

Supplementary Information:

The Reactions of Alkenes with Phenyl-*N*-triflylimino- λ^3 -iodane: Solvent and Oxidant Impact

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1.1 Copies of NMR spectra

Figure S1. ^1H NMR (400.1 MHz, CDCl_3) of compound **3**

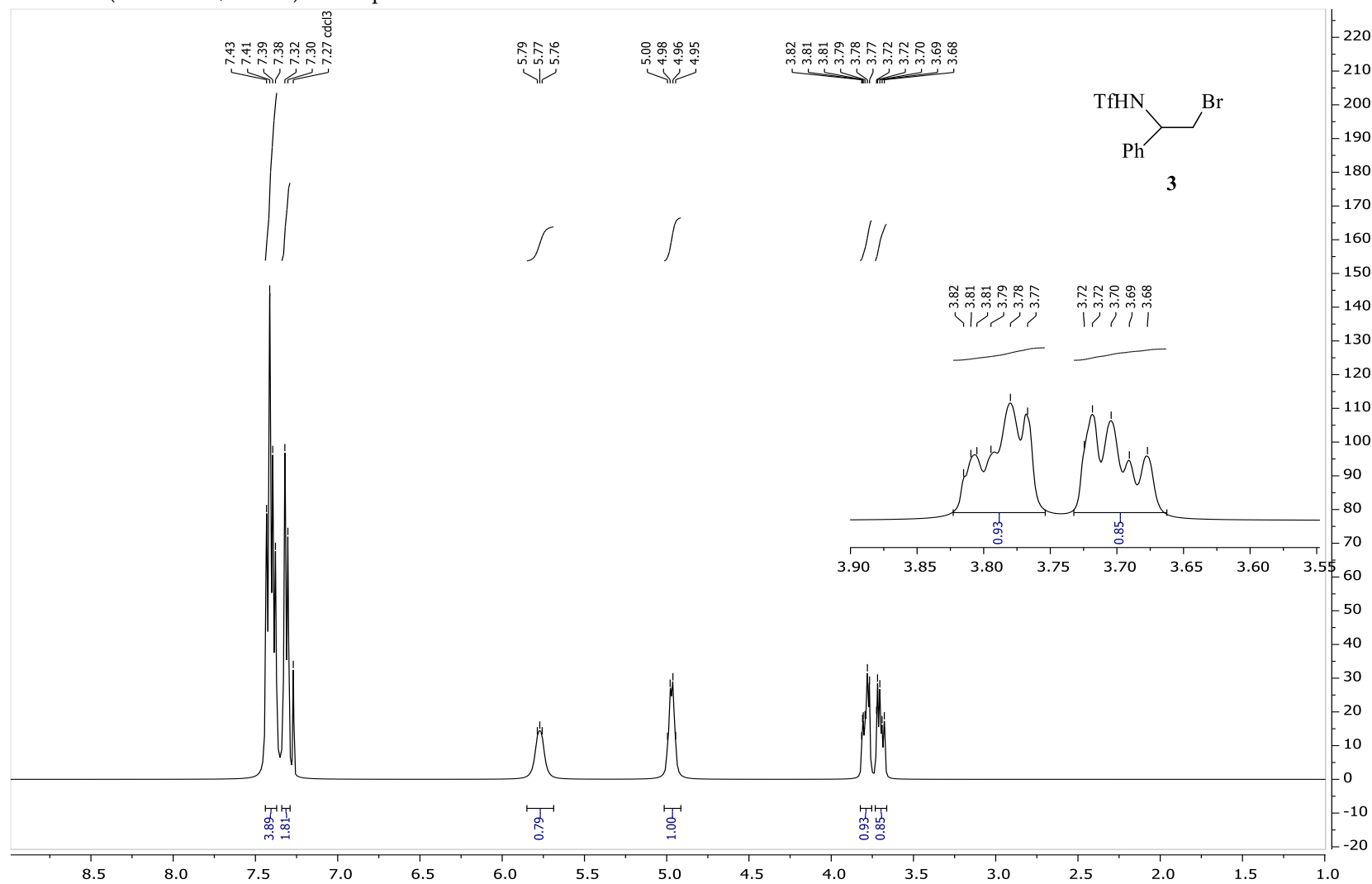


Figure S2. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **3**

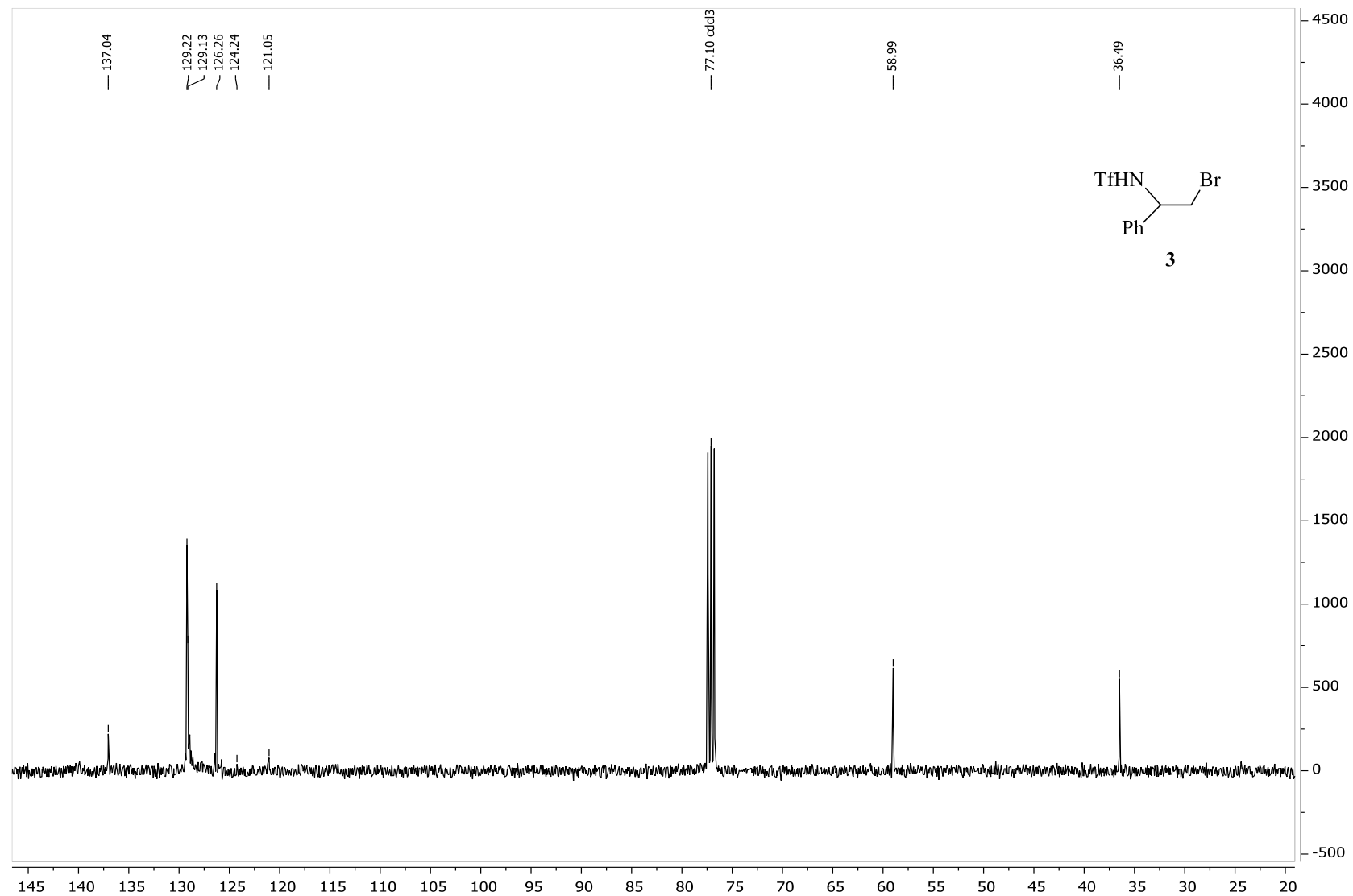


Figure S3. ^{19}F NMR (376 MHz) of compound **3**

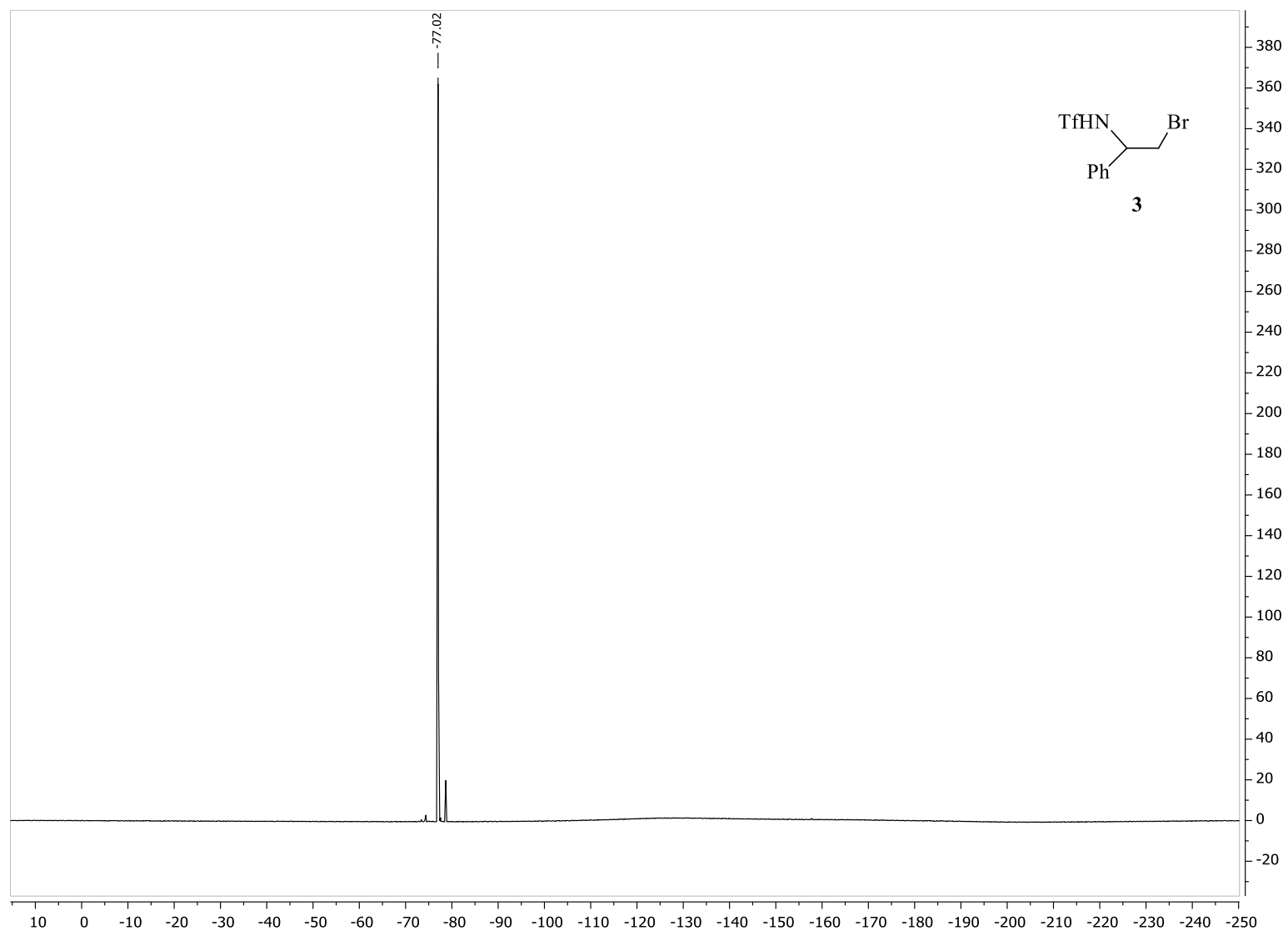


Figure S4. ^1H NMR (400.1 MHz, CDCl_3) of compound **4**

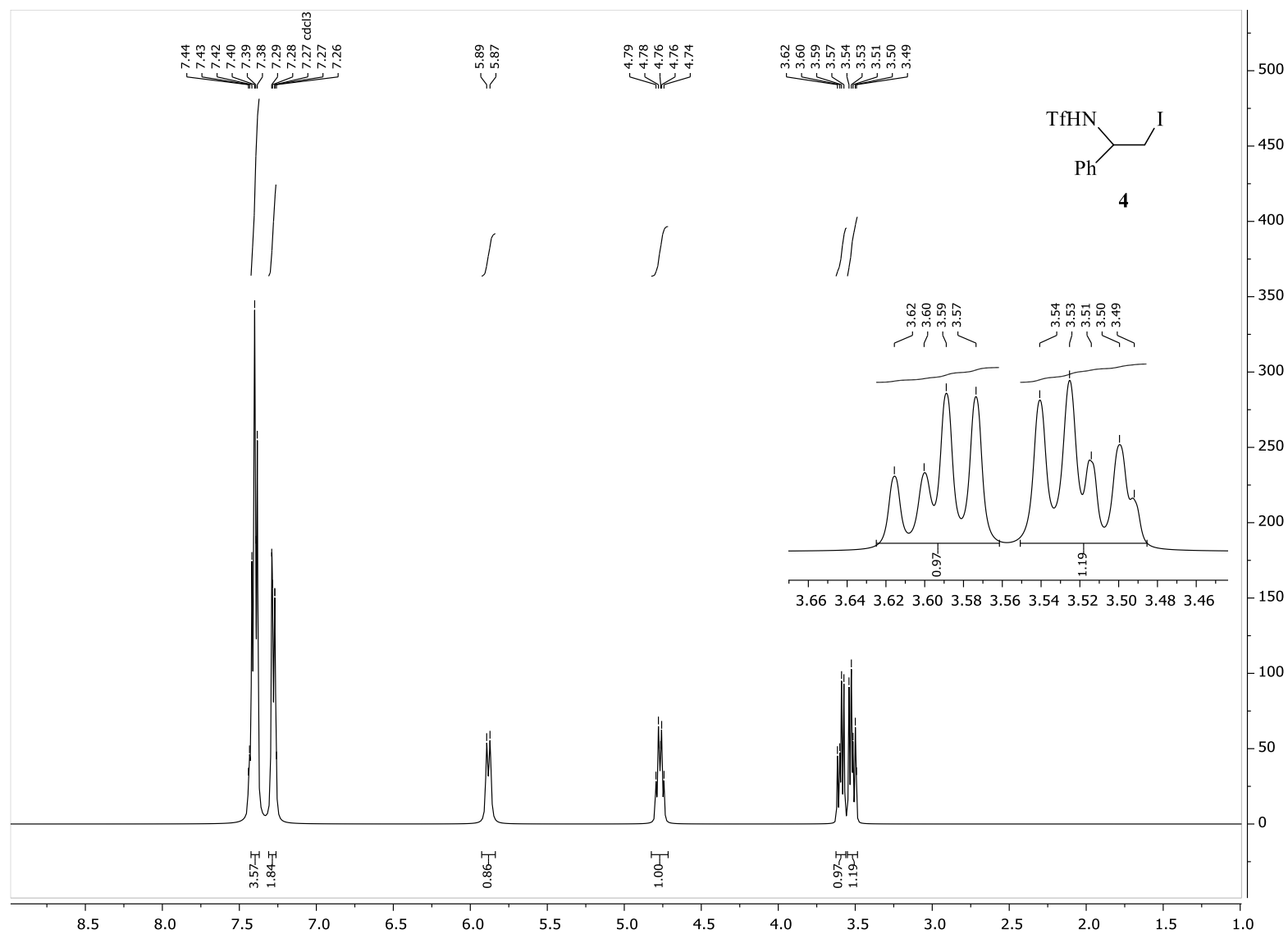


Figure S5. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **4**

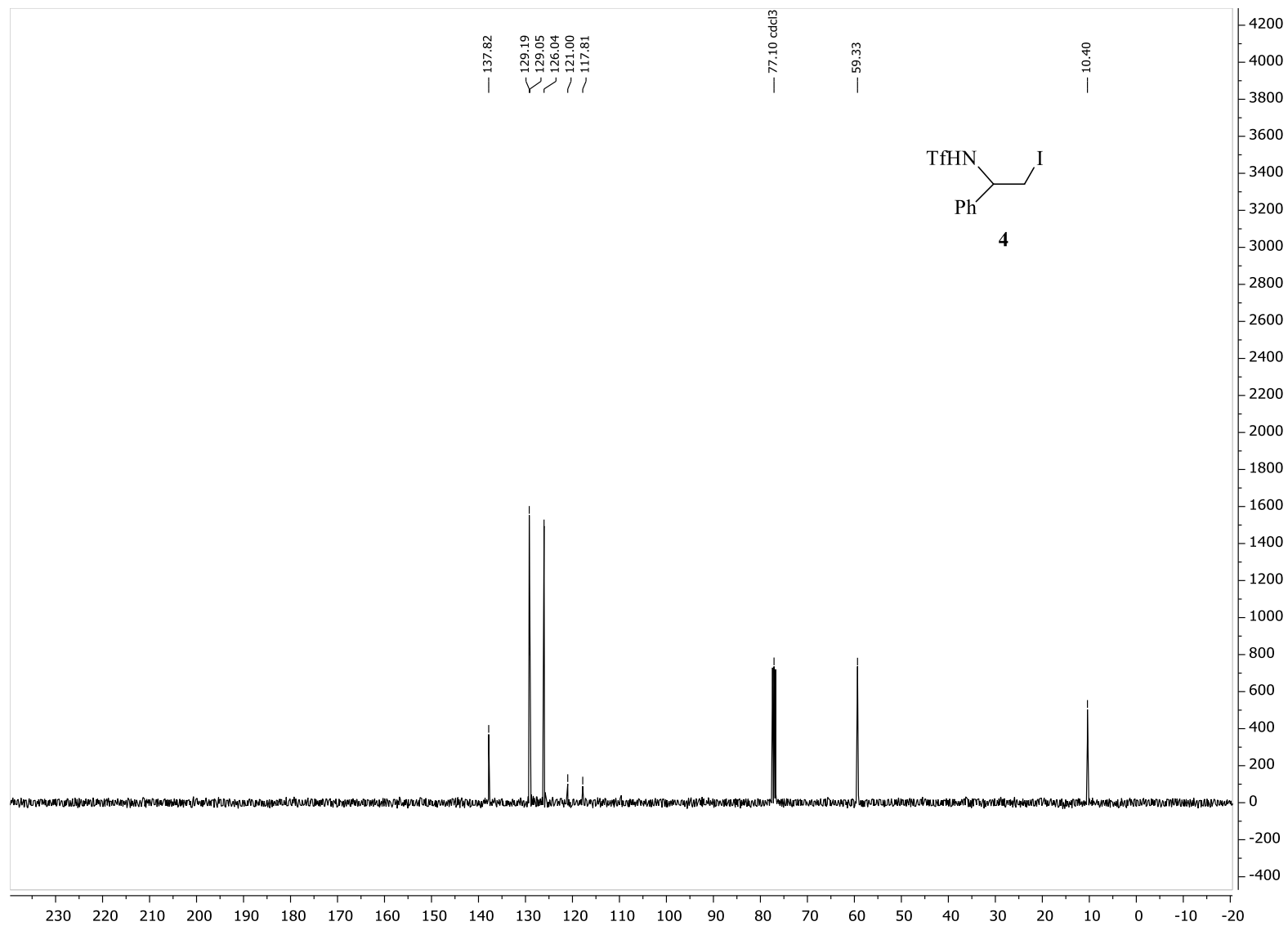


Figure S6. ^{19}F NMR (376 MHz) of compound **4**

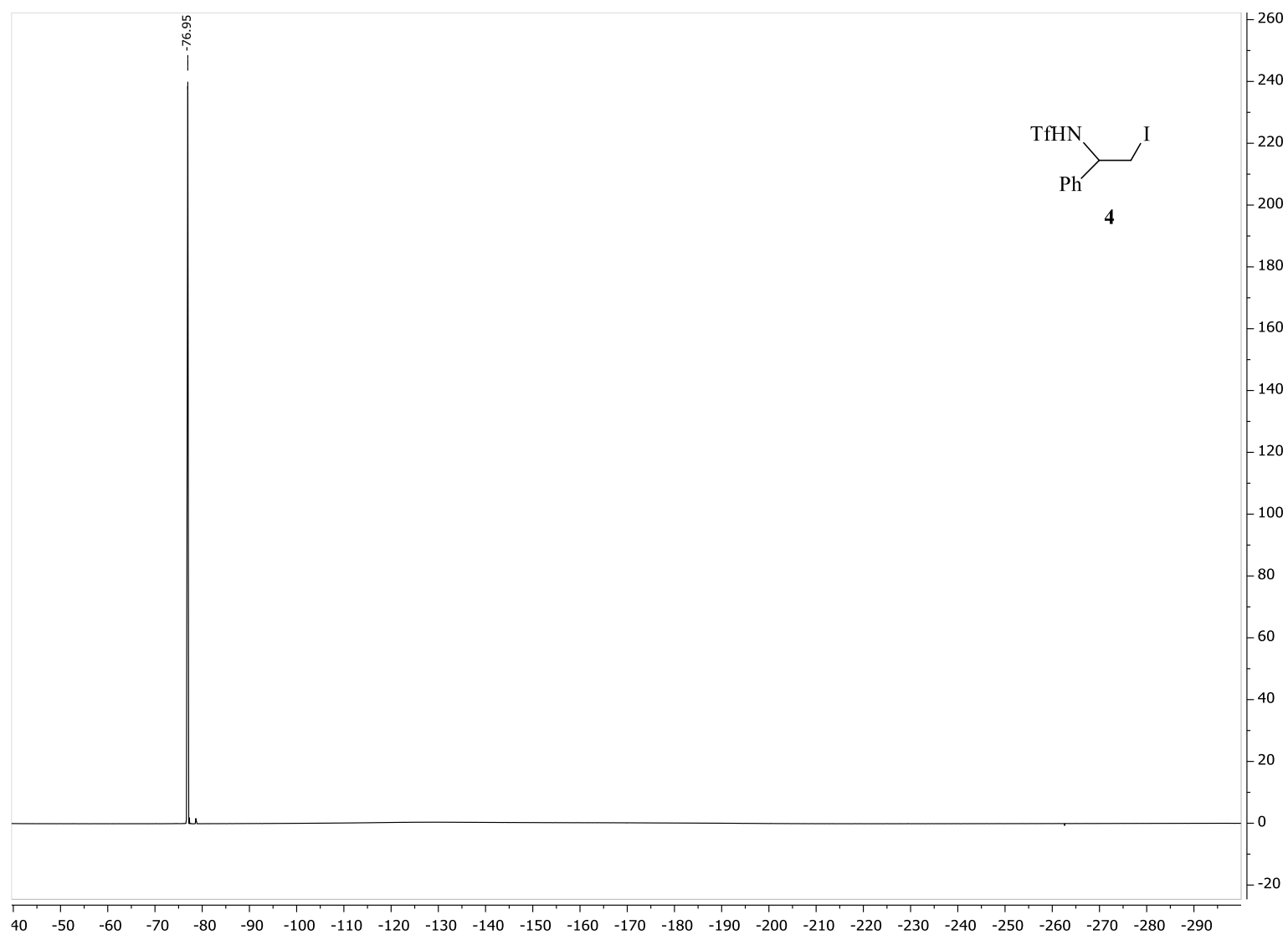


Figure S7. ^1H NMR (400.1 MHz, CDCl_3) of compound **6**

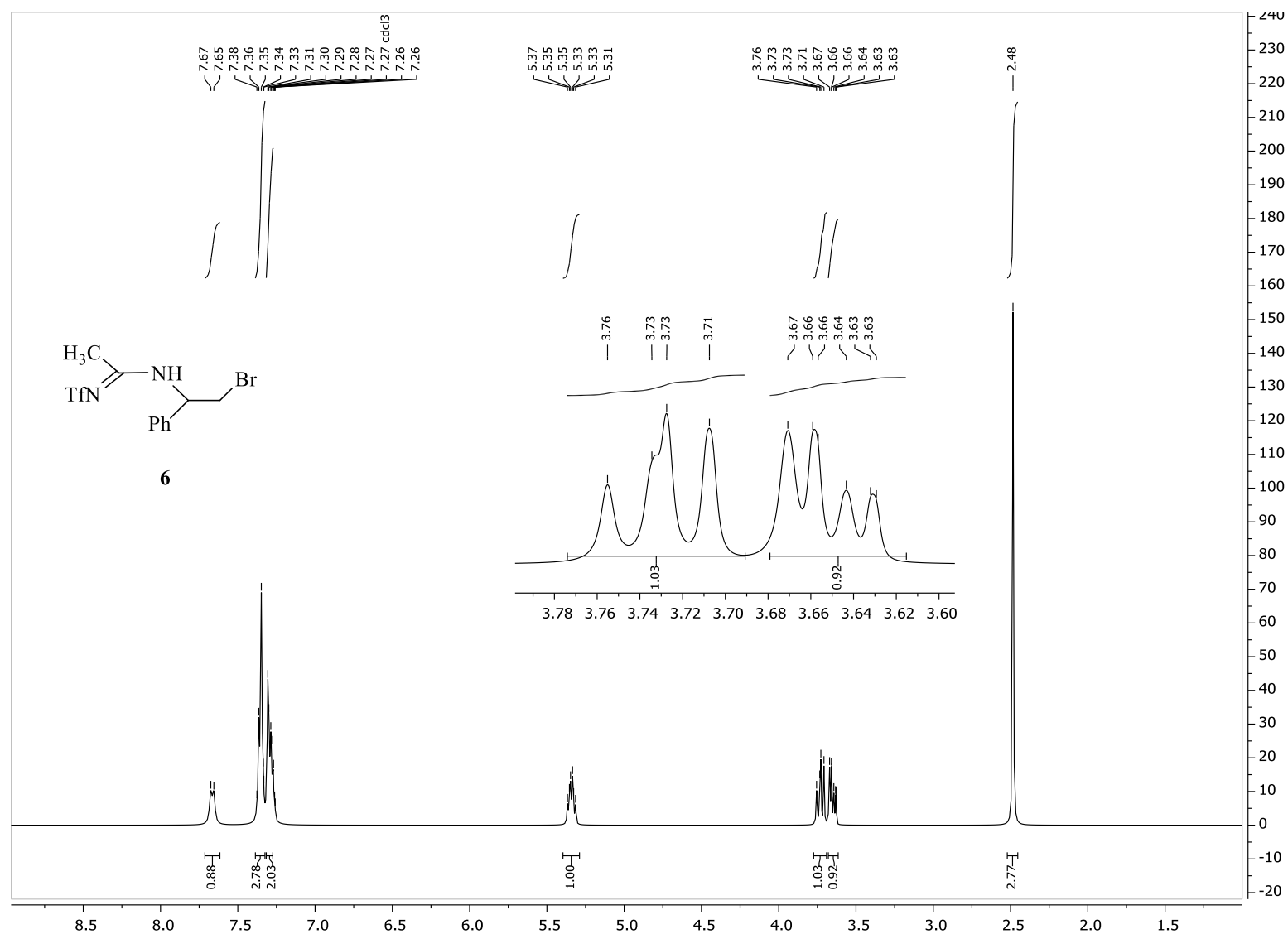


Figure S8. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **6**

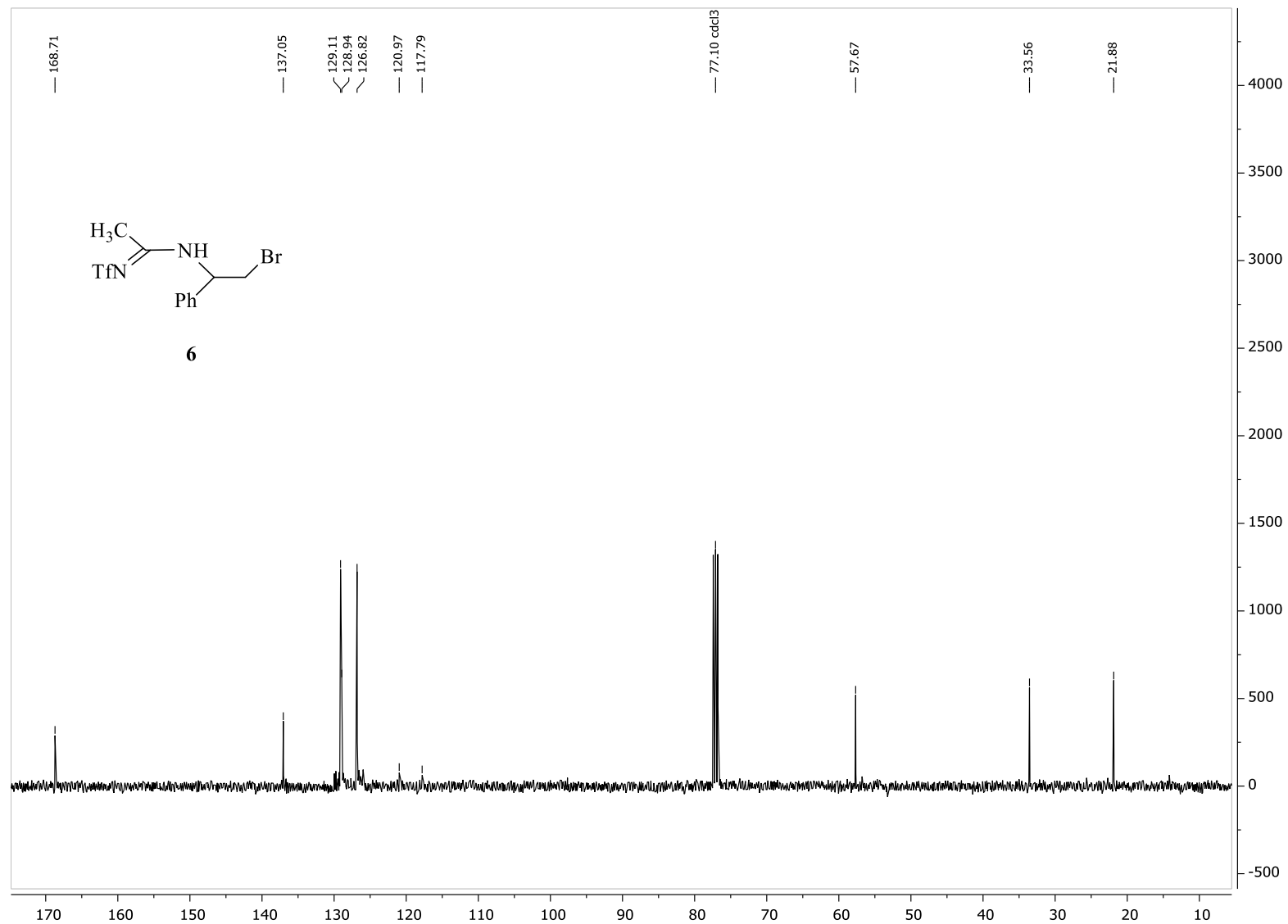


Figure S9. ^{19}F NMR (376 MHz) of compound **6**

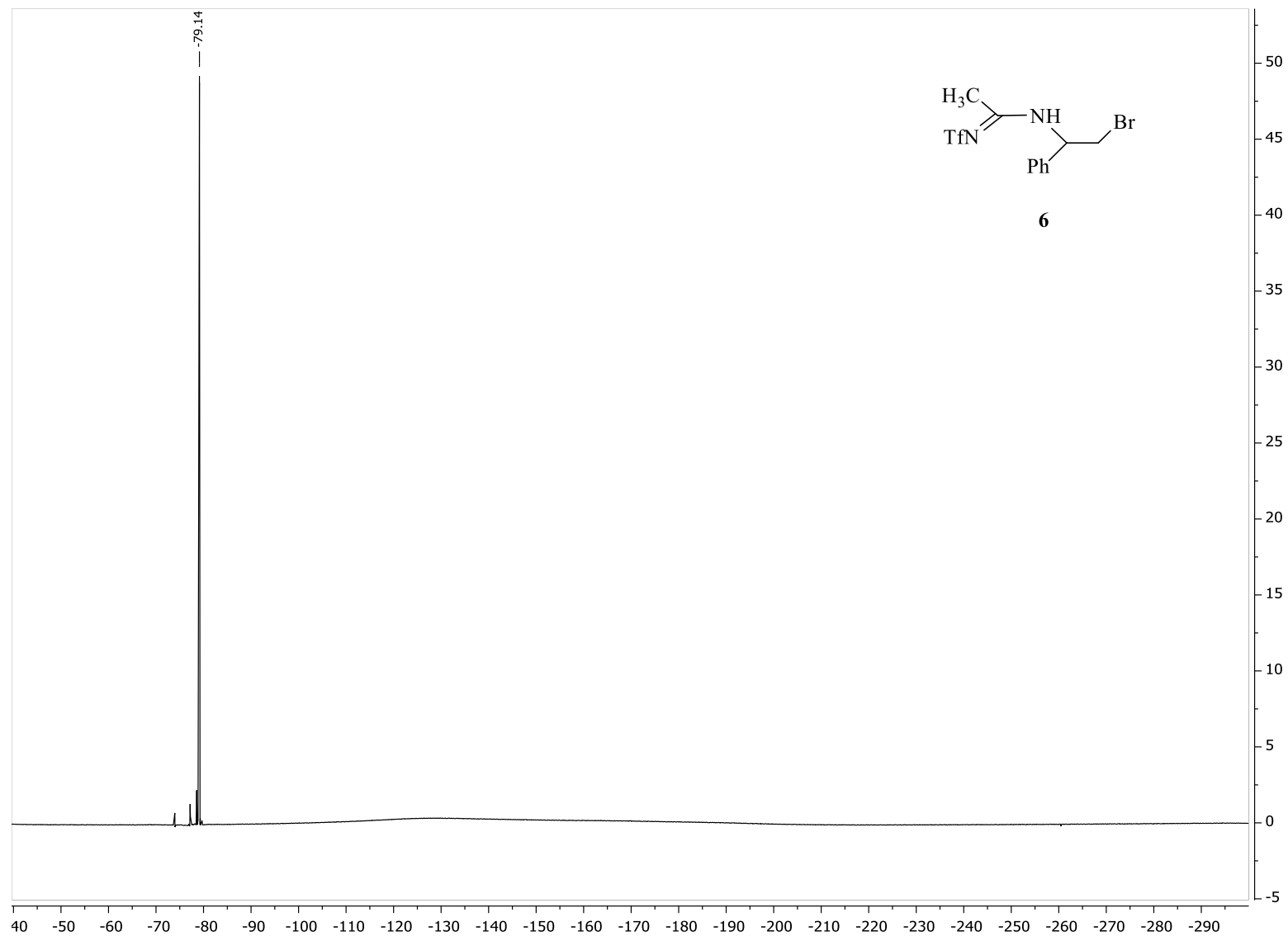


Figure S10. ^1H NMR (400.1 MHz, CDCl_3) of compound **9**

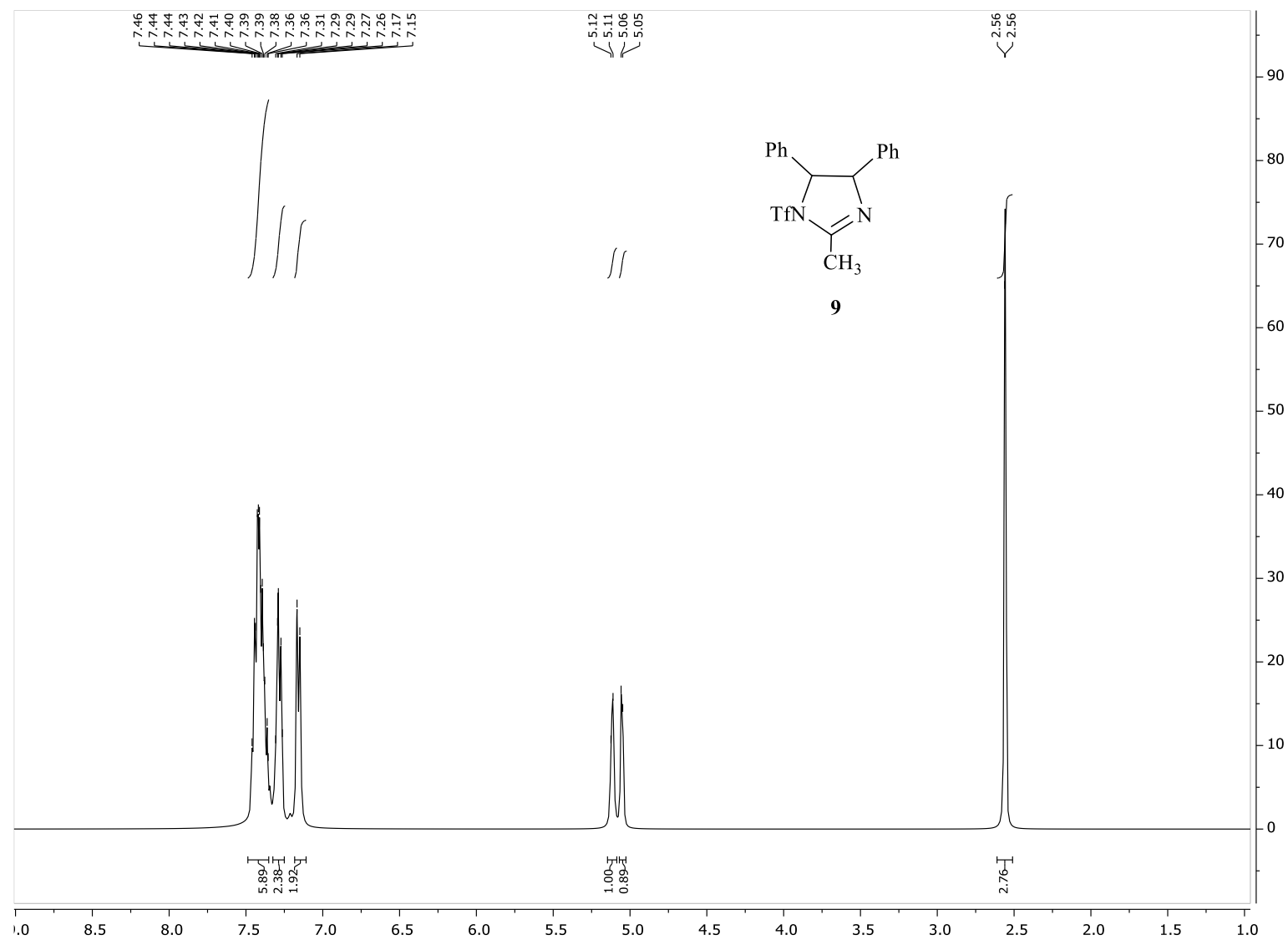


Figure S11. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **9**

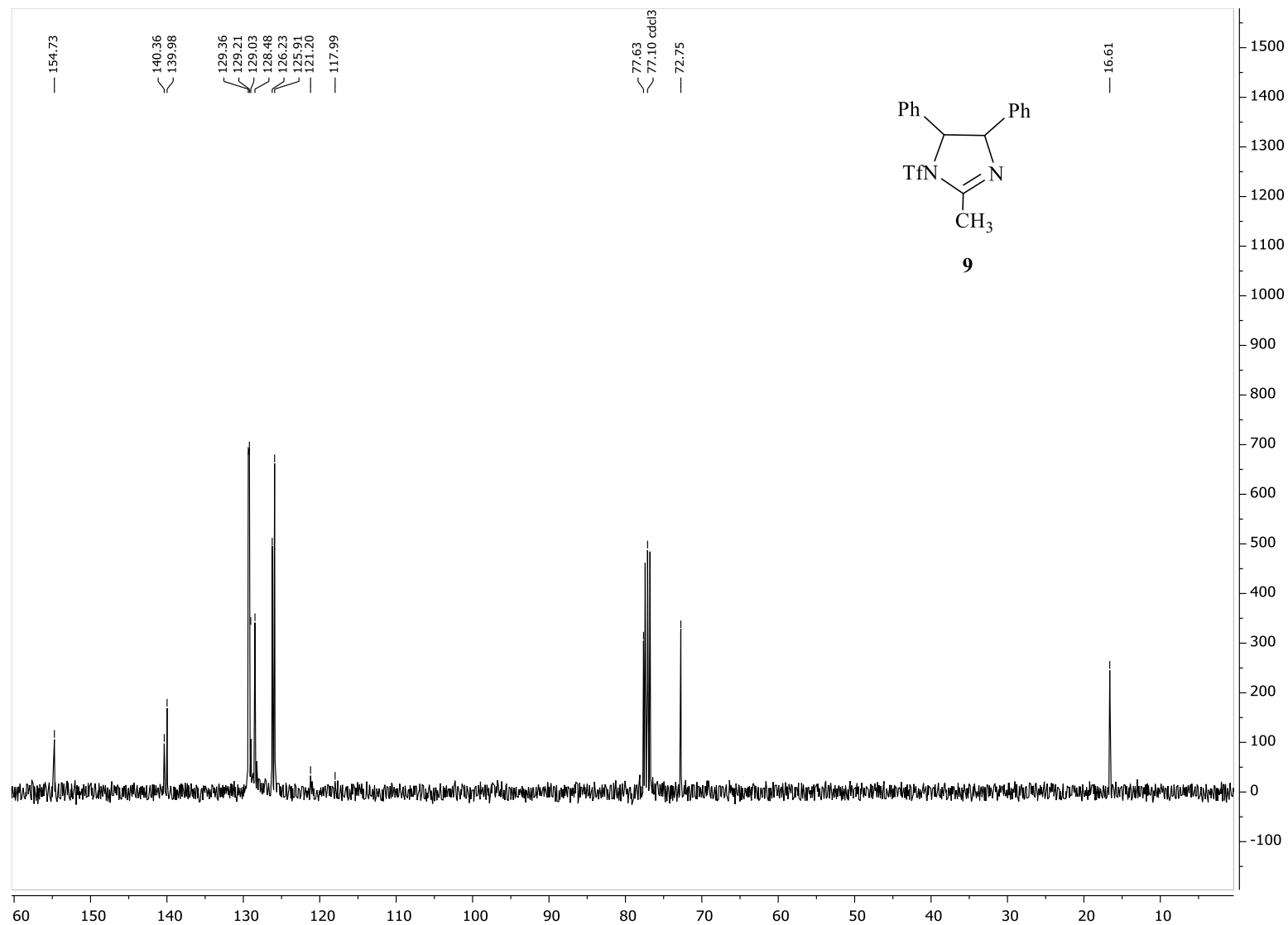


Figure S12. ^{19}F NMR (376 MHz) of compound **9**

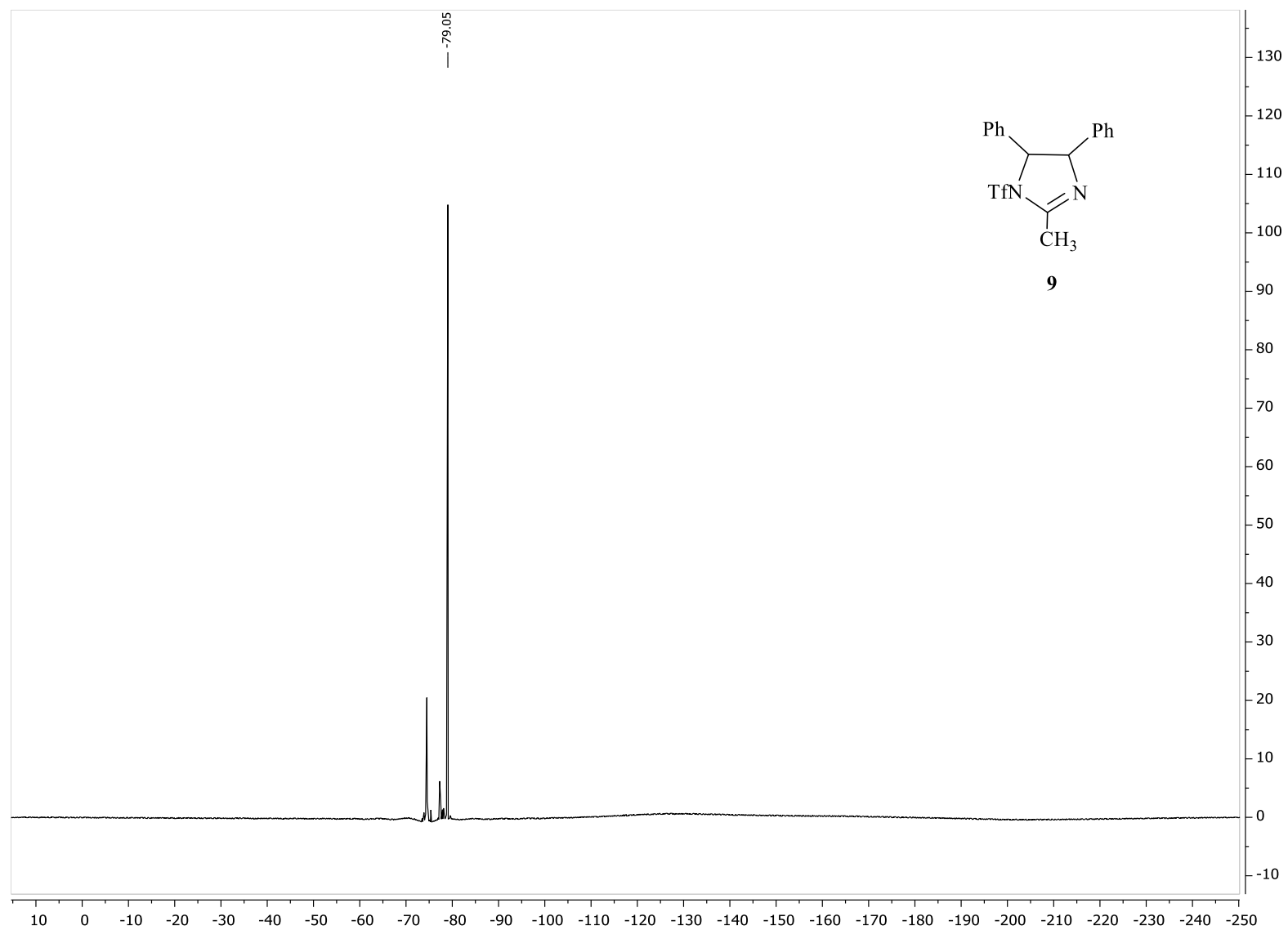


Figure S13. ^1H NMR (400.1 MHz, CDCl_3) of compound **10**

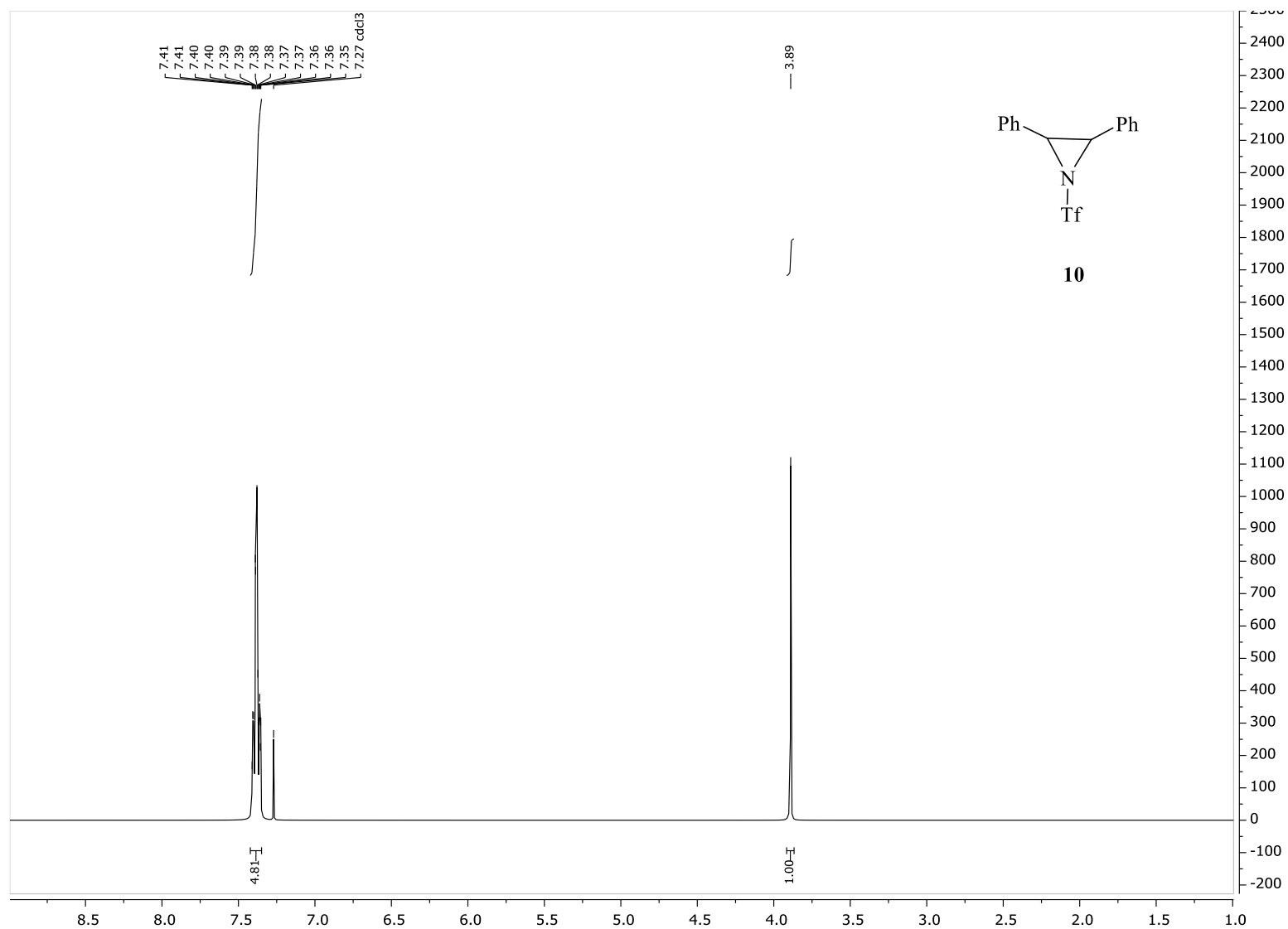


Figure S14. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **10**

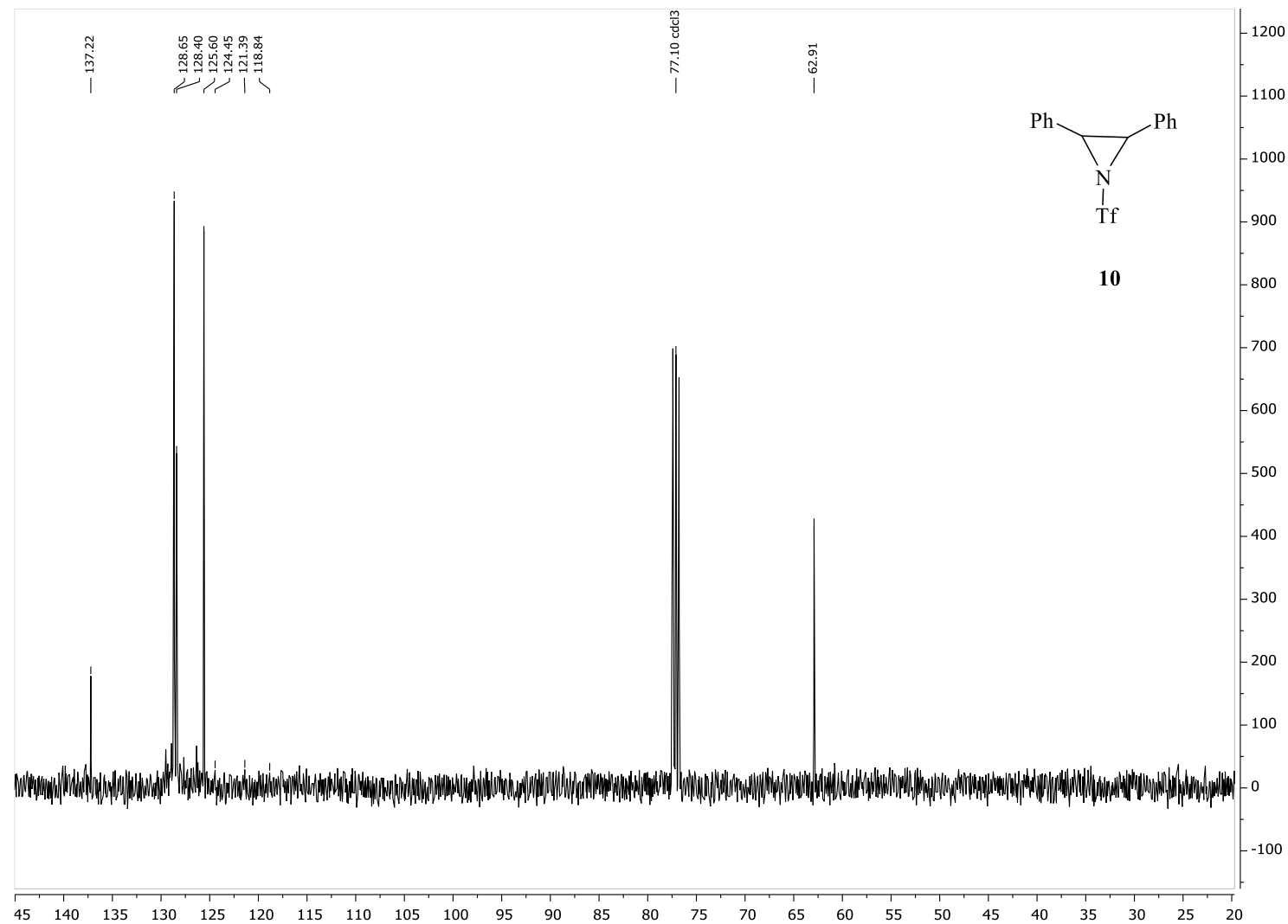


Figure S15. ^{13}C ($[^{13}\text{C} - ^1\text{H}]$) NMR (100.6 MHz, CDCl_3) of compound **10**

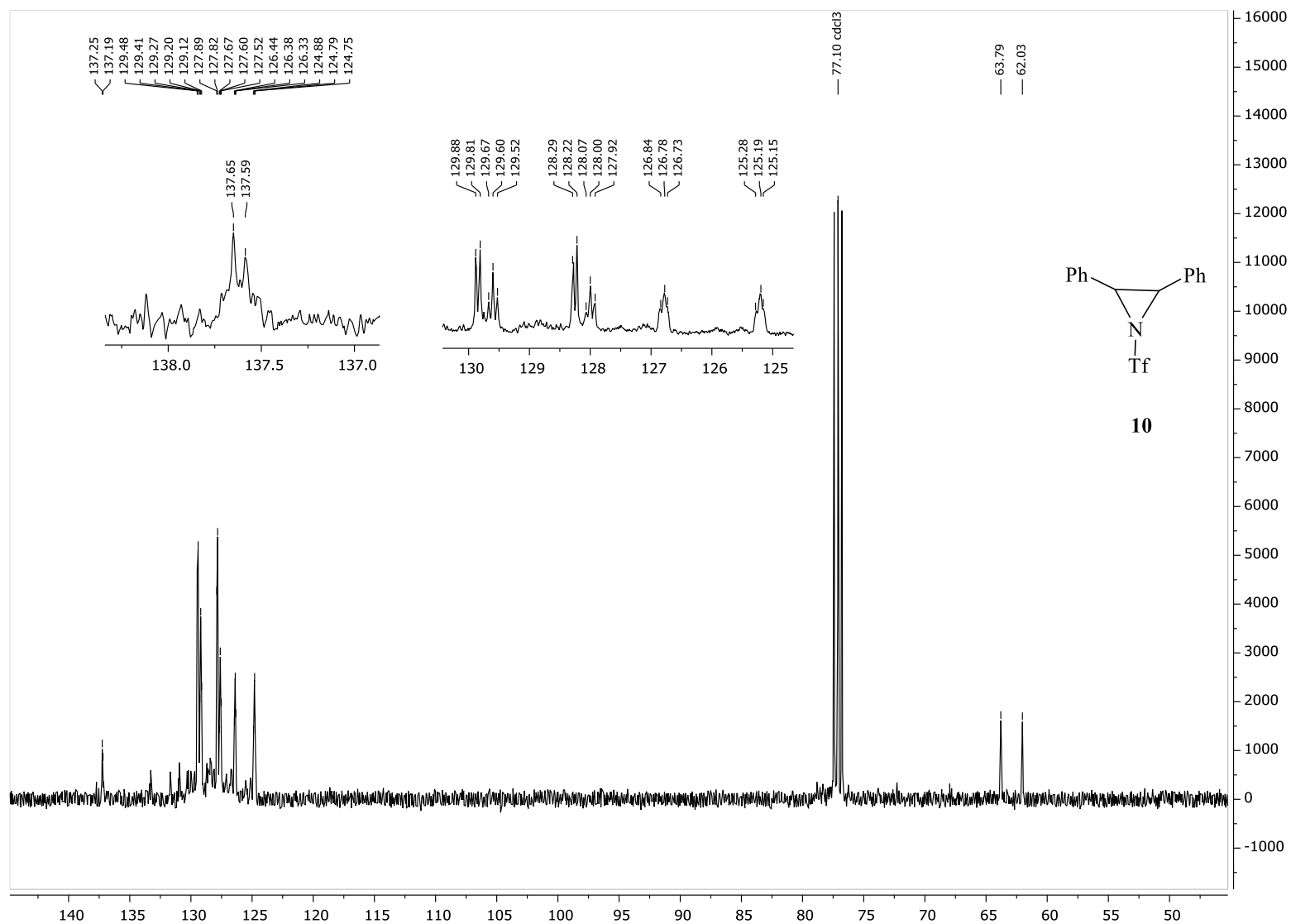


Figure S16. ^{19}F NMR (376 MHz) of compound **10**

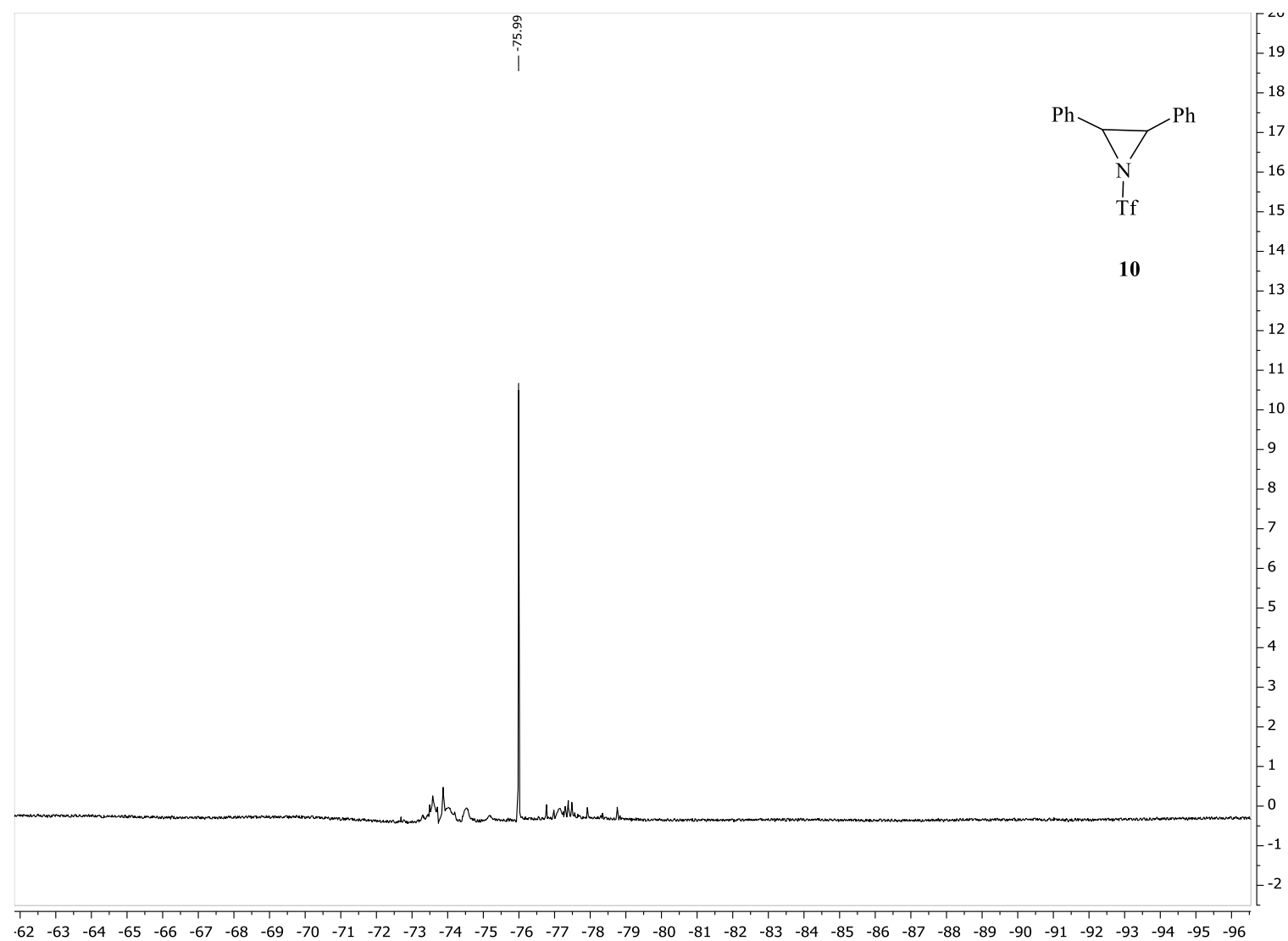


Figure S17. ^1H NMR (400.1 MHz, CDCl_3) of compound **11** (pure)

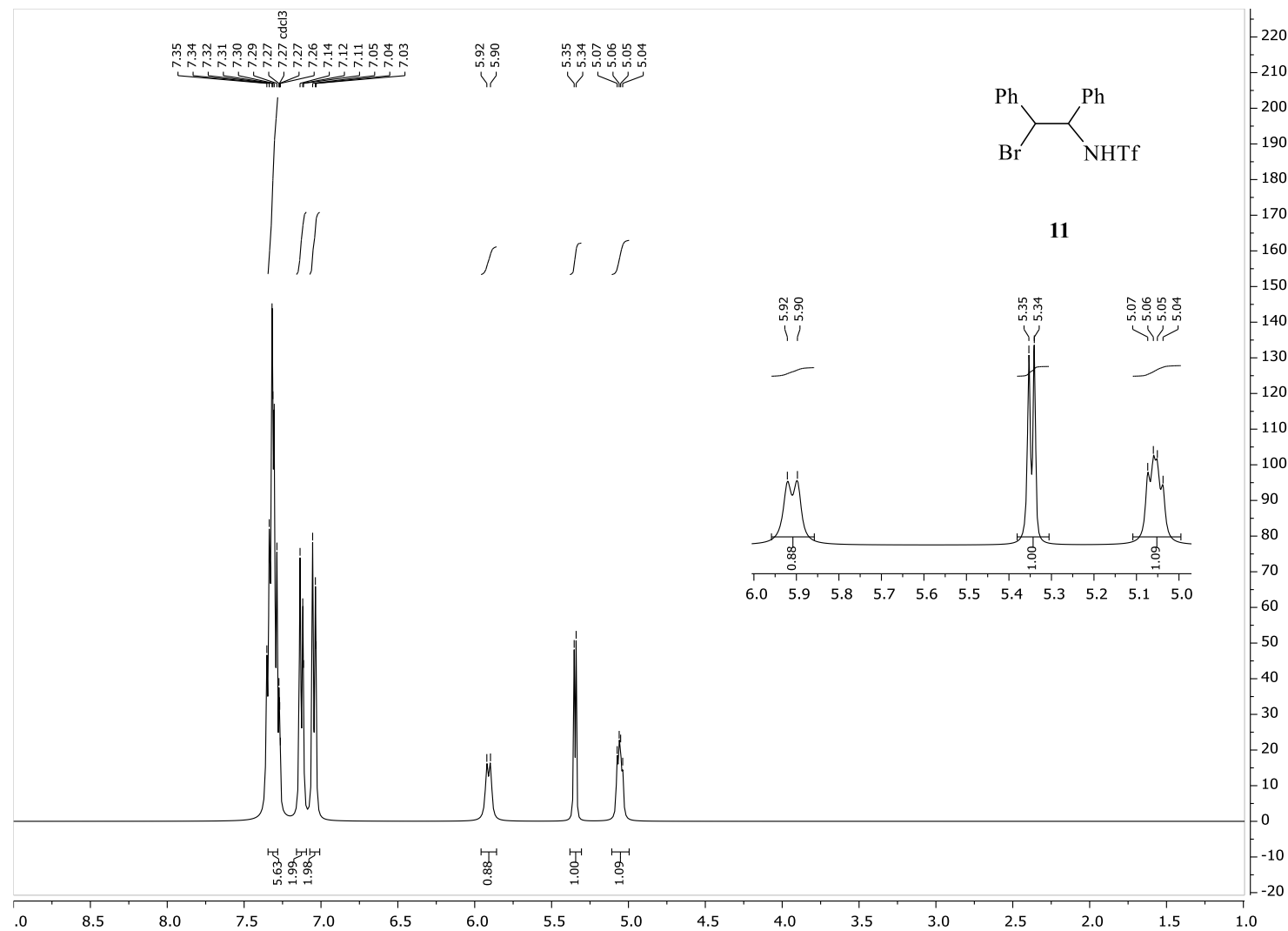


Figure S18. ^1H NMR (400.1 MHz, CDCl_3) of compound **11**

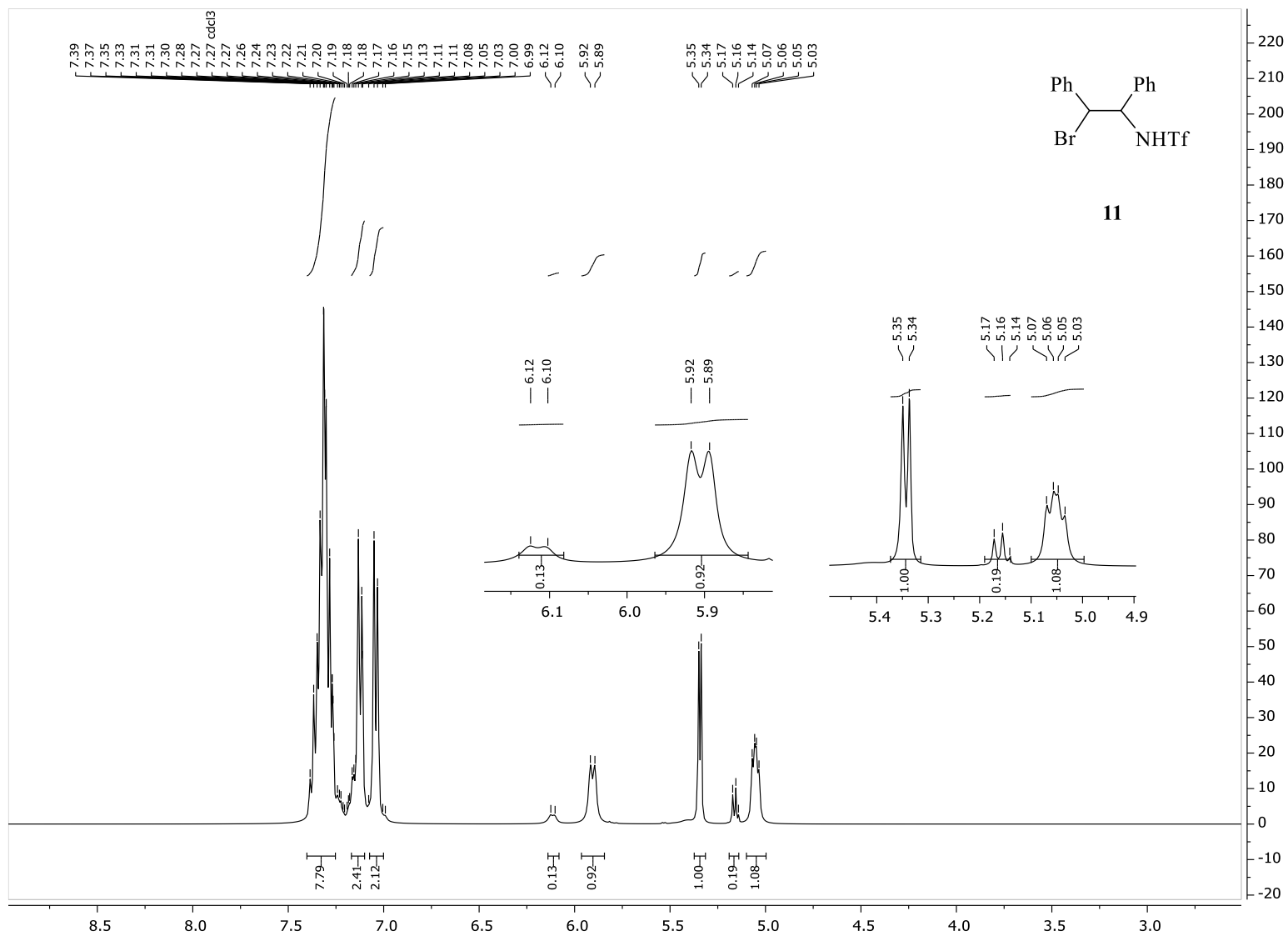


Figure S19. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **11**

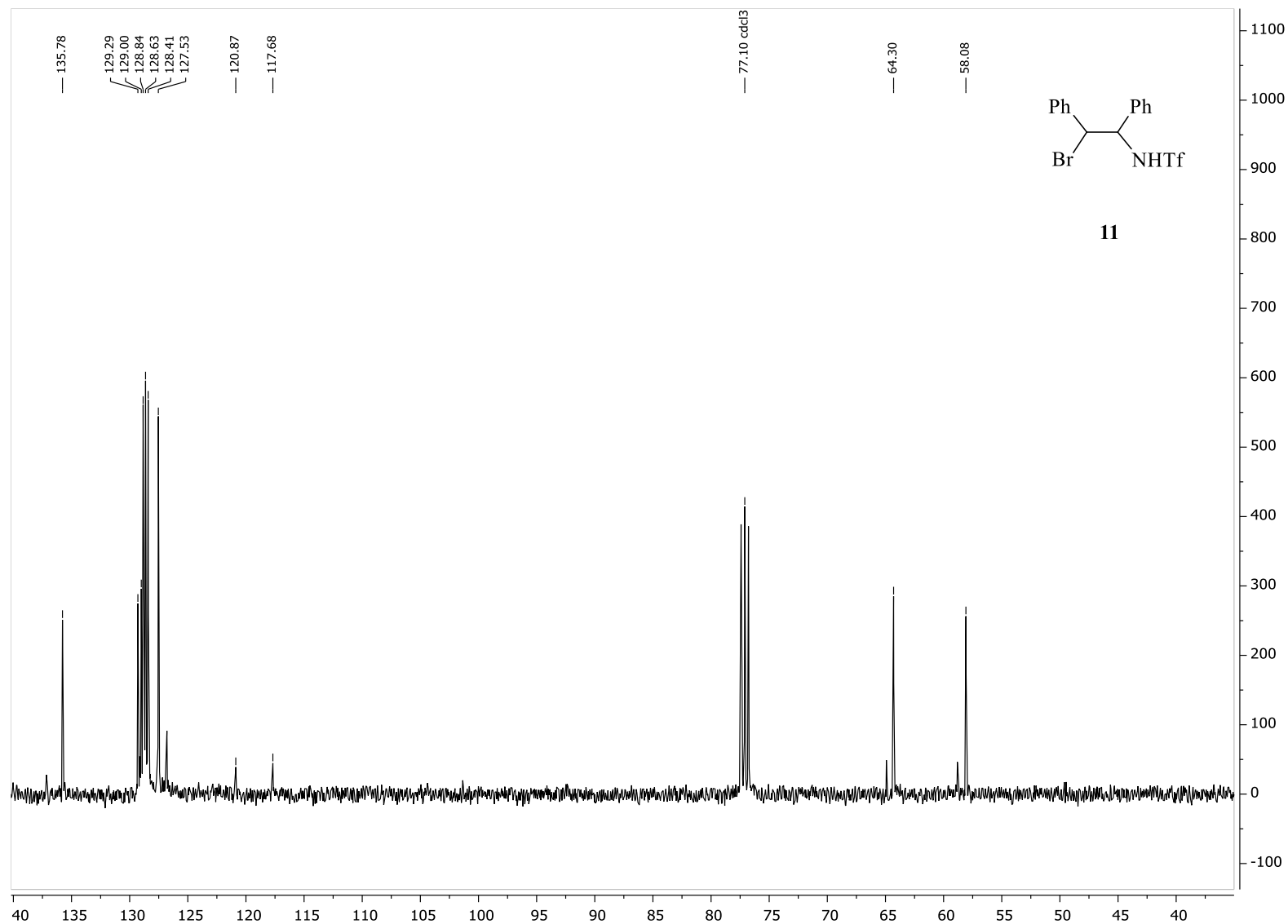


Figure S20. ^{19}F NMR (376 MHz) of compound **11**

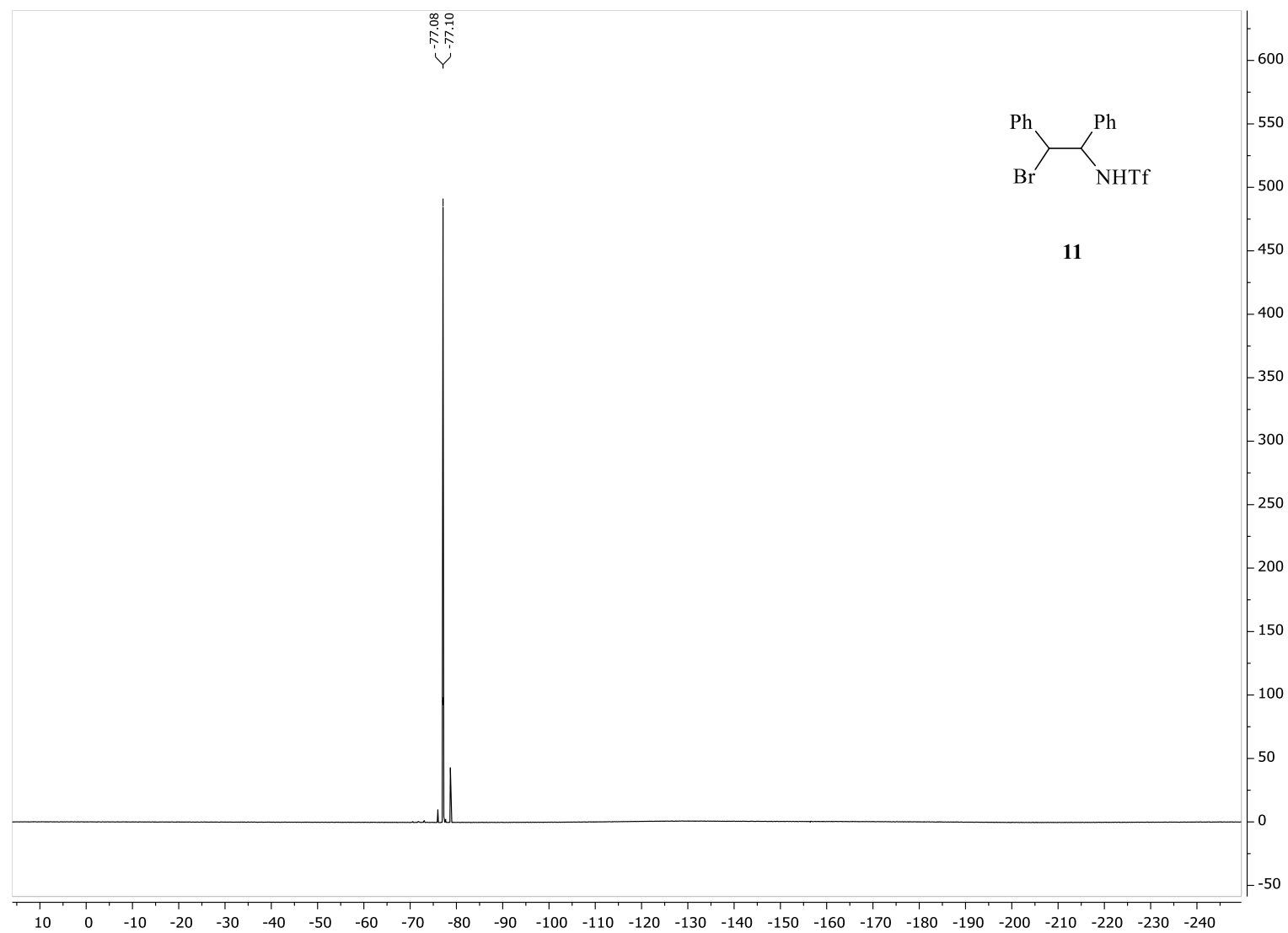


Figure S21. ^1H NMR (400.1 MHz, CDCl_3) of compounds **13** and **14**

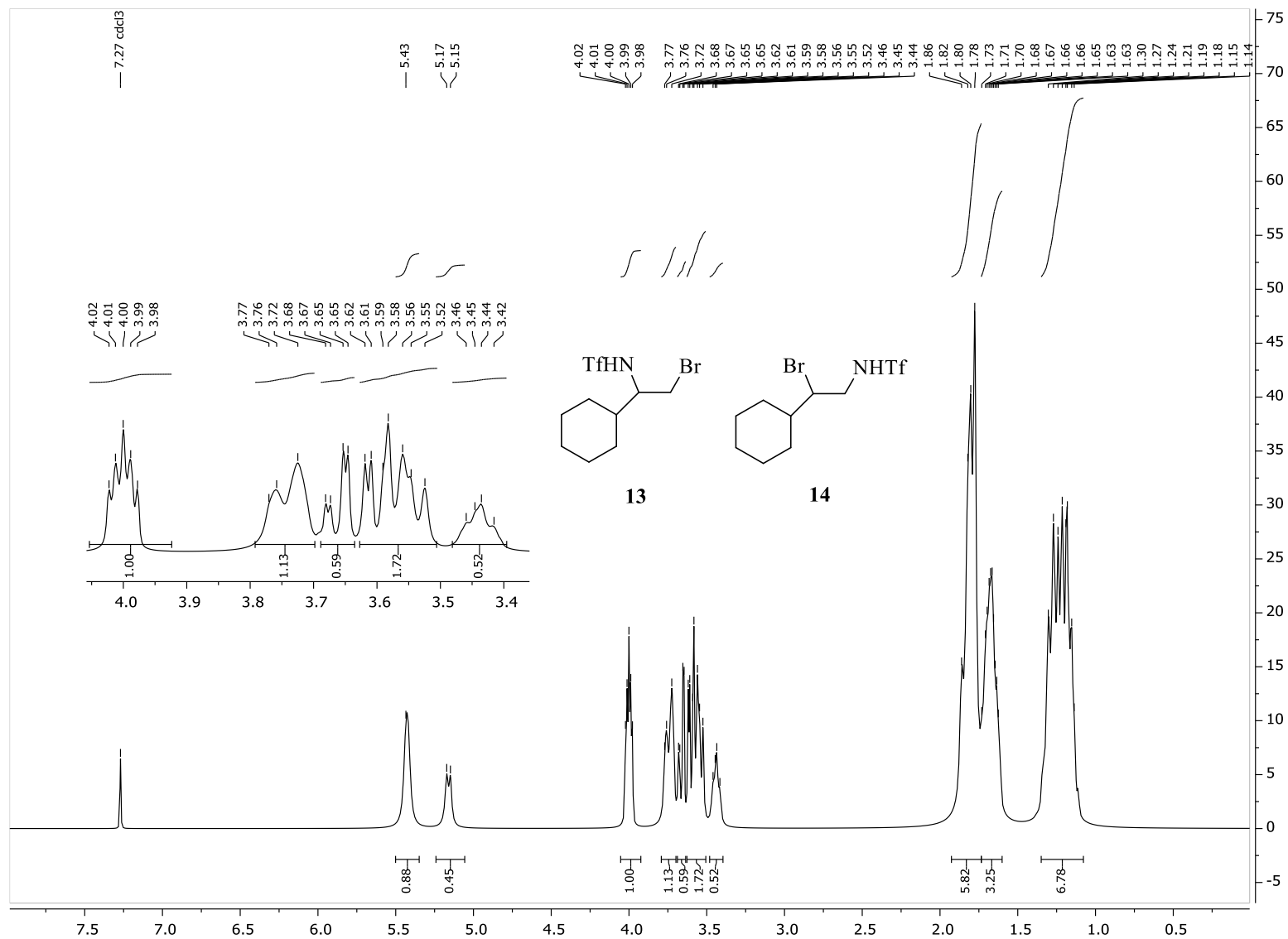


Figure S22. ^{13}C NMR (100.6 MHz, CDCl_3) of compounds **13** and **14**

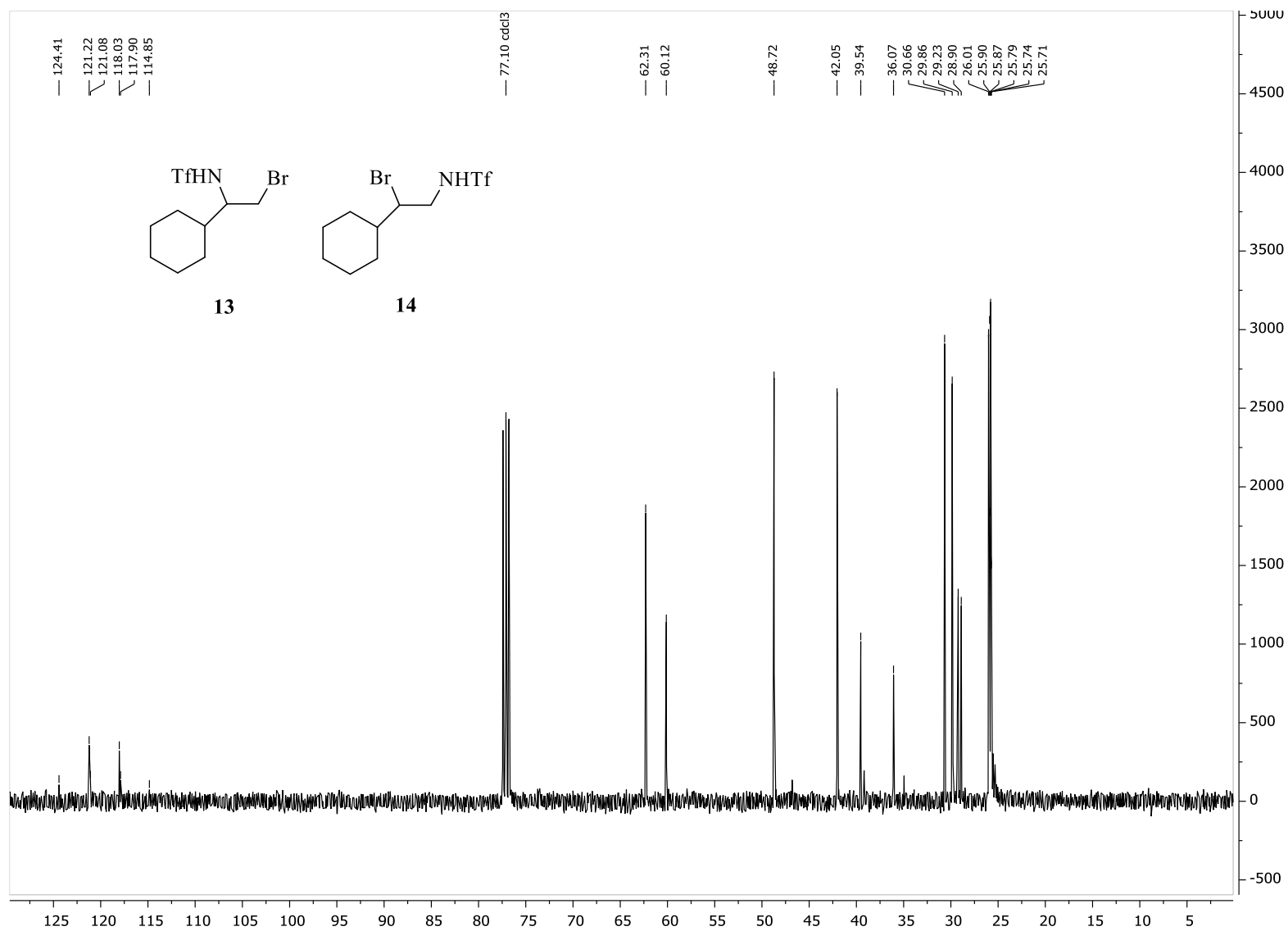


Figure S23. ^{19}F NMR (376 MHz) of compounds **13** and **14**

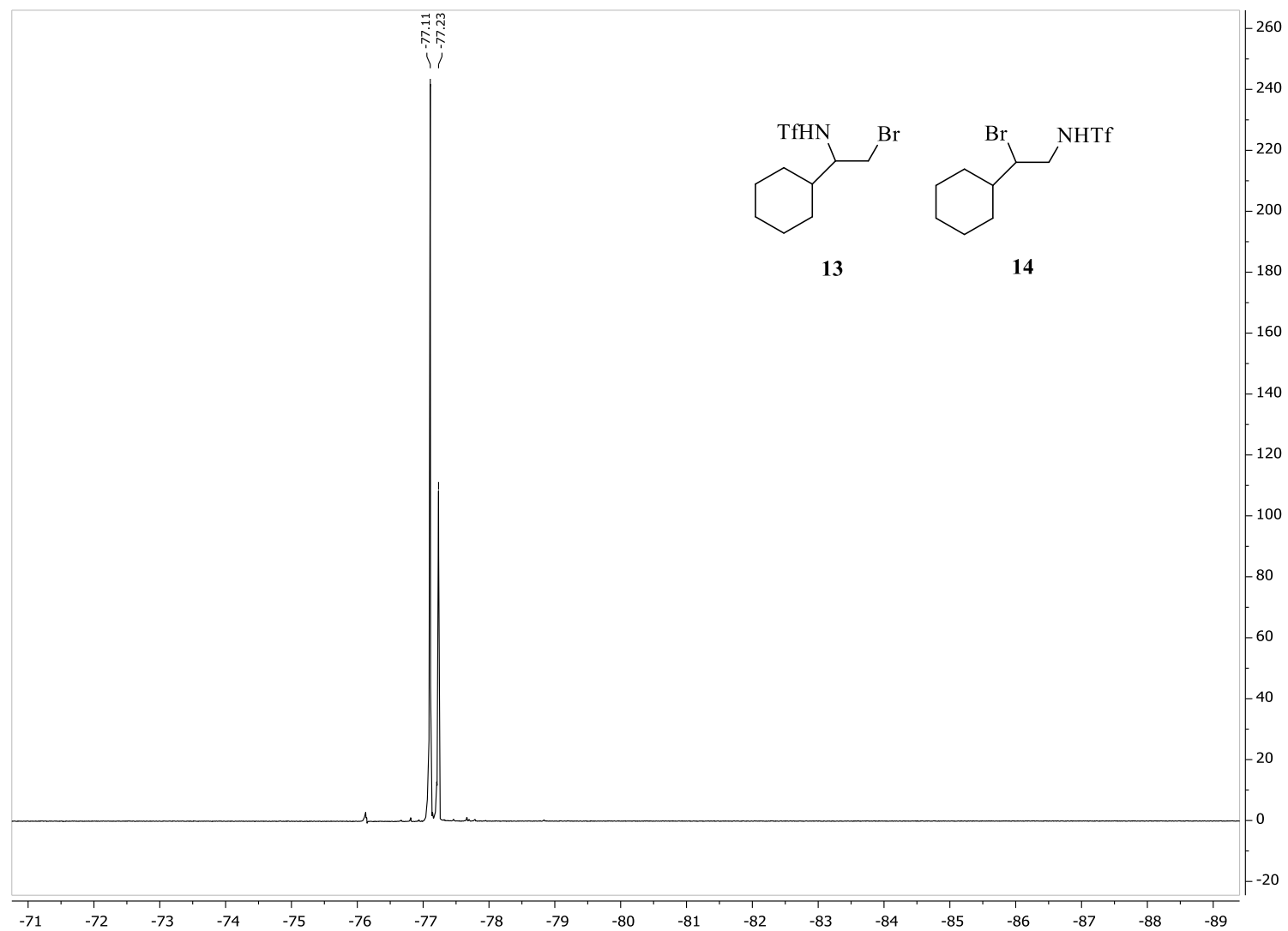


Figure S24. ^1H NMR (400.1 MHz, CDCl_3) of compound **14**

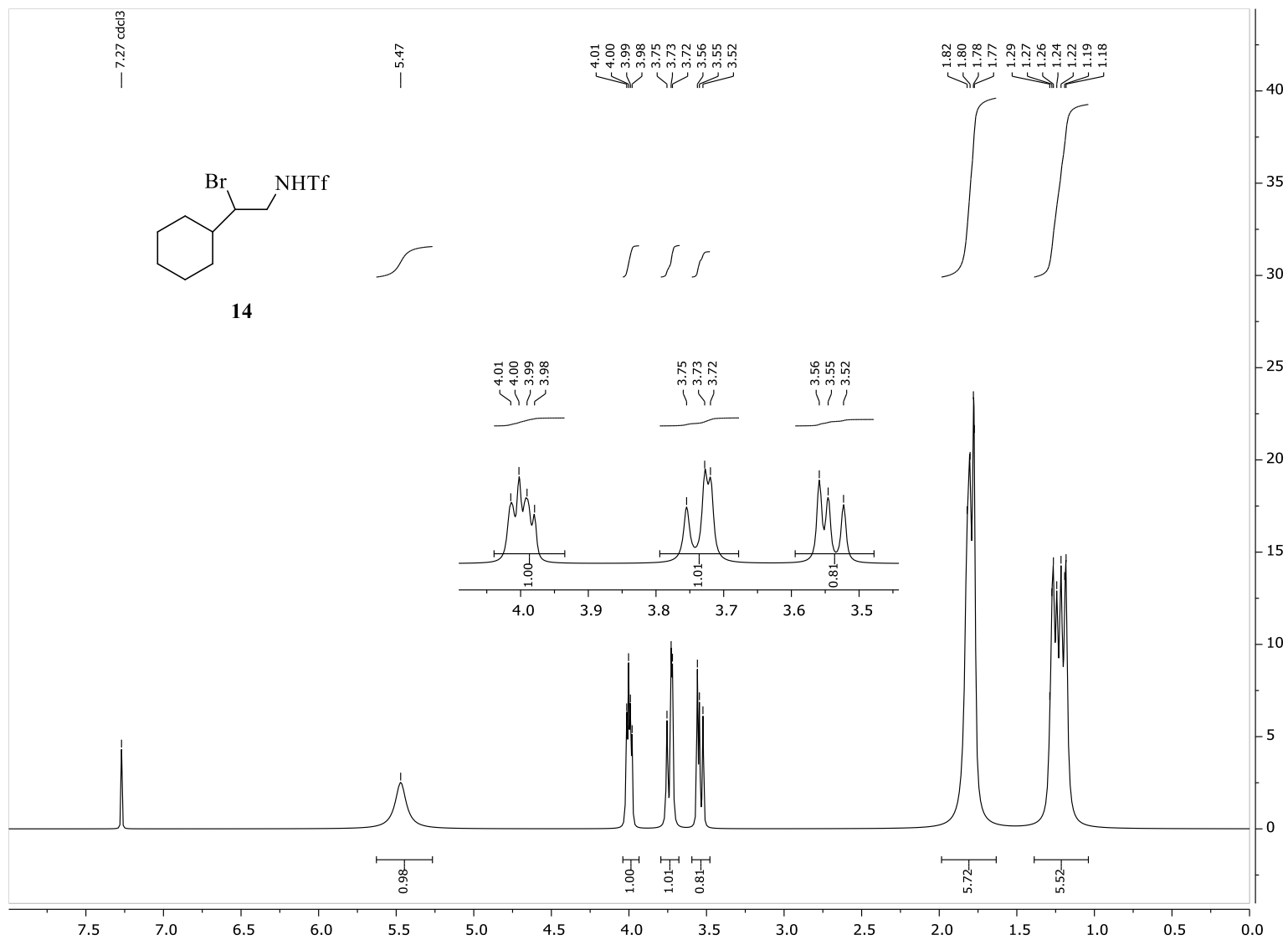


Figure S25. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **14**

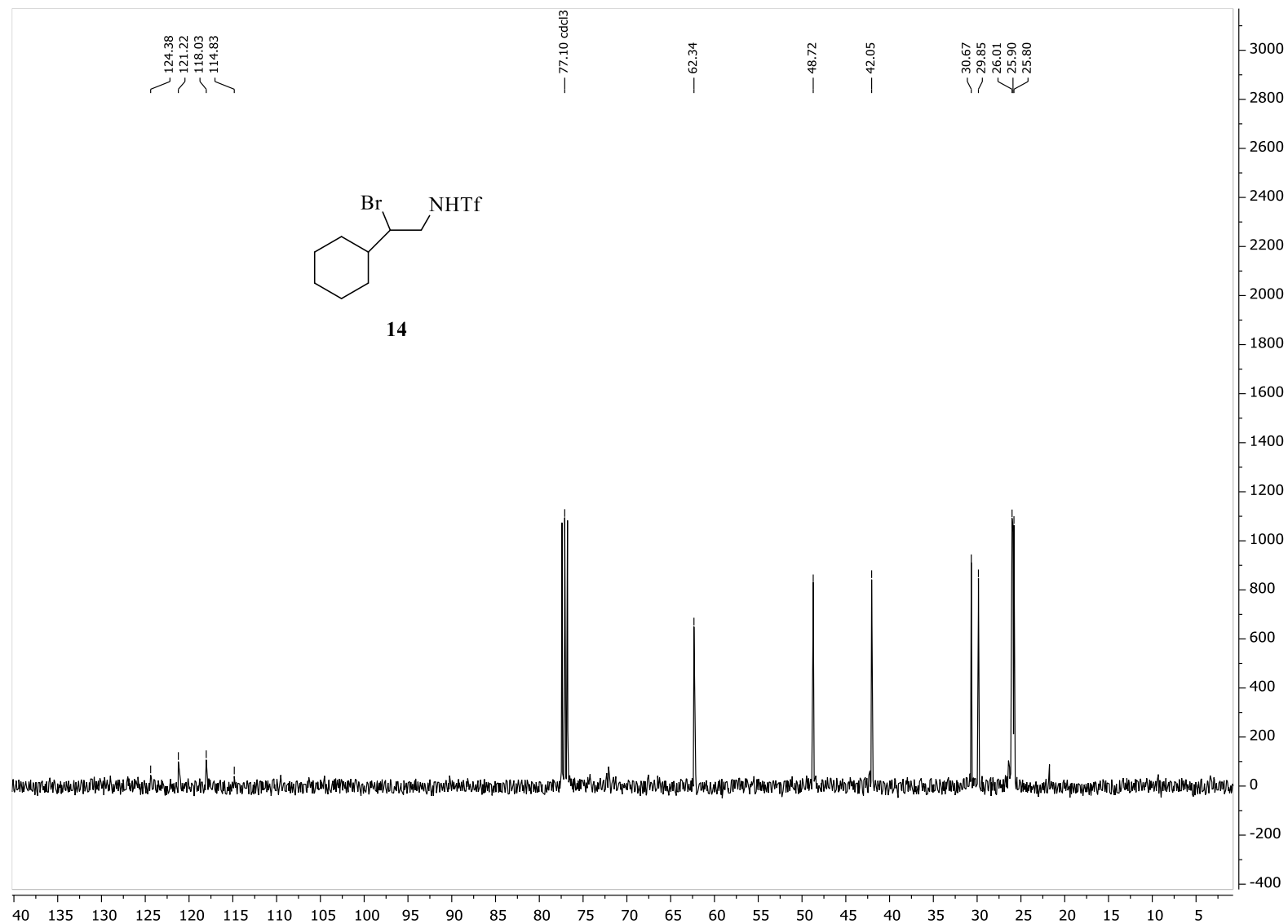


Figure S26. ^1H NMR (400.1 MHz, CDCl_3) of compounds **15** and **16**

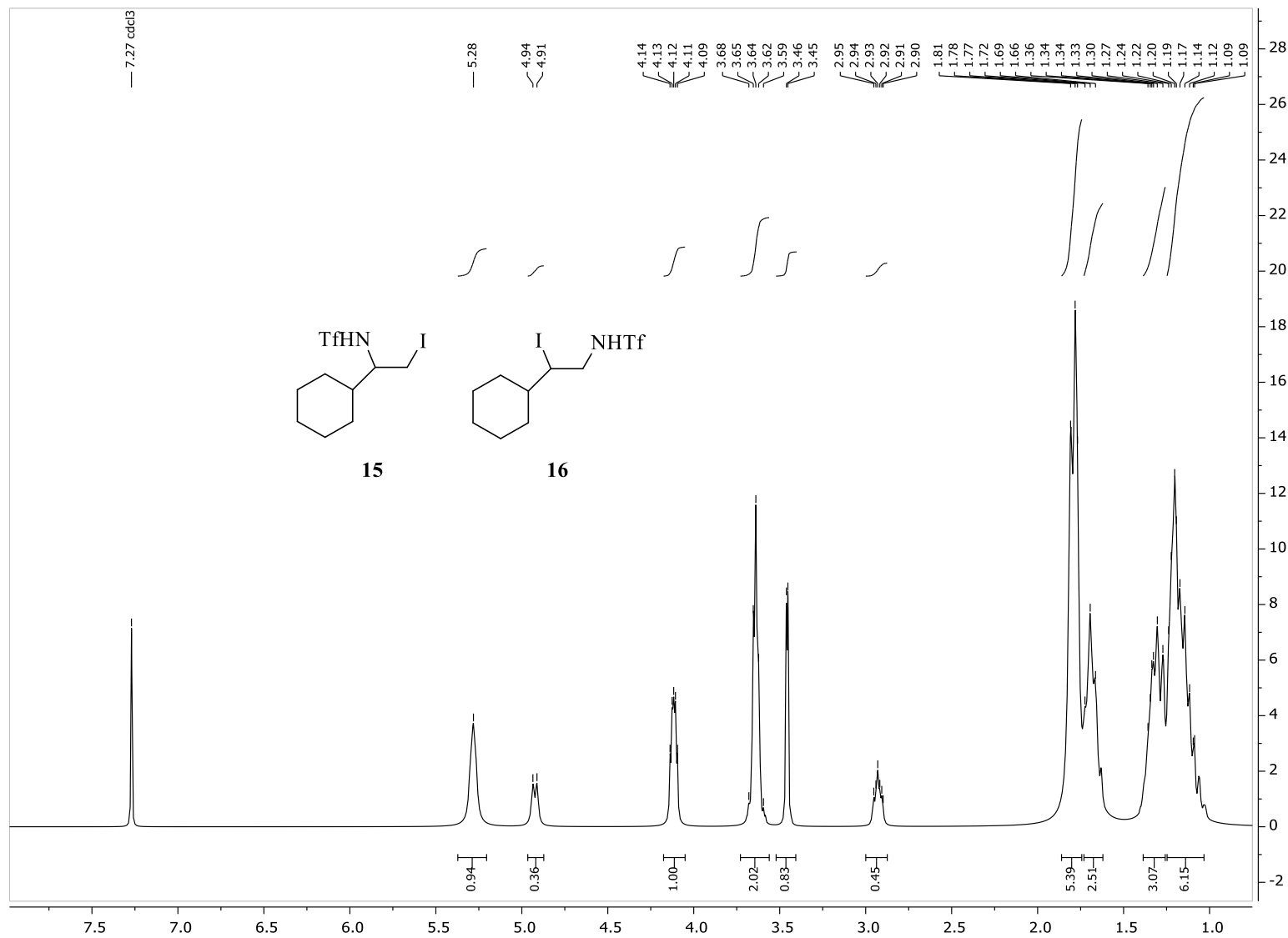


Figure S27. ^{13}C NMR (100.6 MHz, CDCl_3) of compounds **15** and **16**

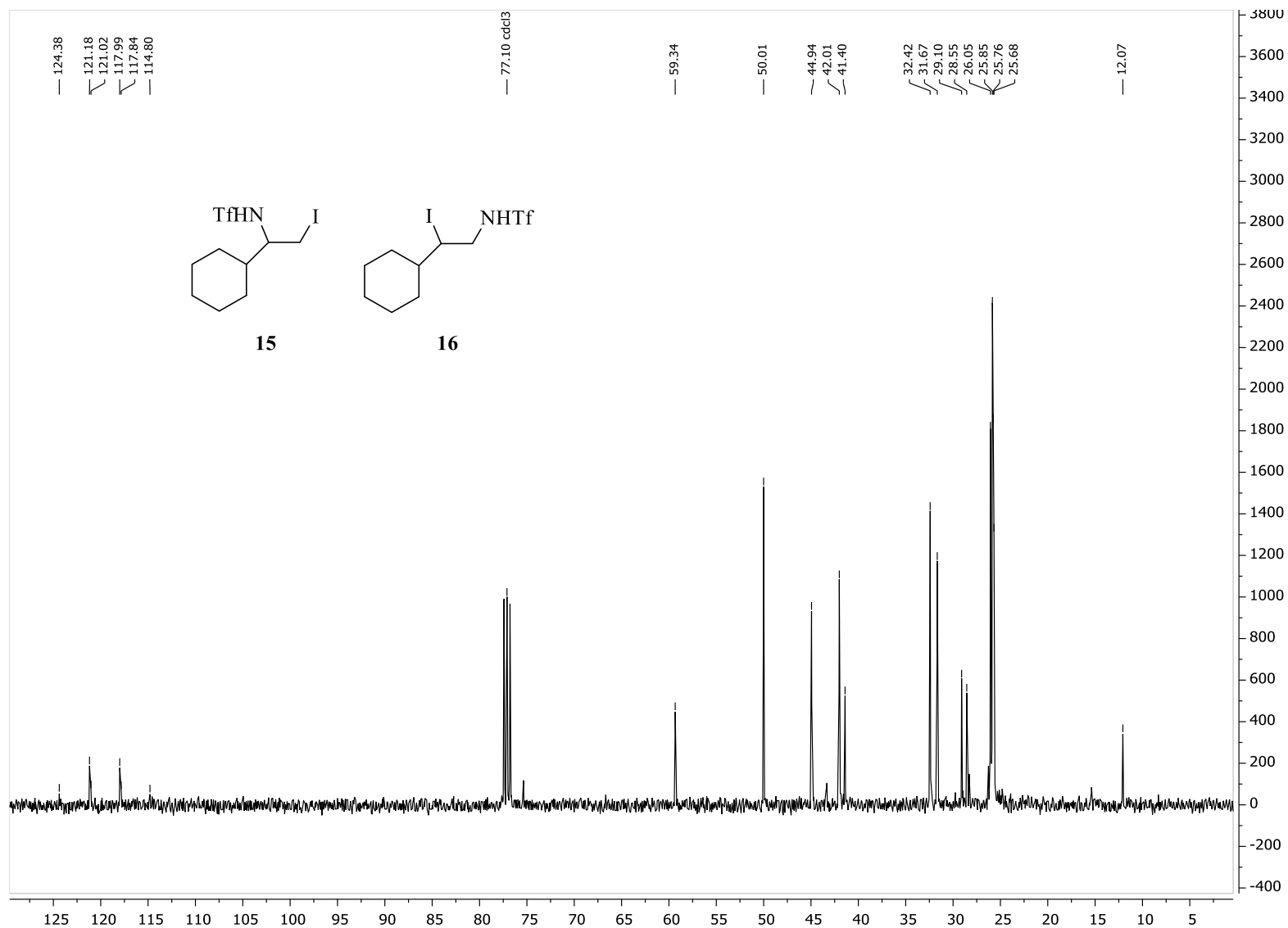
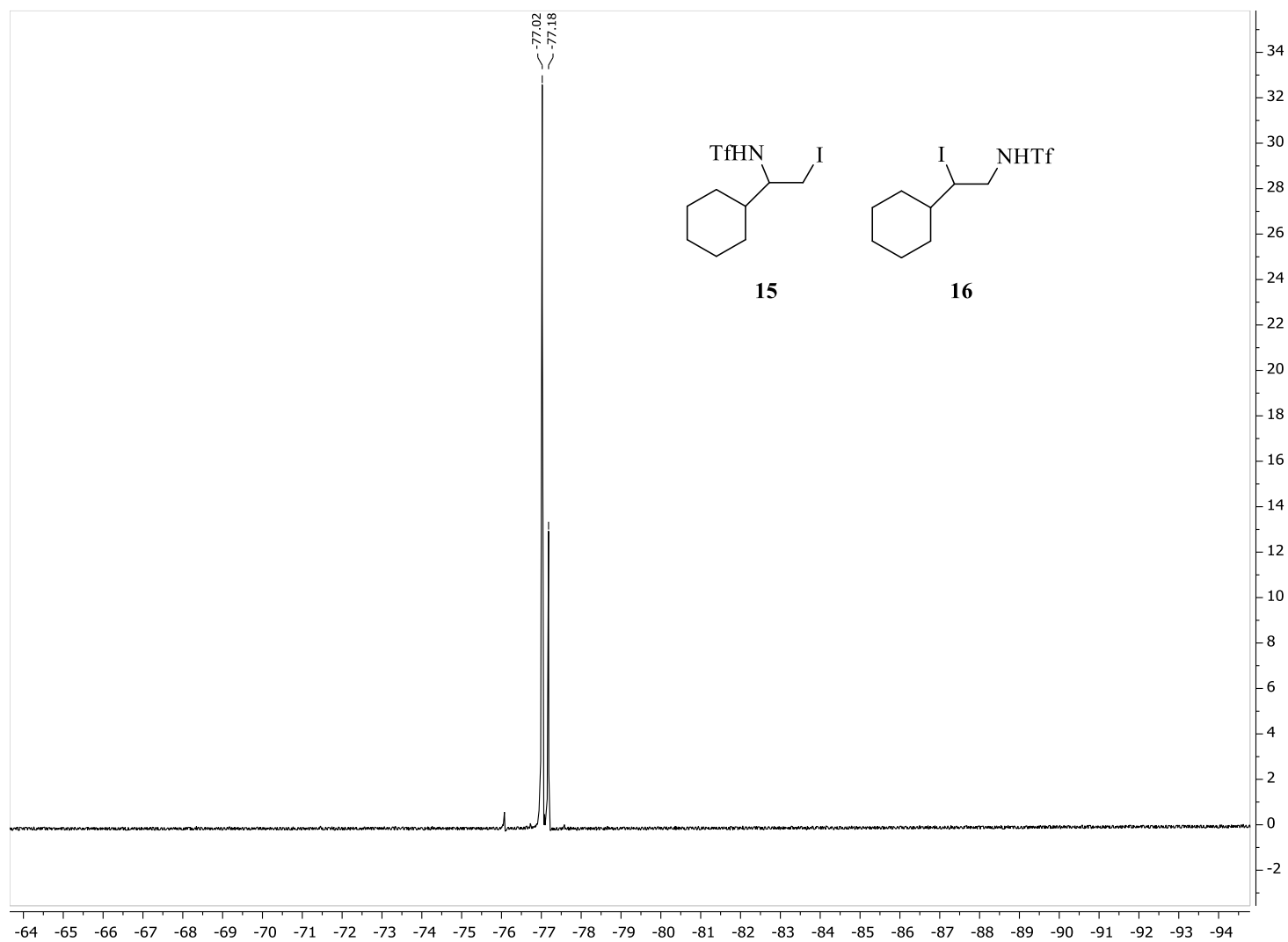


Figure S28. ^{19}F NMR (376 MHz) of compounds **15** and **16**



Chemical Structure of 18: CC(=Nc1ccccc1)C(CI)C2CCCCC2

1H NMR Spectrum (CDCl₃):

Peak List (ppm): 7.27, 7.01, 7.00, 6.66, 6.64, 4.25, 4.24, 4.23, 4.22, 4.21, 4.11, 4.10, 4.09, 4.08, 3.94, 3.93, 3.92, 3.91, 3.90, 3.89, 3.88, 3.87, 3.75, 3.74, 3.73, 3.72, 3.72, 3.71, 3.70, 3.69, 3.64, 3.63, 3.62, 3.61, 3.59, 3.58, 3.57, 3.47, 3.46, 3.45, 3.44, 3.33, 3.32, 3.31, 3.29, 3.29, 1.79, 1.78, 1.75, 1.72, 1.69, 1.68, 1.68, 1.65, 1.64, 1.36, 1.35, 1.32, 1.32, 1.31, 1.30, 1.29, 1.28, 1.27, 1.26, 1.25, 1.24, 1.22, 1.21, 1.19, 1.16, 1.14, 1.13, 1.10, 1.09.

Integration Values: 0.91, 0.85, 1.00, 0.37, 1.14, 1.02, 1.09, 1.12, 1.01, 5.70, 14.26, 12.82.

Inset Spectrum (3.2-4.3 ppm):

Peak List (ppm): 4.25, 4.24, 4.23, 4.22, 4.21, 3.93, 3.92, 3.91, 3.90, 3.89, 3.88, 3.87, 3.73, 3.72, 3.72, 3.71, 3.64, 3.63, 3.62, 3.61, 3.59, 3.47, 3.46, 3.45, 3.44, 3.33, 3.32, 3.31, 3.29.

Integration Values (Inset): 1.00, 0.37, 1.14, 0.02, 0.09, 1.12, 0.01.

Figure S30. ^{13}C NMR (100.6 MHz, CDCl_3) of compounds **17** and **18**

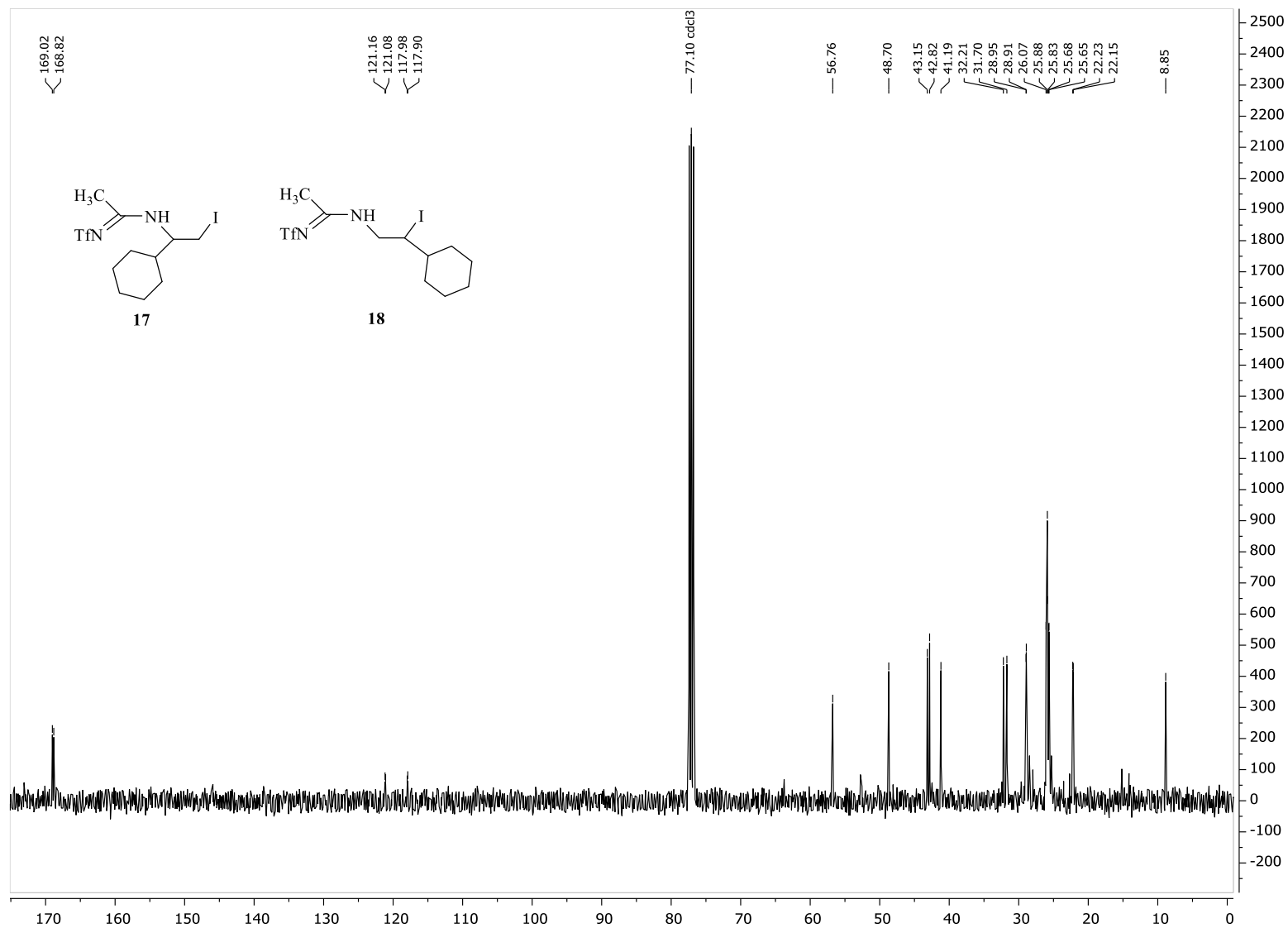


Figure S31. ^{13}C J-modulation NMR (100.6 MHz, CDCl_3) spectrum of **17** and **18**

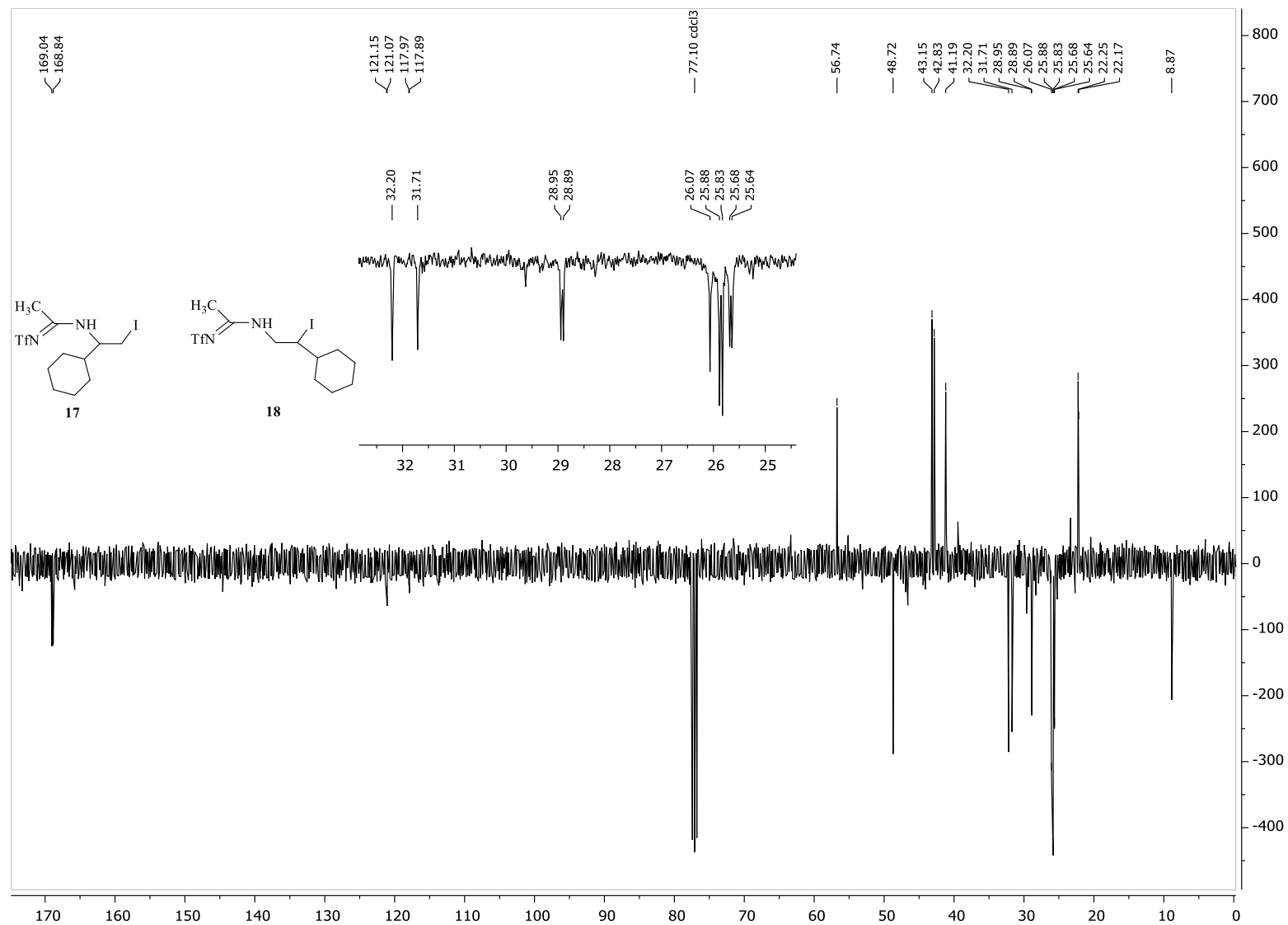


Figure S32. ^{19}F NMR (376 MHz) of compounds **17** and **18**

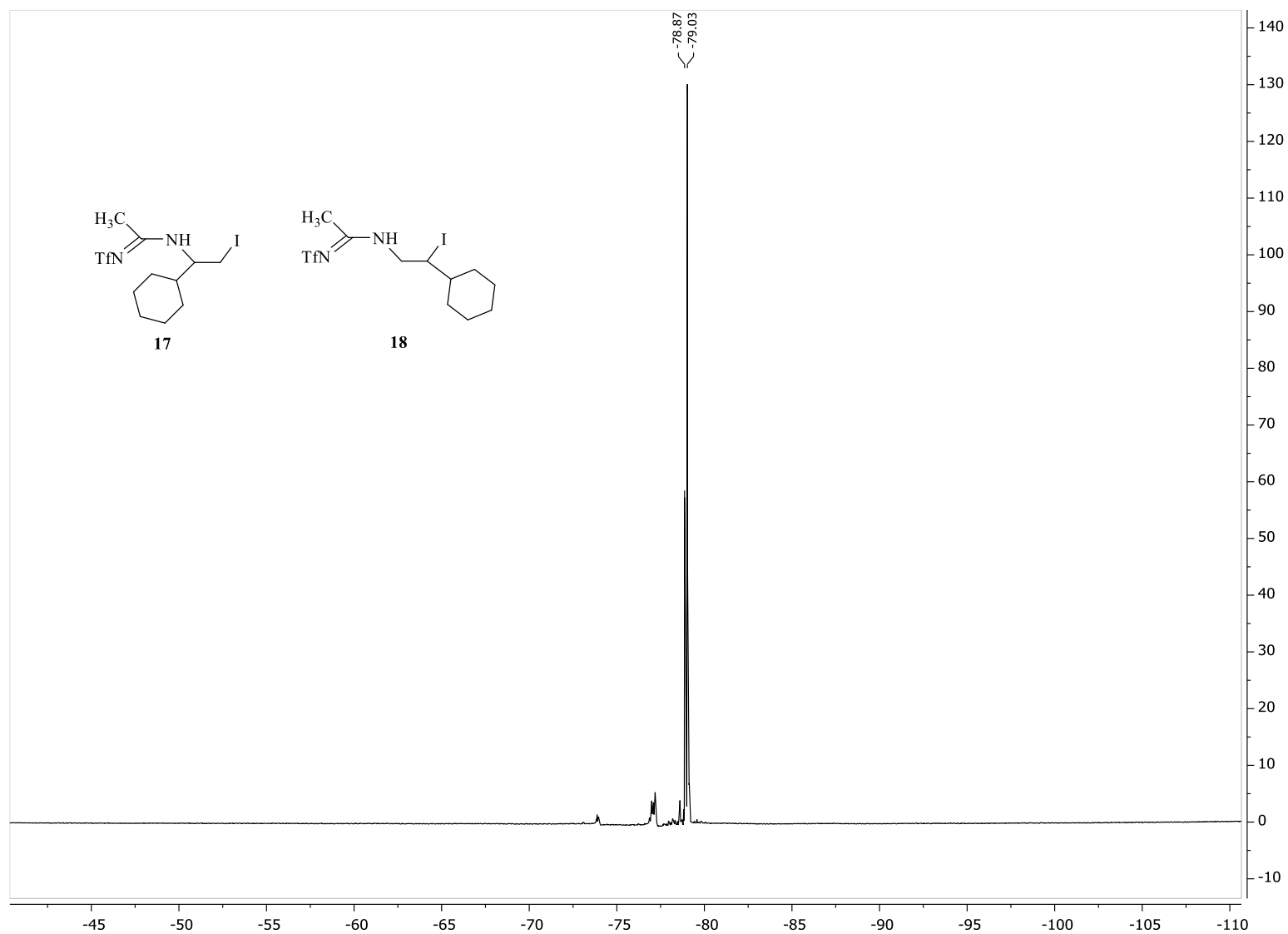


Figure S33. ^1H NMR (400.1 MHz, CDCl_3) of compound **18**

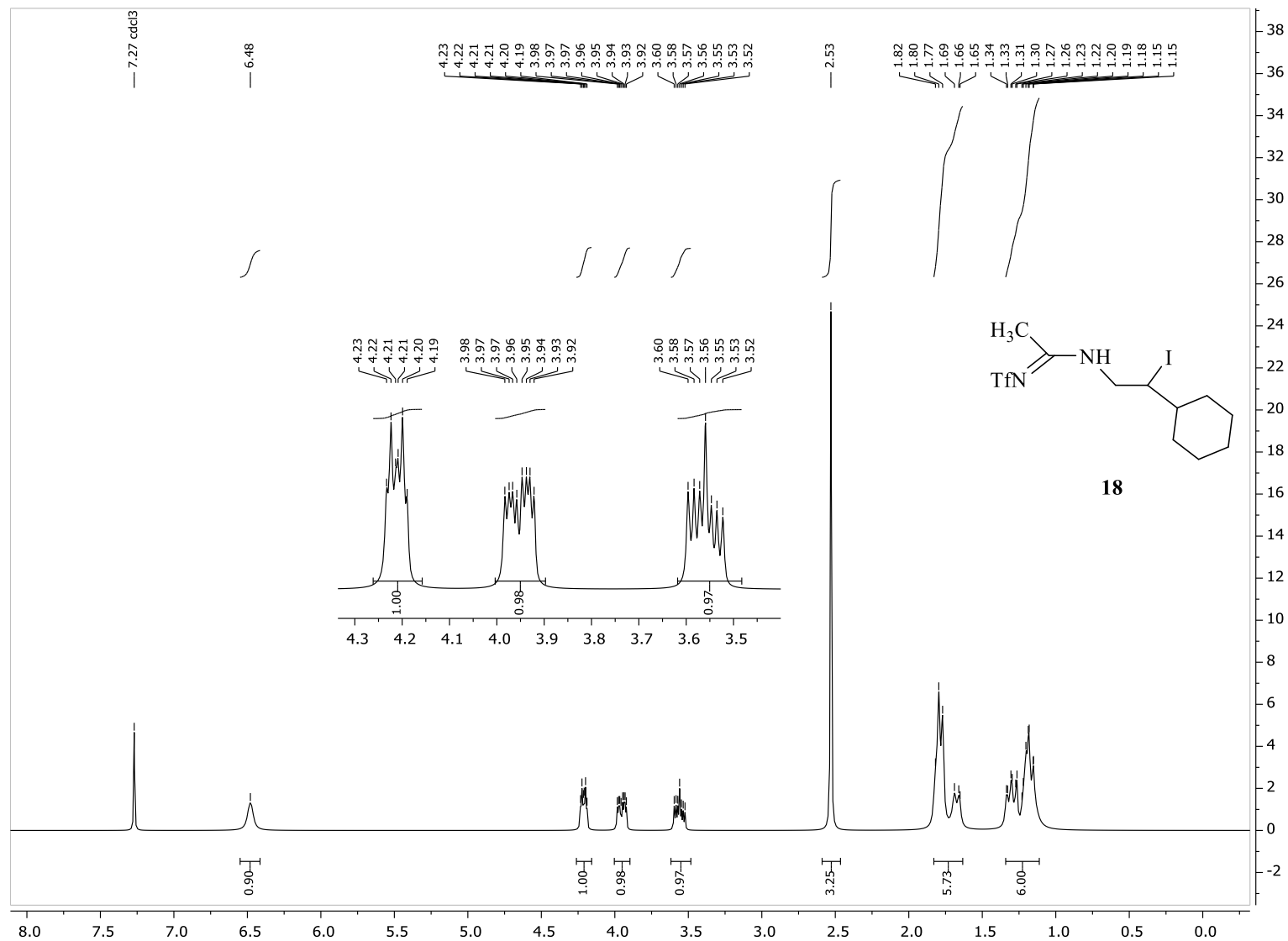


Figure S34. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **18**

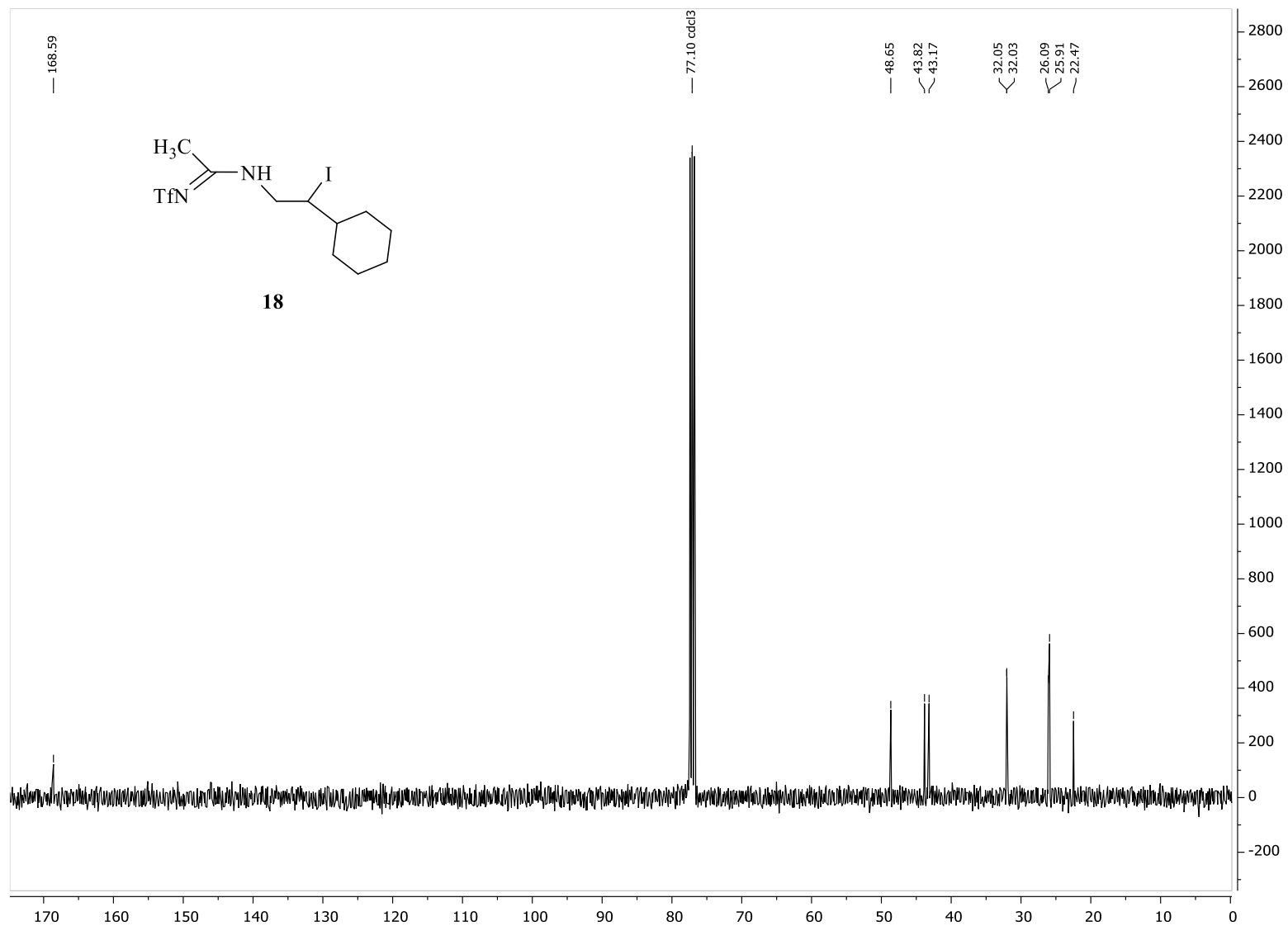


Figure S35. ^{19}F NMR (376 MHz) of compound **18**

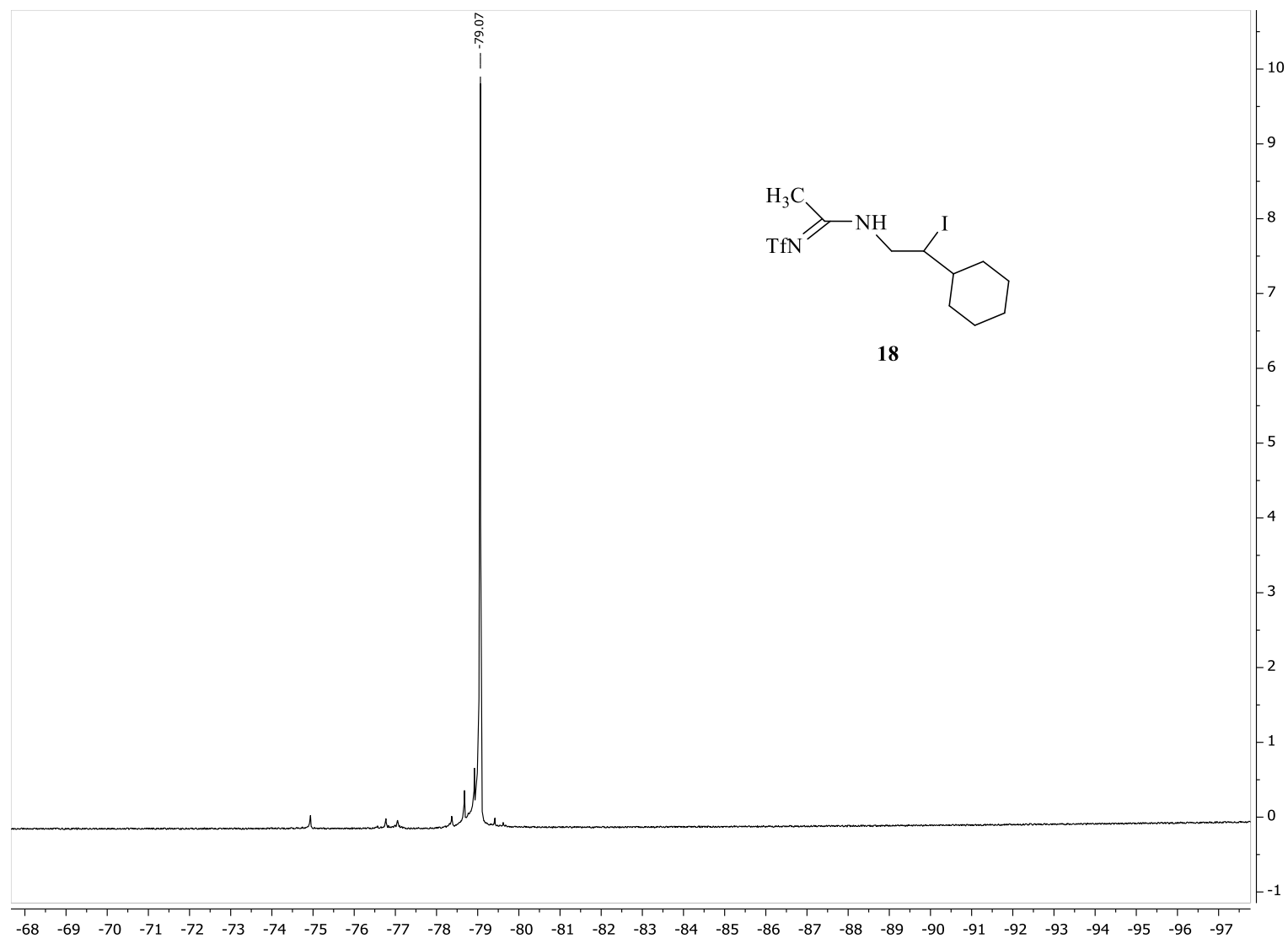


Figure S36. ^1H NMR (400.1 MHz, CDCl_3) of compound **19**

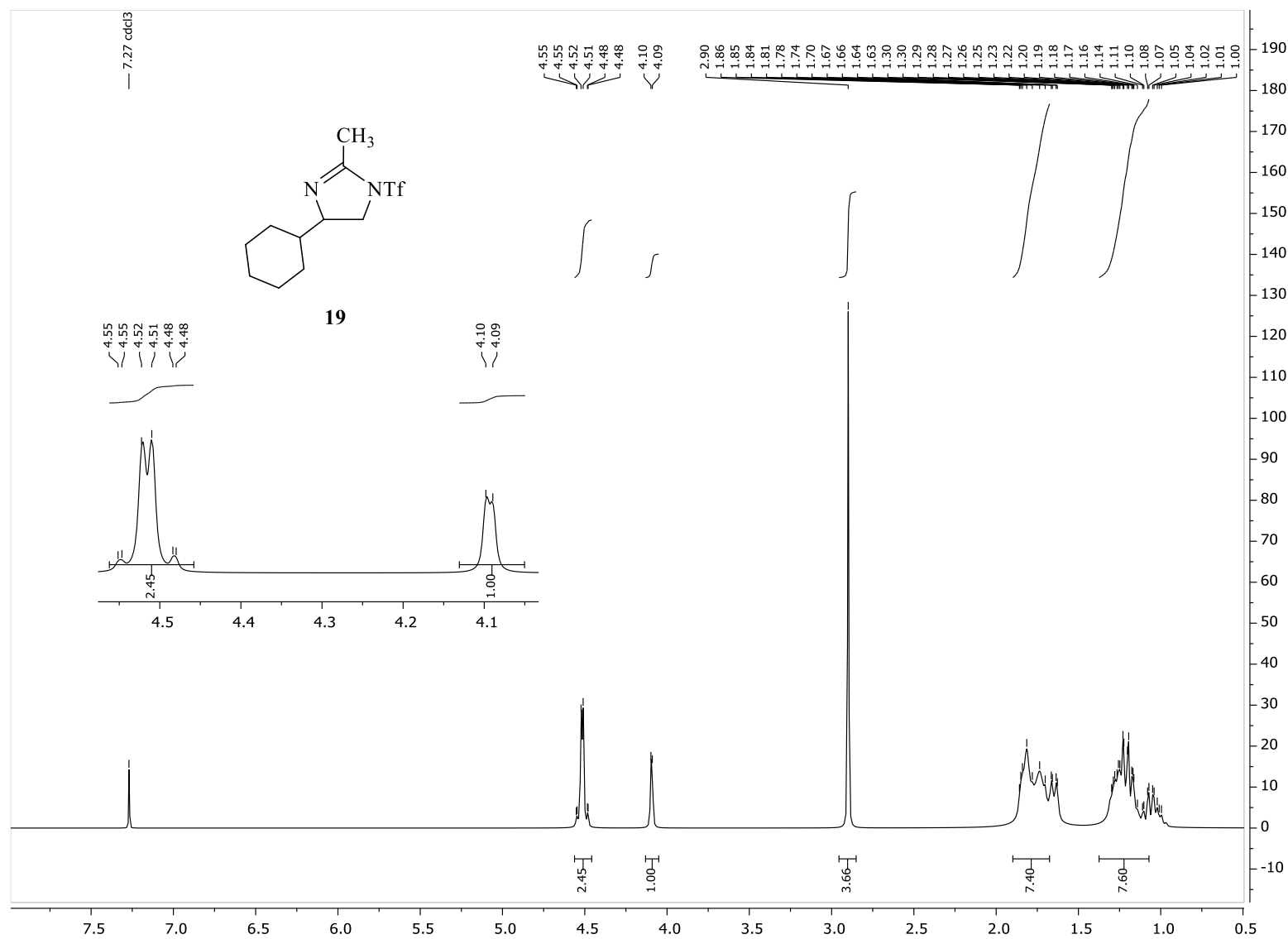


Figure S37. ^{13}C NMR (100.6 MHz, CDCl_3) of compound **19**

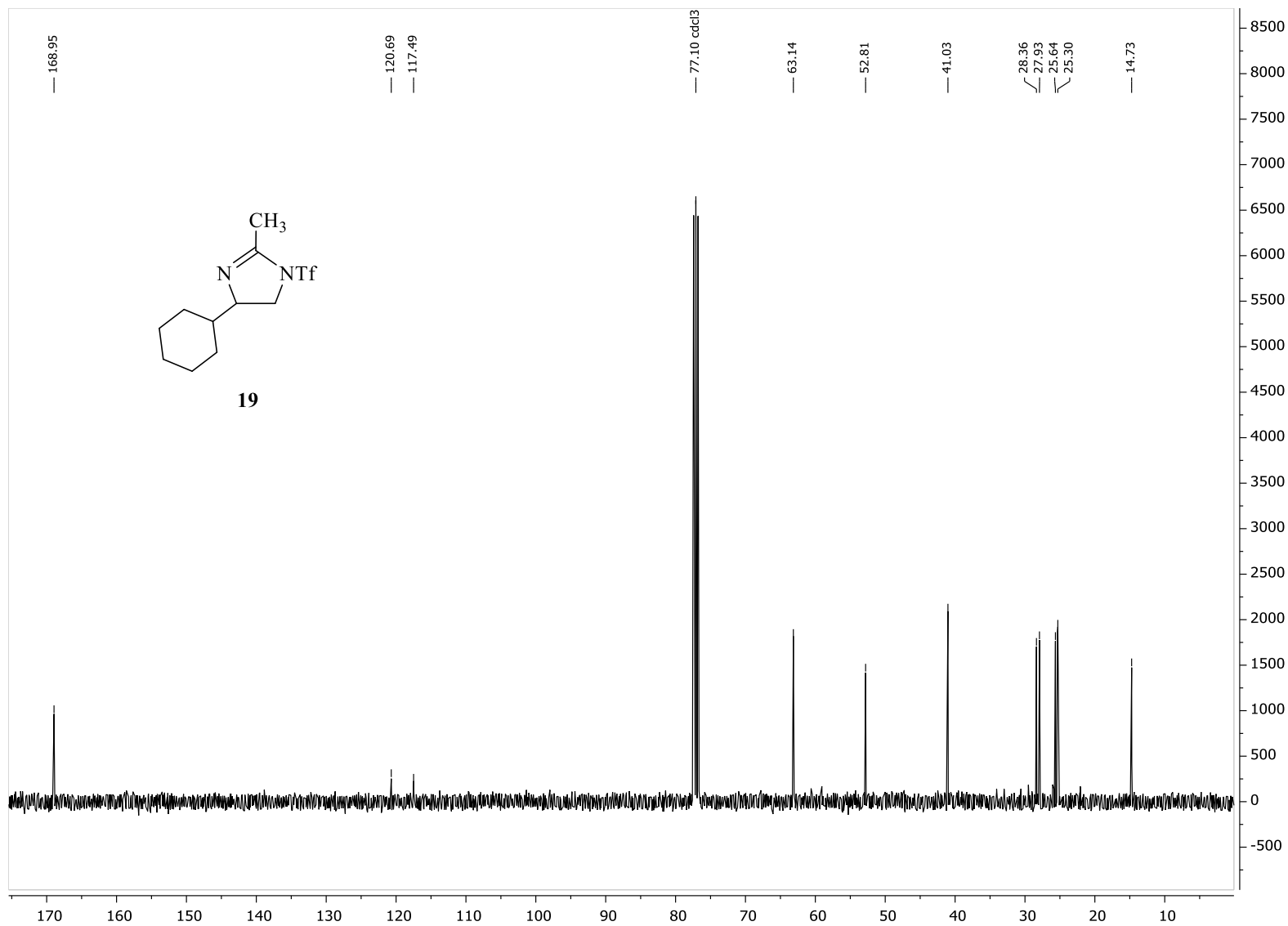


Figure S38. ^{13}C J-modulation NMR (100.6 MHz, CDCl_3) of compound **19**

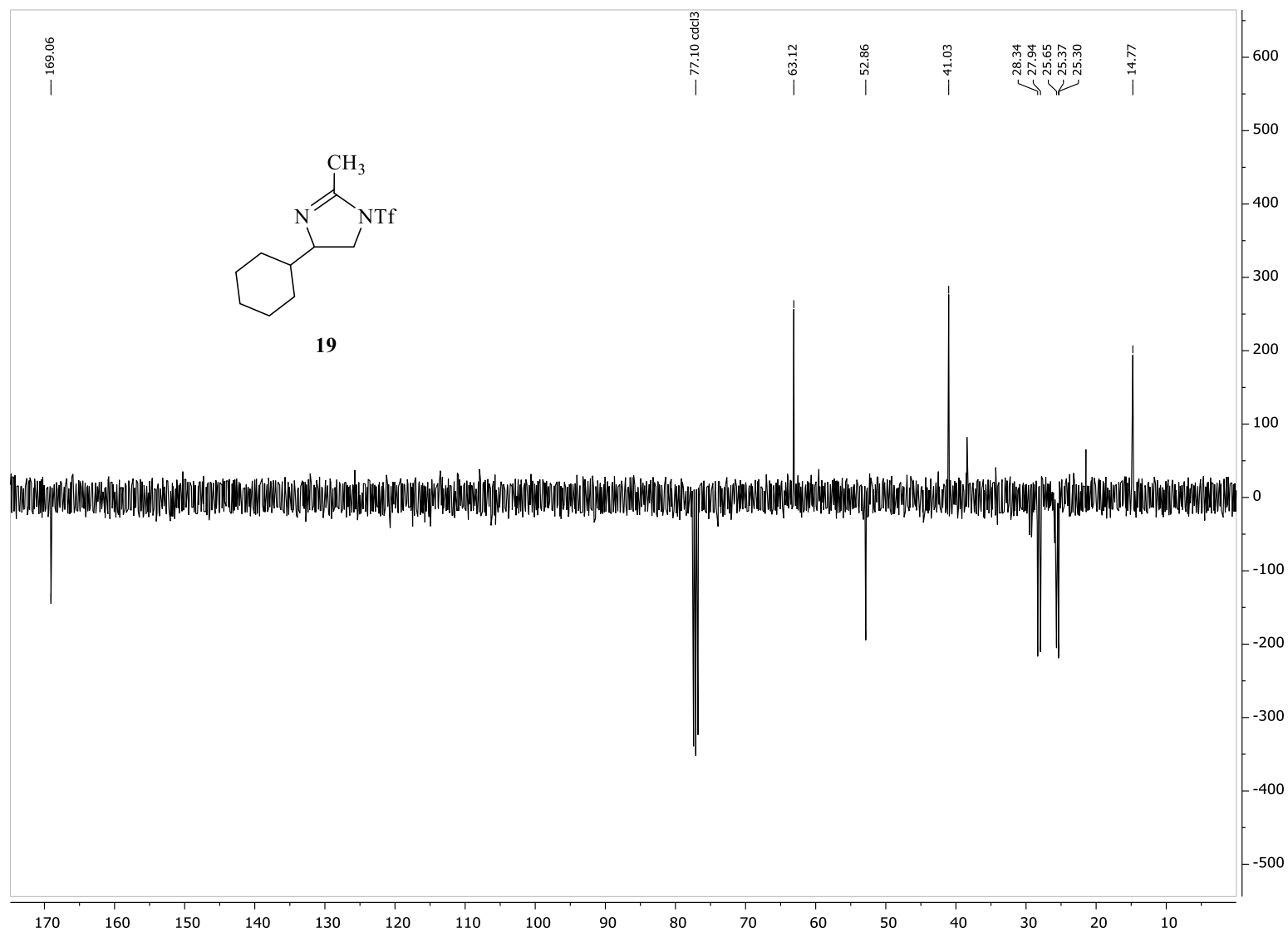
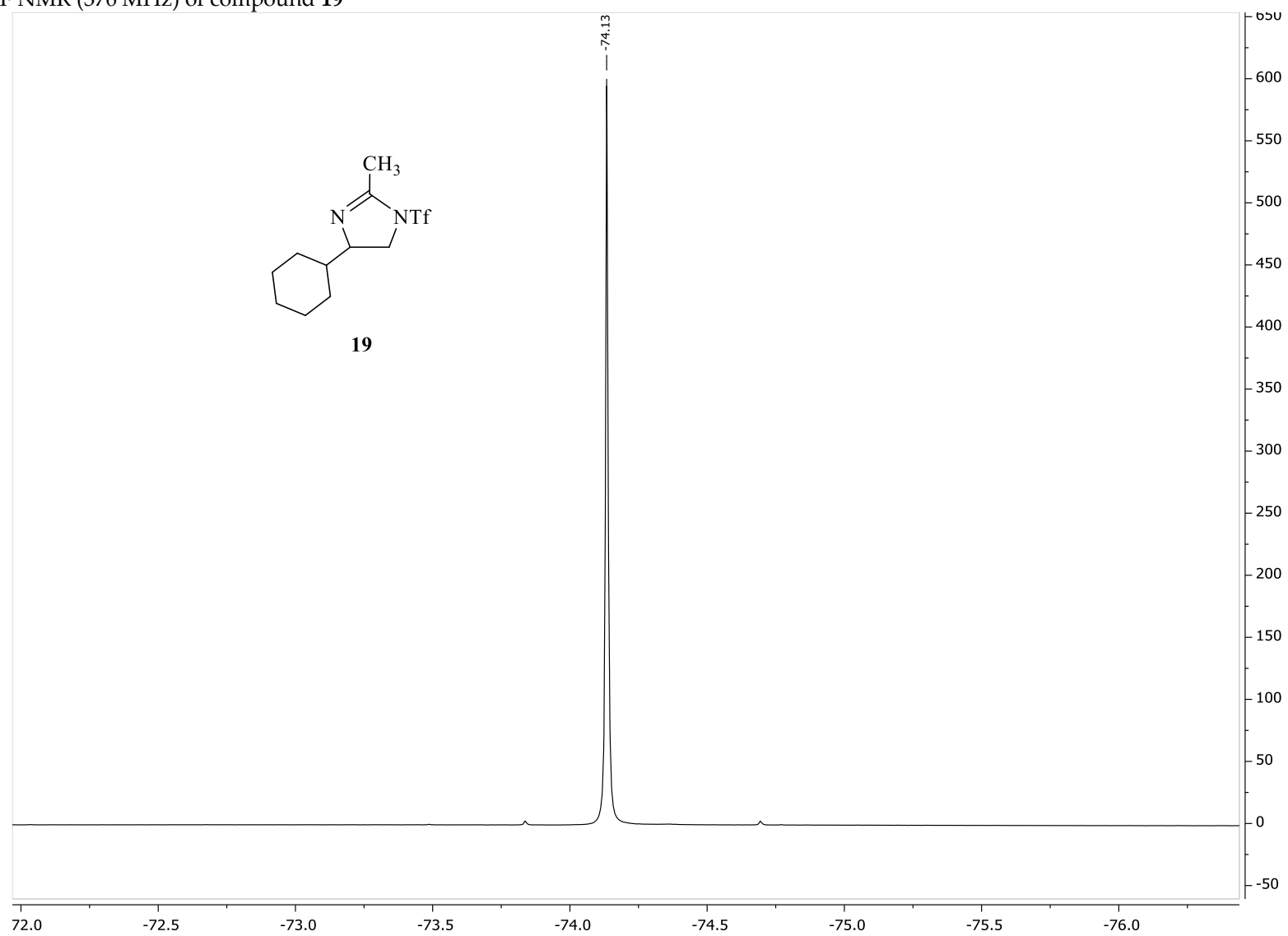


Figure S39. ^{19}F NMR (376 MHz) of compound **19**



1.2 Copies of HRMS spectra

Figure S40. HRMS of compound 9

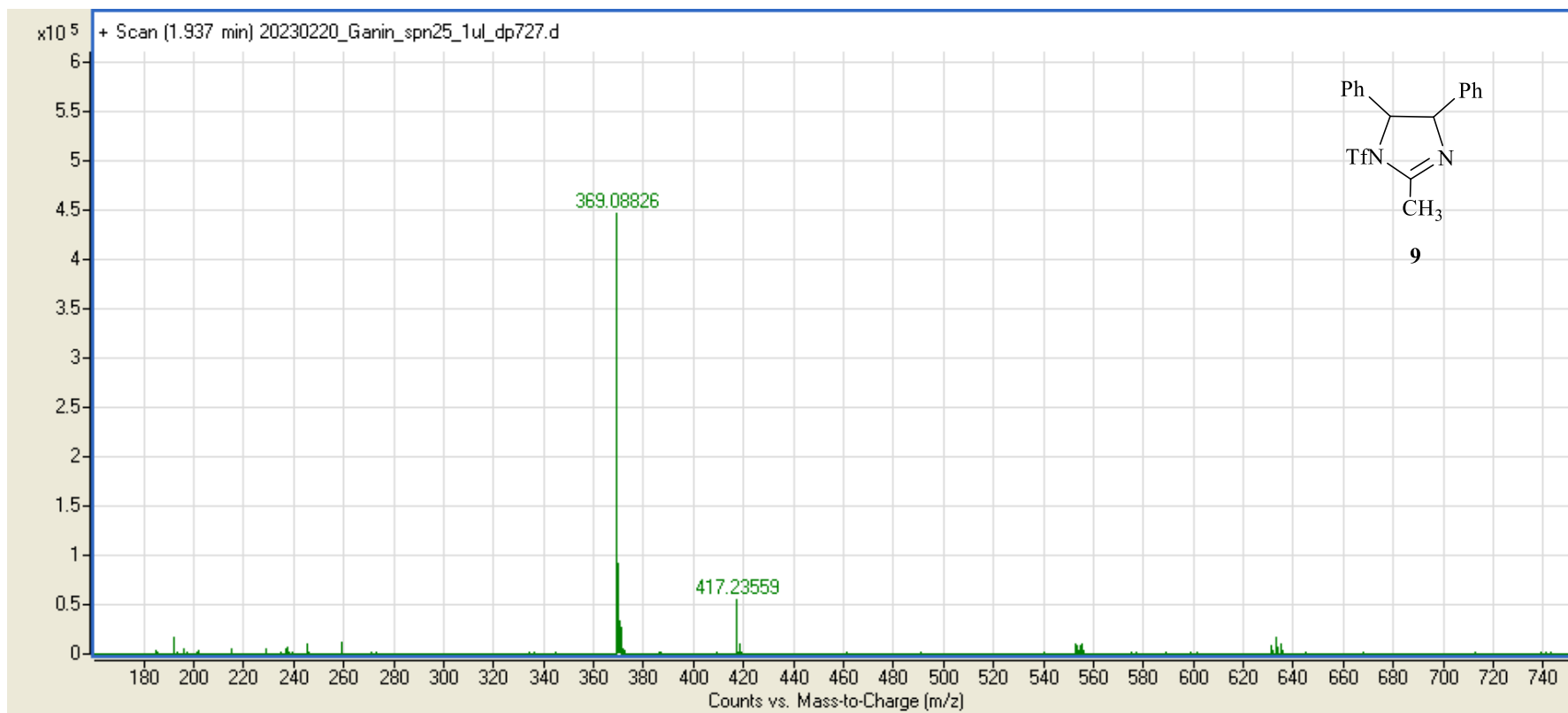


Figure S41. HRMS of compound **10**

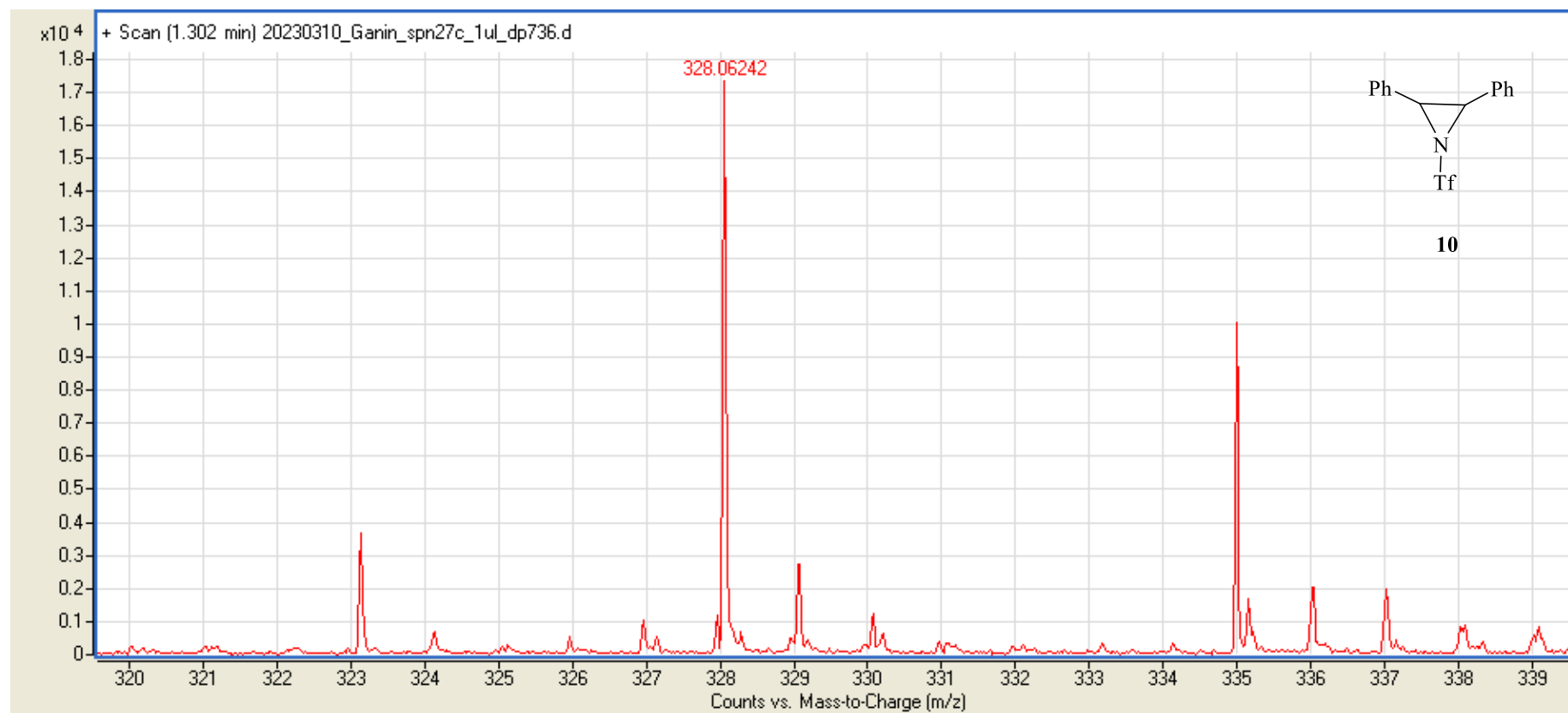


Figure S42. HRMS of compound 11

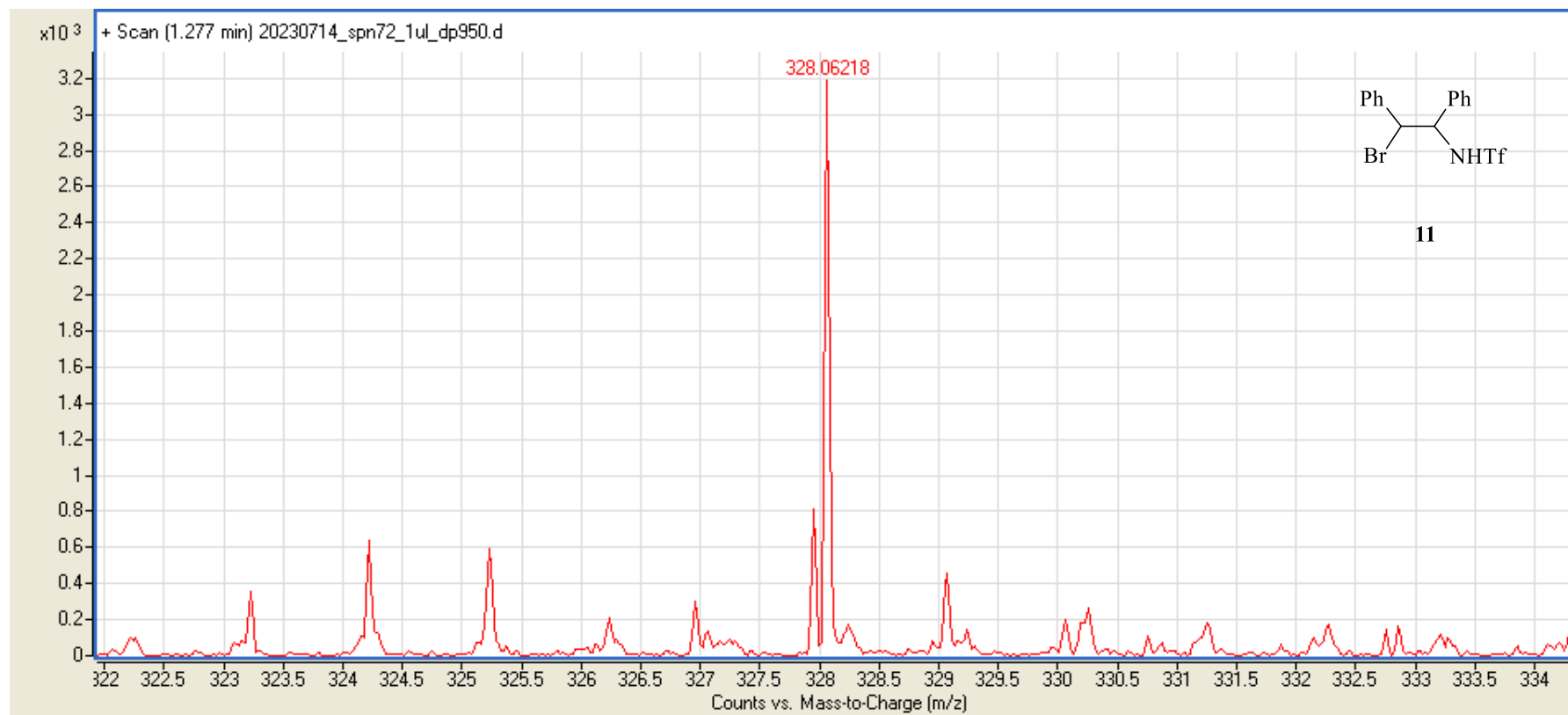


Figure S43. HRMS of compound **18**

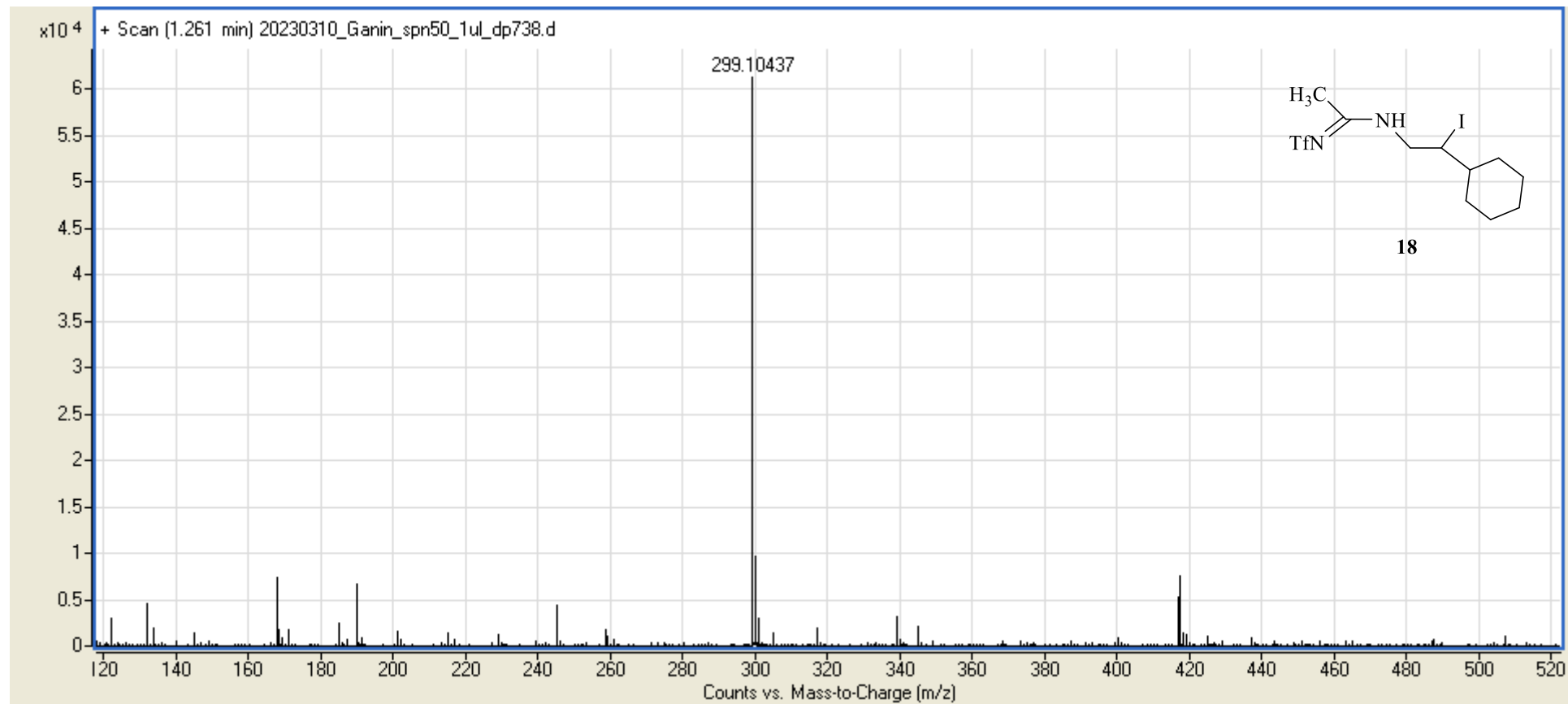


Figure S44. HRMS of compound **19**

