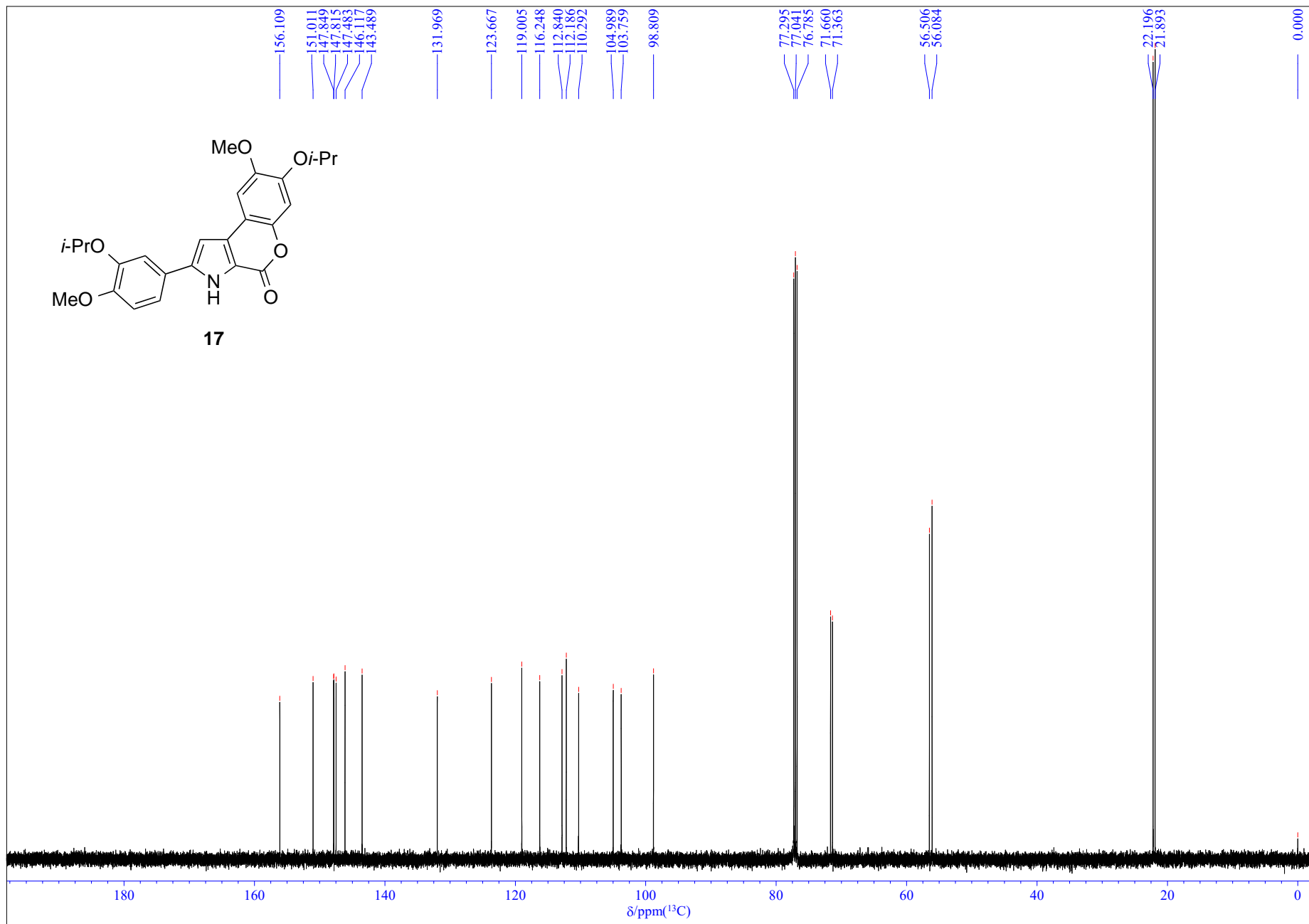


Figure S32. ^{13}C NMR spectrum of compound **17** (126 MHz, CDCl_3).

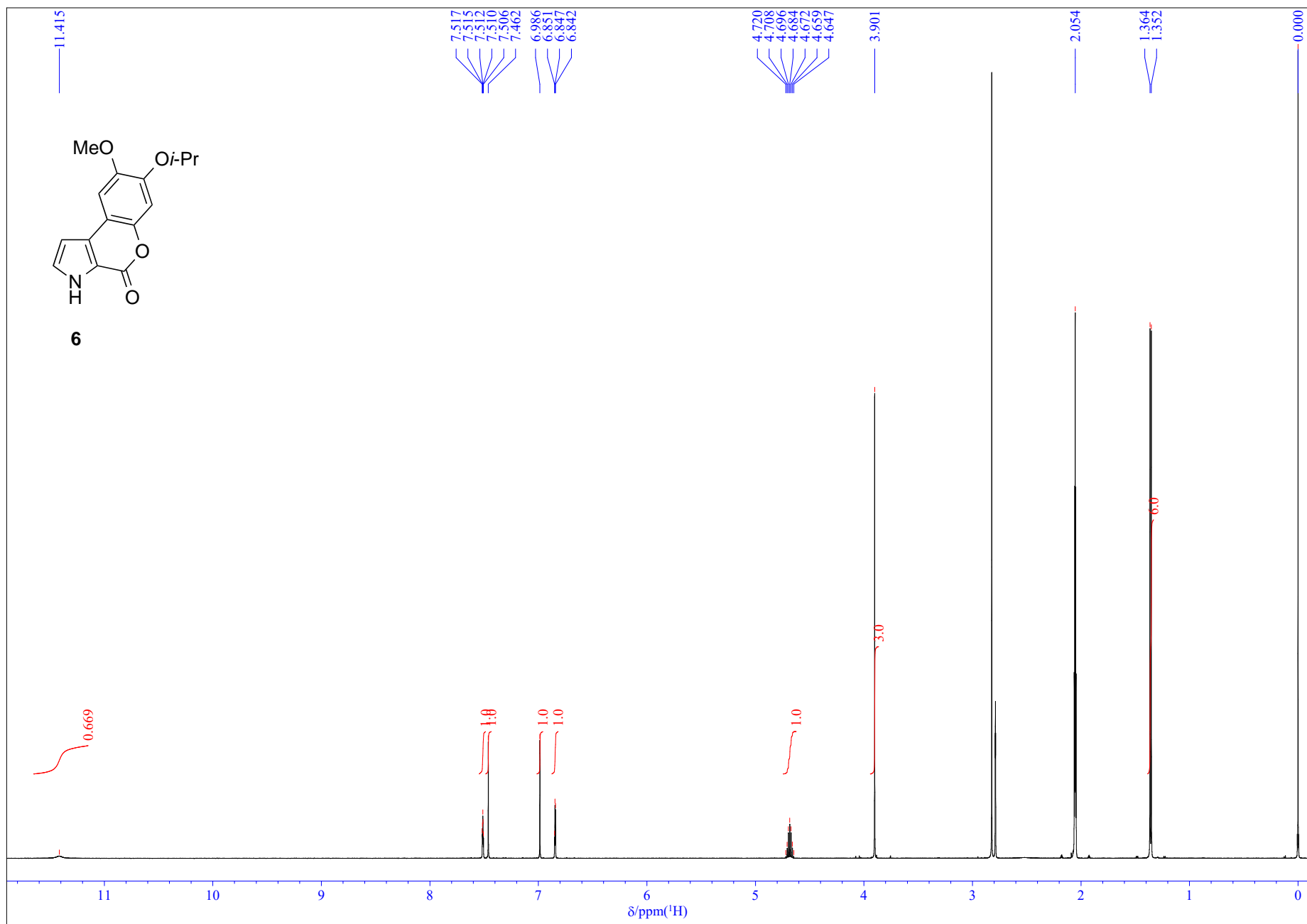


Figure S33. ¹H NMR spectrum of compound **6** (500 MHz, acetone-*d*₆).

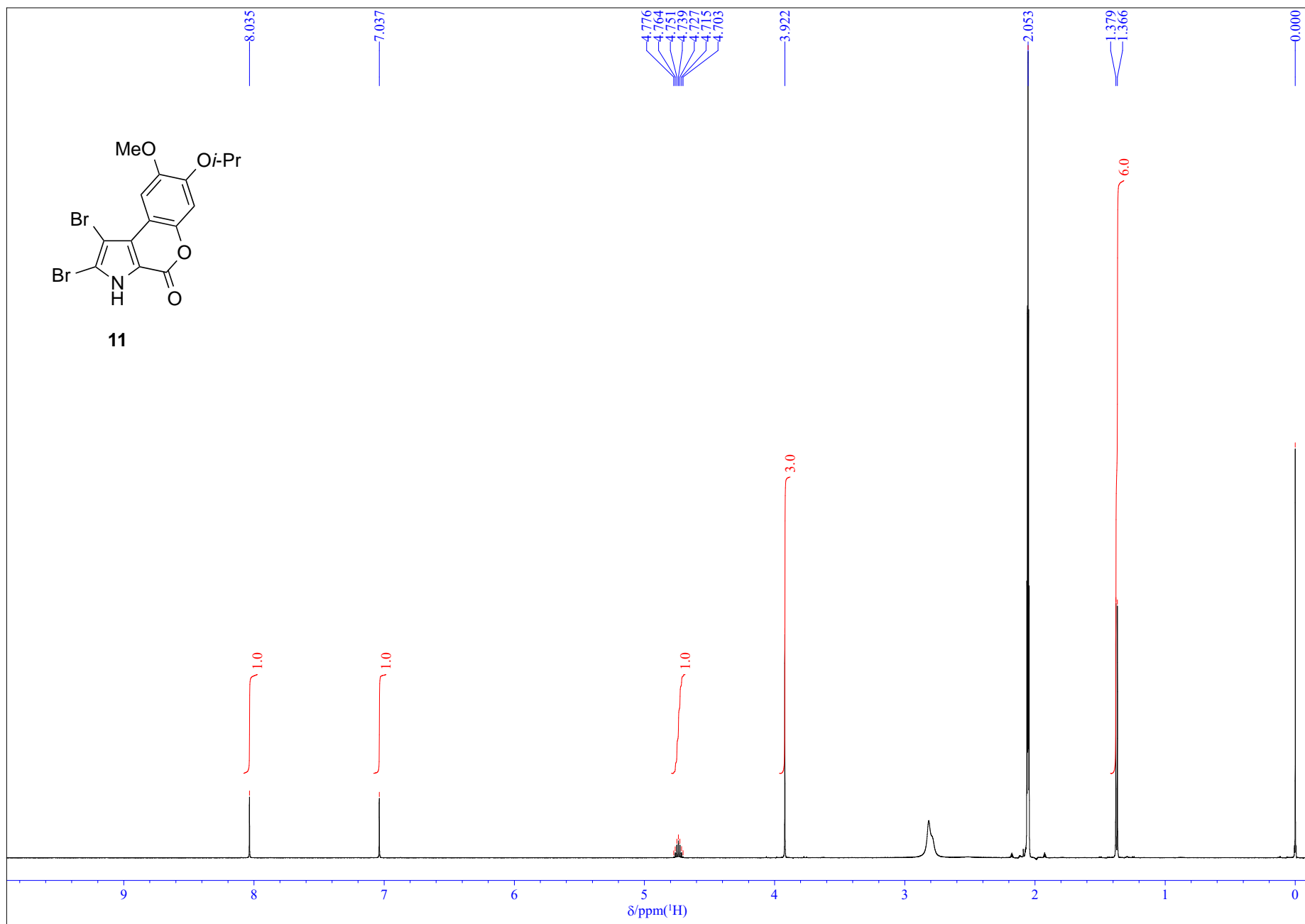


Figure S34. ^1H NMR spectrum of compound **11** (500 MHz, acetone- d_6).

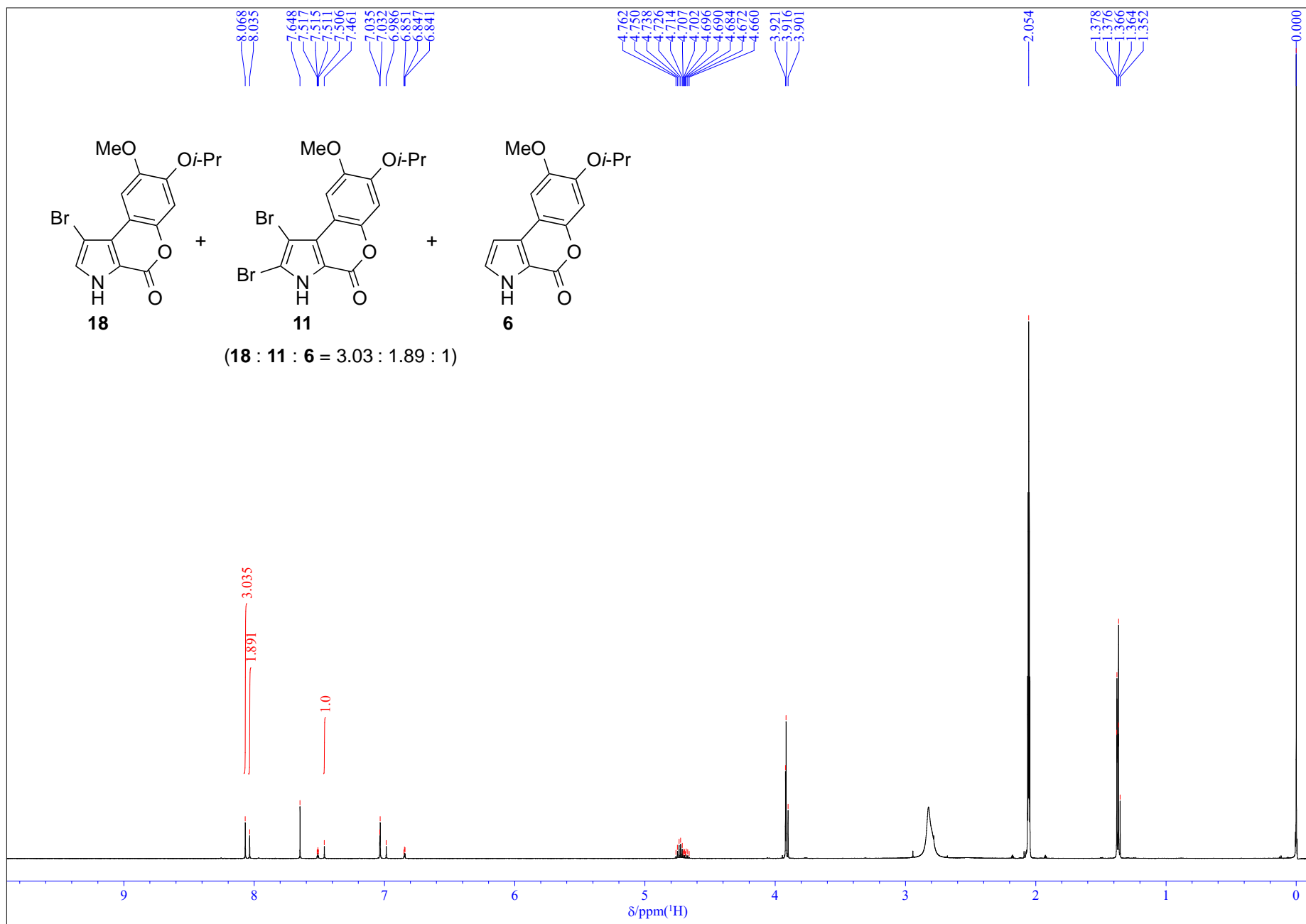


Figure S35. ^1H NMR spectrum of a mixture of compounds **18**, **11**, and **6** (Table 1, entry 1) (500 MHz, acetone- d_6).

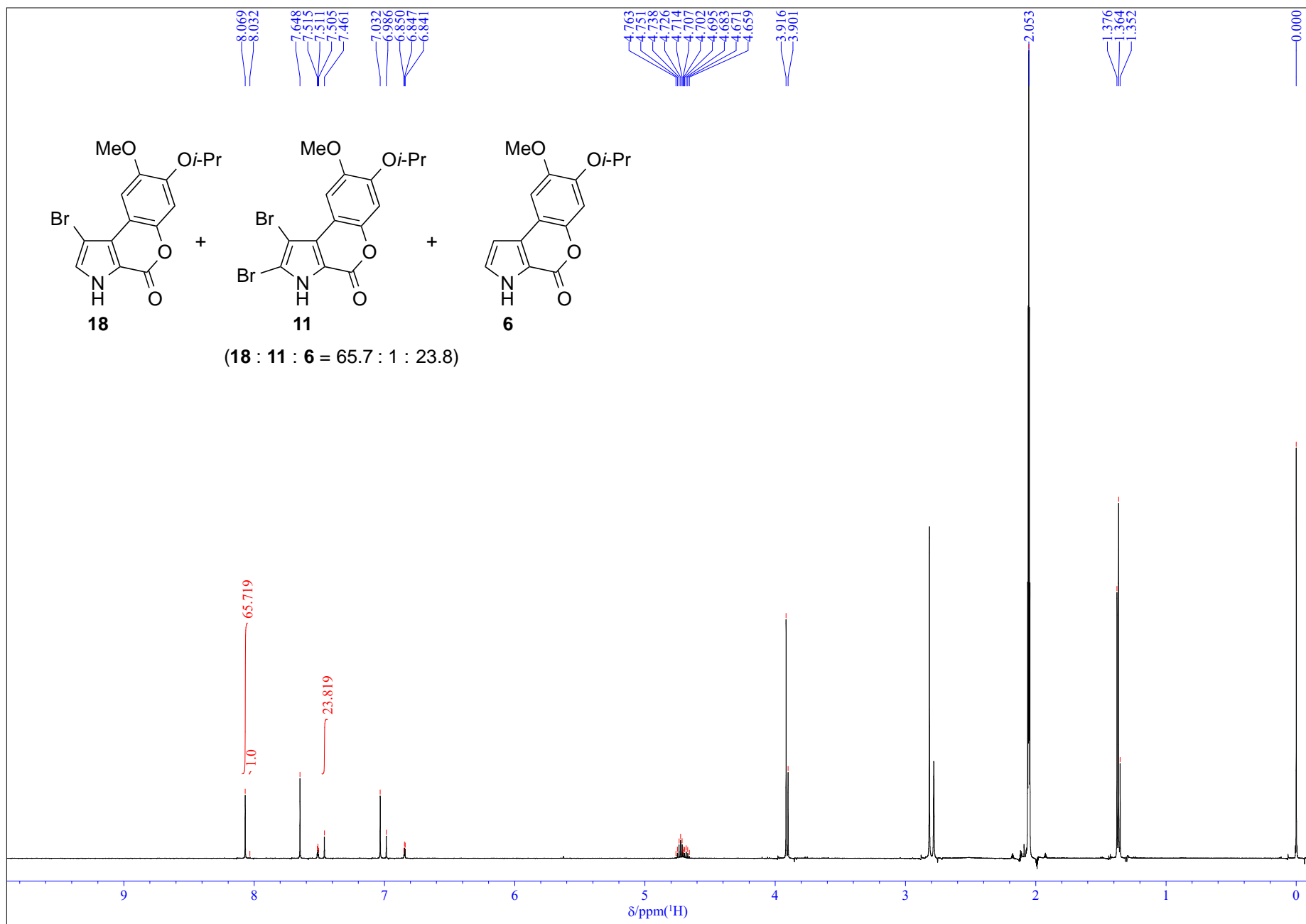


Figure S36. ¹H NMR spectrum of a mixture of compounds **18**, **11**, and **6** (Table 1, entry 2) (500 MHz, acetone-*d*₆).

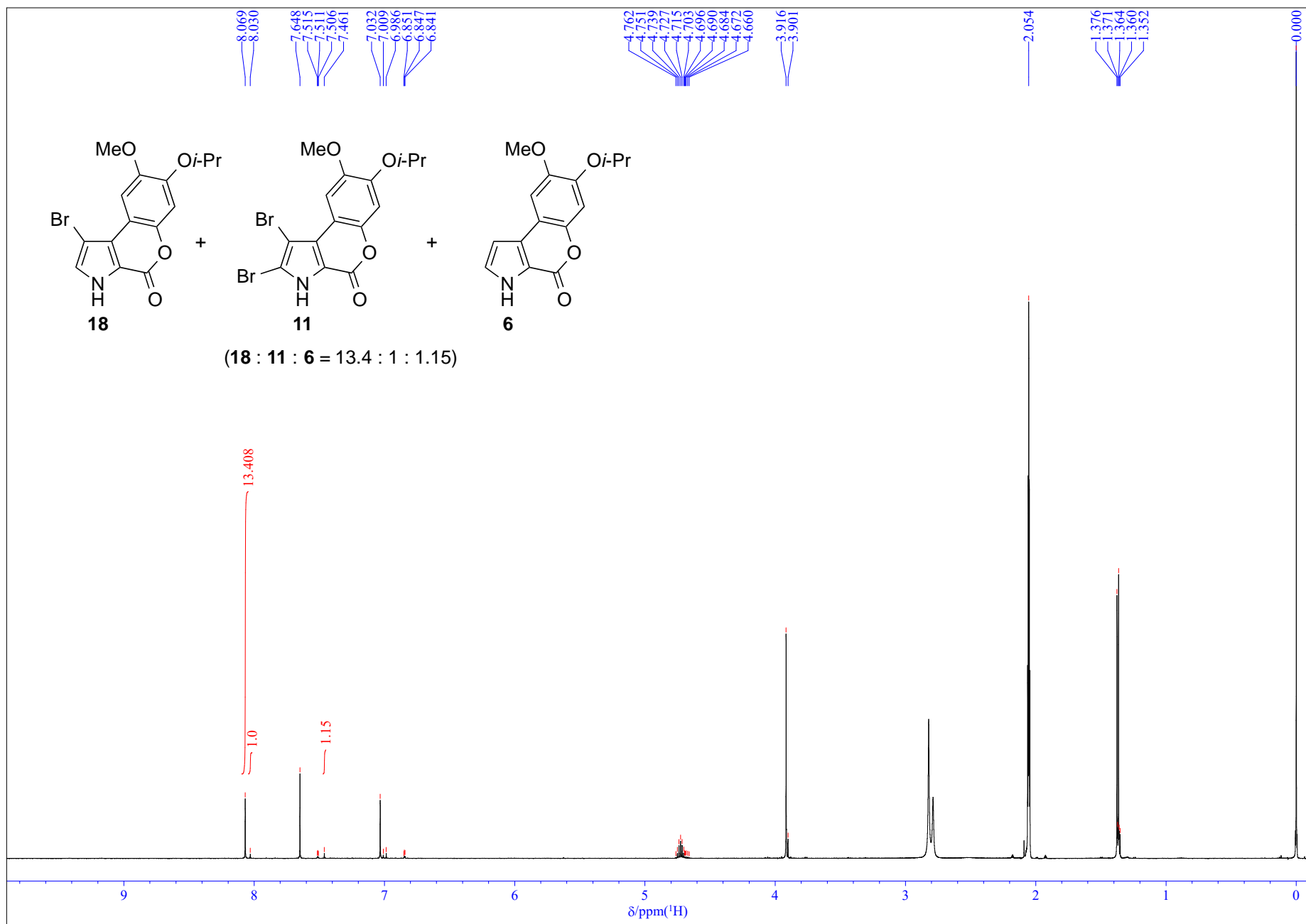


Figure S37. ^1H NMR spectrum of a mixture of compounds **18**, **11**, and **6** (Table 1, entry 3) (500 MHz, acetone- d_6).

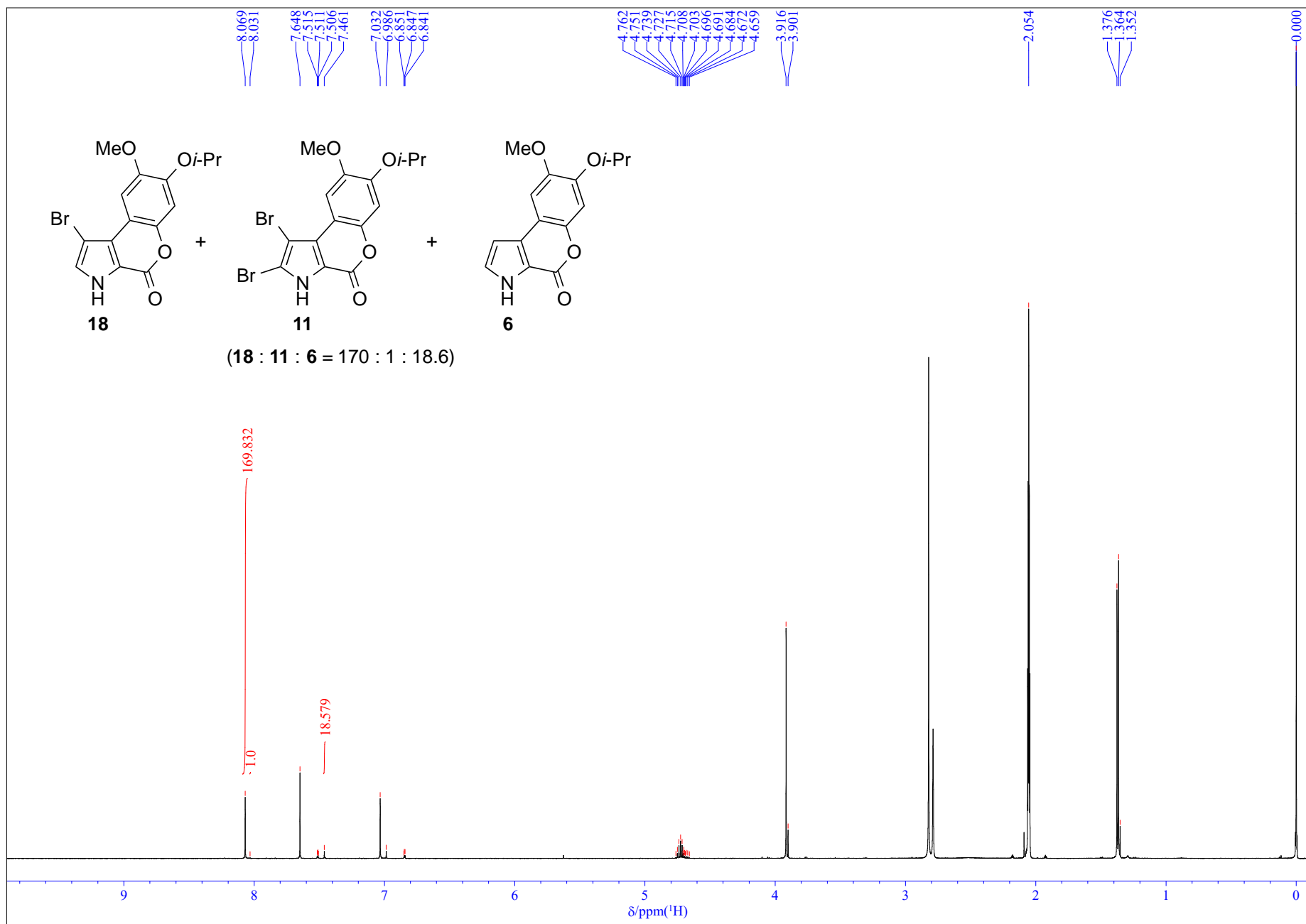


Figure S38. ^1H NMR spectrum of a mixture of compounds **18**, **11**, and **6** (Table 1, entry 4) (500 MHz, acetone- d_6).

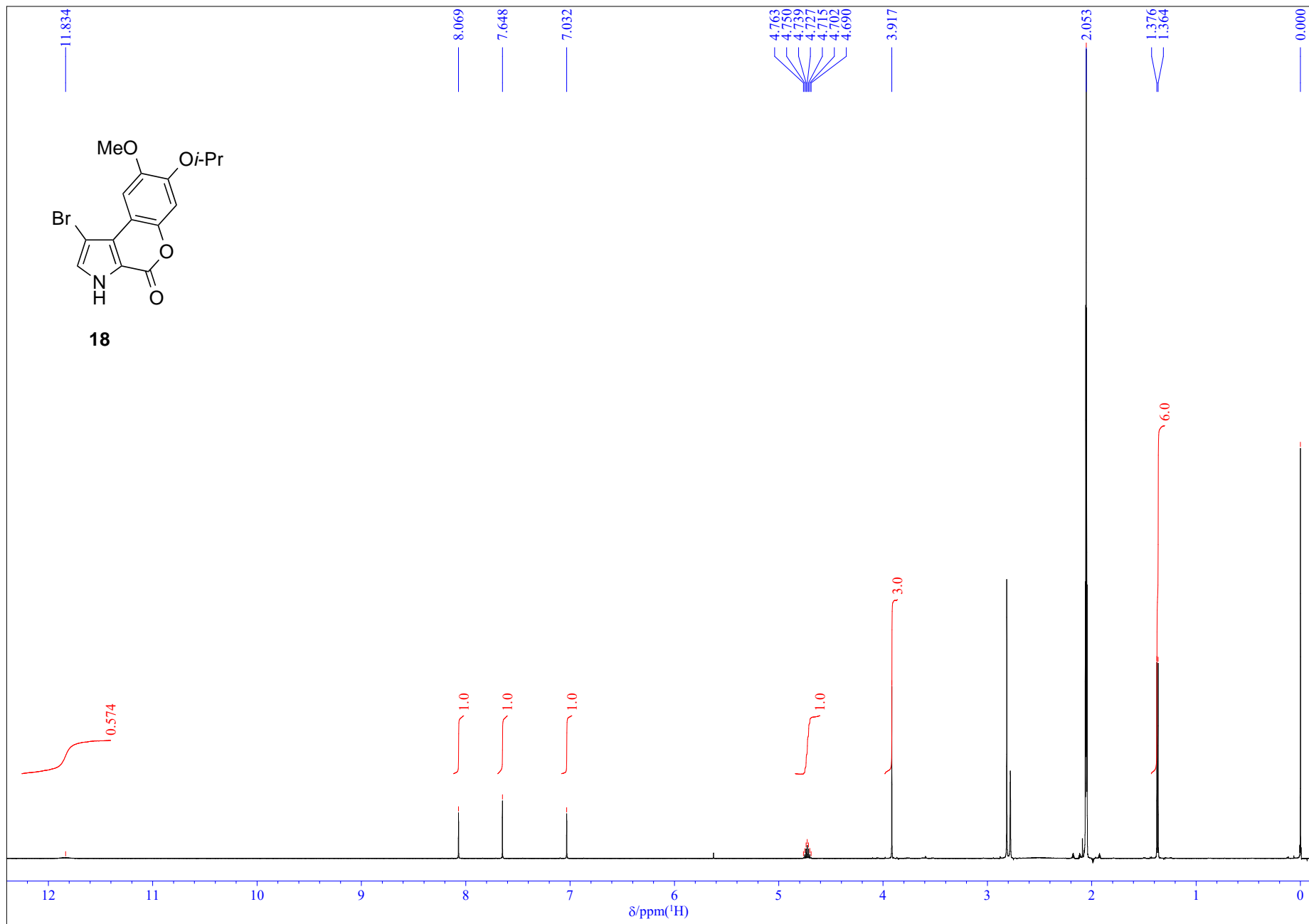


Figure S39. ^1H NMR spectrum of compound **18** (Table 1, entry 5) (500 MHz, acetone- d_6).

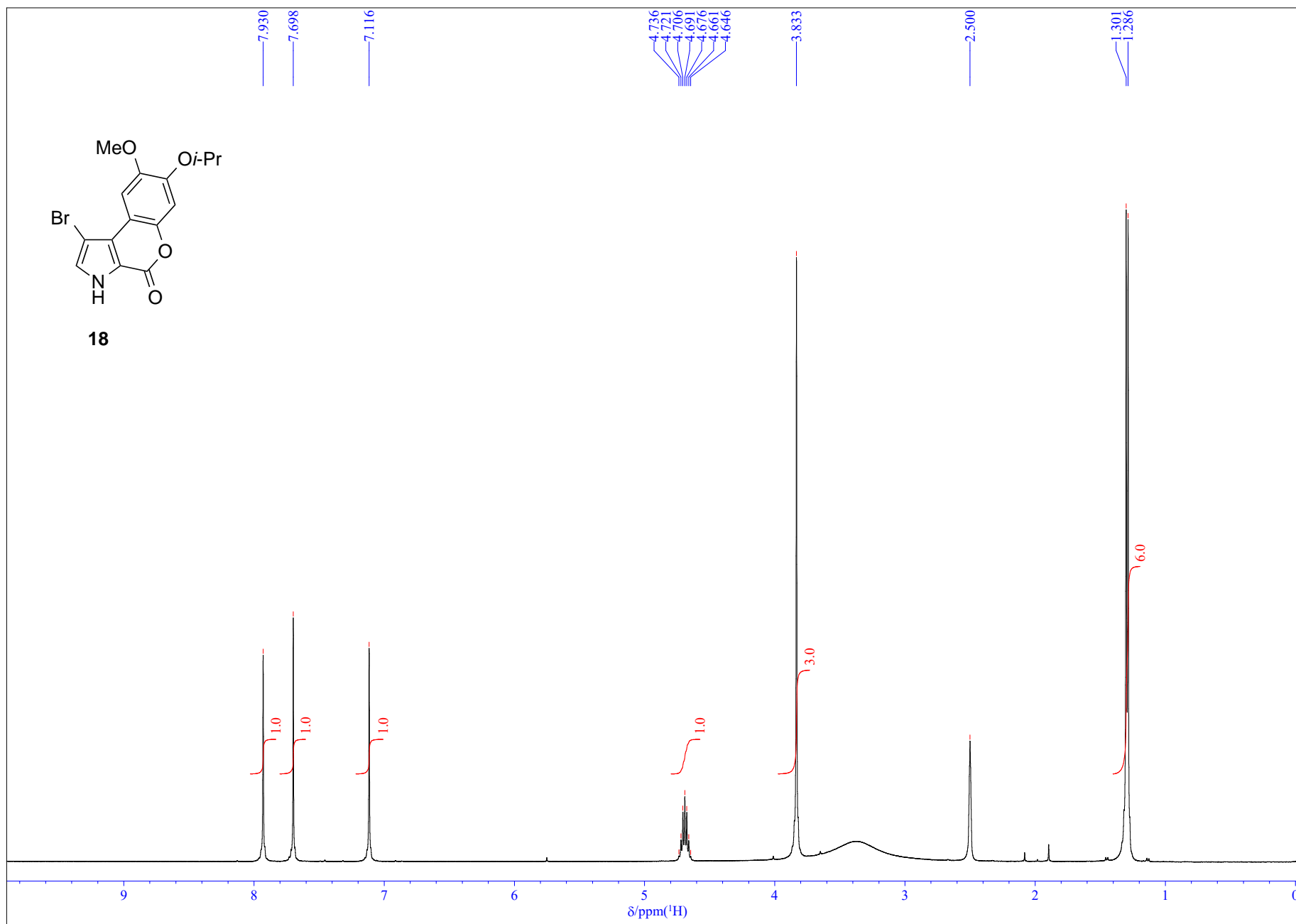


Figure S40. ^1H NMR spectrum of compound **18** (400 MHz, $\text{DMSO}-d_6$).

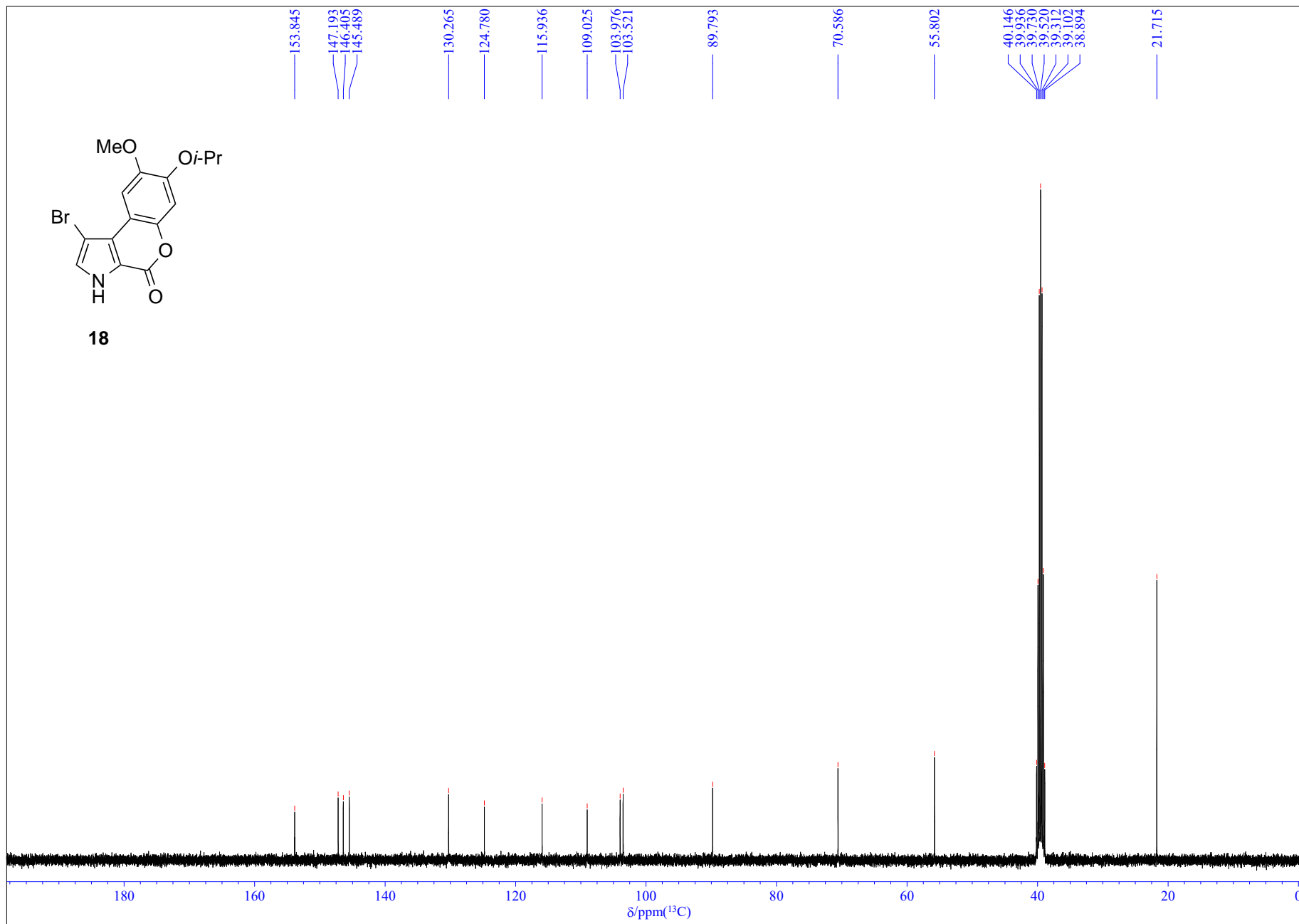


Figure S41. ^{13}C NMR spectrum of compound **18** (100 MHz, $\text{DMSO}-d_6$).

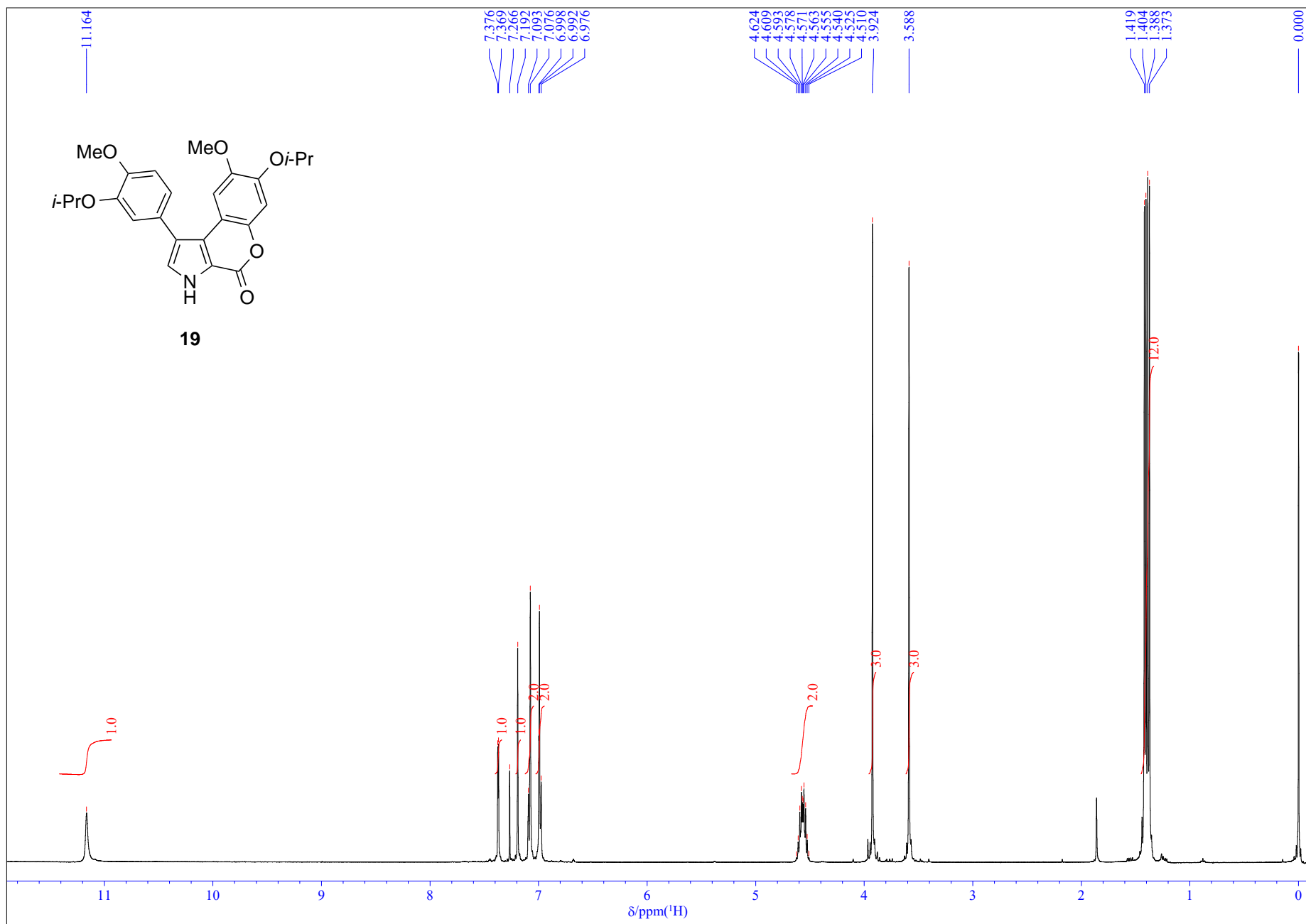


Figure S42. ^1H NMR spectrum of compound **19** (400 MHz, CDCl_3).

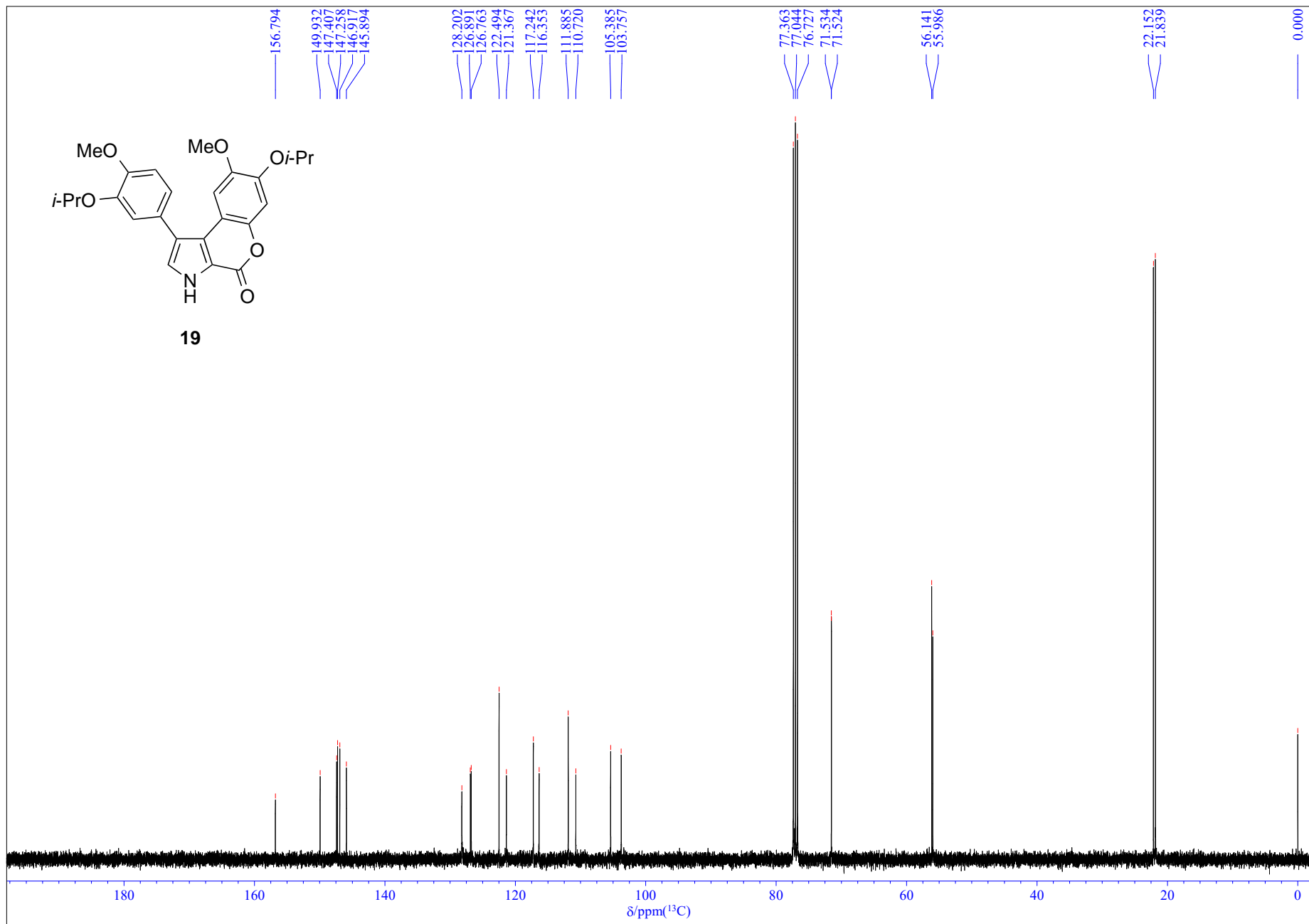


Figure S43. ^{13}C NMR spectrum of compound **19** (100 MHz, CDCl_3).

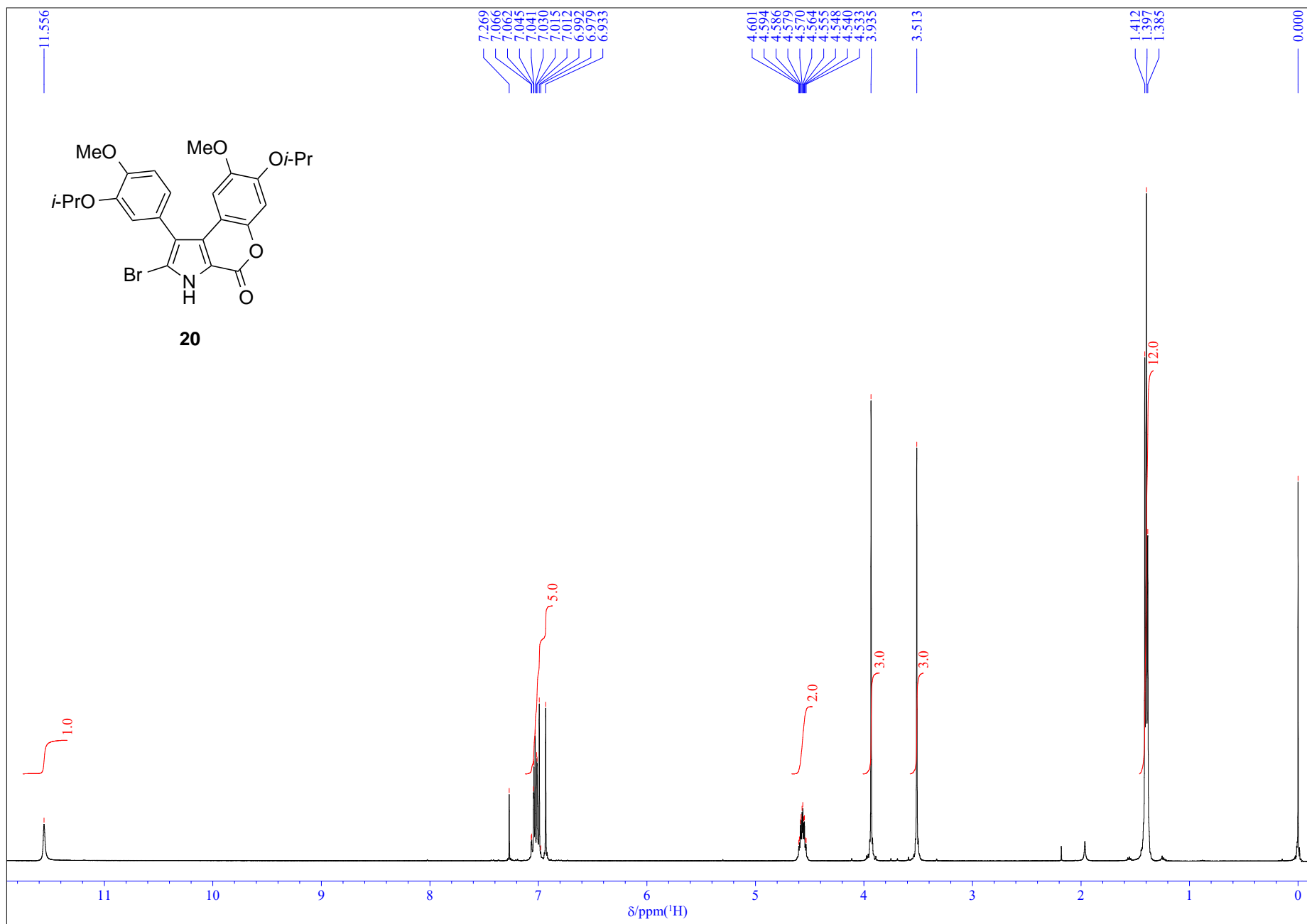


Figure S44. ¹H NMR spectrum of compound **20** (400 MHz, CDCl₃).

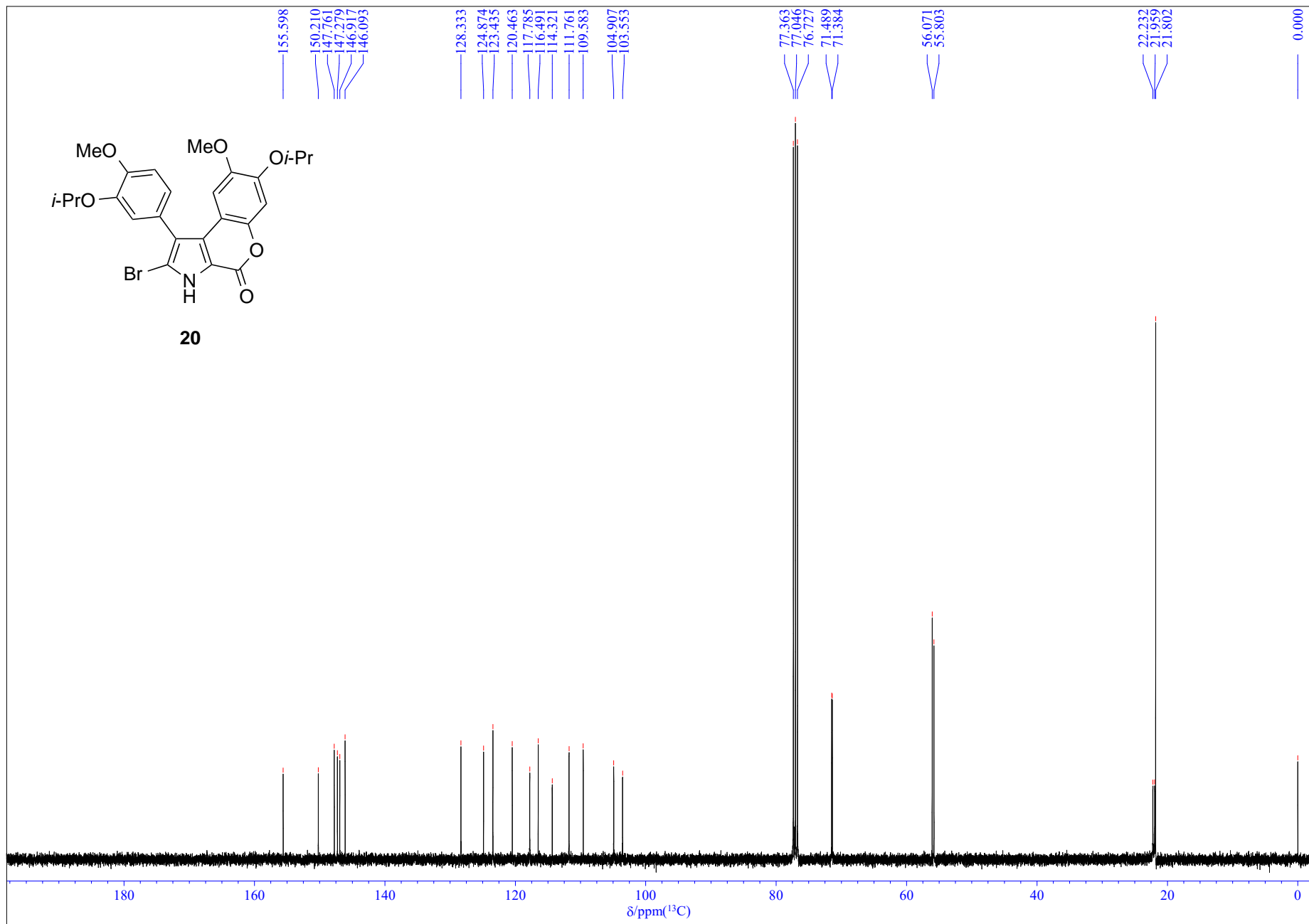


Figure S45. ^{13}C NMR spectrum of compound **20** (100 MHz, CDCl_3).

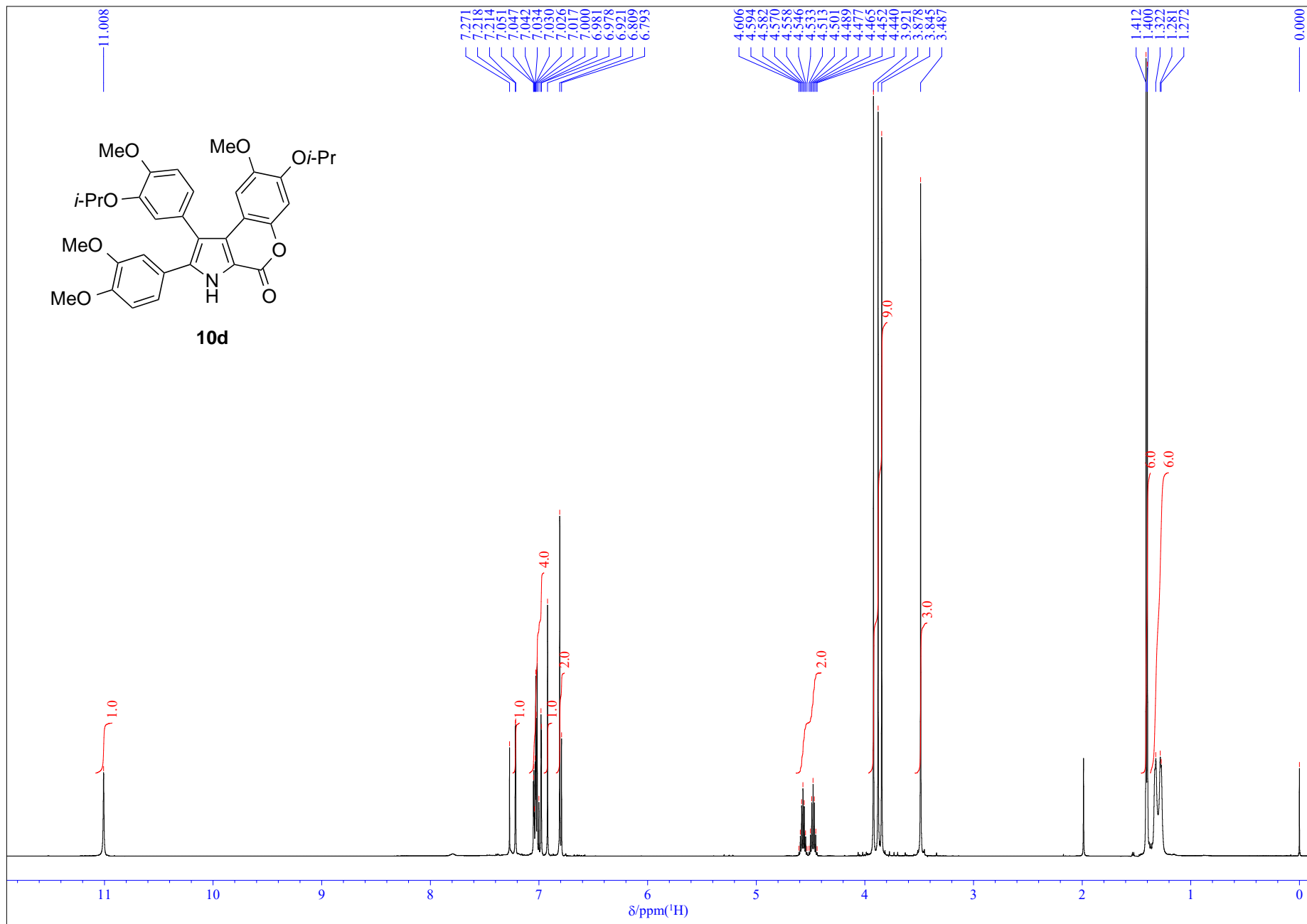


Figure S46. ¹H NMR spectrum of compound **10d** (500 MHz, CDCl₃).

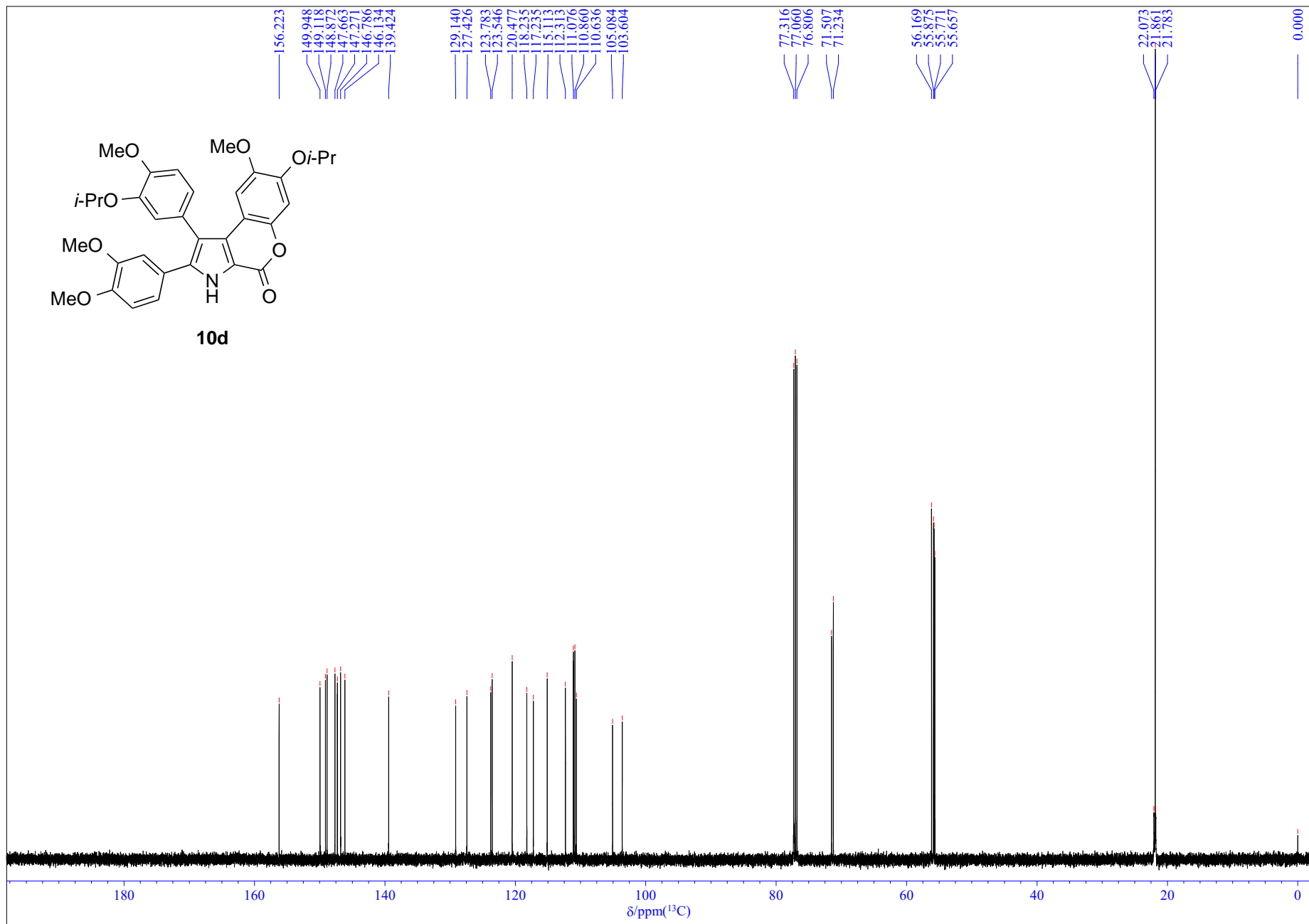


Figure S47. ${}^{13}\text{C}$ NMR spectrum of compound **10d** (126 MHz, CDCl_3).

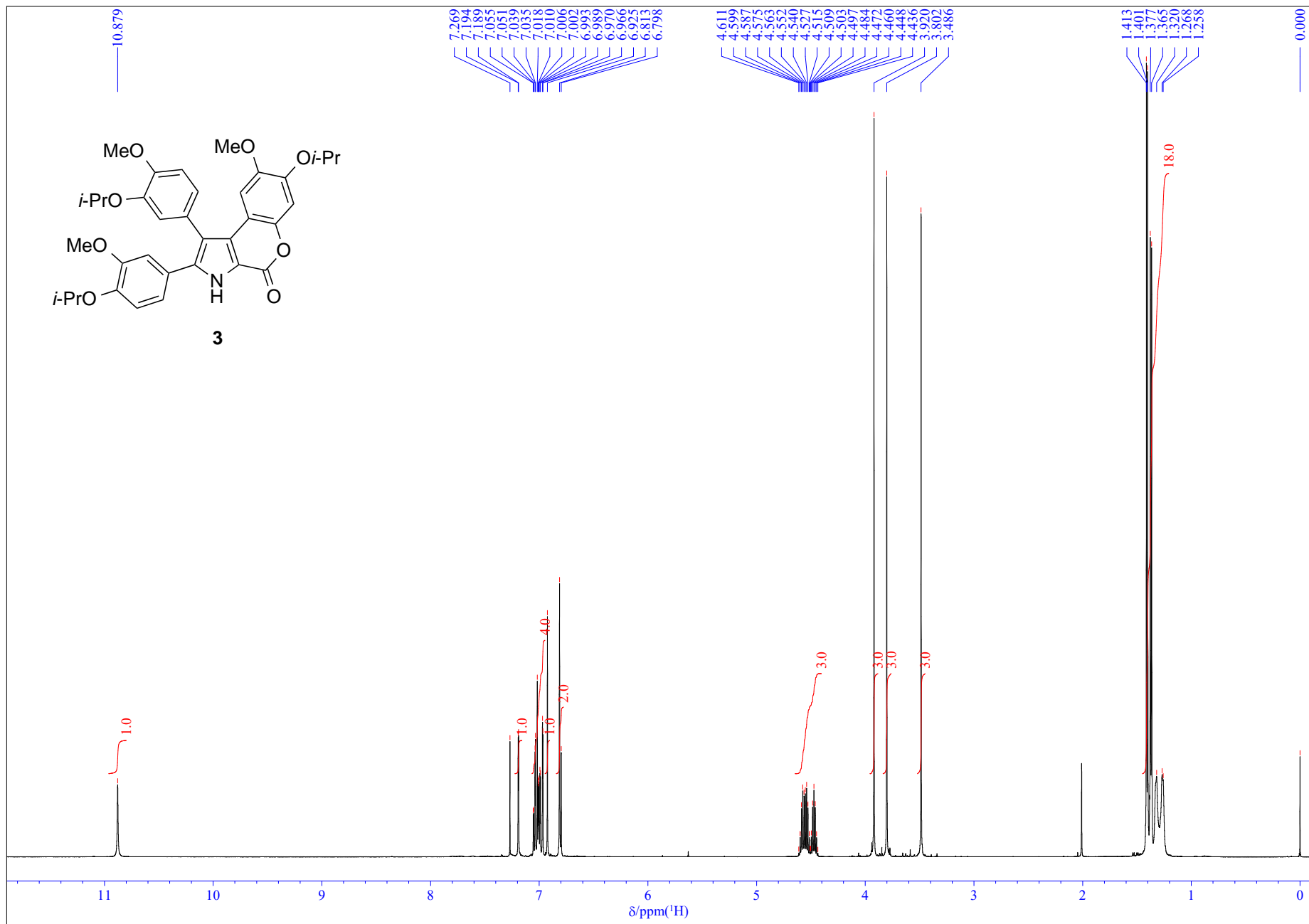


Figure S48. ^1H NMR spectrum of compound **3** (500 MHz, CDCl_3).

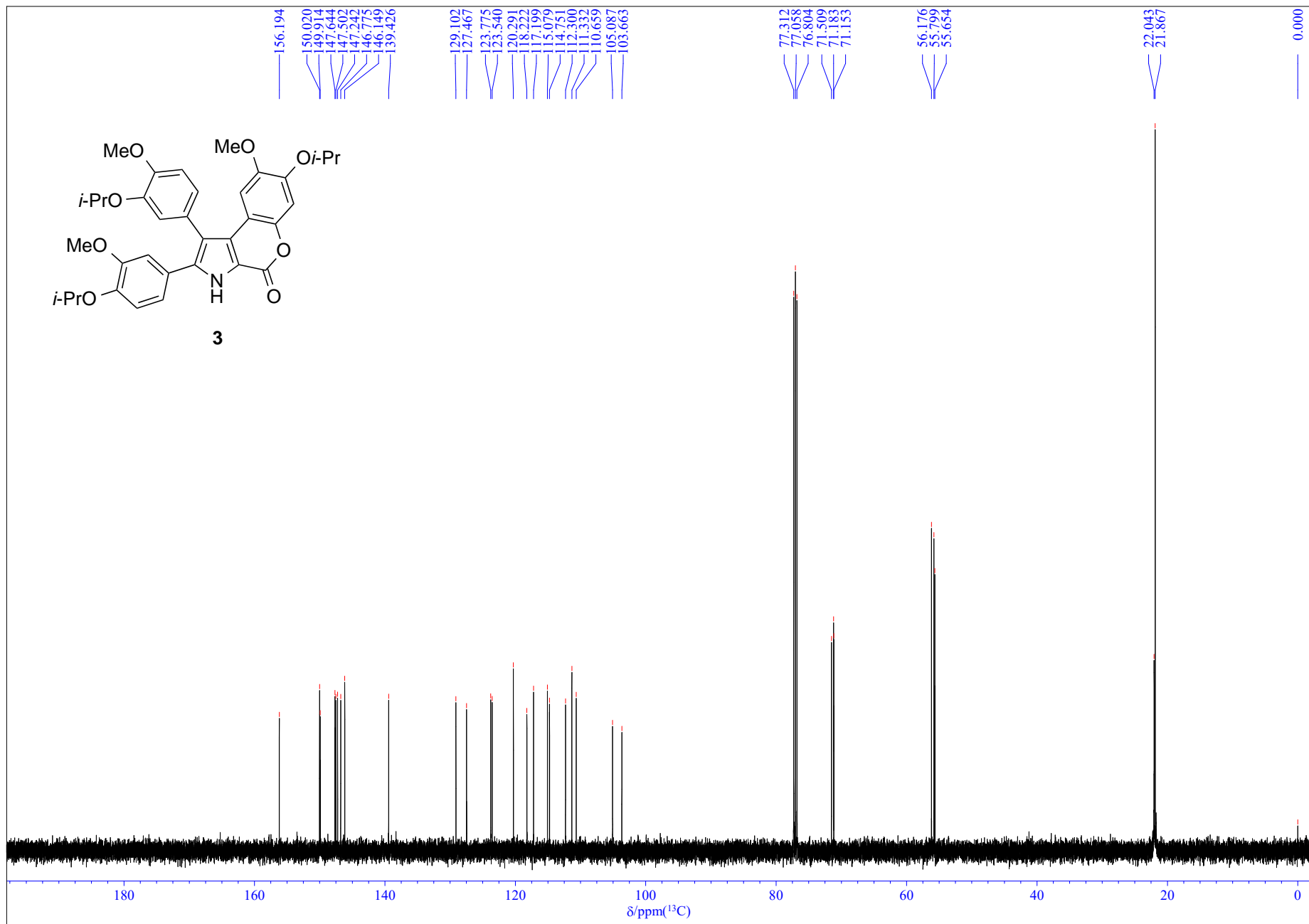


Figure S49. ^{13}C NMR spectrum of compound **3** (126 MHz, CDCl_3).

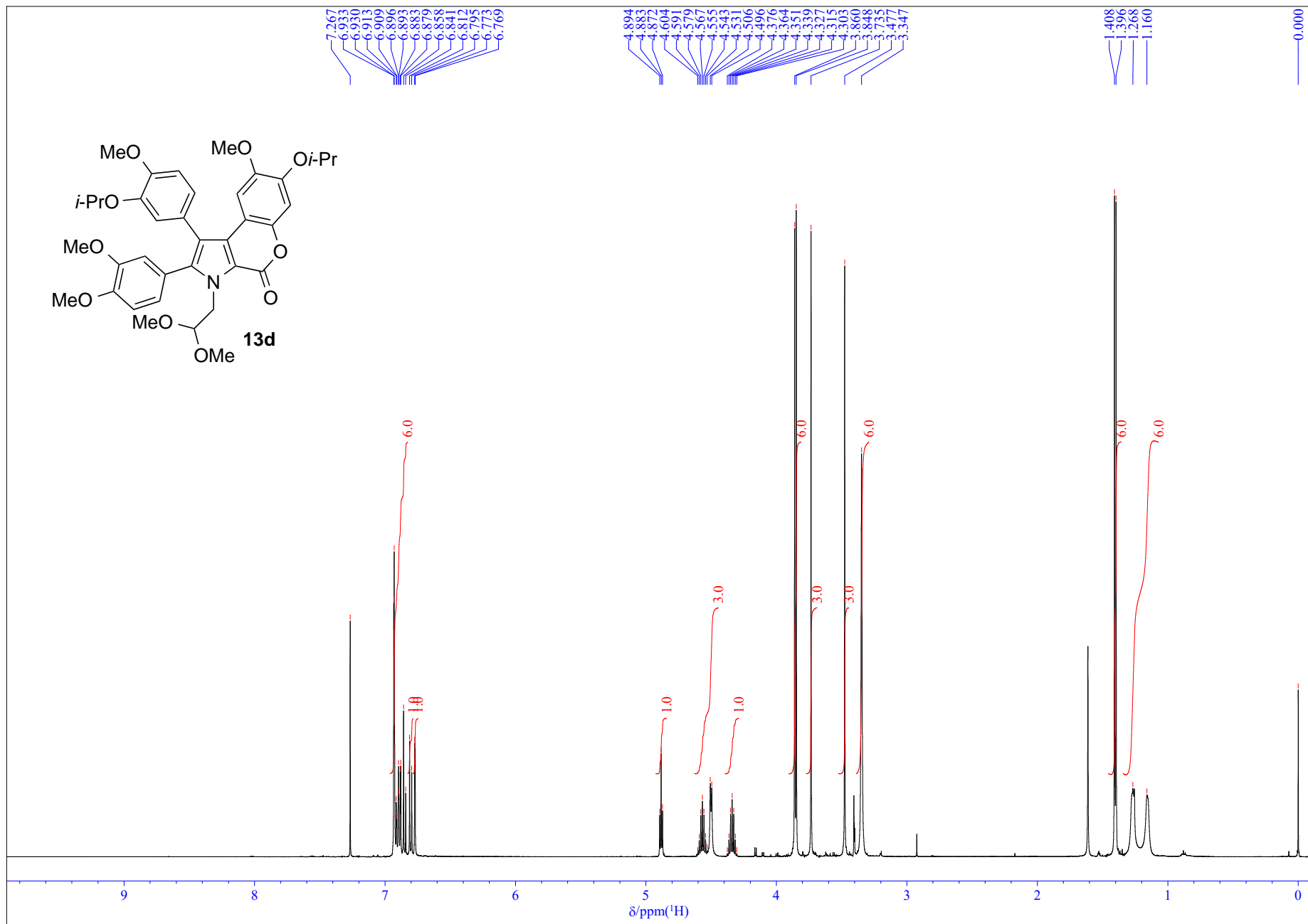


Figure S50. ¹H NMR spectrum of compound **13d** (500 MHz, CDCl₃).

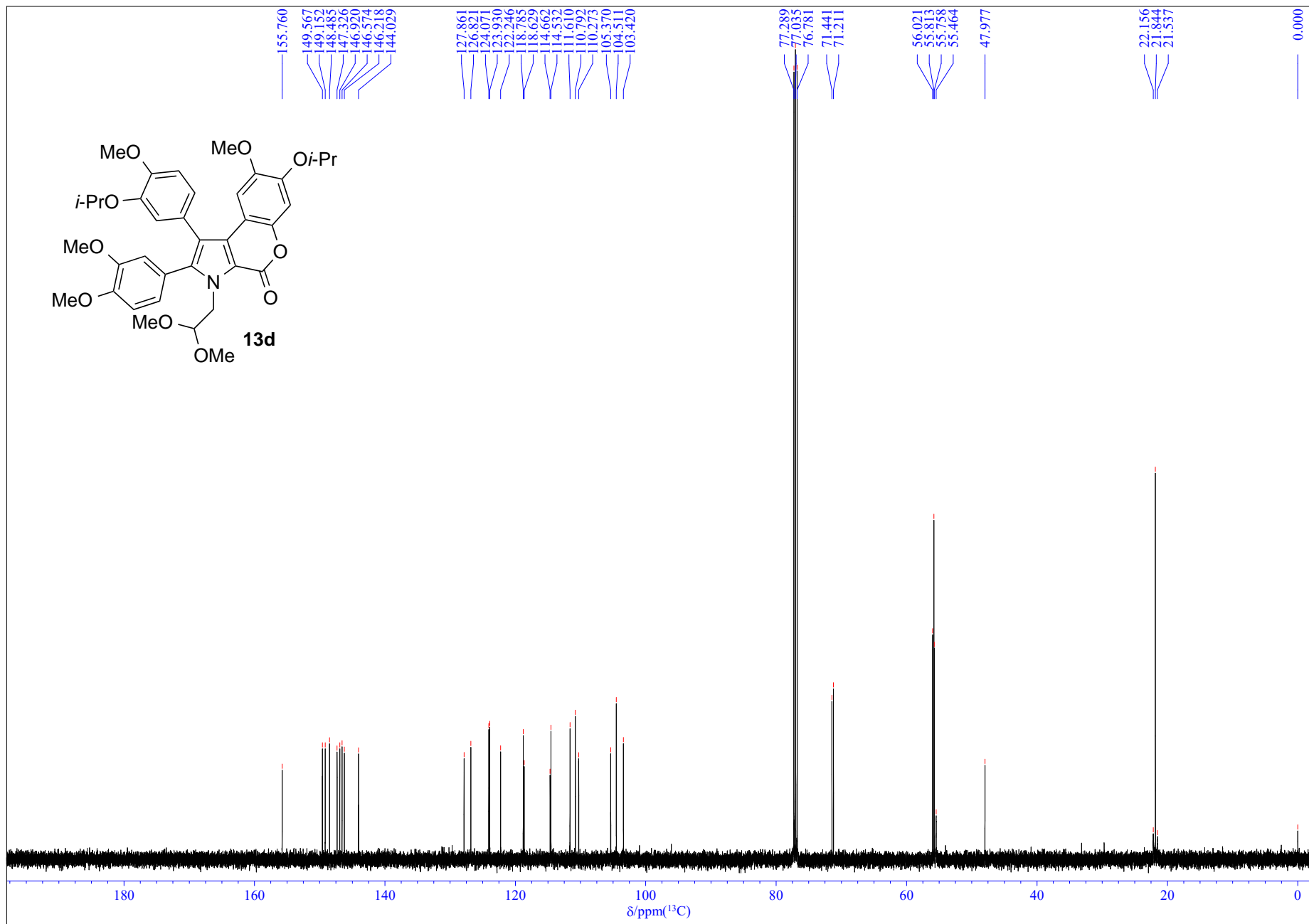


Figure S51. ¹³C NMR spectrum of compound **13d** (126 MHz, CDCl₃).

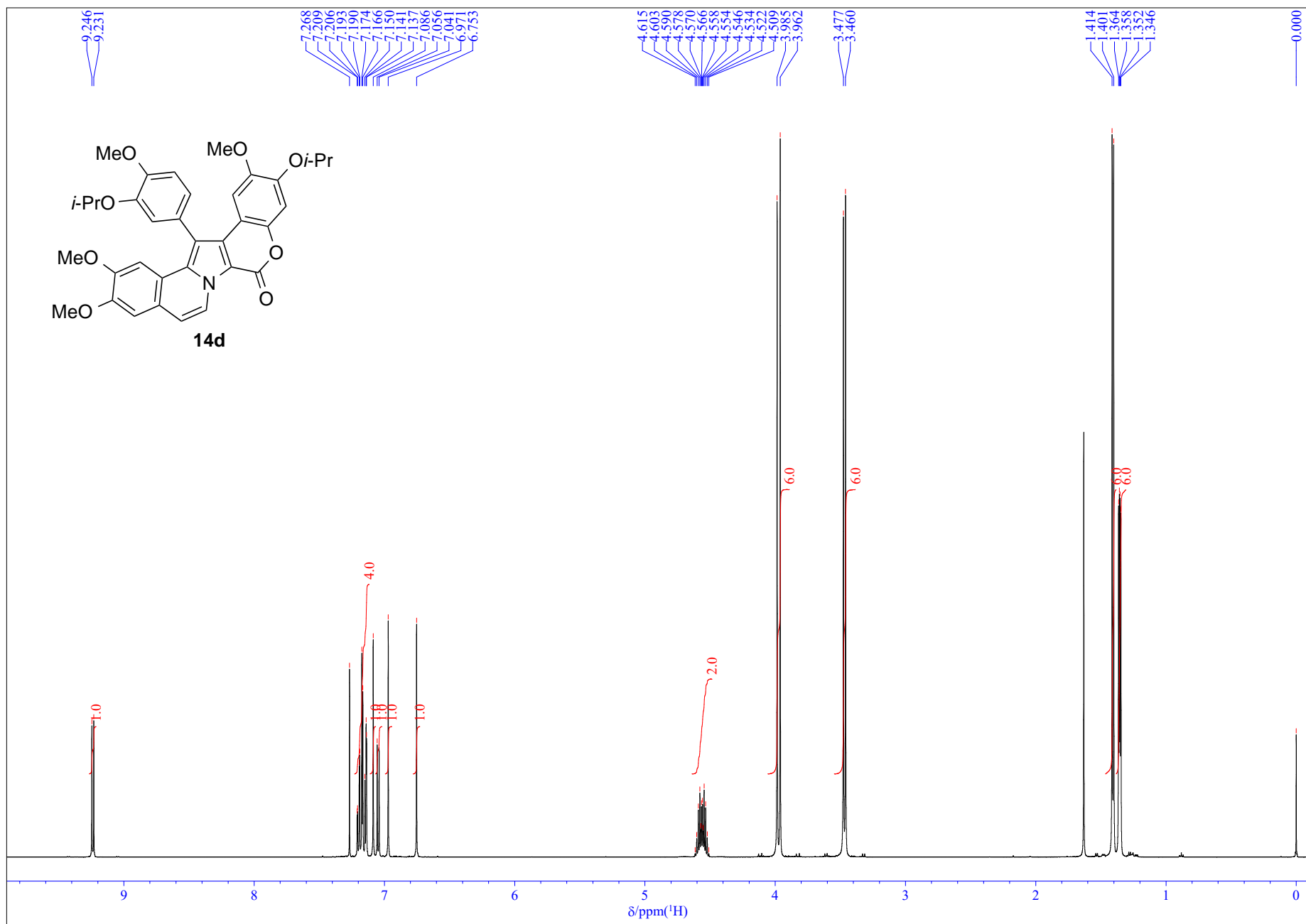


Figure S52. ¹H NMR spectrum of compound **14d** (500 MHz, CDCl₃).

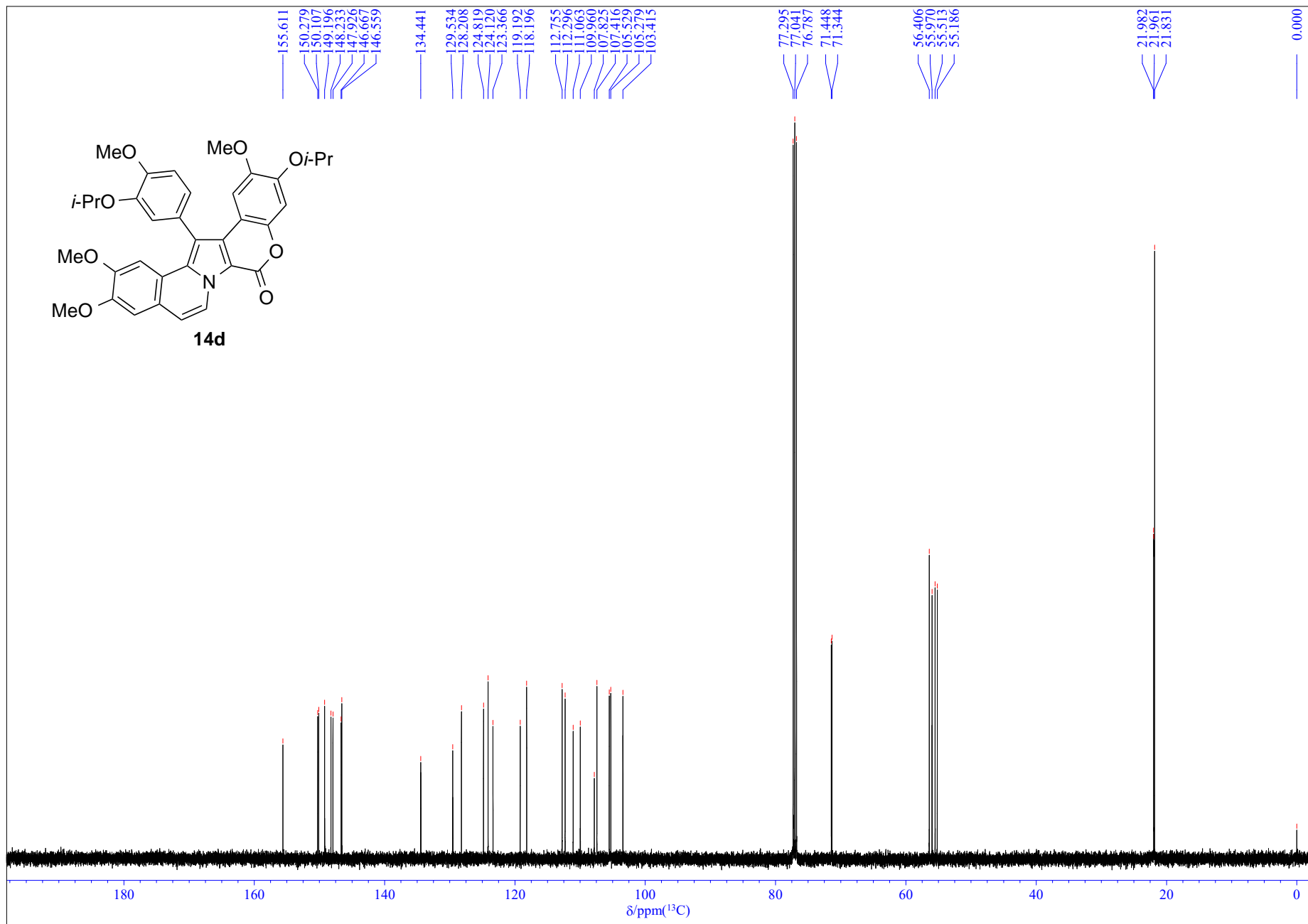


Figure S53. ^{13}C NMR spectrum of compound **14d** (126 MHz, CDCl_3).

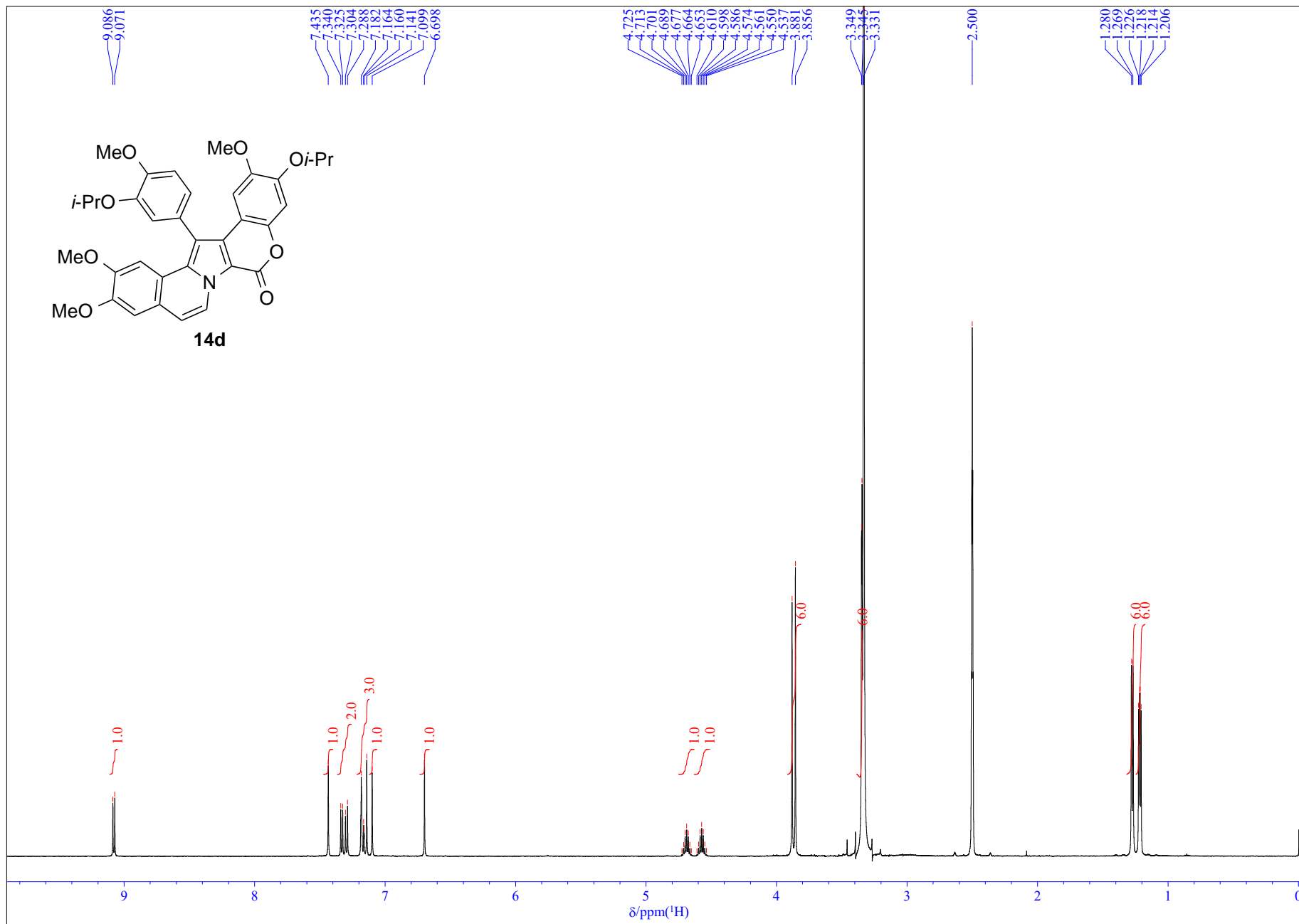


Figure S54. ^1H NMR spectrum of compound **14d** (500 MHz, $\text{DMSO}-d_6$).

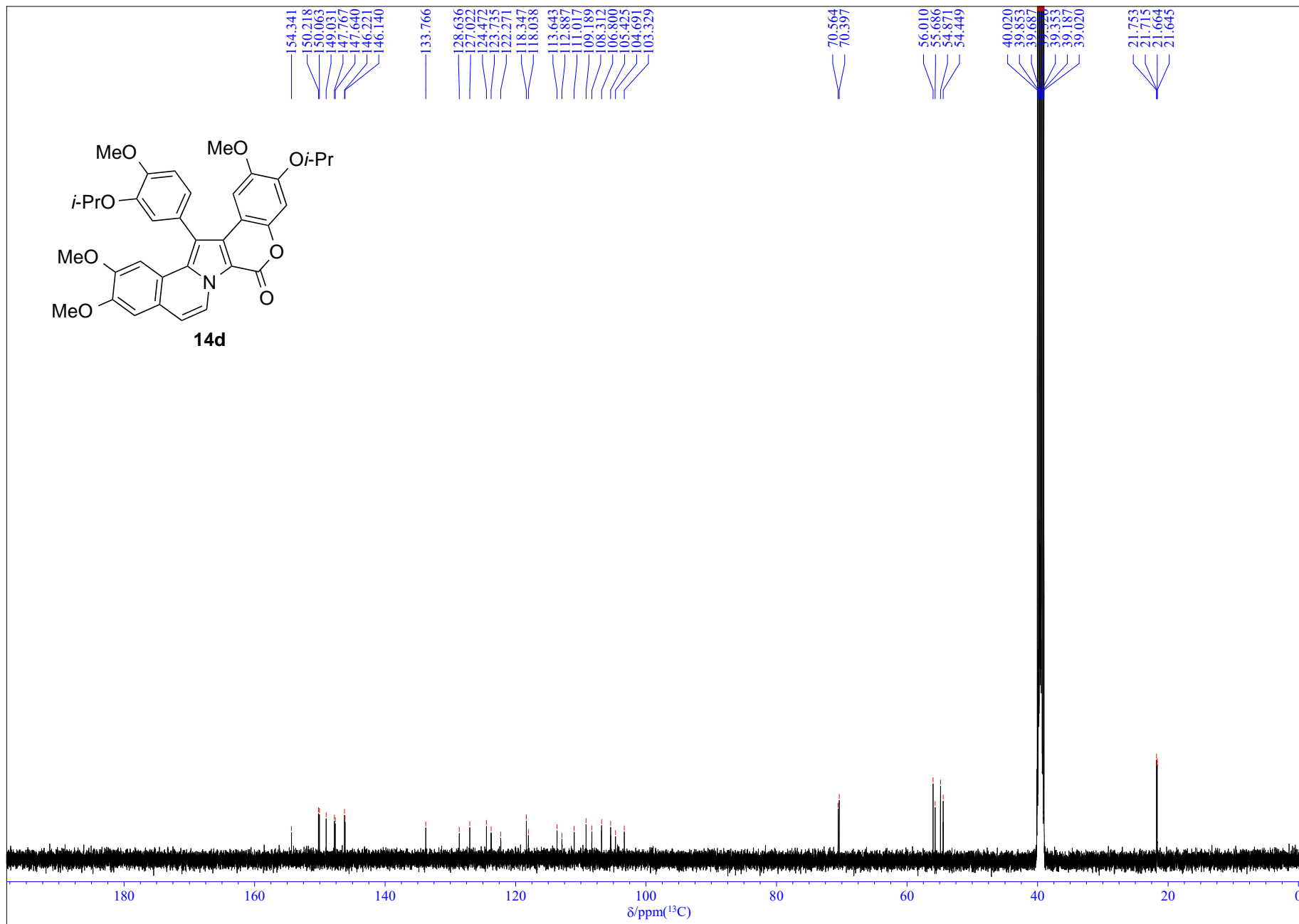


Figure S55. ^{13}C NMR spectrum of compound **14d** (126 MHz, $\text{DMSO-}d_6$).

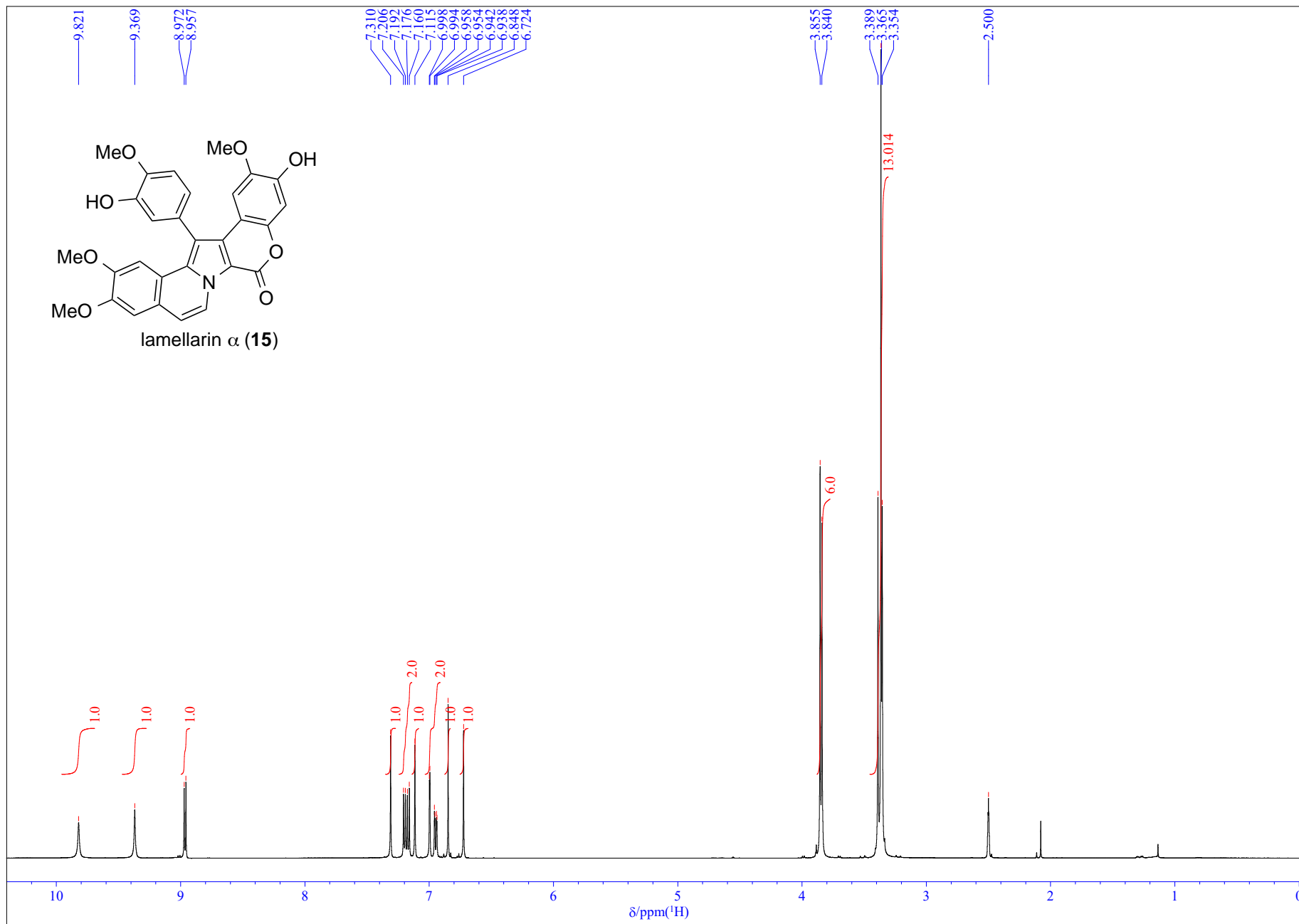


Figure S56. ¹H NMR spectrum of lamellarin α (15) (500 MHz, DMSO-*d*₆).

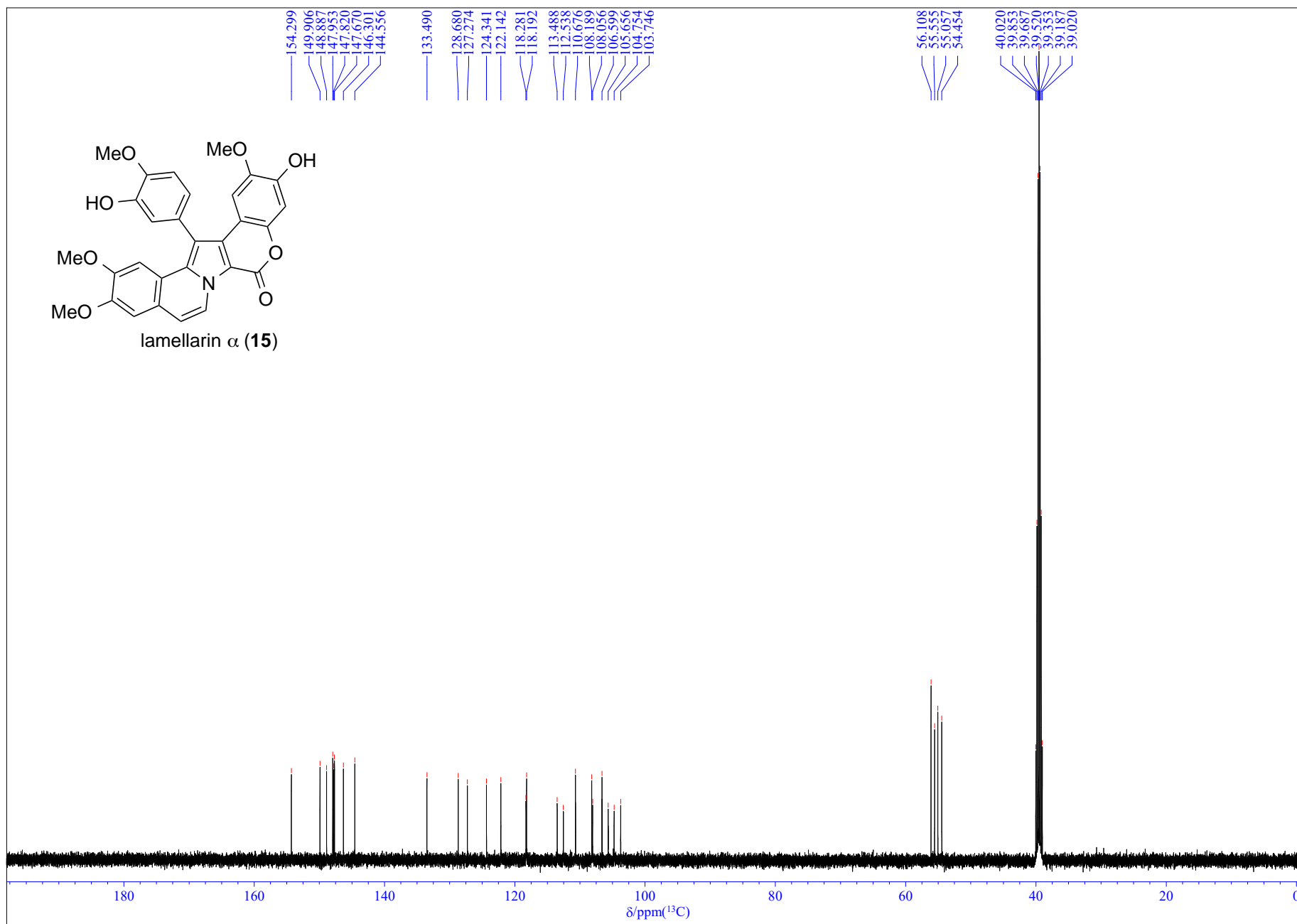


Figure S57. ^{13}C NMR spectrum of lamellarin α (15) (126 MHz, DMSO- d_6).