

Supporting Information

Synthesis of Functionalized Imidazolidine-2-Thiones via NHC/Base-Promoted Aza-Benzoin/Aza-Acetalization Domino Reactions

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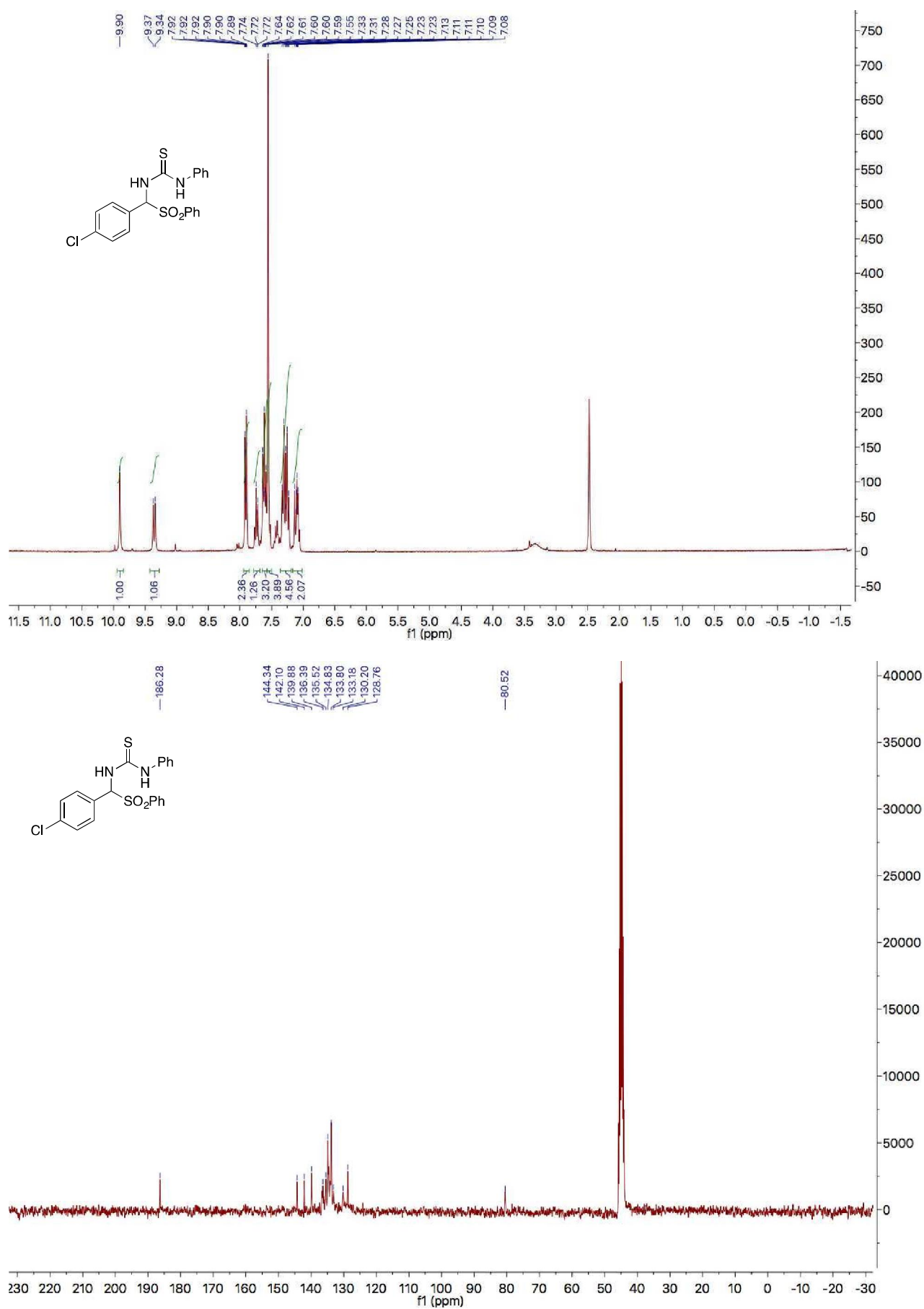
¹ H, ¹³ C and ¹⁹ F NMR of compounds 3 , 5 , 7 , 8 , 9 , 15 , 17 , 18	S2
ROESY experiment of compound 5aam	S43

Chemical structure: O=C1NC(C(=O)N1C2=CC=CC=C2)S(=O)(=O)C3=CC=CC=C3

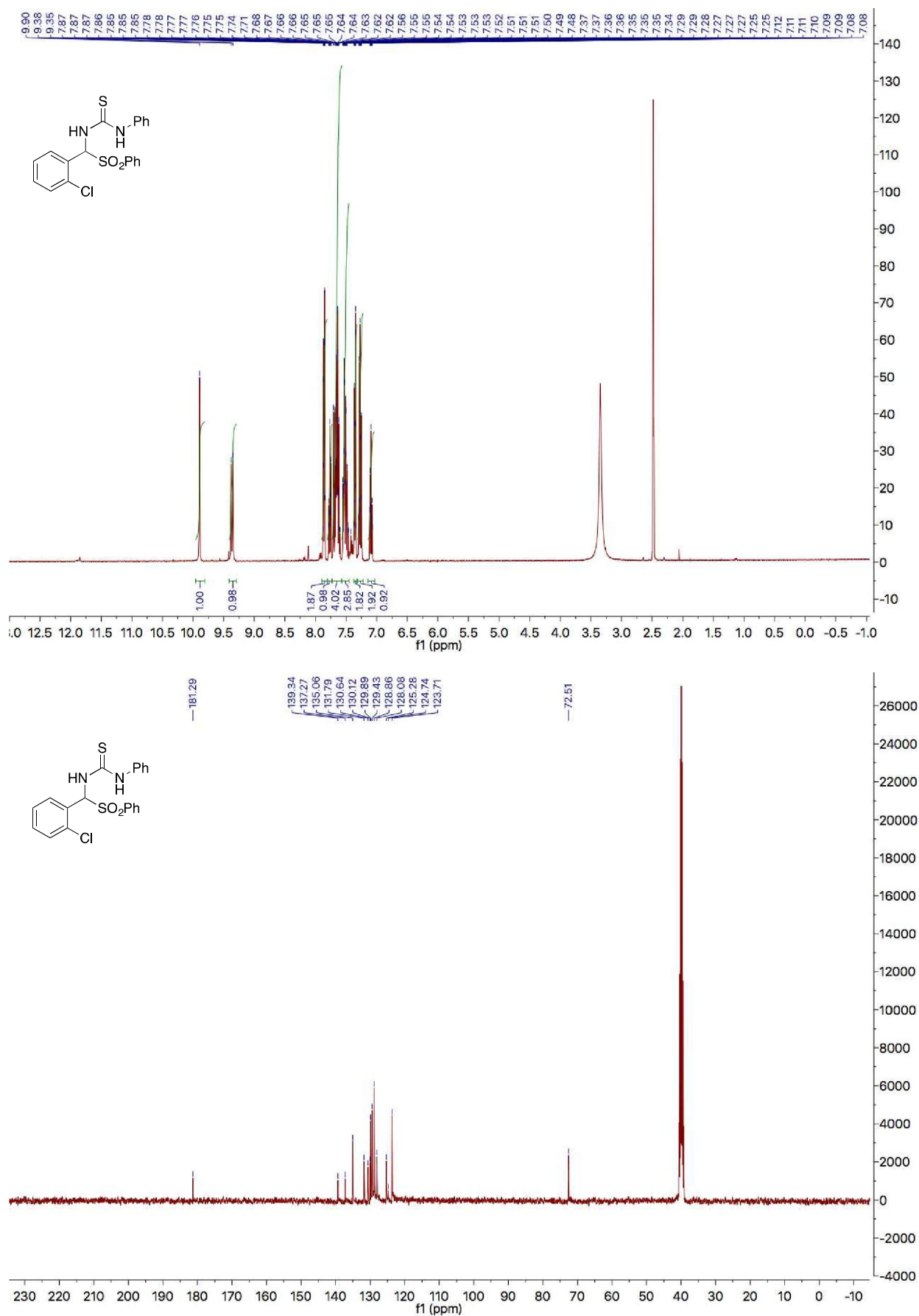
¹H NMR spectrum (DMSO-d₆) showing peaks at 9.69, 7.96, 7.39, 7.11, 3.29, and 2.13 ppm. Integration values are 1.00, 1.08, 2.13, 4.27, 5.30, 3.29, and 1.07.



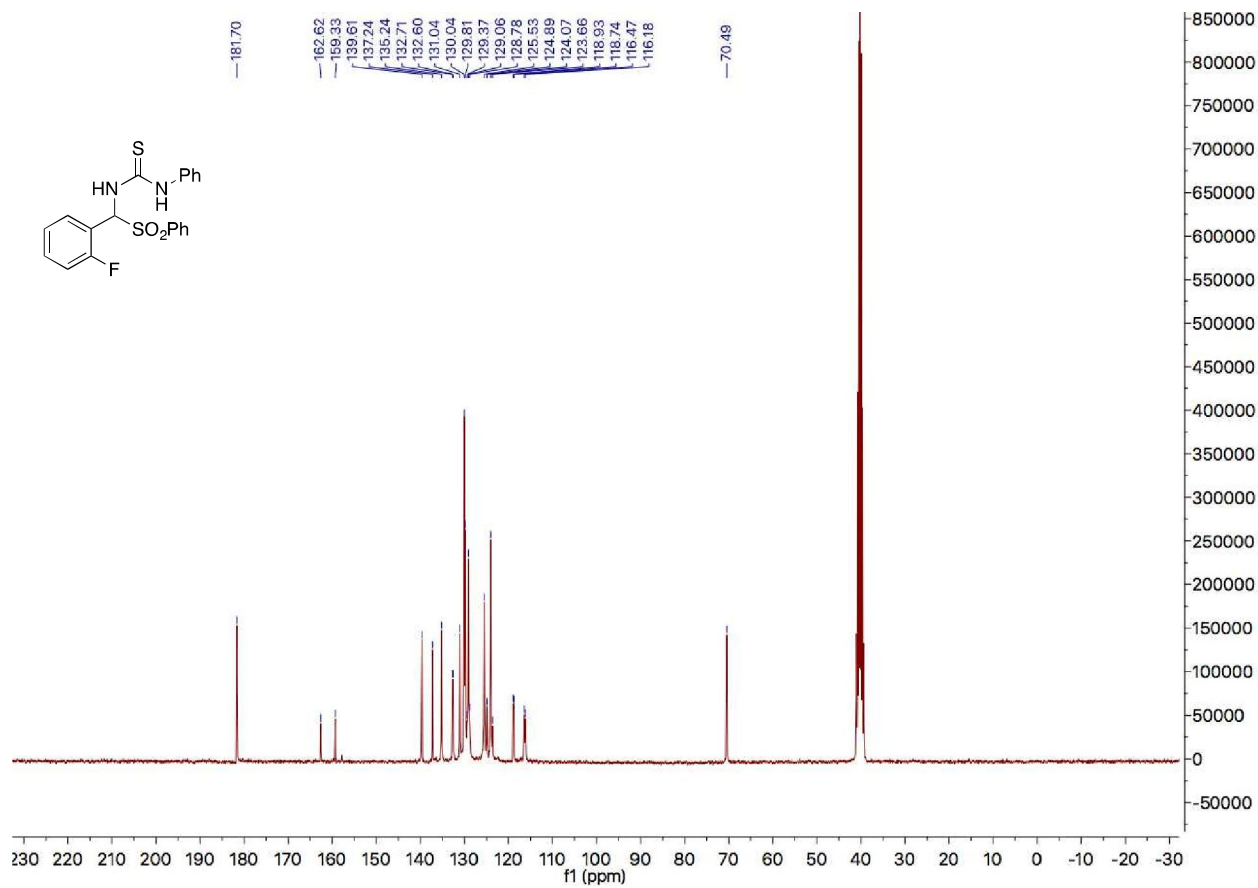
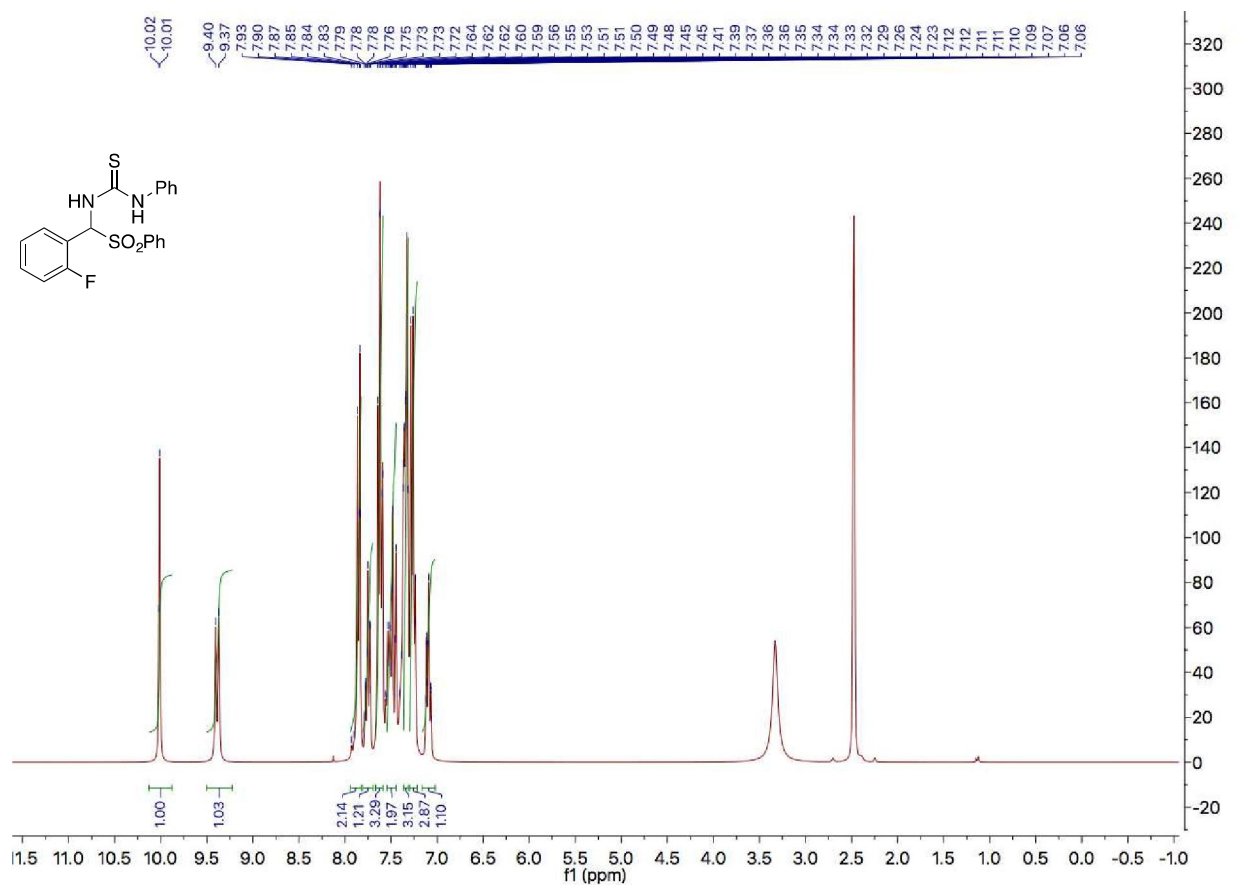
^1H (300 MHz, Acetone- d_6) and ^{13}C (101 MHz, DMSO- d_6) spectra of 3ba

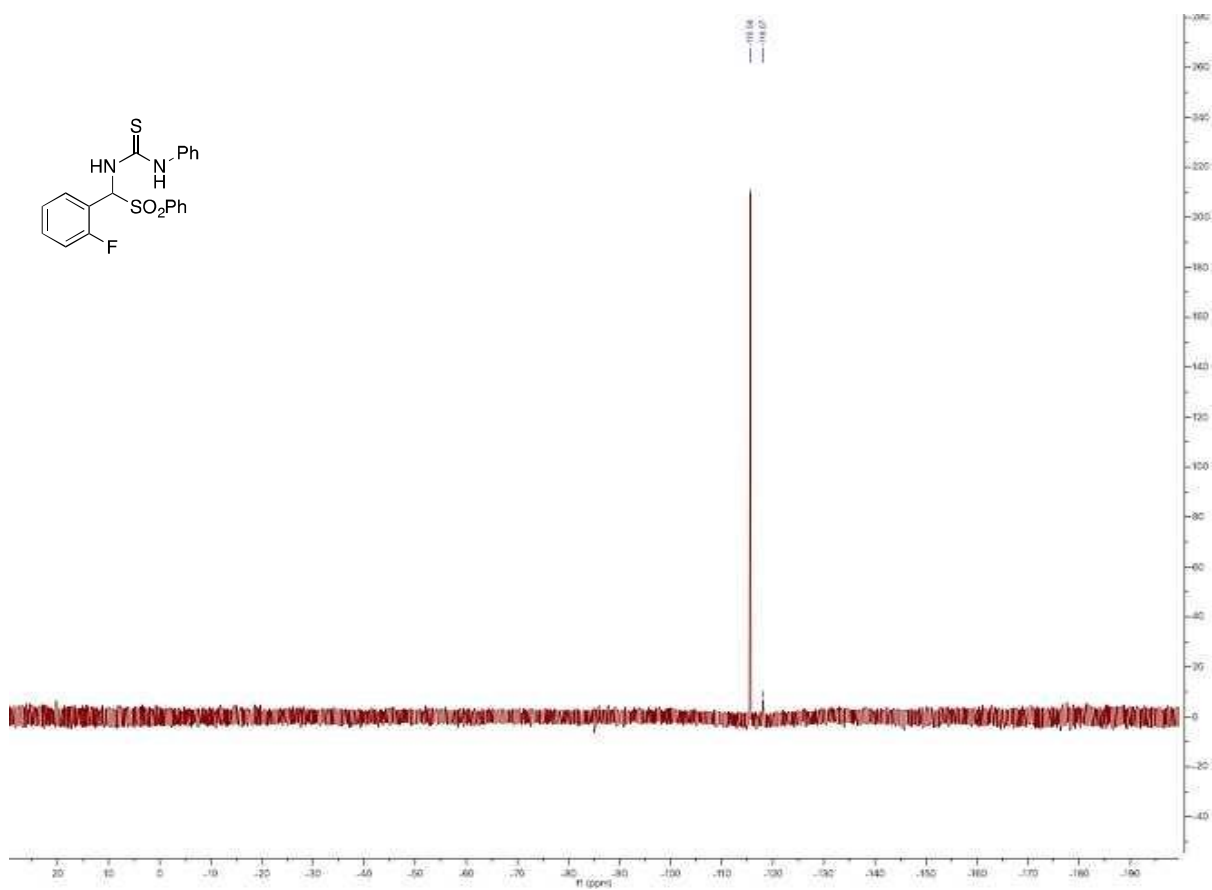


^1H (400 MHz) and ^{13}C (101 MHz) spectra (DMSO- d_6) of 3ca

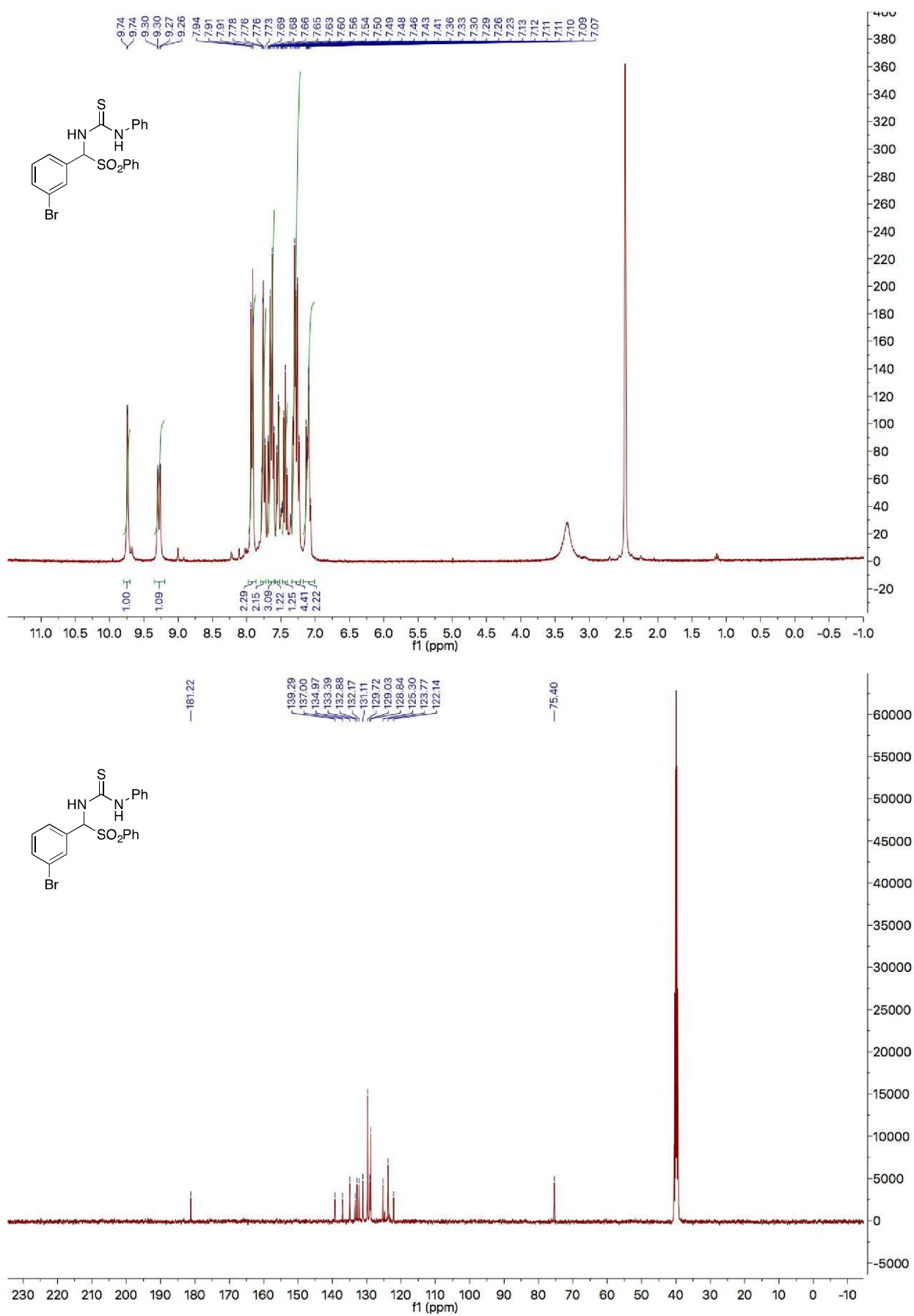


^1H (300 MHz) ^{13}C (101 MHz) and ^{19}F (376 MHz) spectra (DMSO- d_6) of 3da

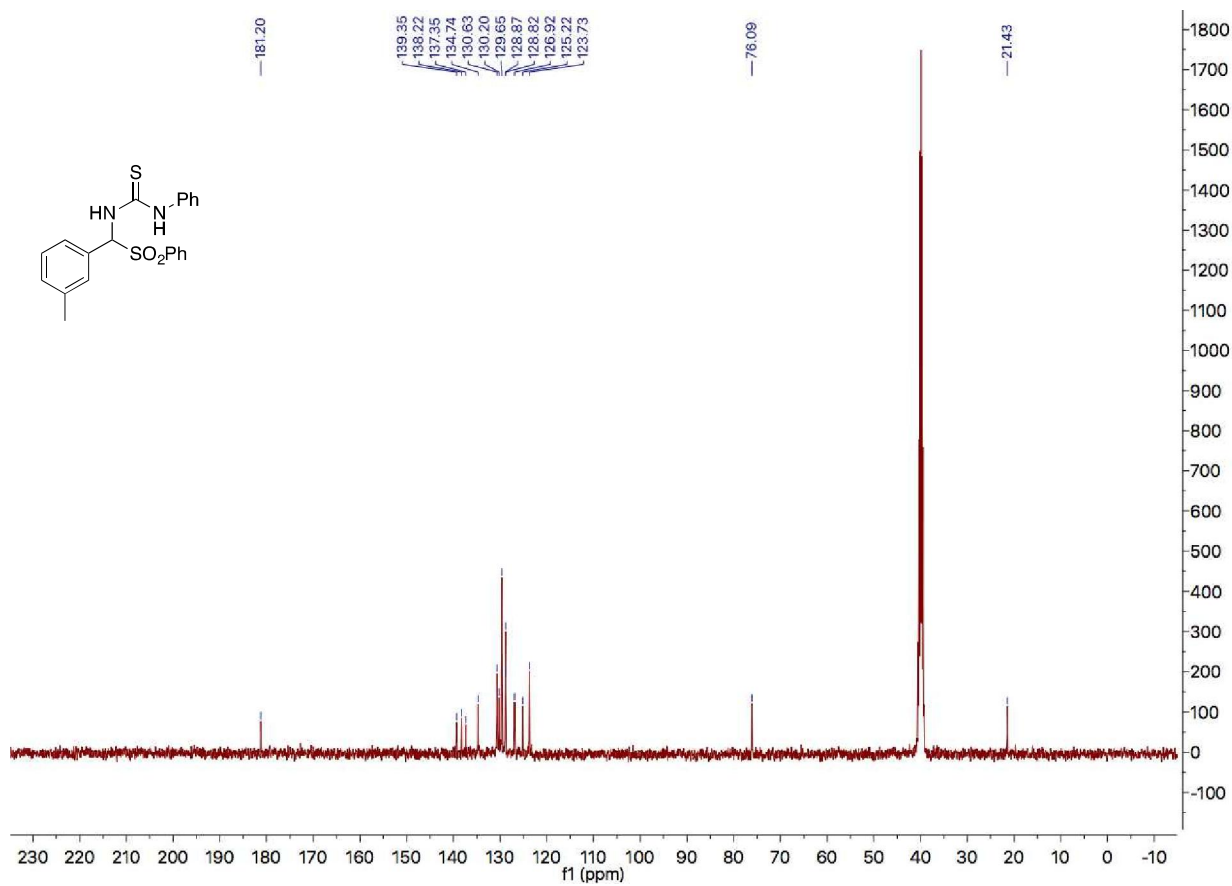
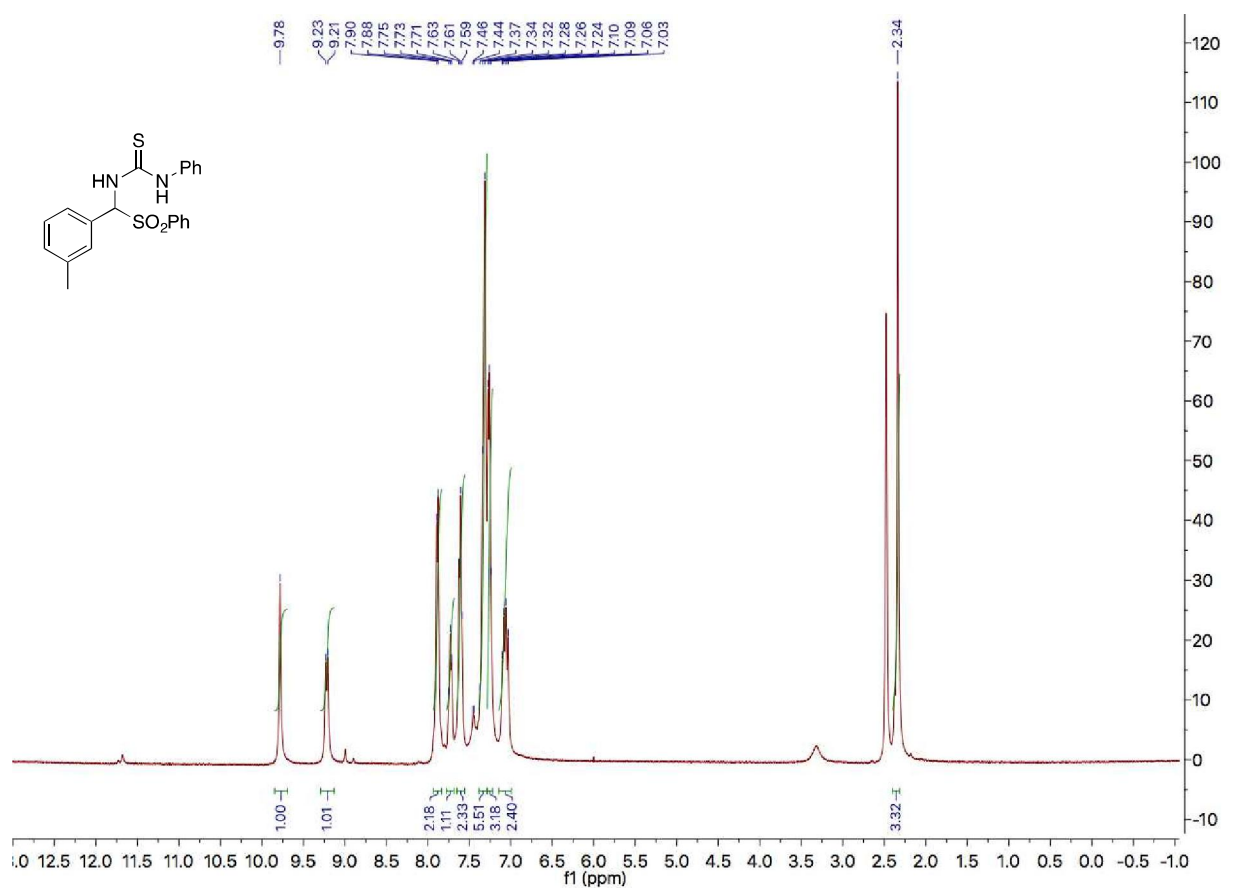




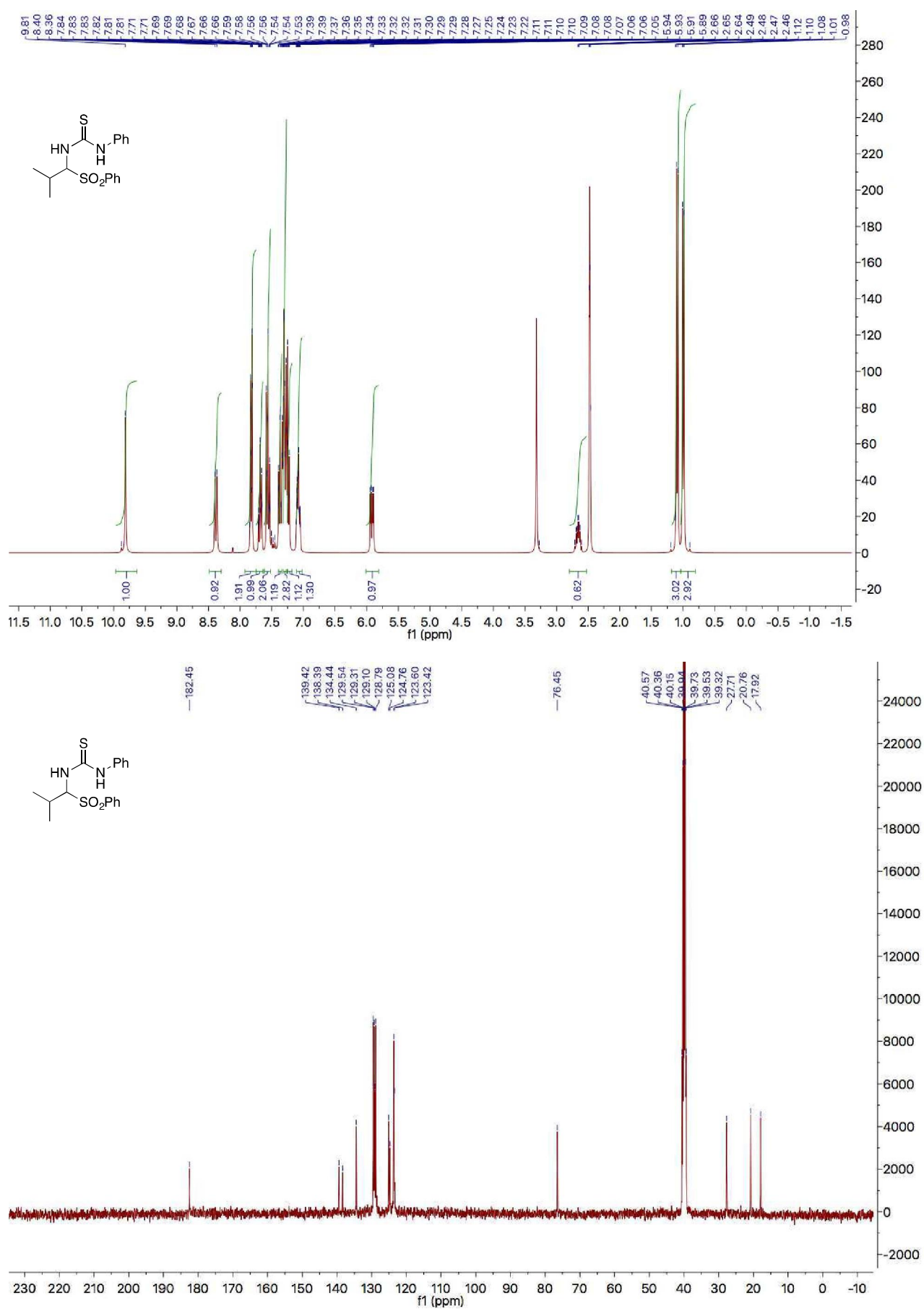
^1H (300 MHz) and ^{13}C (101 MHz) spectra (DMSO- d_6) of 3ea



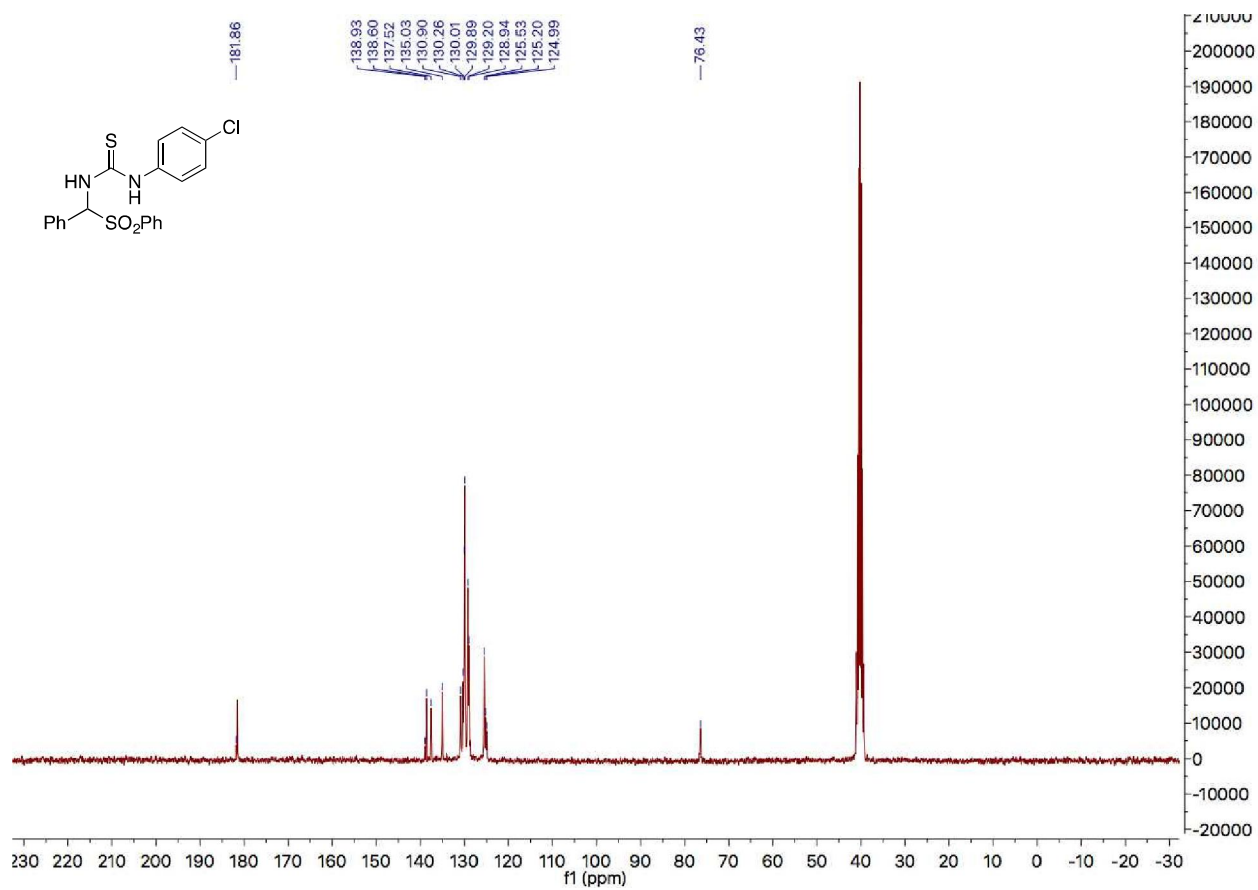
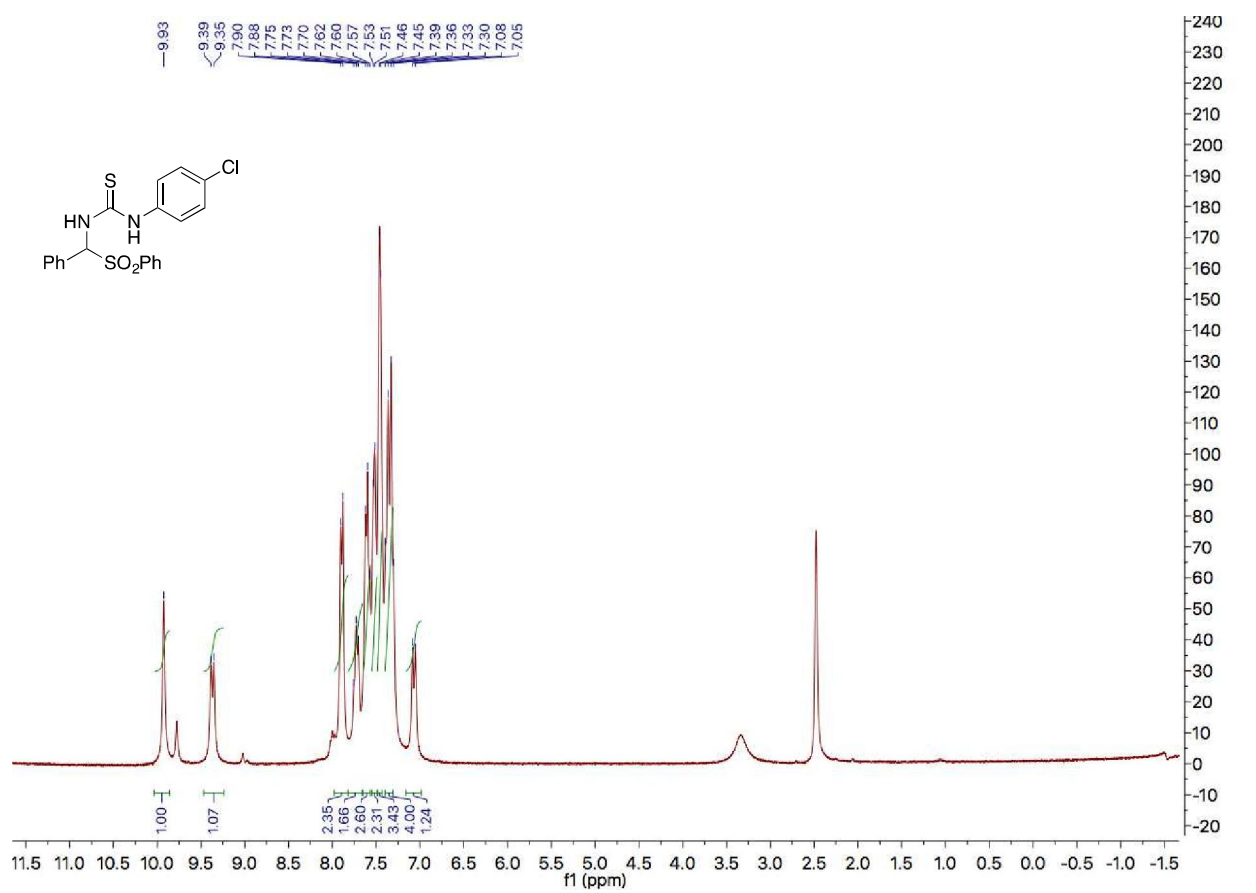
^1H (400 MHz) and ^{13}C (101 MHz) spectra (DMSO- d_6) of 3fa



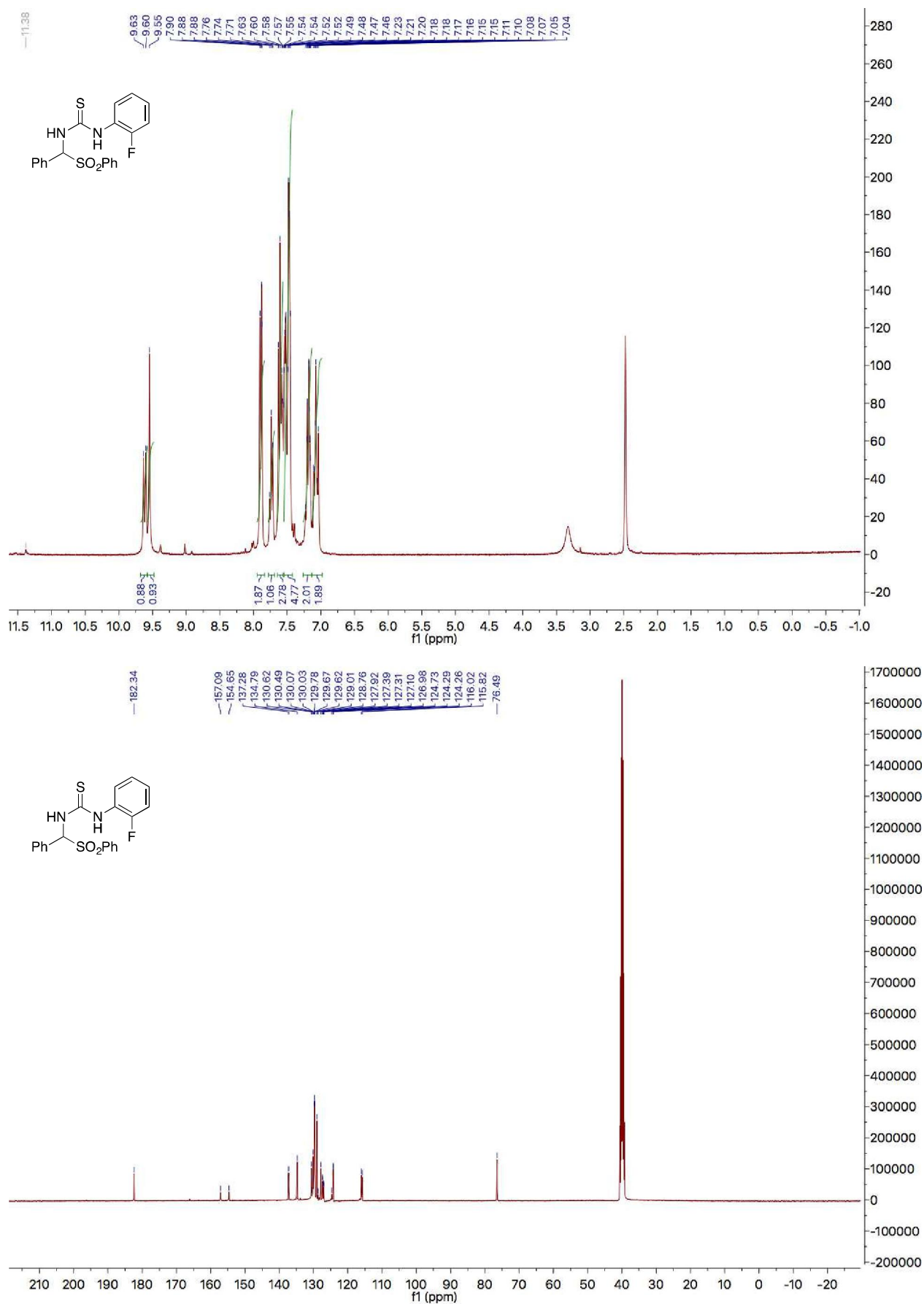
^1H (300 MHz) and ^{13}C (101 MHz) spectra (DMSO- d_6) of 3ga

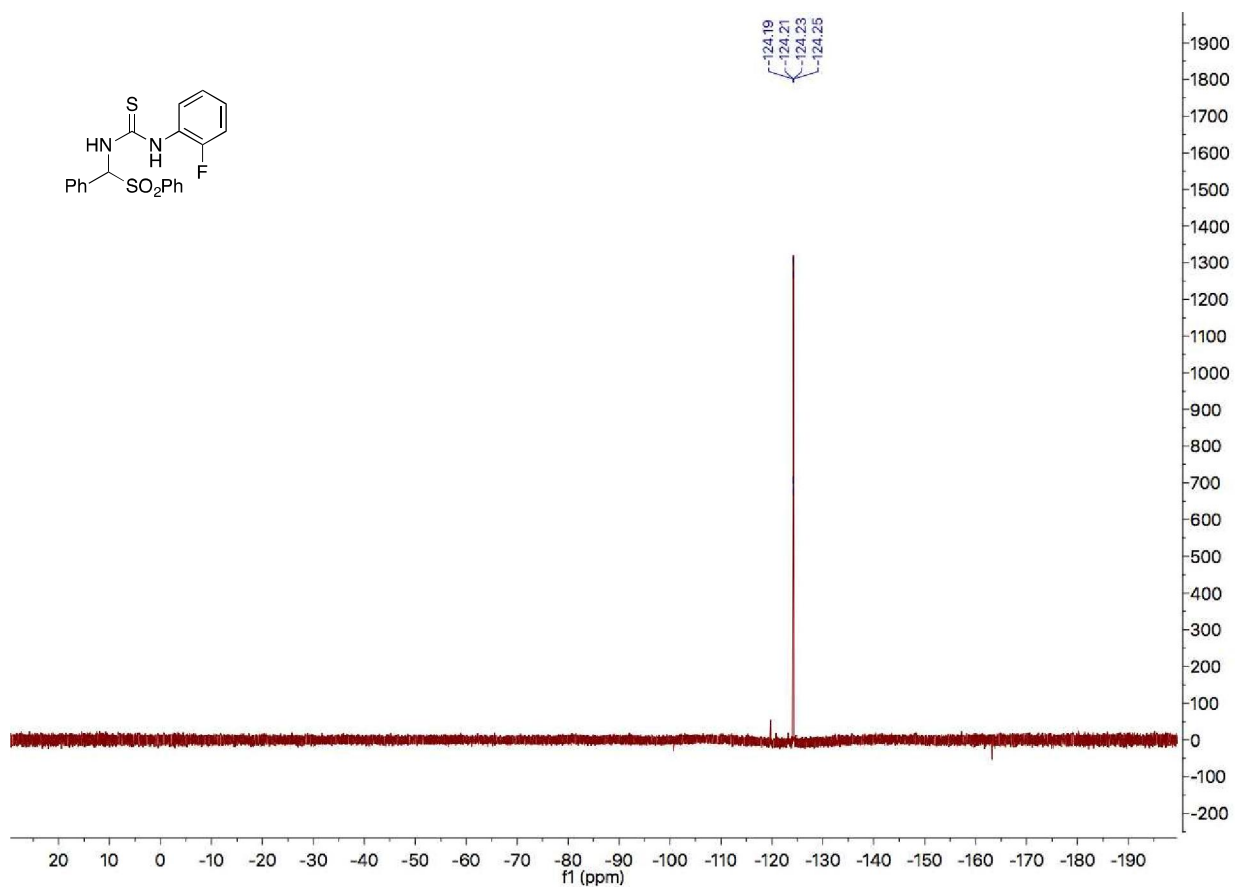
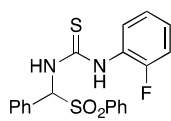


^1H (300 MHz) and ^{13}C (76 MHz) spectra (DMSO- d_6) of 3ab

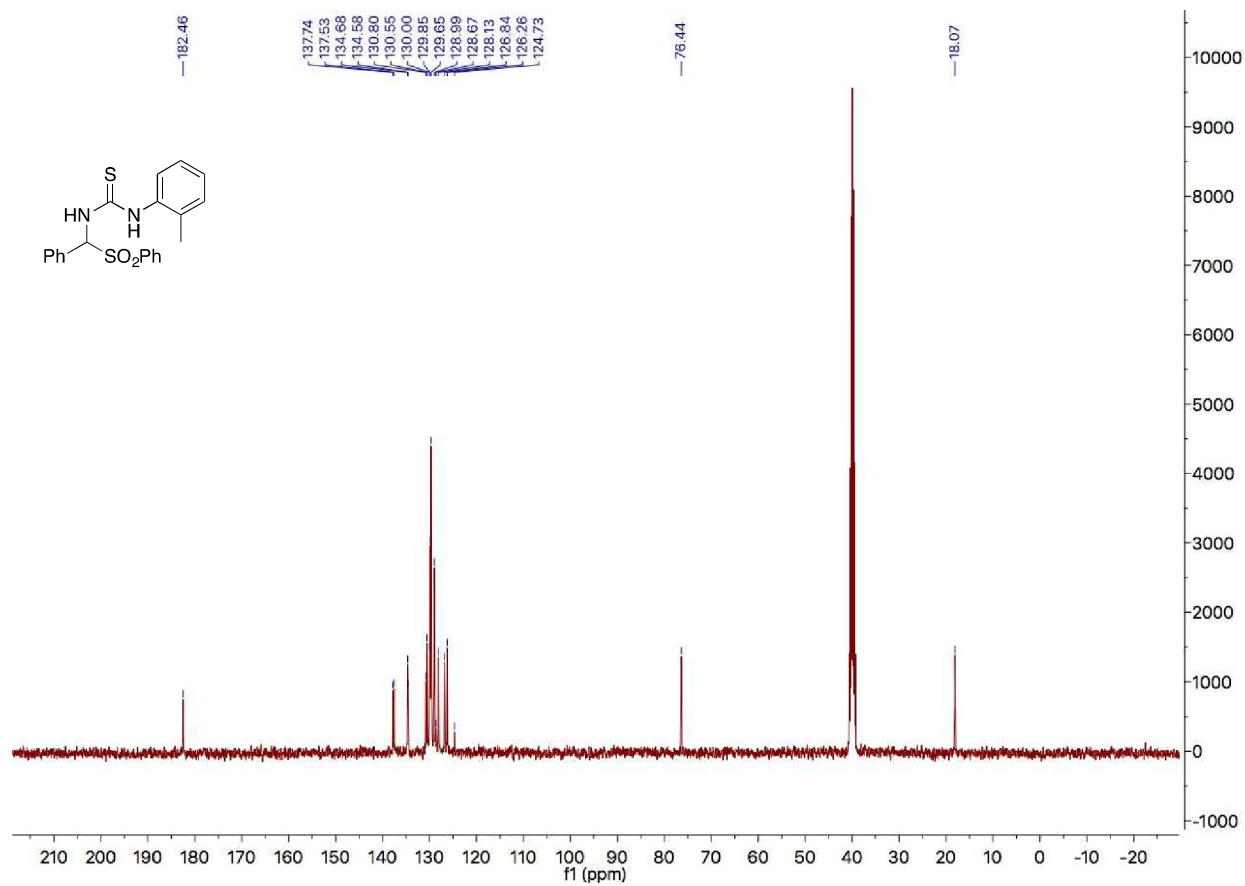
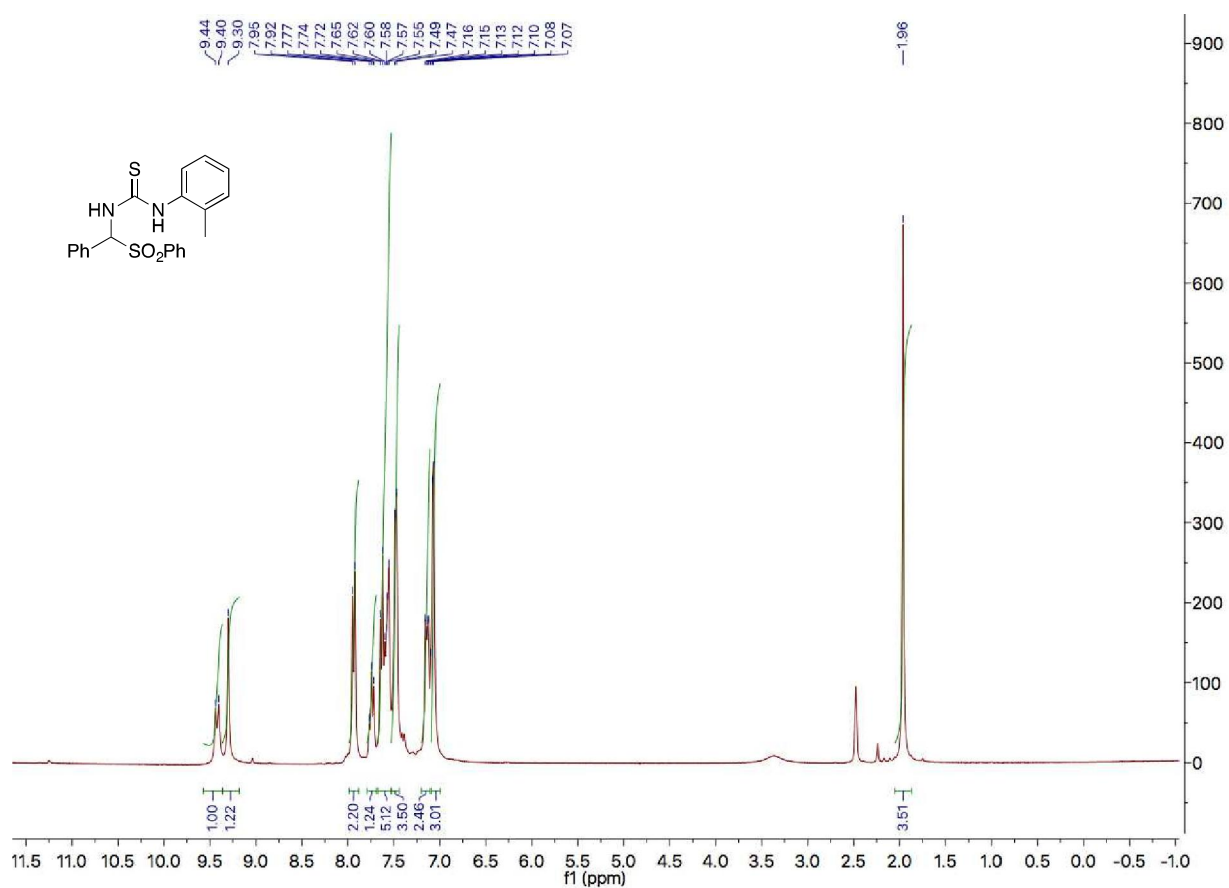


^1H (300 MHz) ^{13}C (101 MHz) and ^{19}F (376 MHz) spectra (DMSO- d_6) of 3ad

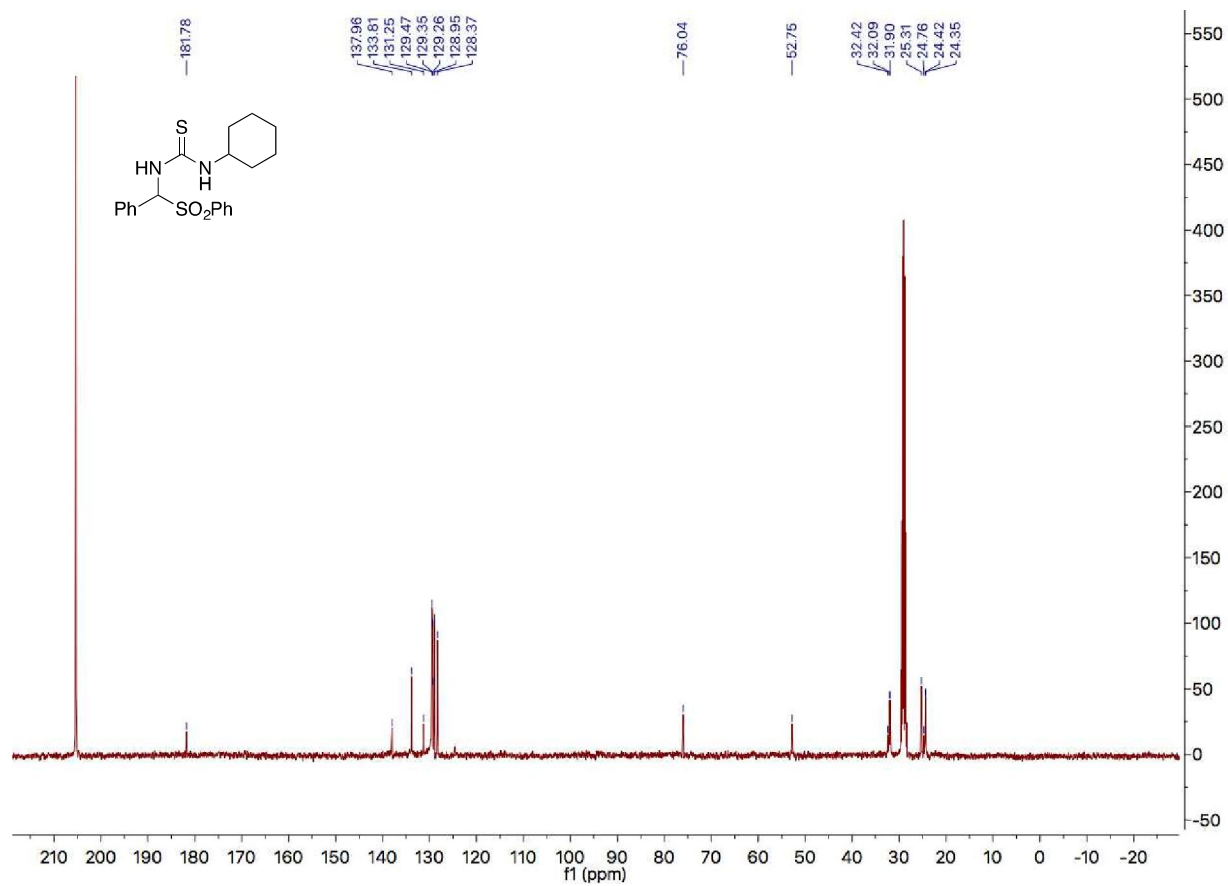
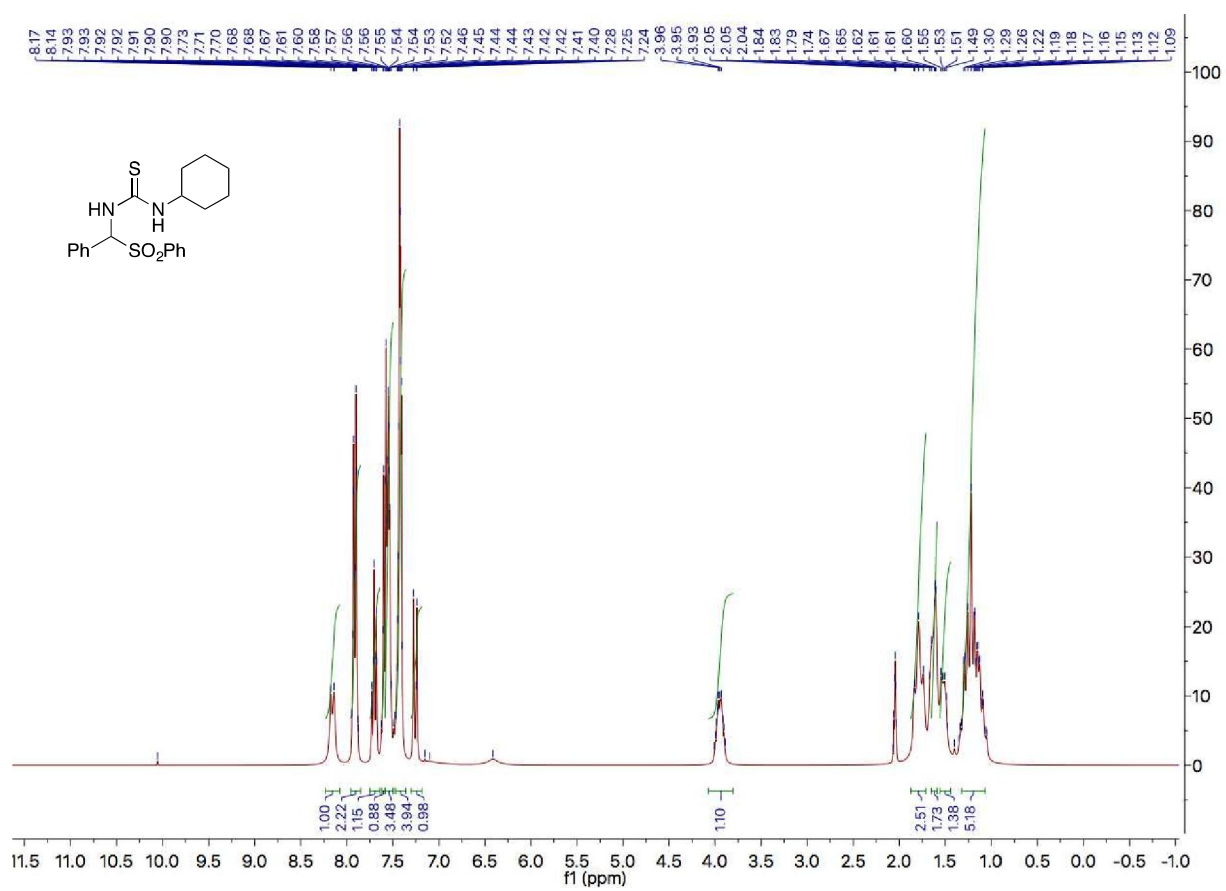




^1H (300 MHz) and ^{13}C (101 MHz) spectra (DMSO- d_6) of 3ah

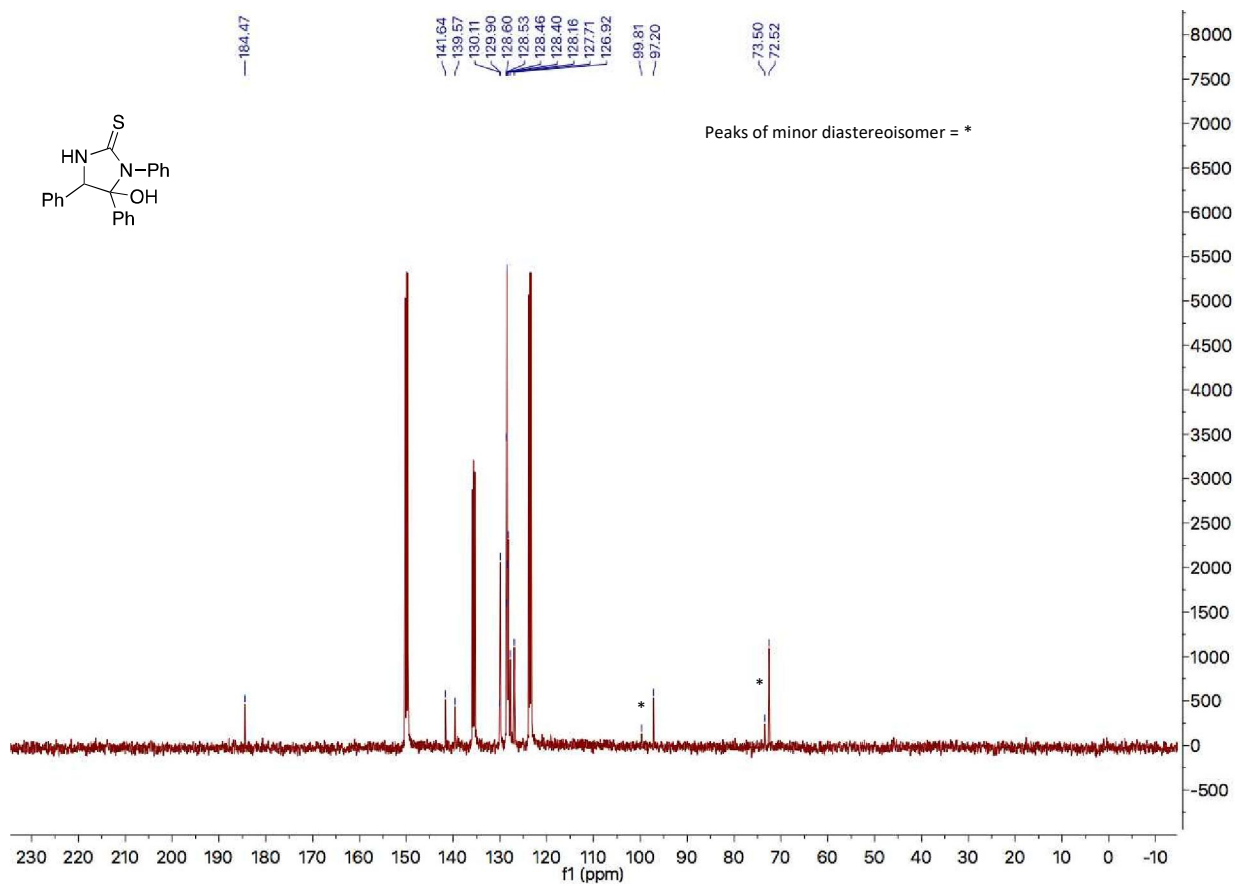
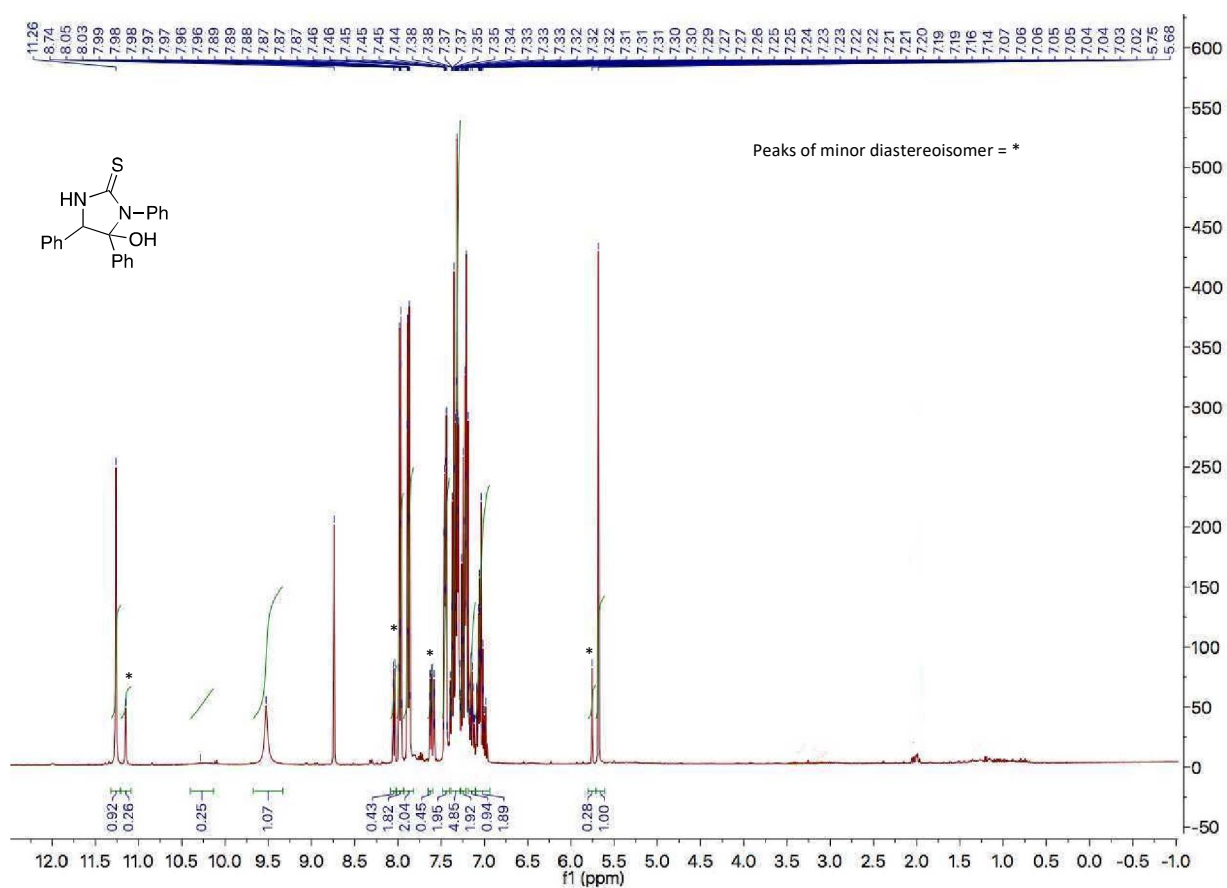


^1H (300 MHz) and ^{13}C (101 MHz) spectra (Acetone- d_6) of 3ai

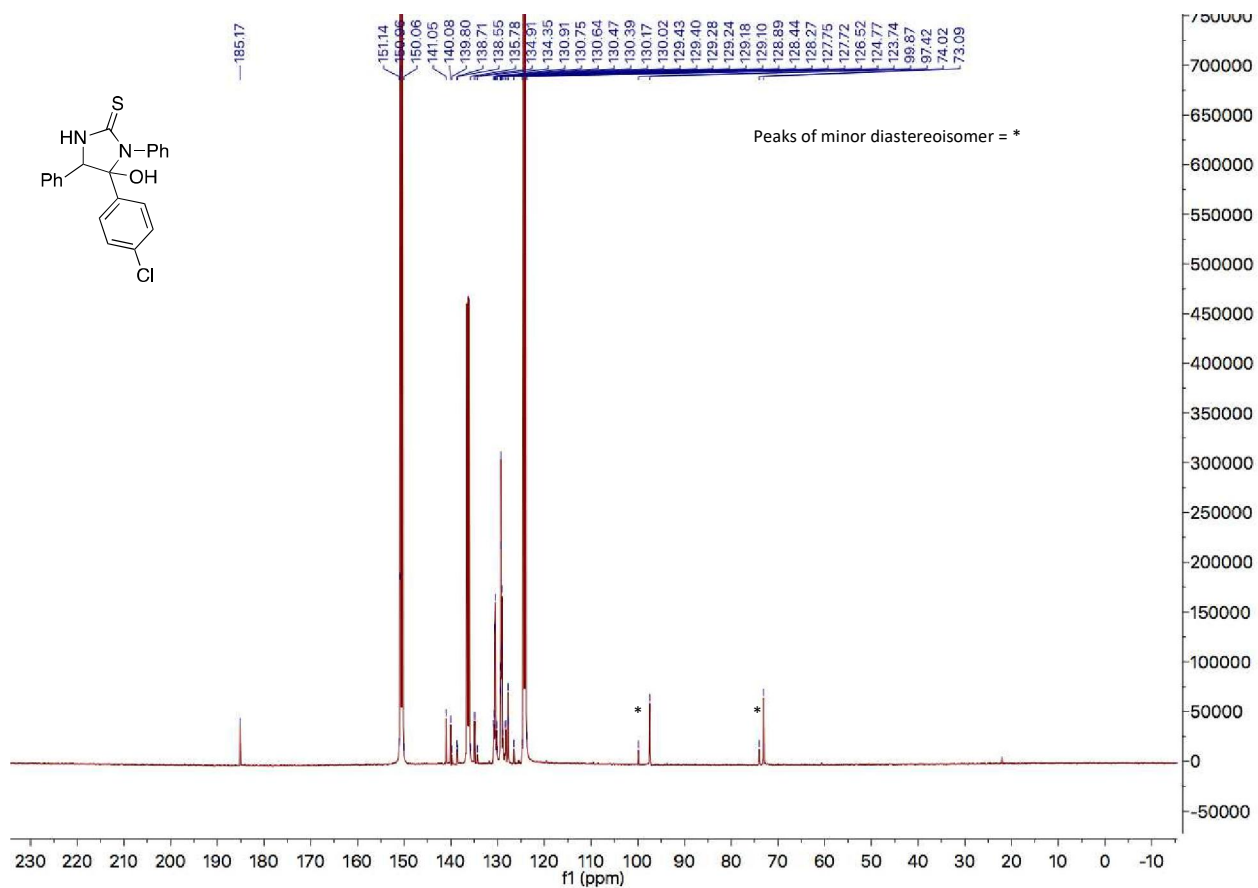
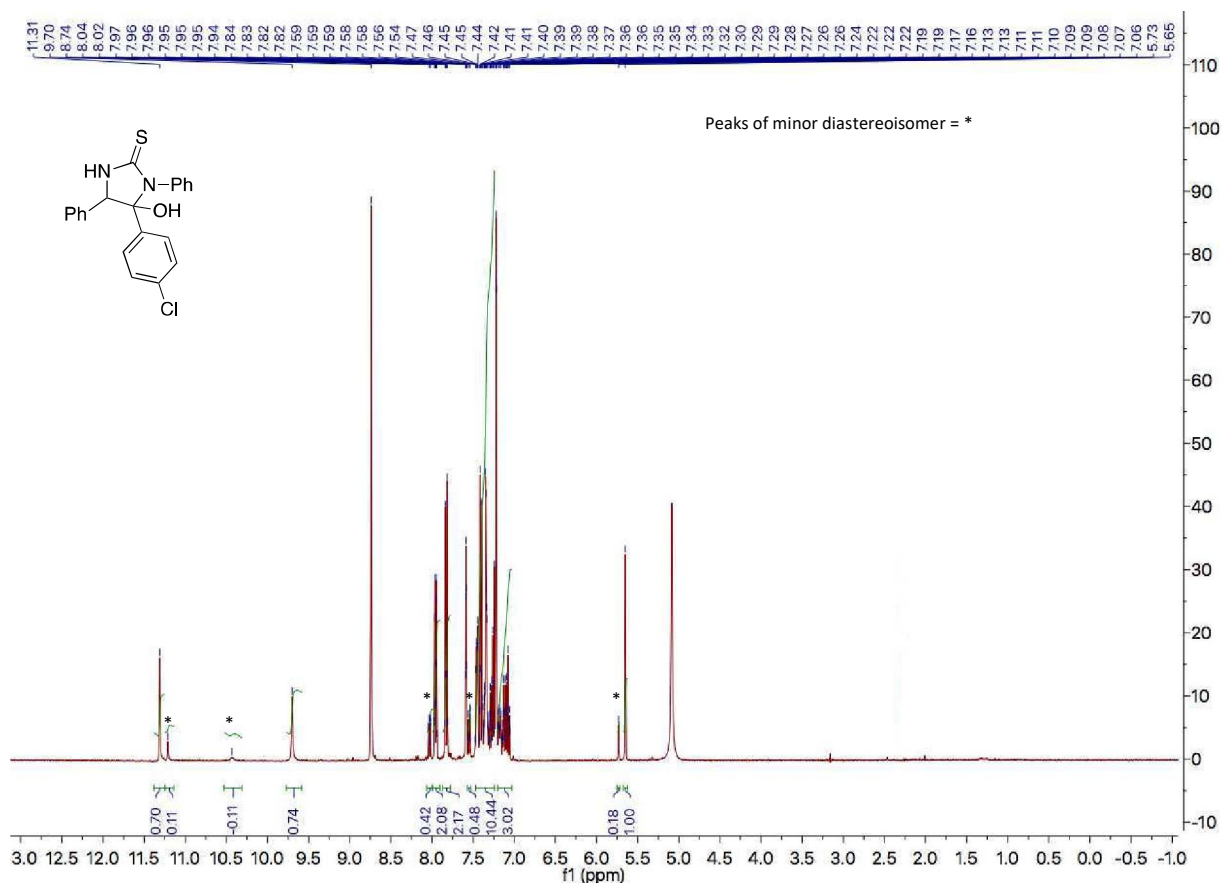




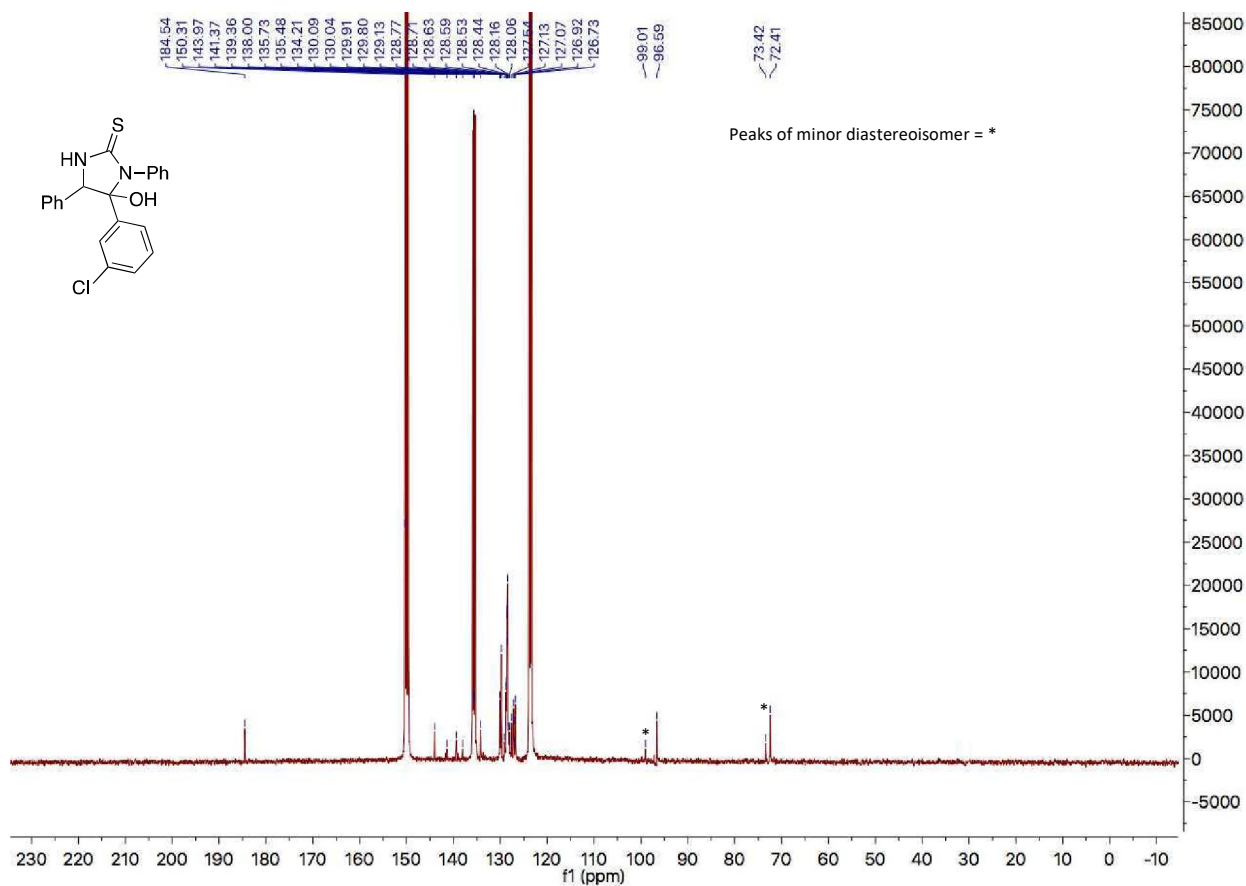
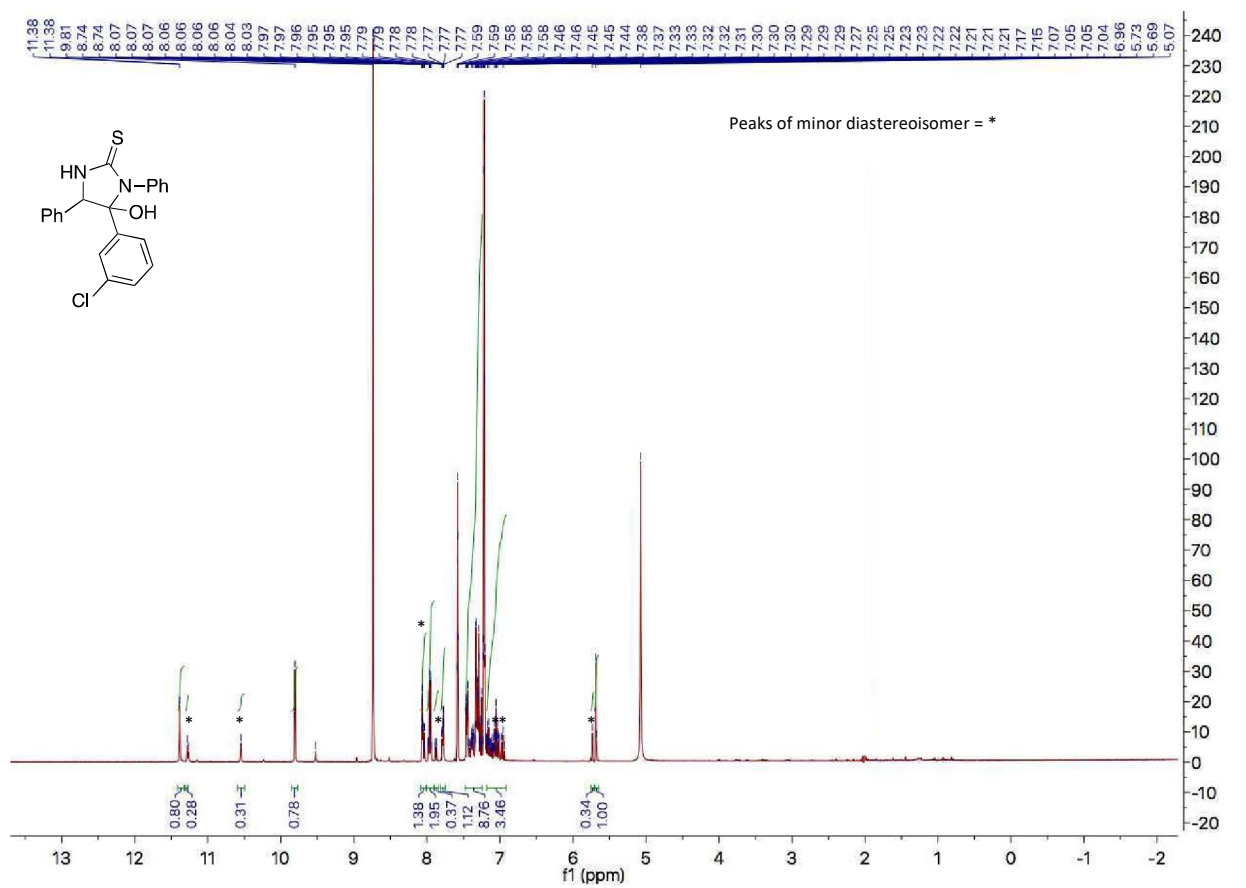
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aaa



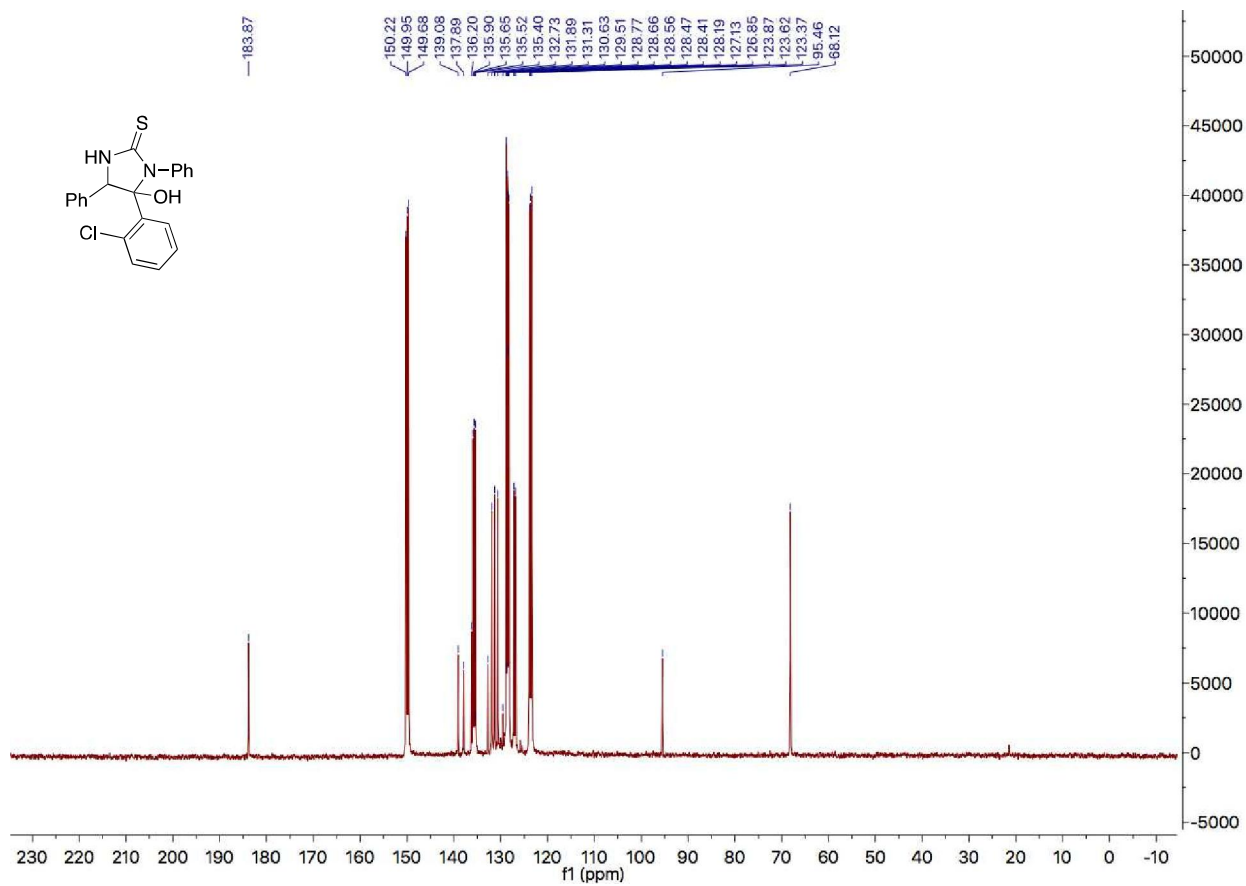
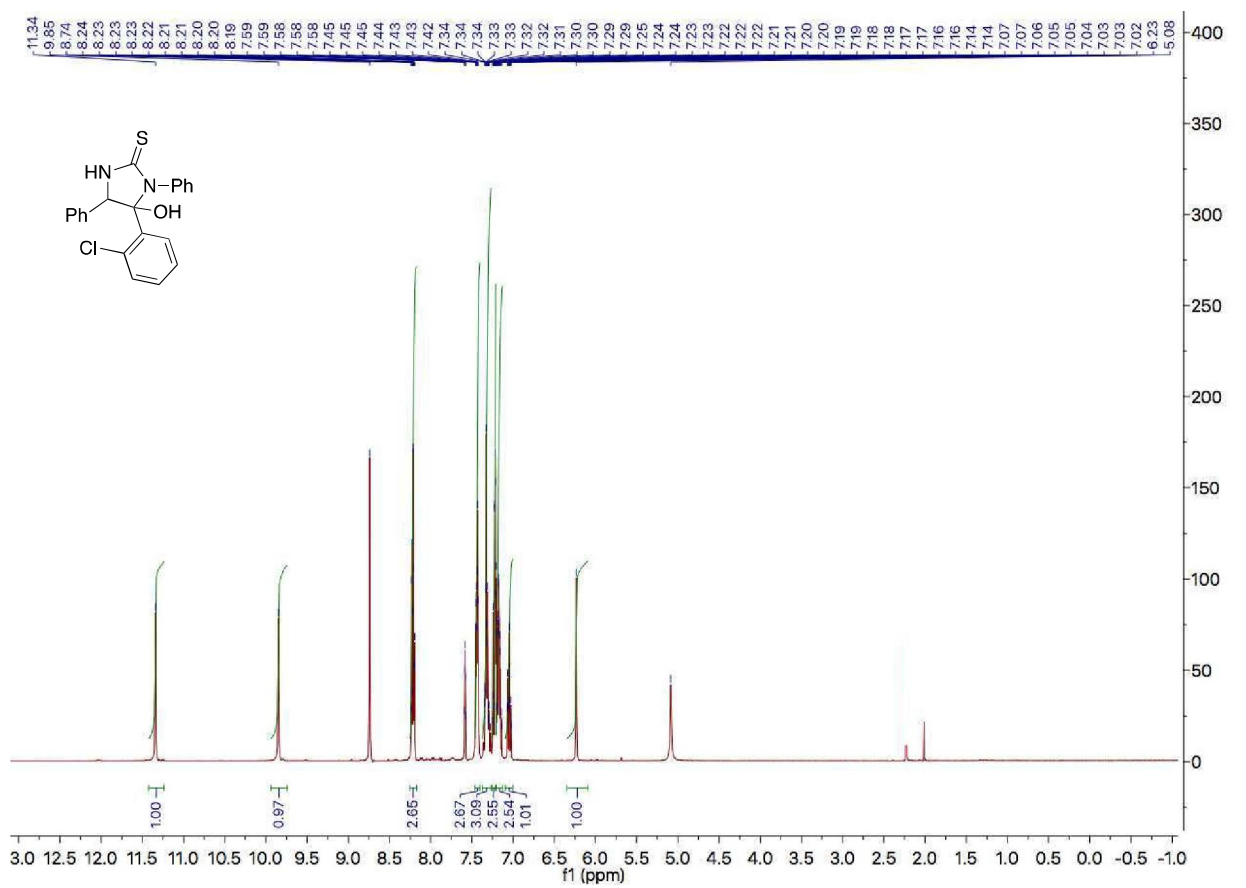
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aab



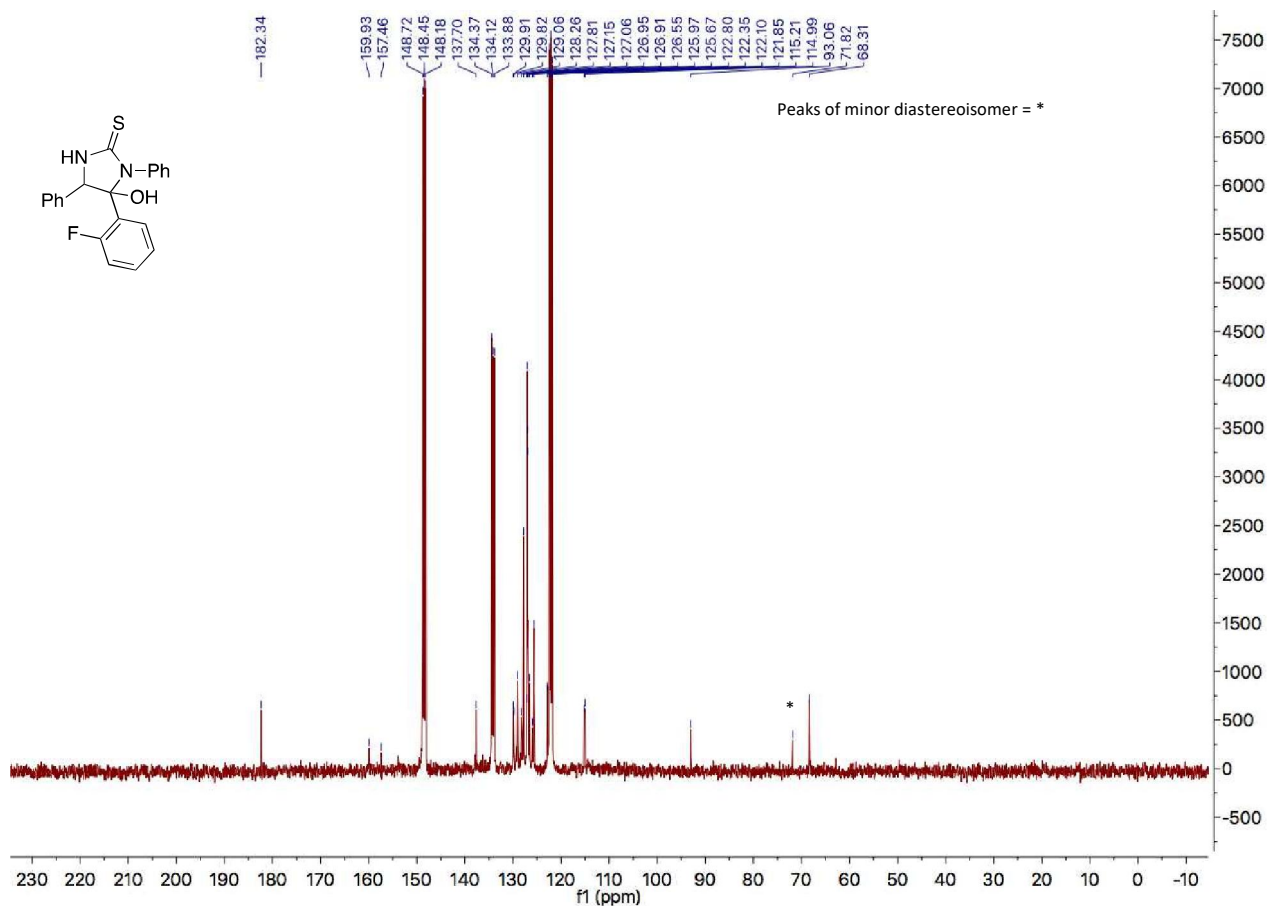
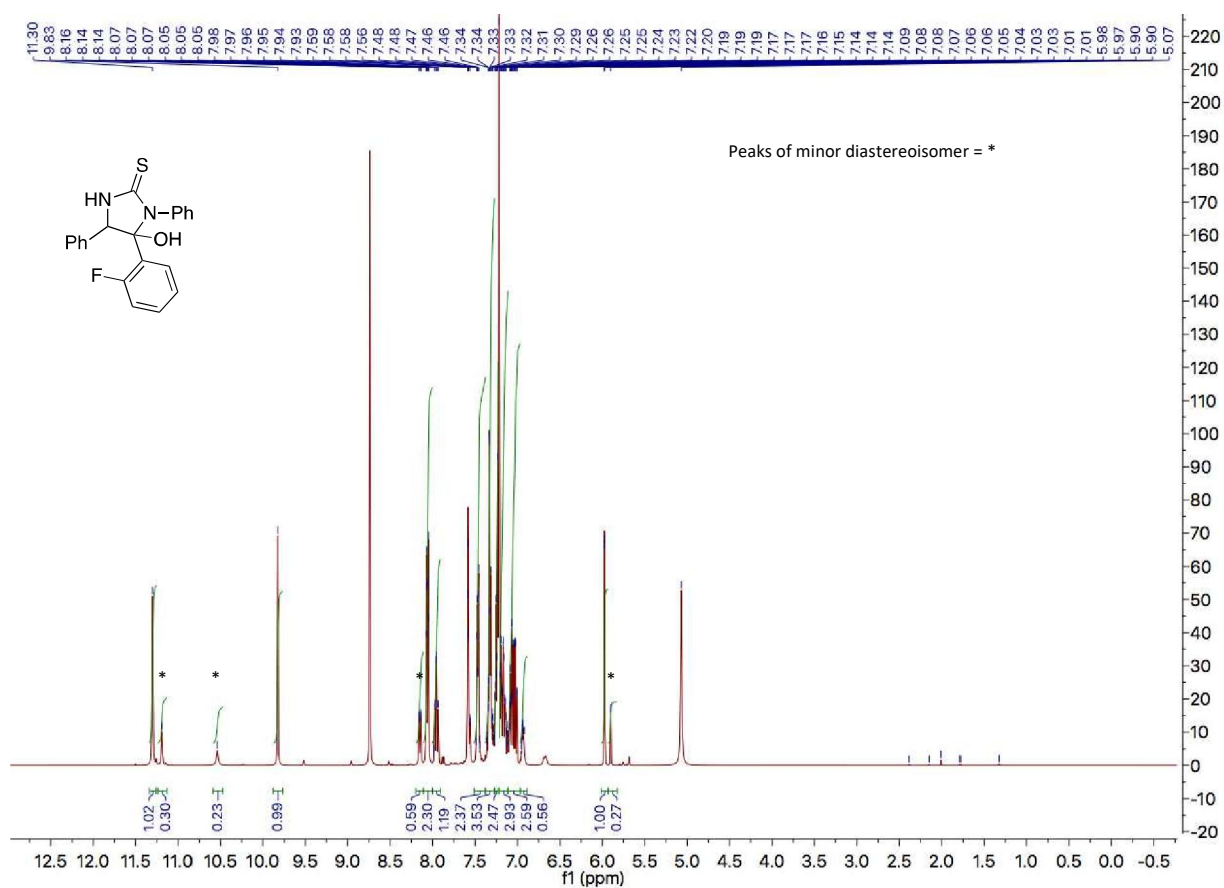
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aak

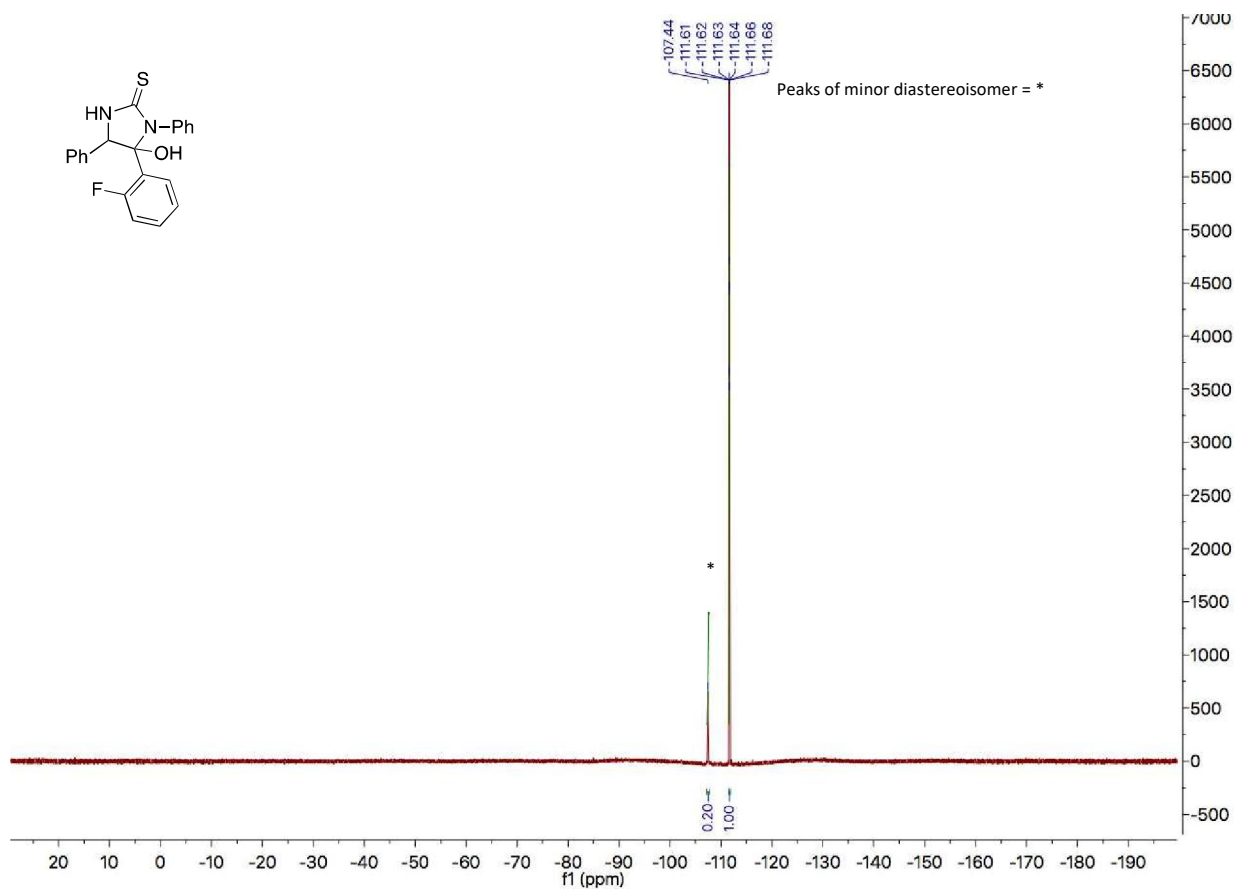
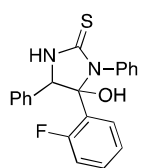


^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aac

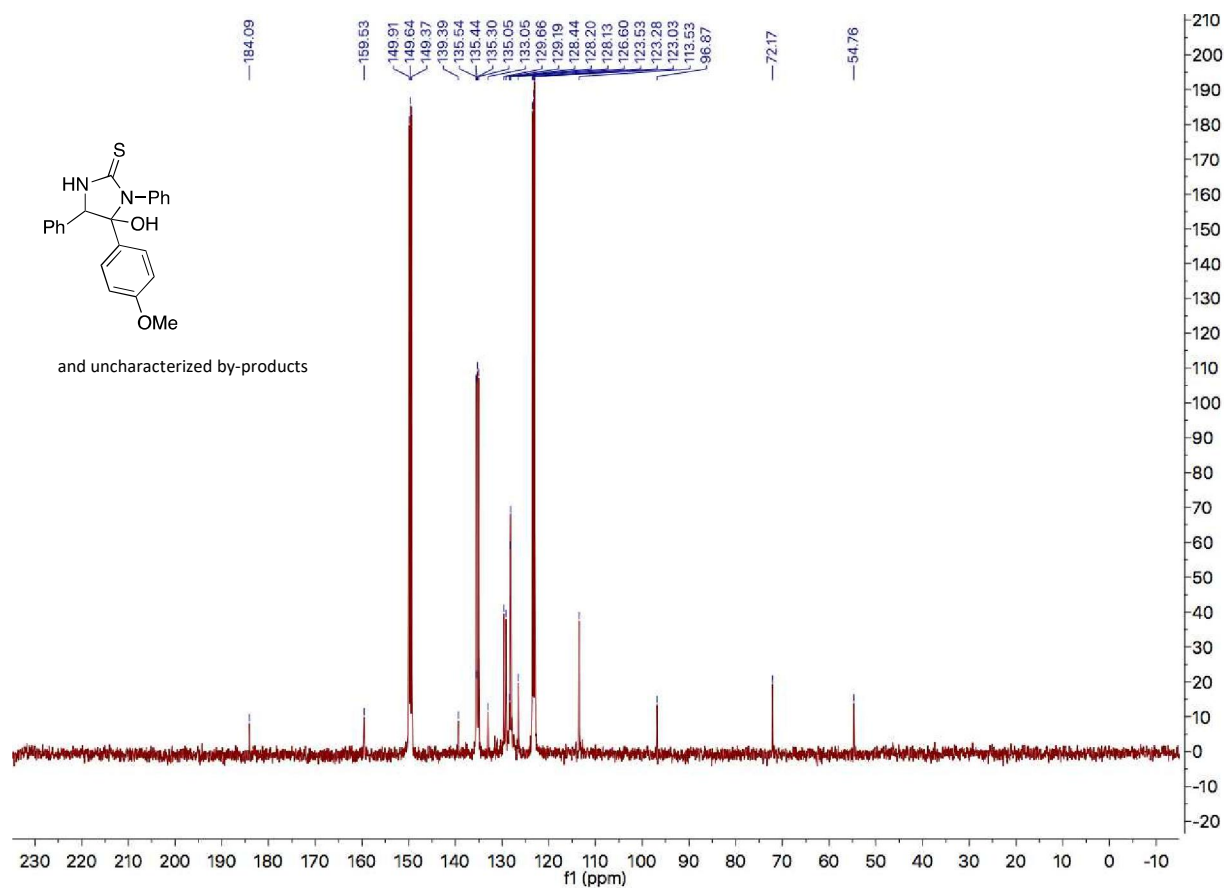
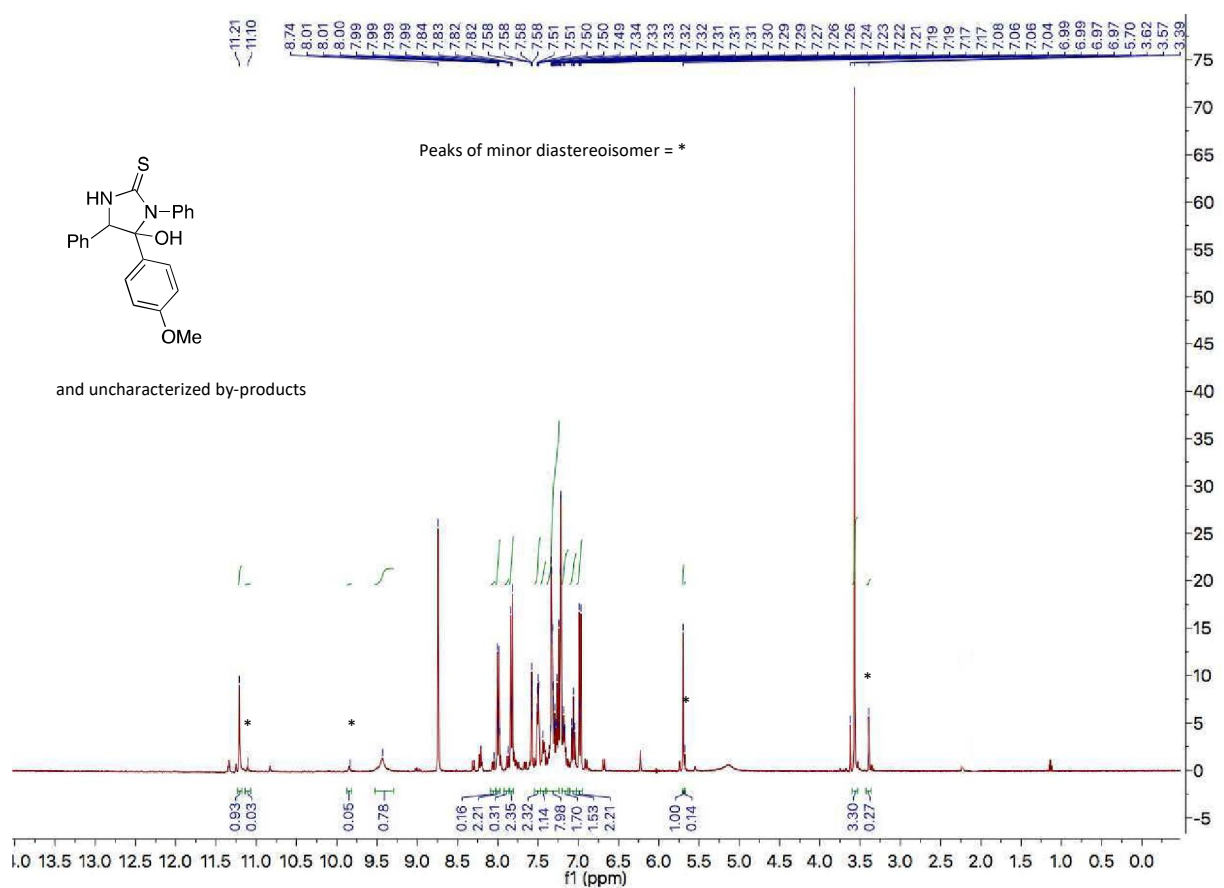


^1H (400 MHz) ^{13}C (101 MHz) and ^{19}F (376 MHz) spectra (pyridine- d_5) of 5aad

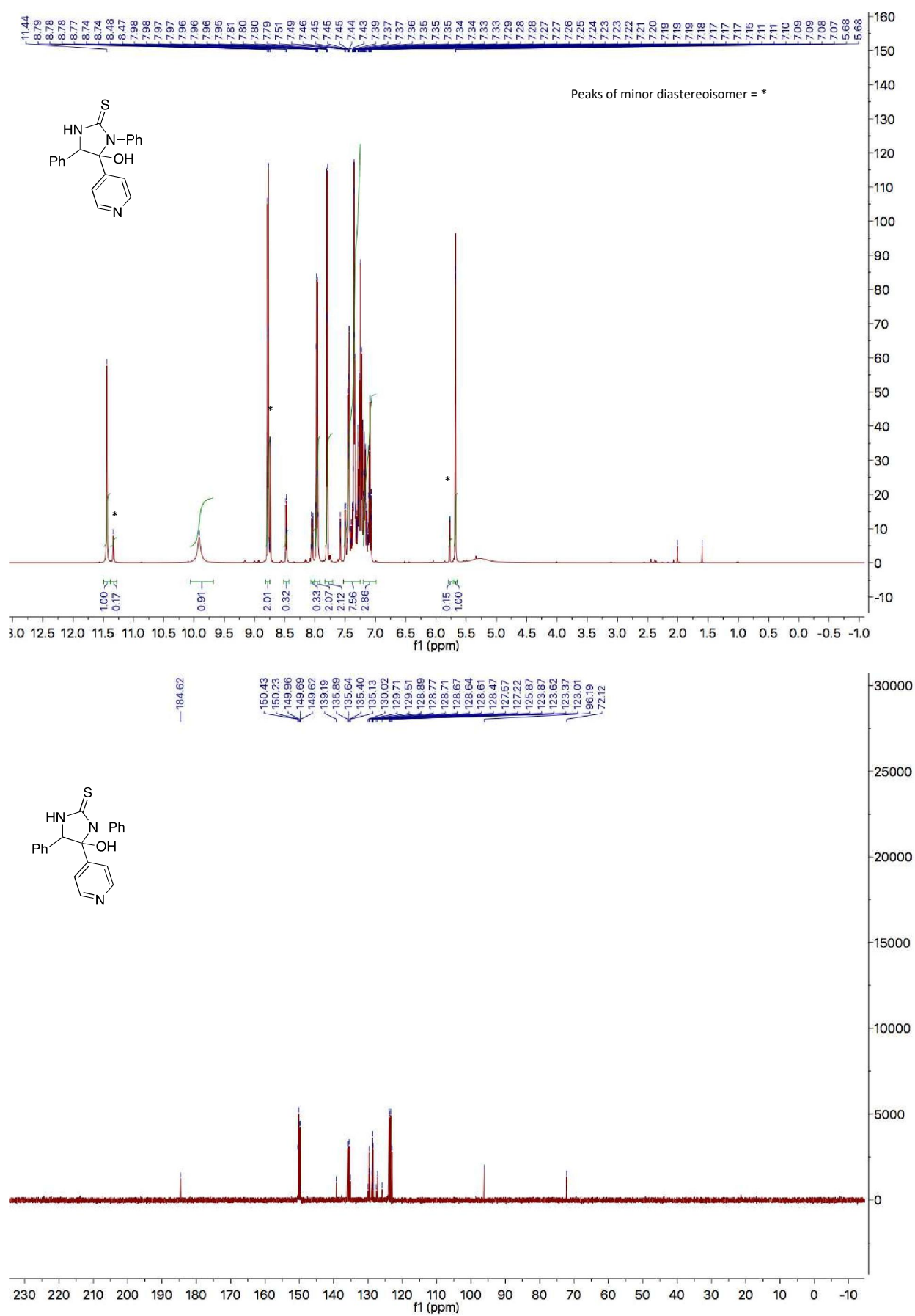




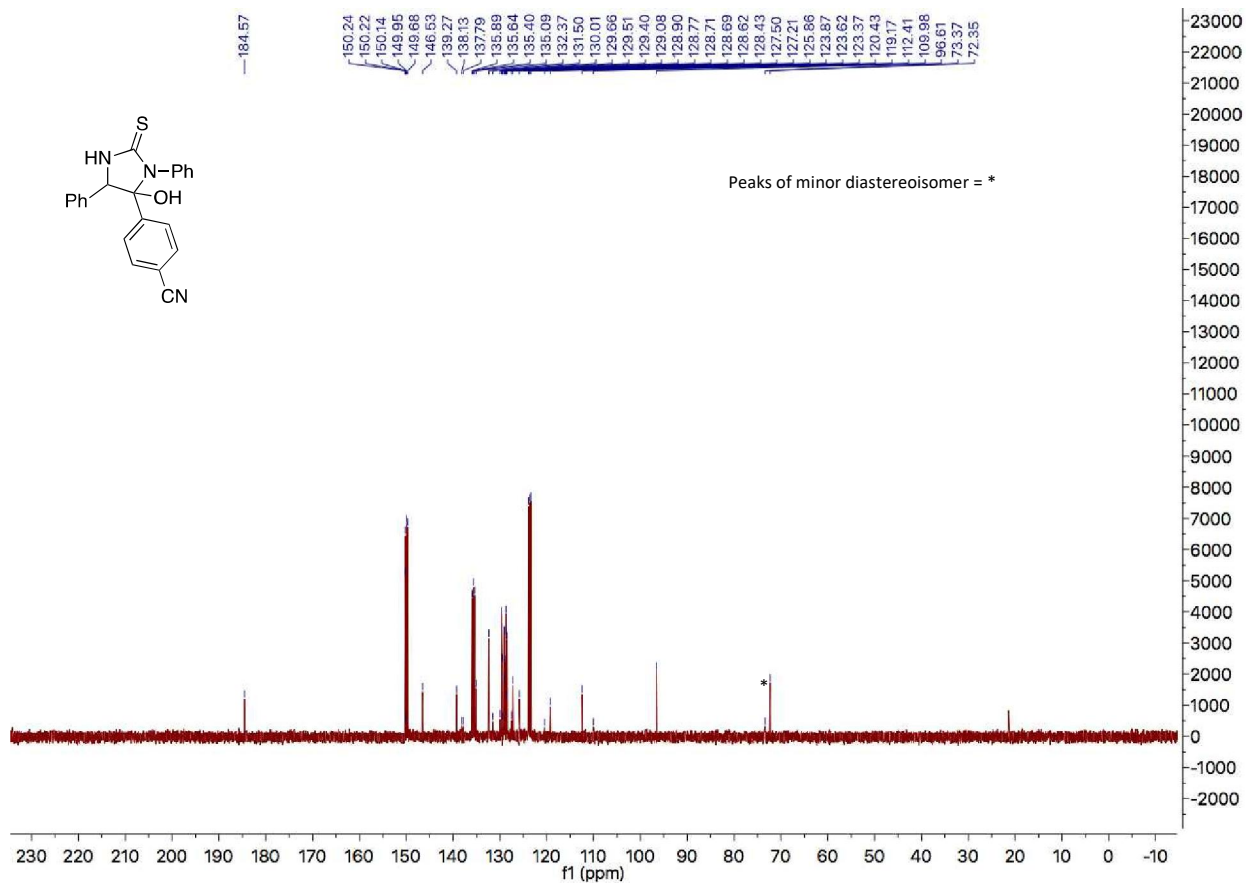
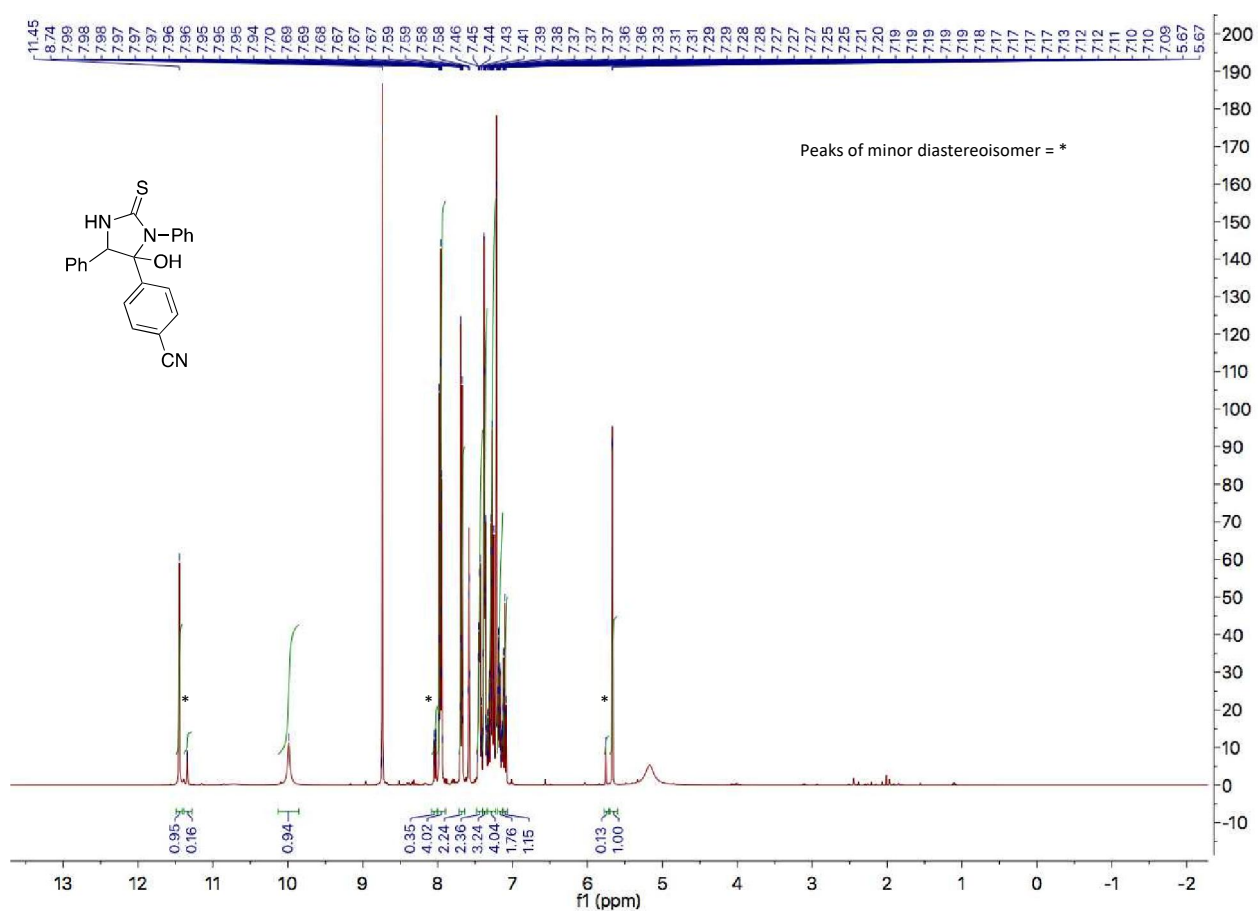
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5a



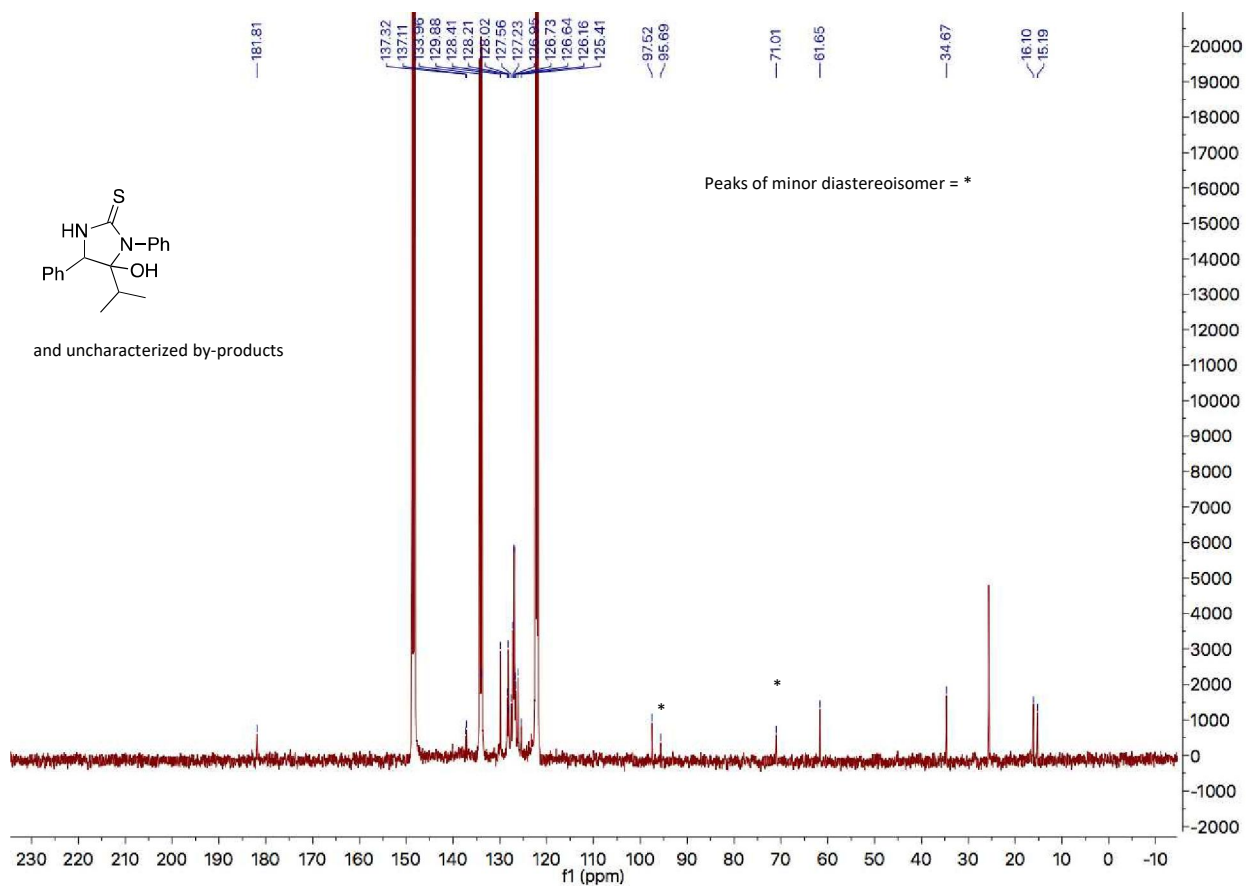
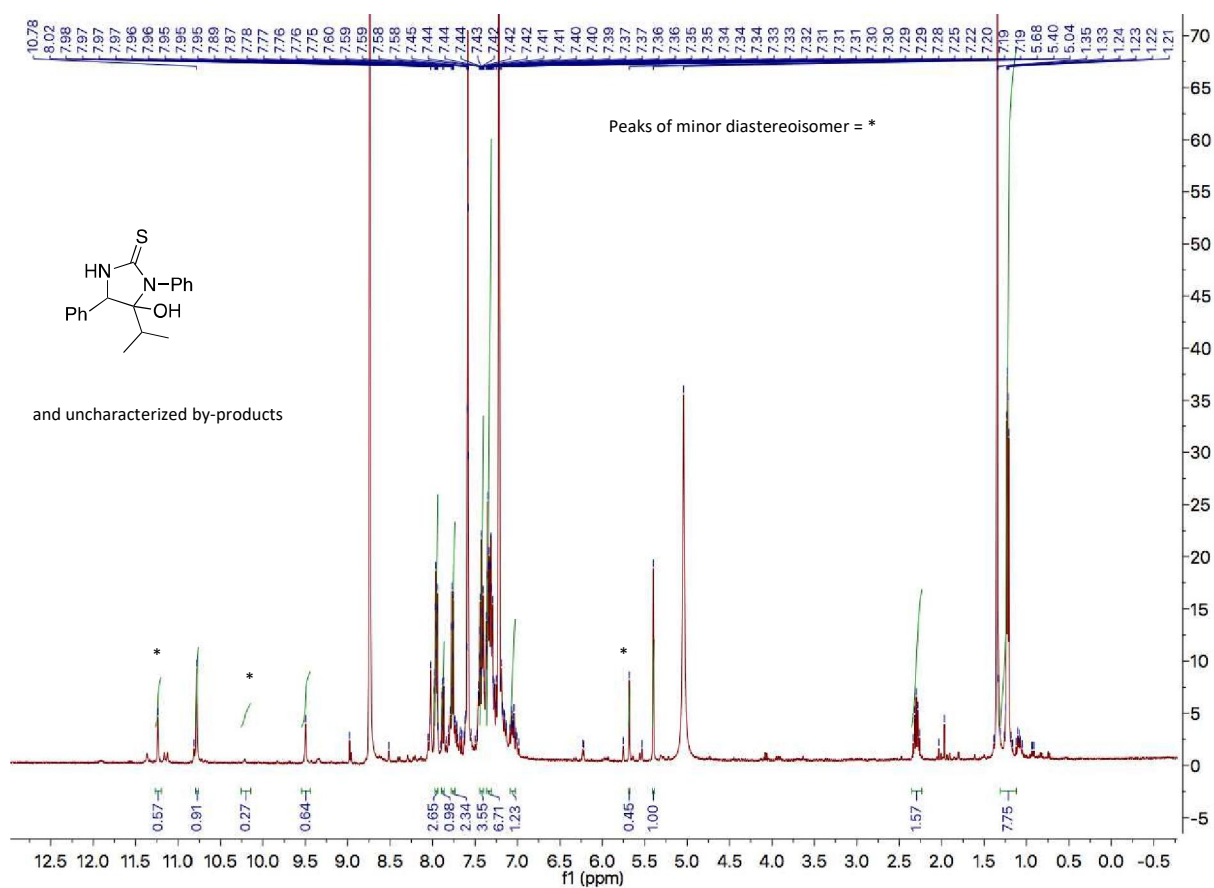
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aam



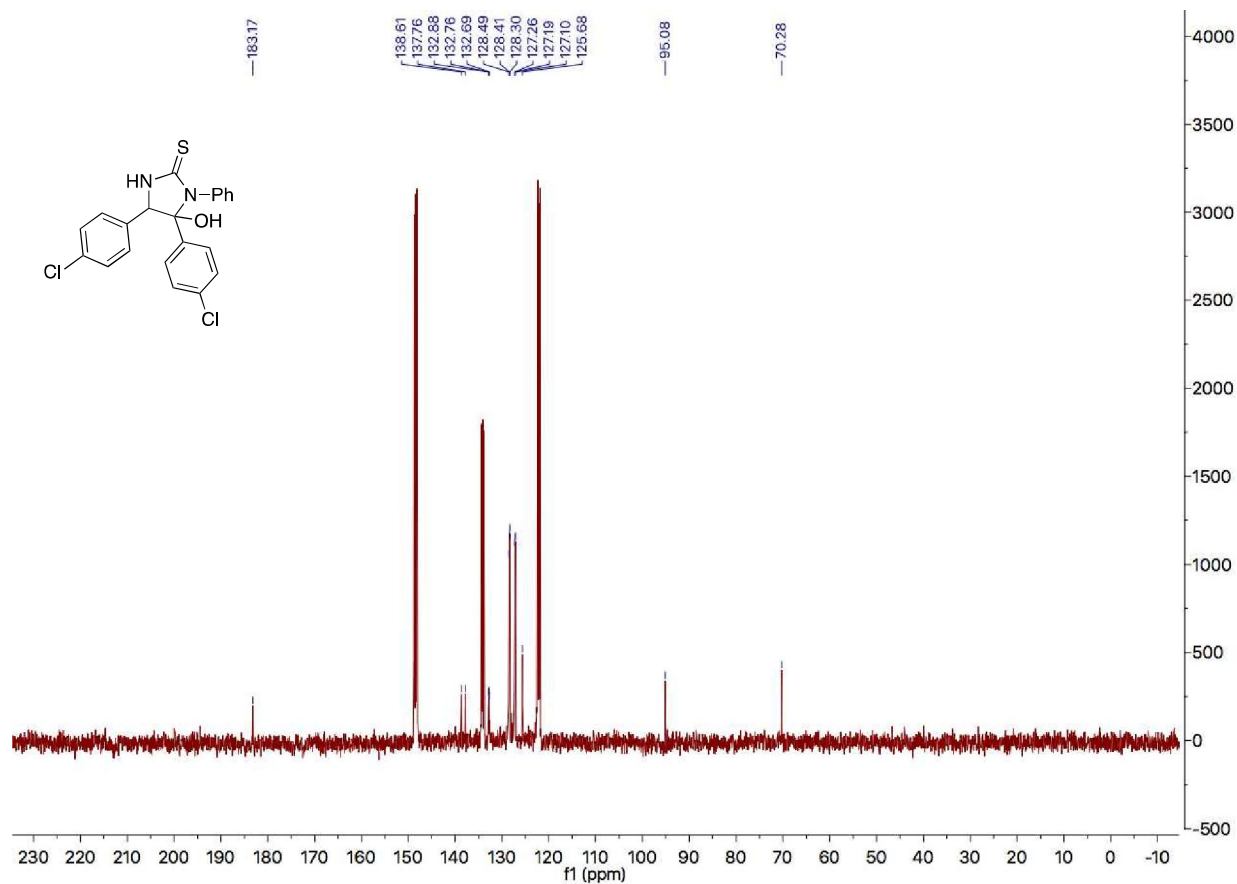
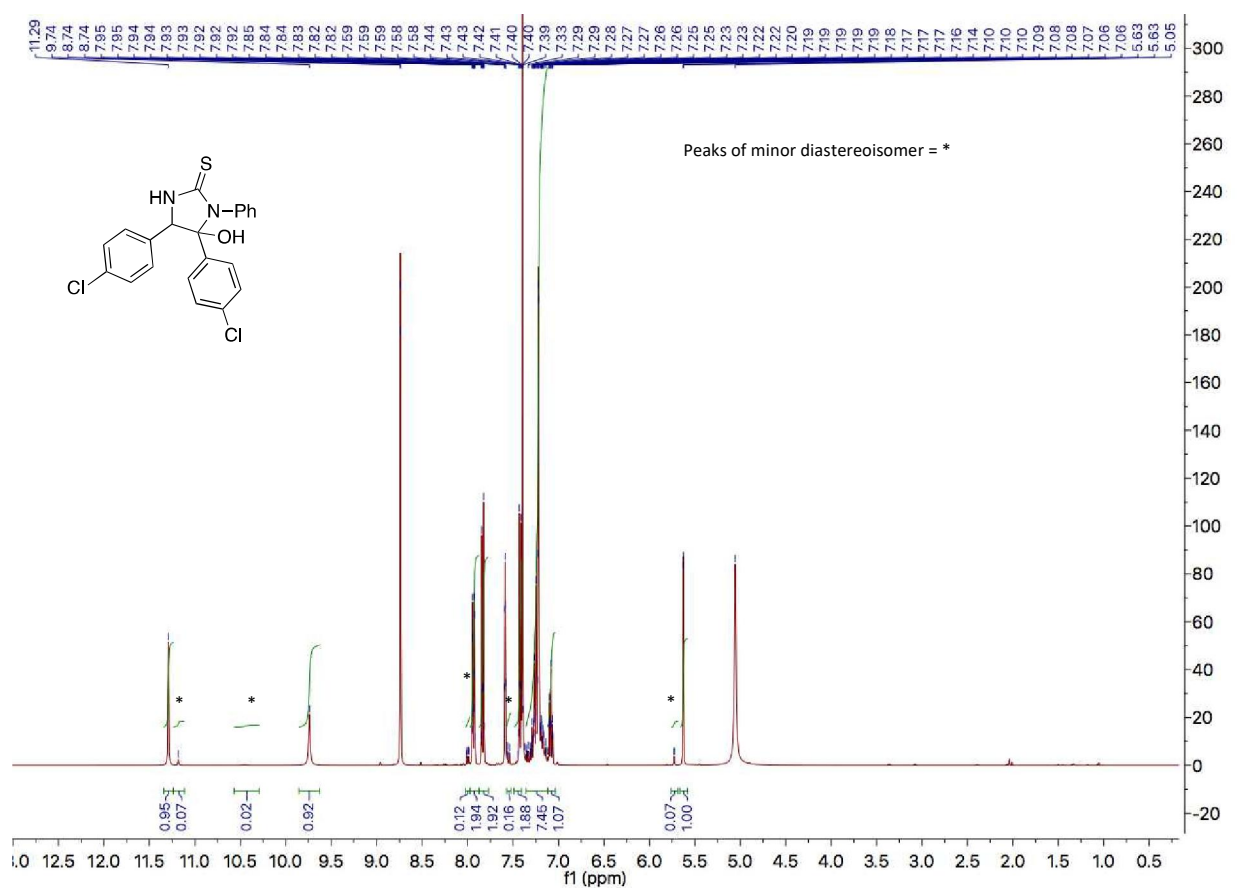
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5a



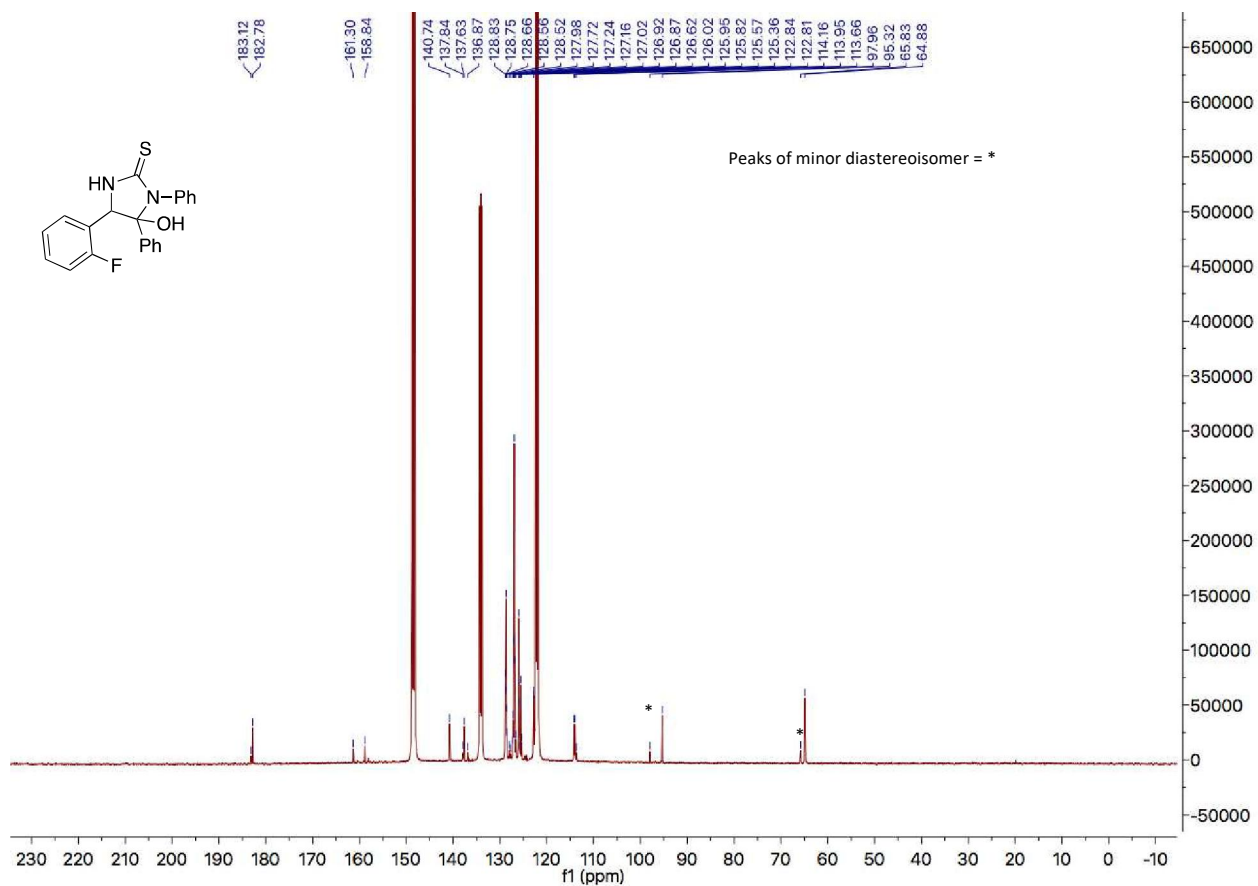
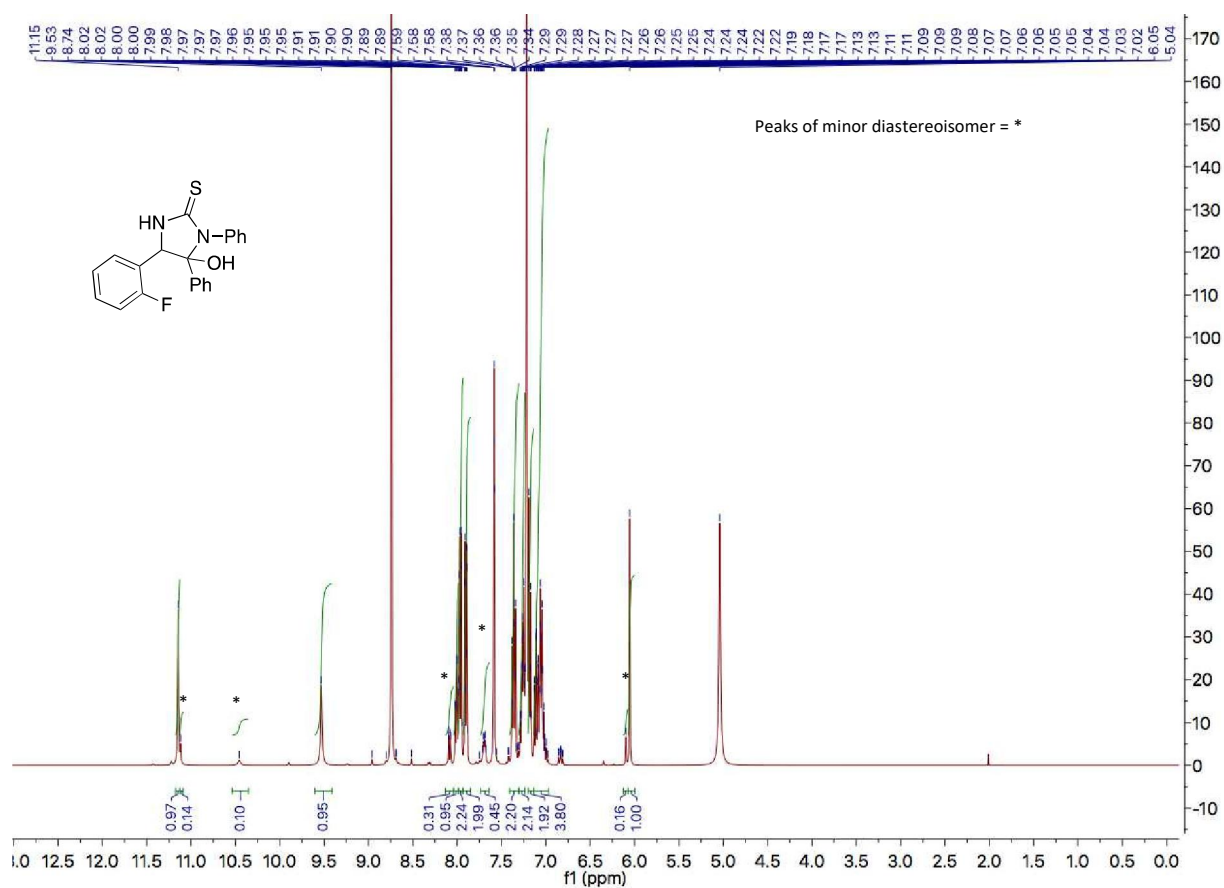
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aag

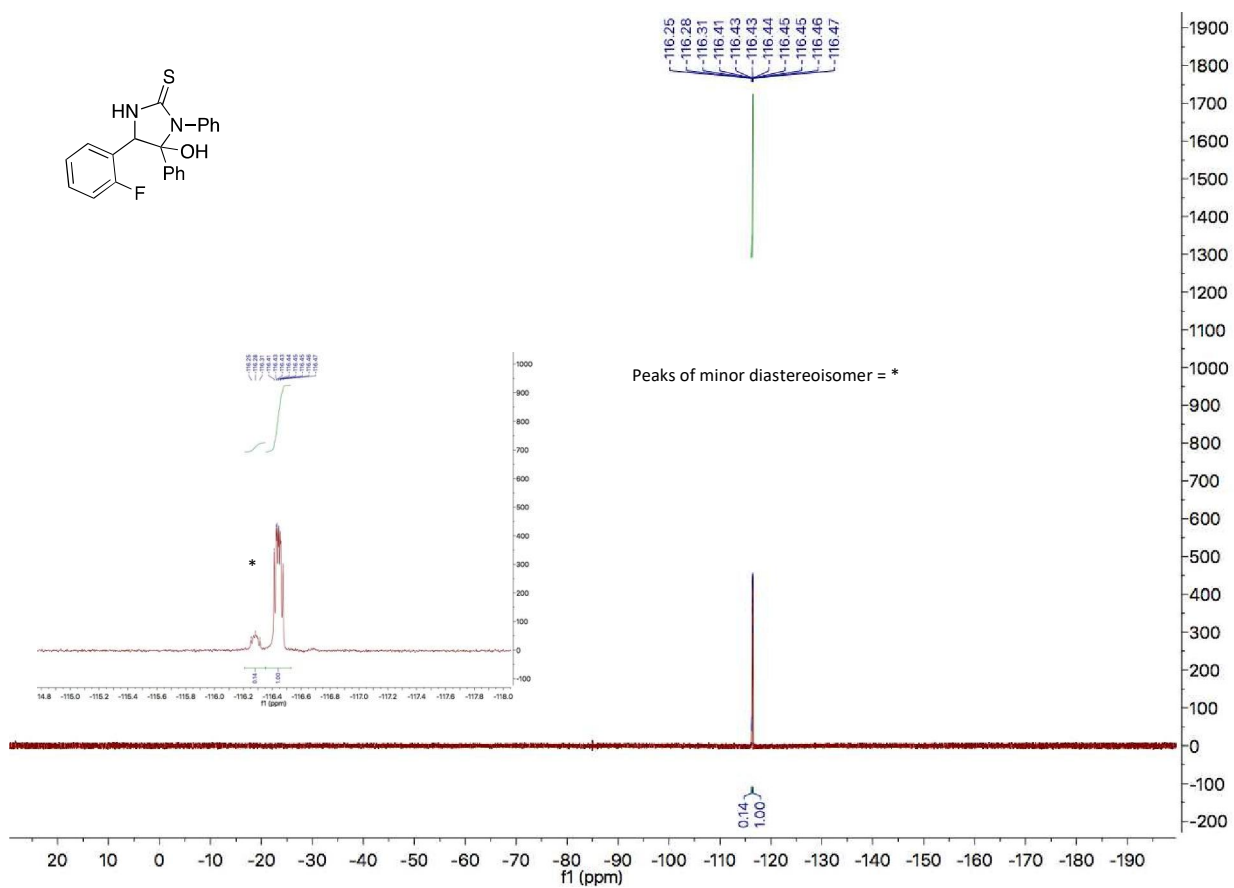


^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5bab

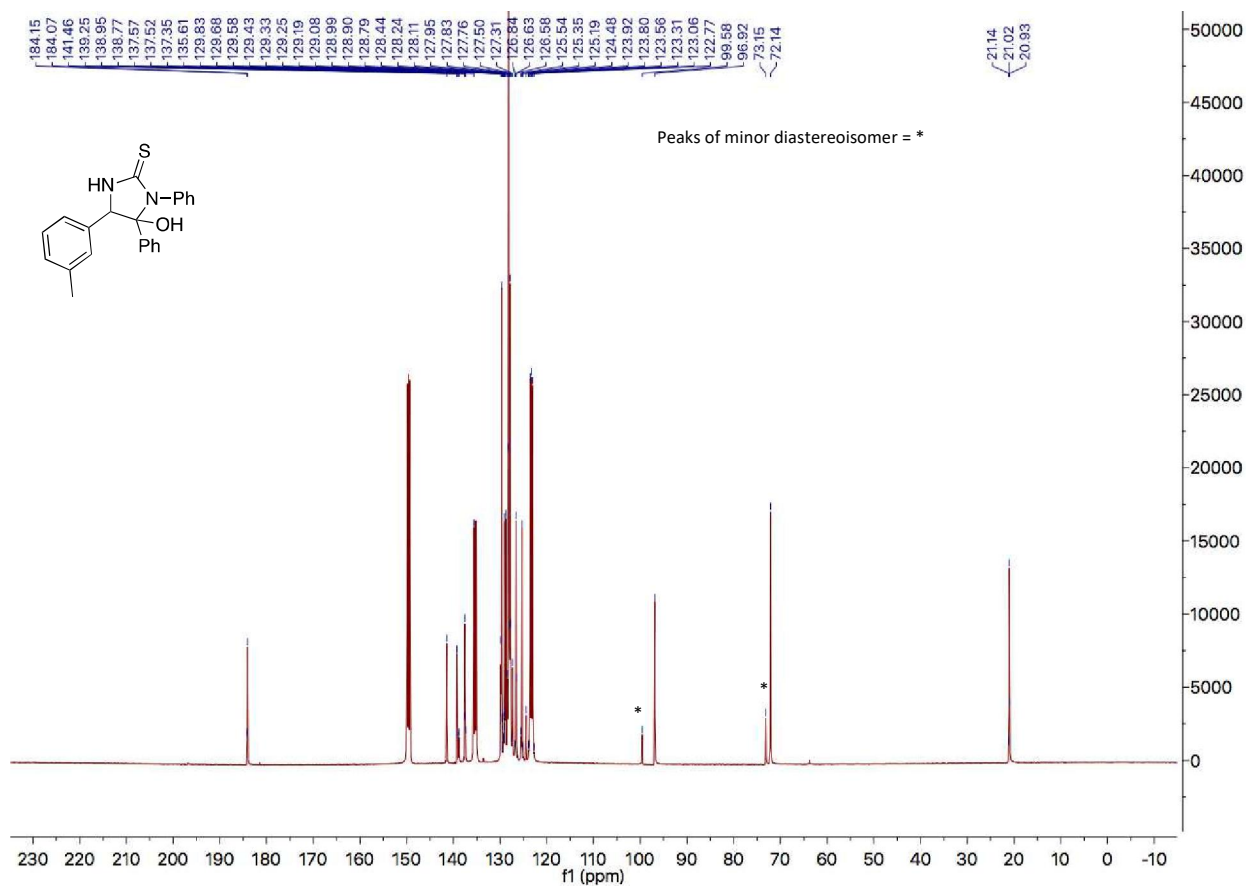
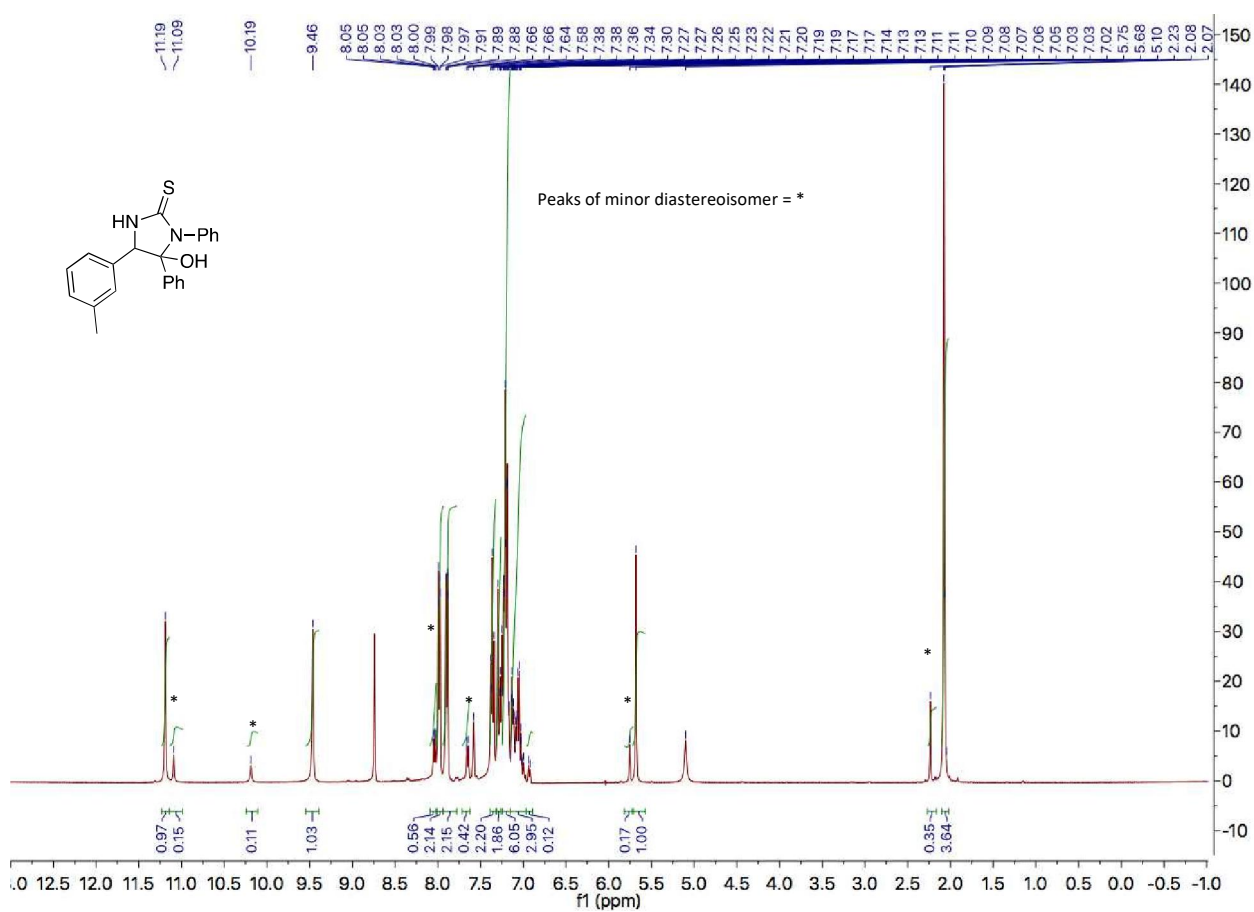


^1H (400 MHz) ^{13}C (101 MHz) and ^{19}F (376 MHz) spectra (pyridine- d_5) of 5daa

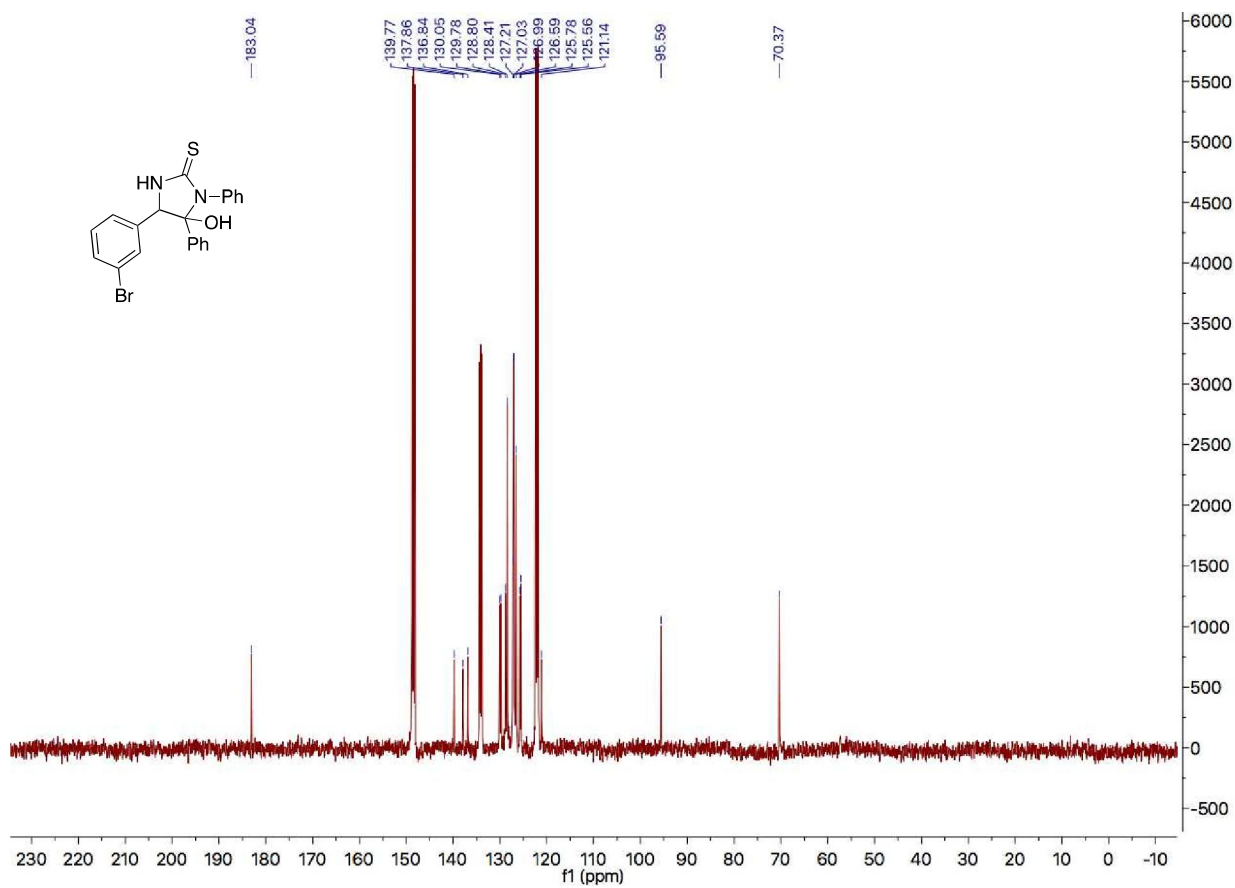
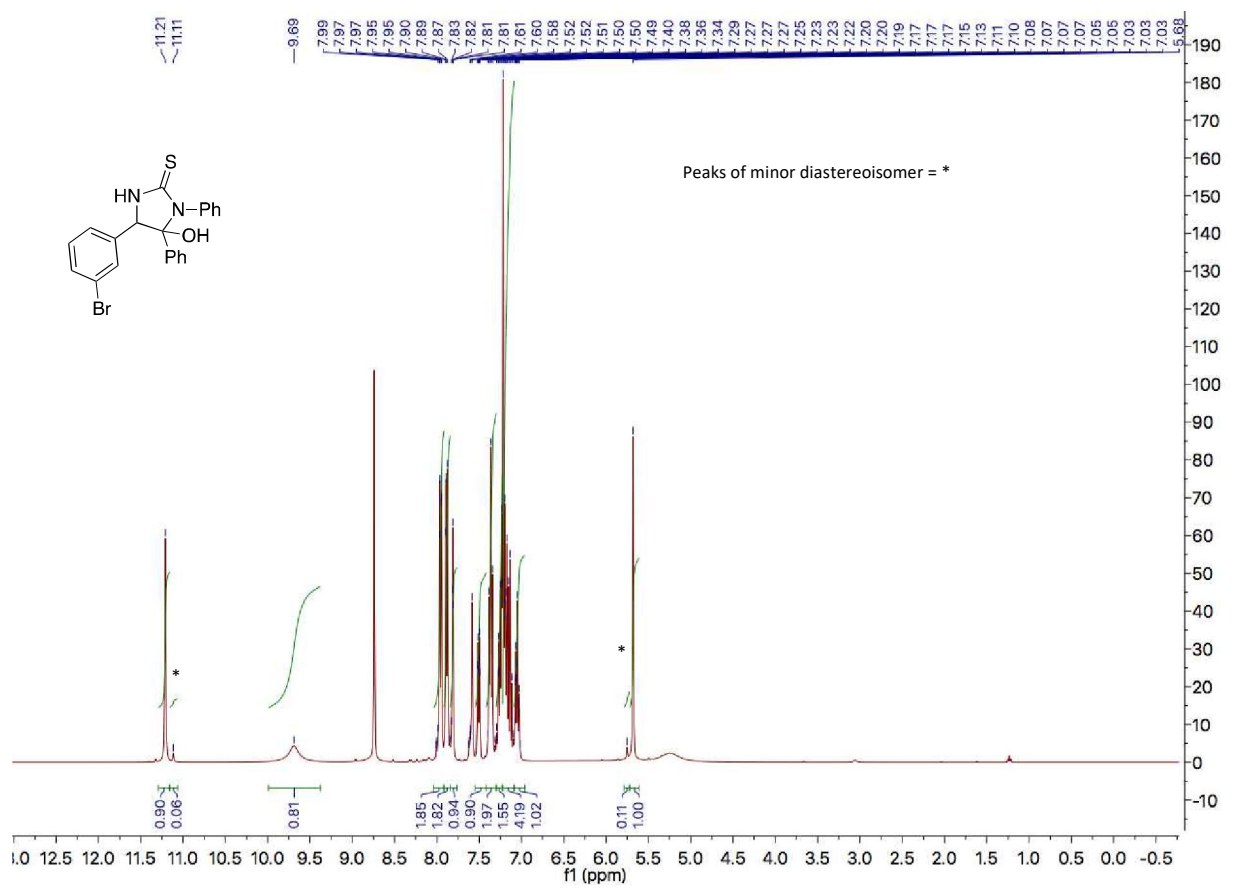




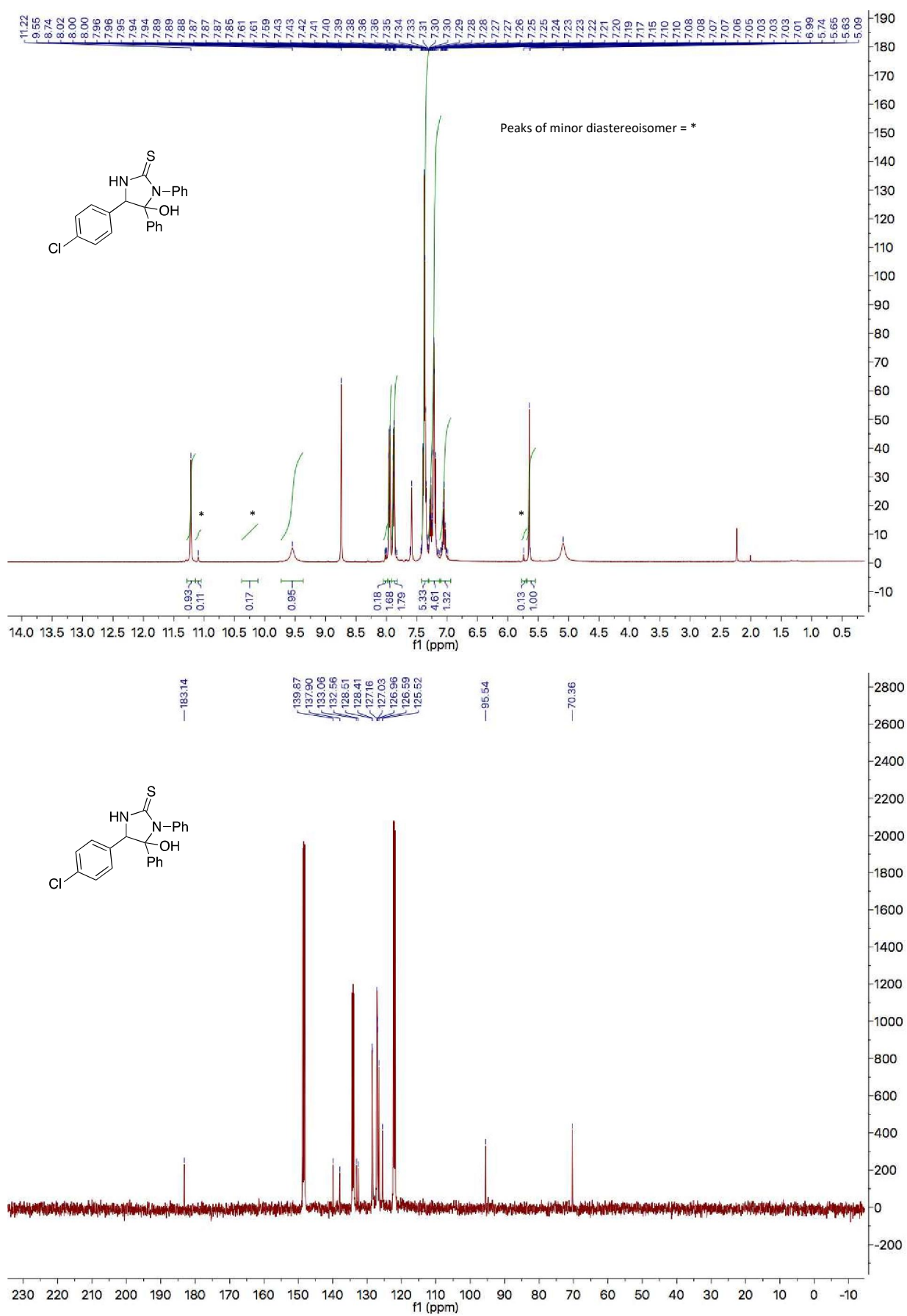
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5faa



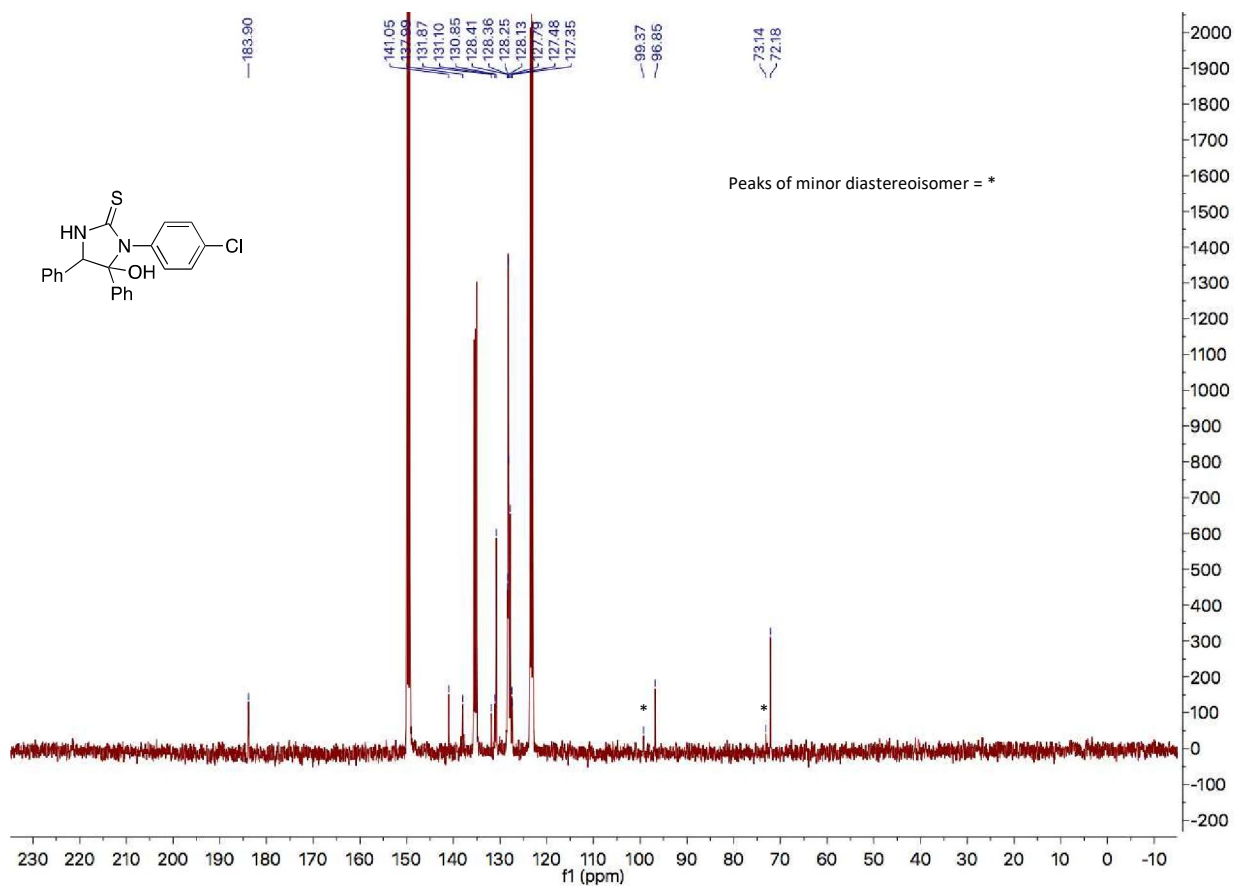
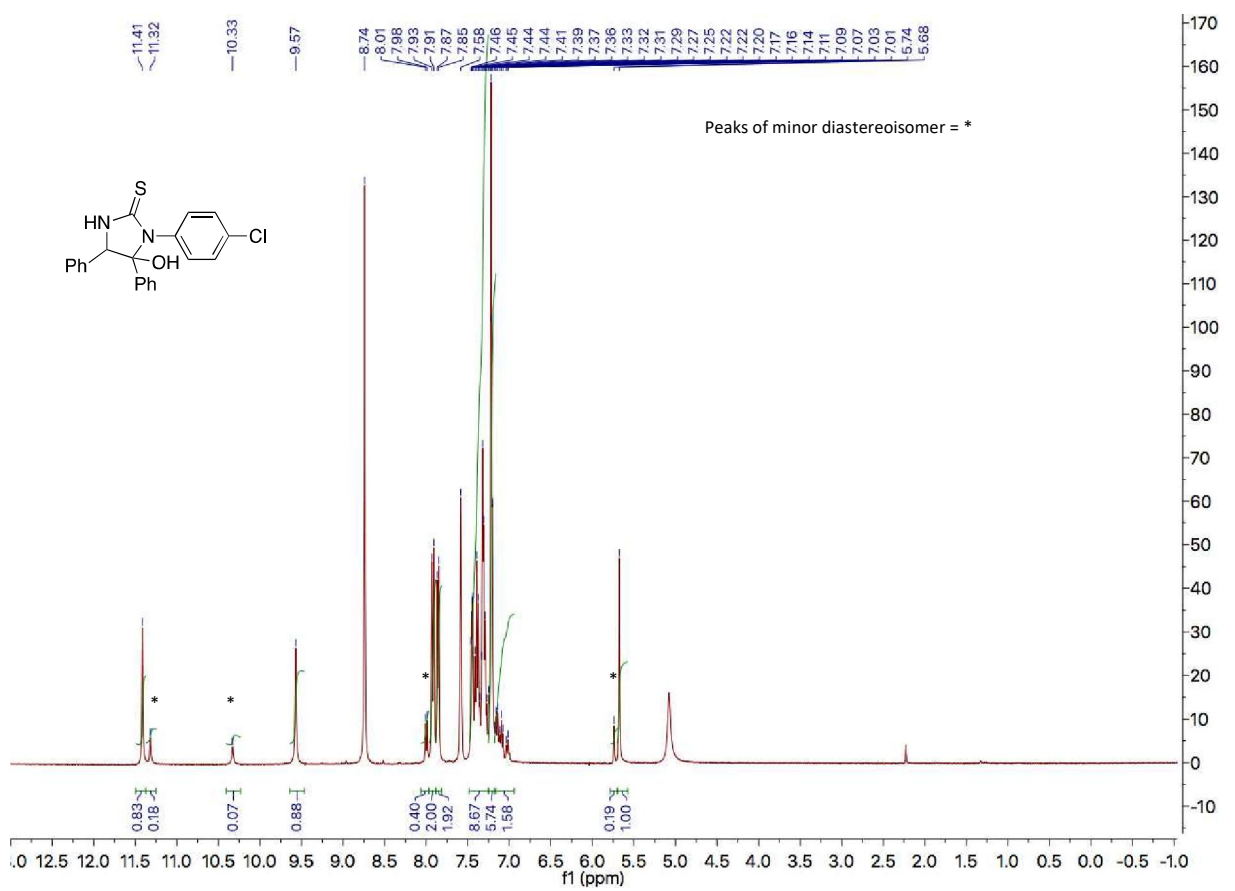
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5eaa



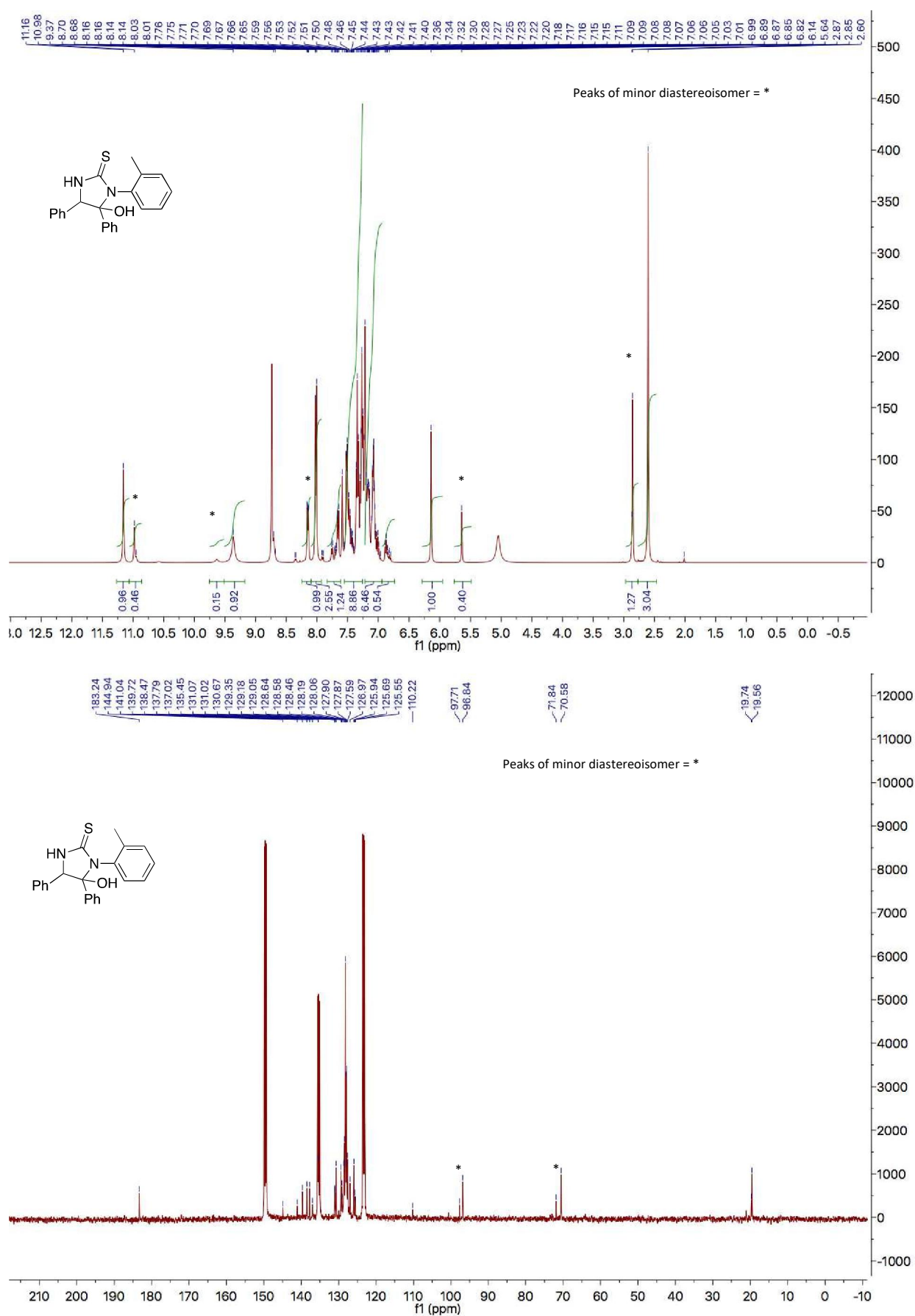
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5baa



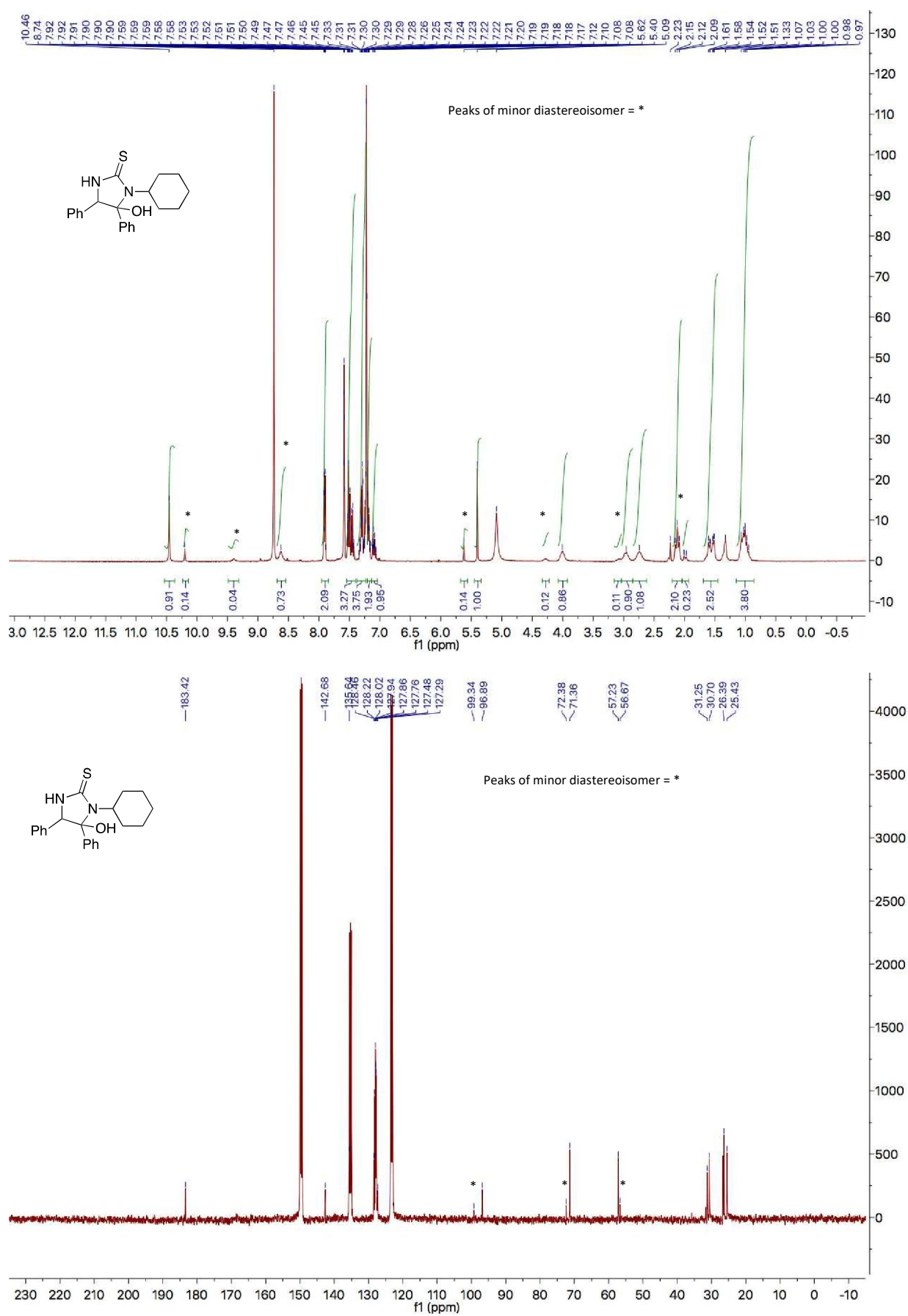
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aba



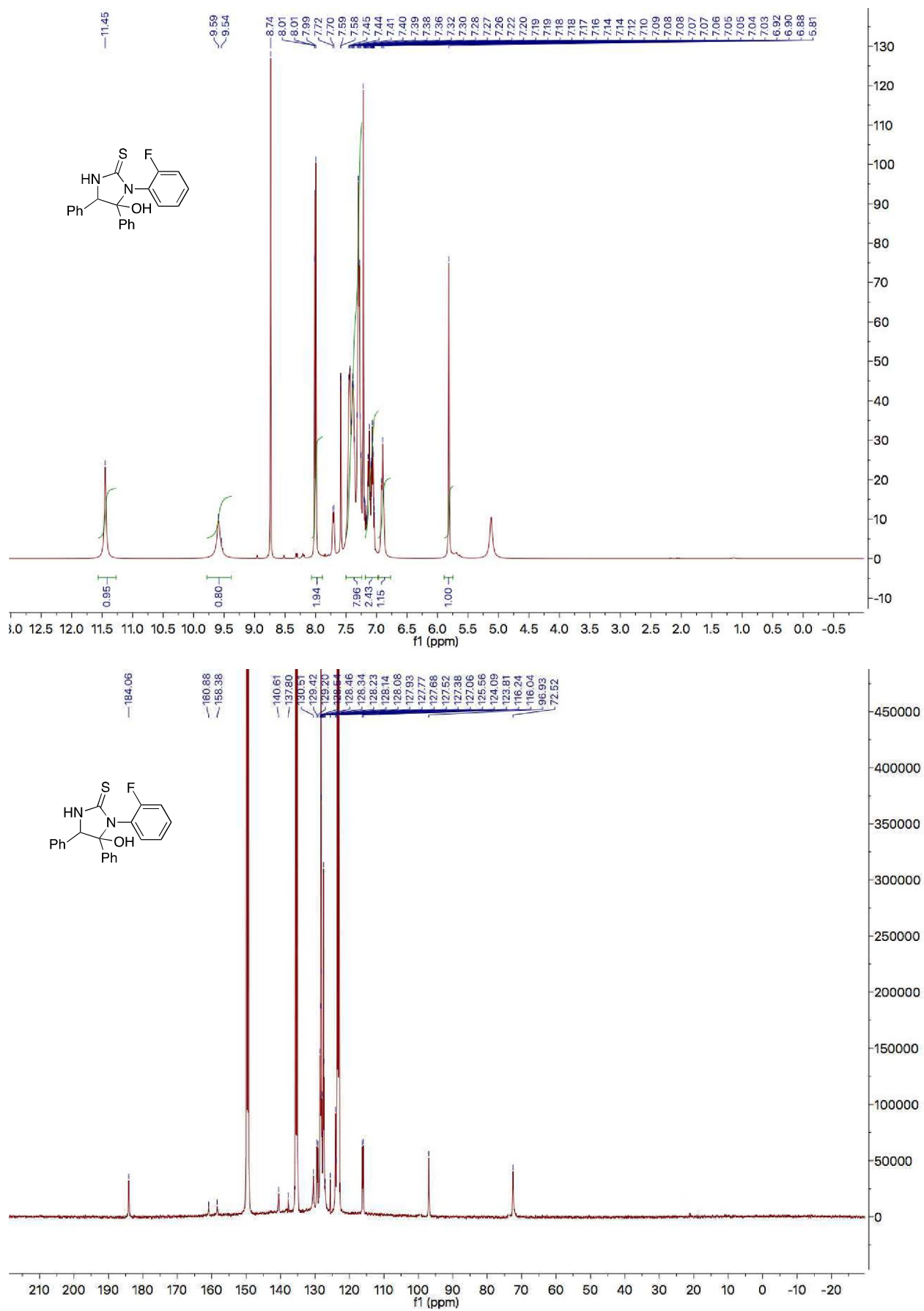
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aha



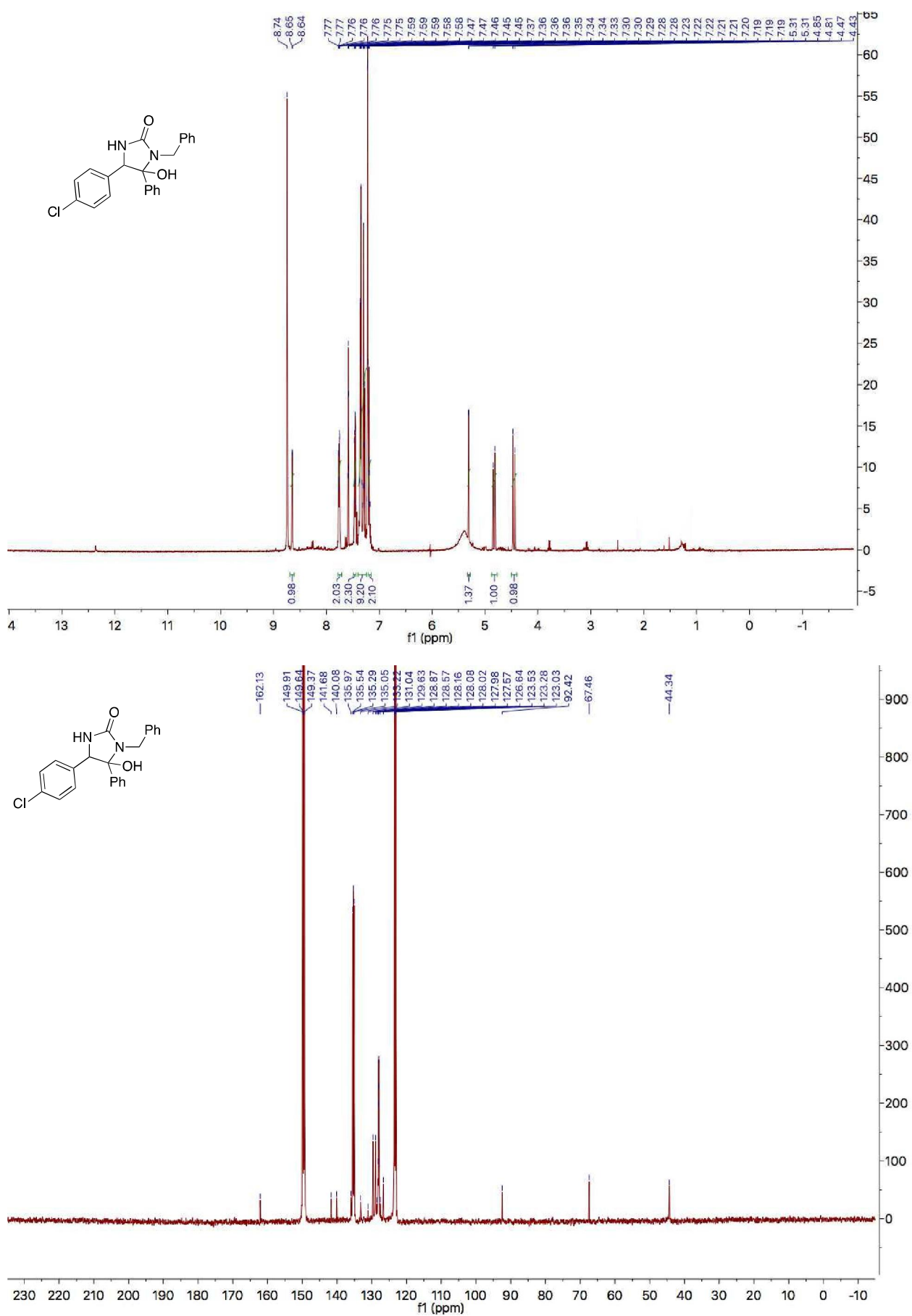
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 5aia



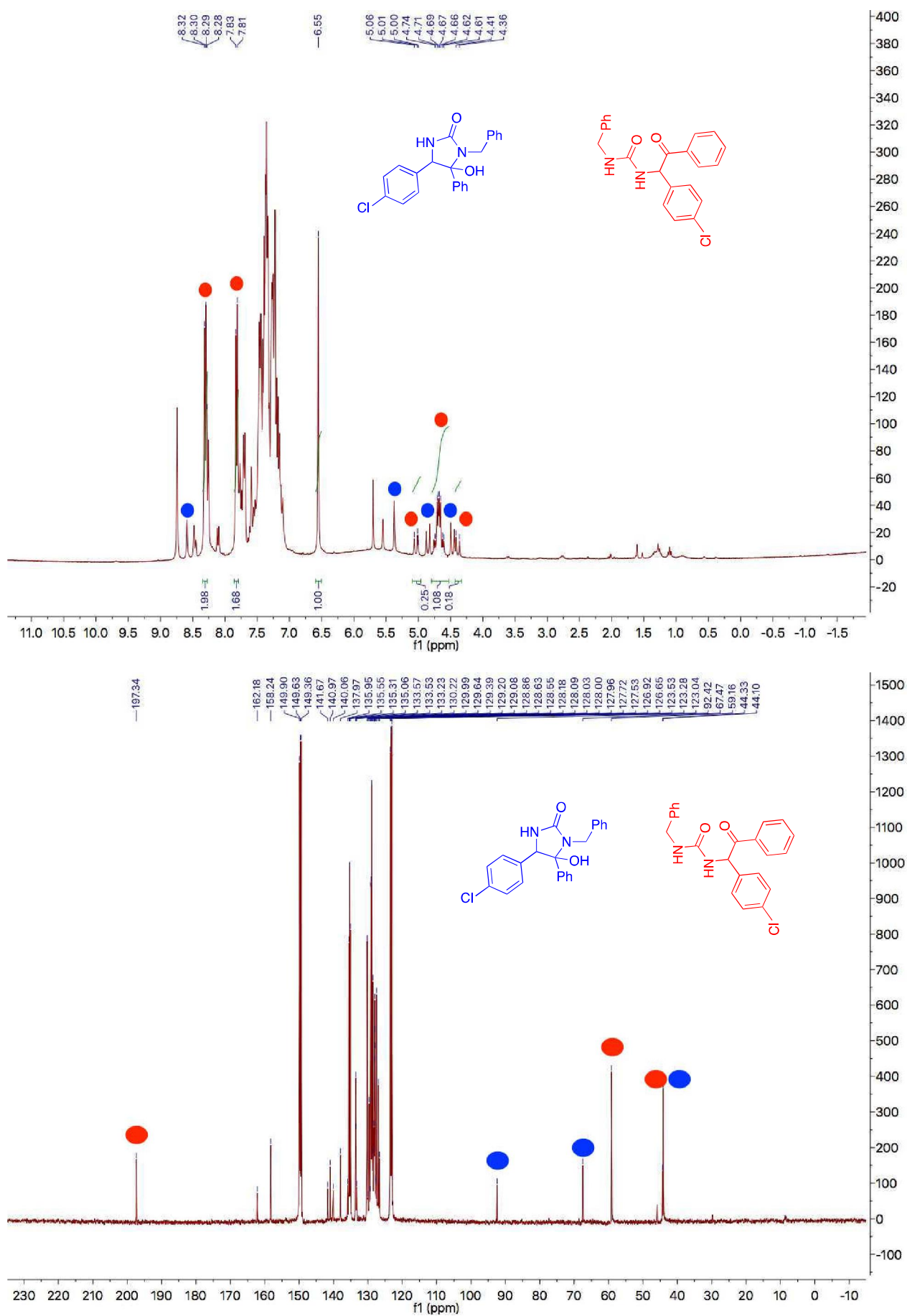
^1H (400 MHz) ^{13}C (101 MHz) and ^{19}F (376 MHz) spectra (pyridine- d_5) of 5ada



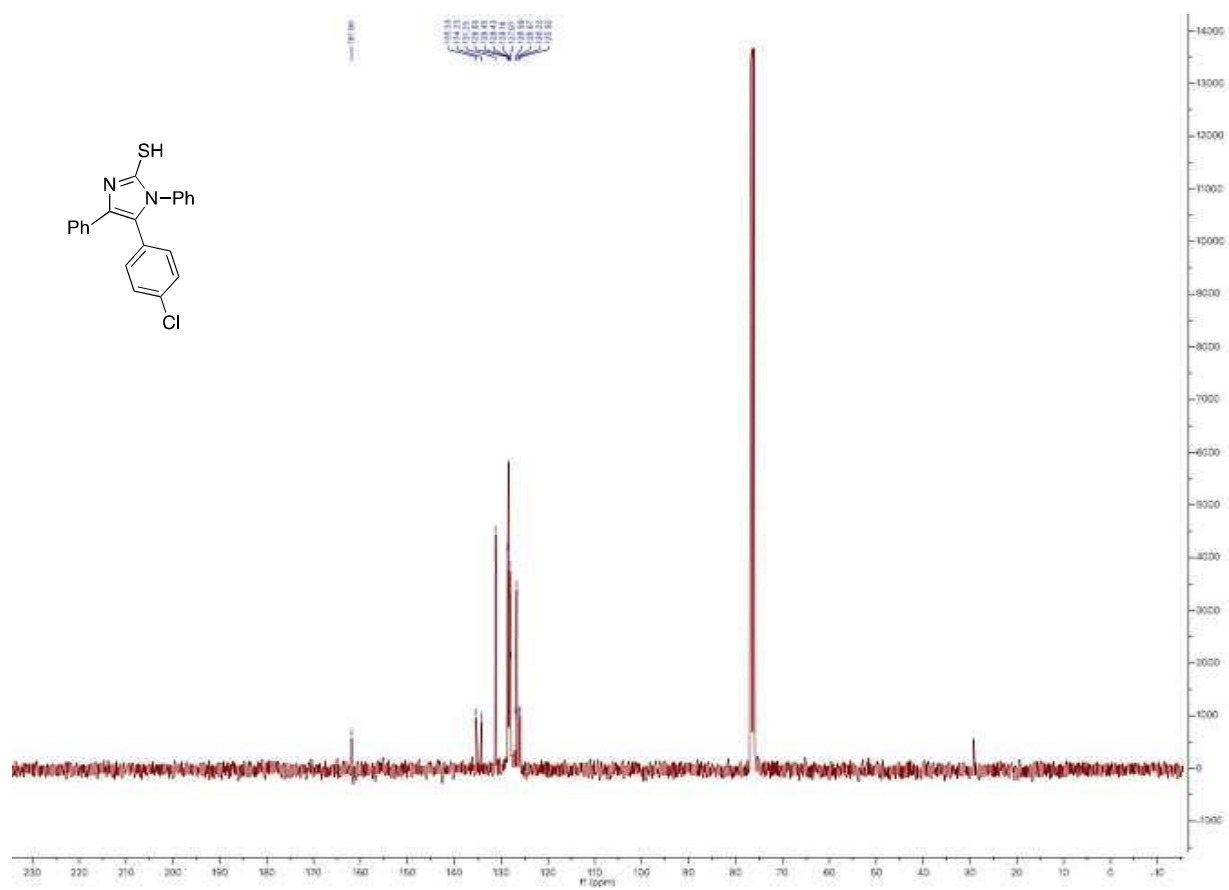
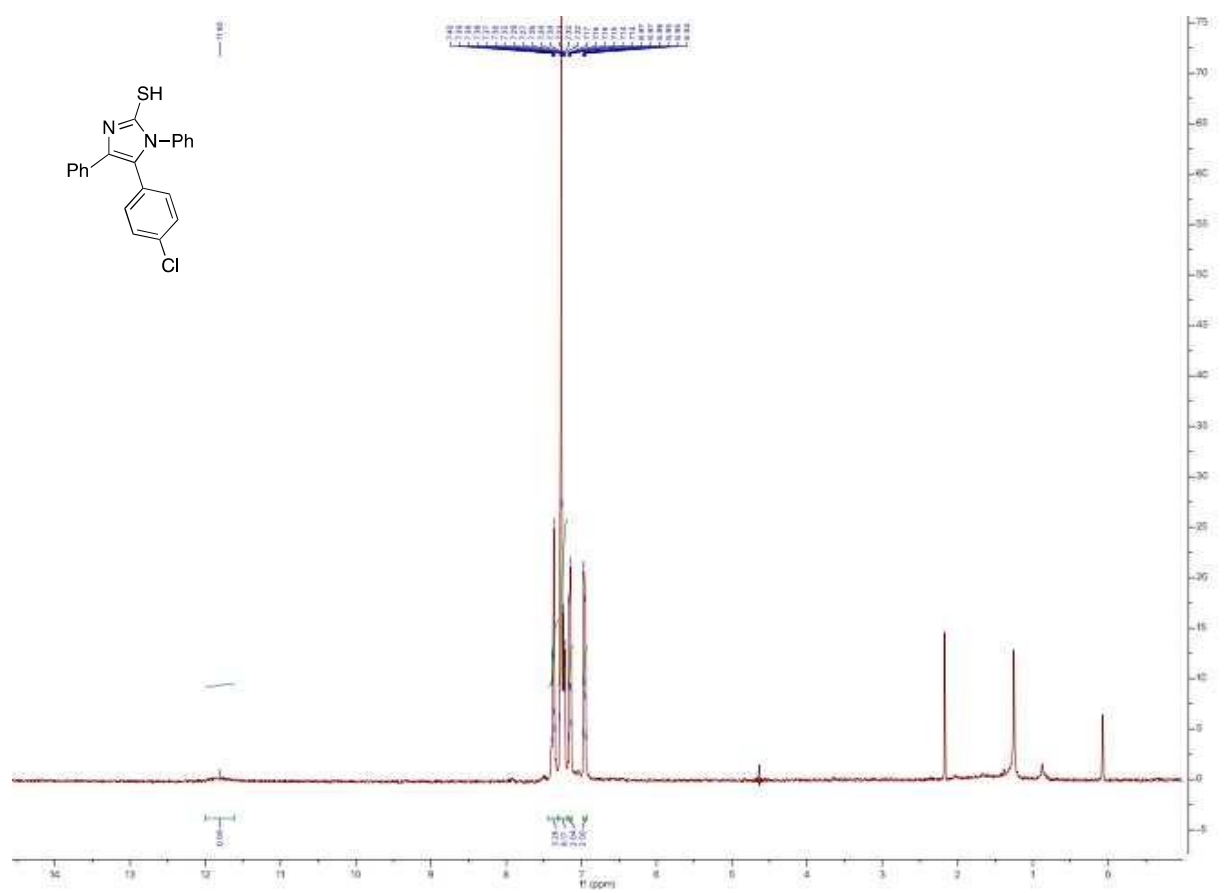
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 8bja



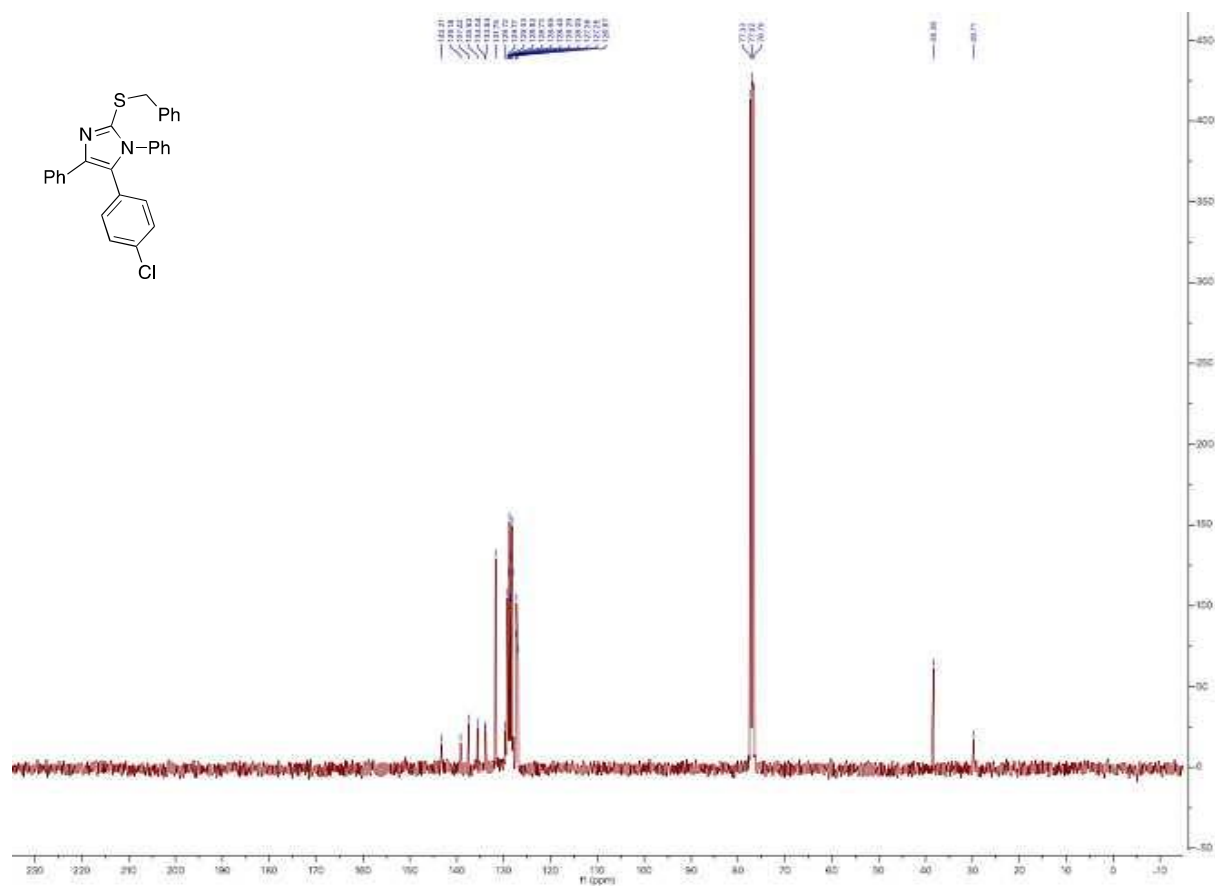
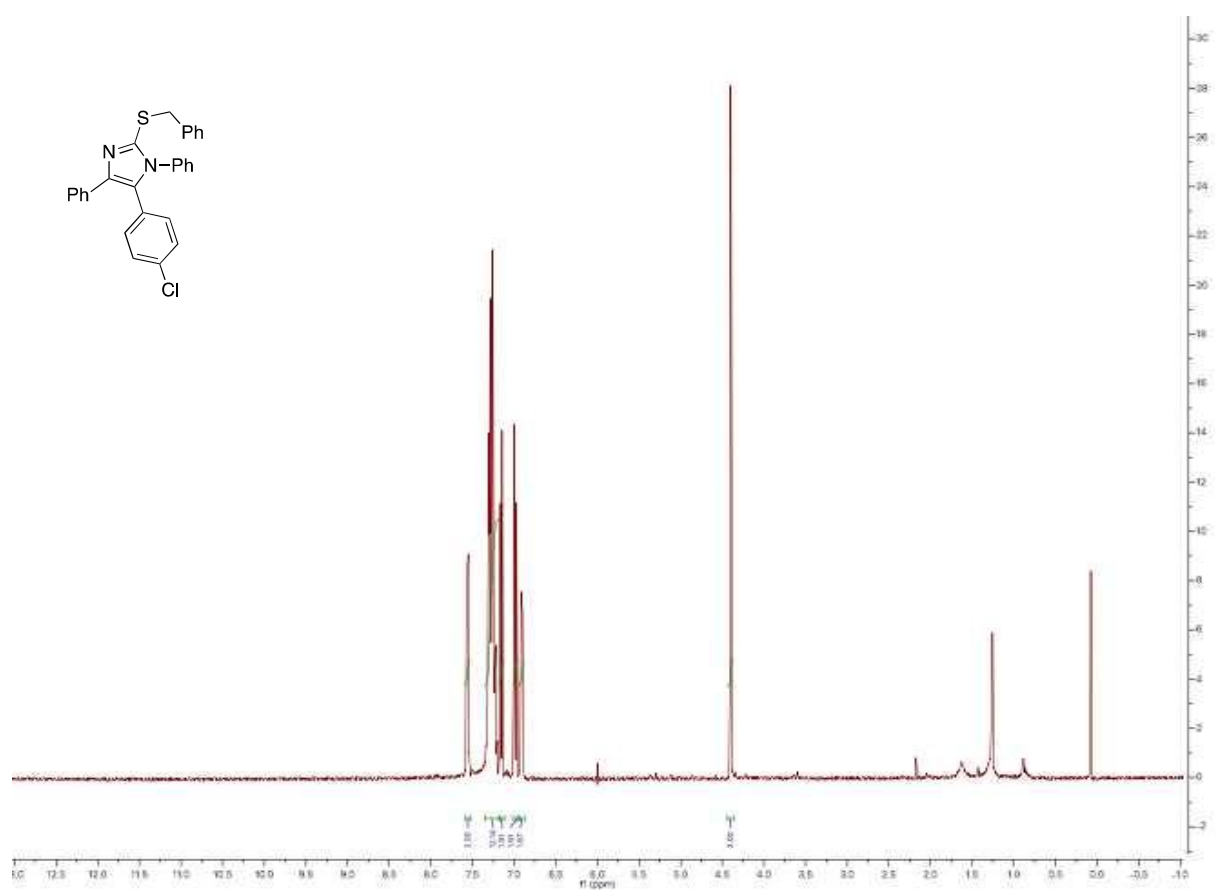
^1H (400 MHz) and ^{13}C (101 MHz) spectra (pyridine- d_5) of 8bja and 9bja mixture



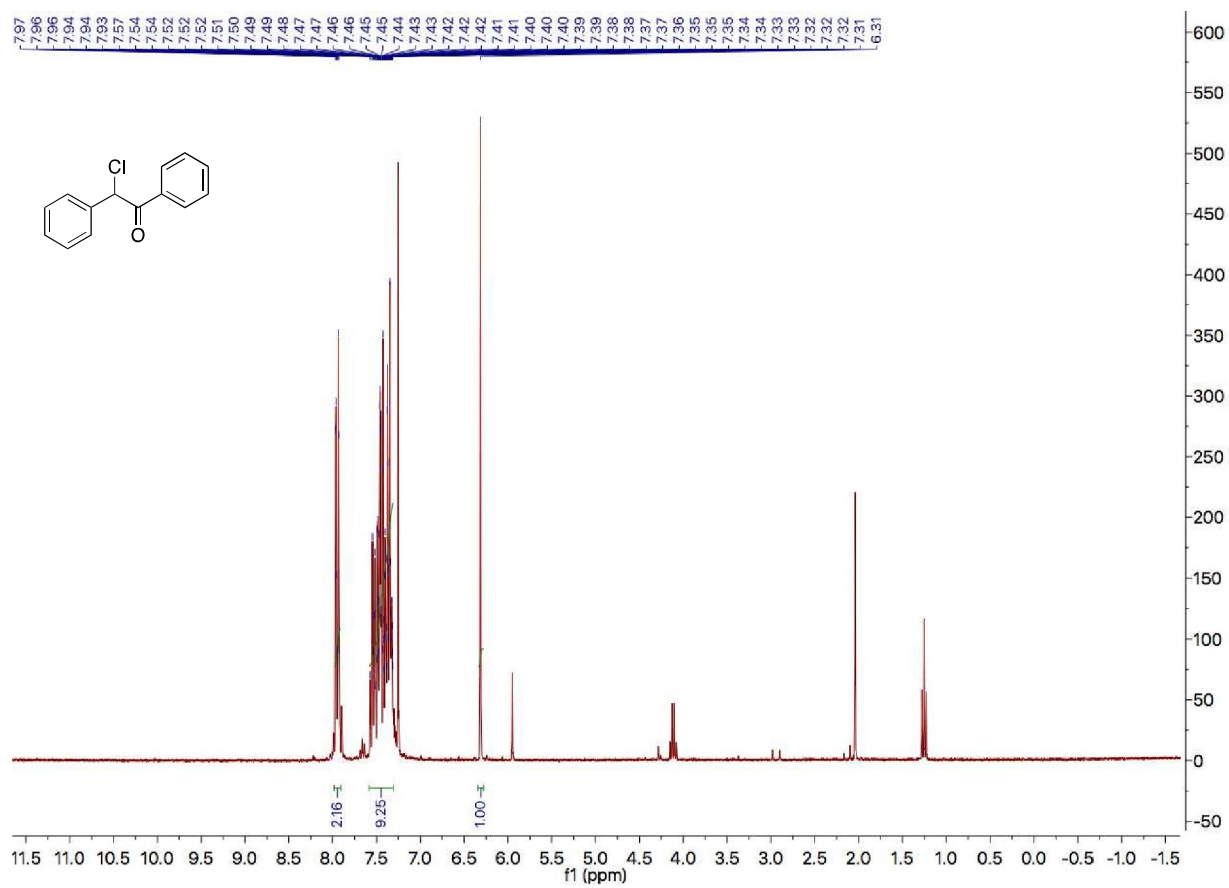
^1H (400 MHz) and ^{13}C (101 MHz) spectra (CDCl_3) of 17



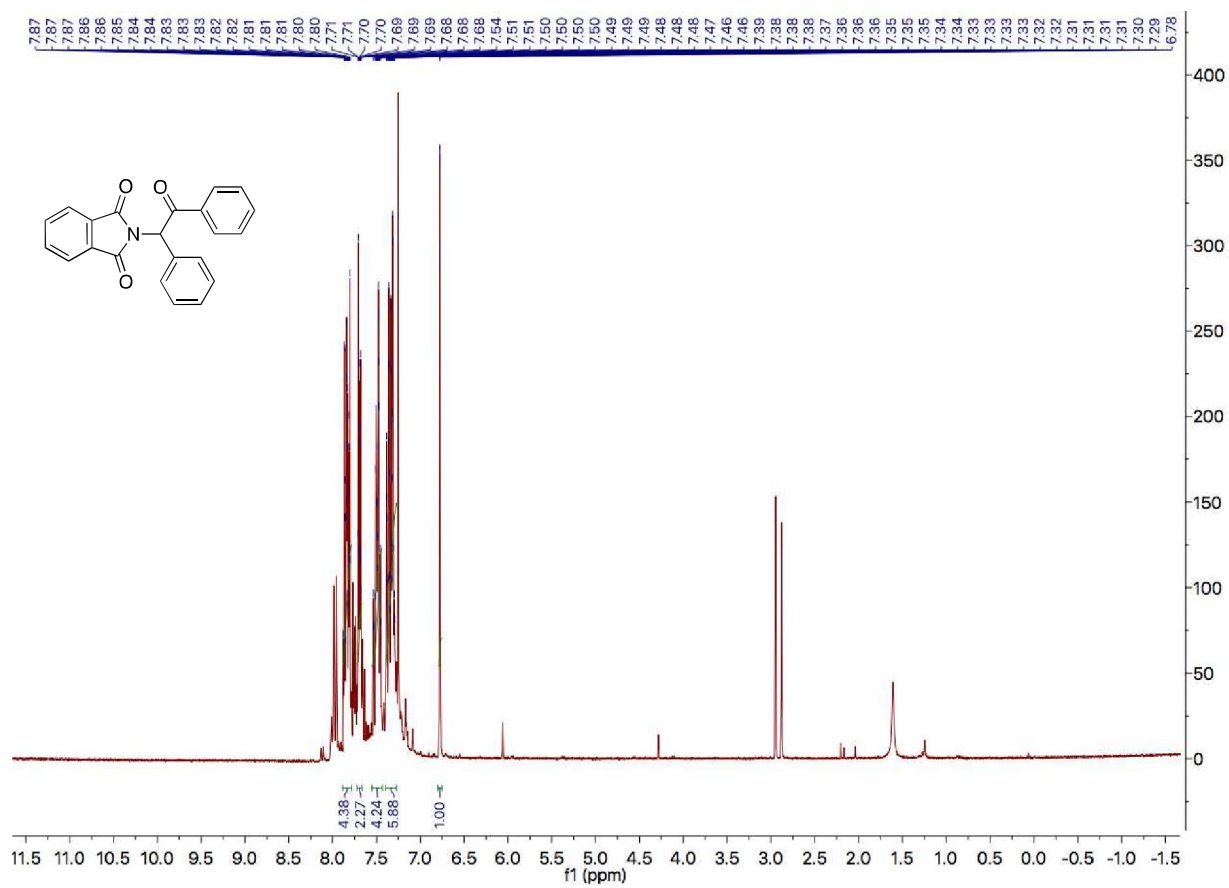
^1H (400 MHz) and ^{13}C (101 MHz) spectra (CDCl_3) of 18



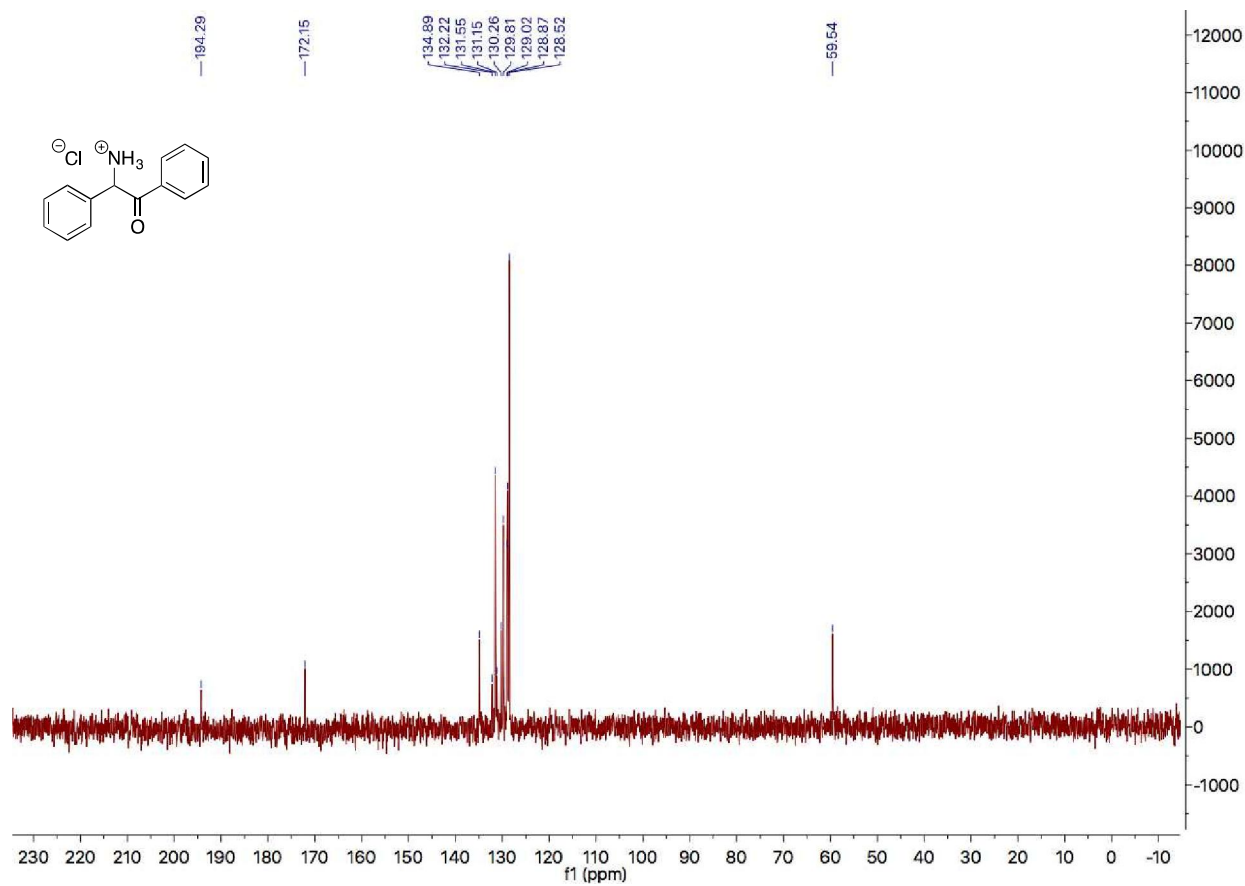
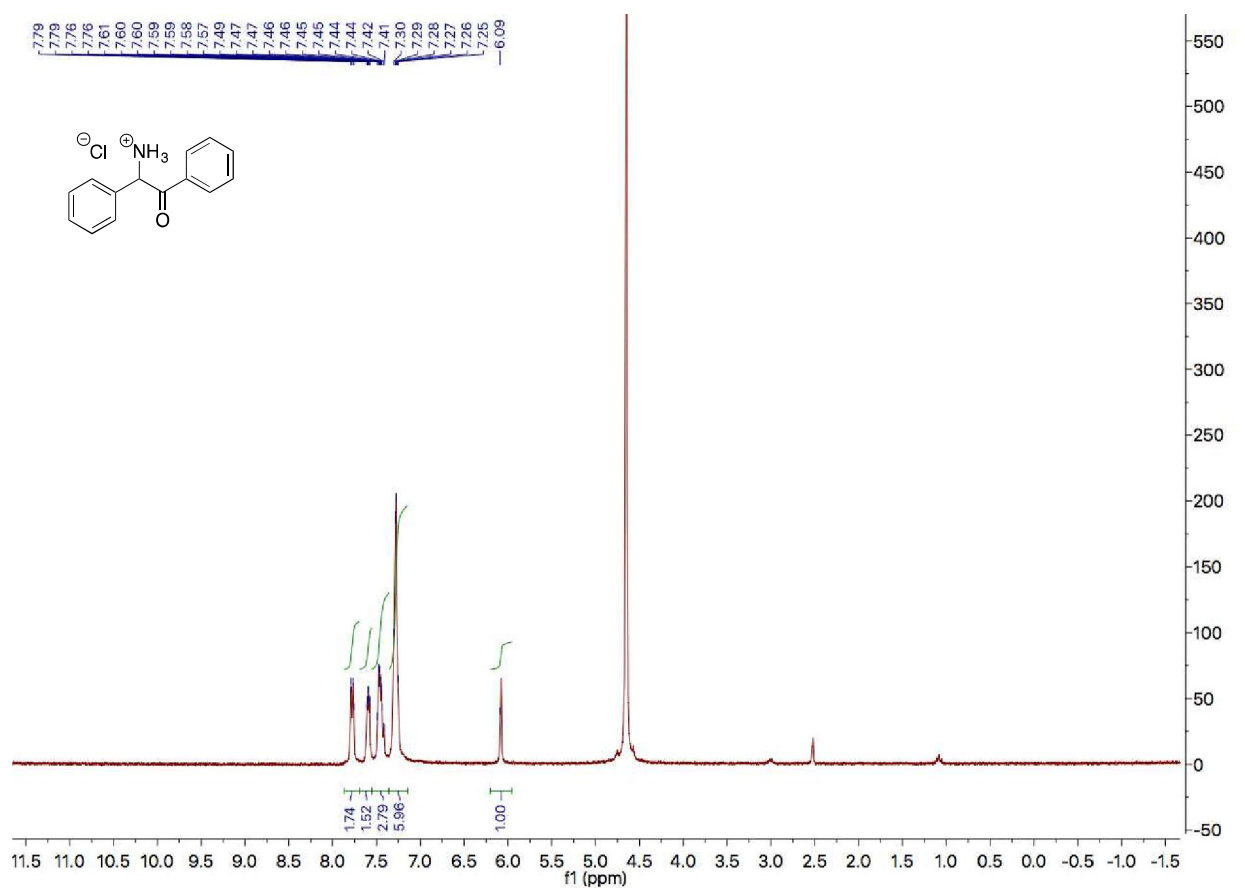
¹H (300 MHz) spectrum (CDCl₃) of 2-chloro-1,2-diphenylethan-1-one



¹H (300 MHz) spectrum (CDCl₃) of 15



^1H (300 MHz) and ^{13}C (101 MHz) spectra (D_2O) of 16



ROESY (400 MHz) experiment (Pyridine-*d*₅) of 5aam

