Supporting Information

Co(III)-Catalyzed C−H Activation: A Site-Selective Conjugate Addition of Maleimide to Indole at the C-2 Position

Nachimuthu Muniraj and Kandikere Ramaiah Prabhu*

Department of Organic Chemistry,

Indian Institute of Science,

Bangalore 560 012, Karnataka, India

*E-mail: prabhu@orgchem.iisc.ernet.in

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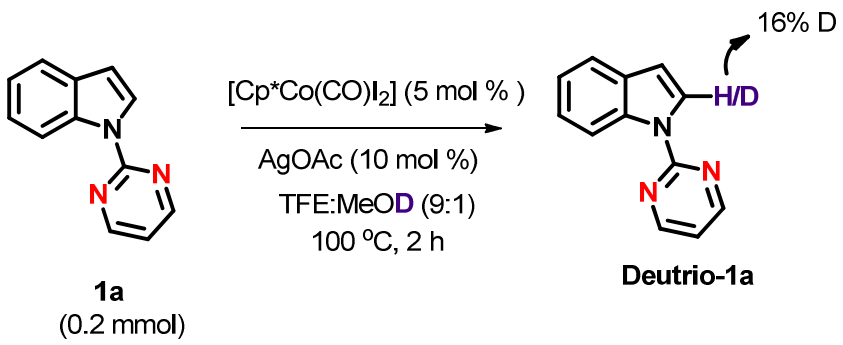


Scheme S1: Deuterium labeling studies

In a 8-mL screw cap reaction vial, *N*-pyrimidinylindole (0.2 mmol), cobalt catalyst (5mol %) and AgOAc (10 mol %), were added followed by the addition of TFE:MeOD(2 mL, 9:1). This vial was sealed with a screw cap, placed in a pre-heated metal block at 100 °C for 2 h, cooled to room temperature, and concentrated to yield the crude product, which was further purified by flash chromatography to give the desired product **deutrio-1a** in 99% yield. The deuterium incorporation was calculated from ^{1}H NMR spectroscopy (See the following ^{1}H NMR spectra).

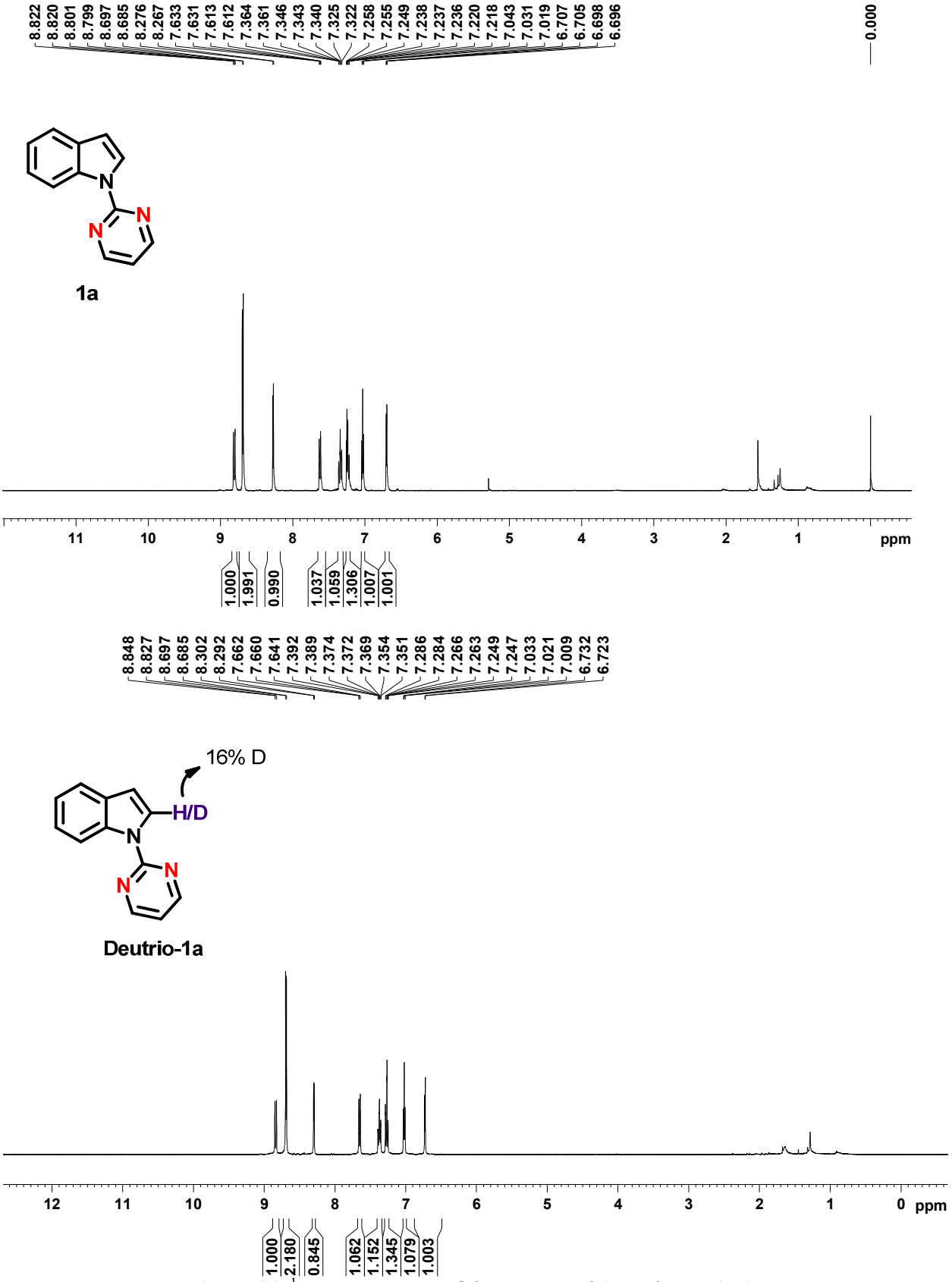


Figure S1. ^{1}H NMR spectra of the compound **1a** and **deutrio-1a**

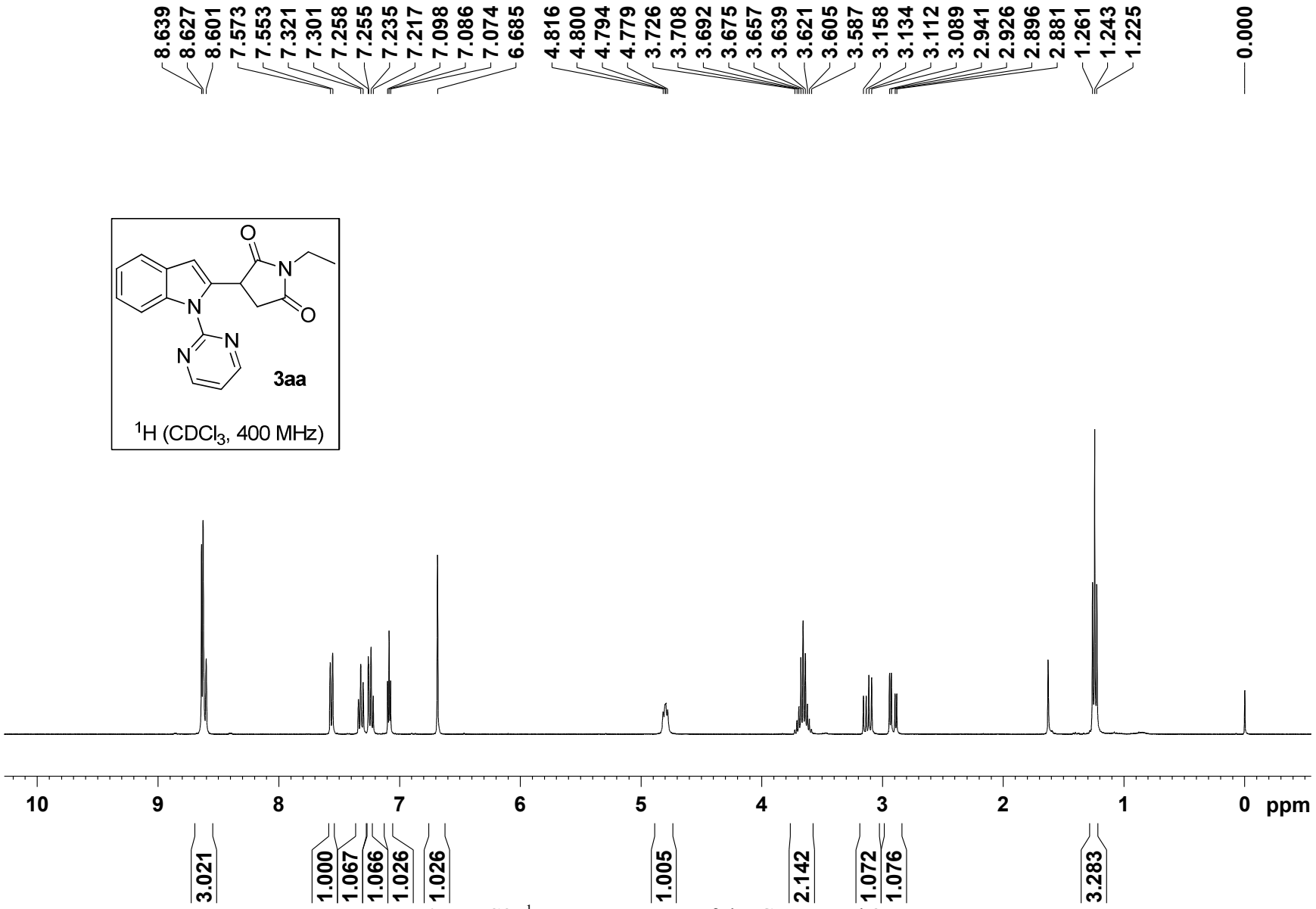


Figure S2. ^{1}H NMR spectra of the Compound **3aa**

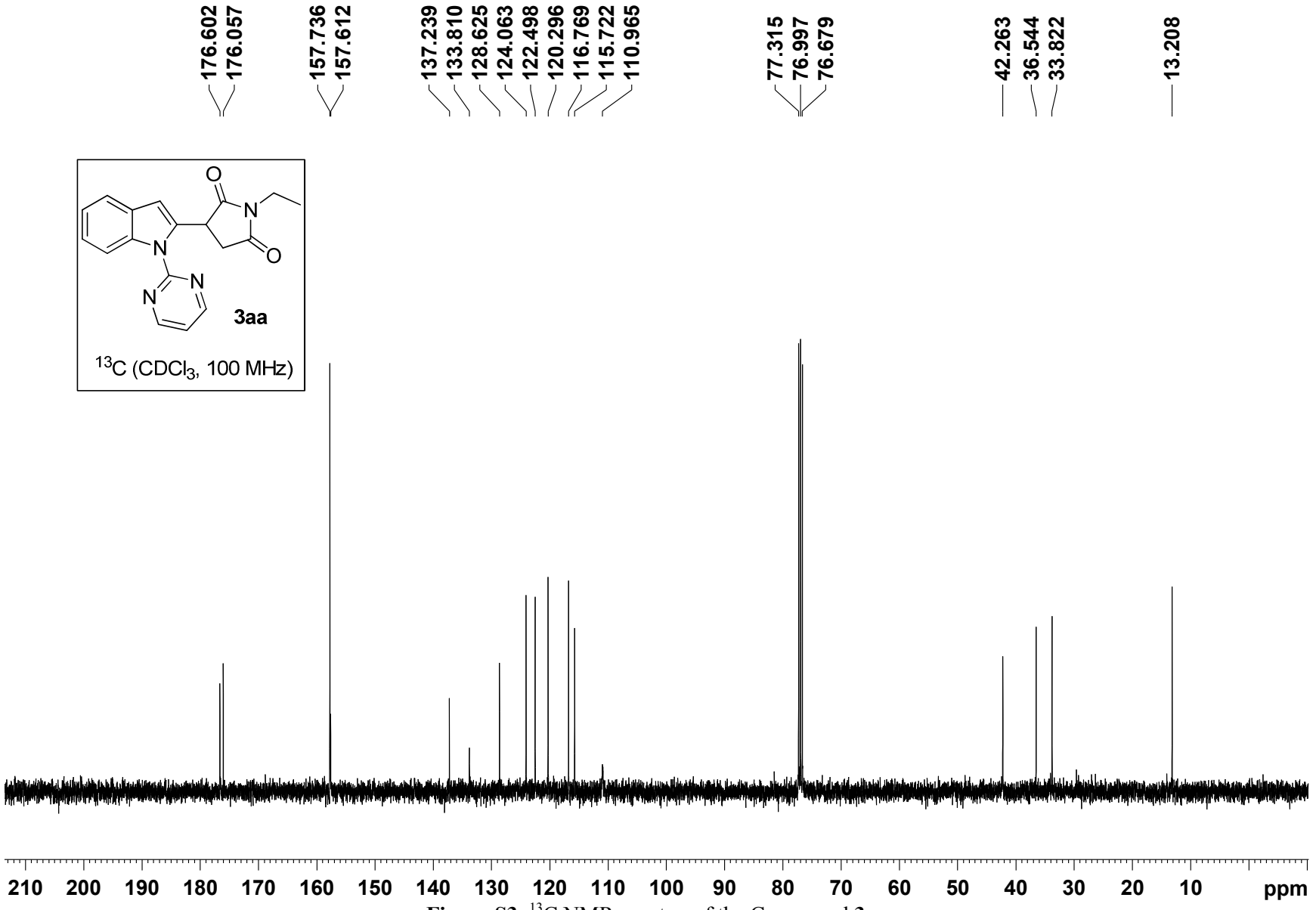


Figure S3. ^{13}C NMR spectra of the Compound **3aa**

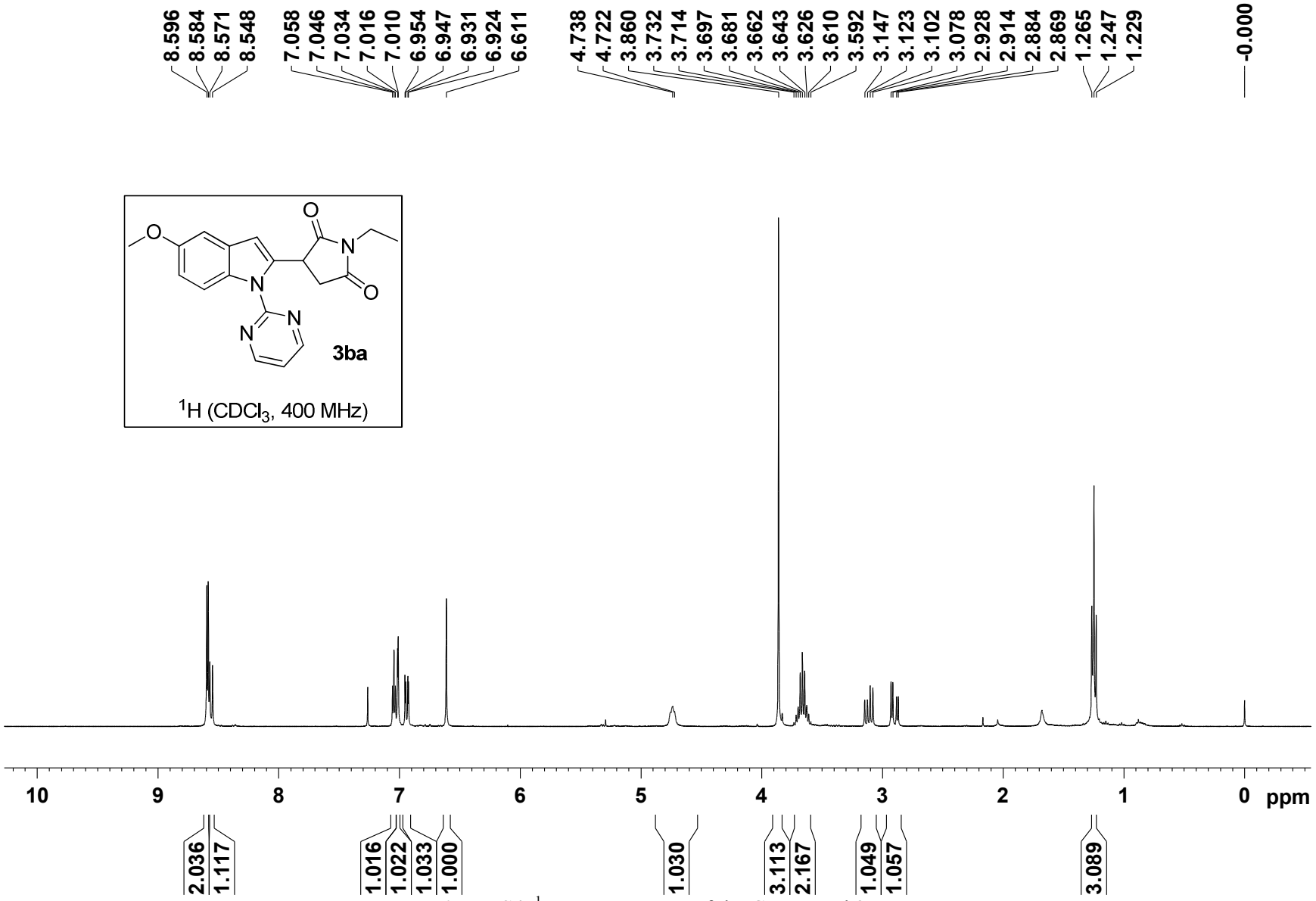


Figure S4. ^{1}H NMR spectra of the Compound **3ba**

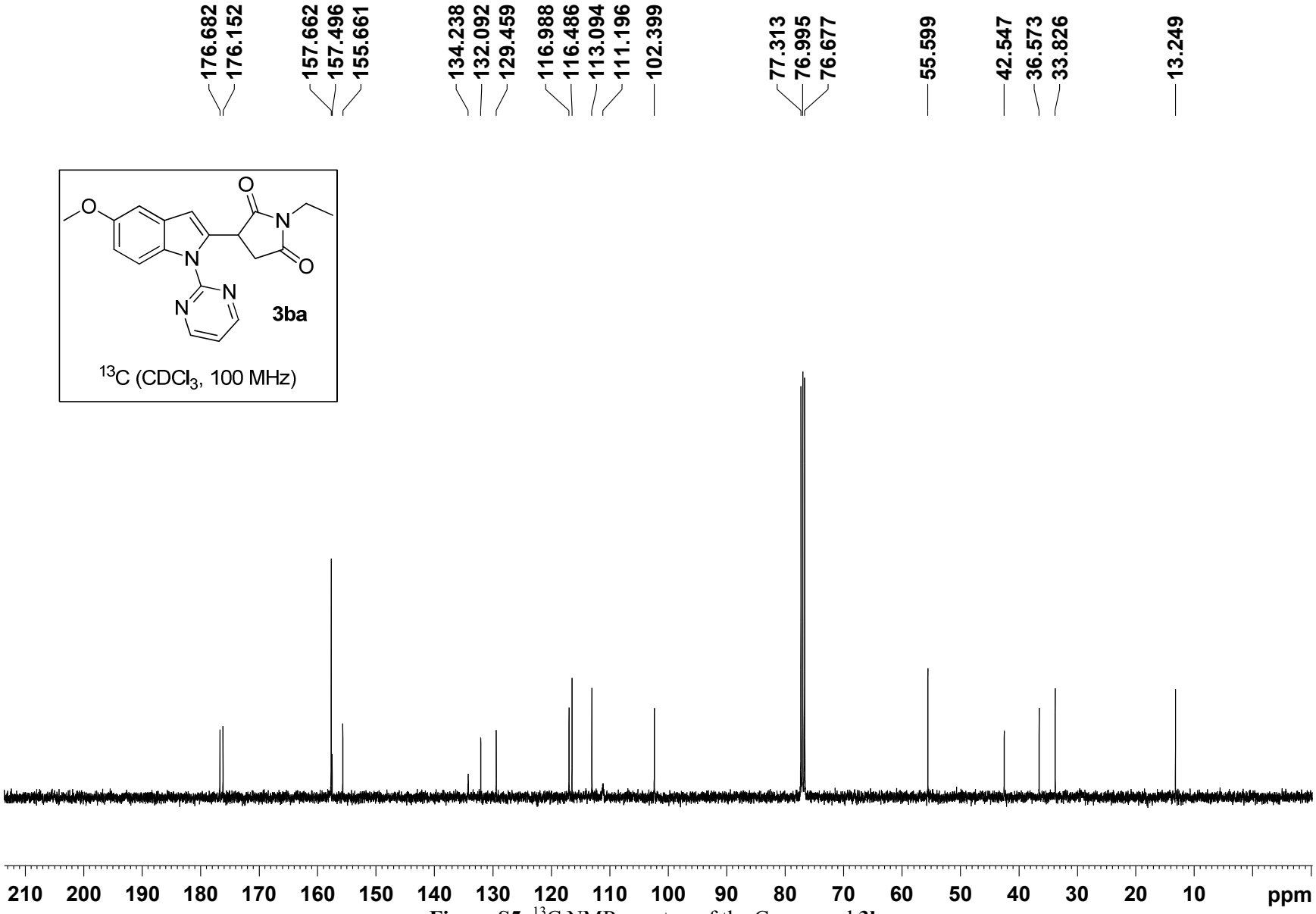


Figure S5. ^{13}C NMR spectra of the Compound **3ba**

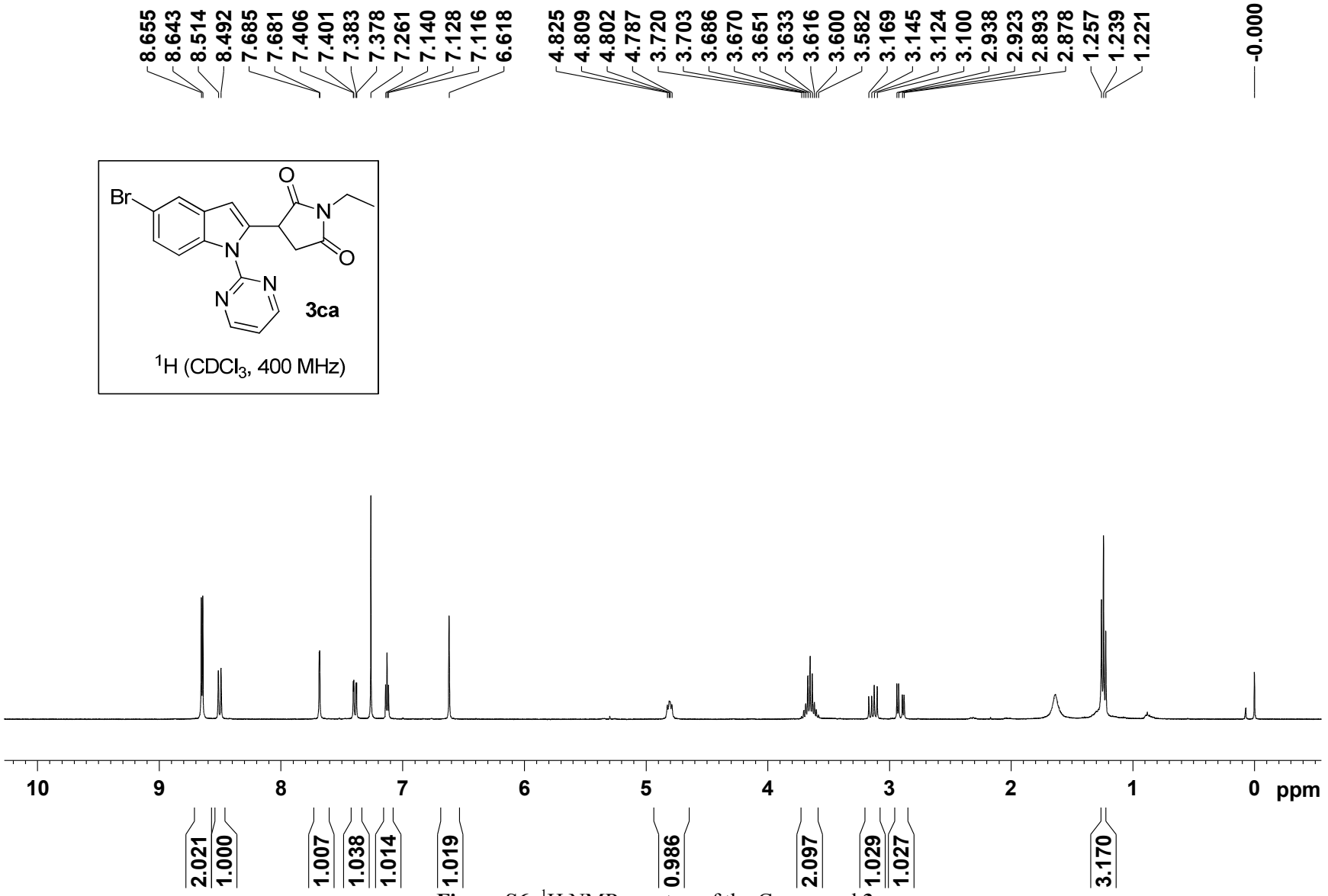


Figure S6. ^{1}H NMR spectra of the Compound **3ca**

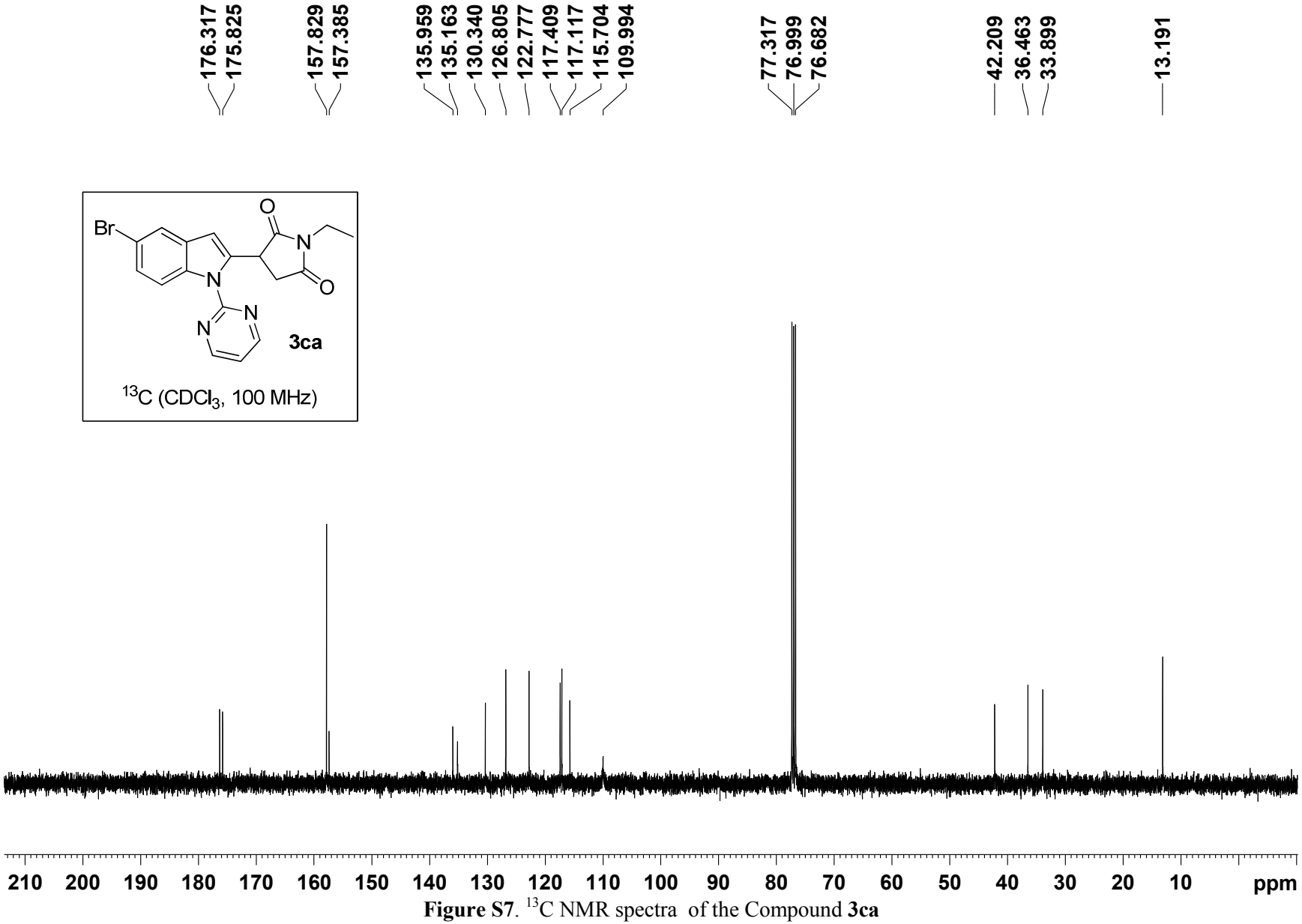


Figure S7. ^{13}C NMR spectra of the Compound **3ca**

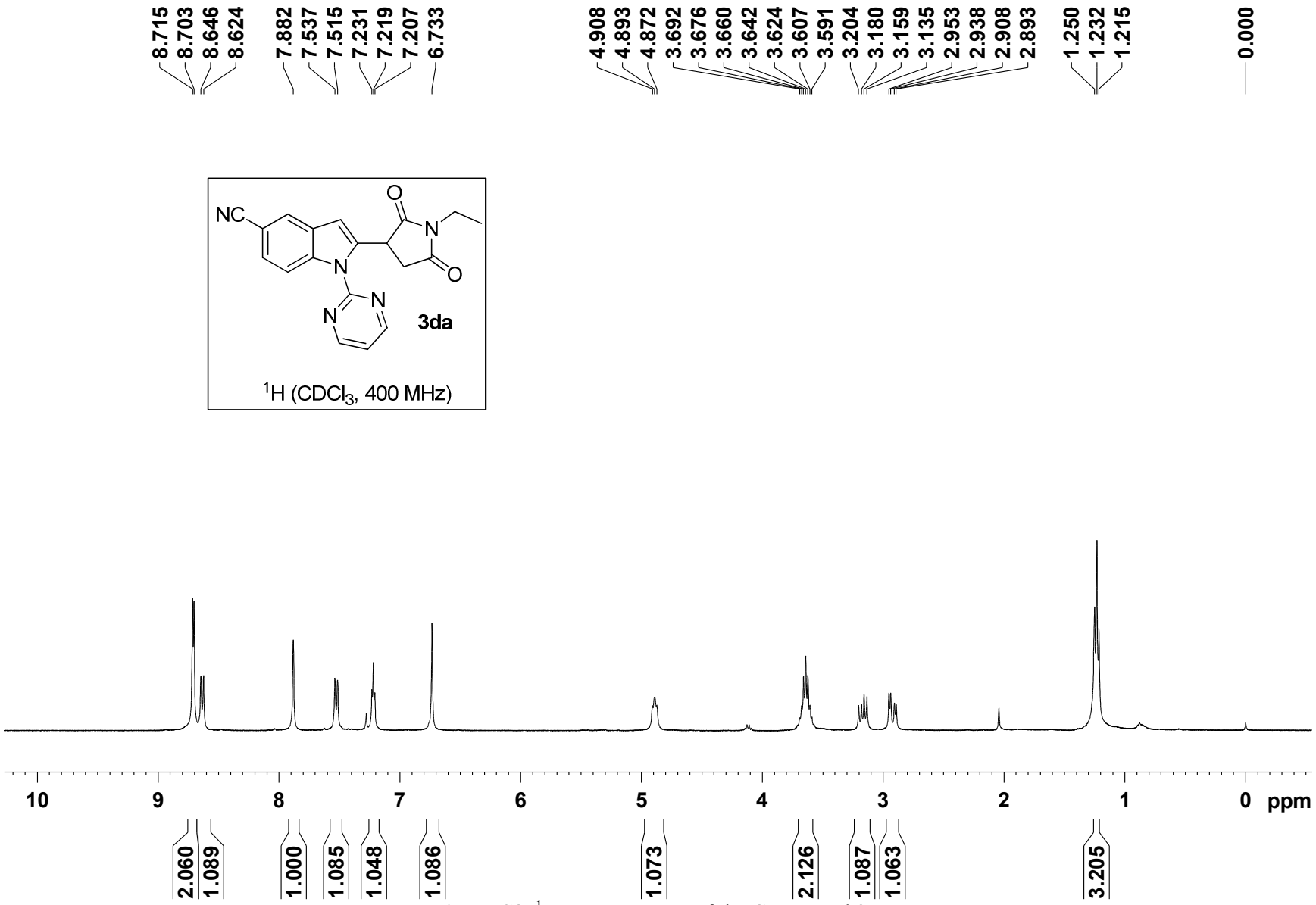


Figure S8. ^{1}H NMR spectra of the Compound **3da**

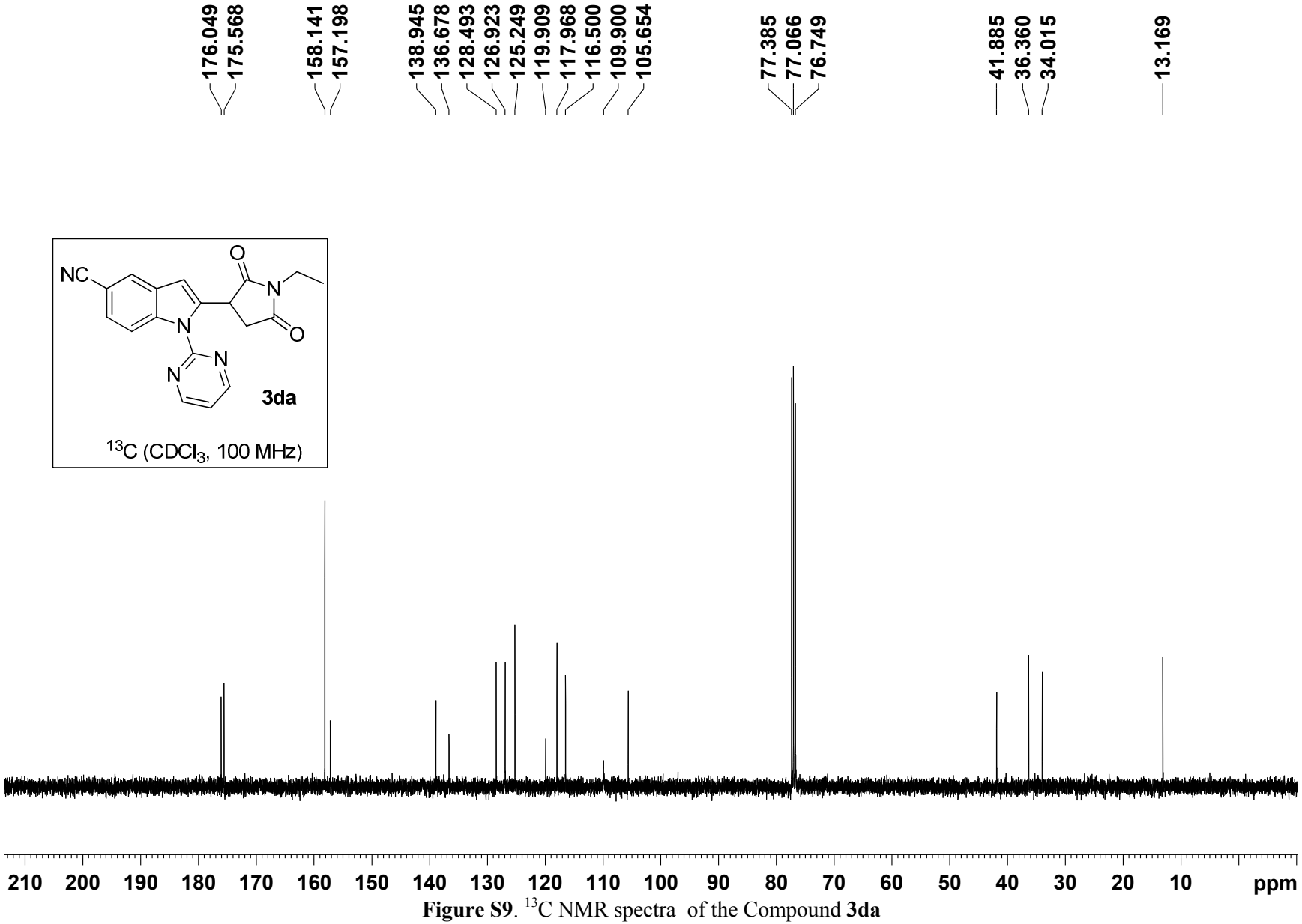


Figure S9. ^{13}C NMR spectra of the Compound **3da**

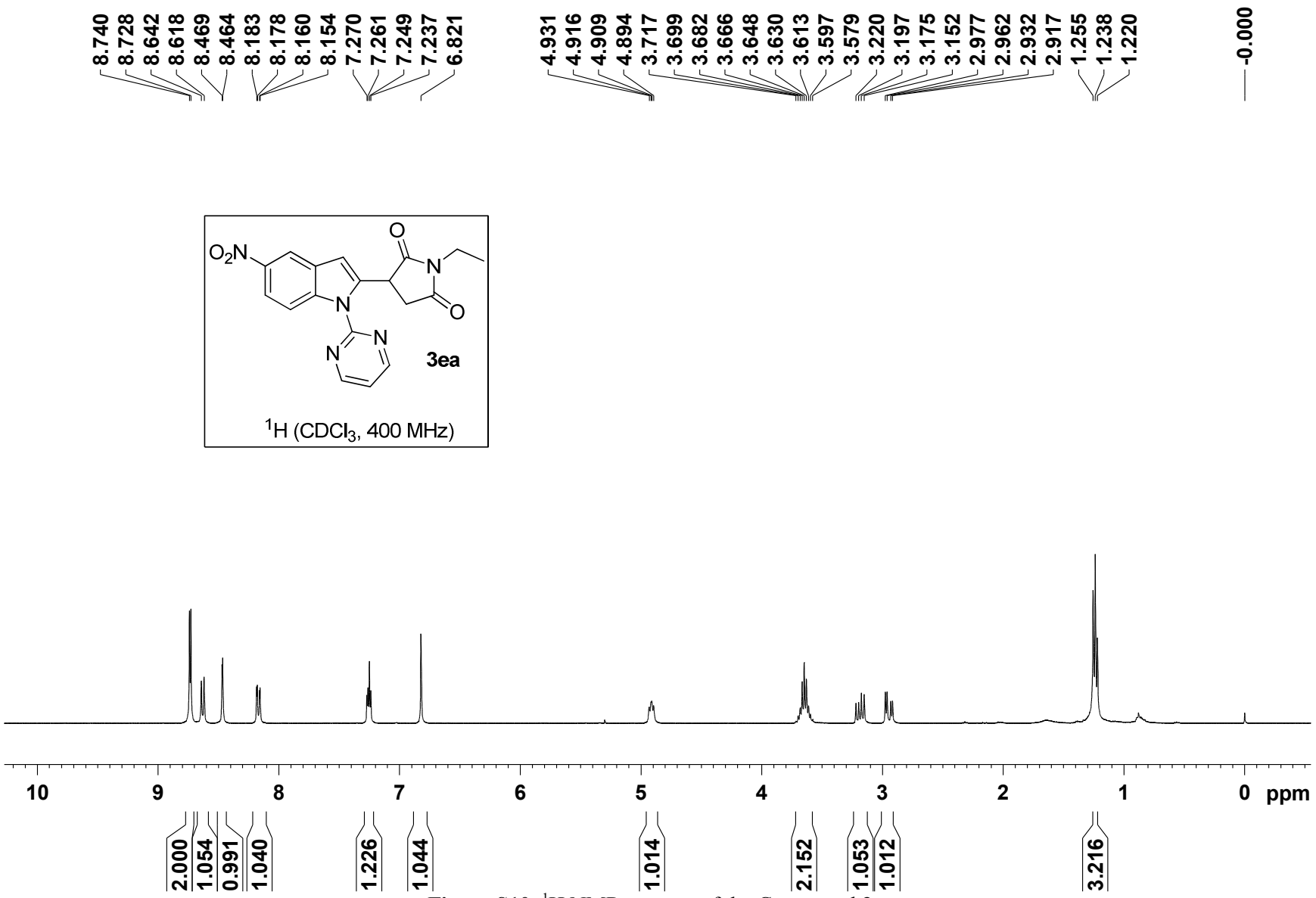


Figure S10. ^{1}H NMR spectra of the Compound **3ea**

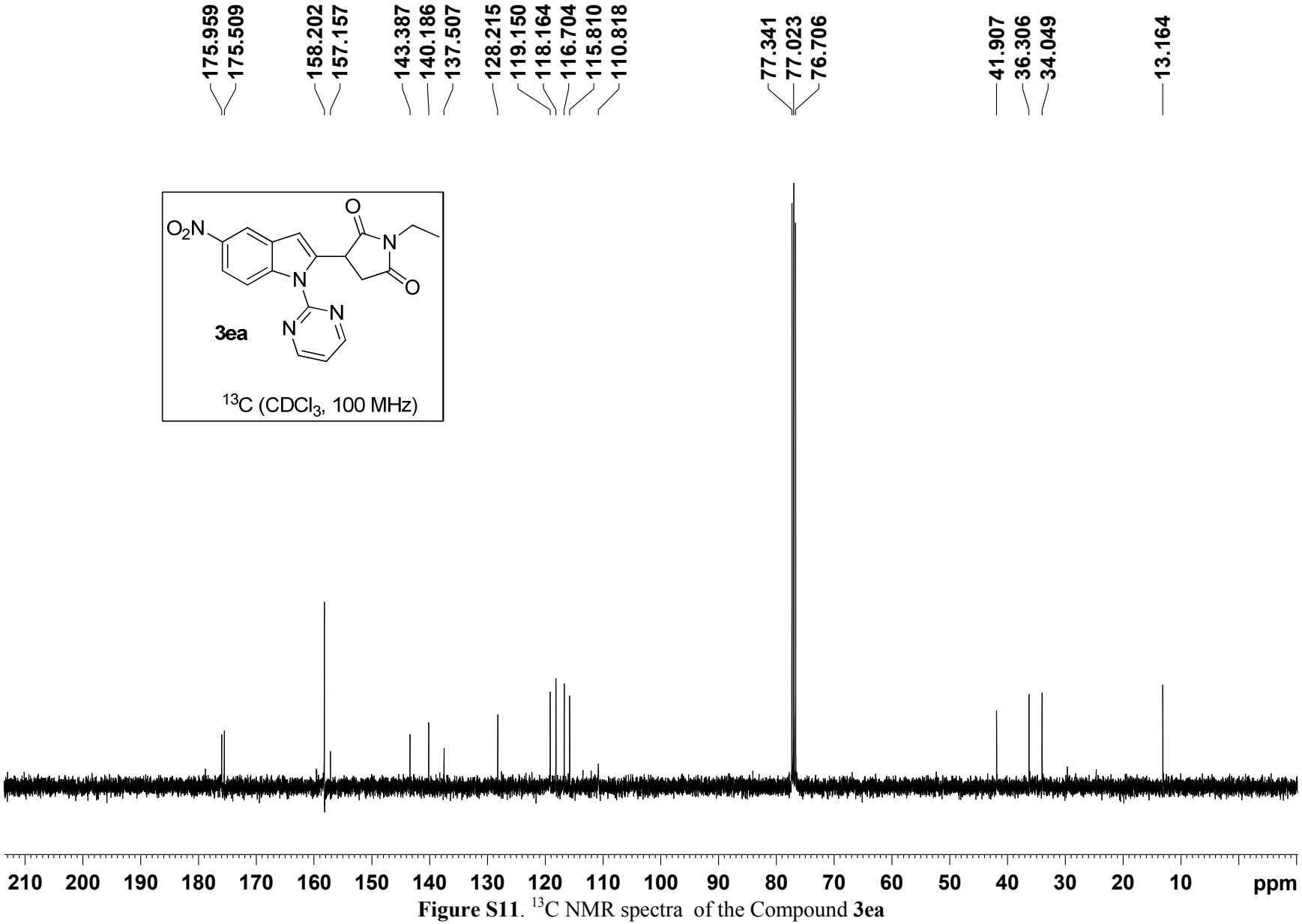


Figure S11. ^{13}C NMR spectra of the Compound **3ea**

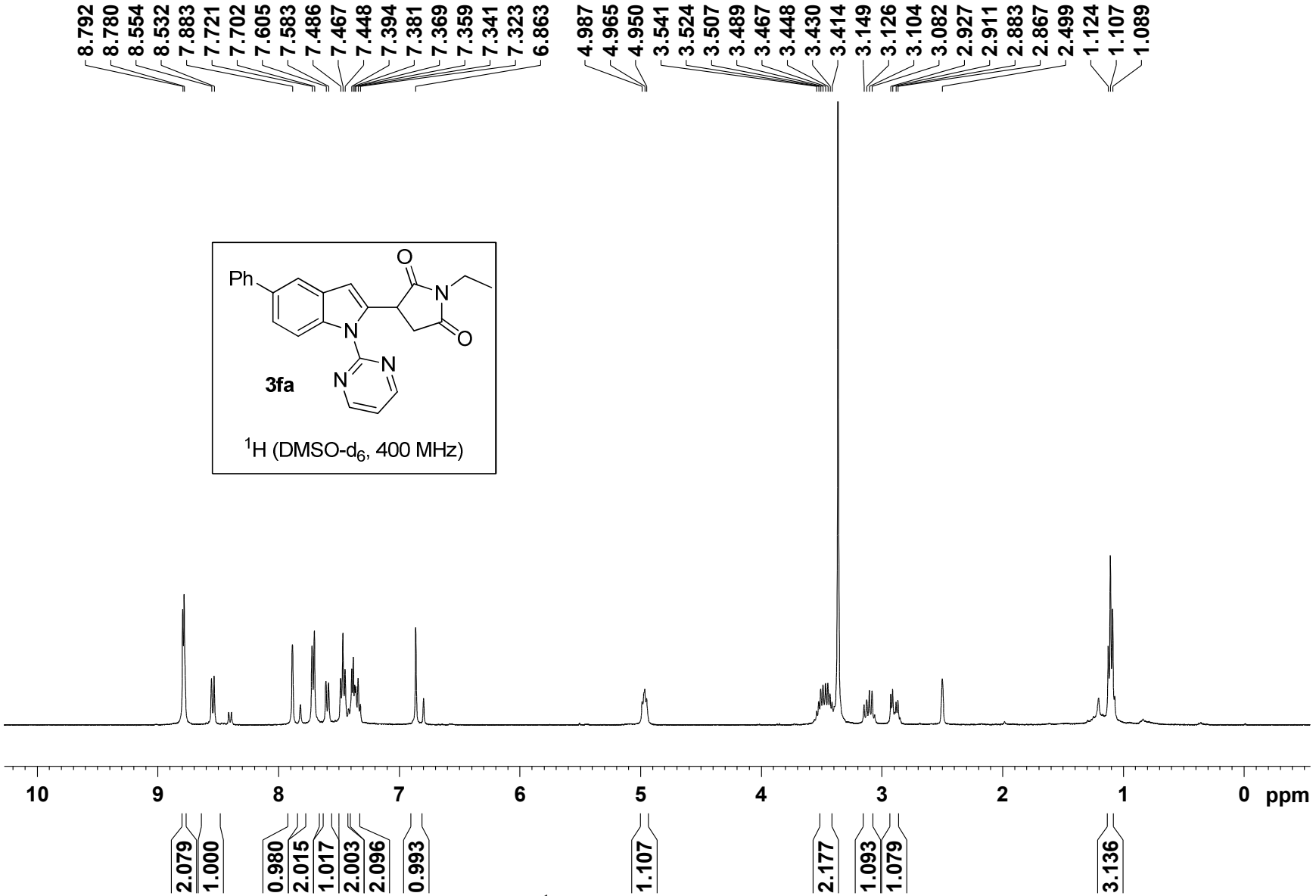


Figure S12. ^{1}H NMR spectra of the Compound **3fa**

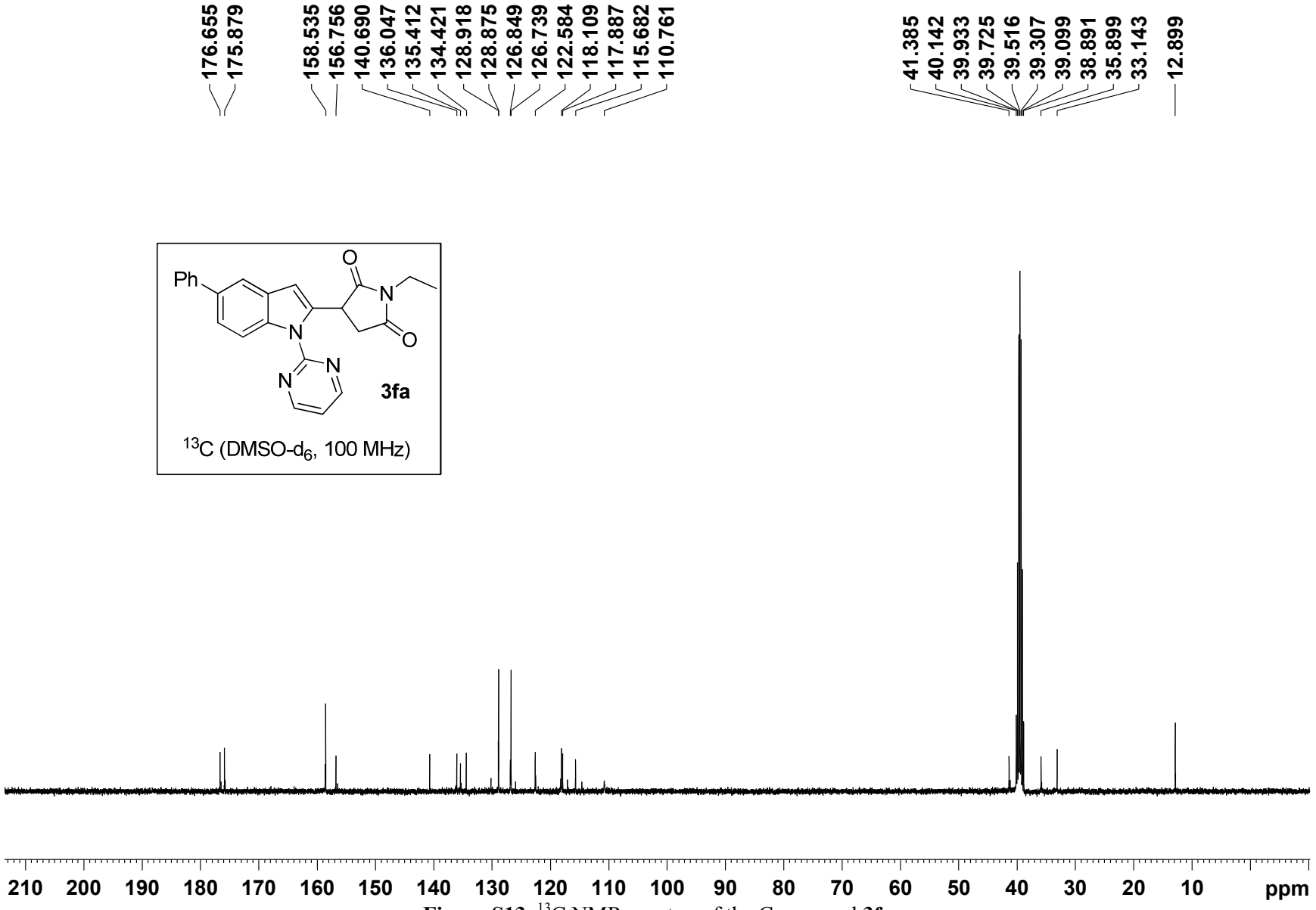


Figure S13. ^{13}C NMR spectra of the Compound **3fa**

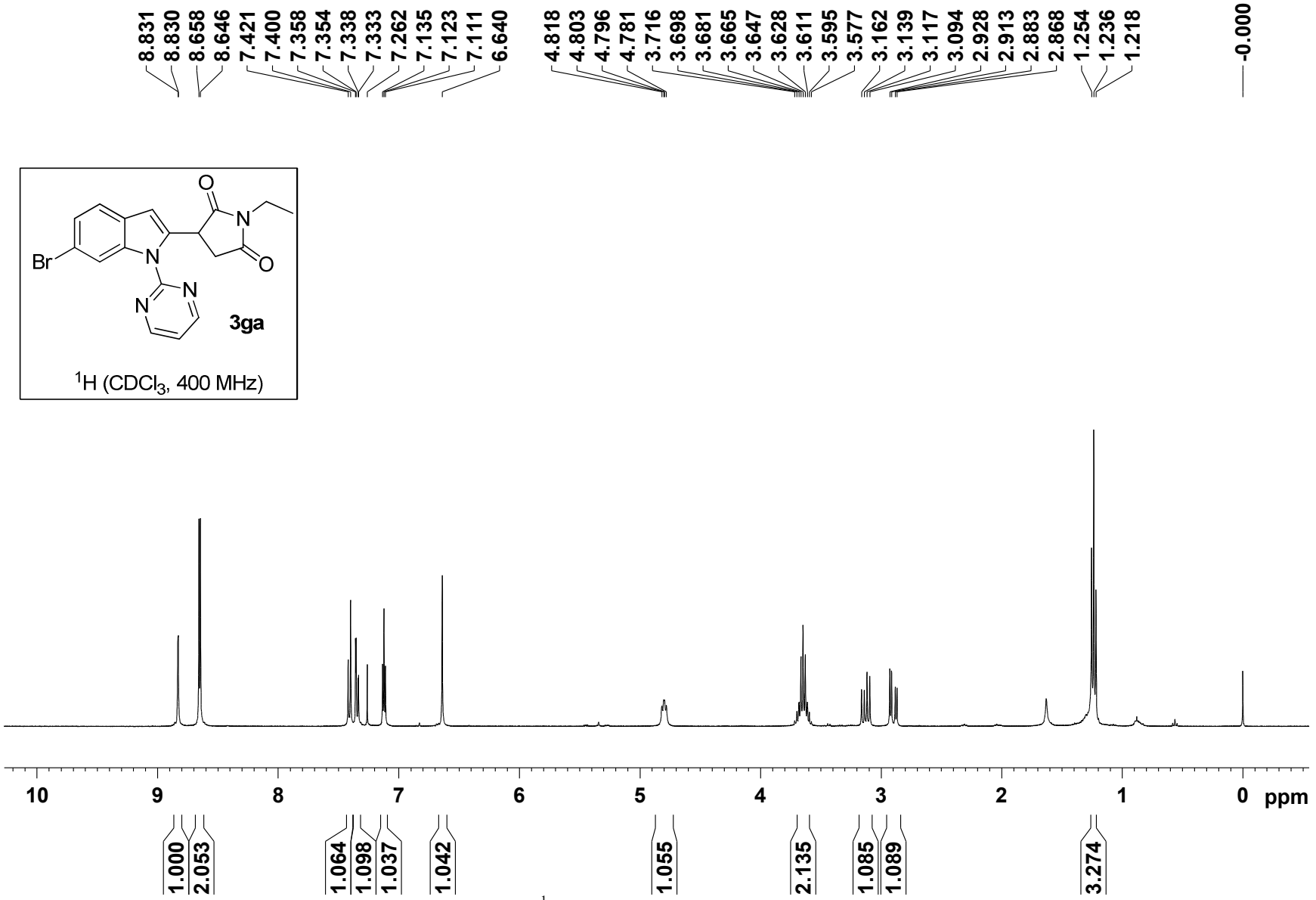


Figure S14. ^{1}H NMR spectra of the Compound **3ga**

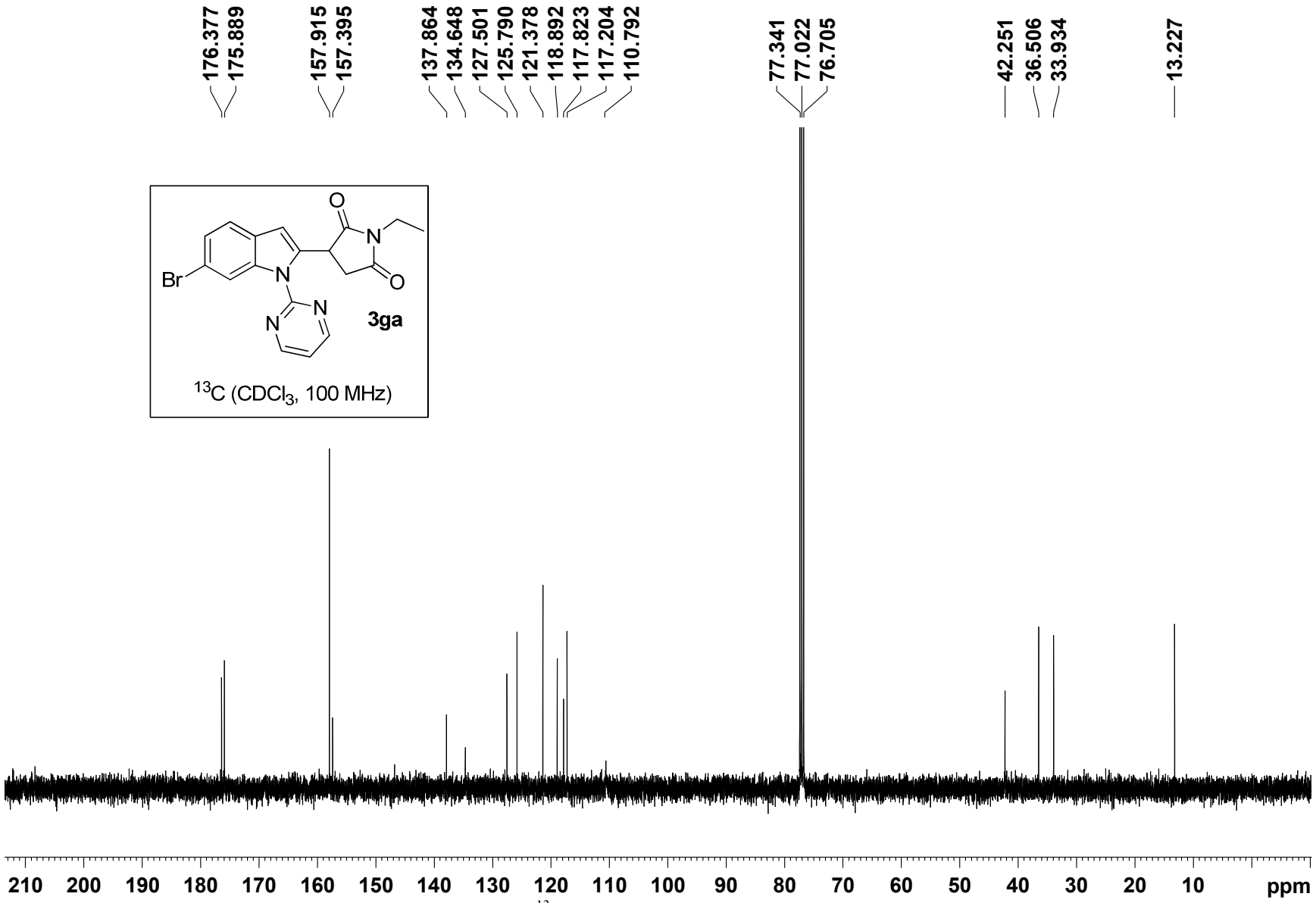


Figure S15. ^{13}C NMR spectra of the Compound **3ga**

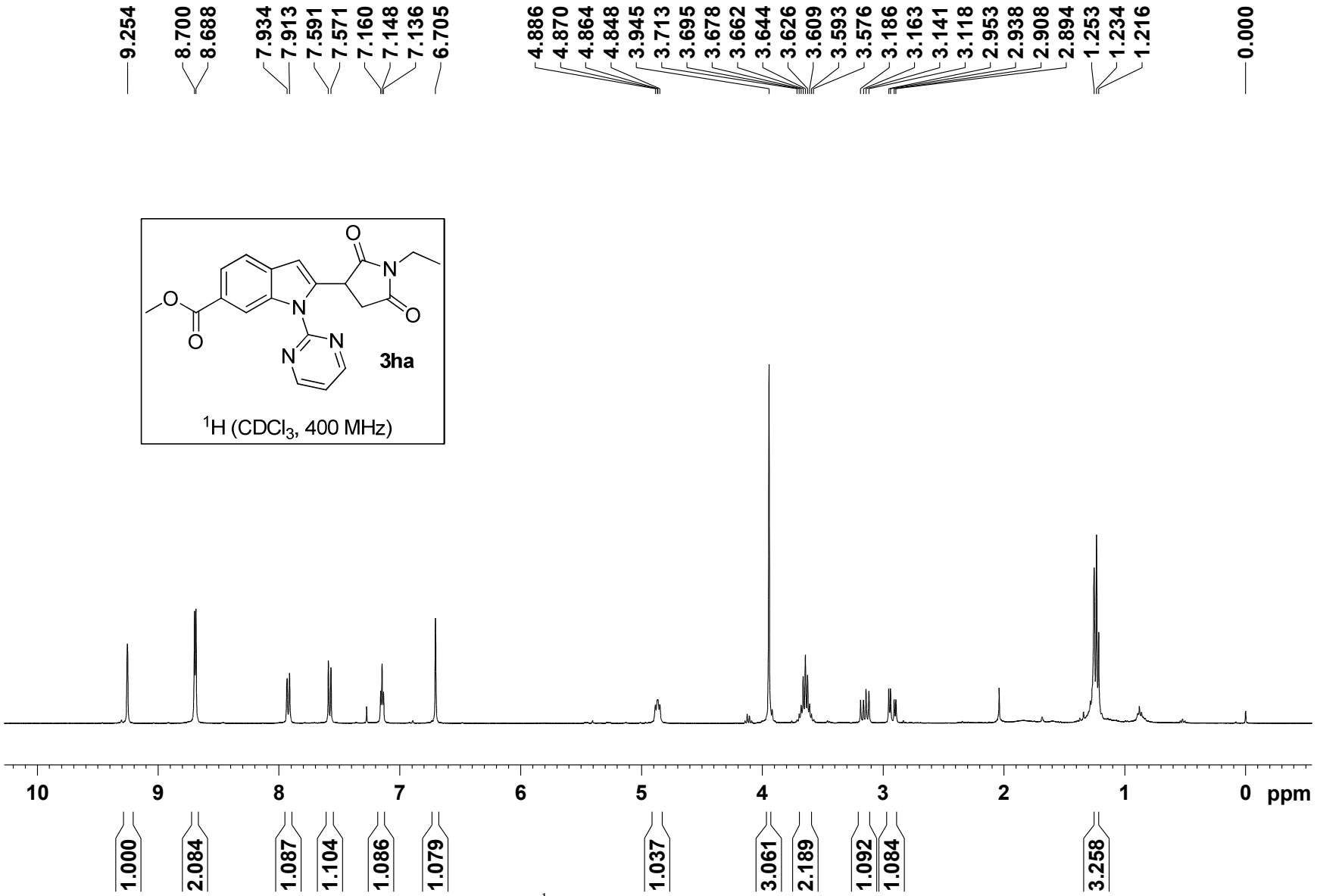


Figure S16. ^{1}H NMR spectra of the Compound **3ha**

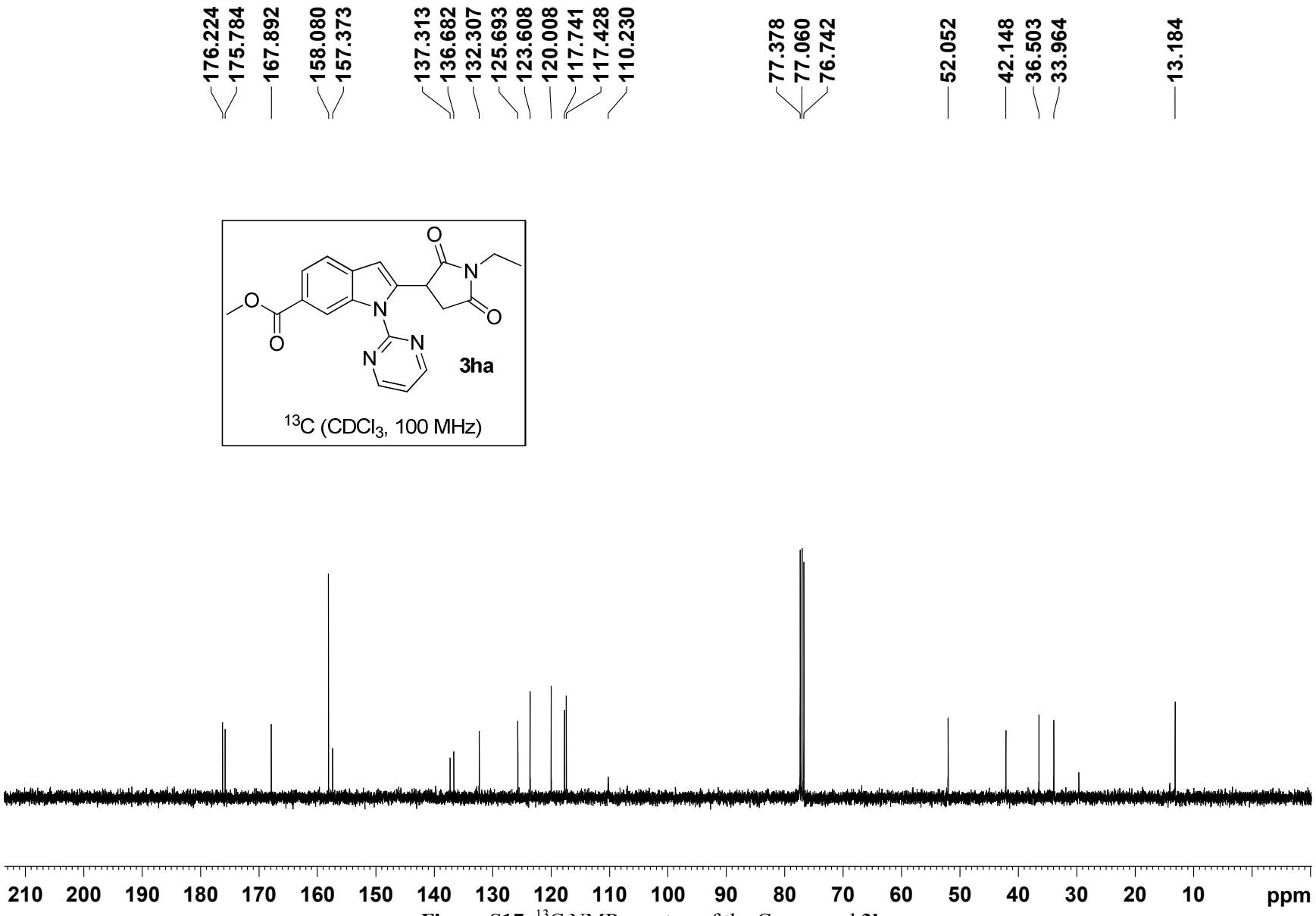


Figure S17. ^{13}C NMR spectra of the Compound **3ha**

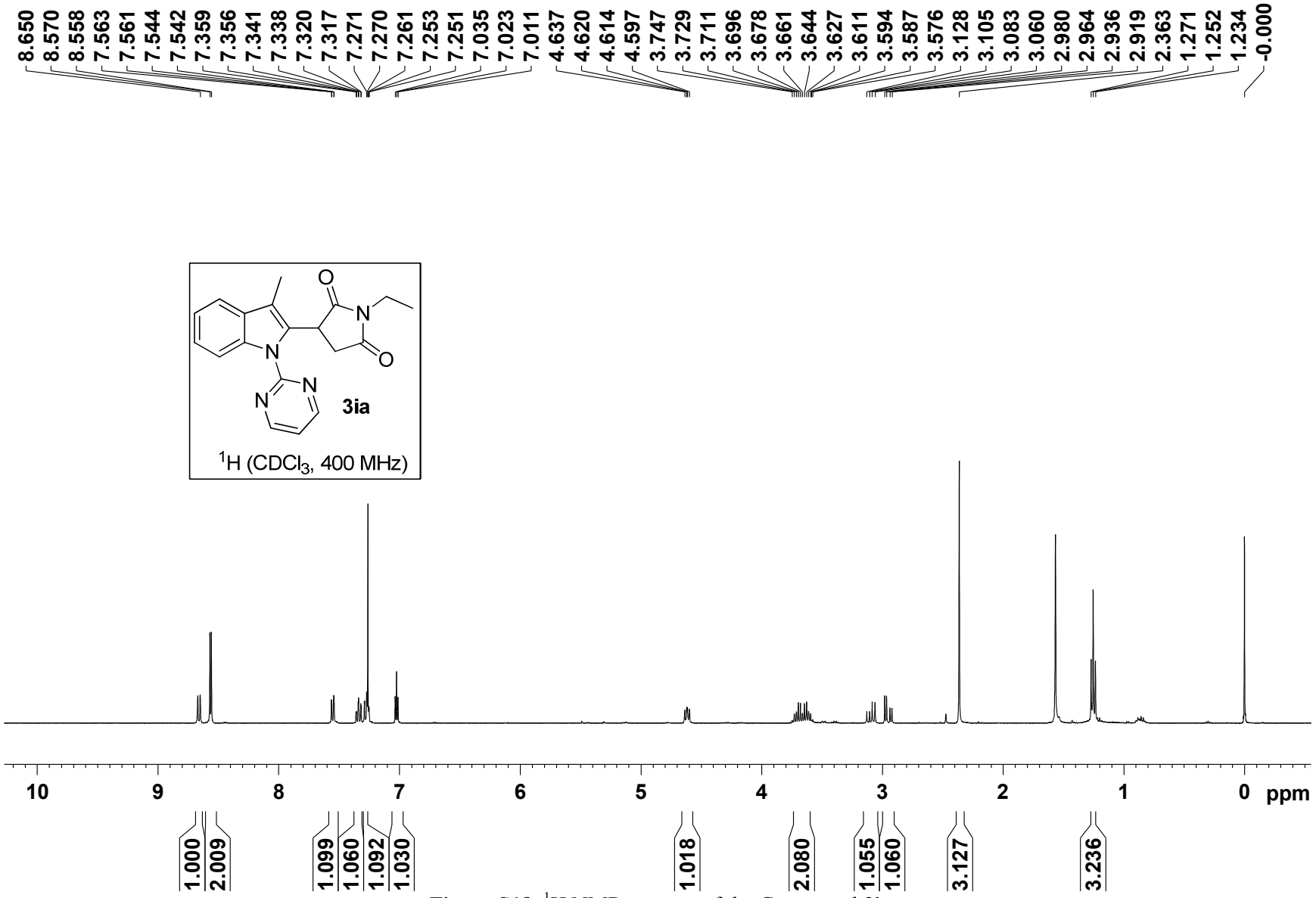


Figure S18. ^{1}H NMR spectra of the Compound **3ia**

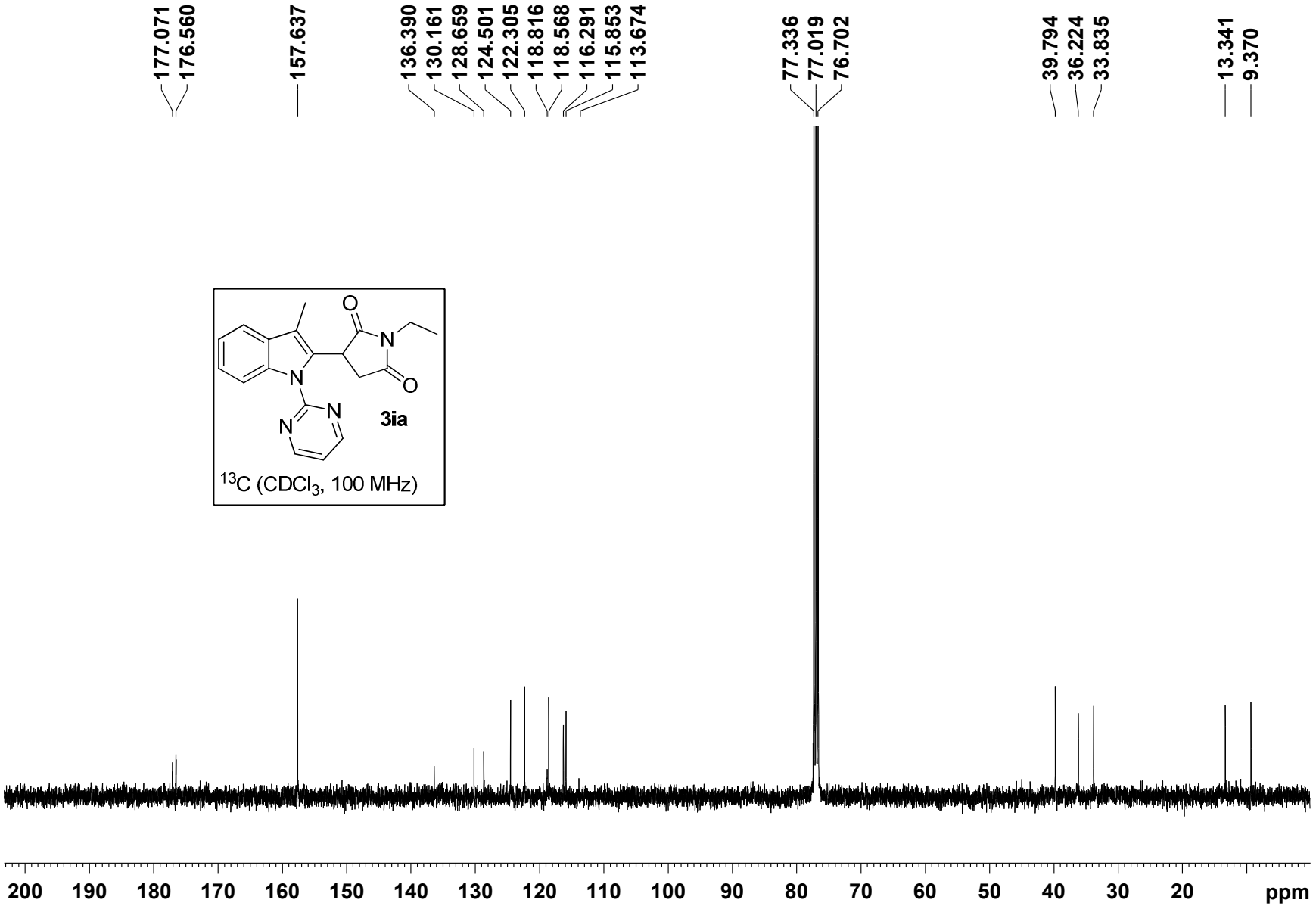


Figure S19. ^{13}C NMR spectra of the Compound **3ia**

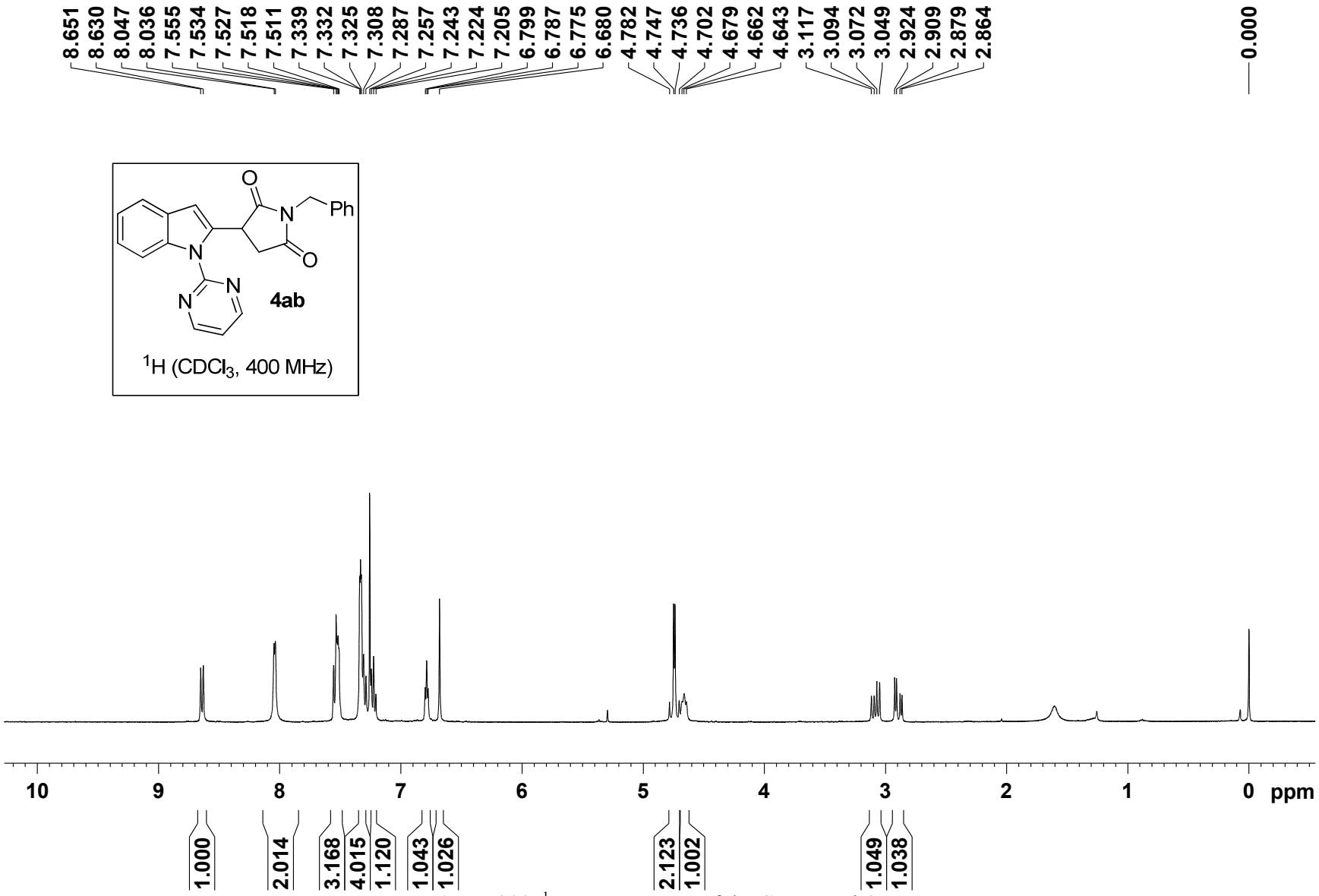


Figure S20. ^{1}H NMR spectra of the Compound **4ab**

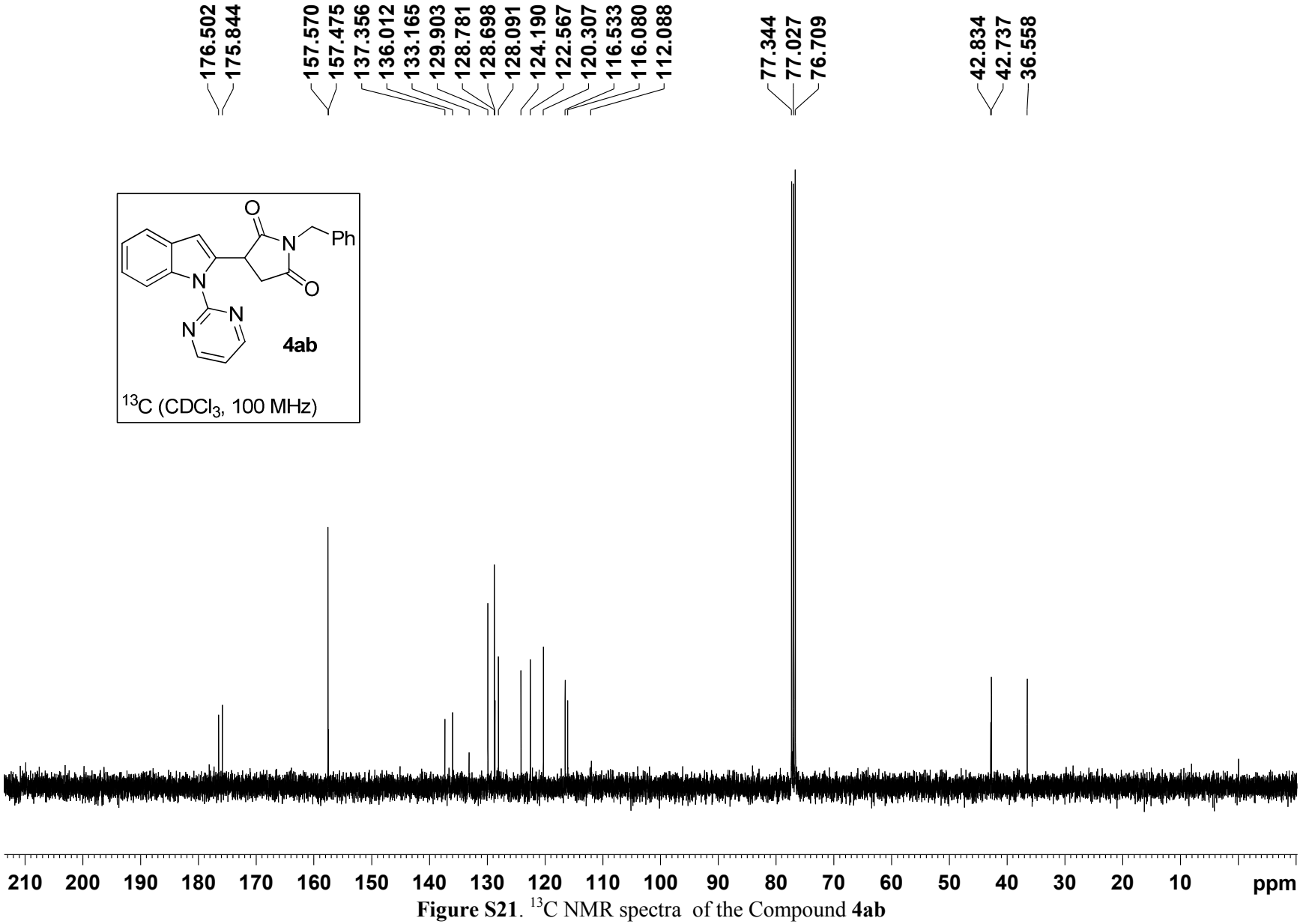


Figure S21. ^{13}C NMR spectra of the Compound **4ab**

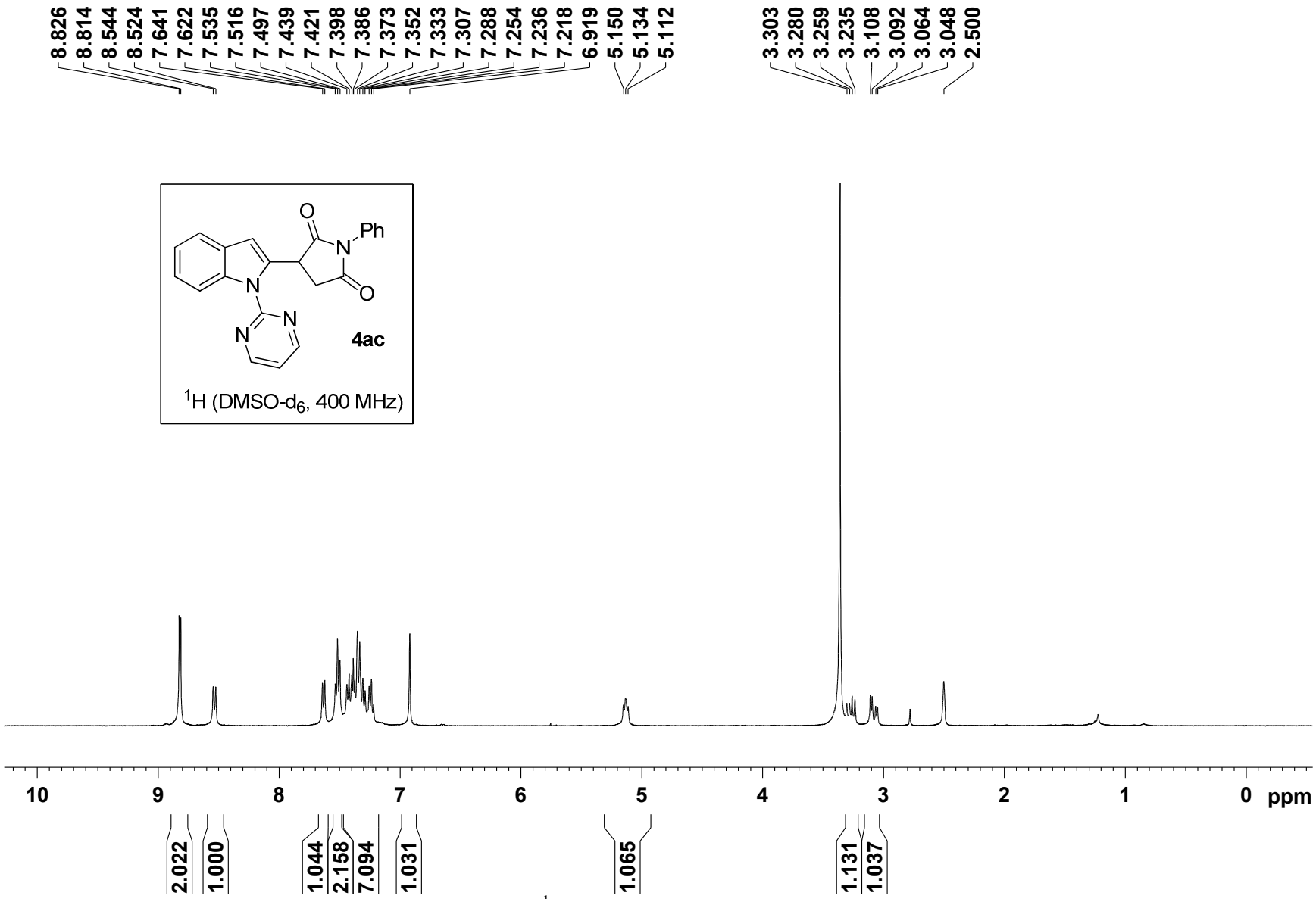


Figure S22. ^{1}H NMR spectra of the Compound **4ac**

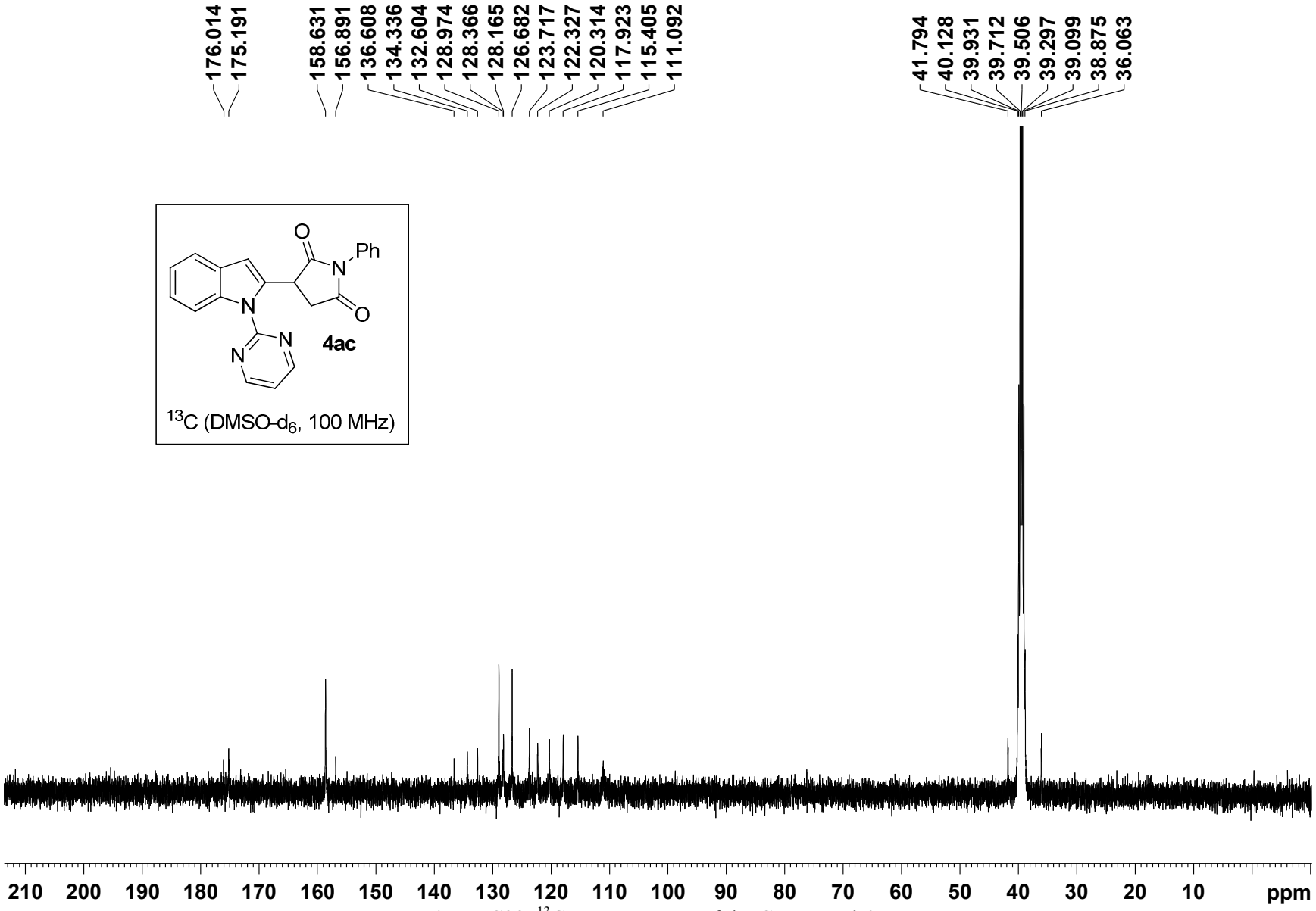


Figure S23. ^{13}C NMR spectra of the Compound **4ac**

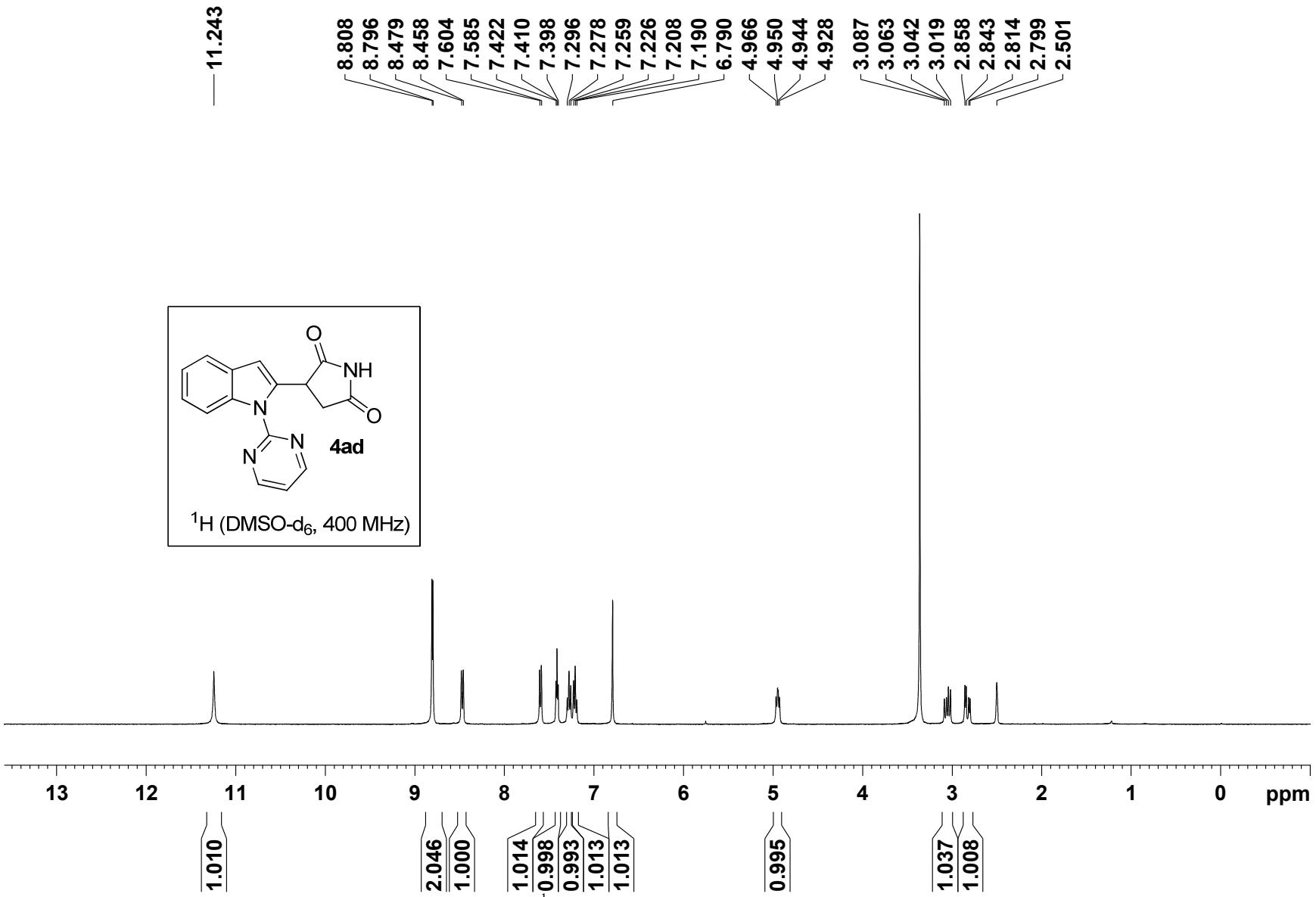


Figure S24. ^{1}H NMR spectra of the Compound **4ad**

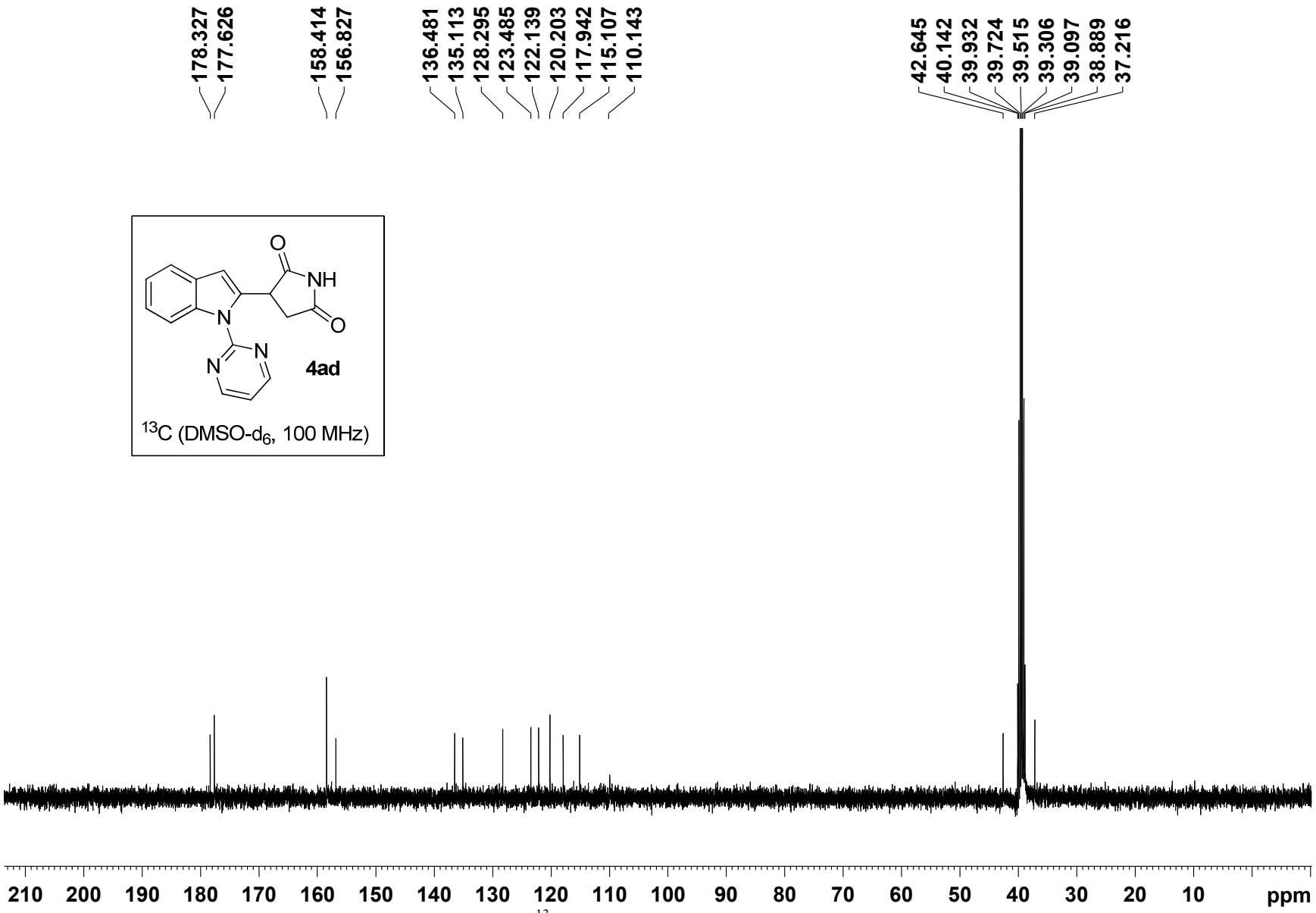


Figure S25. ^{13}C NMR spectra of the Compound **4ad**

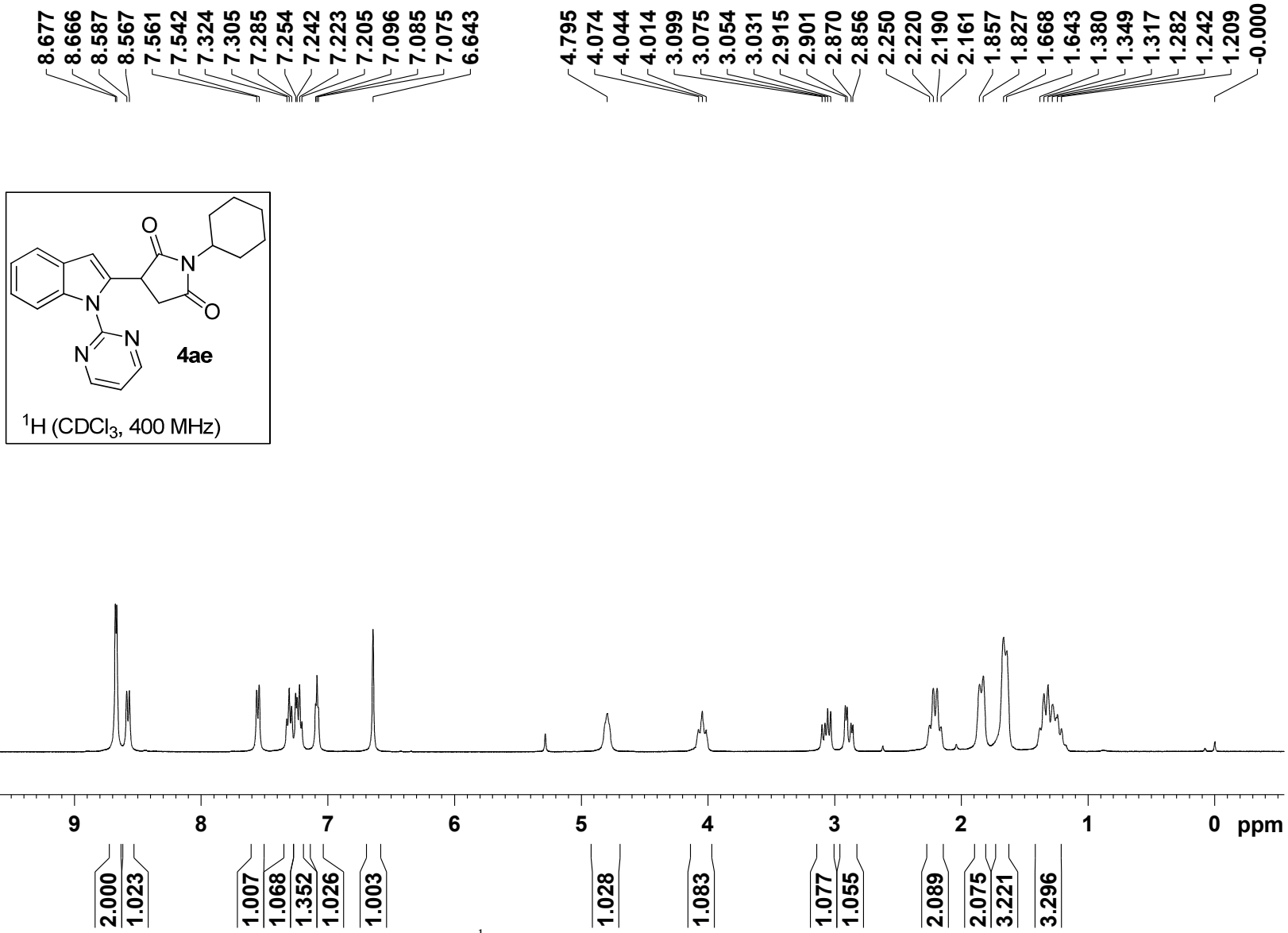


Figure S26. ^{1}H NMR spectra of the Compound **4ae**

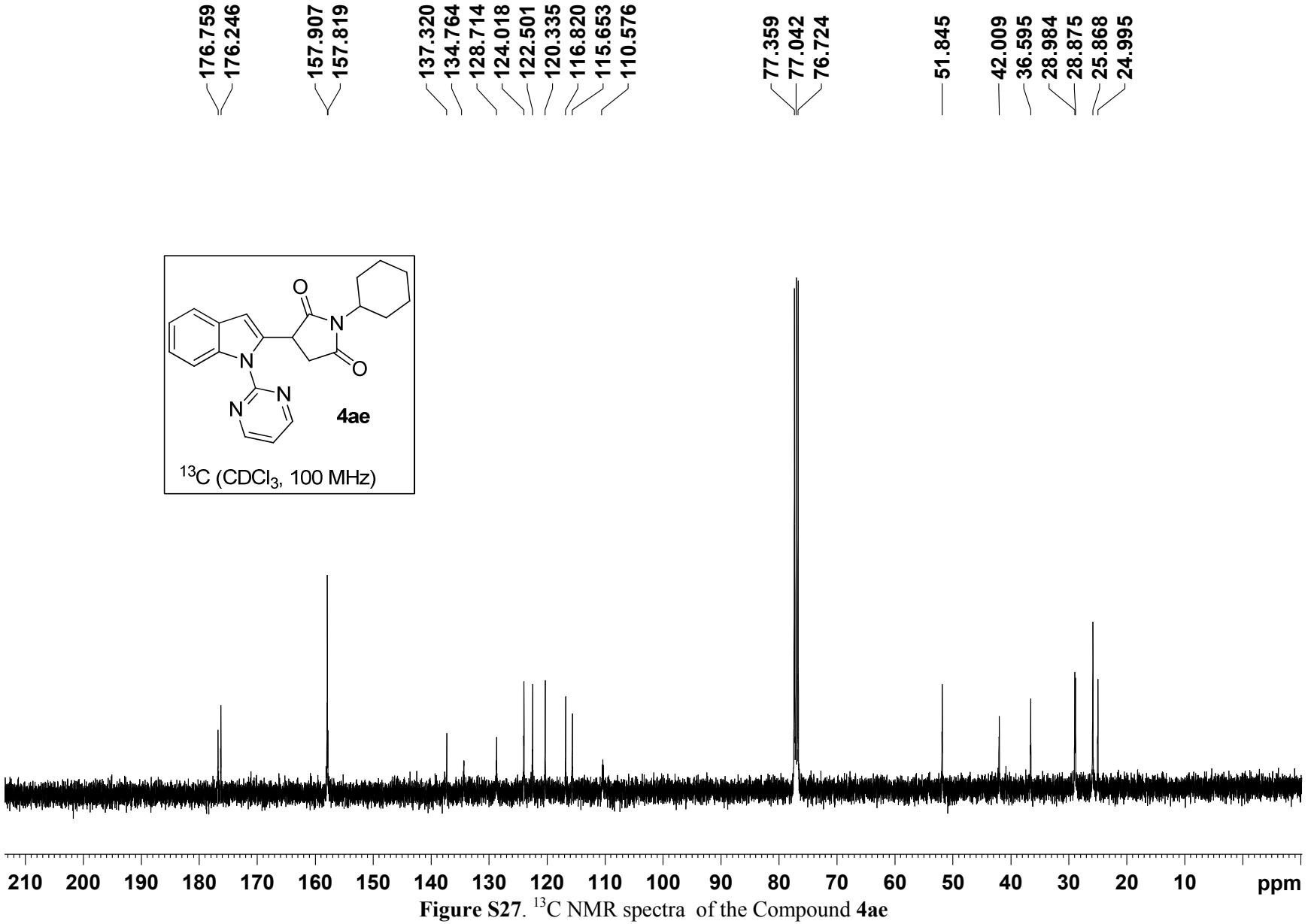


Figure S27. ^{13}C NMR spectra of the Compound **4ae**

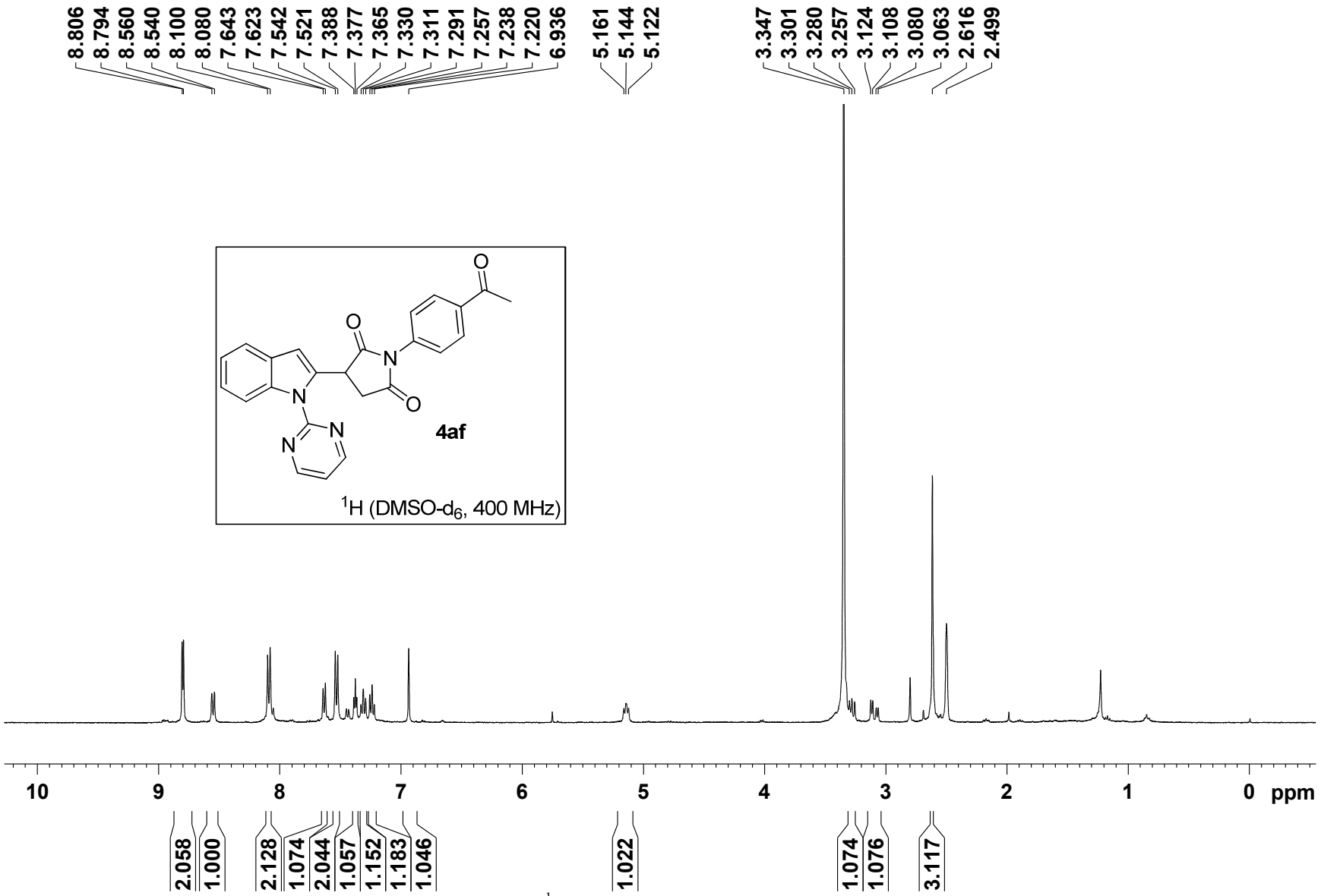


Figure S28. ^{1}H NMR spectra of the Compound **4af**

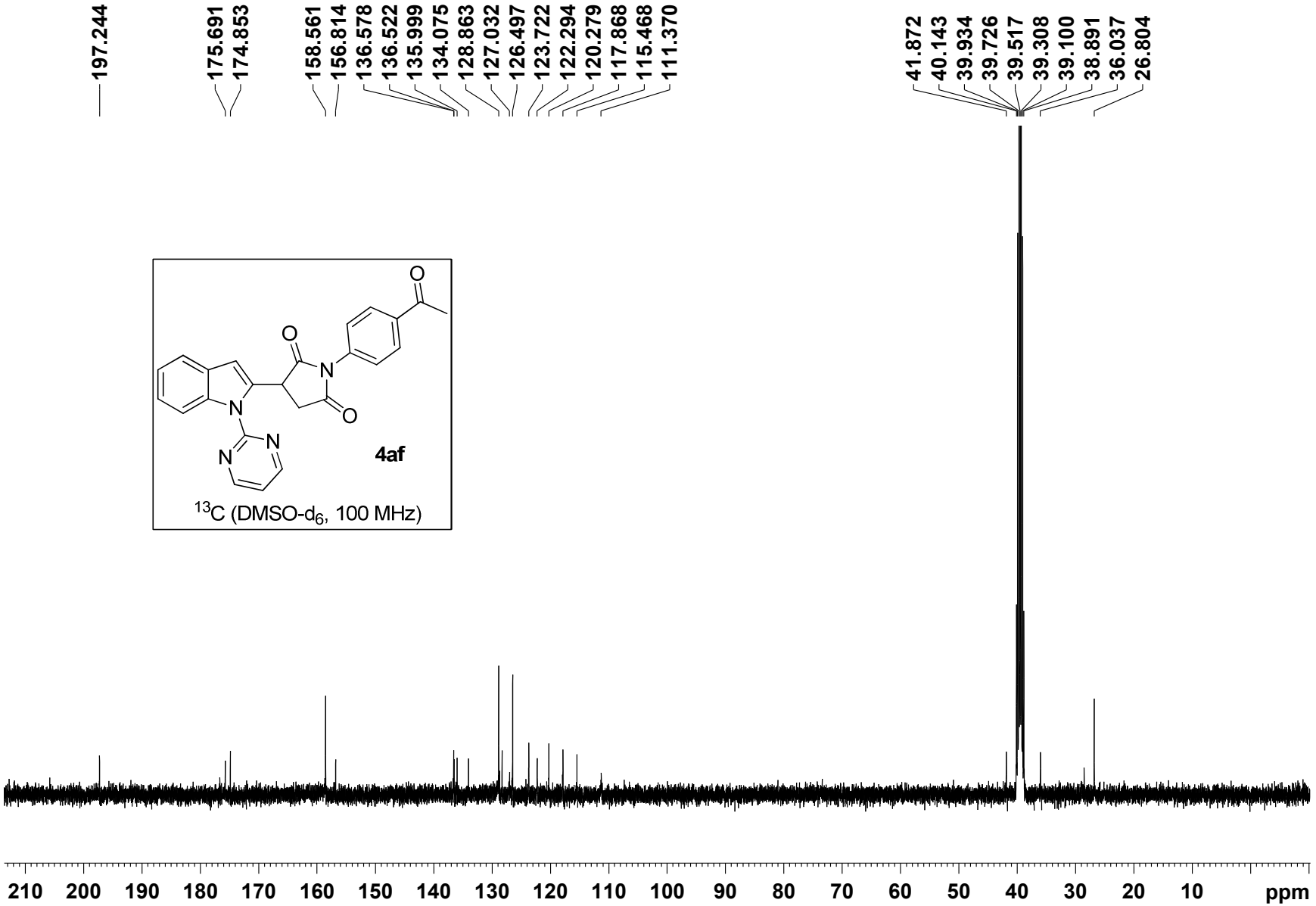


Figure S29. ^{13}C NMR spectra of the Compound **4af**

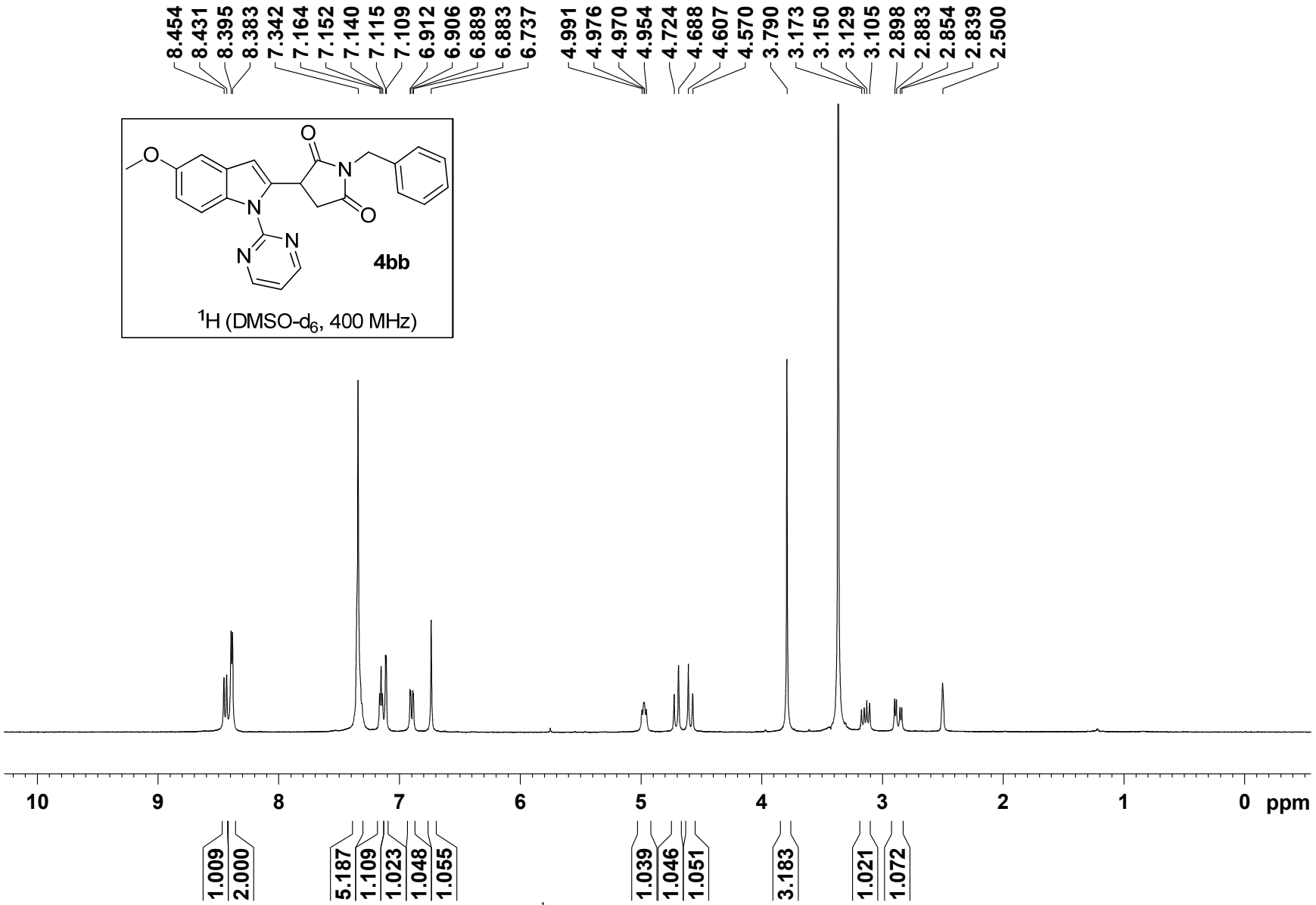


Figure S30. ^{1}H NMR spectra of the Compound **4bb**

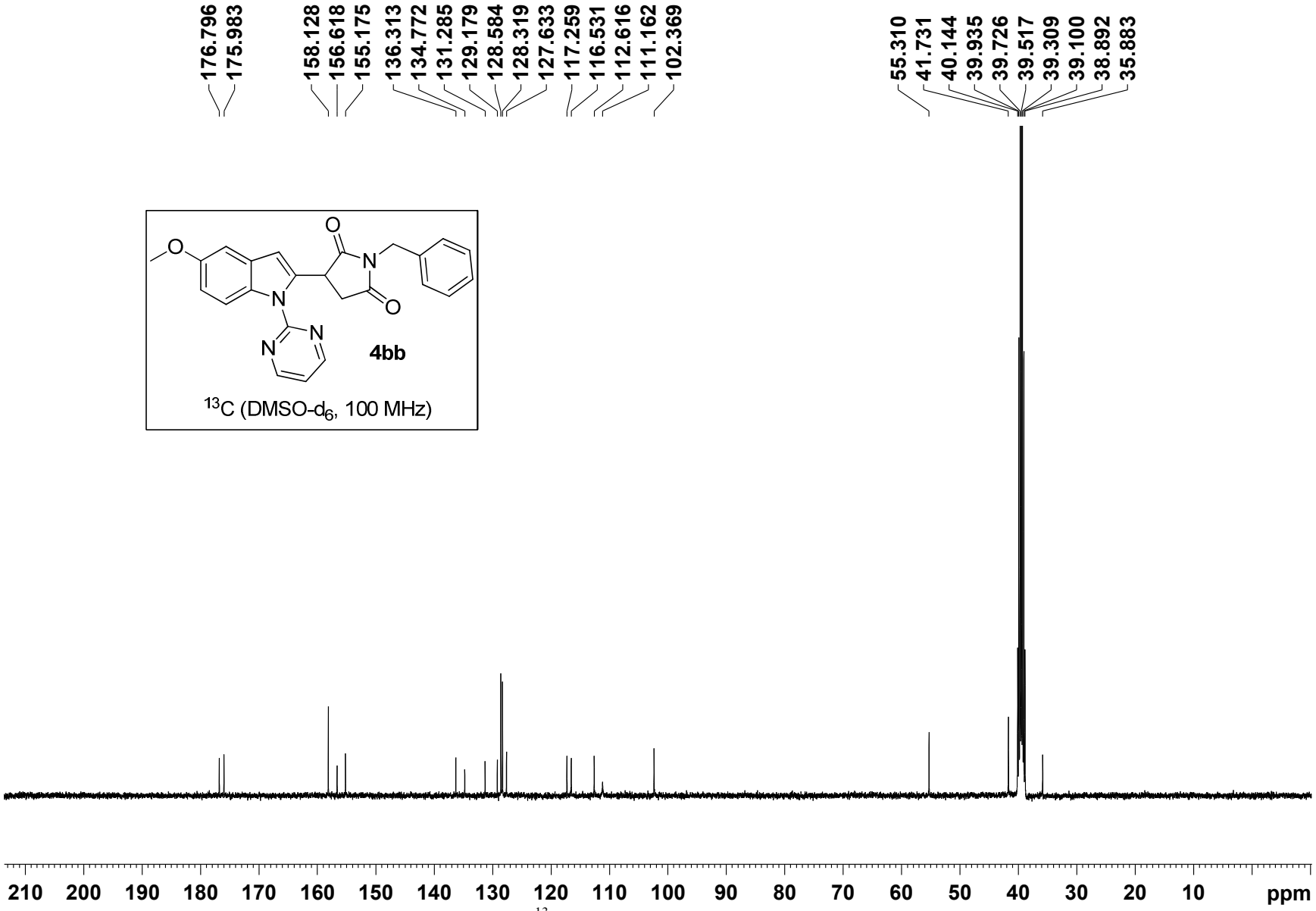


Figure S31. ^{13}C NMR spectra of the Compound **4bb**

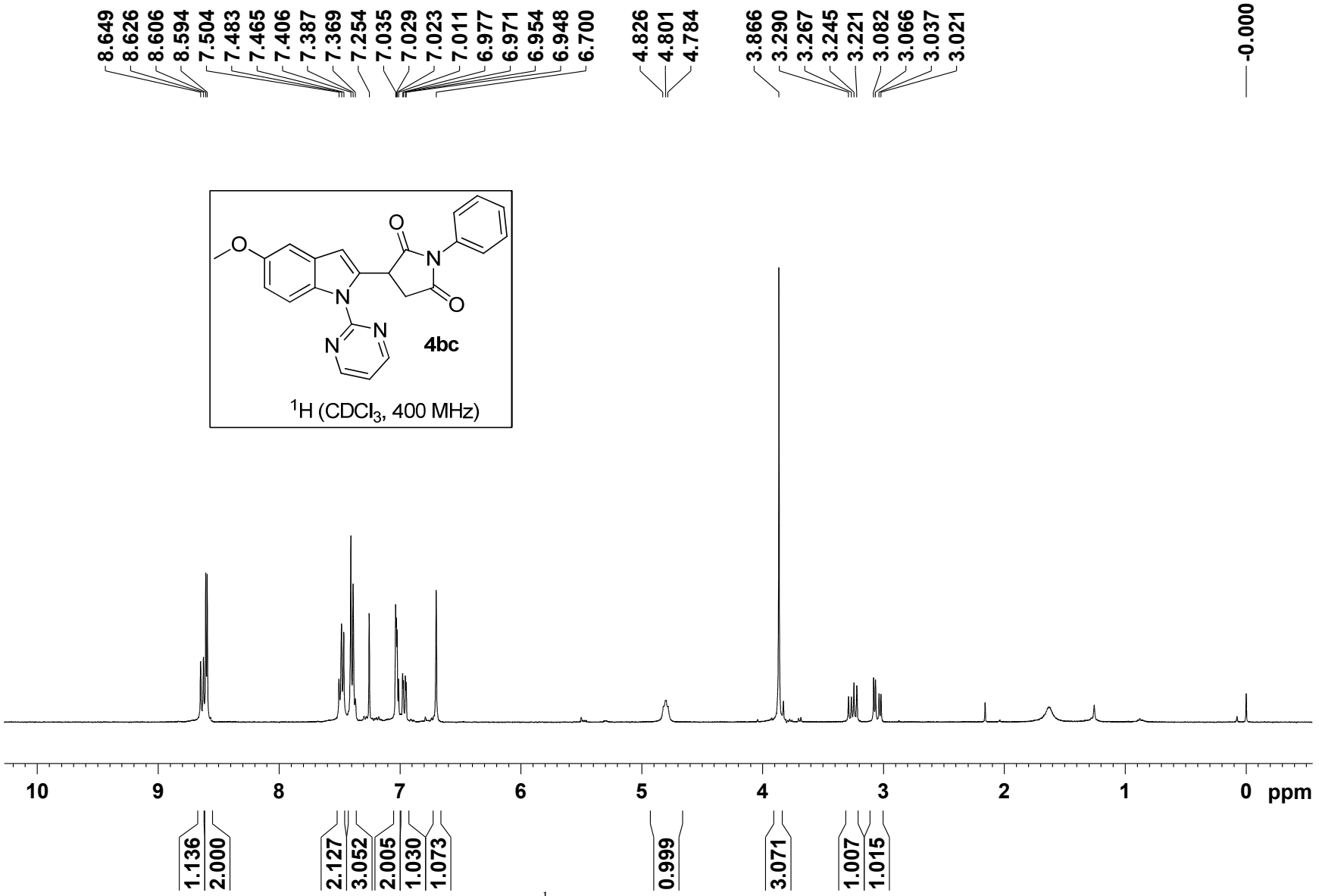


Figure S32. ^{1}H NMR spectra of the Compound **4bc**

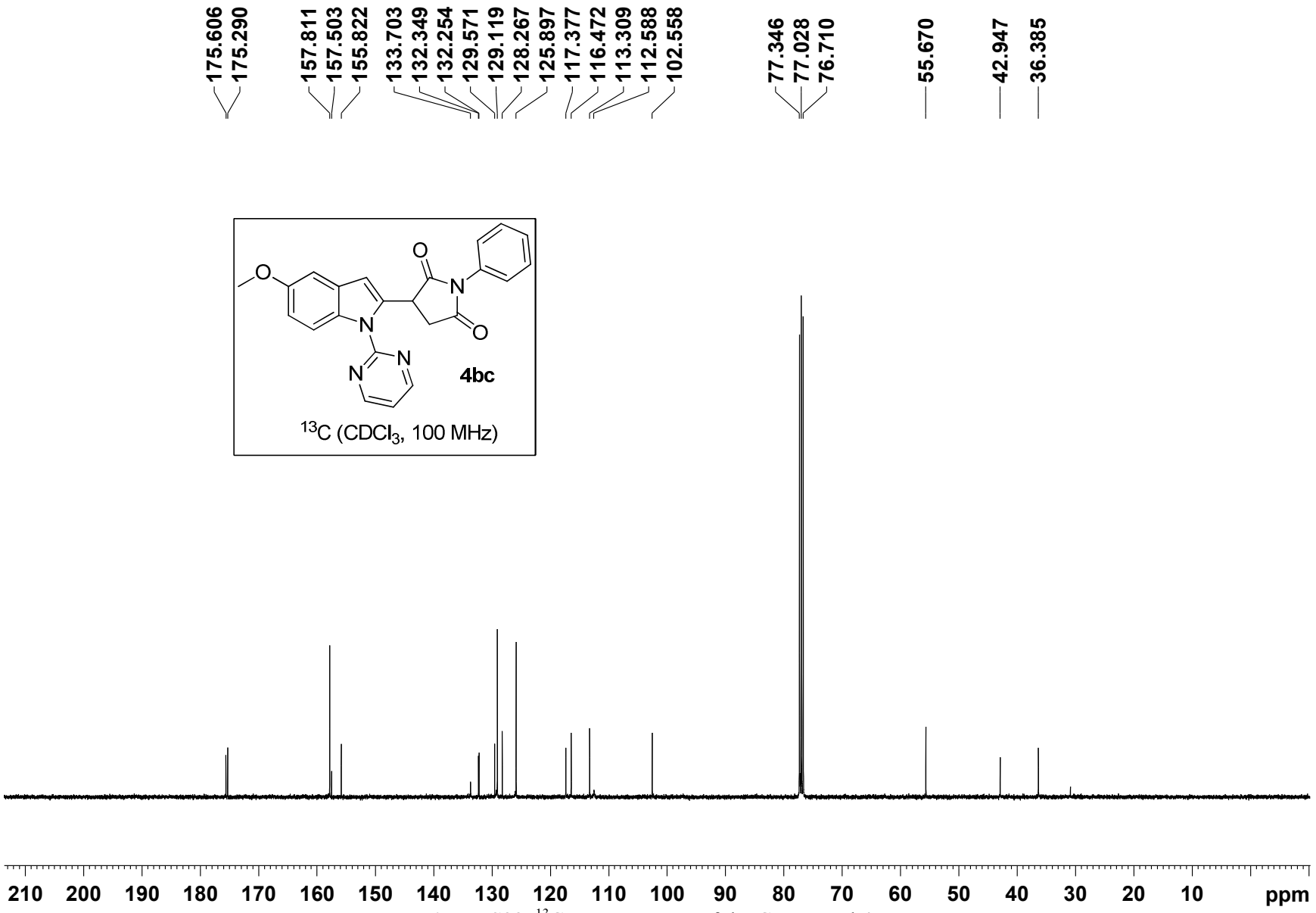


Figure S33. ^{13}C NMR spectra of the Compound **4bc**

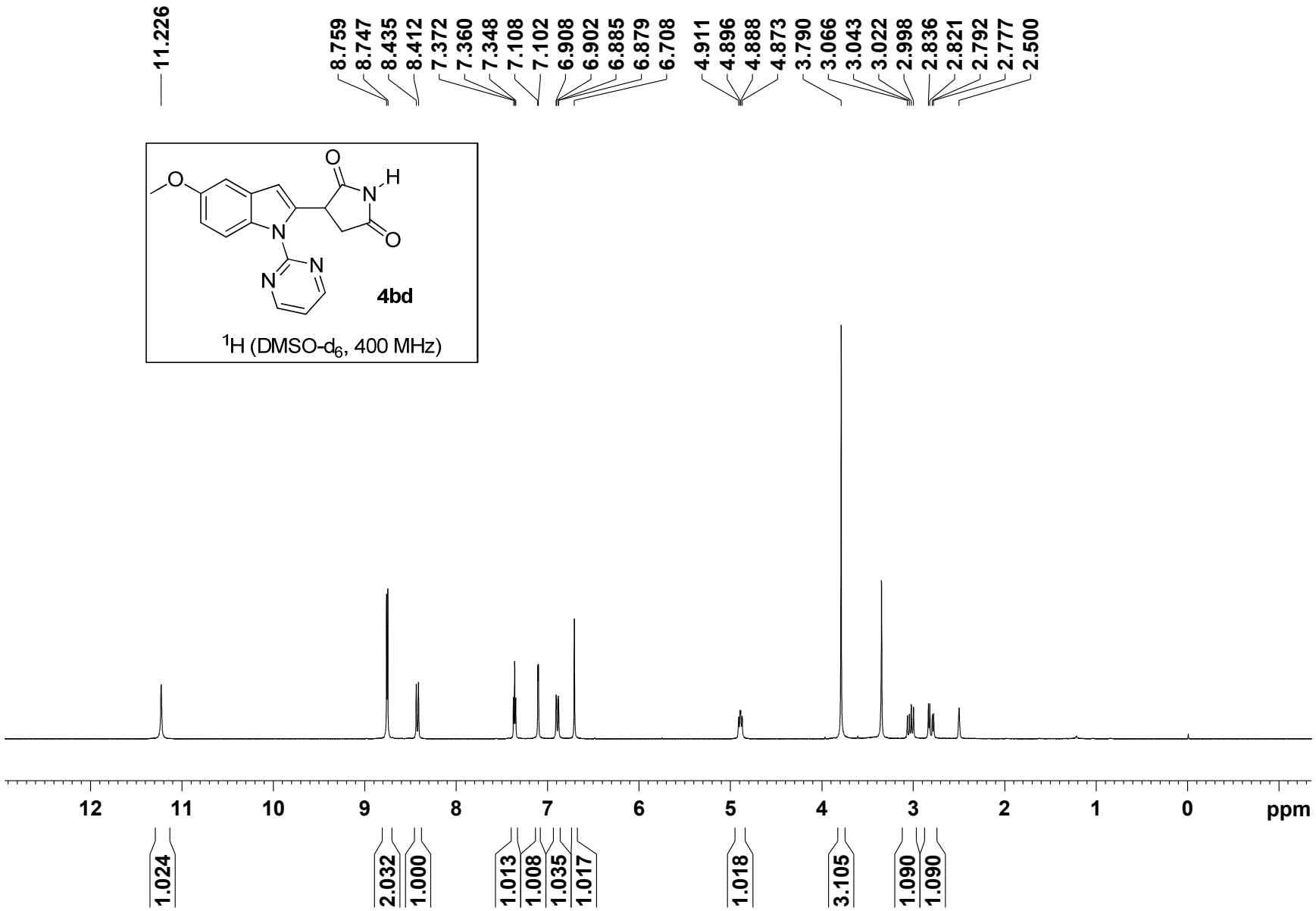


Figure S34. ^{1}H NMR spectra of the Compound **4bd**

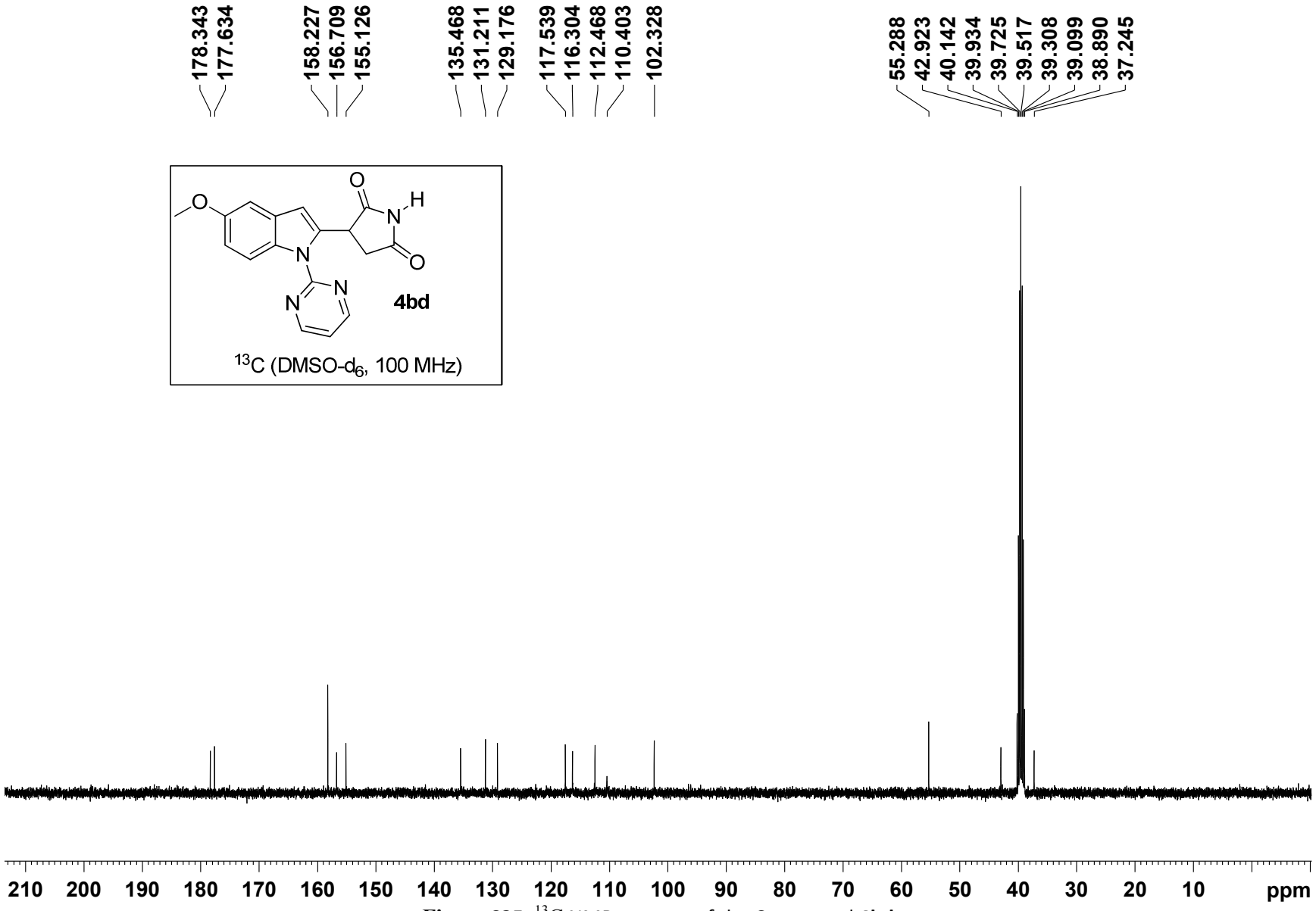


Figure S35. ^{13}C NMR spectra of the Compound **4bd**

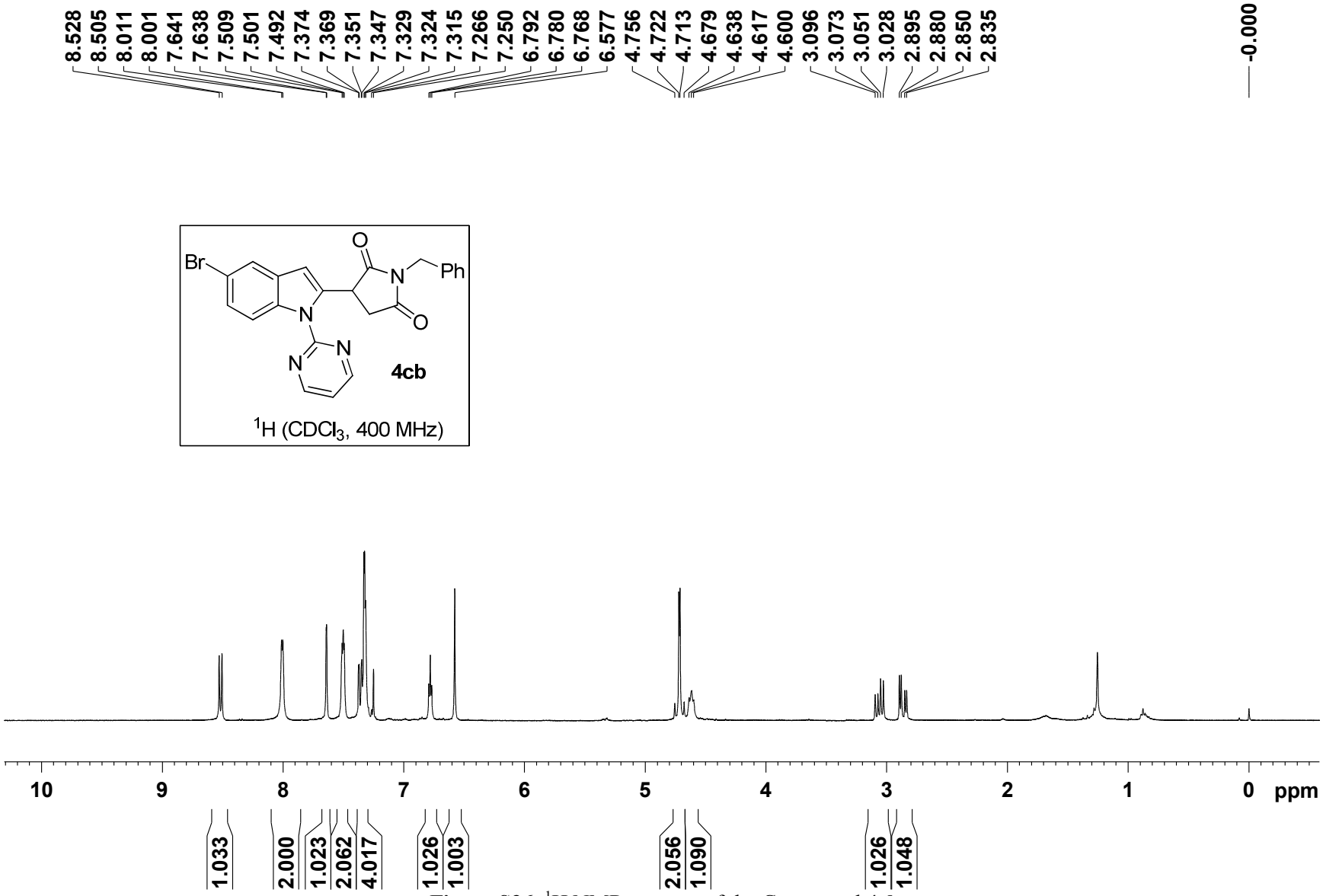


Figure S36. ^{1}H NMR spectra of the Compound **4cb**

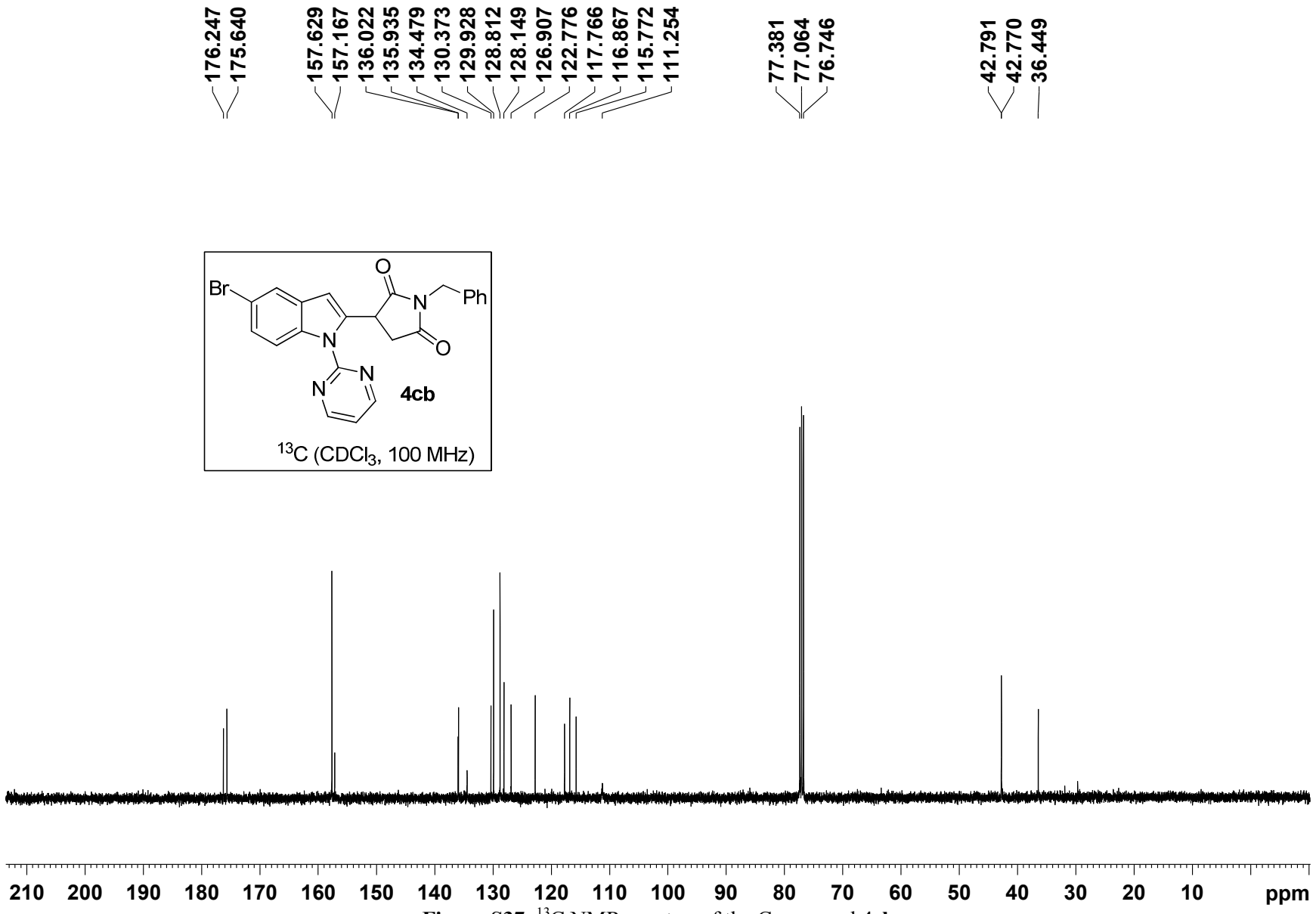


Figure S37. ^{13}C NMR spectra of the Compound **4cb**

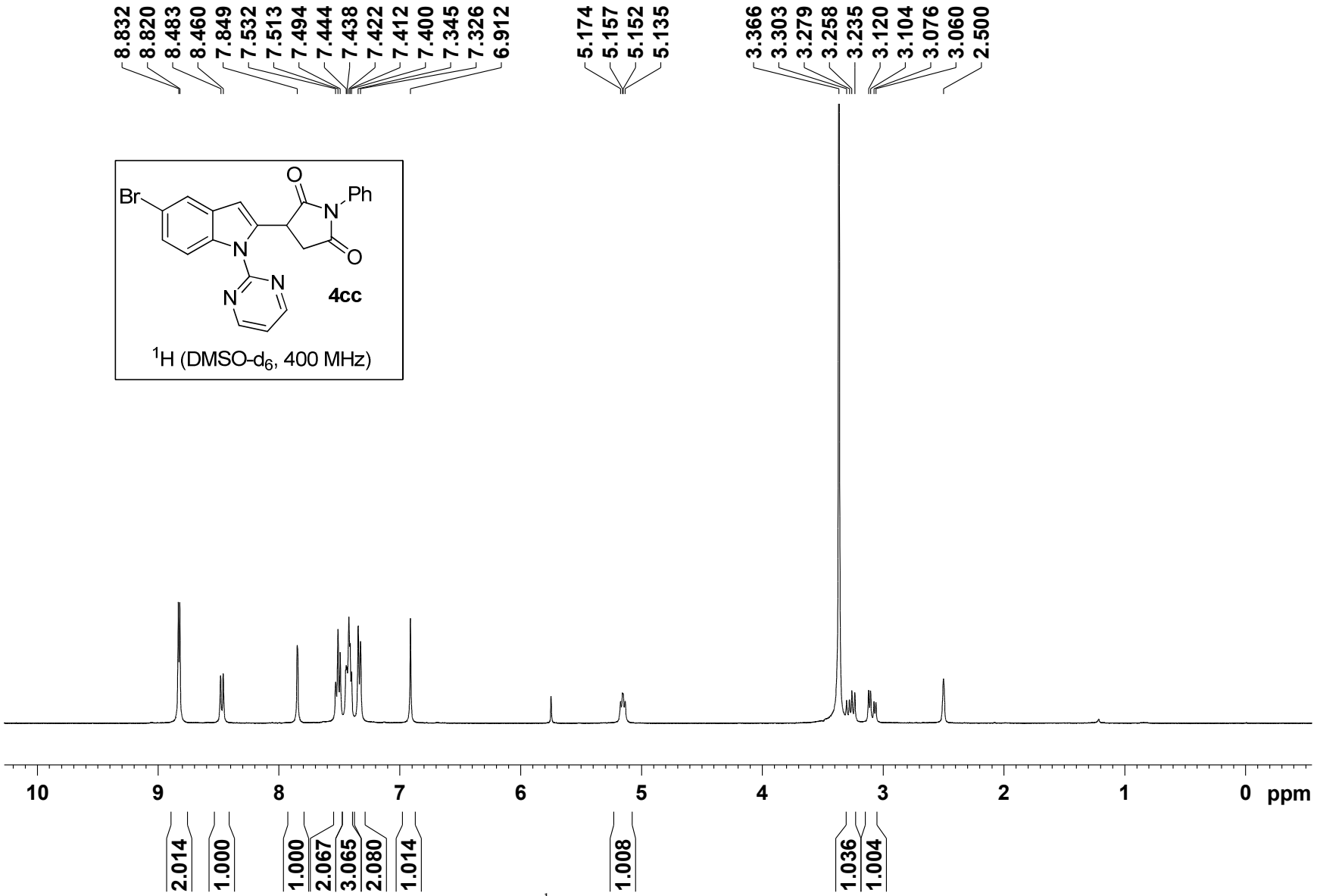


Figure S38. ^{1}H NMR spectra of the Compound **4cc**

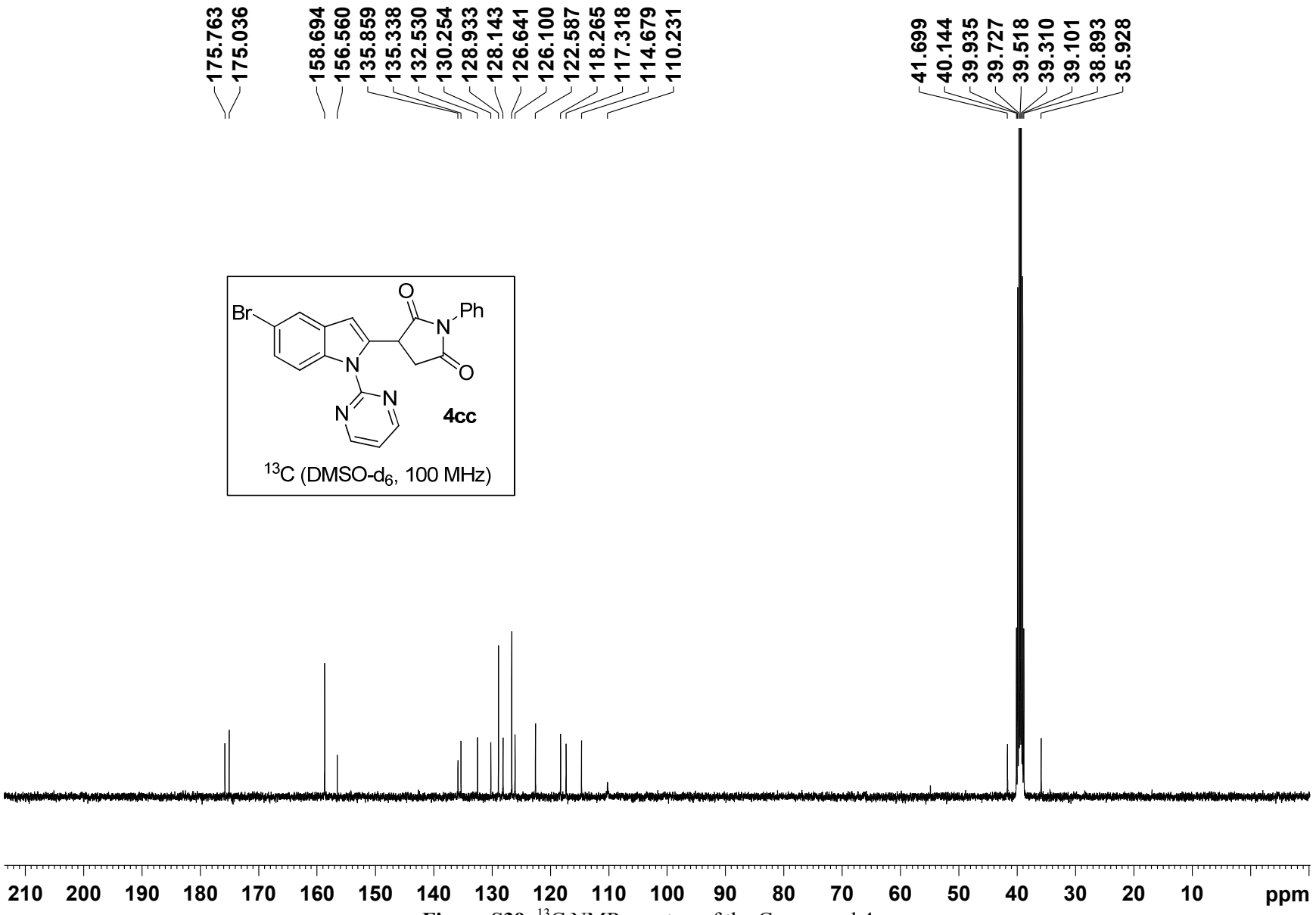


Figure S39. ^{13}C NMR spectra of the Compound **4cc**

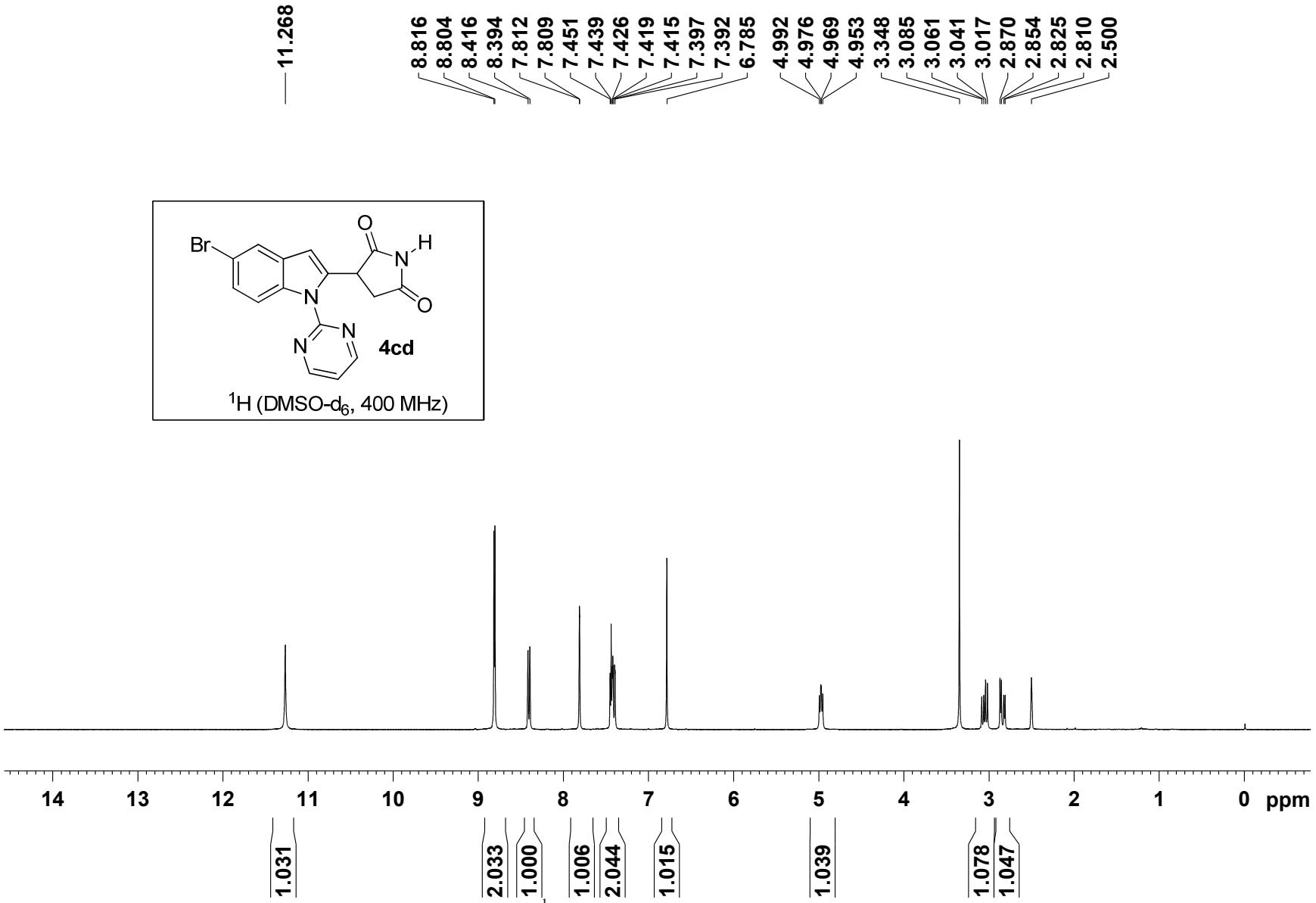


Figure S40. ^{1}H NMR spectra of the Compound **4cd**

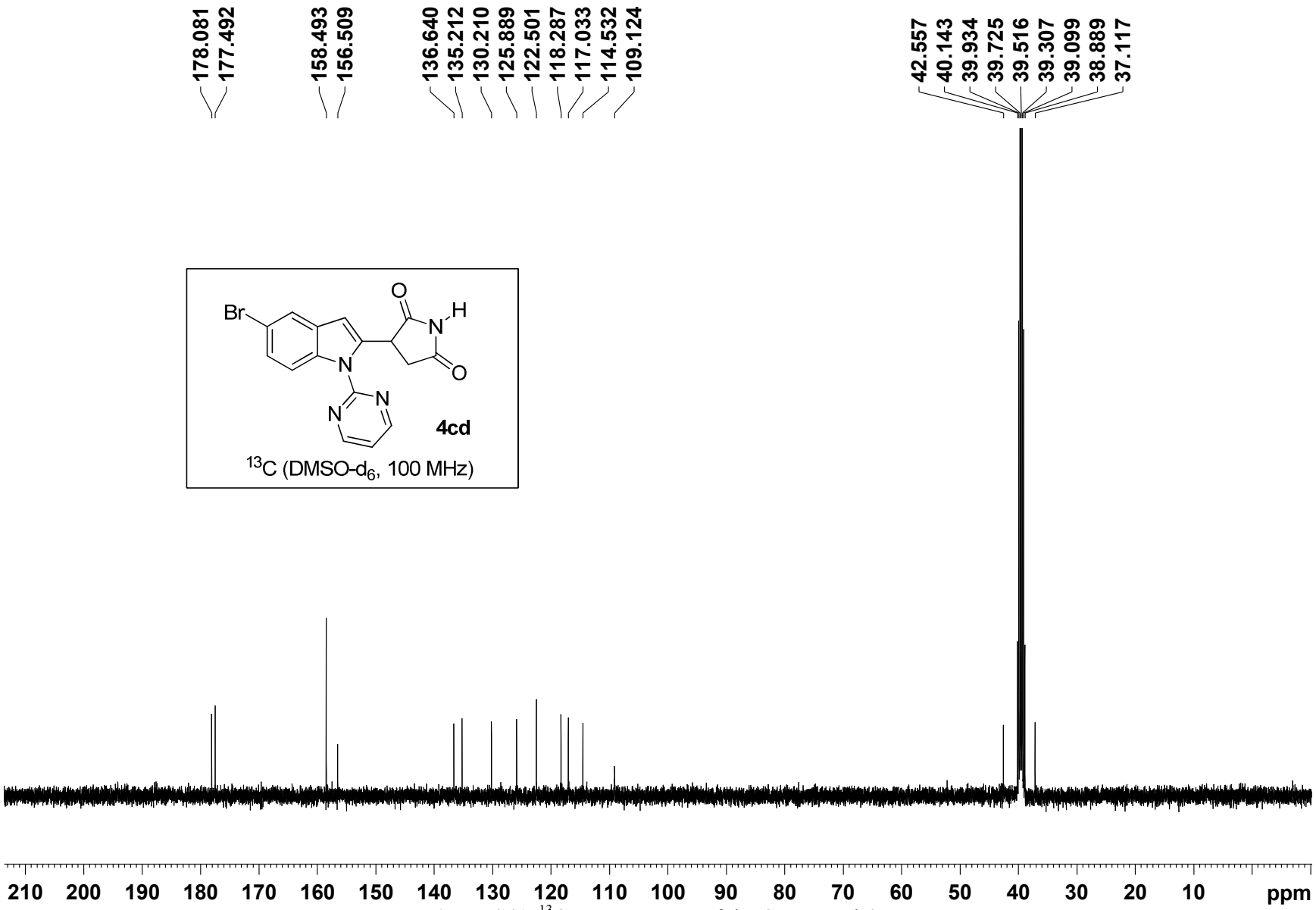


Figure S41. ^{13}C NMR spectra of the Compound **4cd**

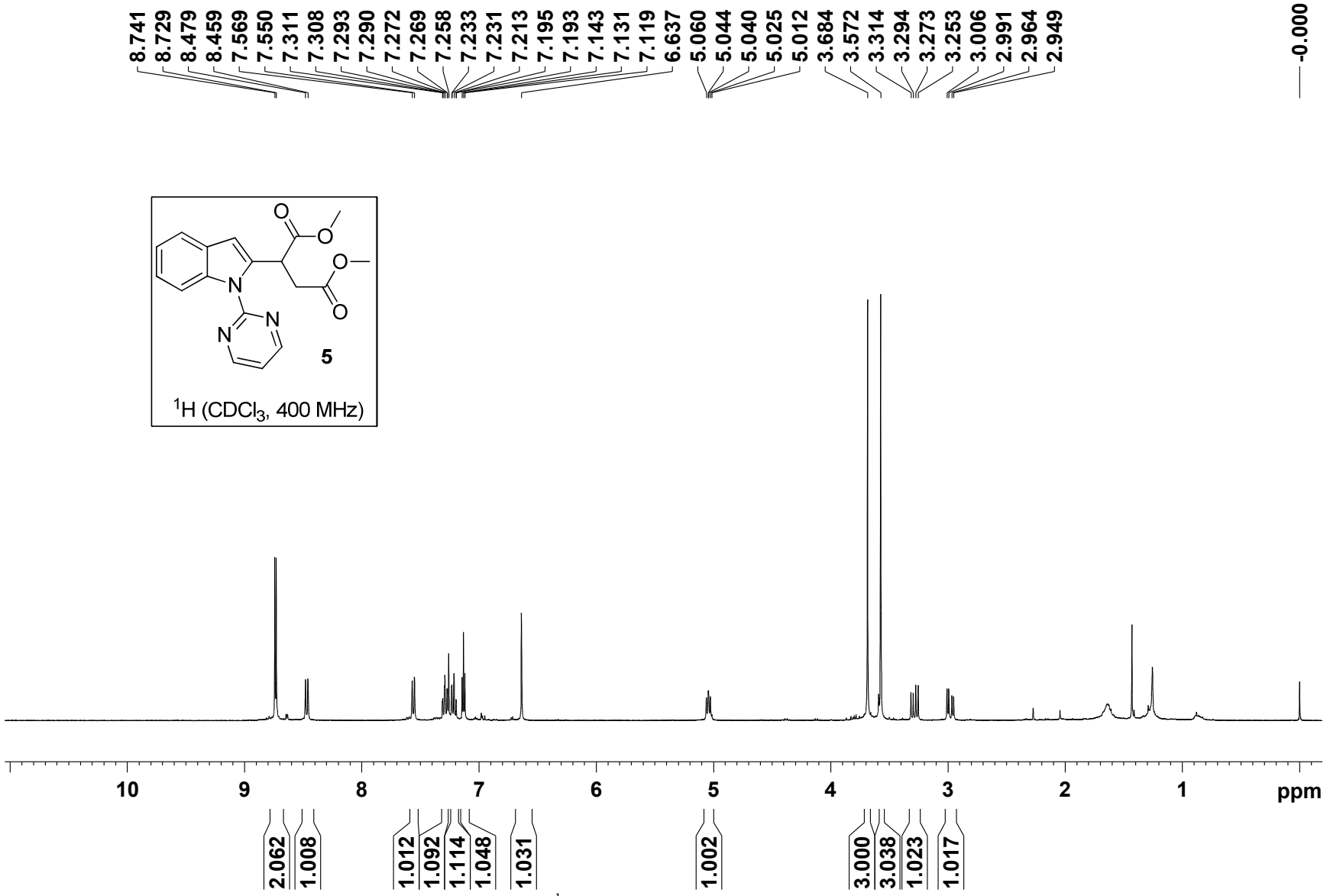


Figure S42. ^{1}H NMR spectra of the Compound **5**

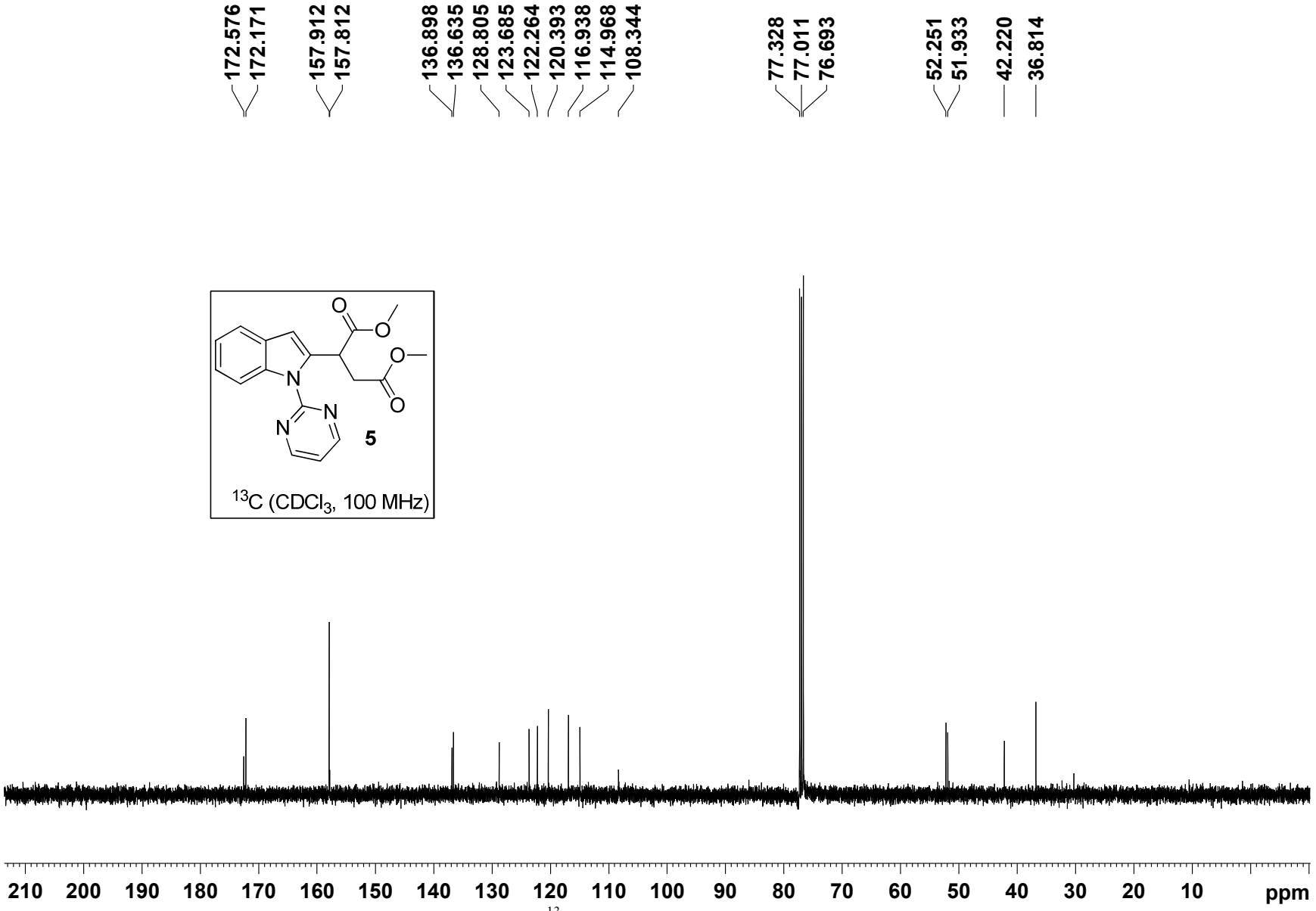


Figure S43. ^{13}C NMR spectra of the Compound **5**

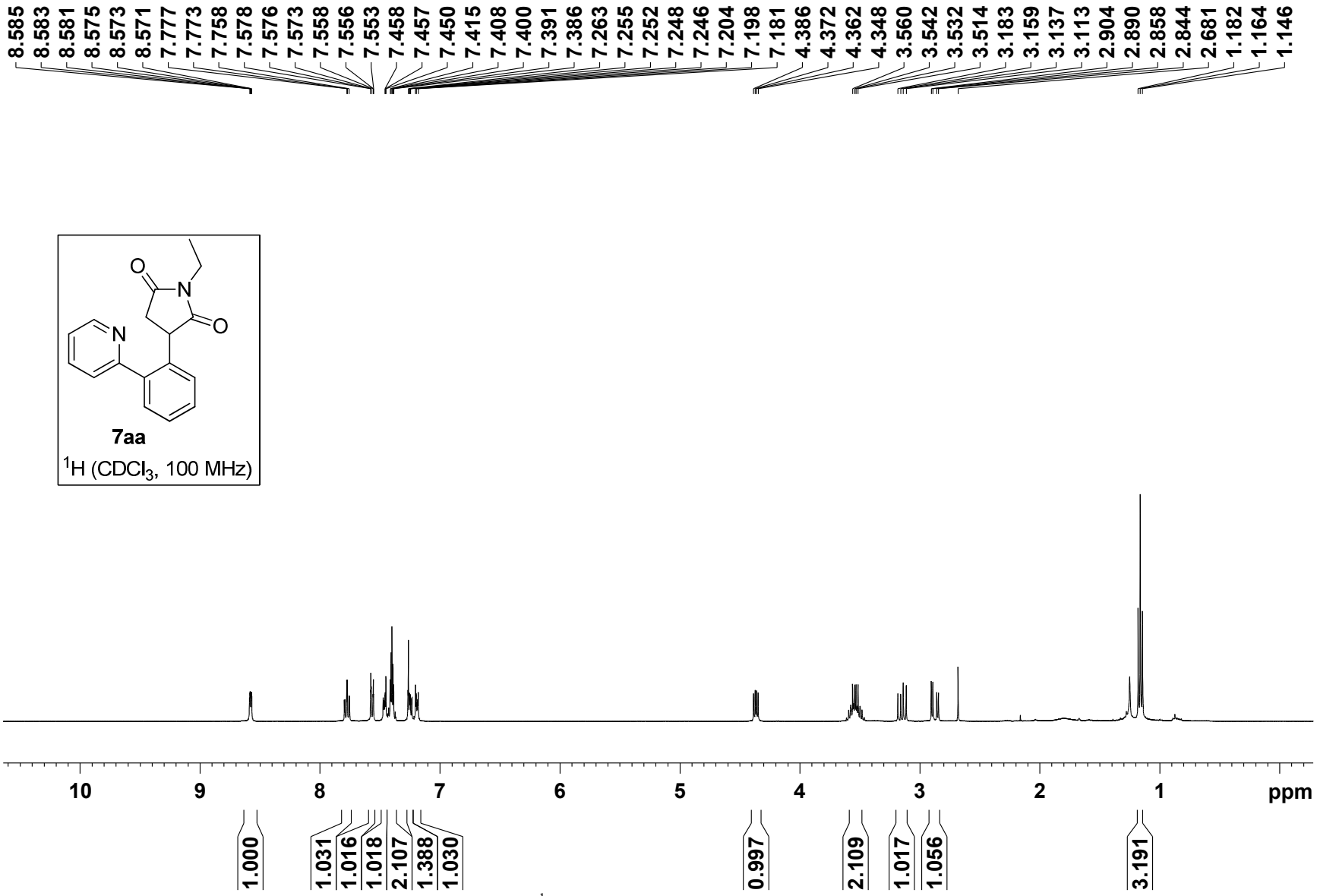


Figure S44. ^{1}H NMR spectra of the Compound **7aa**

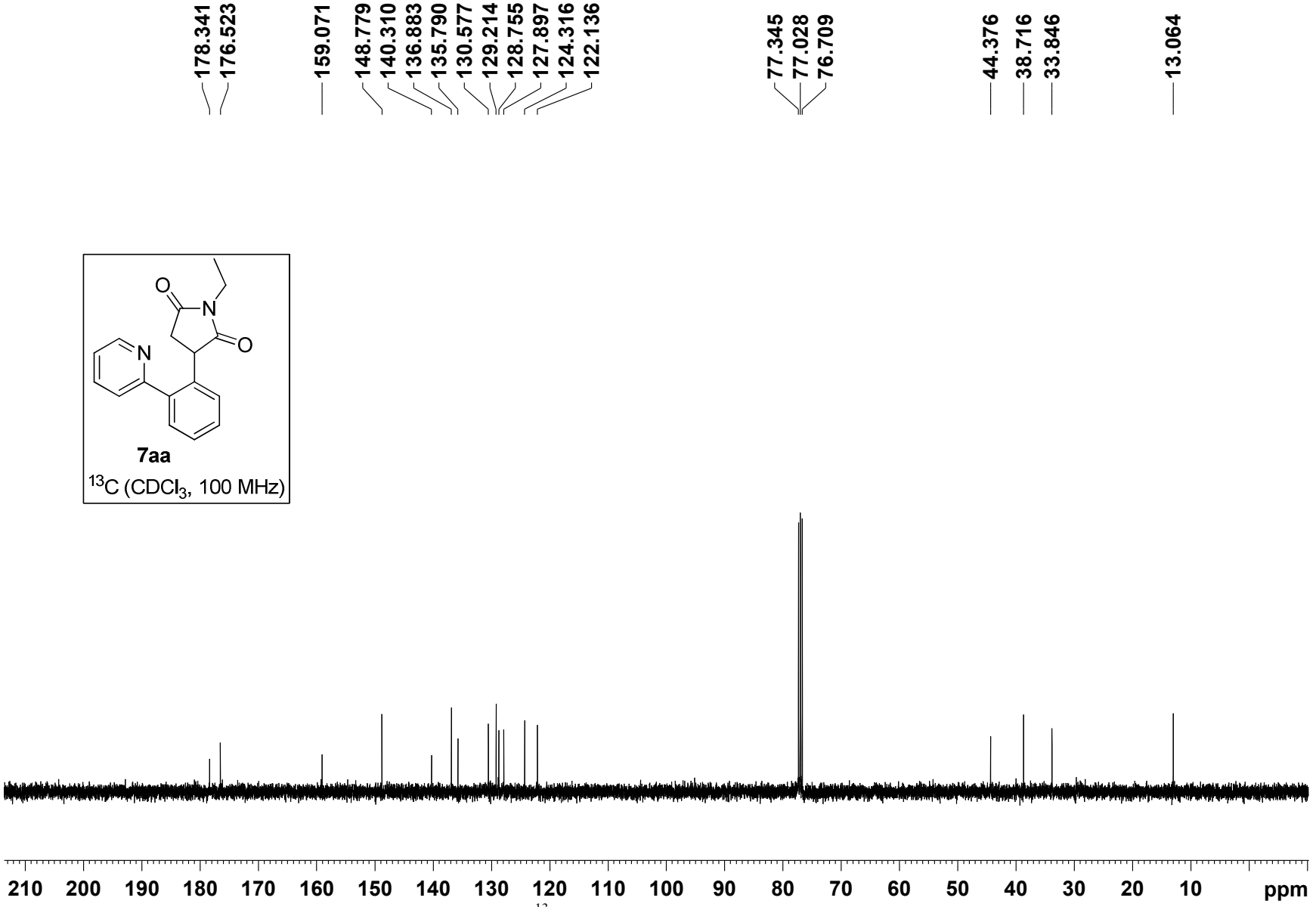


Figure S45. ^{13}C NMR spectra of the Compound **7aa**

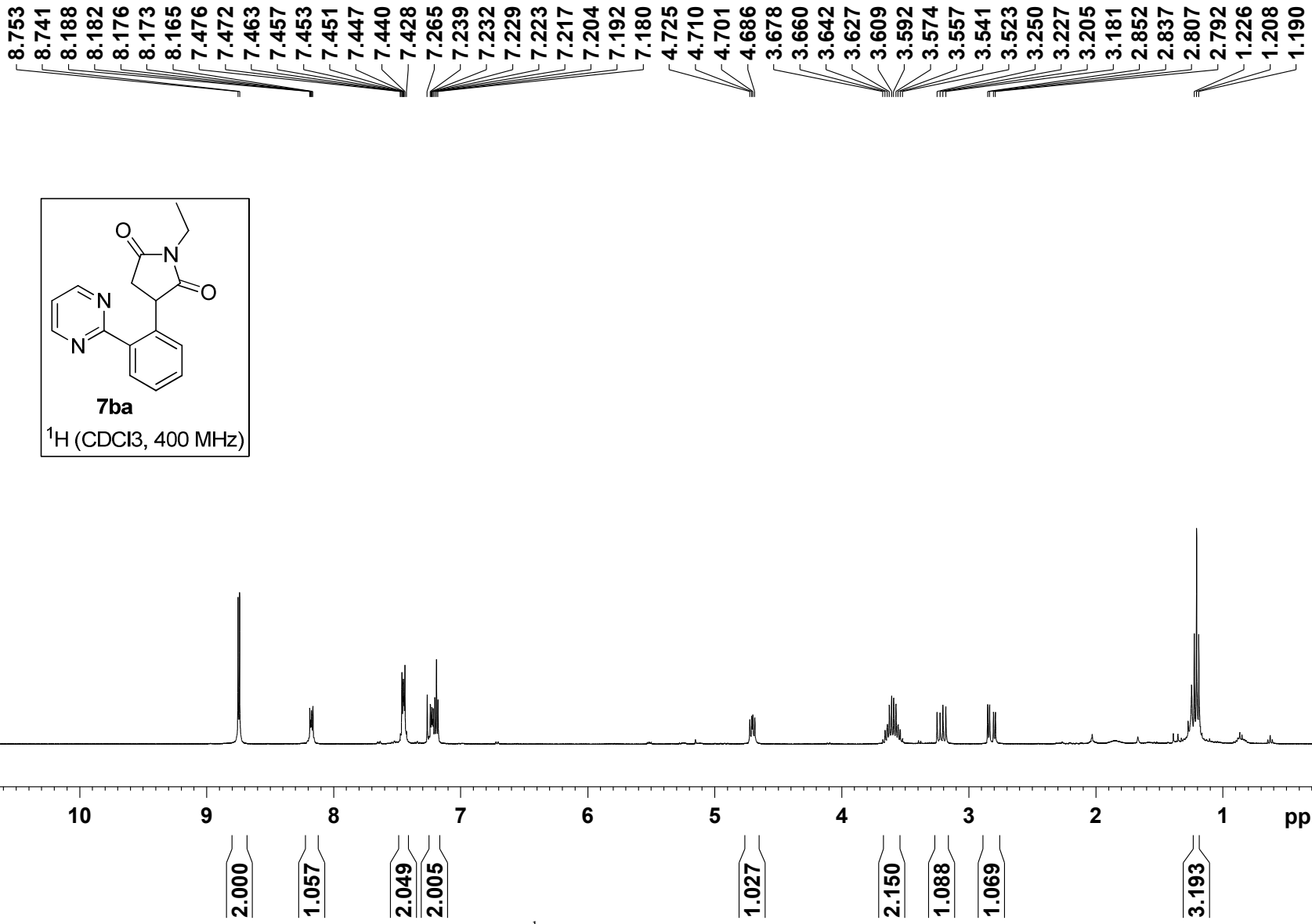


Figure S46. ^{1}H NMR spectra of the Compound **7ba**

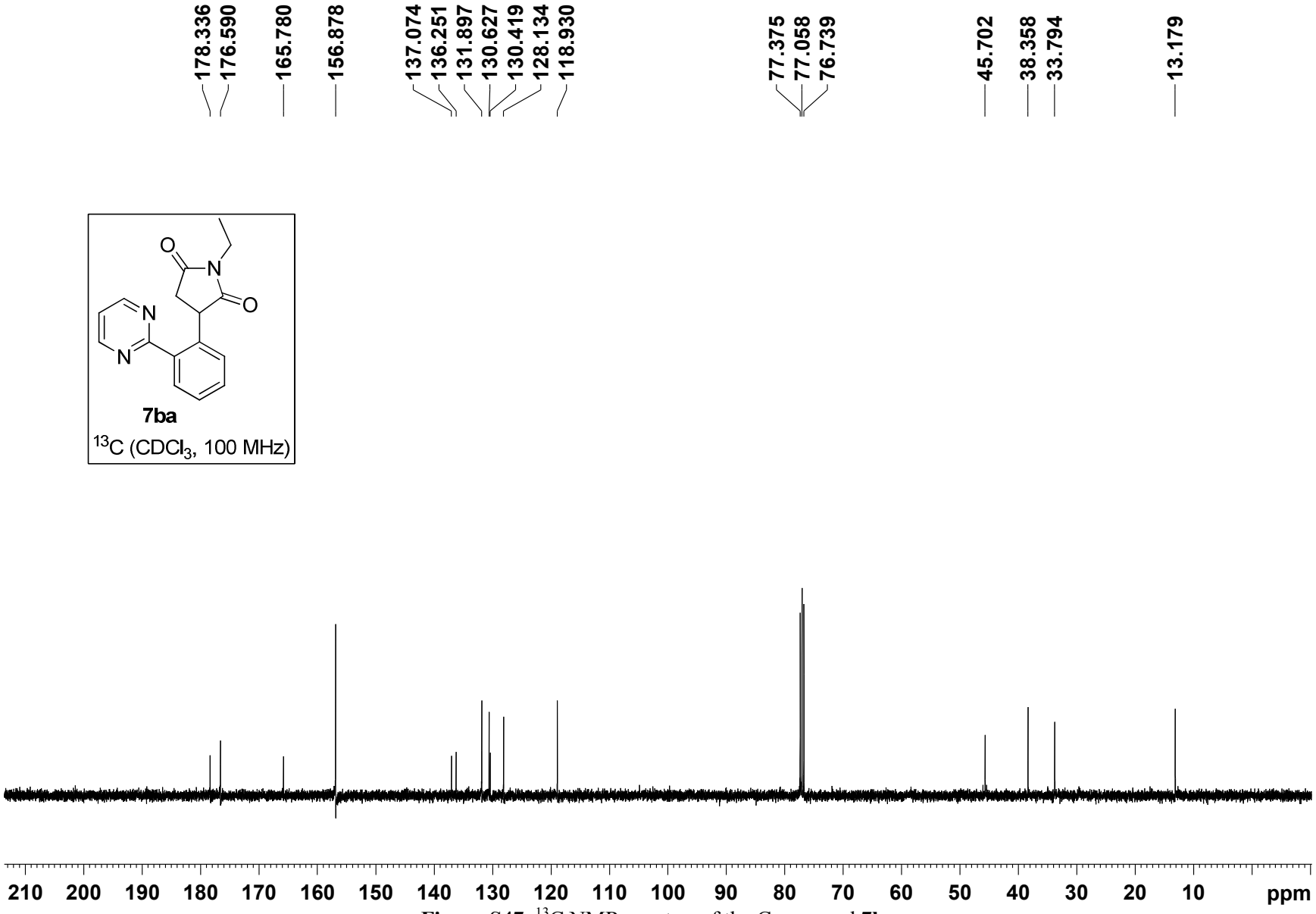


Figure S47. ^{13}C NMR spectra of the Compound **7ba**

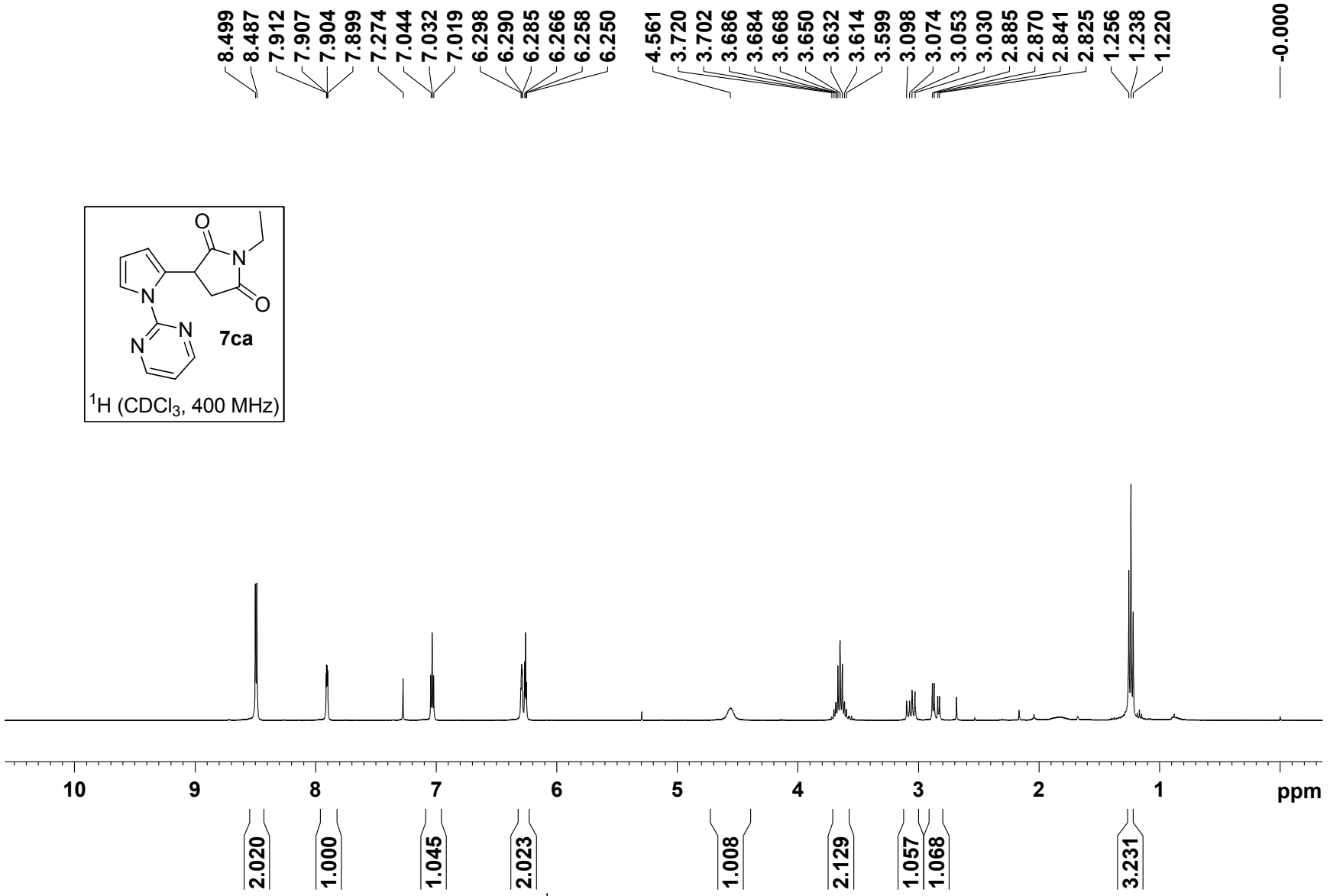


Figure S48. ^{1}H NMR spectra of the Compound **7ca**

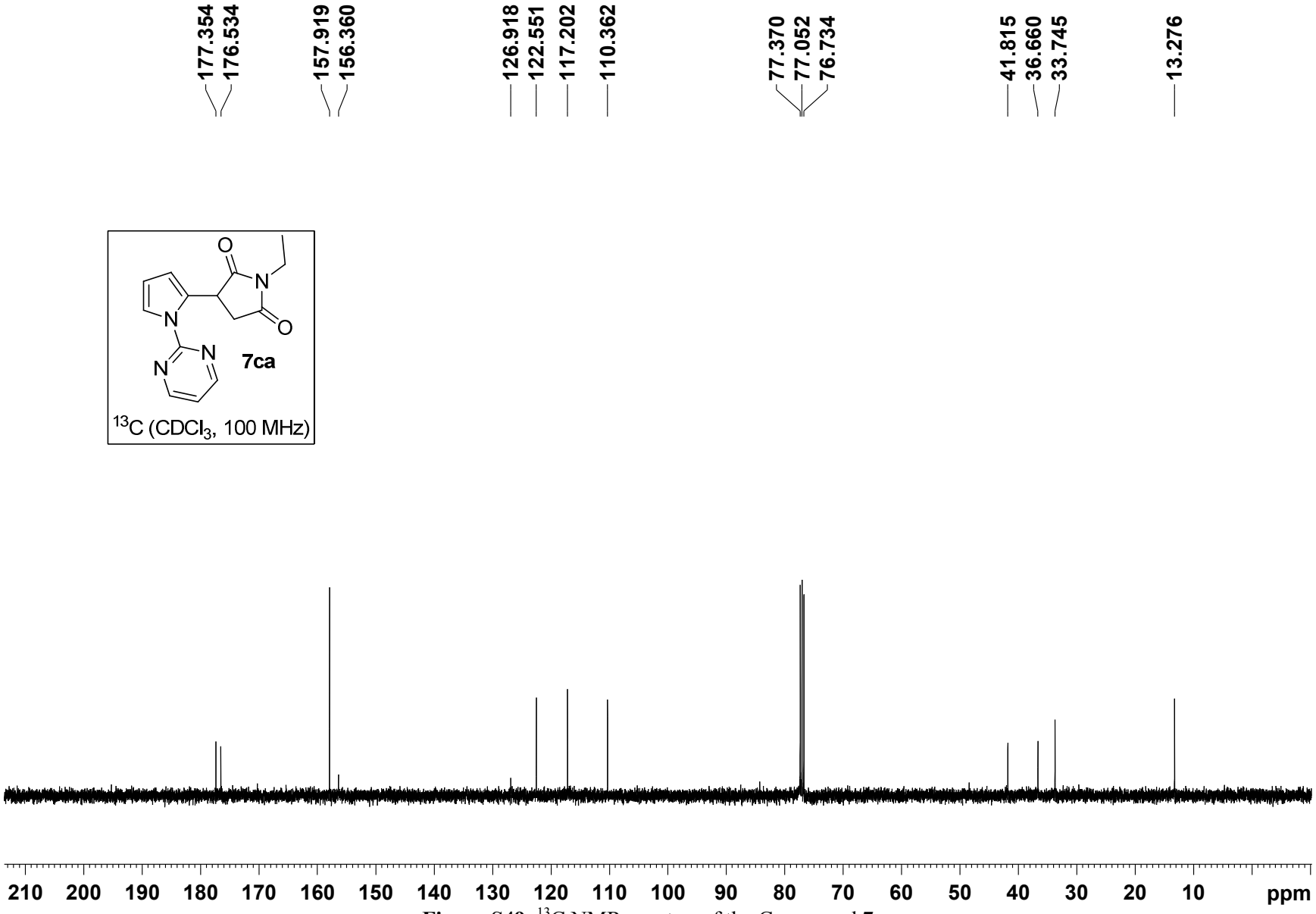


Figure S49. ^{13}C NMR spectra of the Compound **7ca**

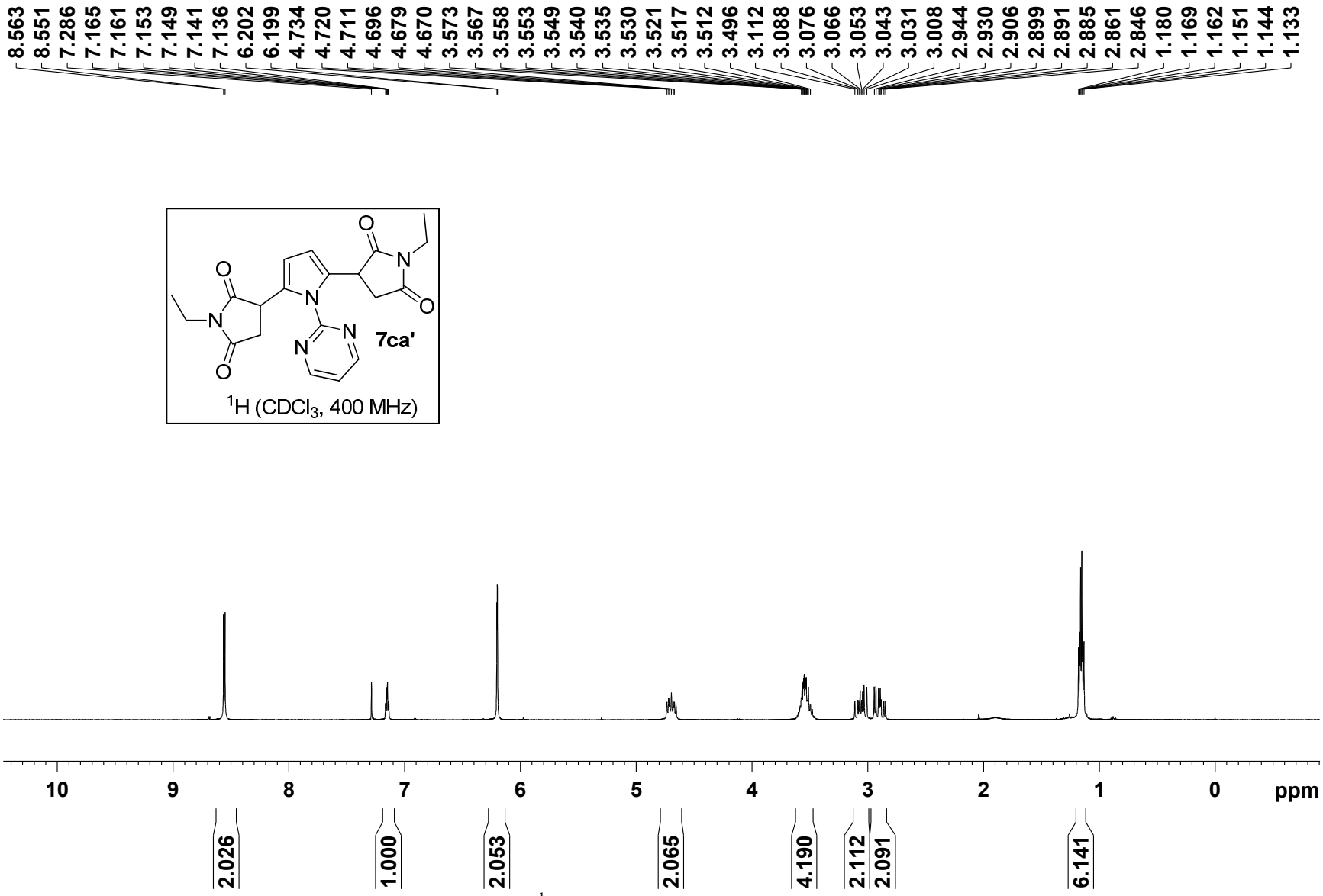


Figure S50. ^{1}H NMR spectra of the Compound **7ca'**

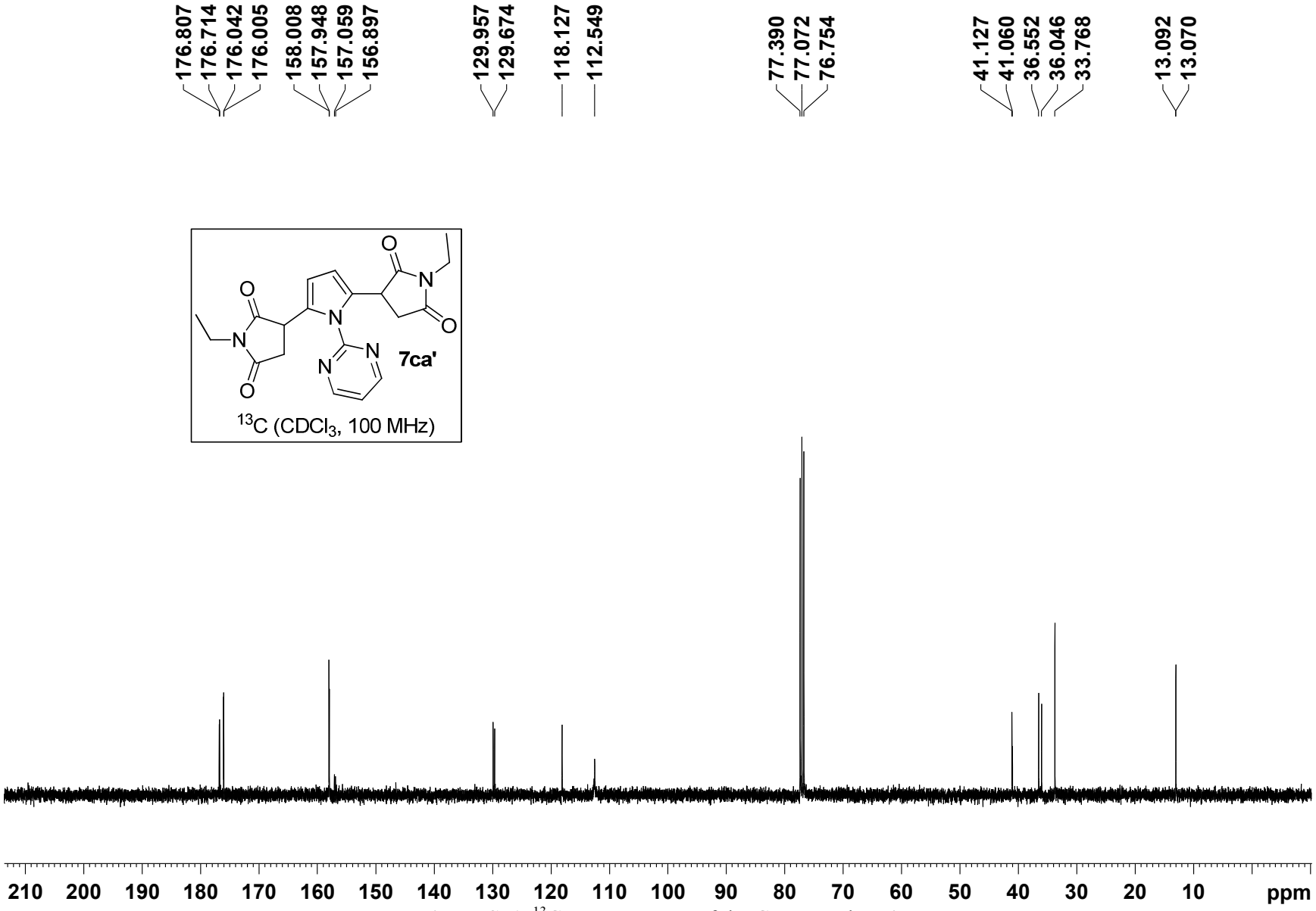


Figure S51. ^{13}C NMR spectra of the Compound **7ca'**

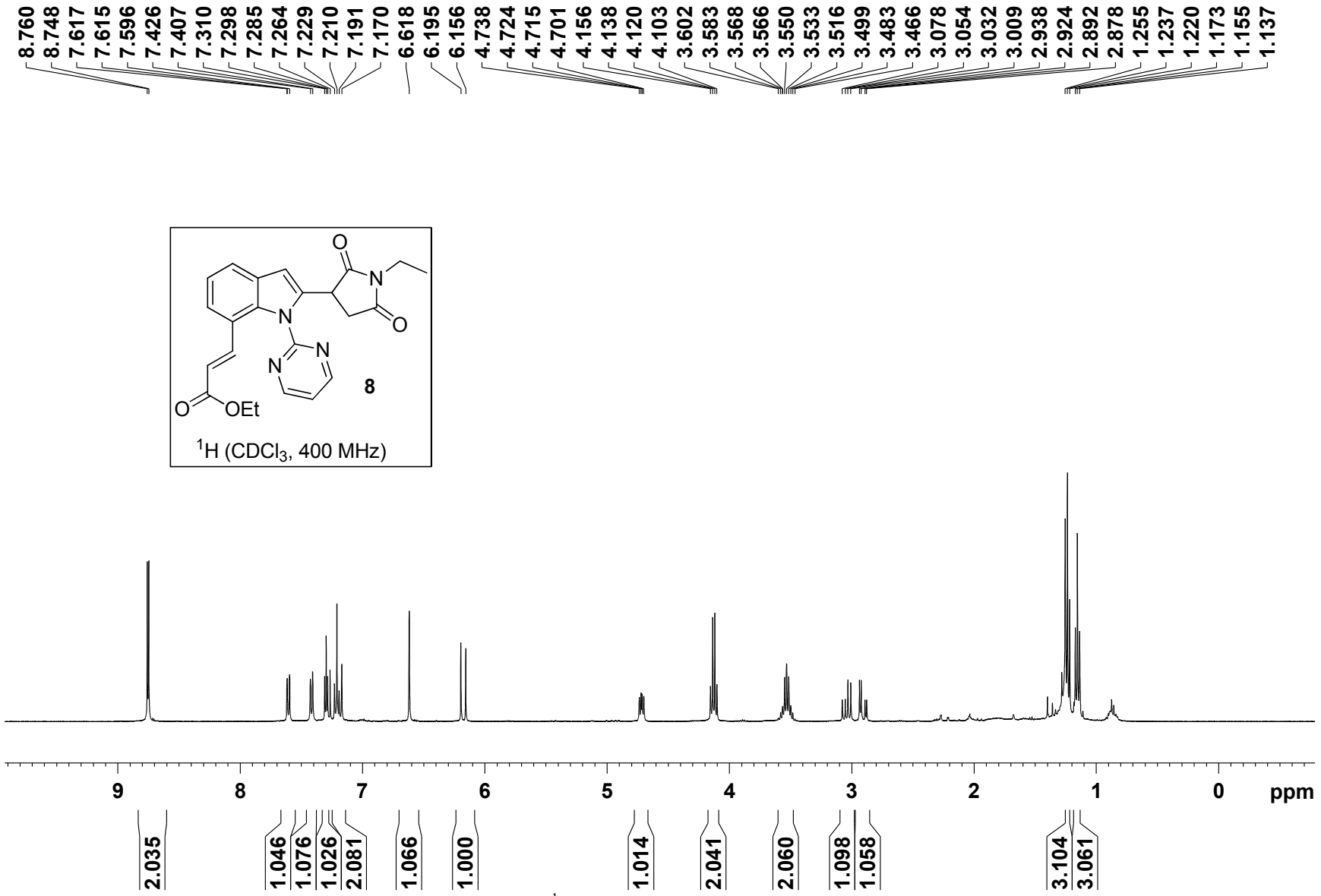
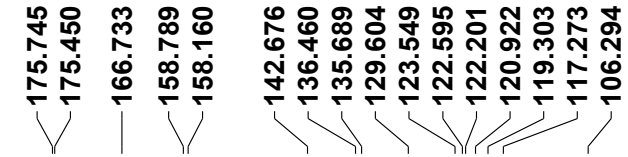
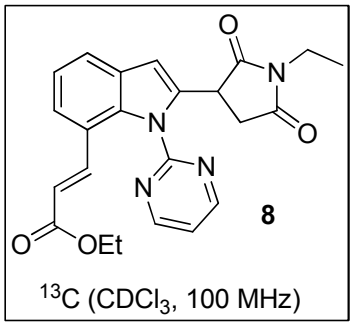


Figure S52. ^{1}H NMR spectra of the Compound **8**





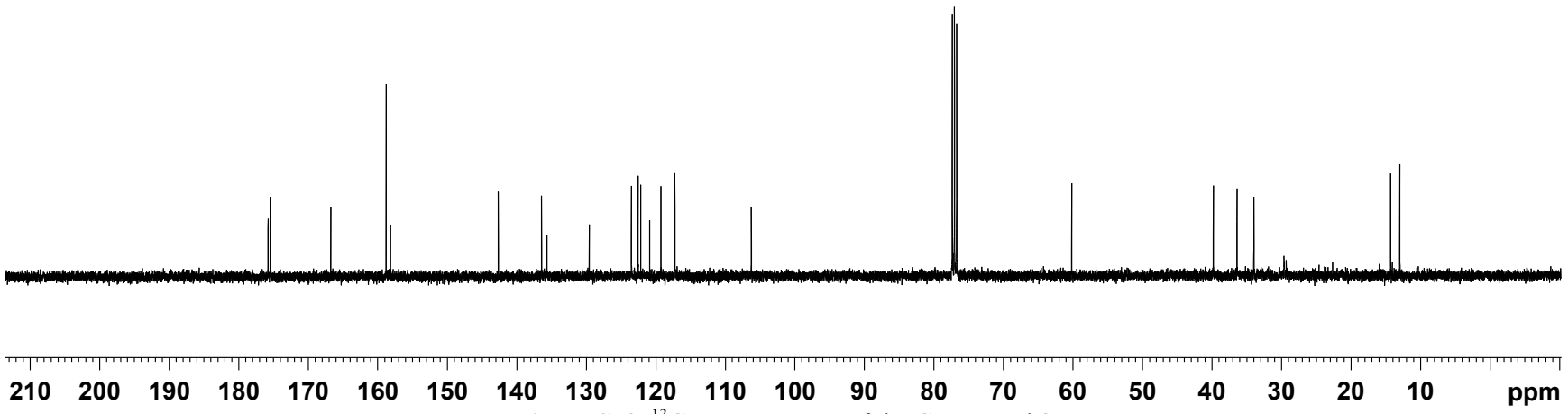


Figure S53. ^{13}C NMR spectra of the Compound **8**