

Supporting information for

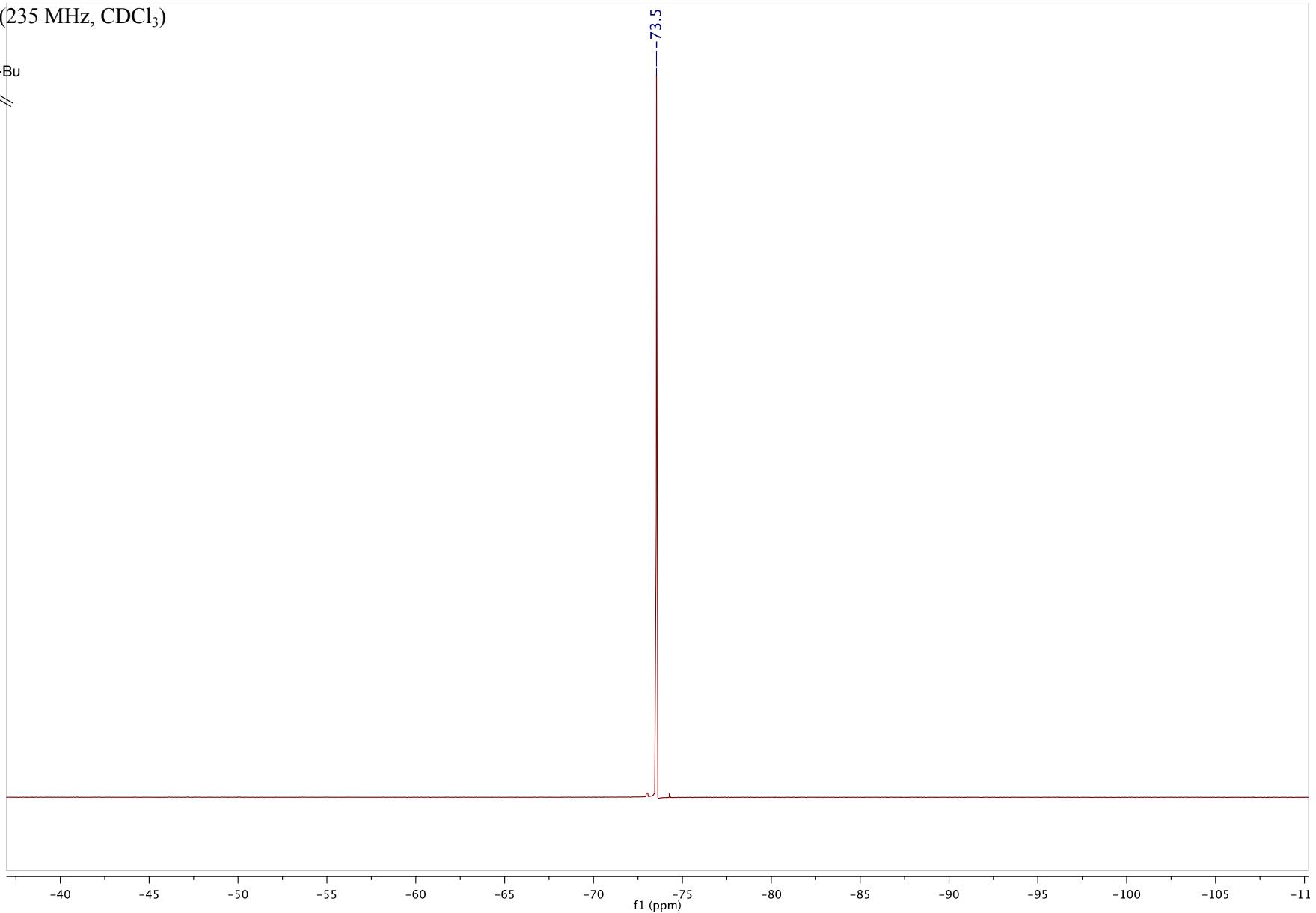
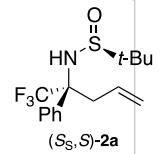
α -Trifluoromethylated tertiary homoallylic amines :

Diastereoselective synthesis and conversion into β -aminoesters, γ - and
 δ -aminoalcohols, azetidines and pyrrolidines.

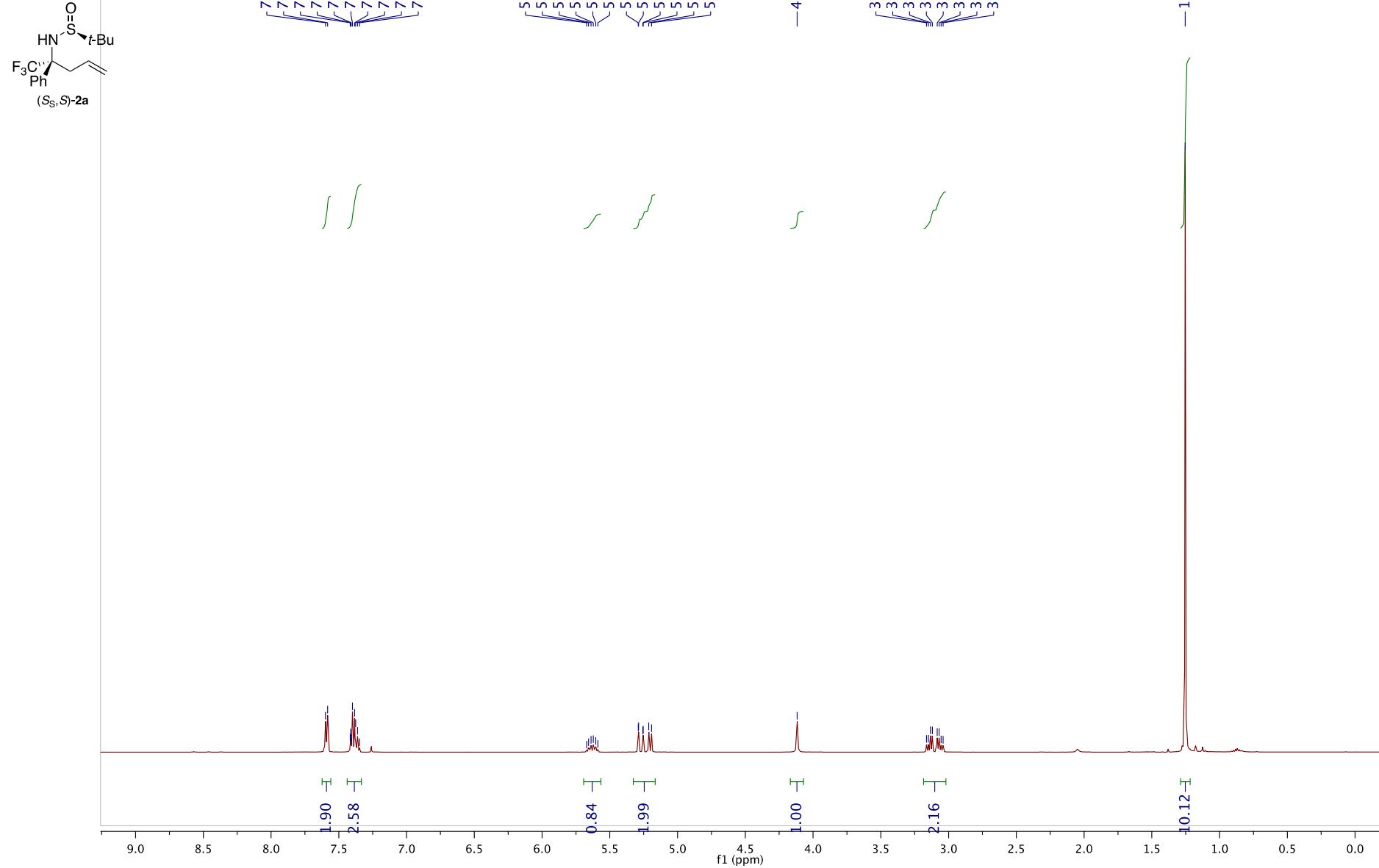
Fabienne Grellepois,* Abdelkhalek Ben Jamaa, Nathalie Saraiva Rosa

^{19}F , ^1H and ^{13}C NMR spectra of sulfinamides 2a-k	S2-S40
^{19}F , ^1H and ^{13}C NMR spectra of amine derivatives 3 and 4	S41-S55
^{19}F , ^1H and ^{13}C NMR spectra of aminoalcohols 5 and 6	S56-S73
^{19}F , ^1H and ^{13}C NMR spectra of <i>N</i> -heterocycles 7	S74-S82

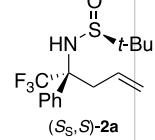
¹⁹F NMR (235 MHz, CDCl₃)



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)



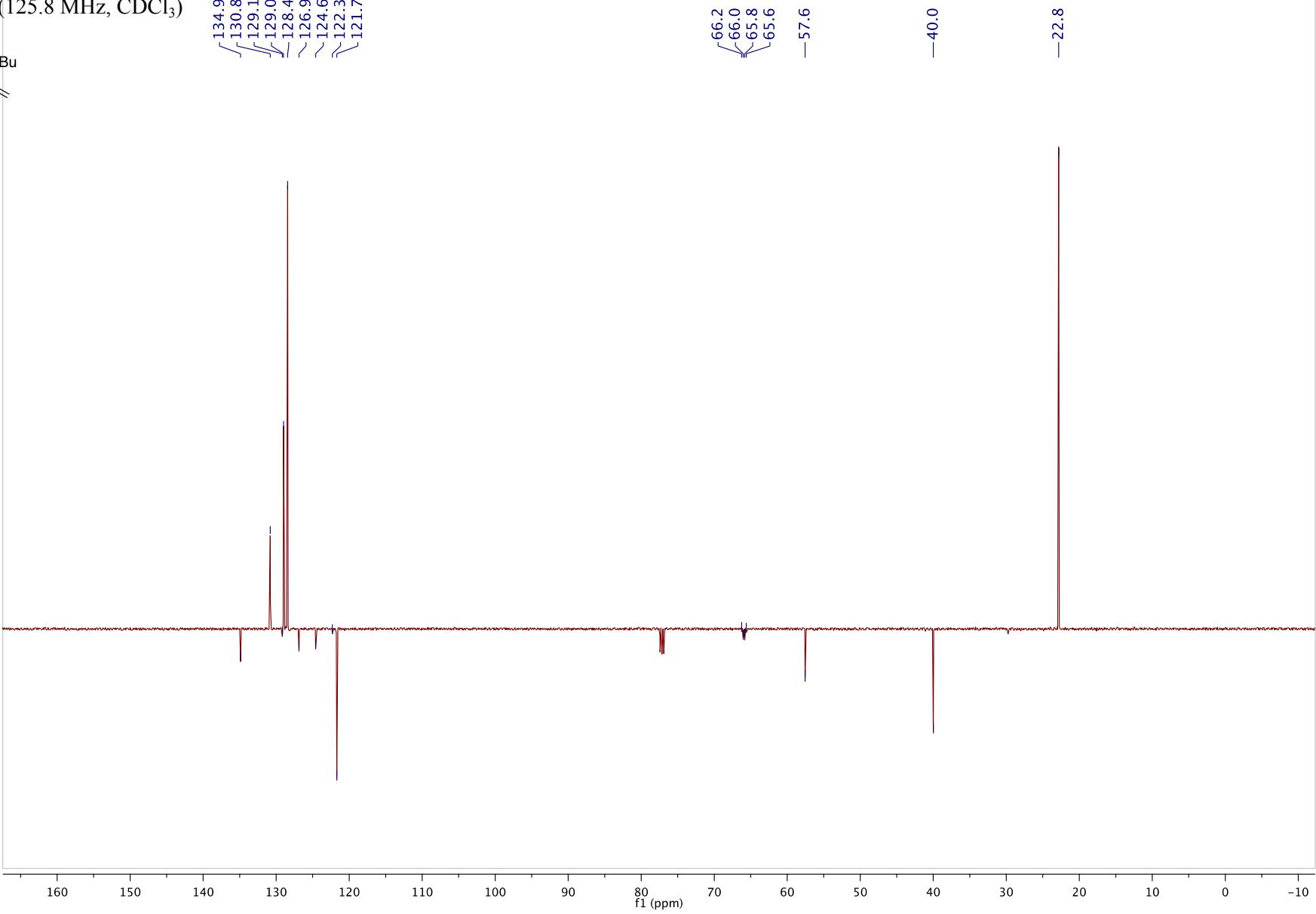
(S,S)-2a

134.9
130.8
129.1
129.0
128.4
126.9
124.6
122.3
121.7

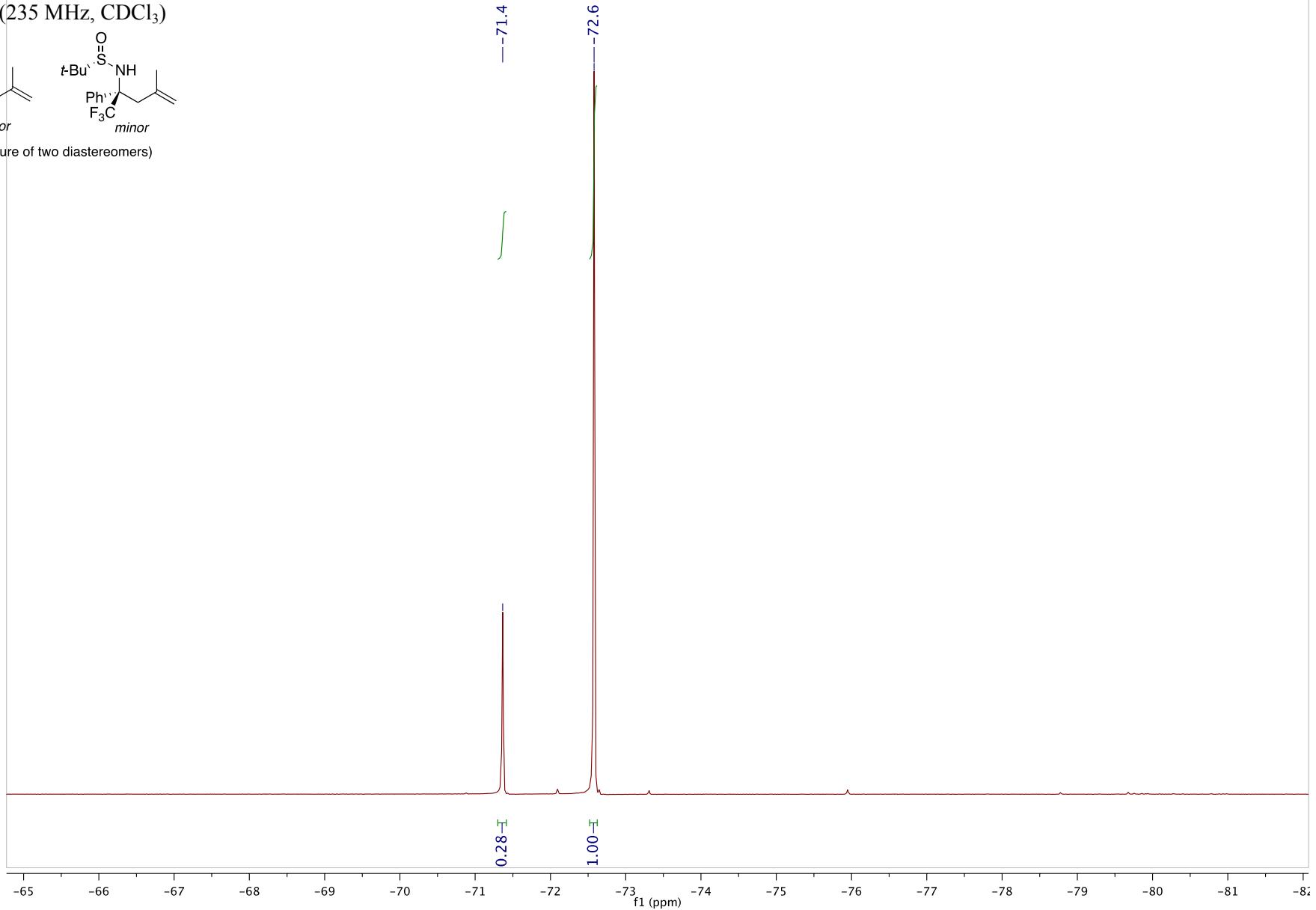
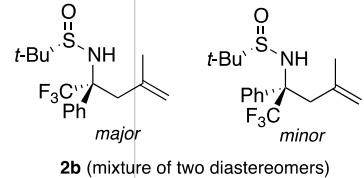
66.2
66.0
65.8
65.6
57.6

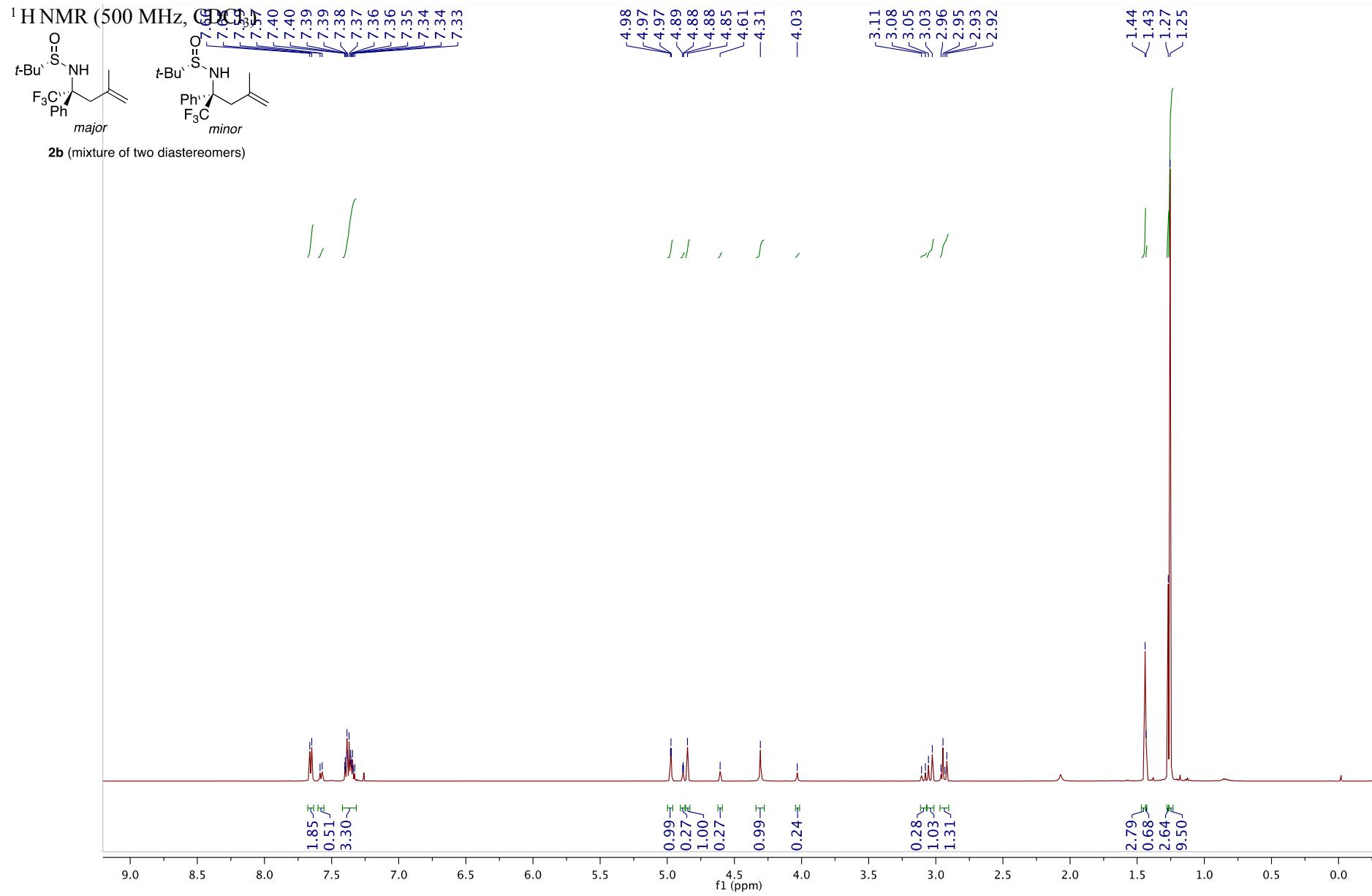
-40.0

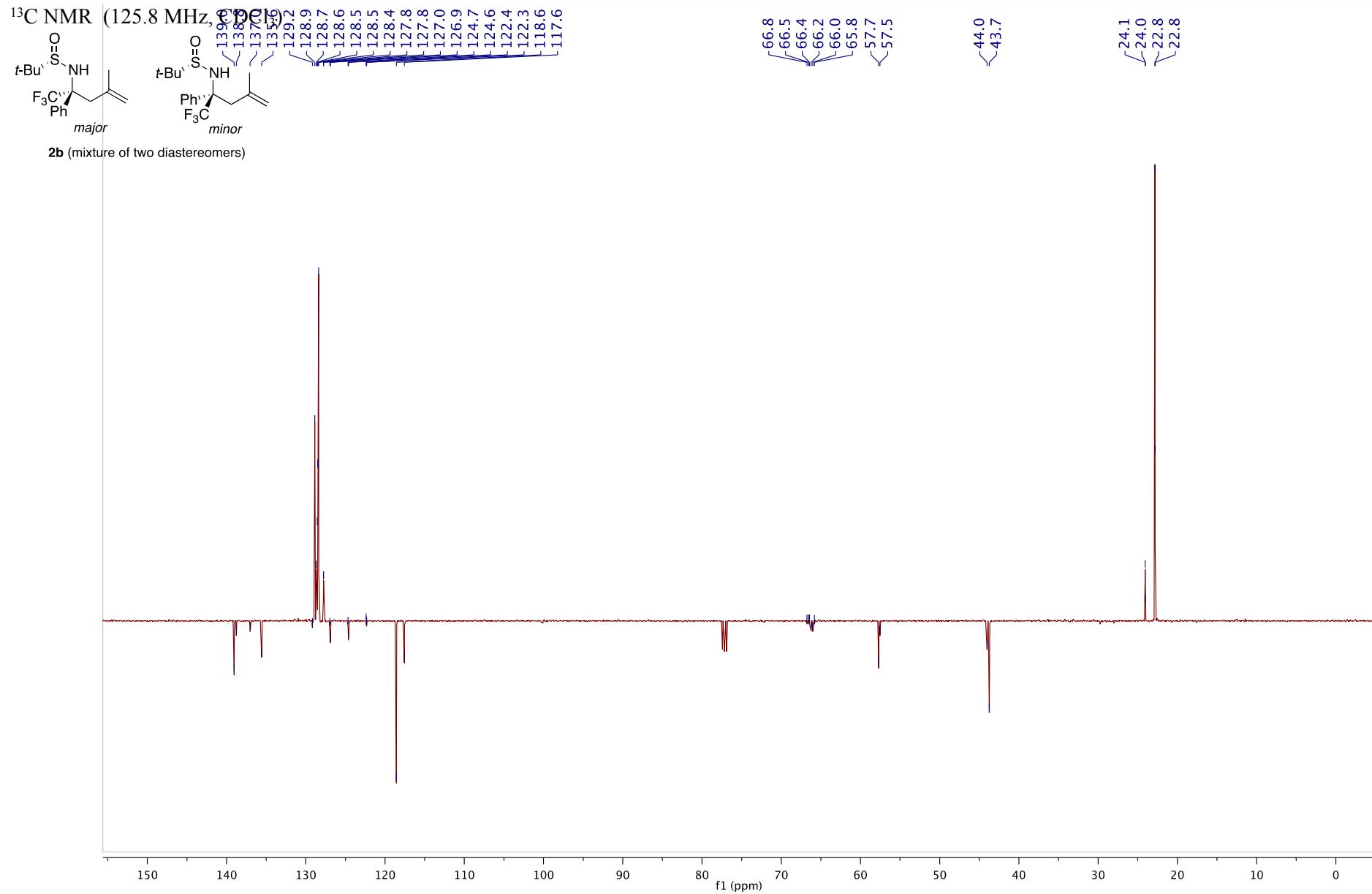
-22.8



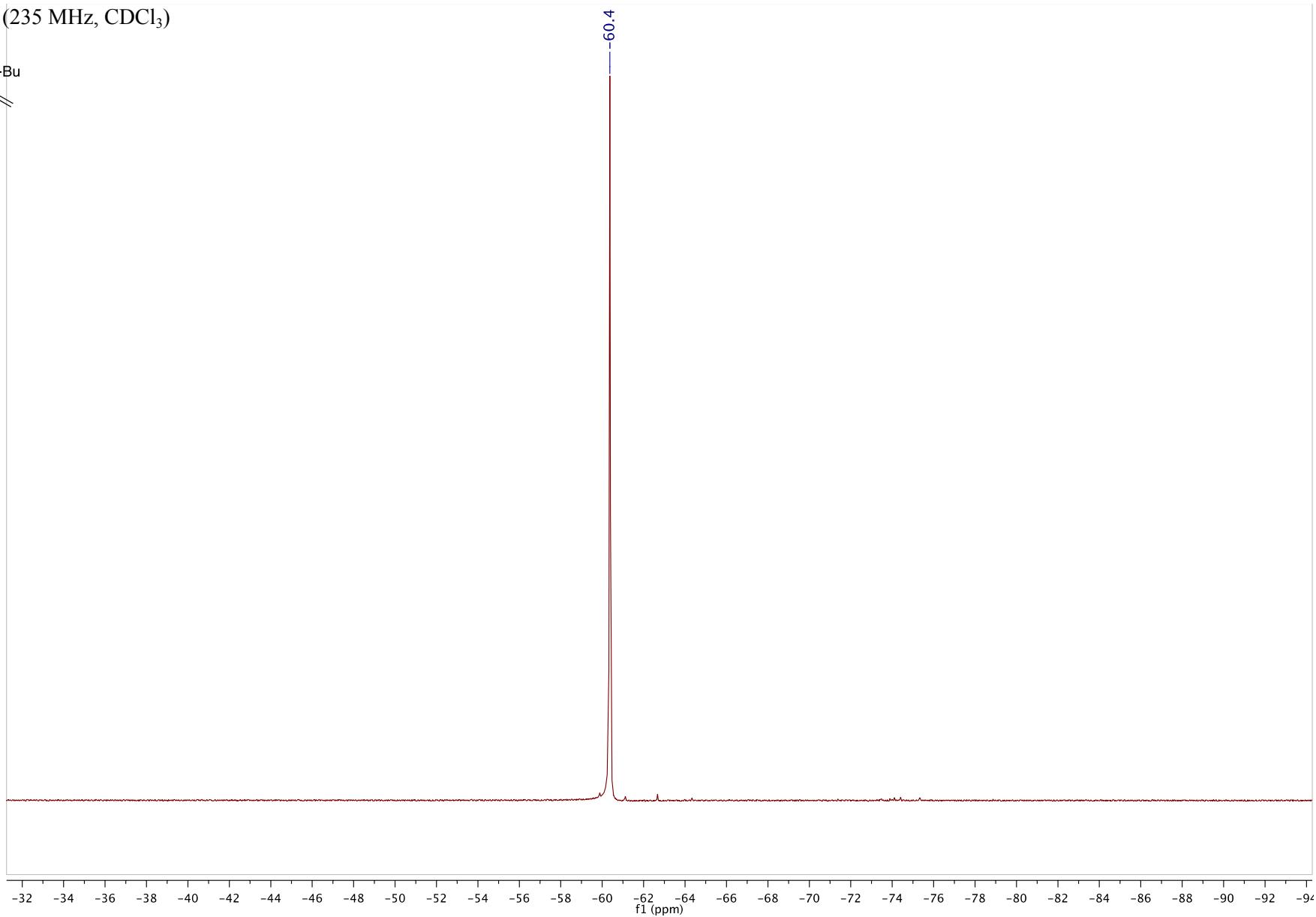
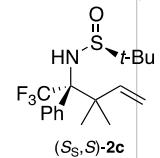
¹⁹F NMR (235 MHz, CDCl₃)



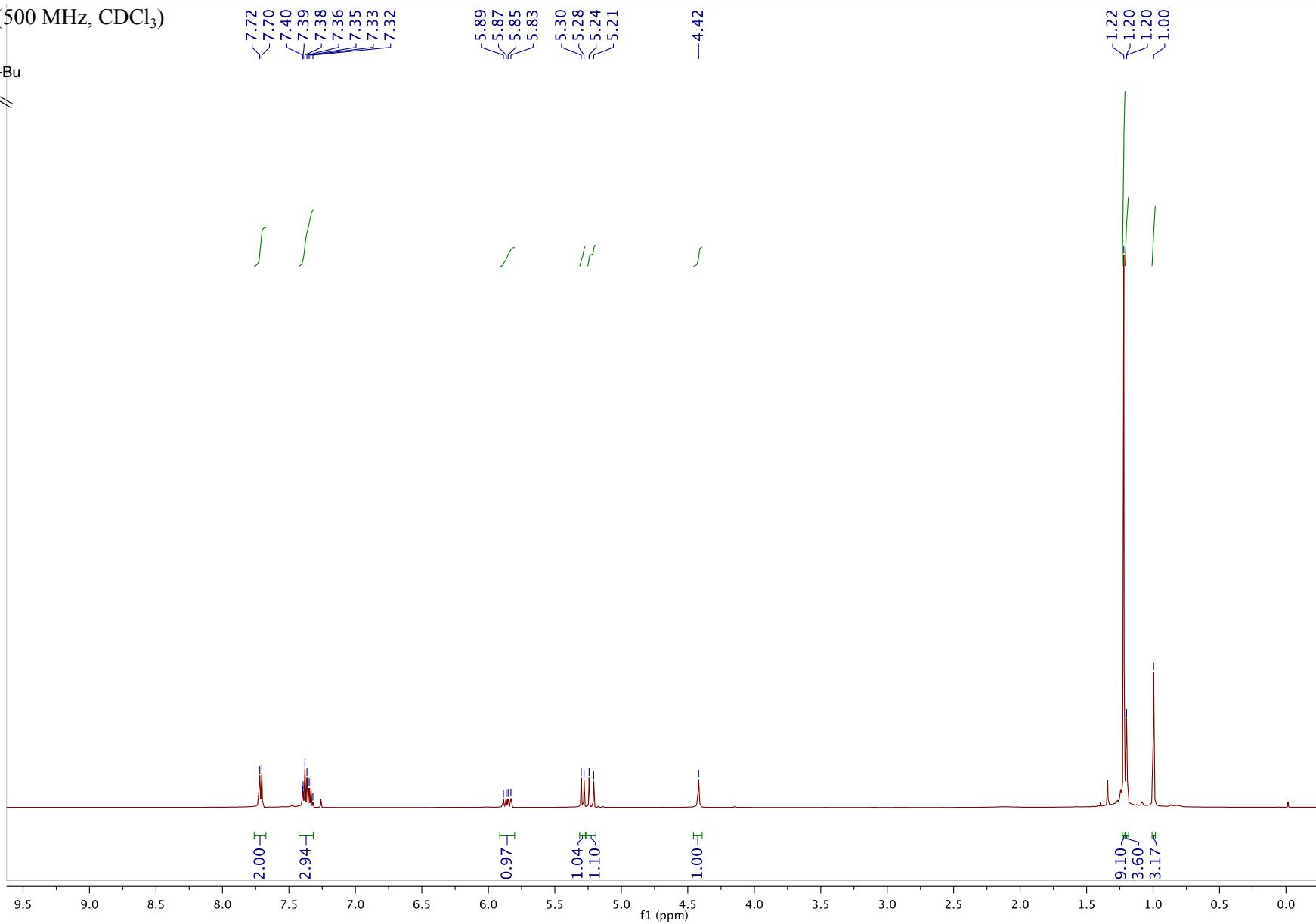
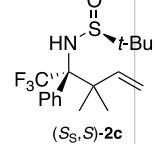


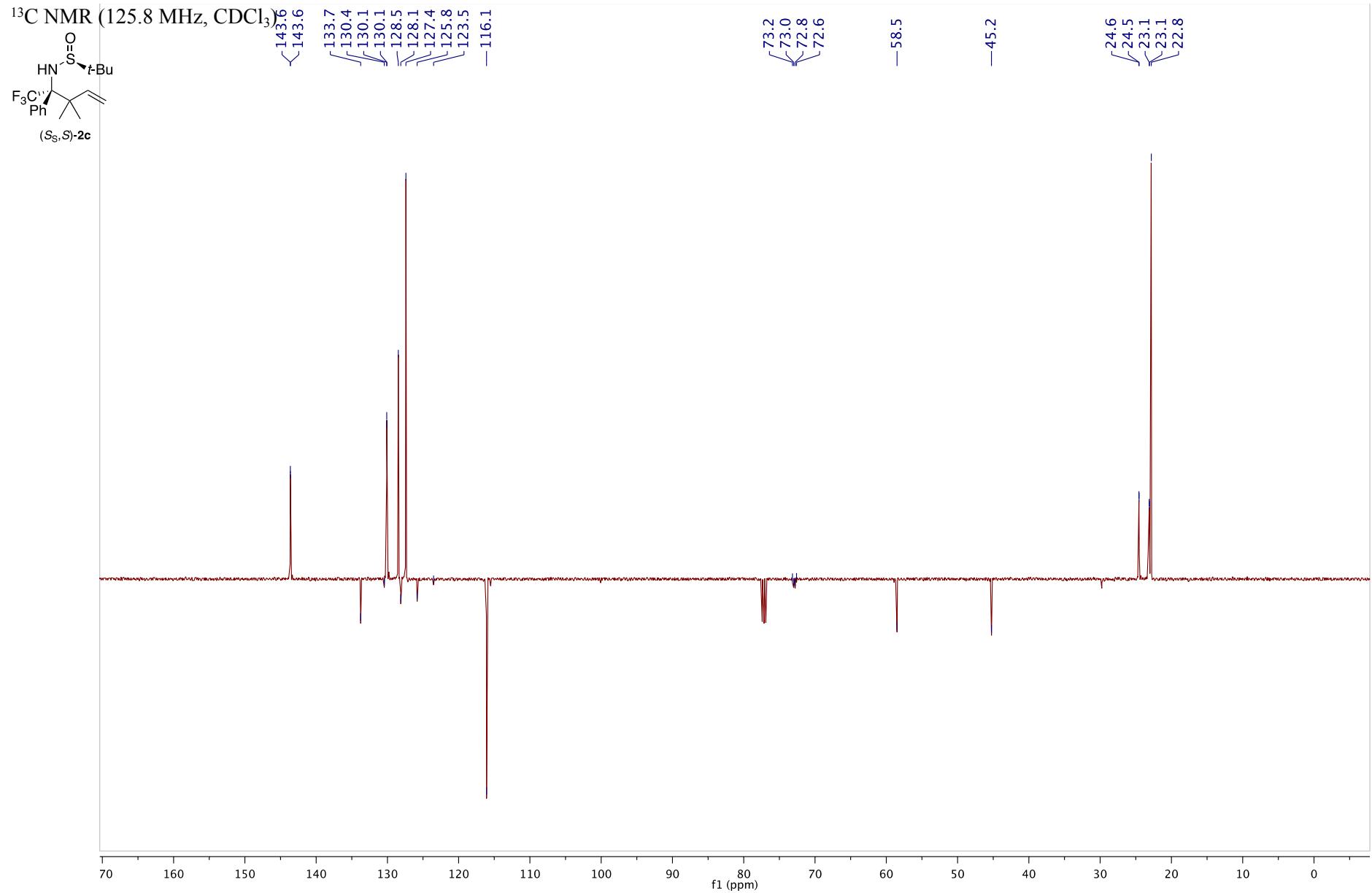


¹⁹F NMR (235 MHz, CDCl₃)

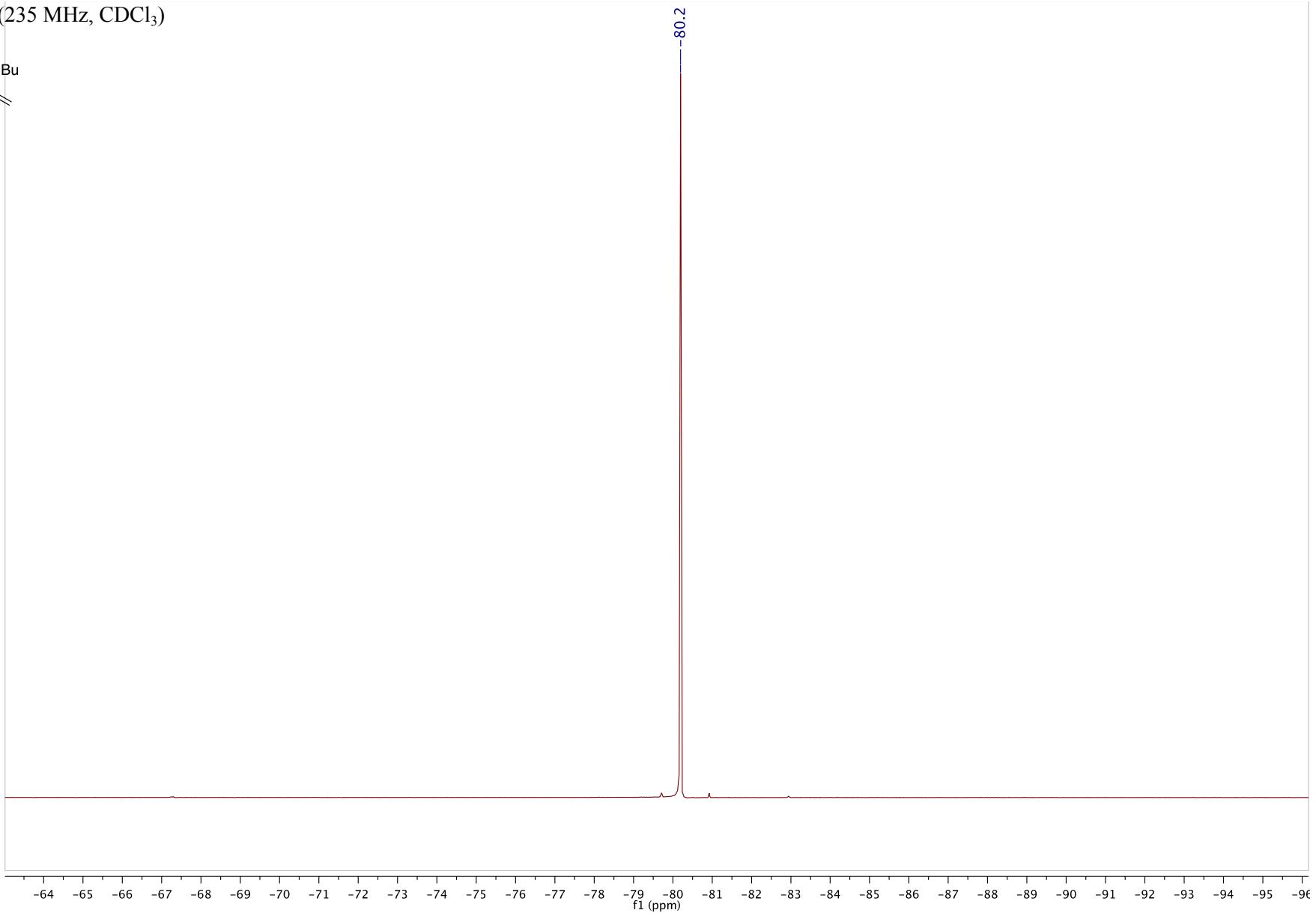
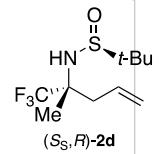


¹H NMR (500 MHz, CDCl₃)

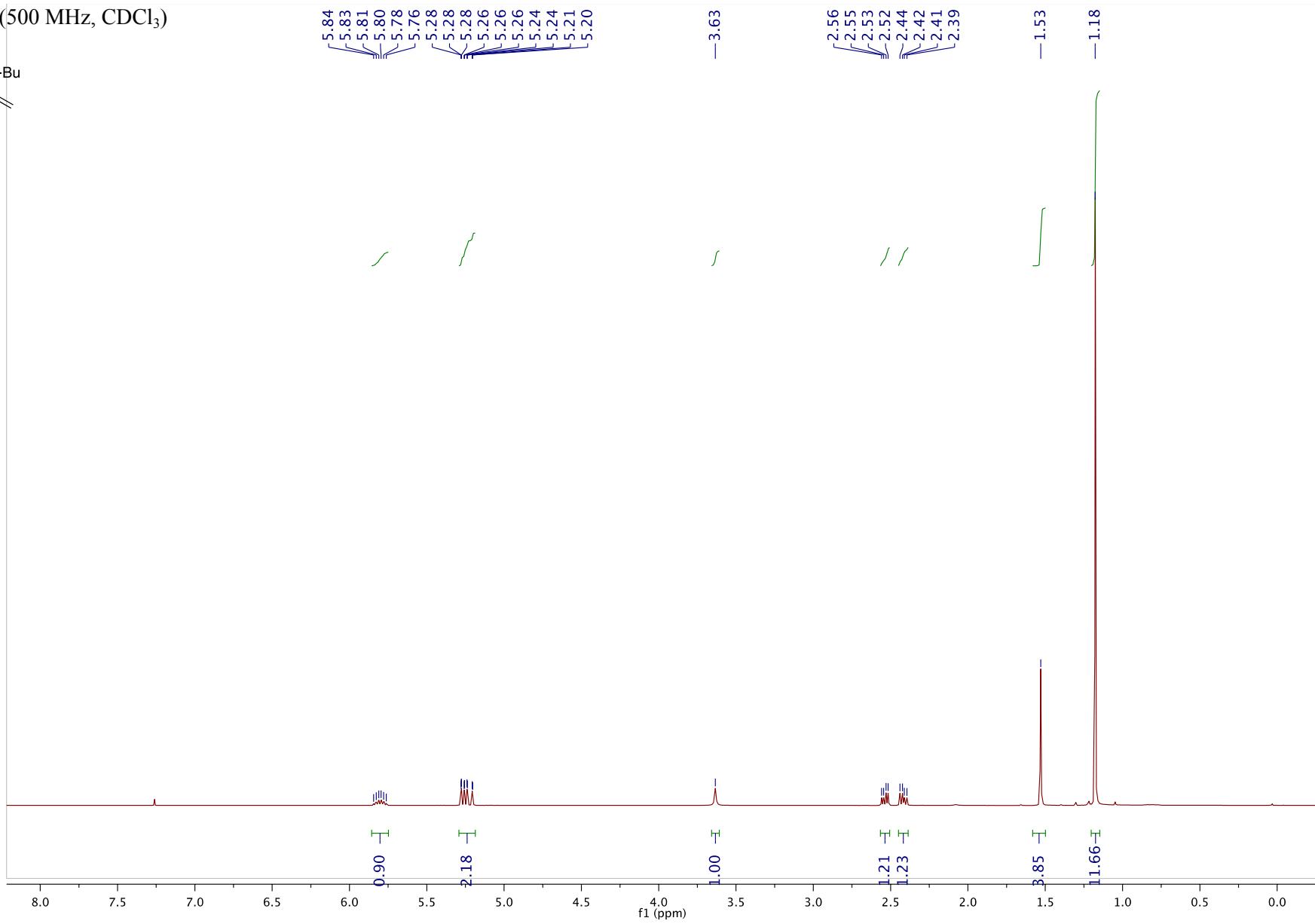
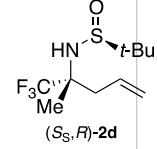




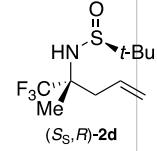
¹⁹F NMR (235 MHz, CDCl₃)



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)



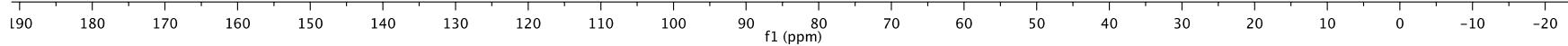
(S_S,R)-2d

130.7
129.8
127.5
125.2
123.0
121.9

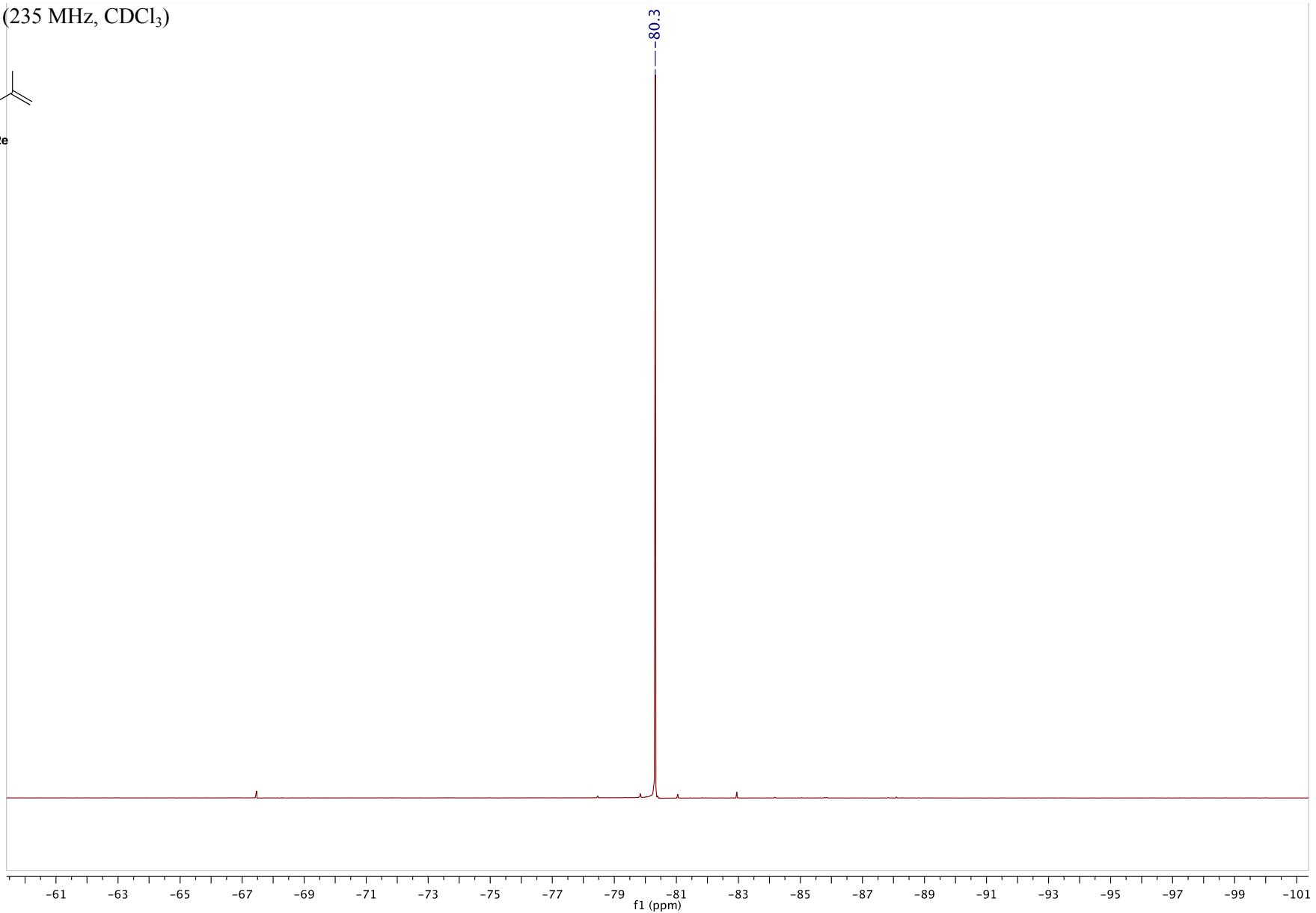
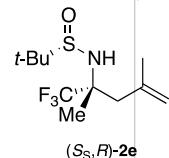
60.0
59.8
59.5
59.3
56.6

-41.3

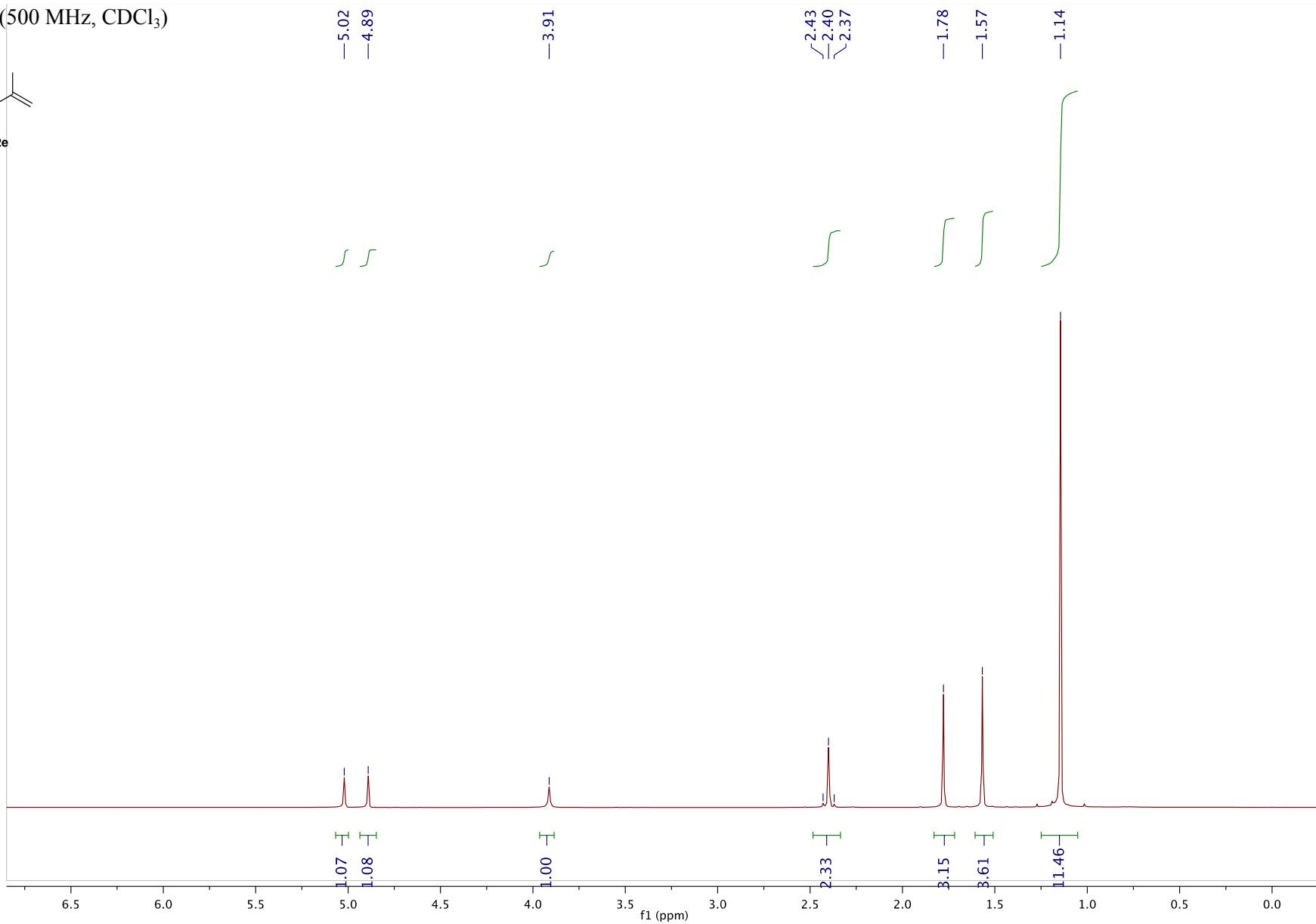
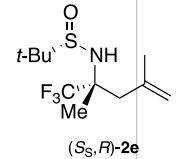
22.5
18.9
18.9



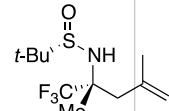
¹⁹F NMR (235 MHz, CDCl₃)



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)



(S,S,R)-2e

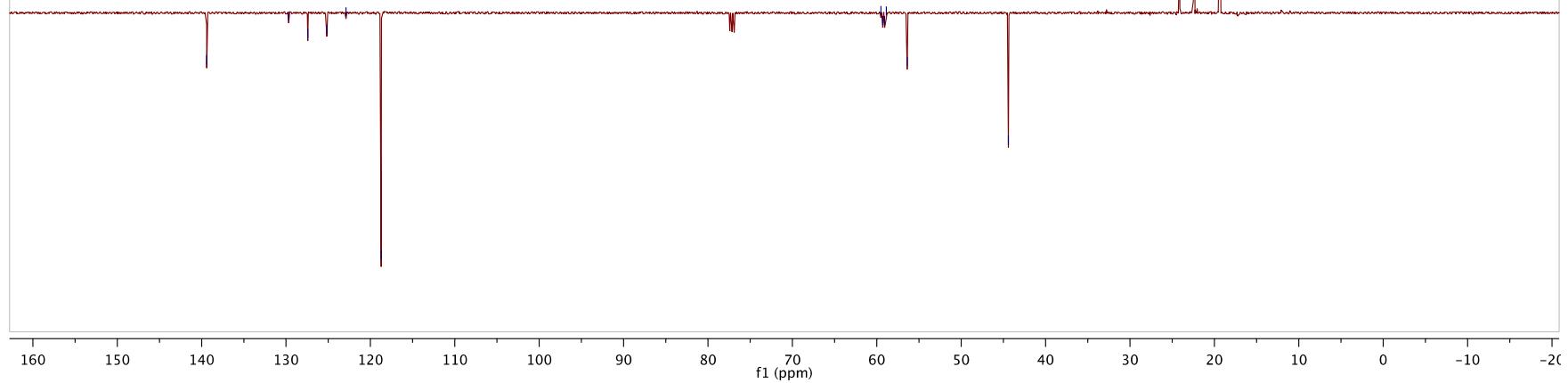
— 139.4

~ 129.7
~ 127.4
~ 125.2
~ 122.9
~ 118.7

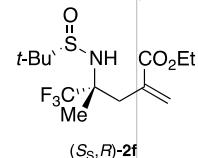
59.5
59.3
59.1
58.9
56.4

— 44.4

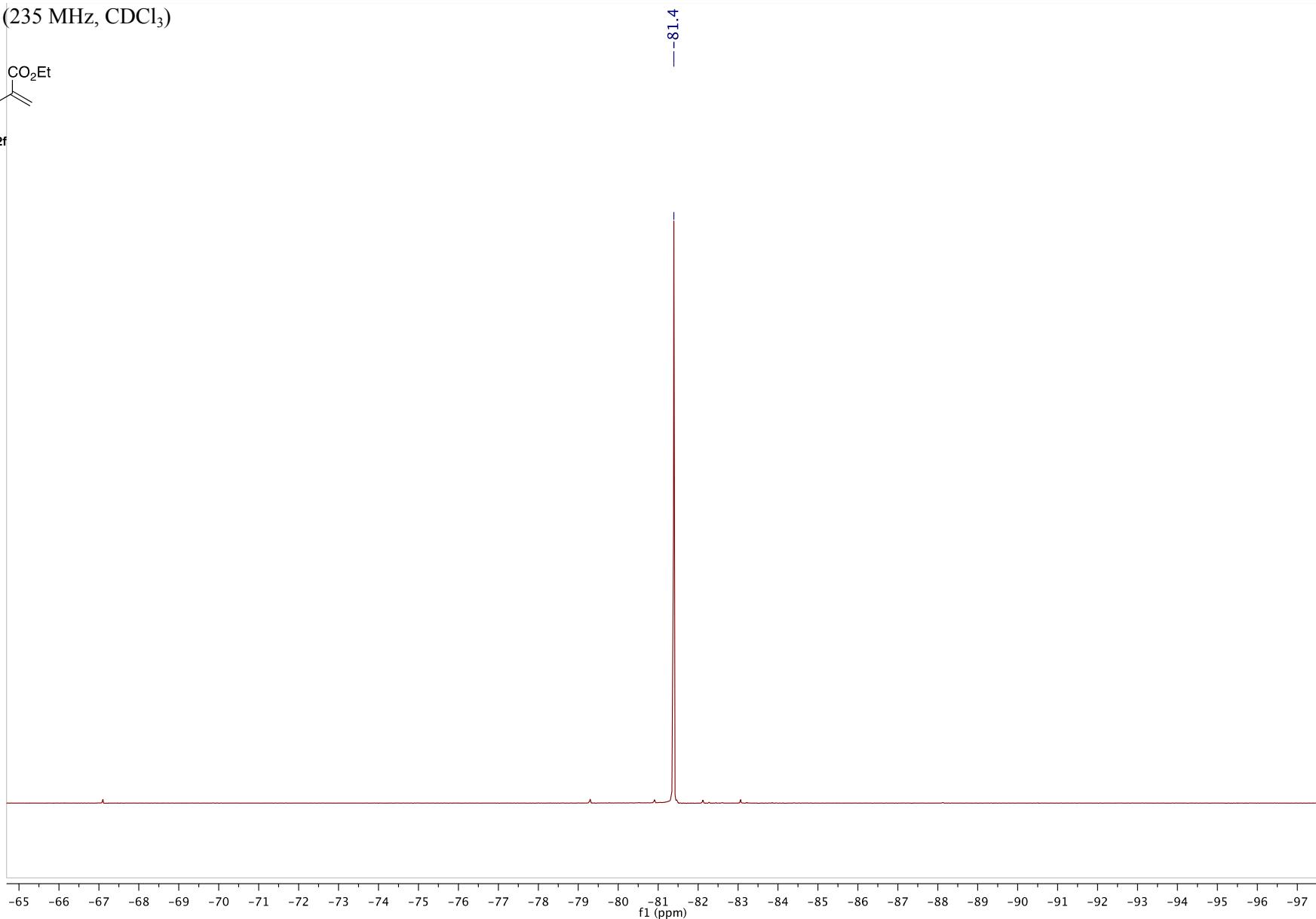
24.1
22.4
19.4
19.3



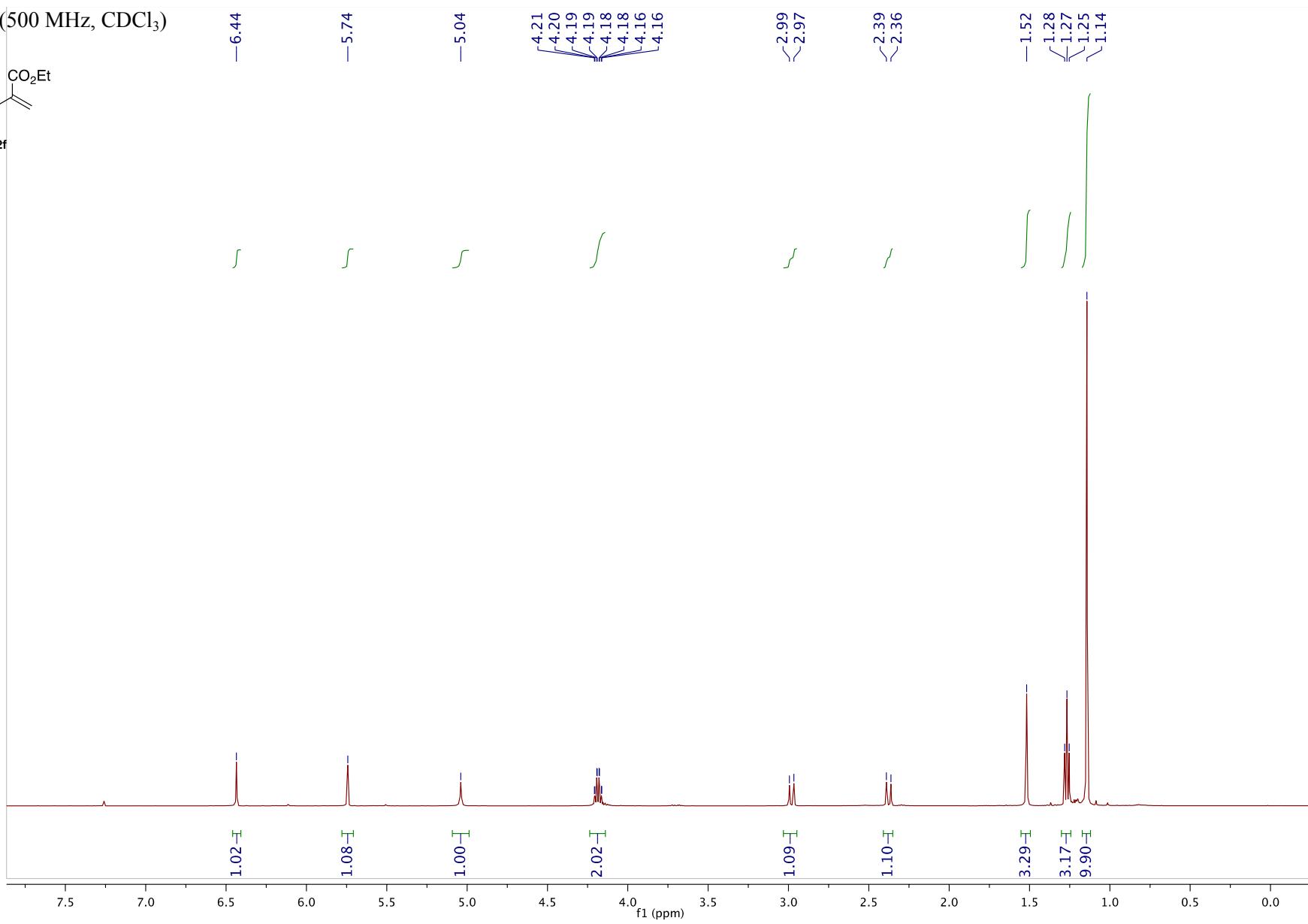
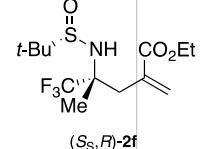
¹⁹F NMR (235 MHz, CDCl₃)



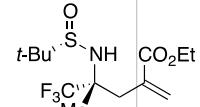
(S_S,R)-2f



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)



(S_S,R)-2f

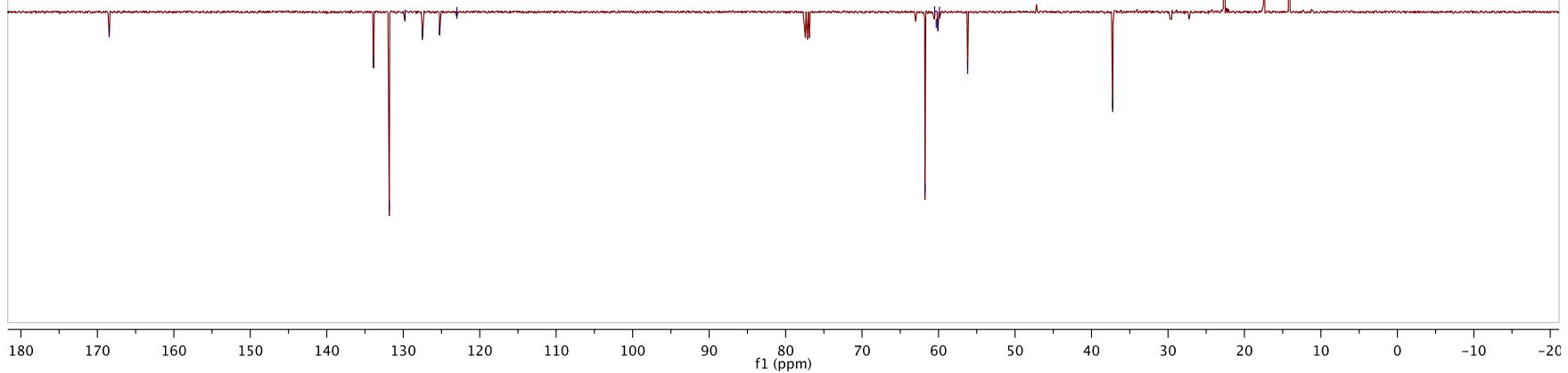
-168

133.9
131.8
129.8
127.5
125.2
123.0

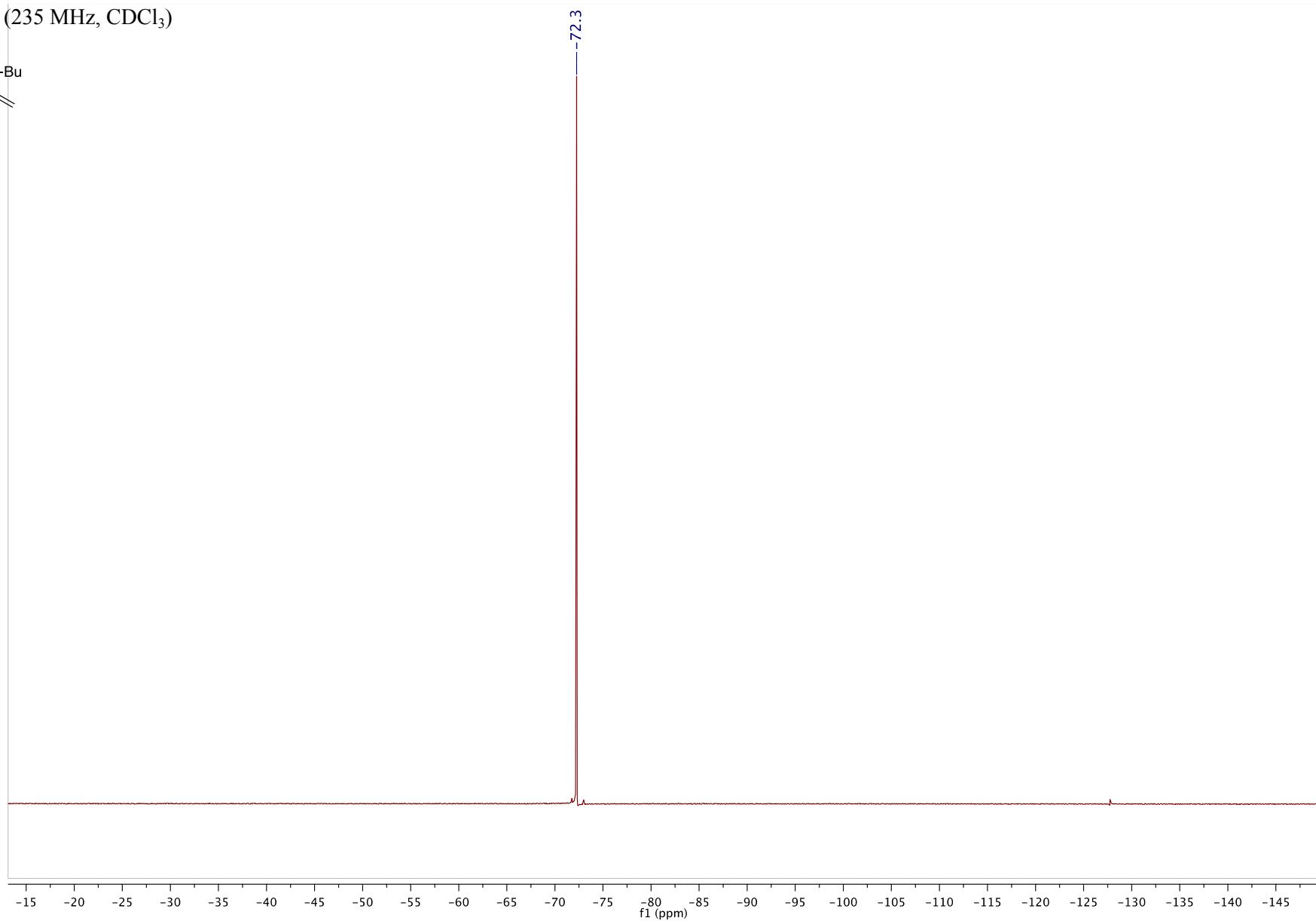
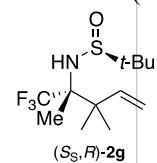
61.8
60.5
60.3
60.1
59.9
56.2

37.2
37.2

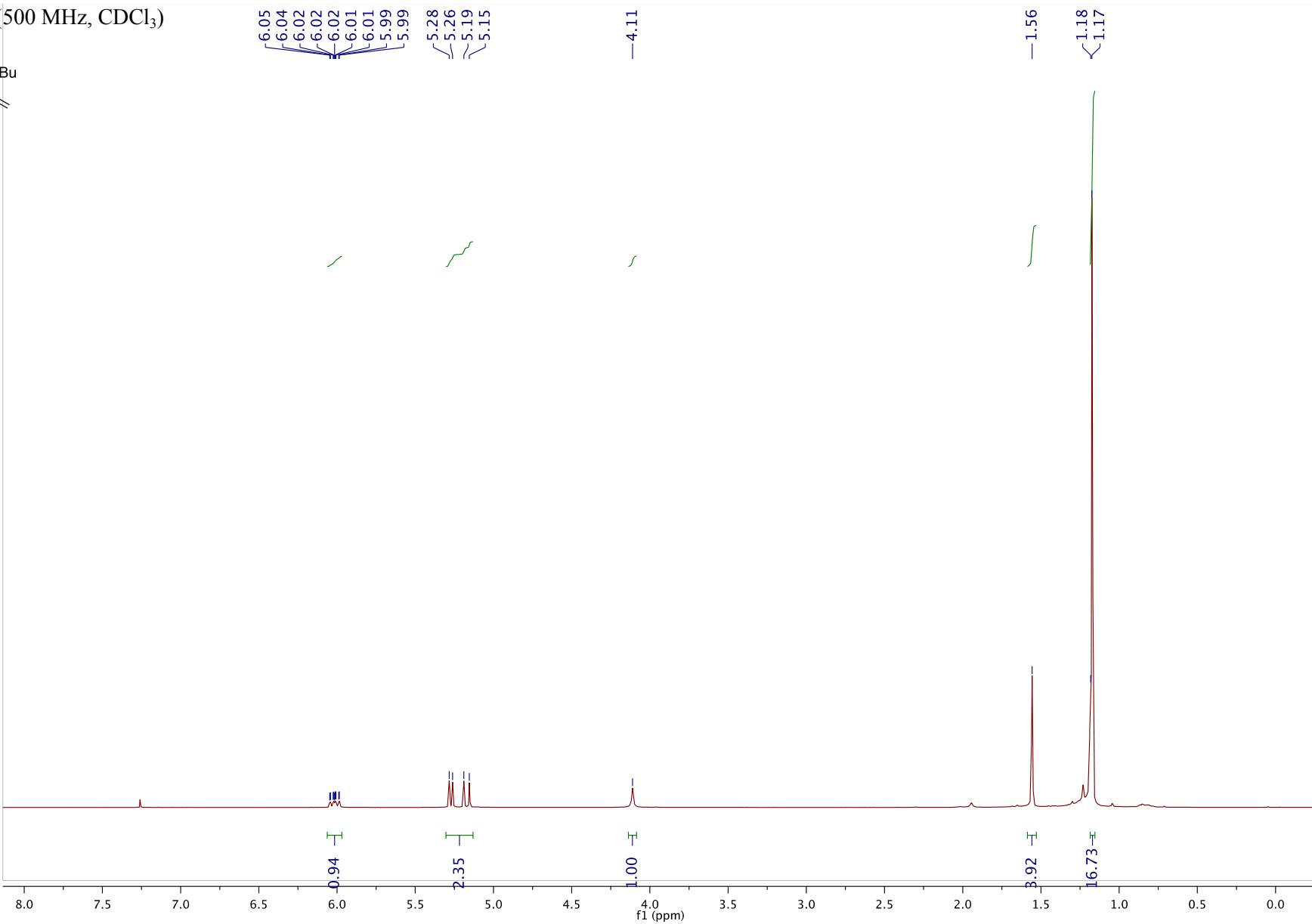
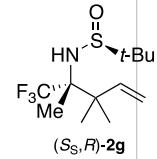
22.6
17.5
14.1



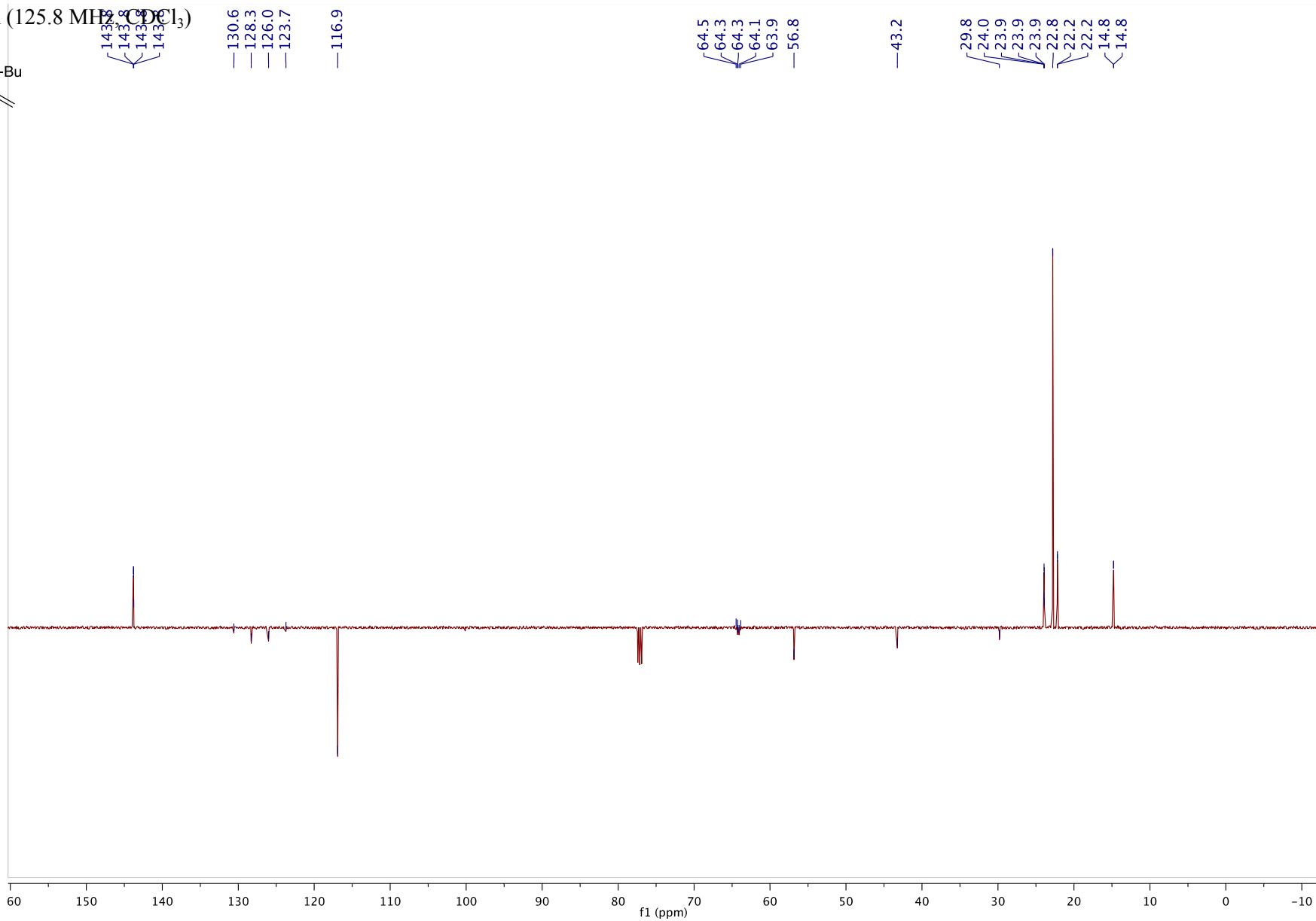
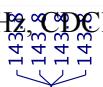
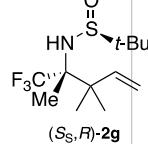
¹⁹F NMR (235 MHz, CDCl₃)



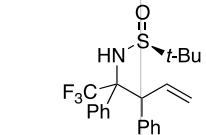
¹H NMR (500 MHz, CDCl₃)



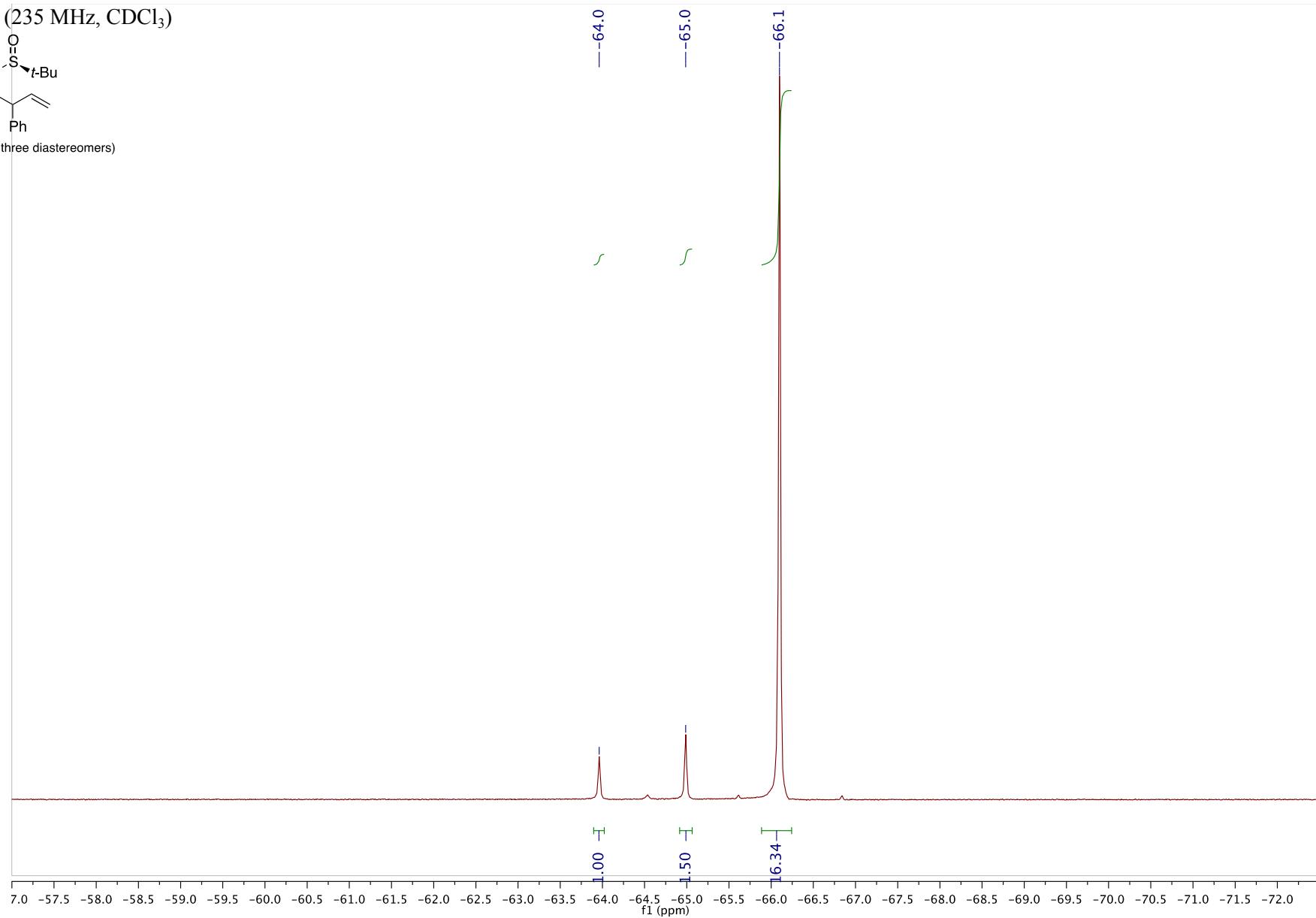
^{13}C NMR (125.8 MHz, CDCl_3)

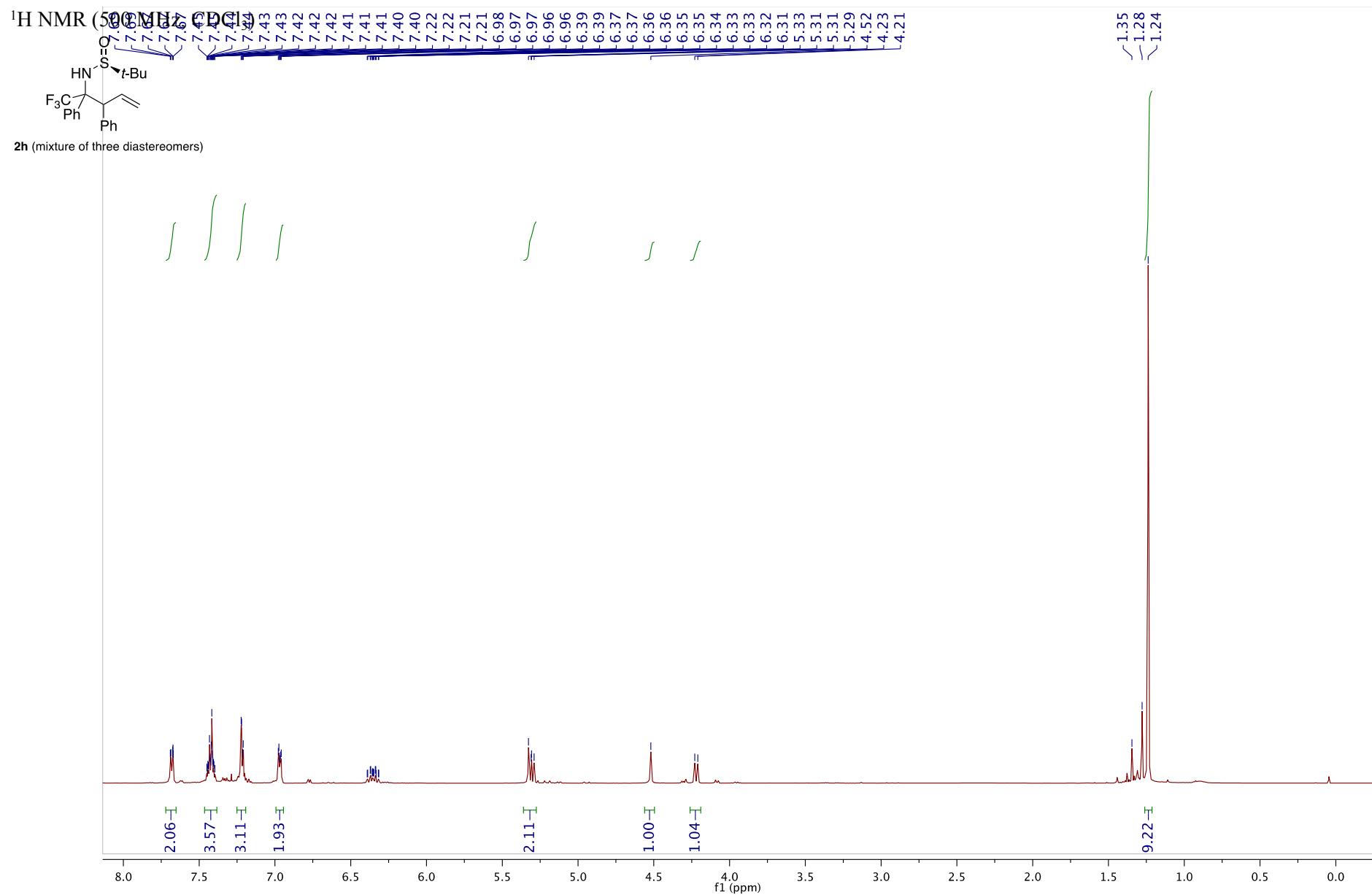


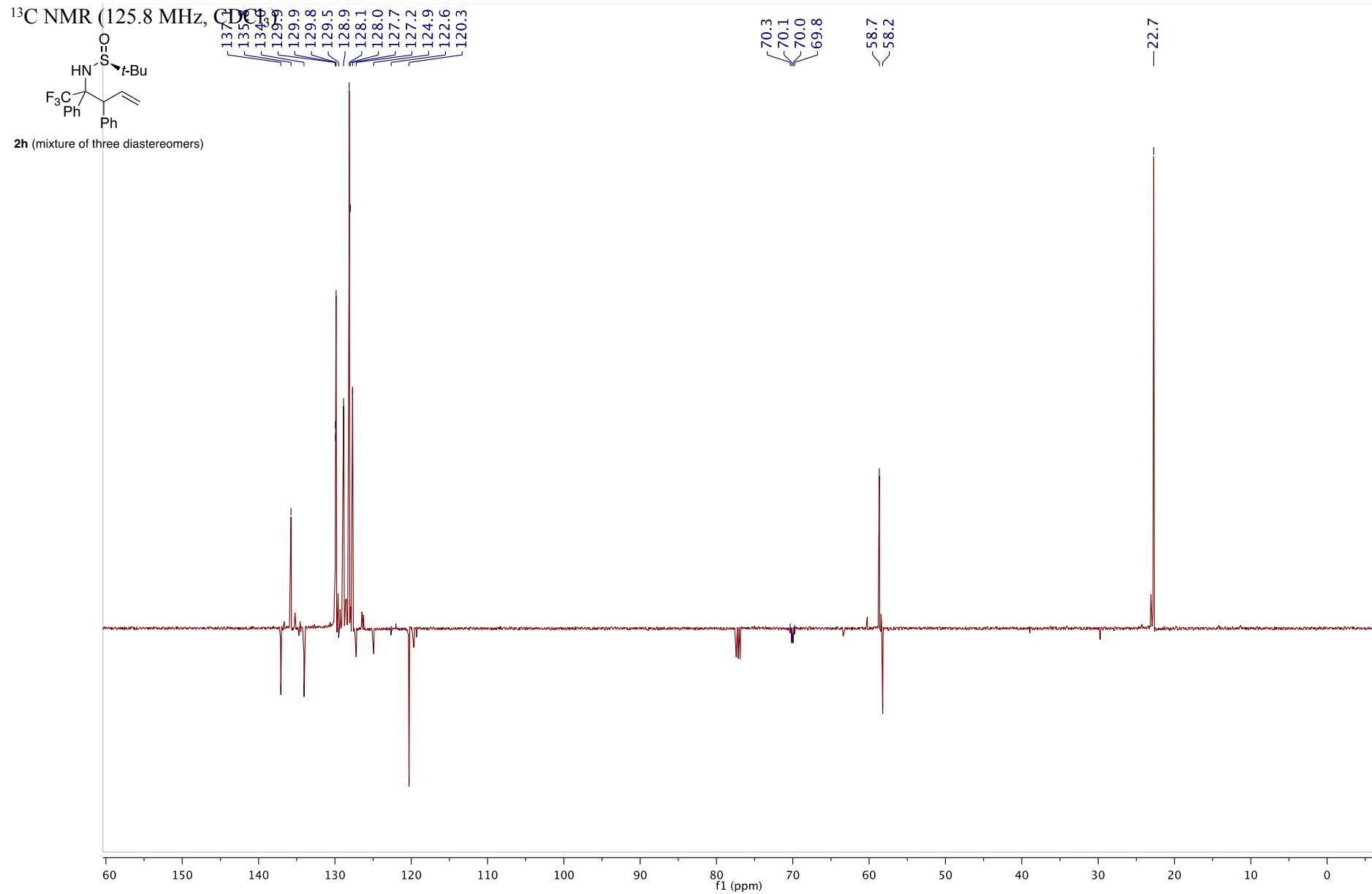
¹⁹F NMR (235 MHz, CDCl₃)



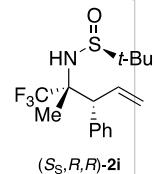
2h (mixture of three diastereomers)



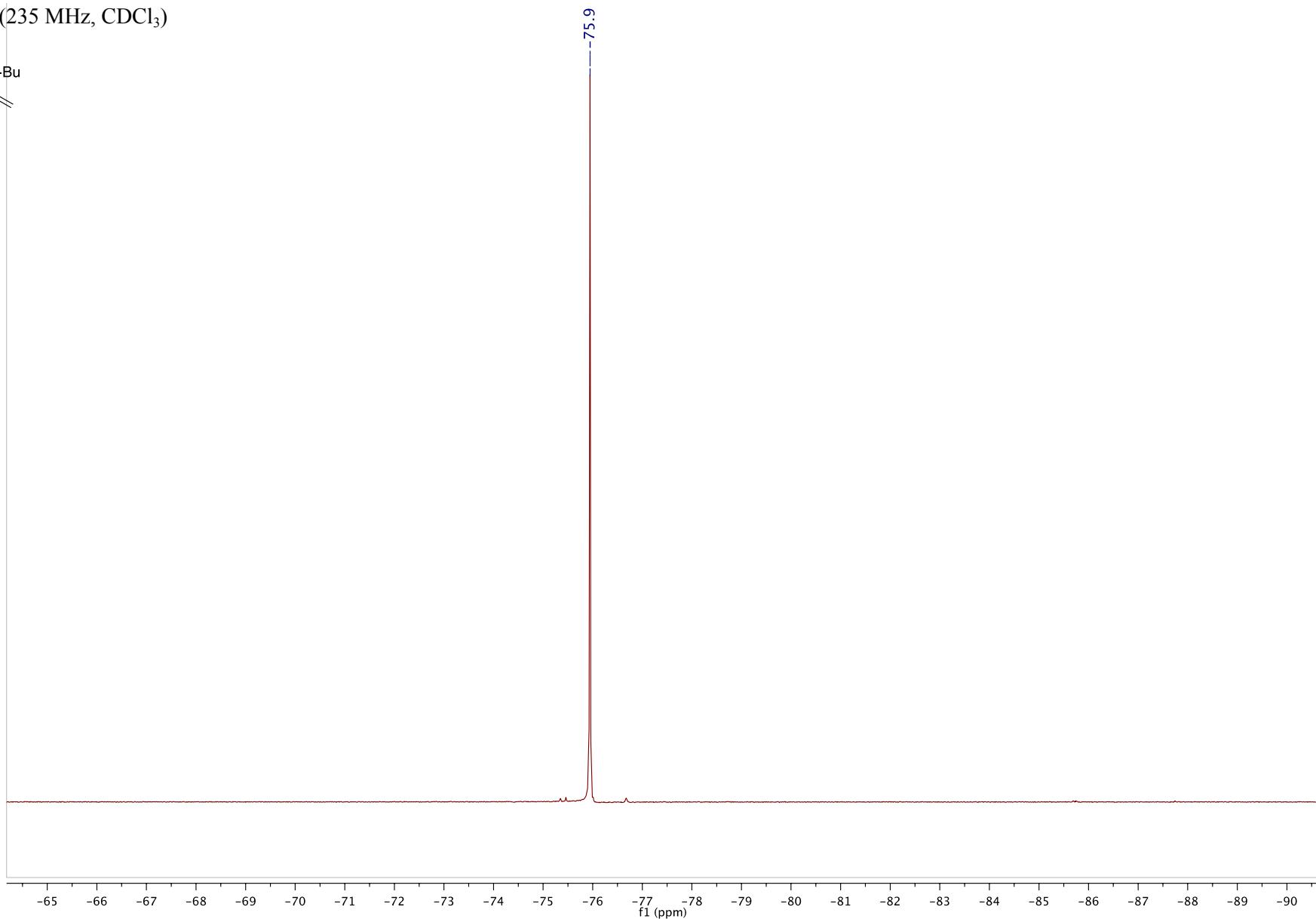




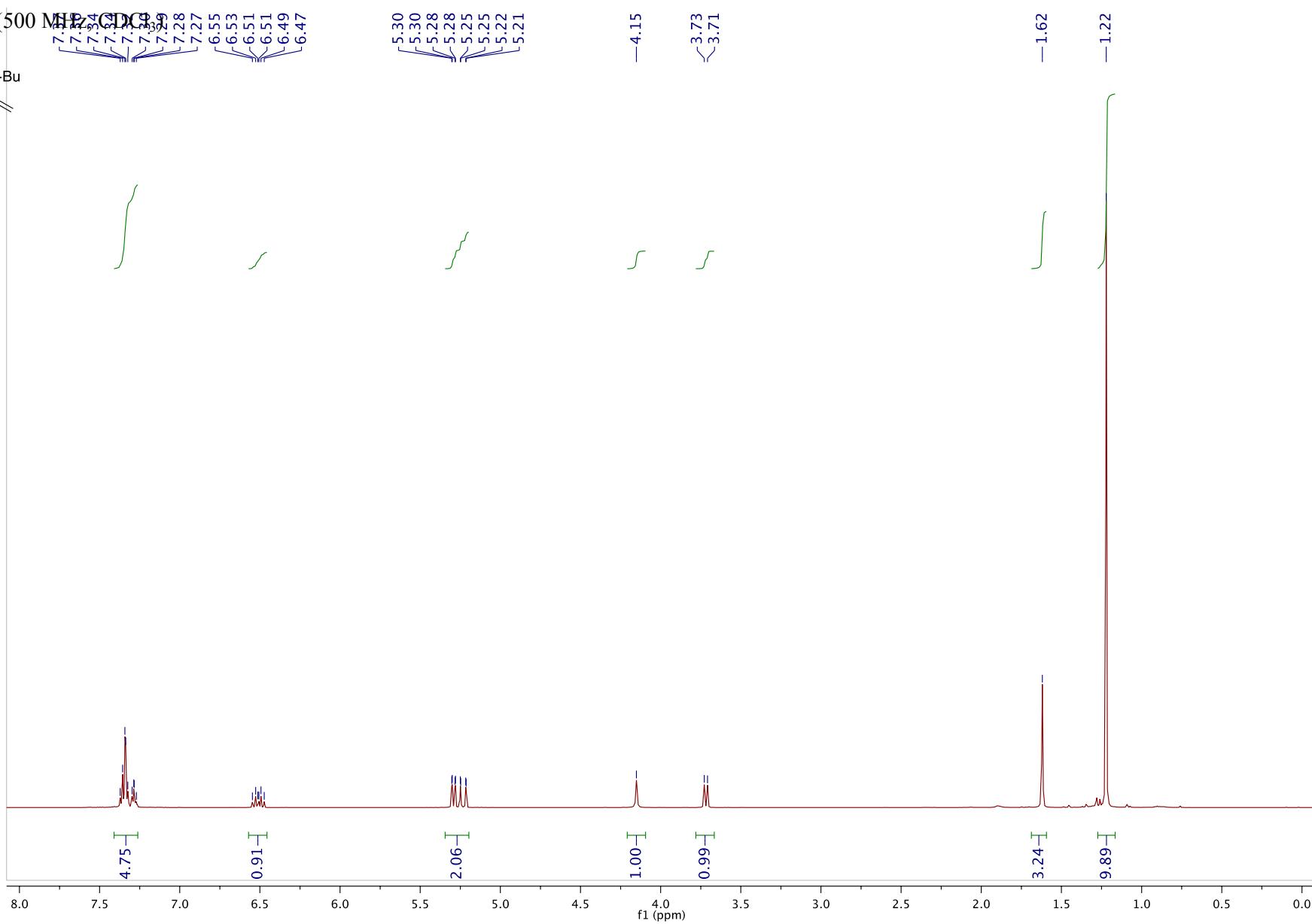
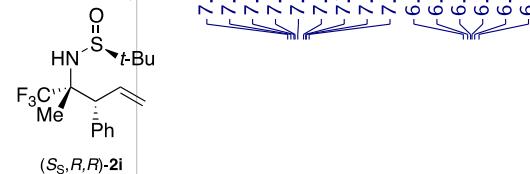
¹⁹F NMR (235 MHz, CDCl₃)

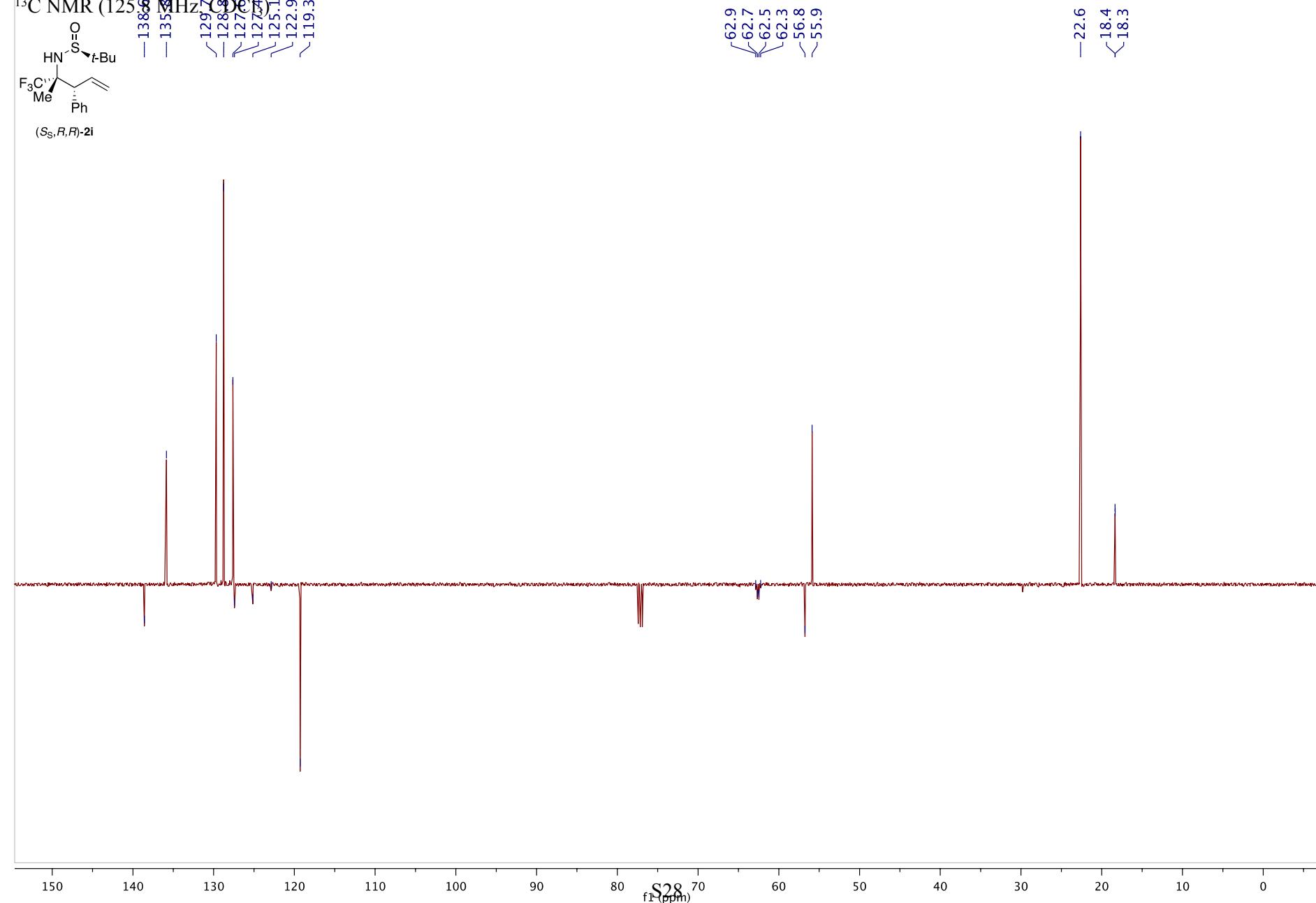
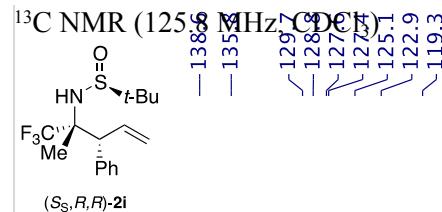


(S,S,R,R)-2i

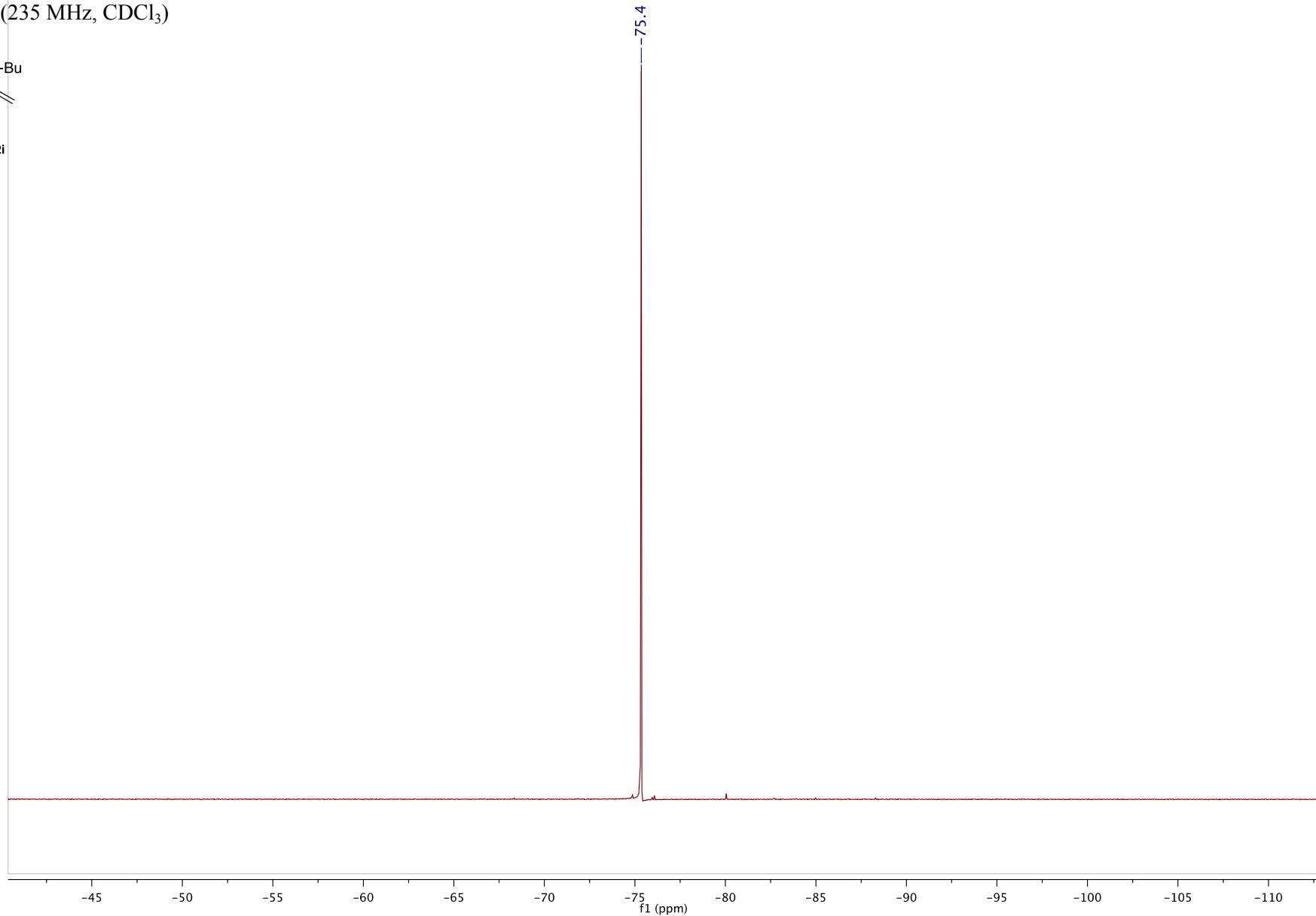
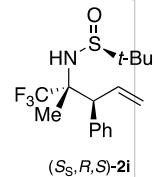


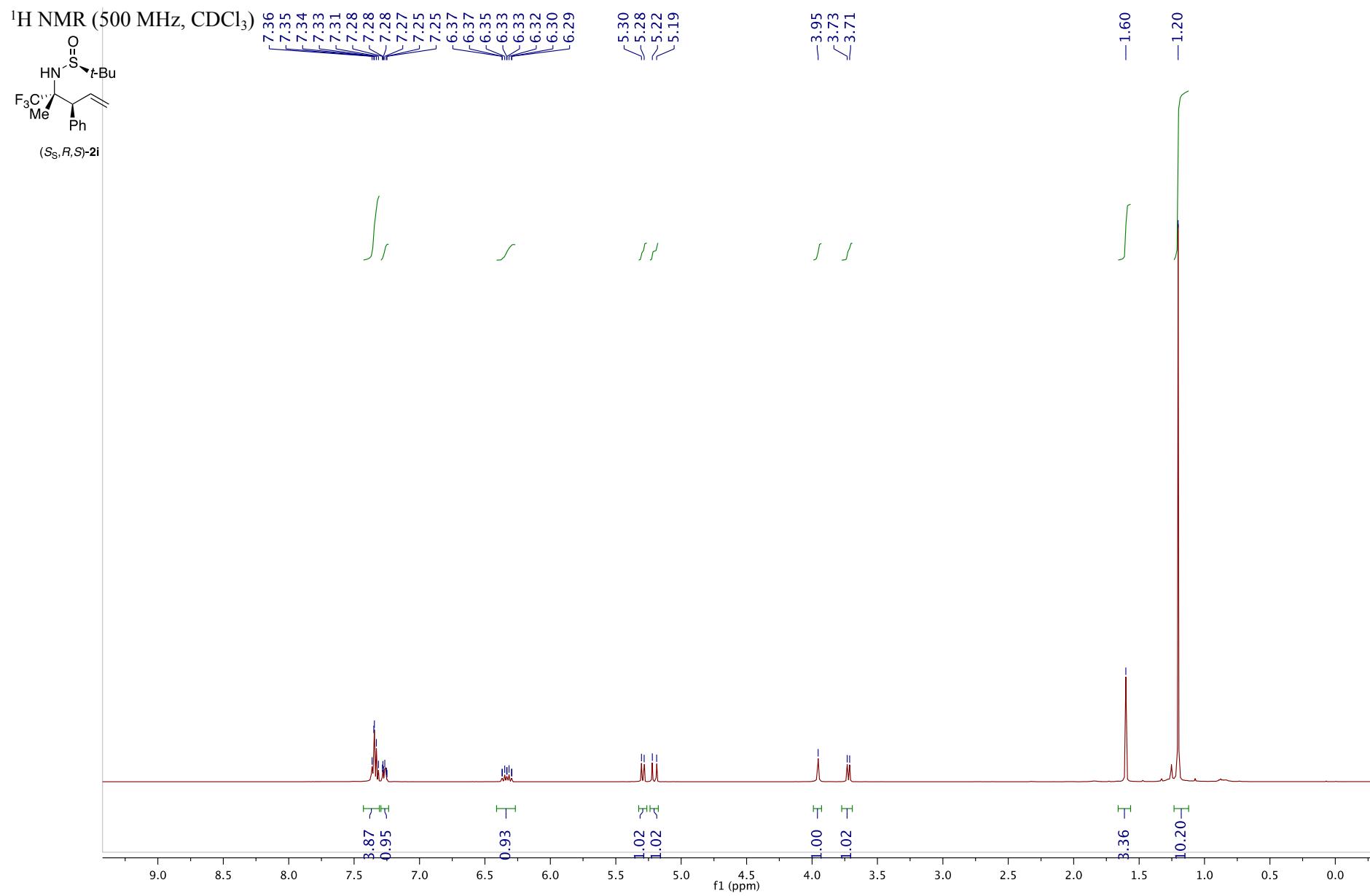
¹H NMR (500 MHz, CDCl₃)

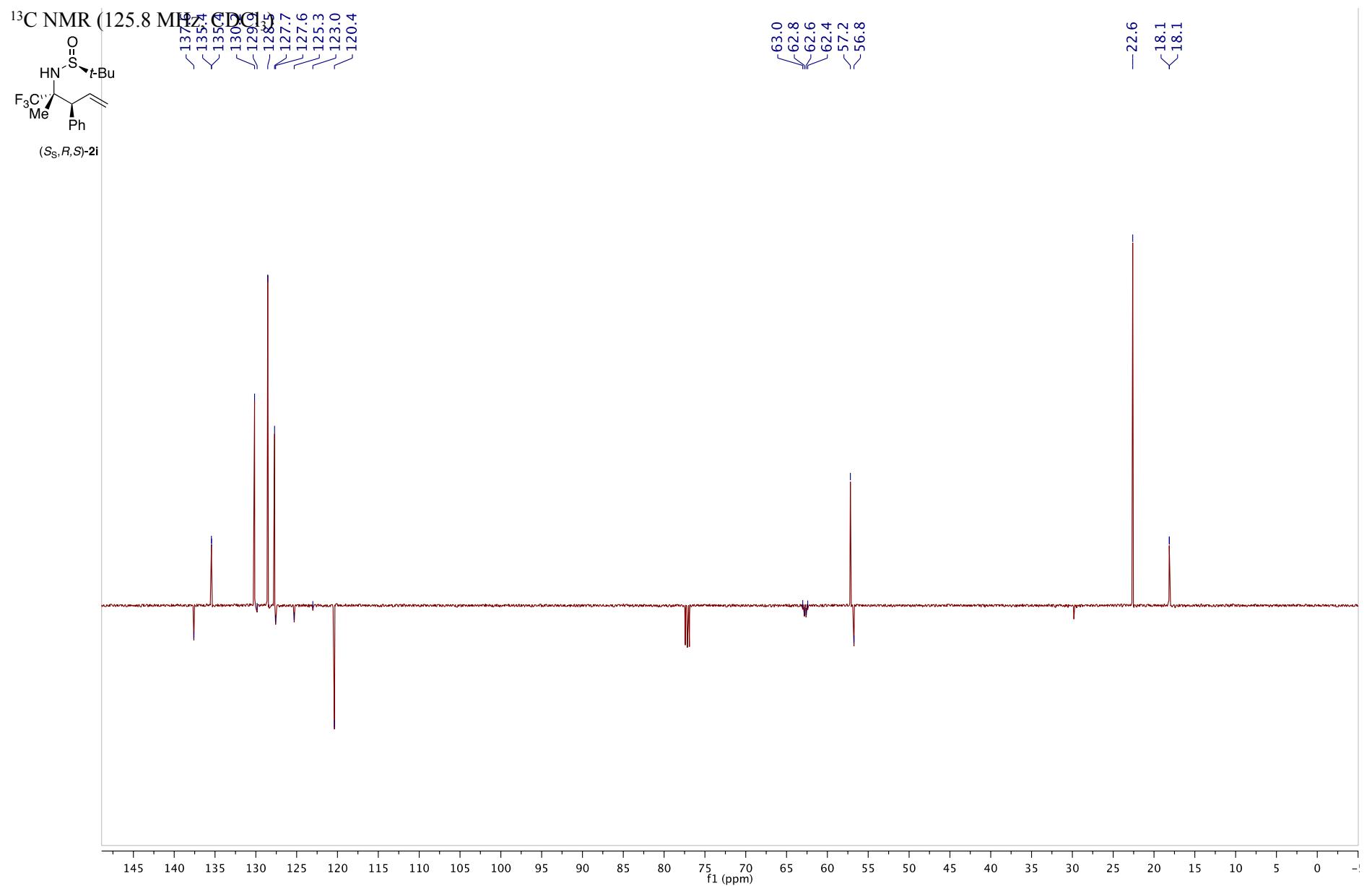




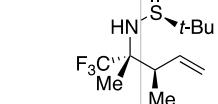
¹⁹F NMR (235 MHz, CDCl₃)



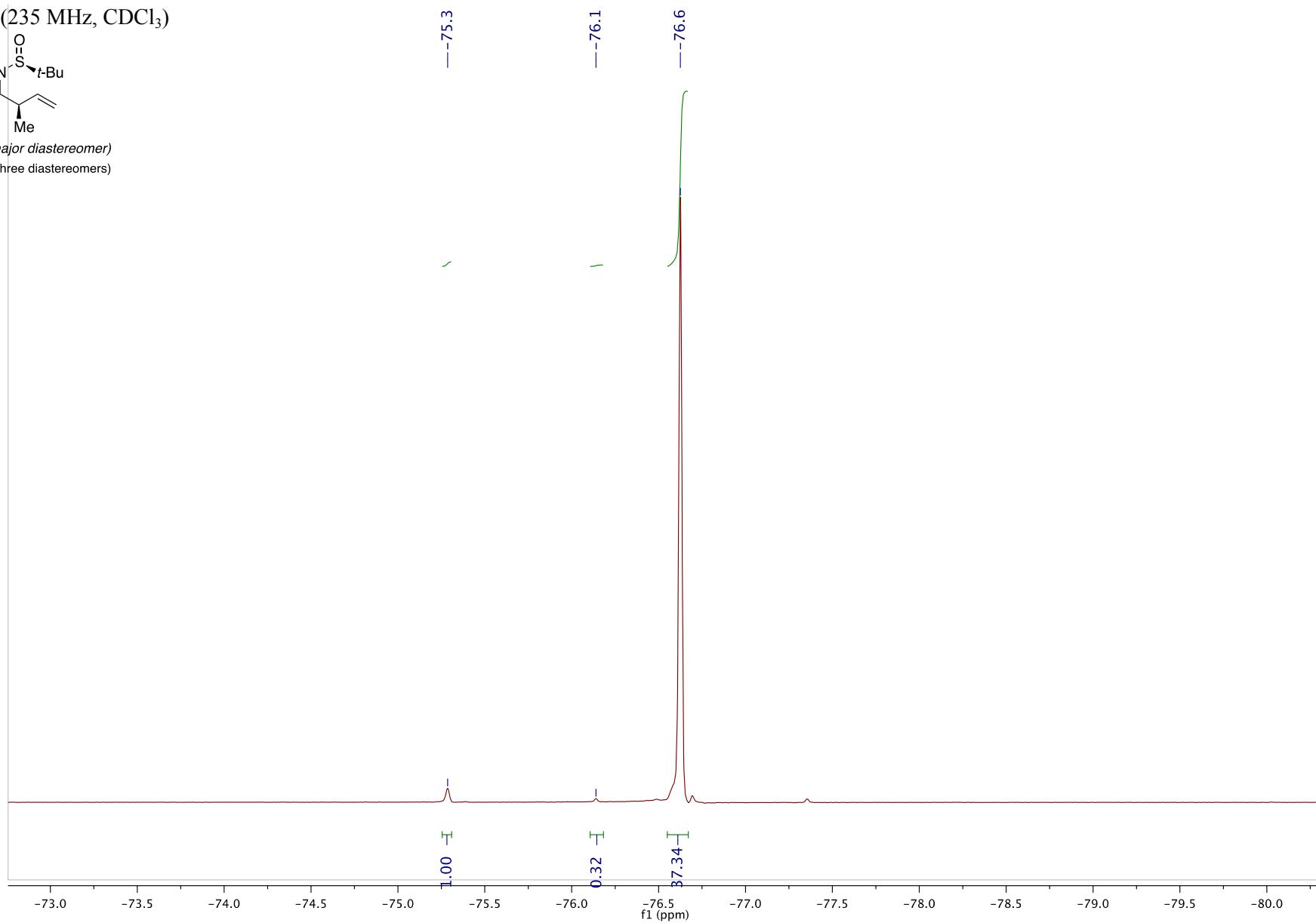




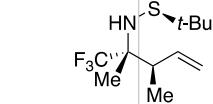
¹⁹F NMR (235 MHz, CDCl₃)



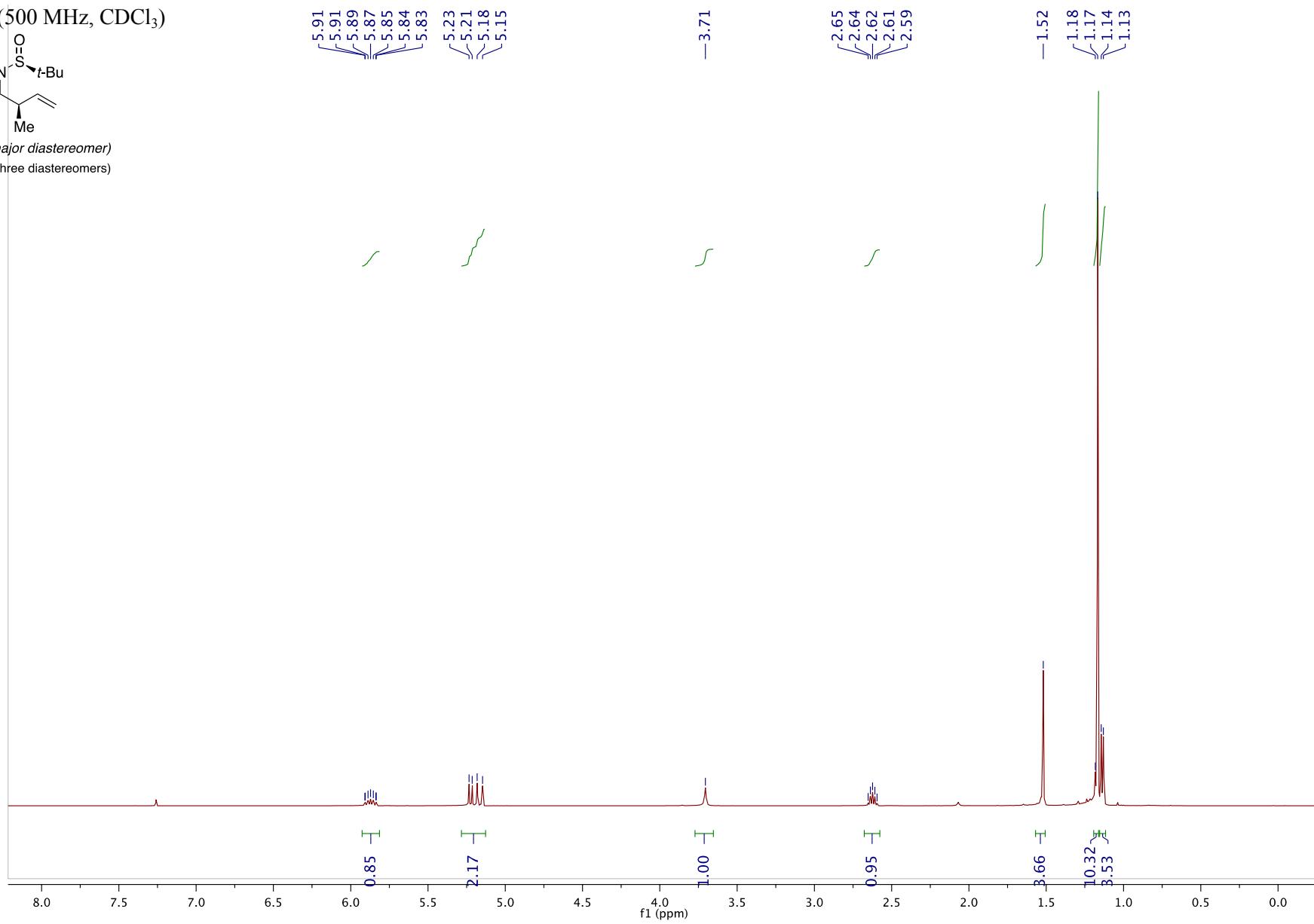
(S_S,R,R)-2i (major diastereomer)
2i (mixture of three diastereomers)

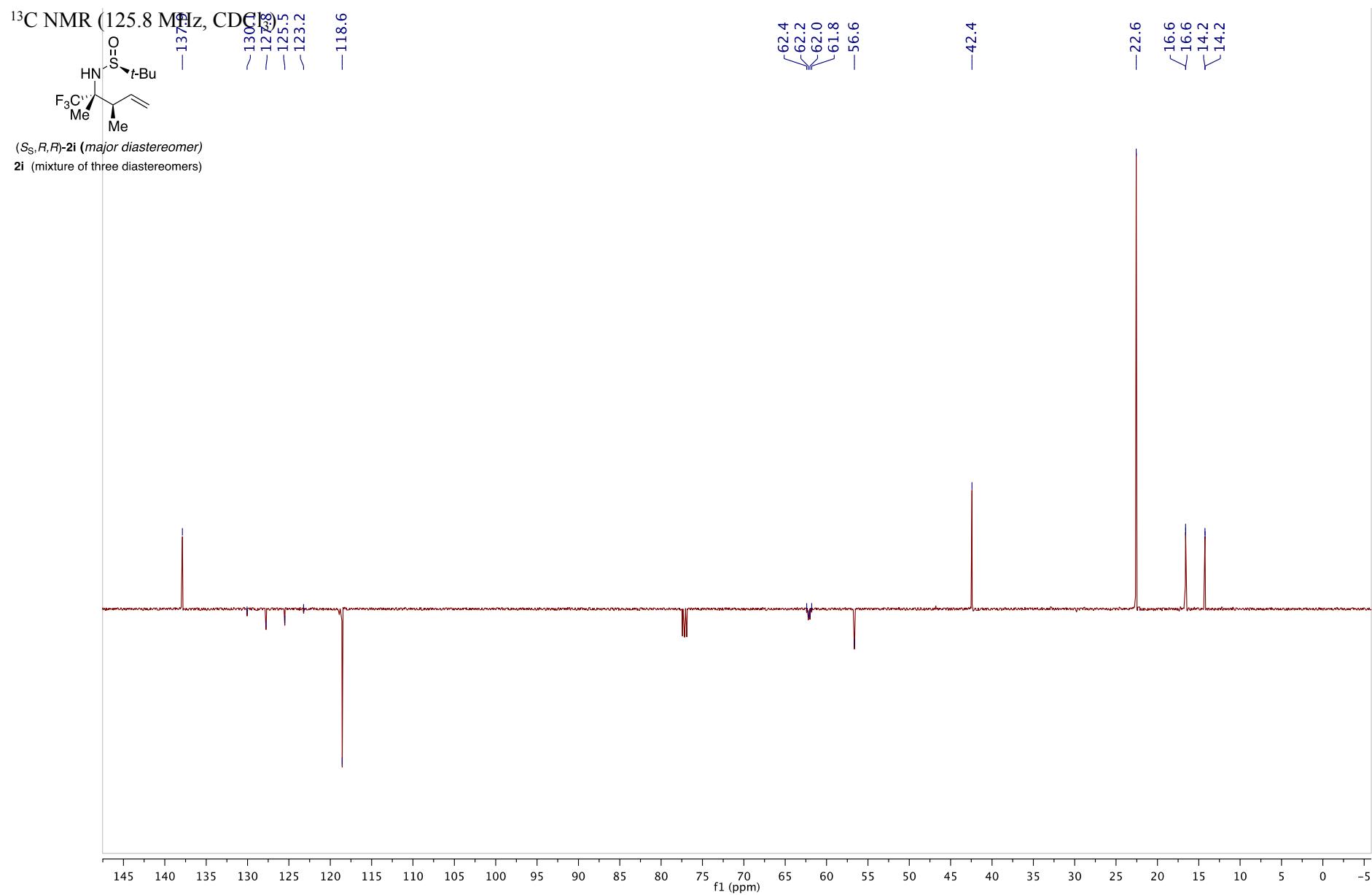


¹H NMR (500 MHz, CDCl₃)

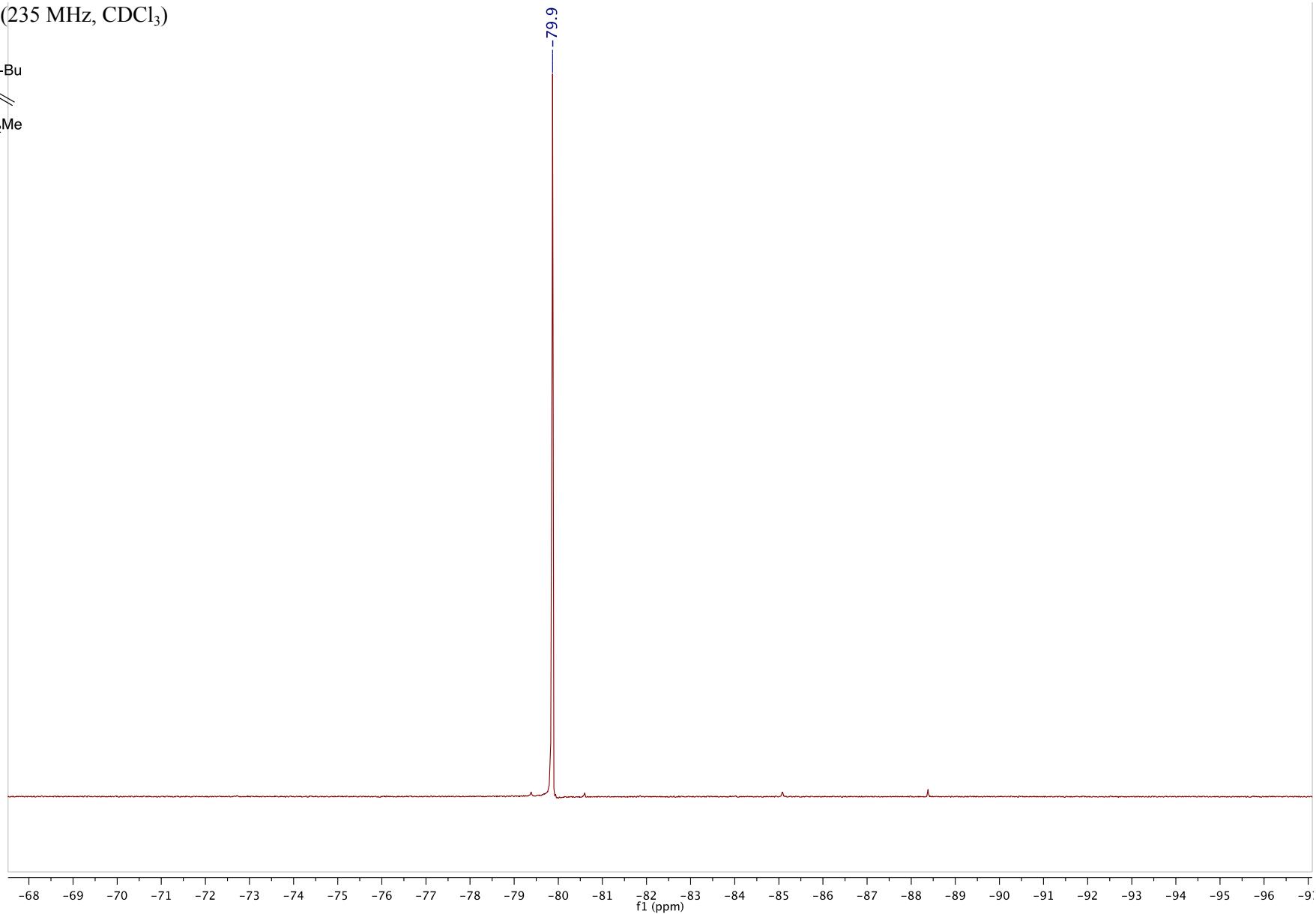
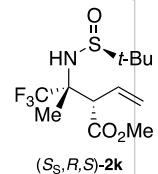


(S,S,R,R)-2i (major diastereomer)
2i (mixture of three diastereomers)

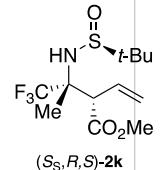




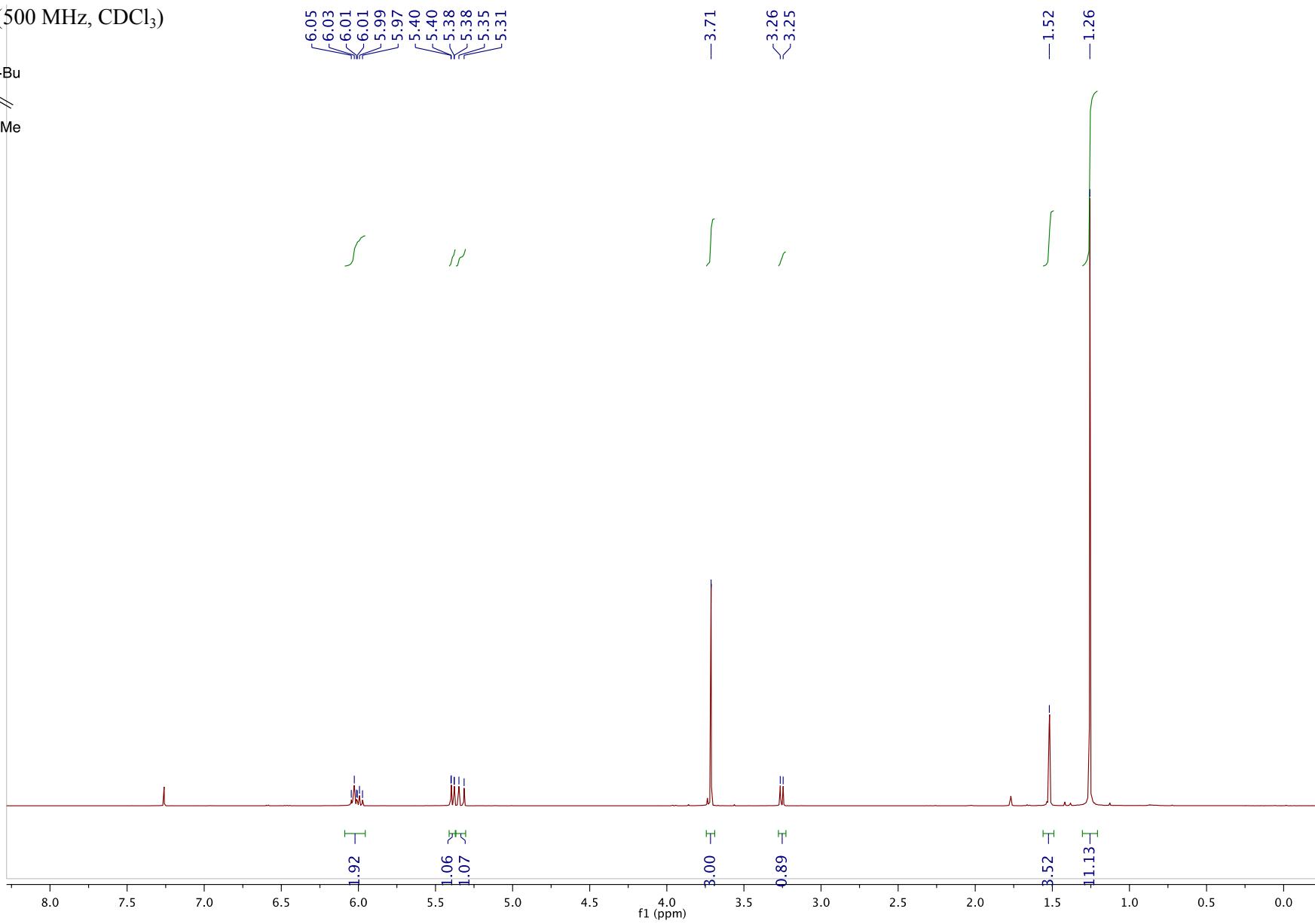
¹⁹F NMR (235 MHz, CDCl₃)



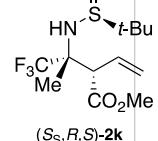
¹H NMR (500 MHz, CDCl₃)



(S,S,R,S)-2k



¹³C NMR (125.8 MHz, CDCl₃)



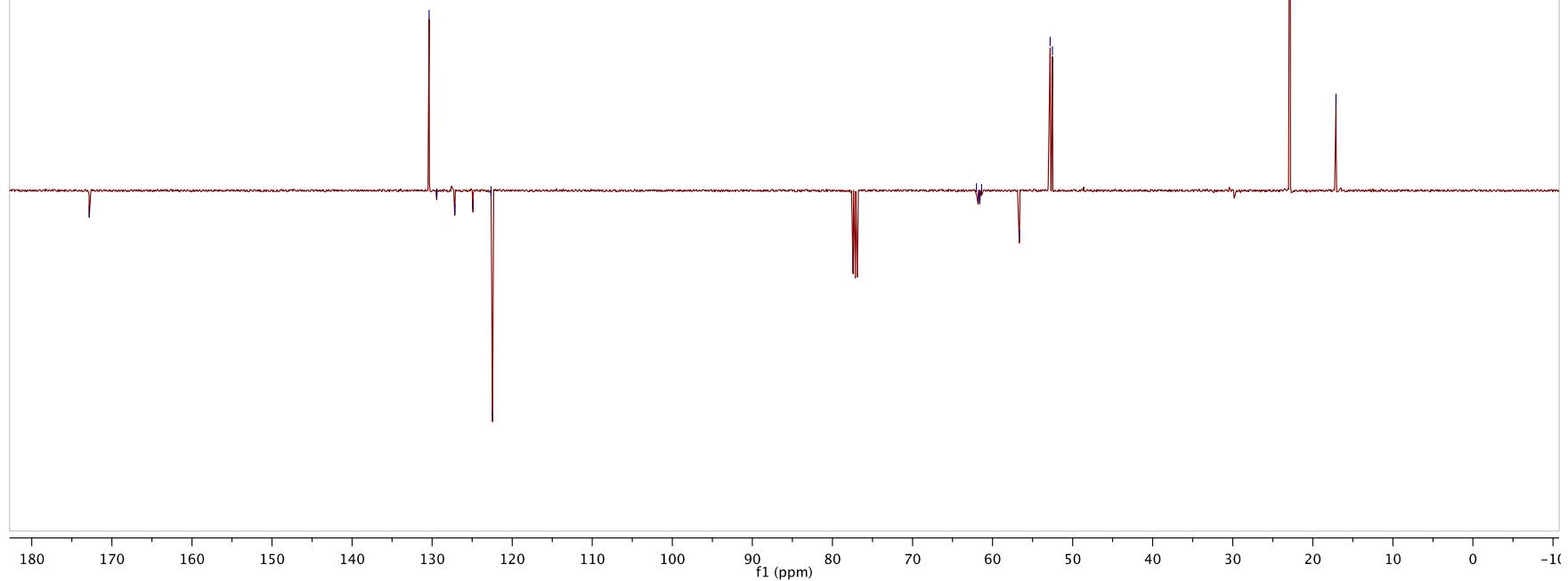
-172.8

130.4
129.4
127.2
124.9
122.6
122.5

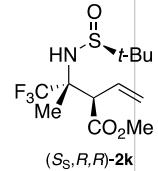
62.0
61.8
61.6
61.4
56.7
52.8
52.5

-22.8
17.1
17.1

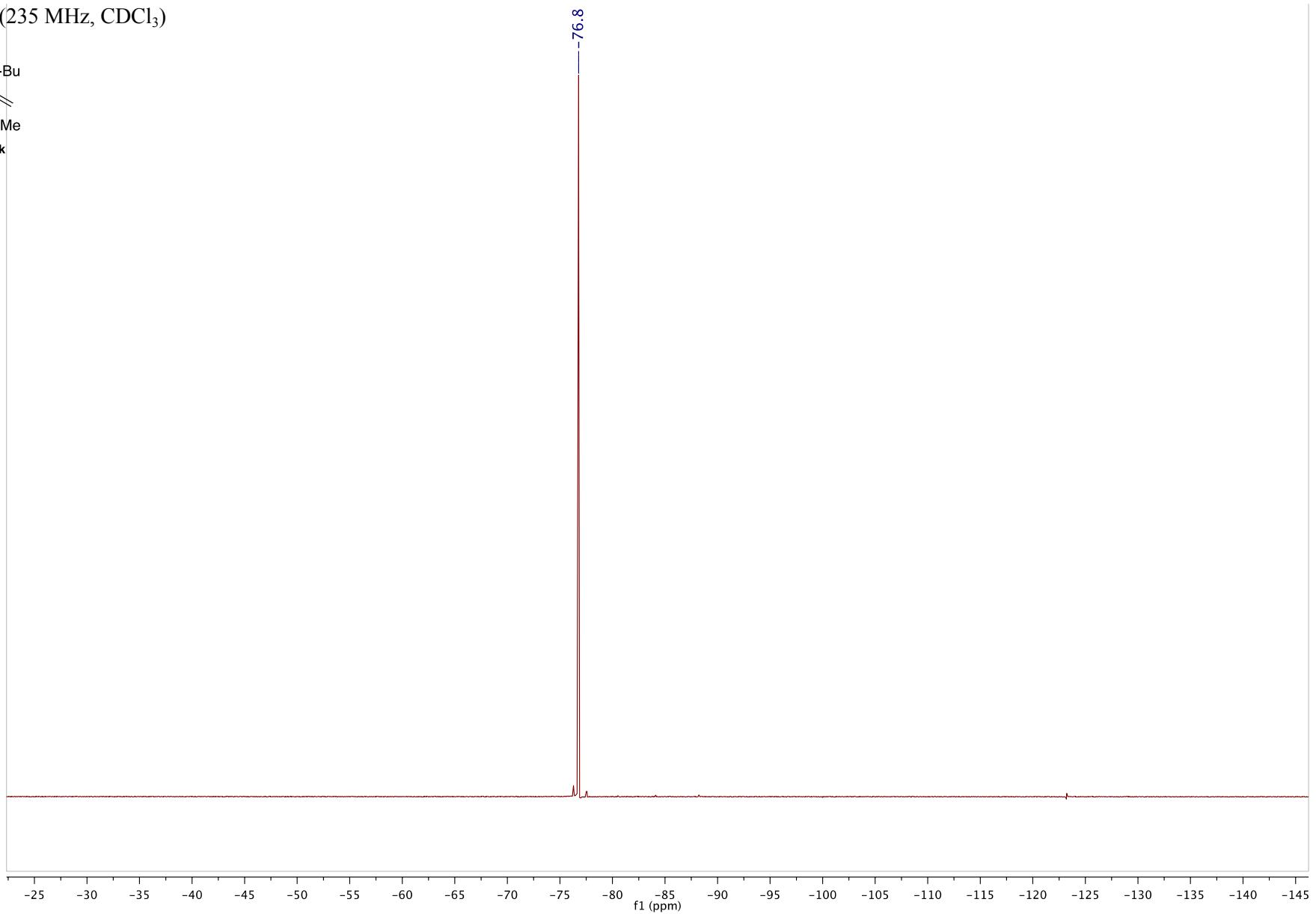
(S,S,R,S)-2k



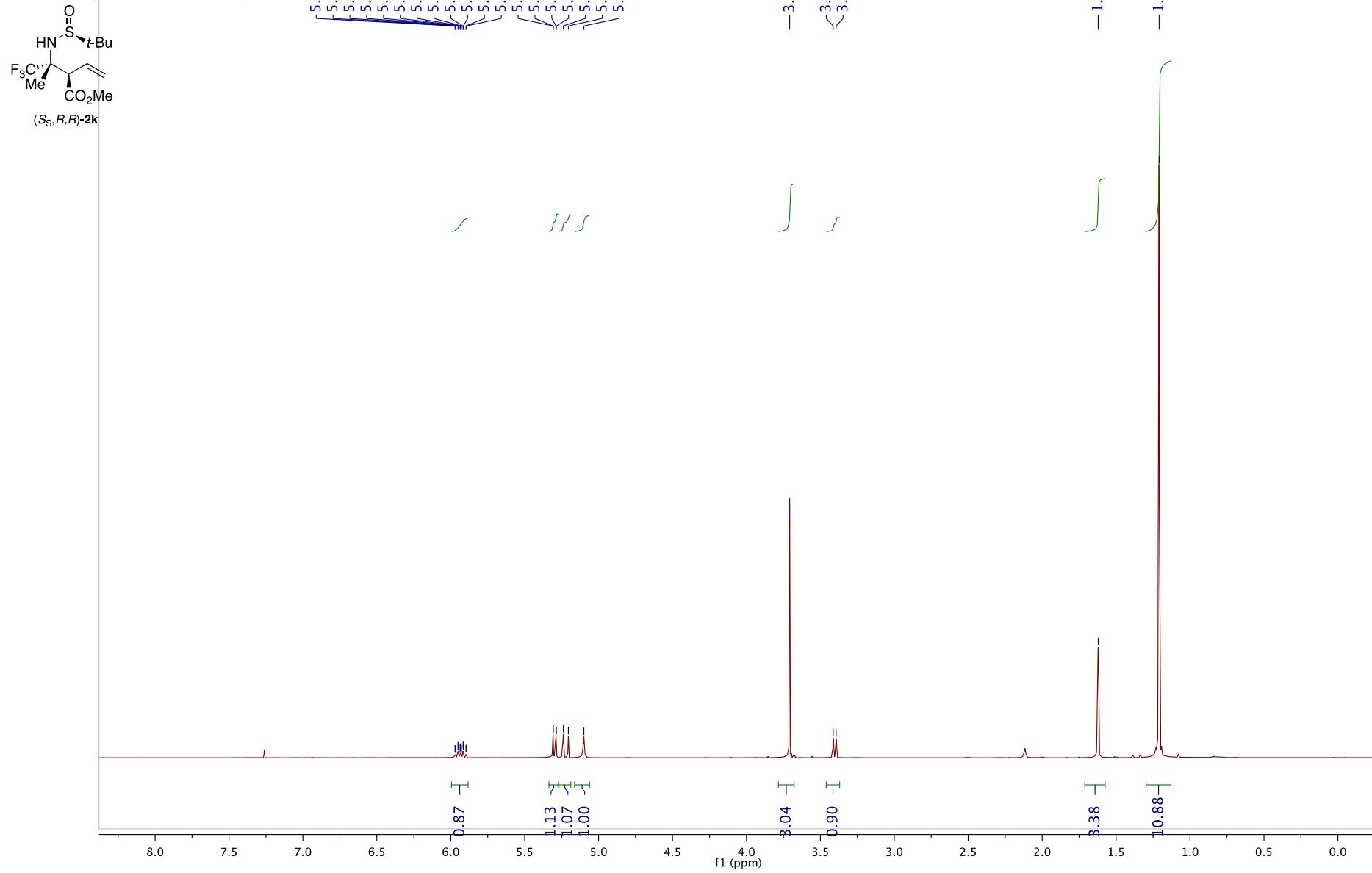
¹⁹F NMR (235 MHz, CDCl₃)



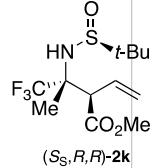
(S₃,R,R)-2k



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)

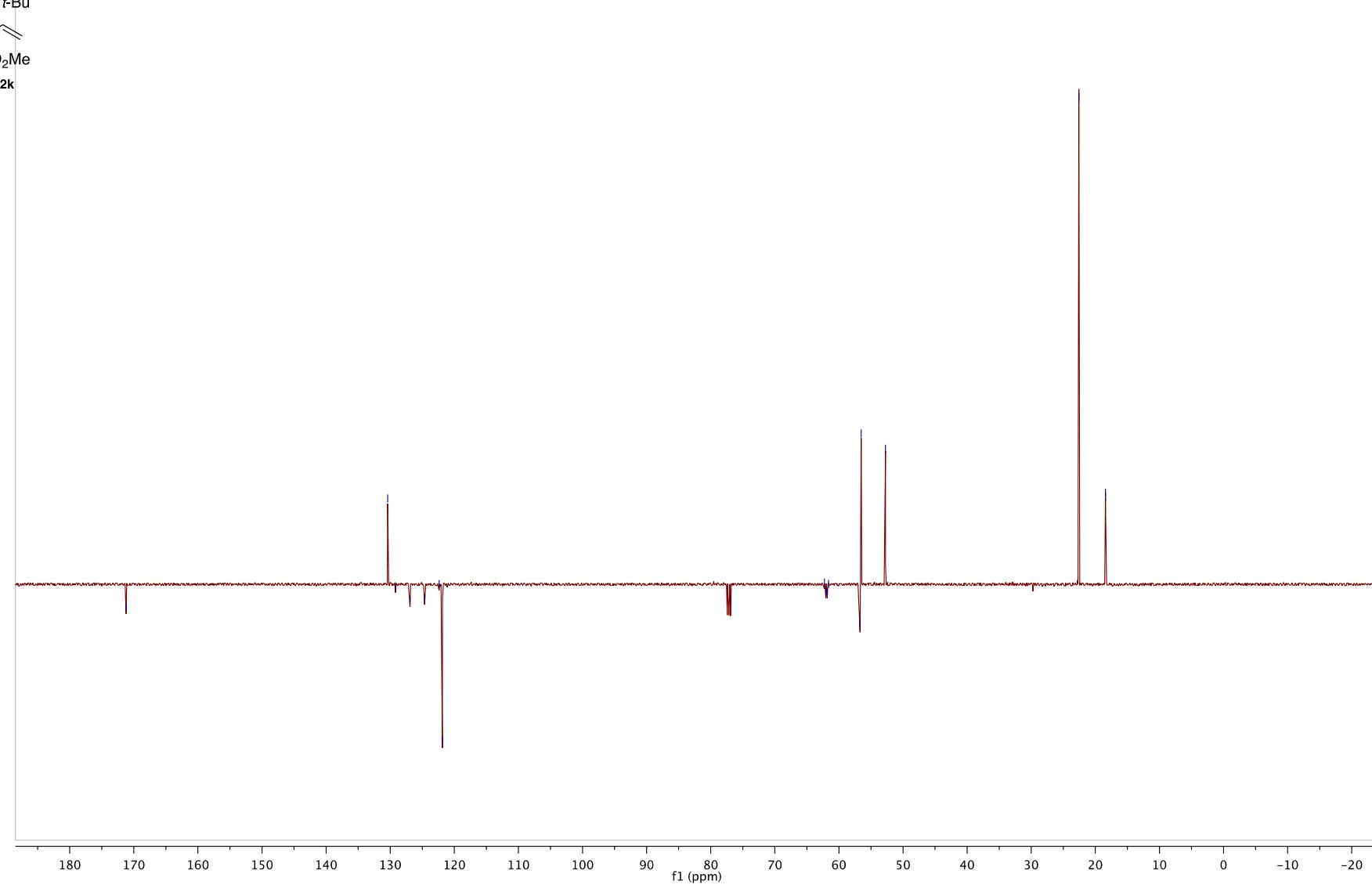


-172

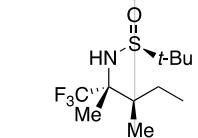
130.4
129.2
126.9
124.6
122.4
121.9

62.3
62.0
61.8
61.6
56.7
56.5
52.7

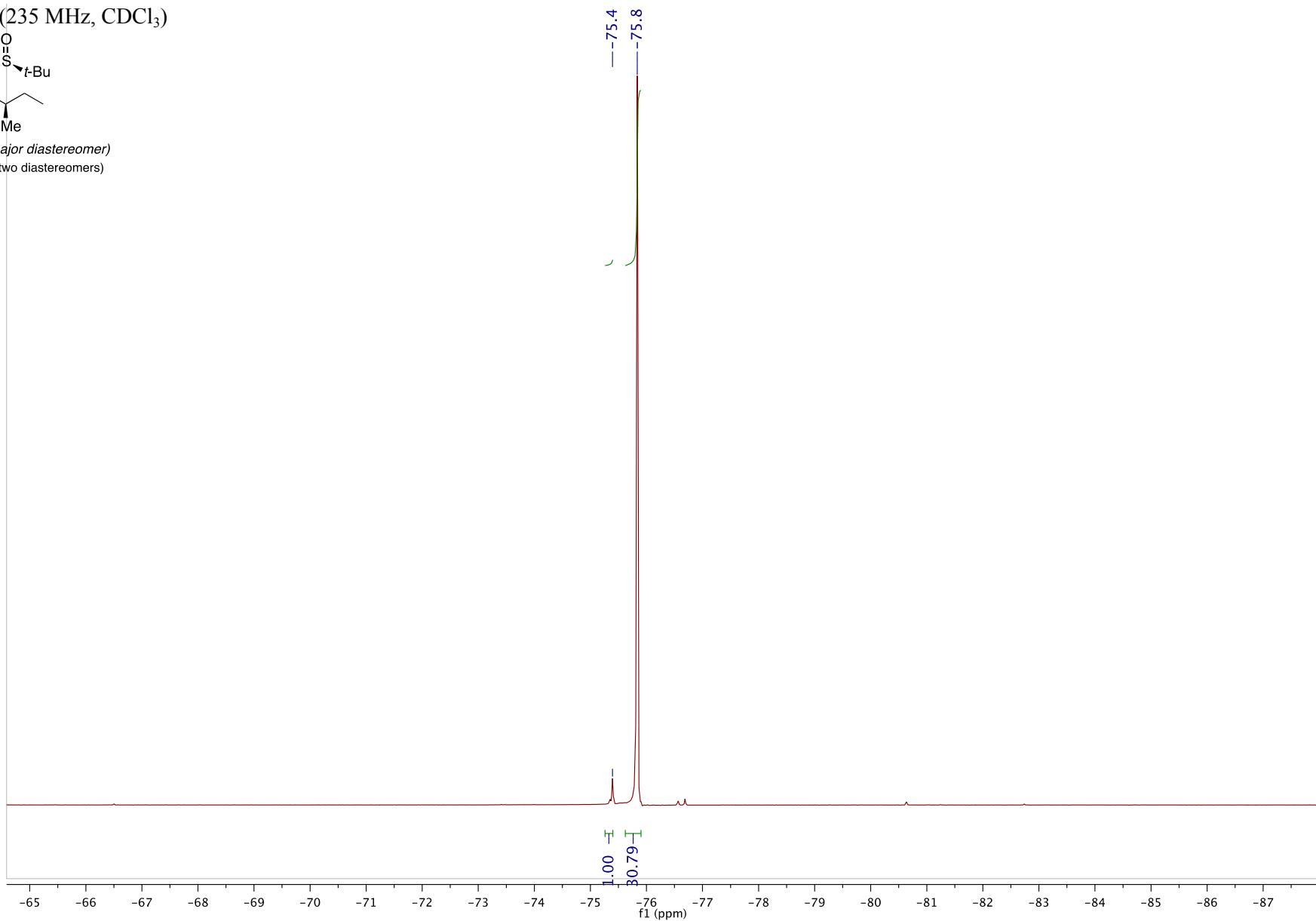
22.6
18.4
18.4



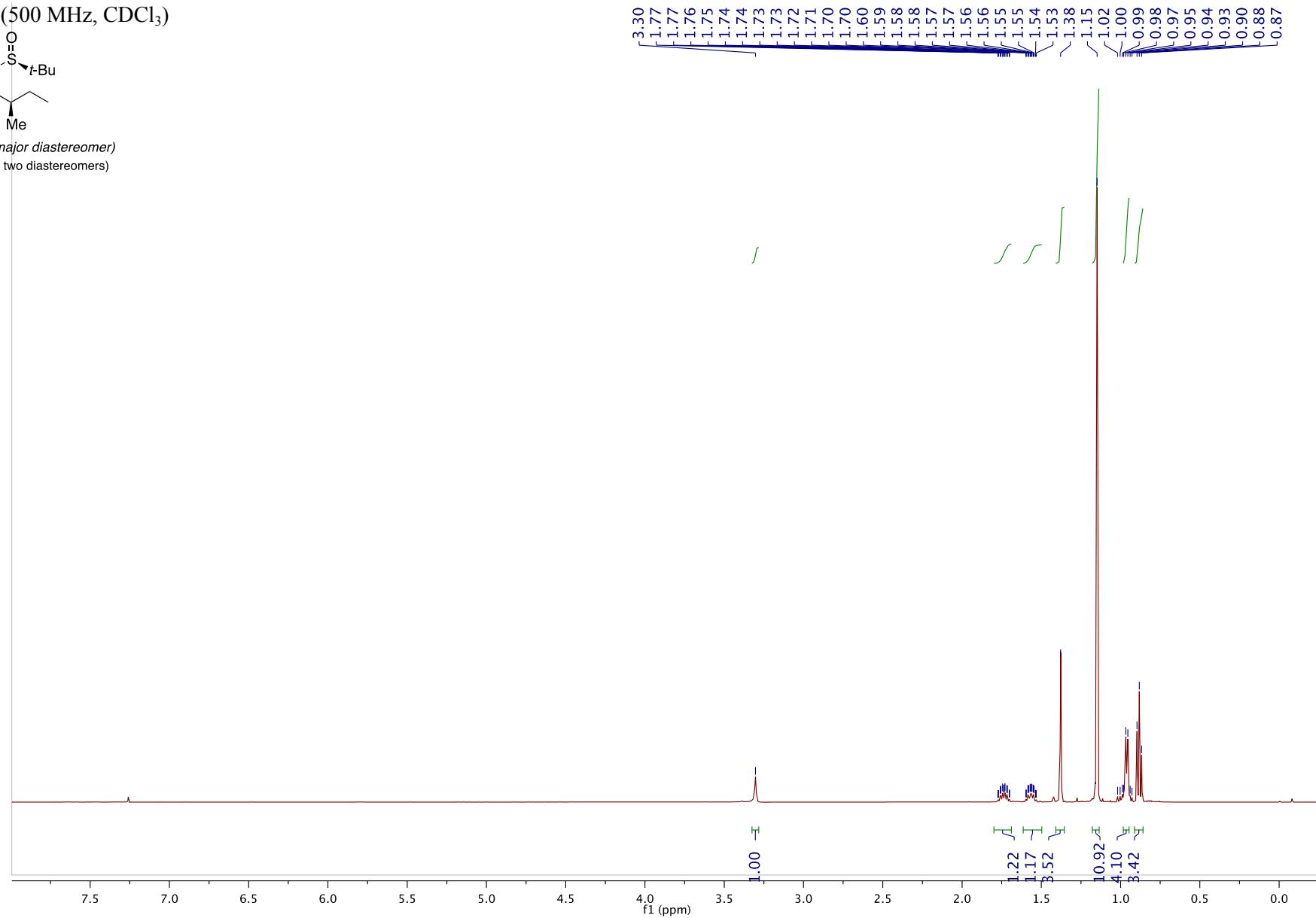
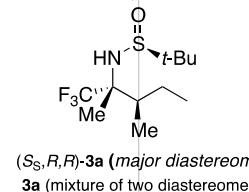
¹⁹F NMR (235 MHz, CDCl₃)



(S_S,R,R)-3a (major diastereomer)
3a (mixture of two diastereomers)

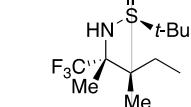


¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)

~130.0
-127.7
-125.7
-123.4



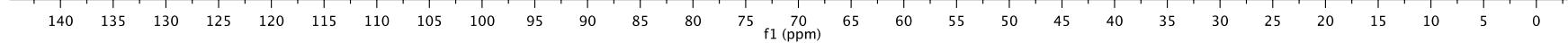
(S_S,R,R)-3a (major diastereomer)
3a (mixture of two diastereomers)

64.3
64.1
63.9
63.7

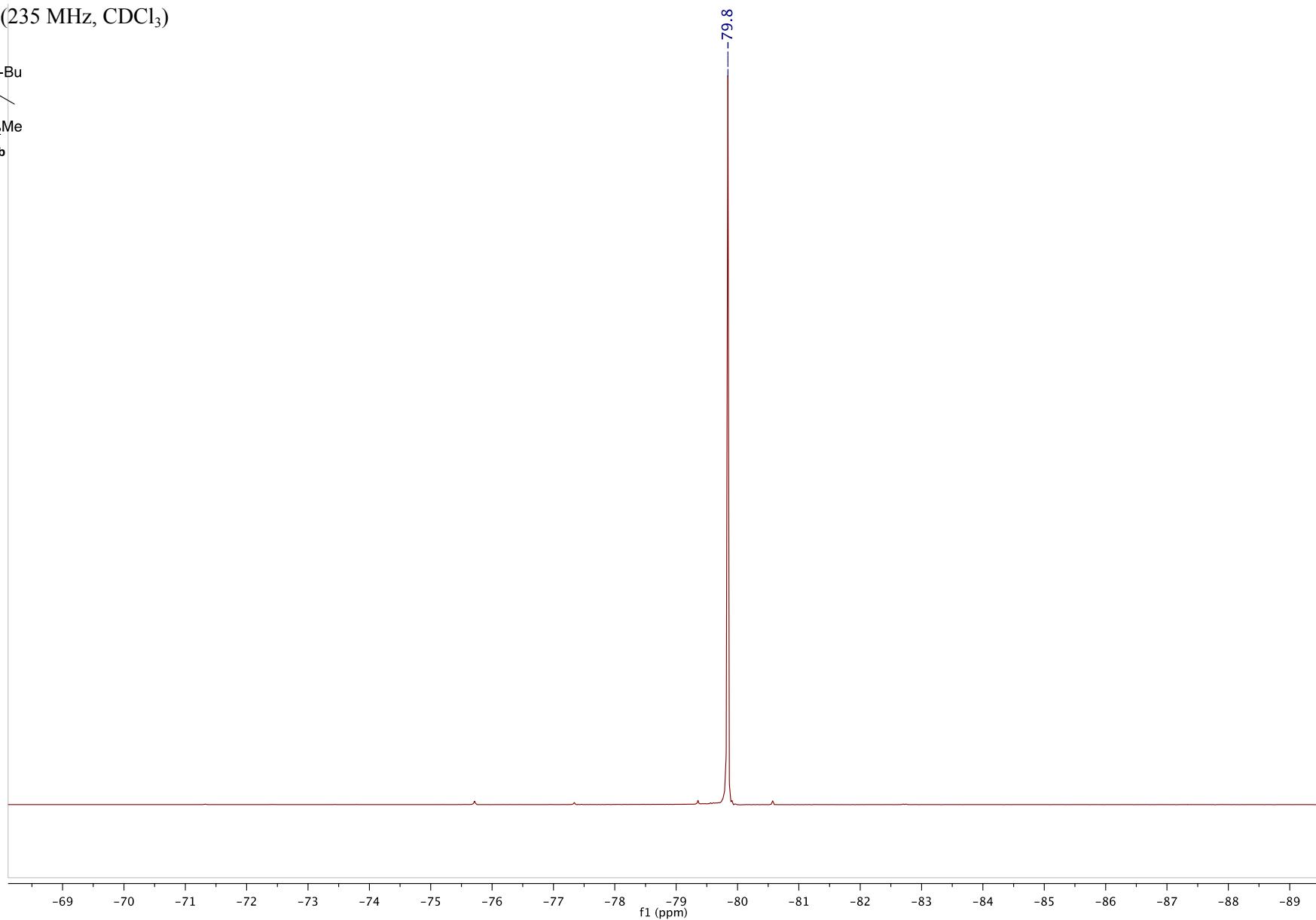
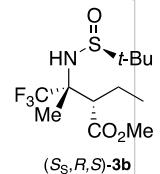
-56.5

-41.0

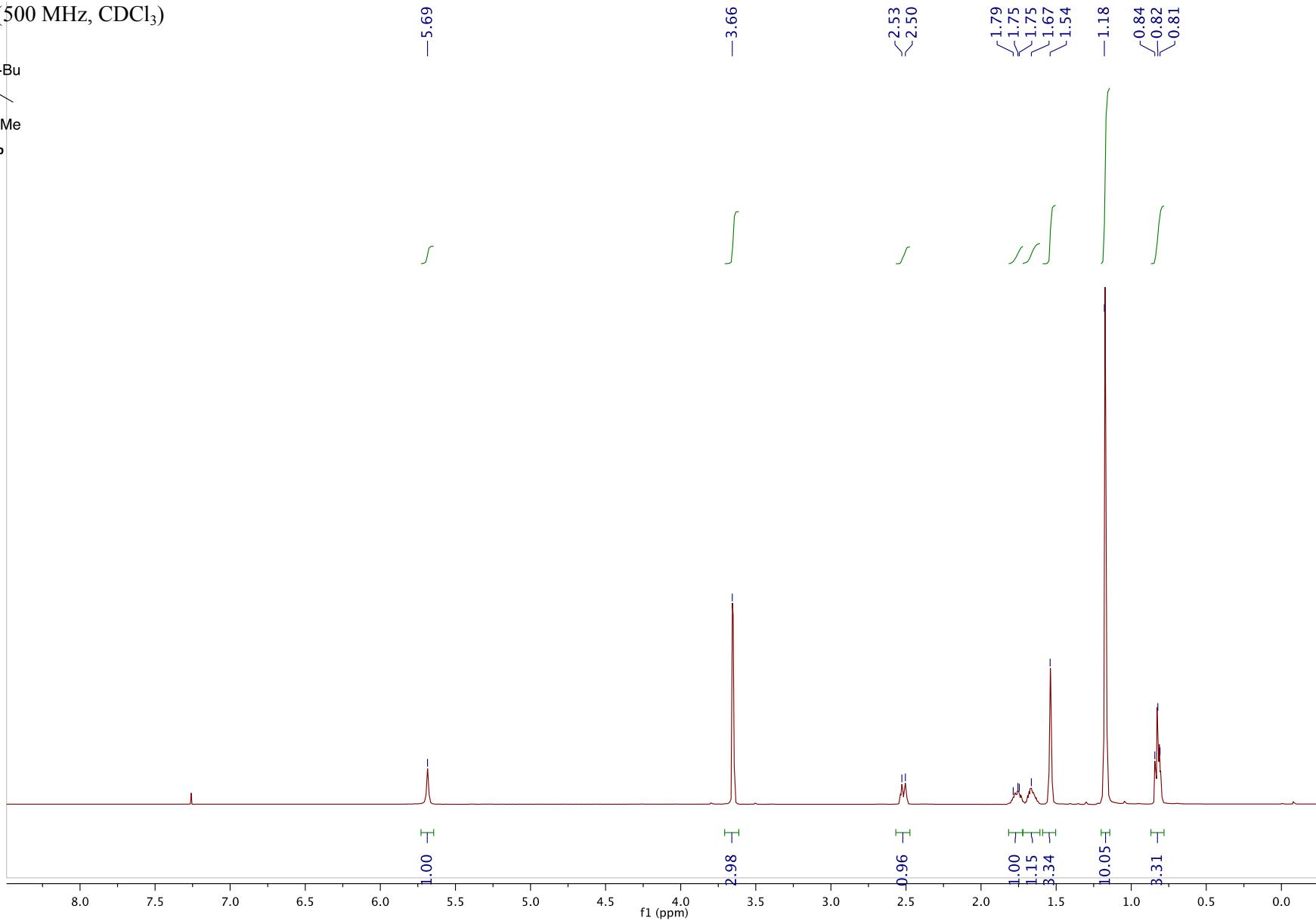
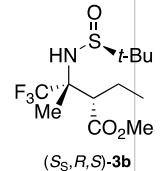
23.4
23.4
15.0
15.0
15.0
13.3
13.3
13.3
12.6



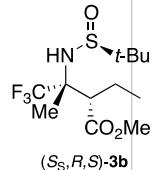
¹⁹F NMR (235 MHz, CDCl₃)



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)



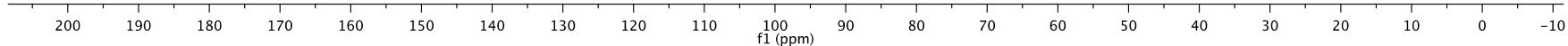
(S_S,R,S)-3b

-175.2

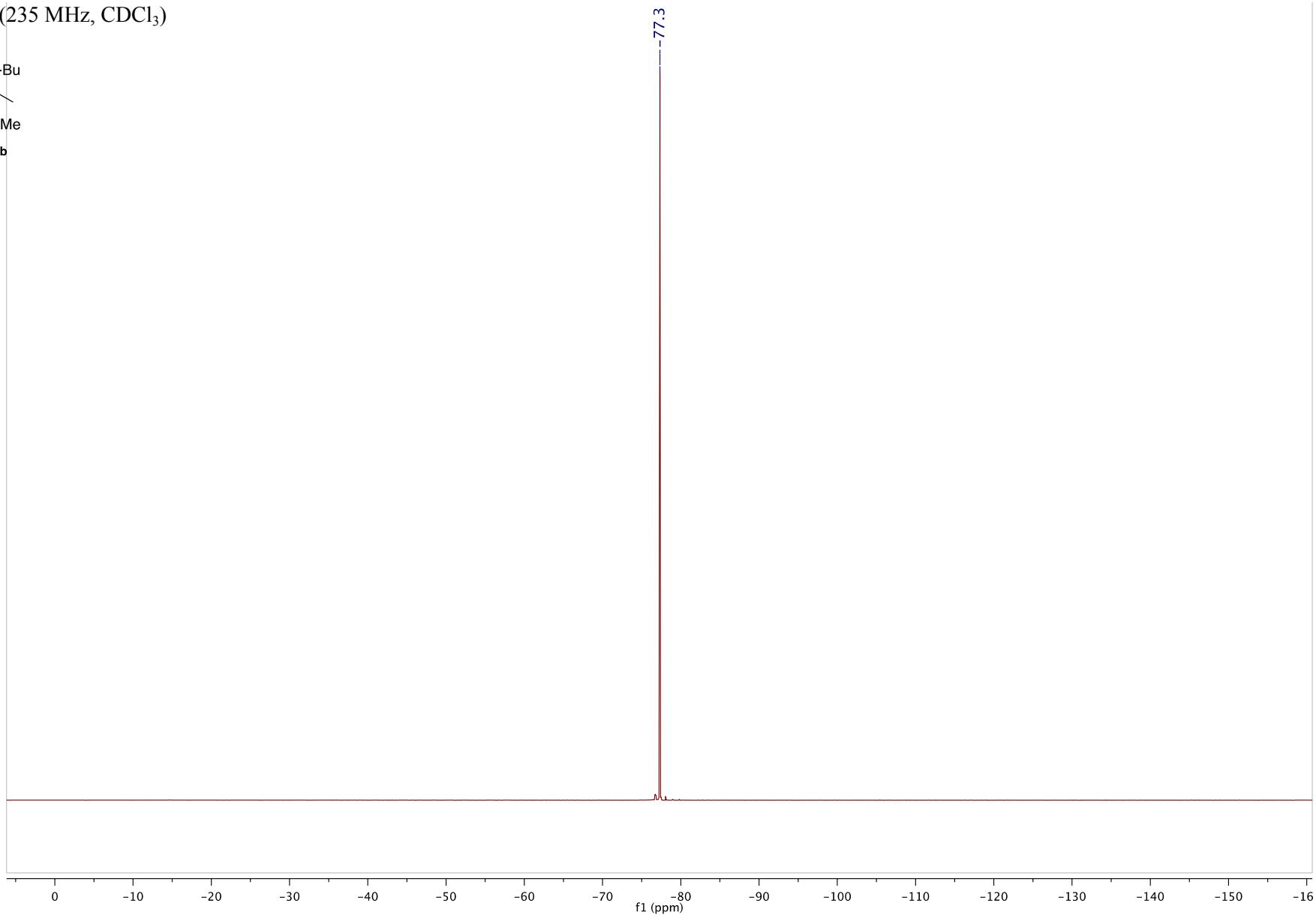
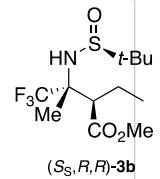
~129.5
~127.2
~124.9
~122.7

62.4
62.1
61.9
61.7
56.5
52.1
48.8

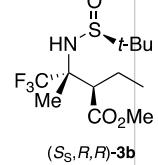
22.7
20.5
16.7
11.2



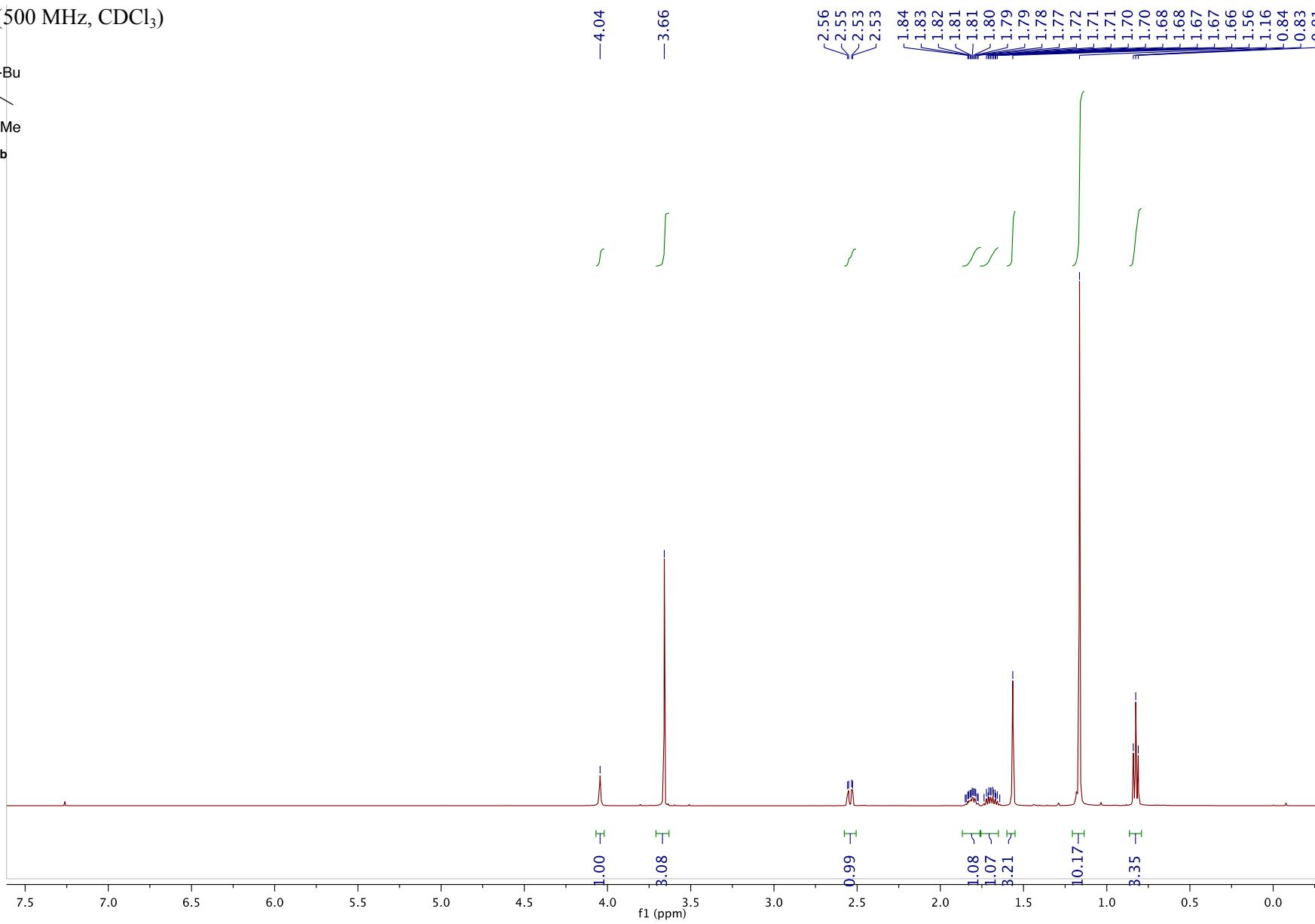
¹⁹F NMR (235 MHz, CDCl₃)



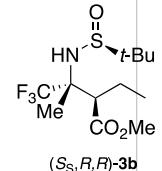
¹H NMR (500 MHz, CDCl₃)



(S_S,R,R)-3b



¹³C NMR (125.8 MHz, CDCl₃)⁷



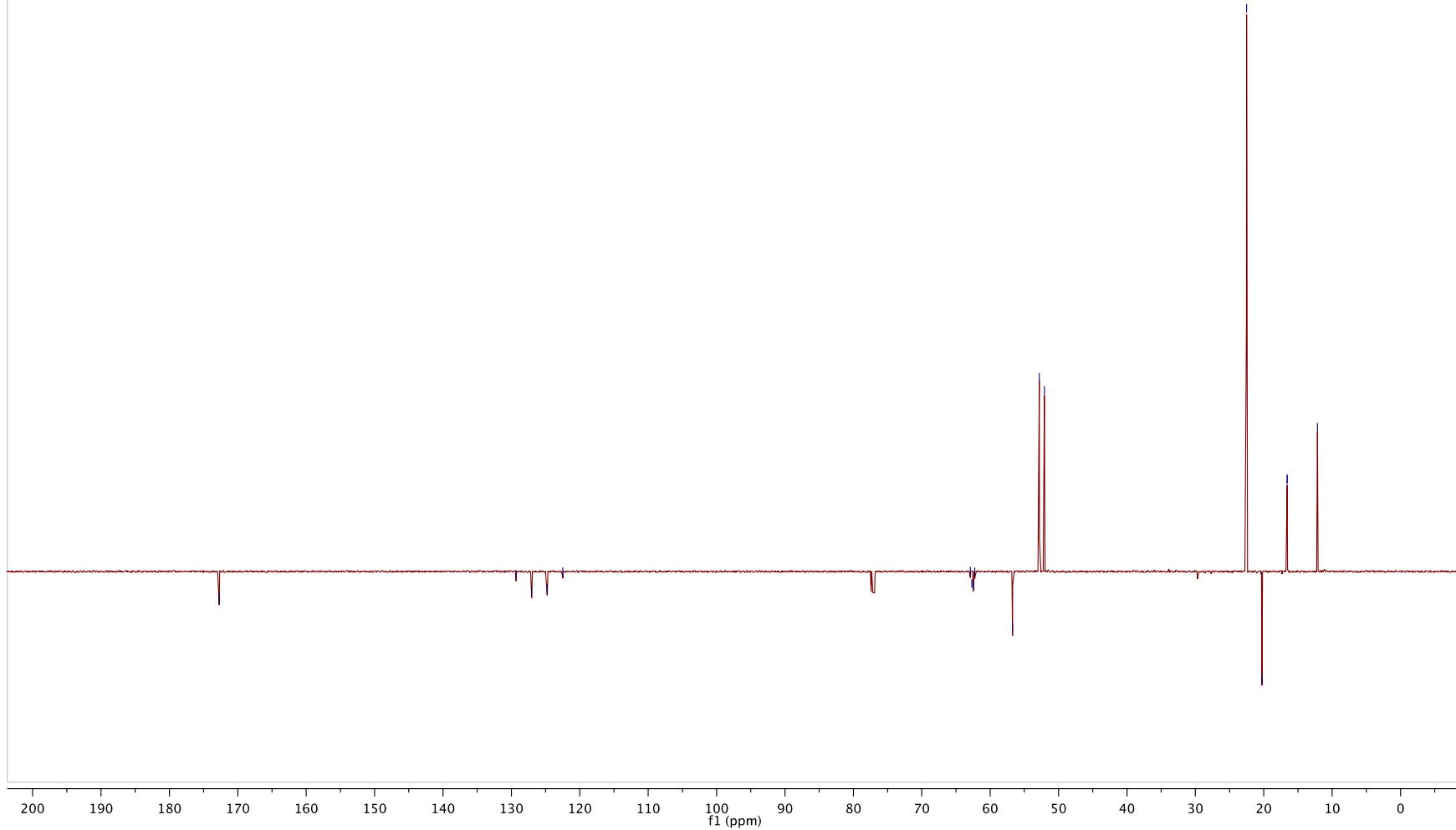
(S_S,R,R)-3b

-172.7

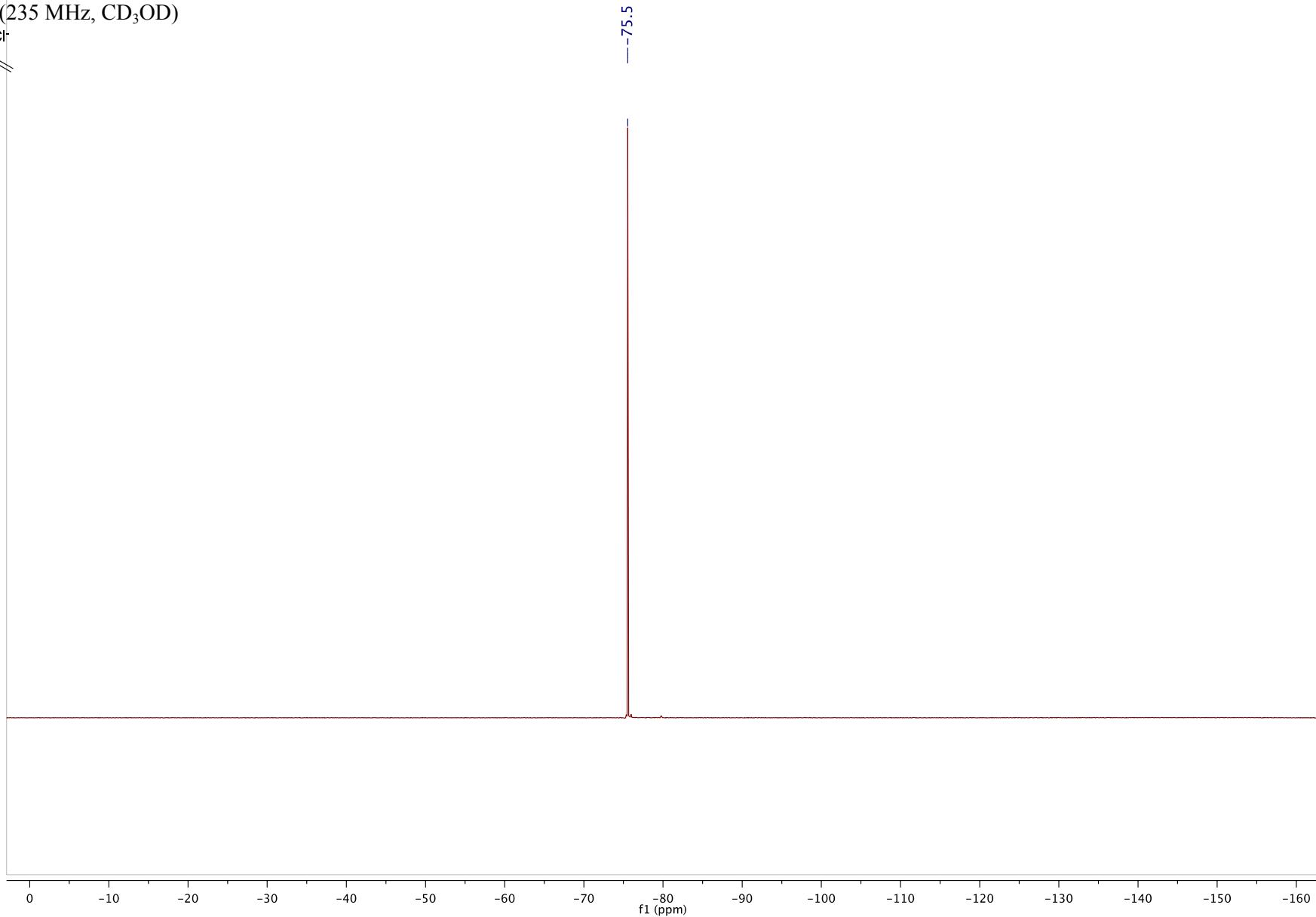
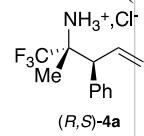
~129.3
-127.0
-124.8
~122.5

62.9
62.7
62.5
62.3
56.7
52.8
52.1

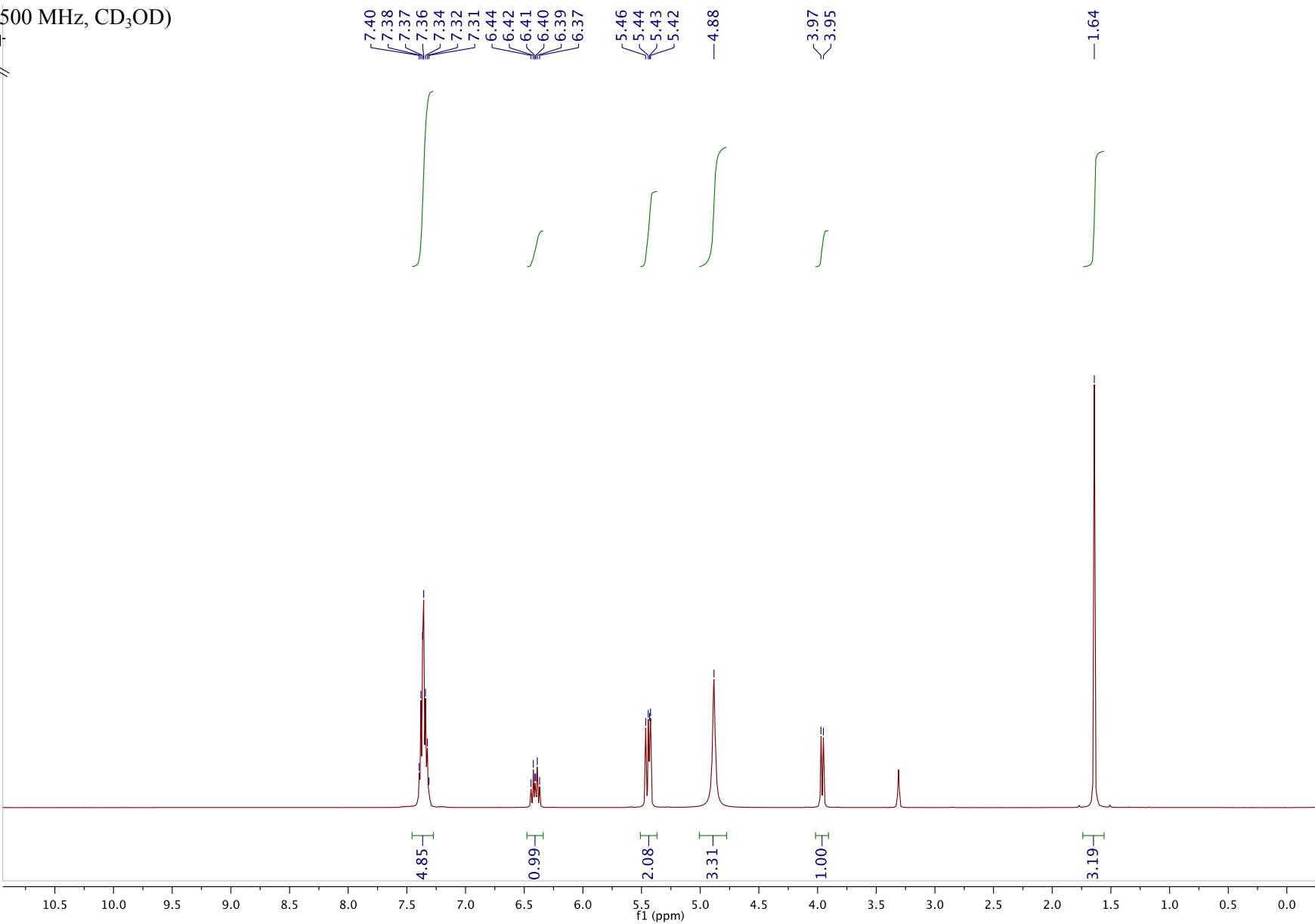
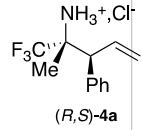
-22.5
-20.3
-16.6
-16.6
-12.2



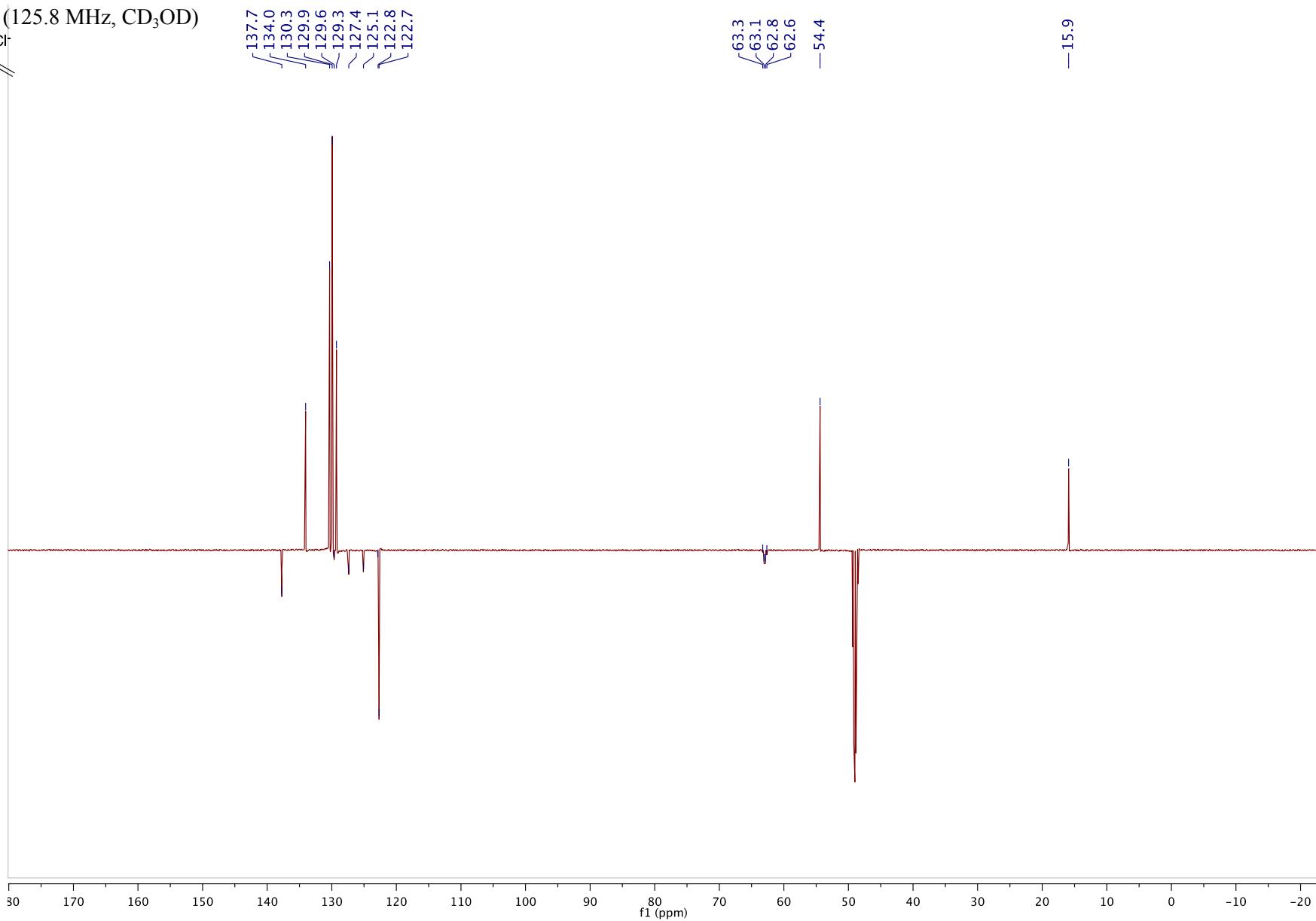
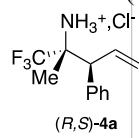
¹⁹F NMR (235 MHz, CD₃OD)



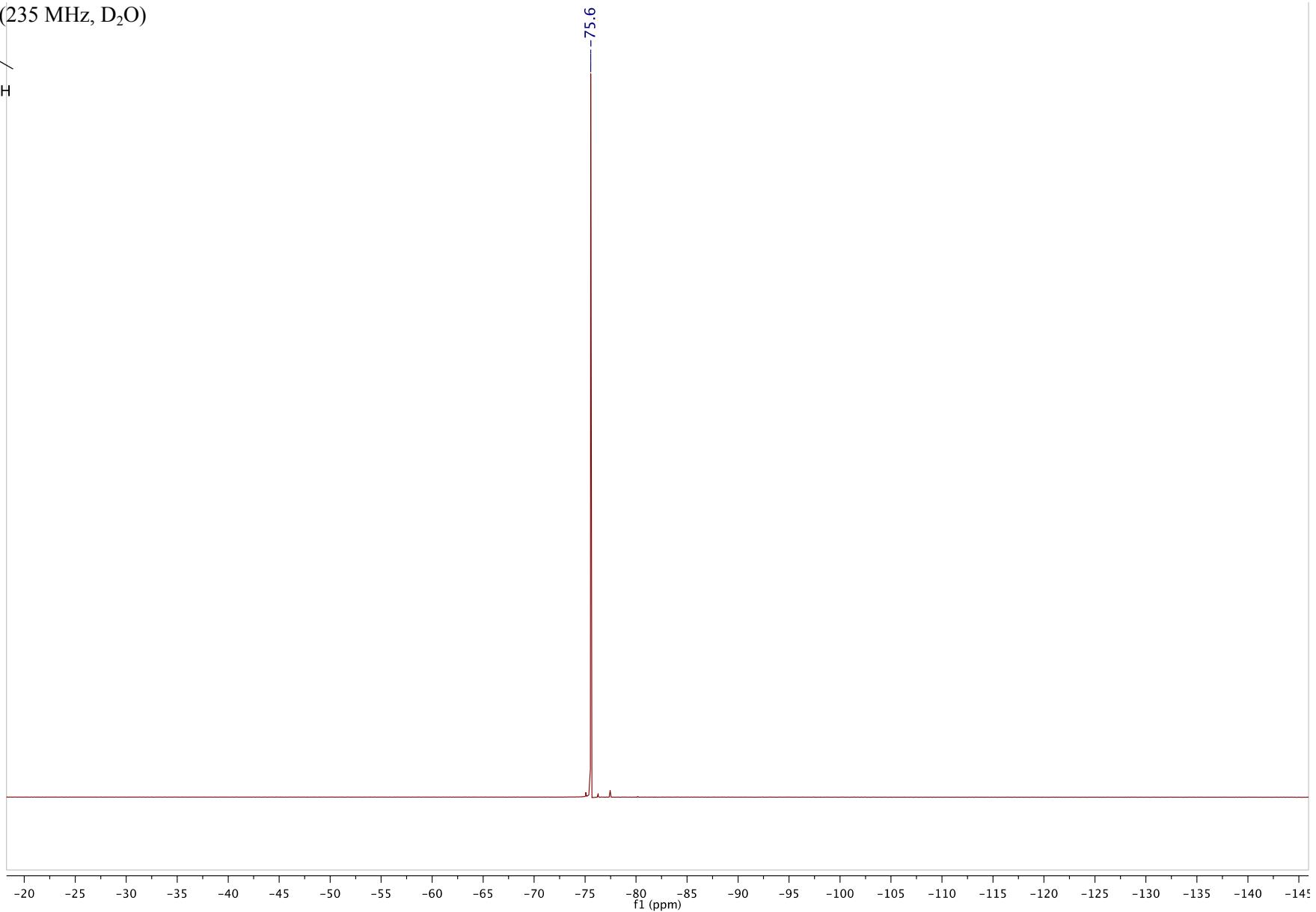
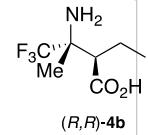
¹H NMR (500 MHz, CD₃OD)



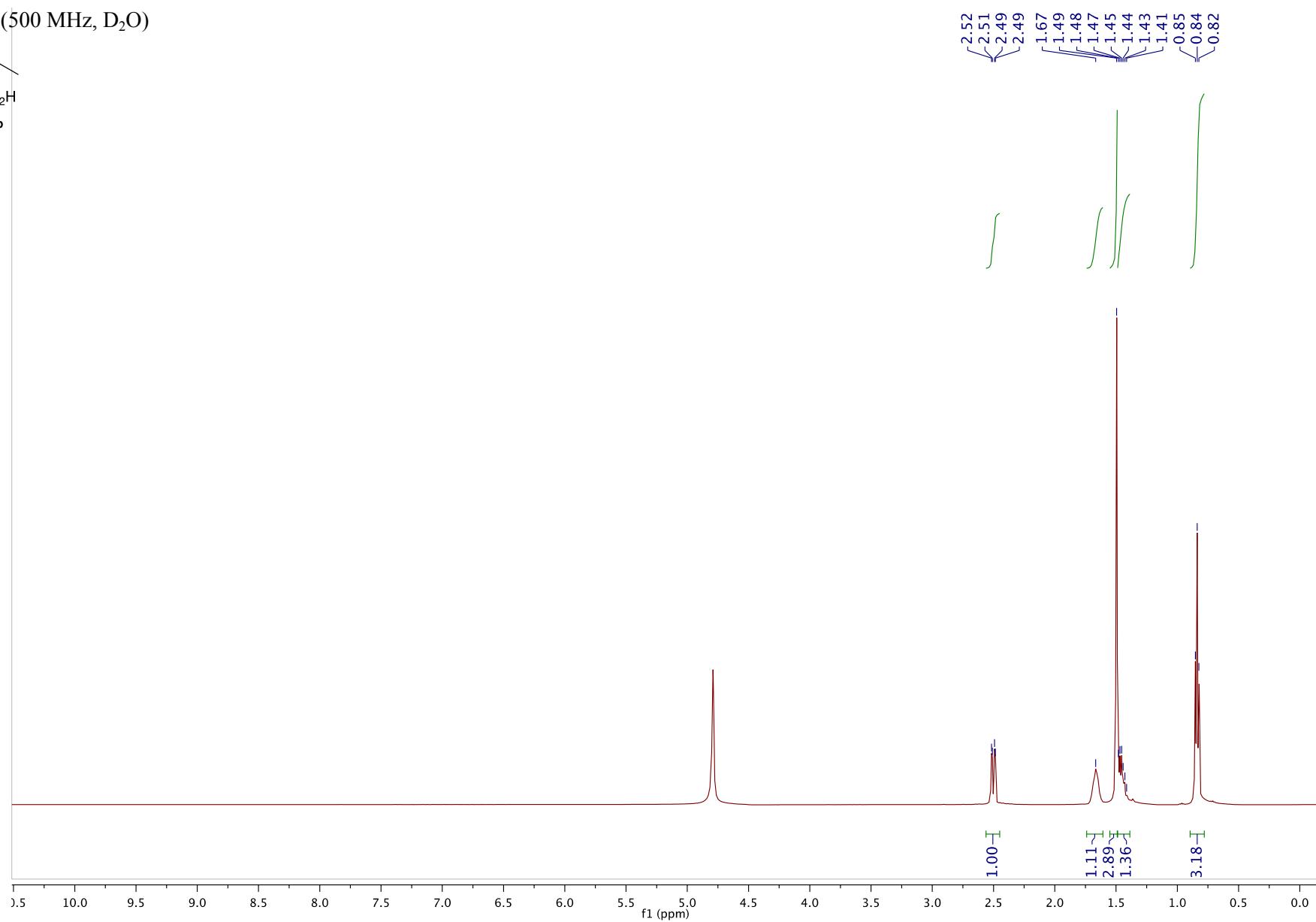
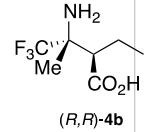
¹³C NMR (125.8 MHz, CD₃OD)



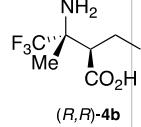
¹⁹F NMR (235 MHz, D₂O)



¹H NMR (500 MHz, D₂O)



¹³C NMR (125.8 MHz, D₂O)



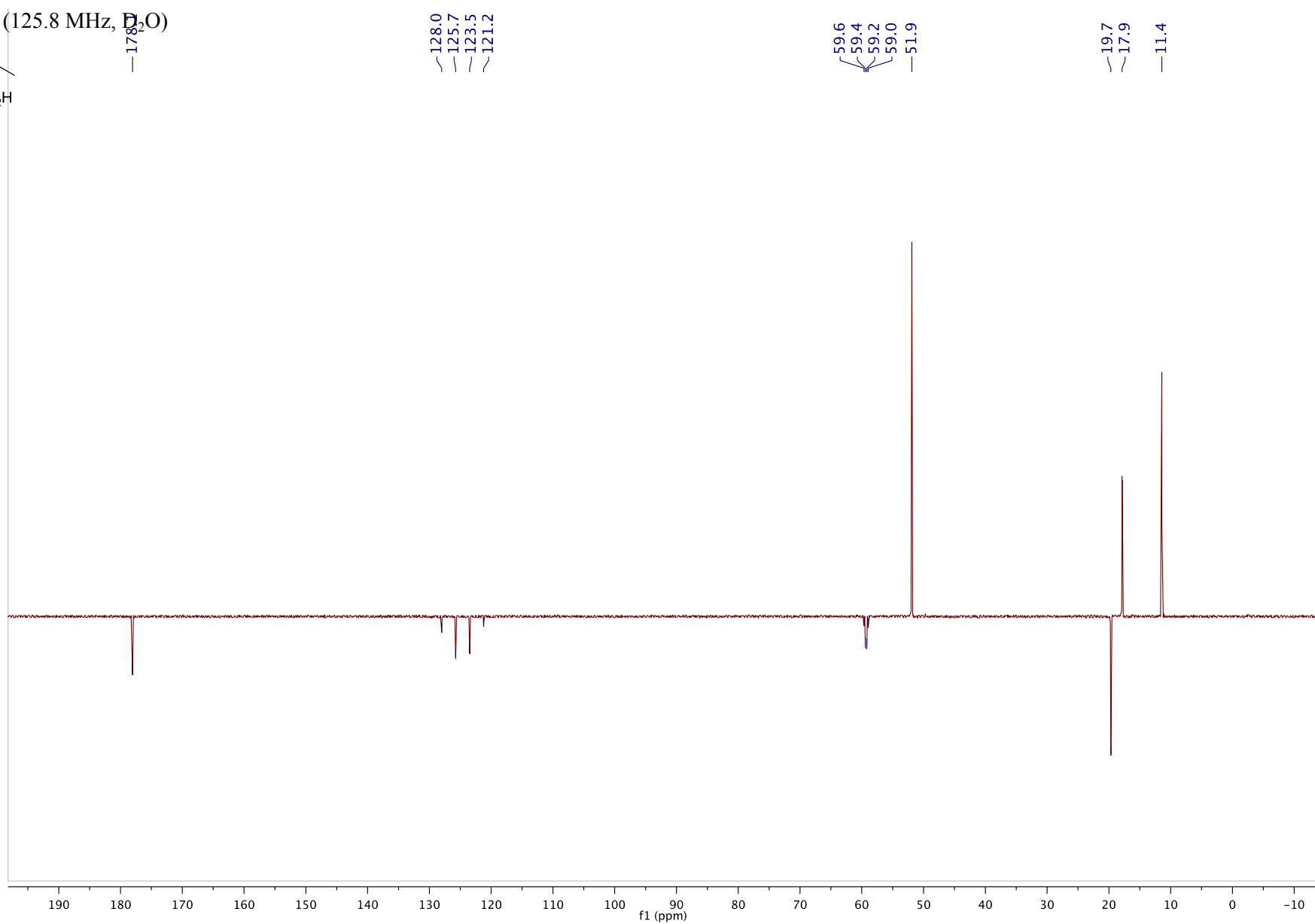
(R,R)-4b

-178.0

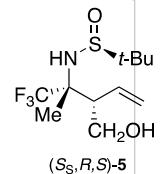
~128.0
-125.7
-123.5
~121.2

59.6
59.4
59.2
59.0
-51.9

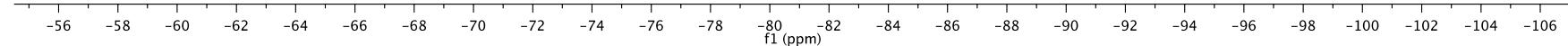
-19.7
-17.9
-11.4



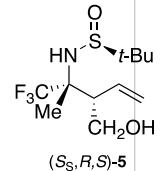
¹⁹F NMR (235 MHz, CDCl₃)



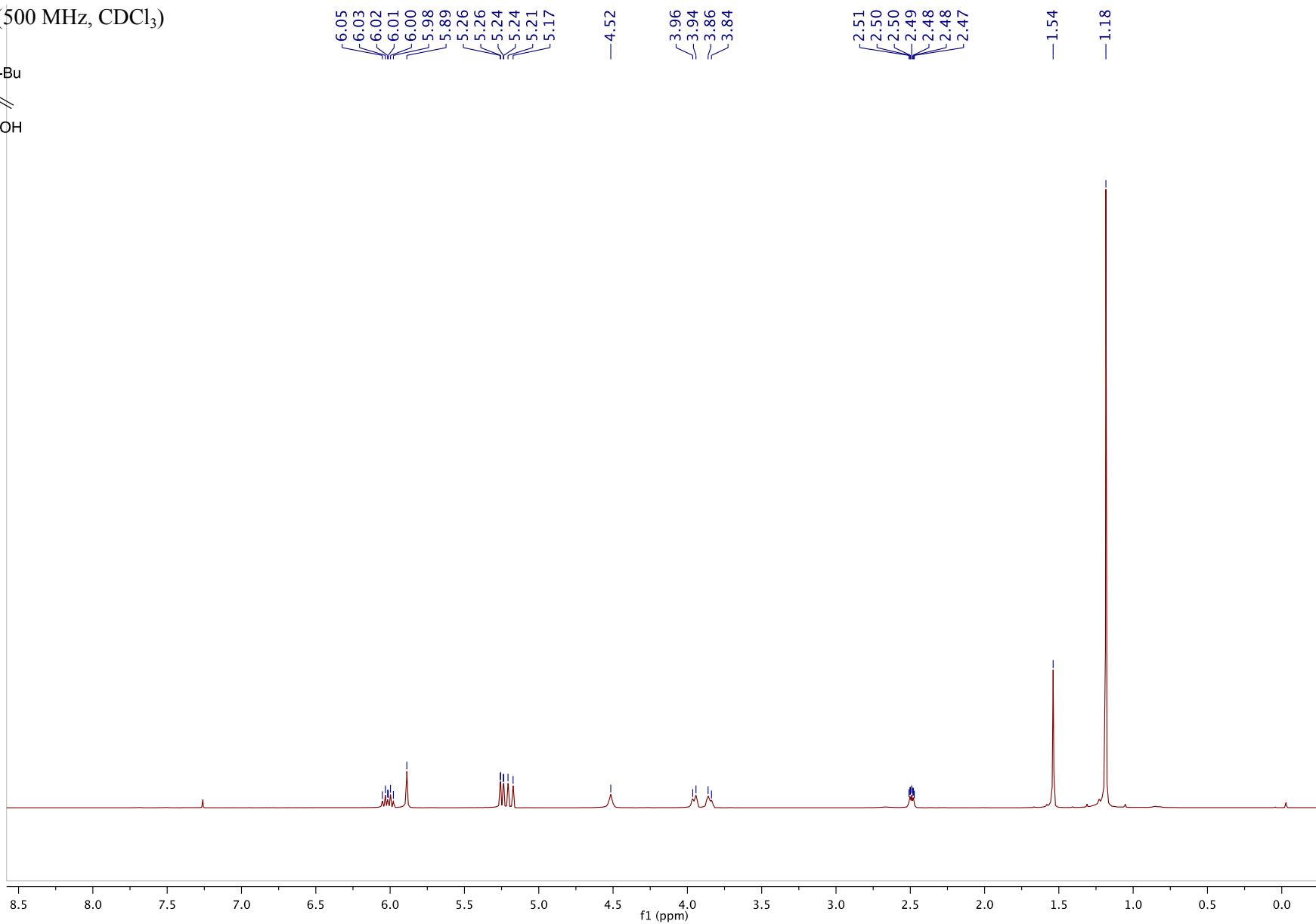
-77.5



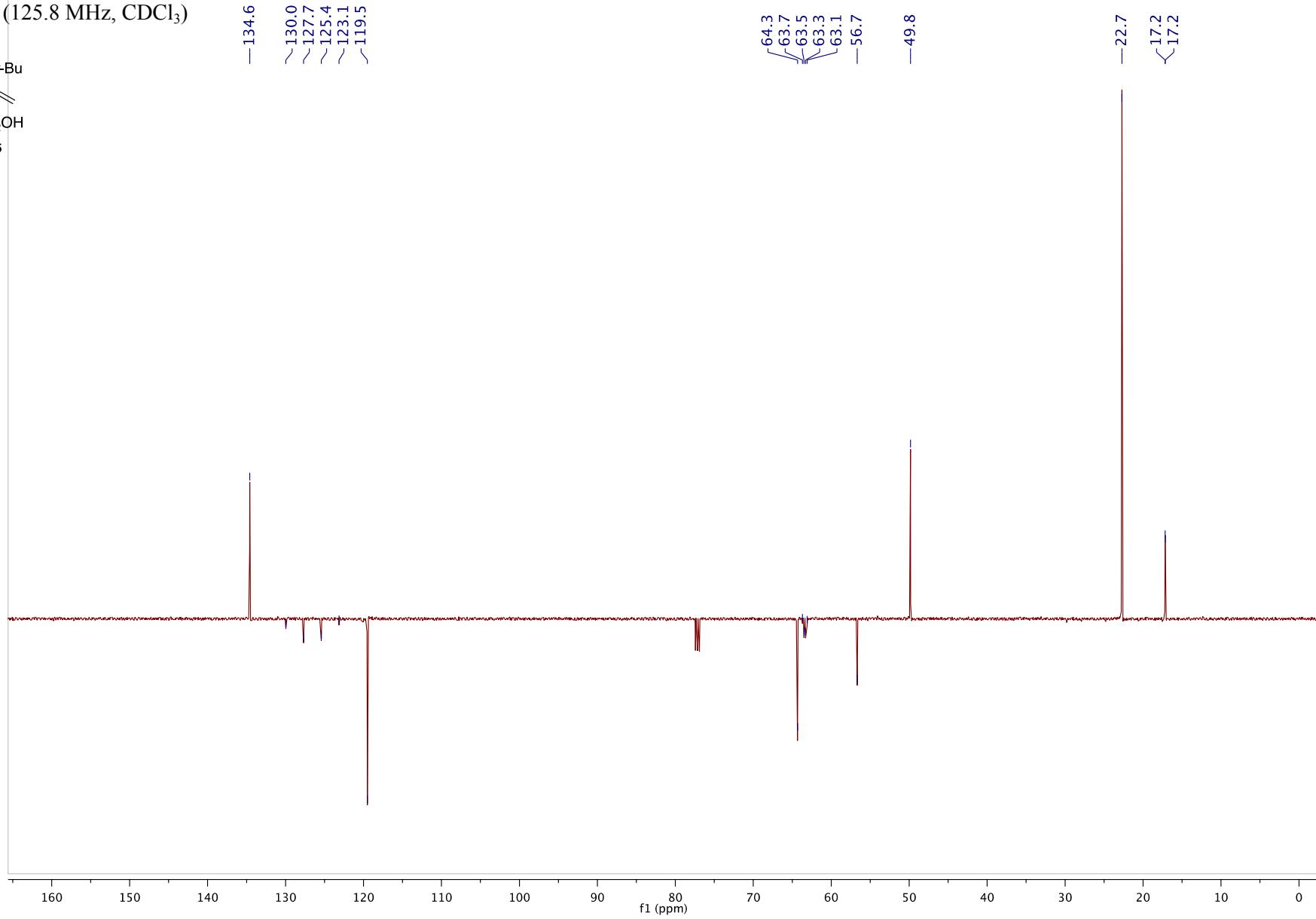
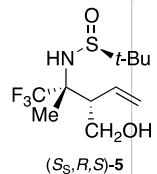
¹H NMR (500 MHz, CDCl₃)



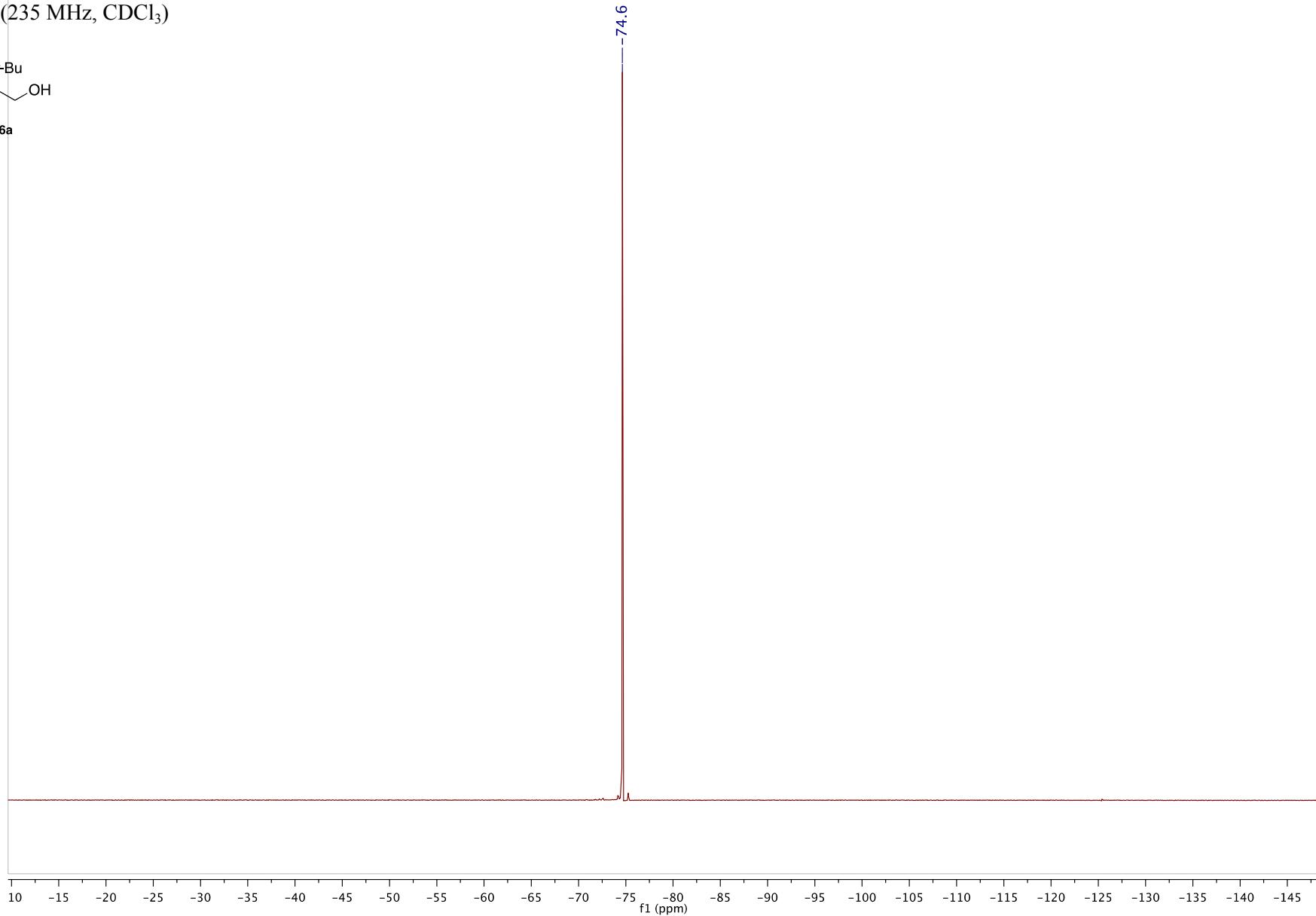
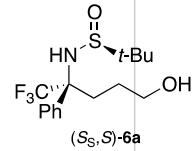
(S_S,R,S)-5



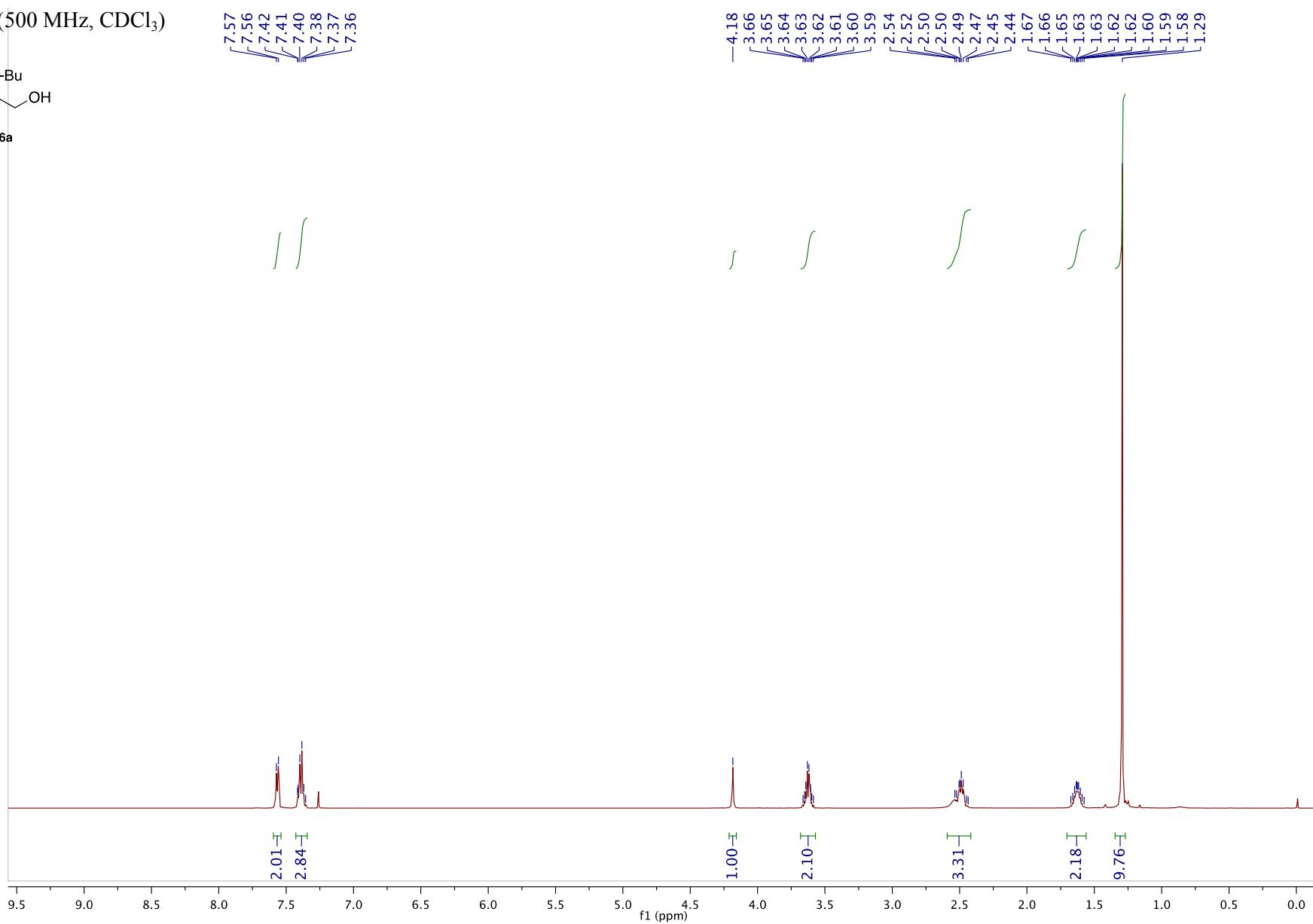
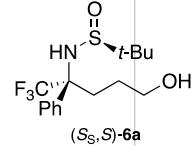
¹³C NMR (125.8 MHz, CDCl₃)

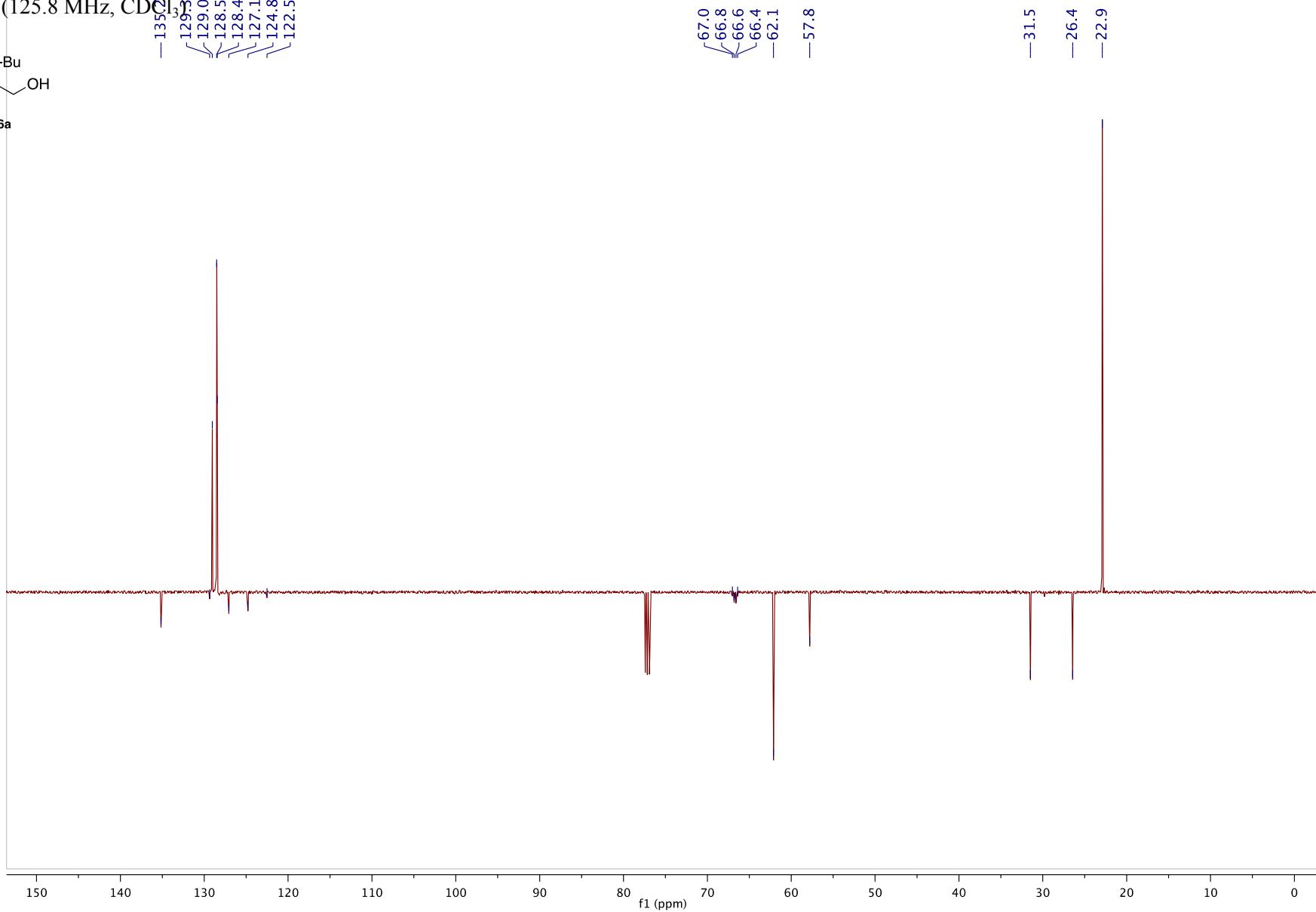
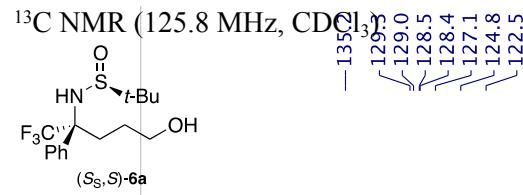


¹⁹F NMR (235 MHz, CDCl₃)

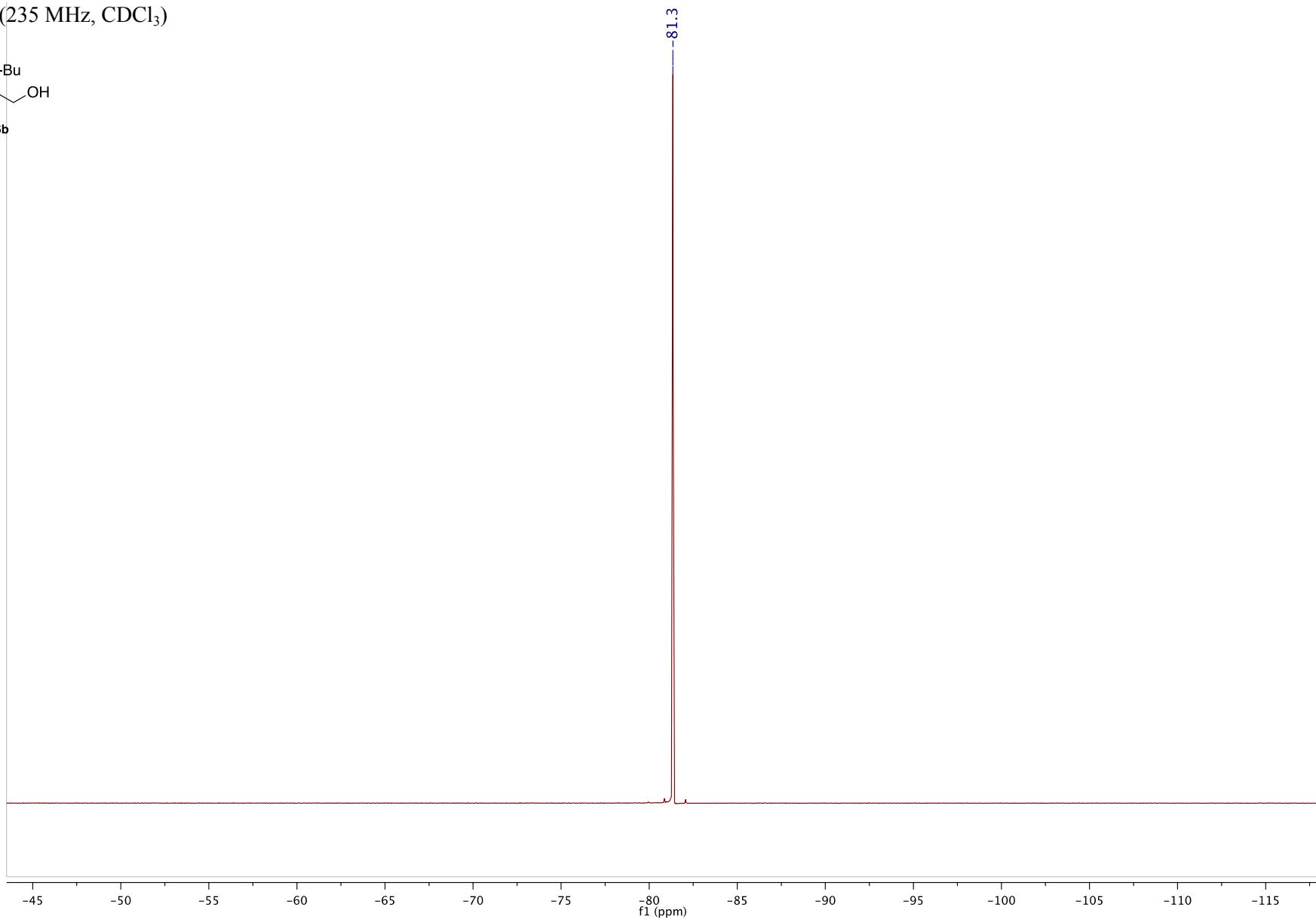
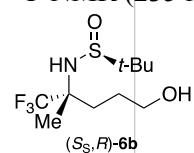


¹H NMR (500 MHz, CDCl₃)

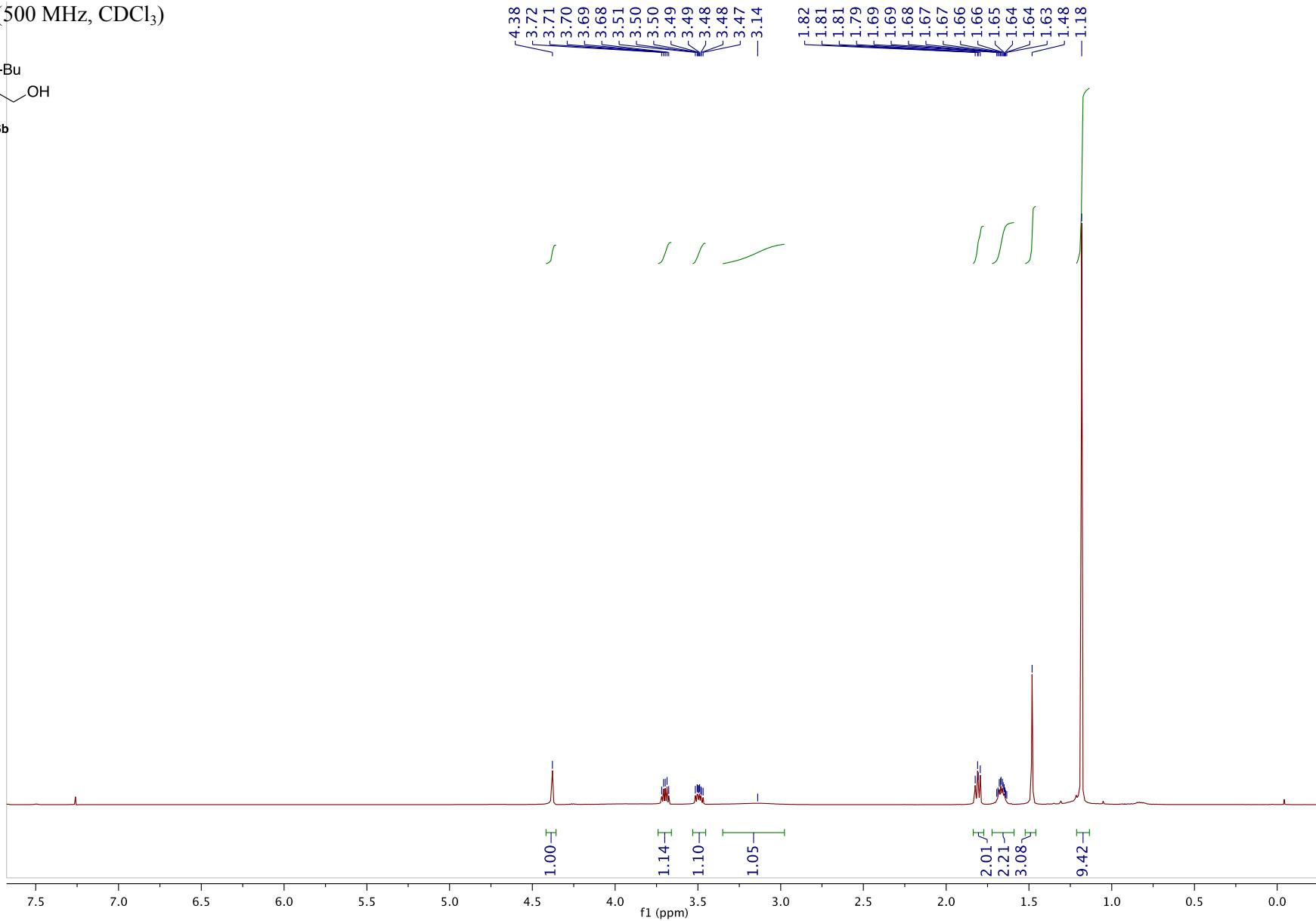
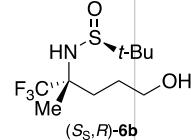




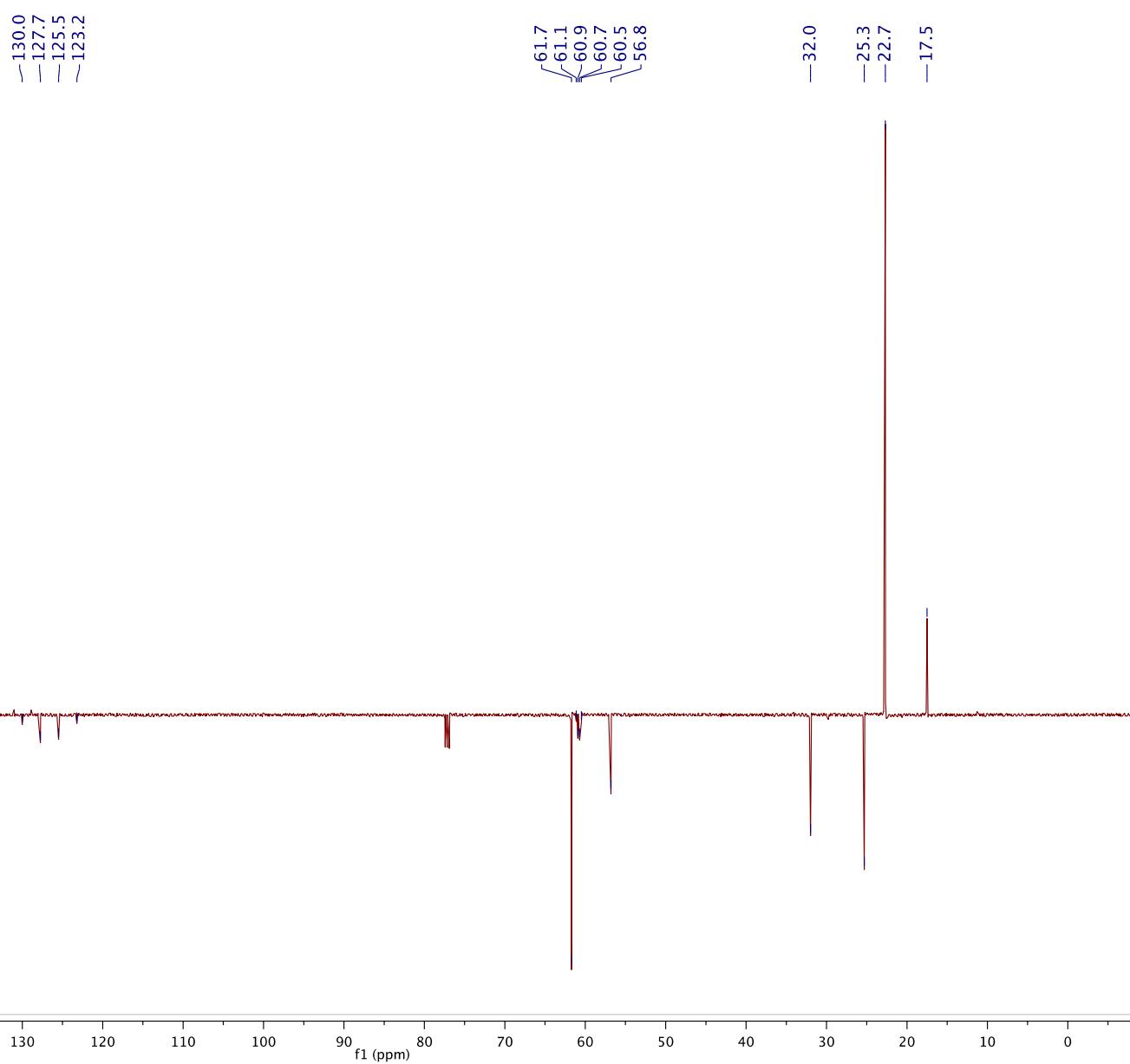
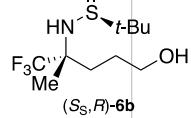
¹⁹F NMR (235 MHz, CDCl₃)



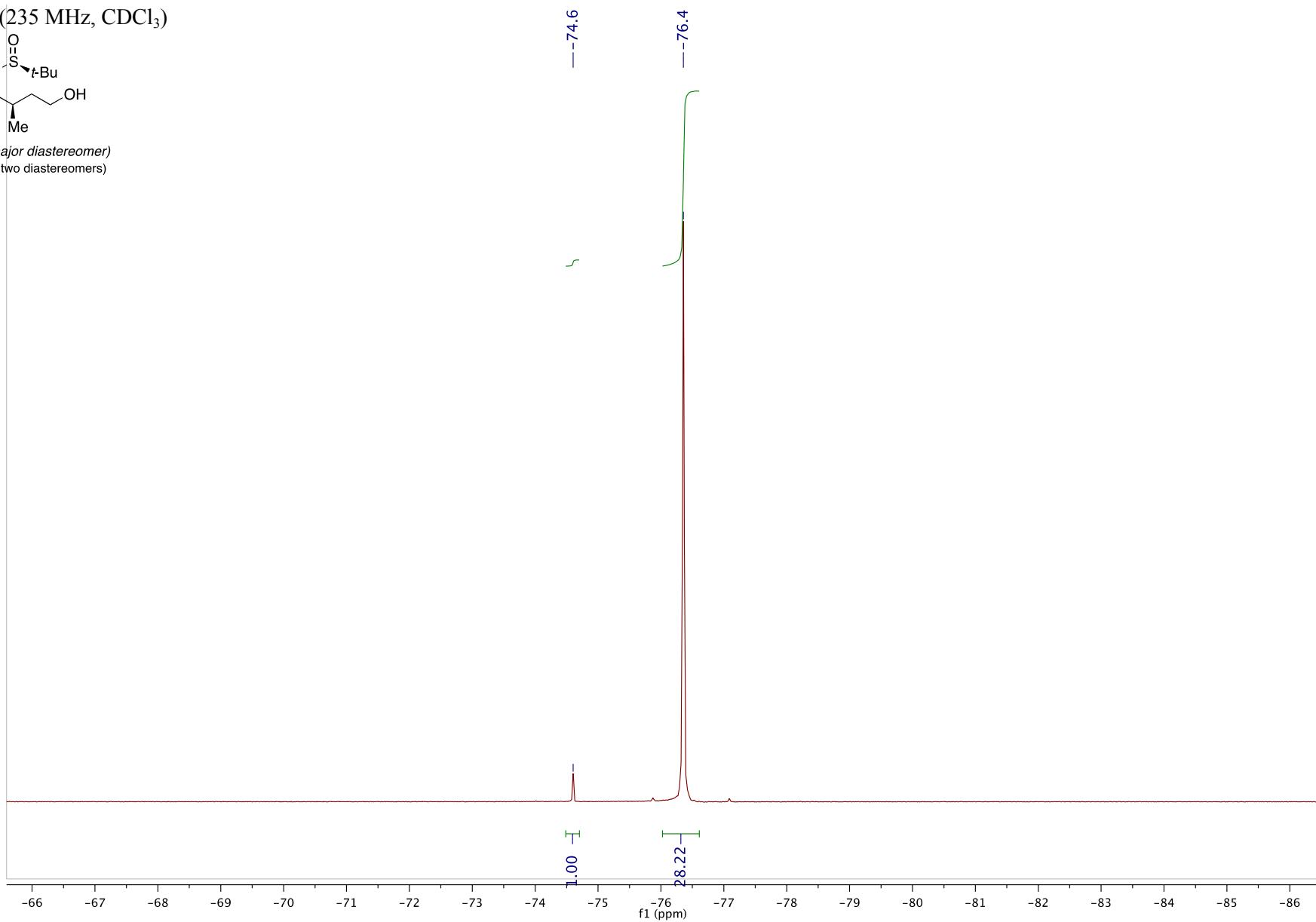
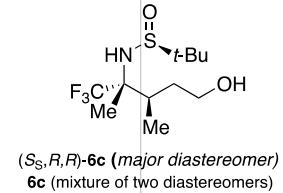
¹H NMR (500 MHz, CDCl₃)



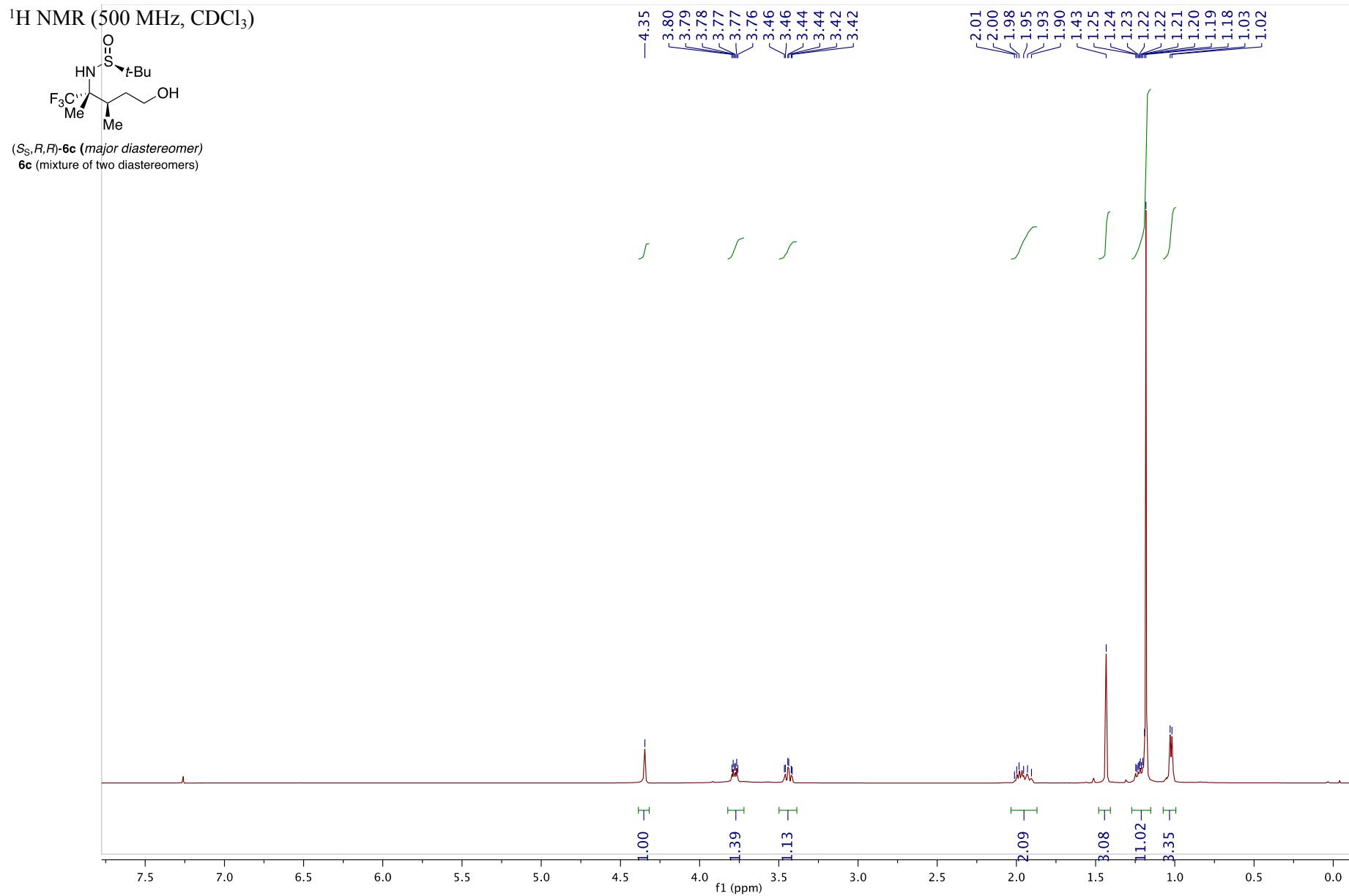
¹³C NMR (125.8 MHz, CDCl₃)



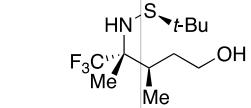
¹⁹F NMR (235 MHz, CDCl₃)



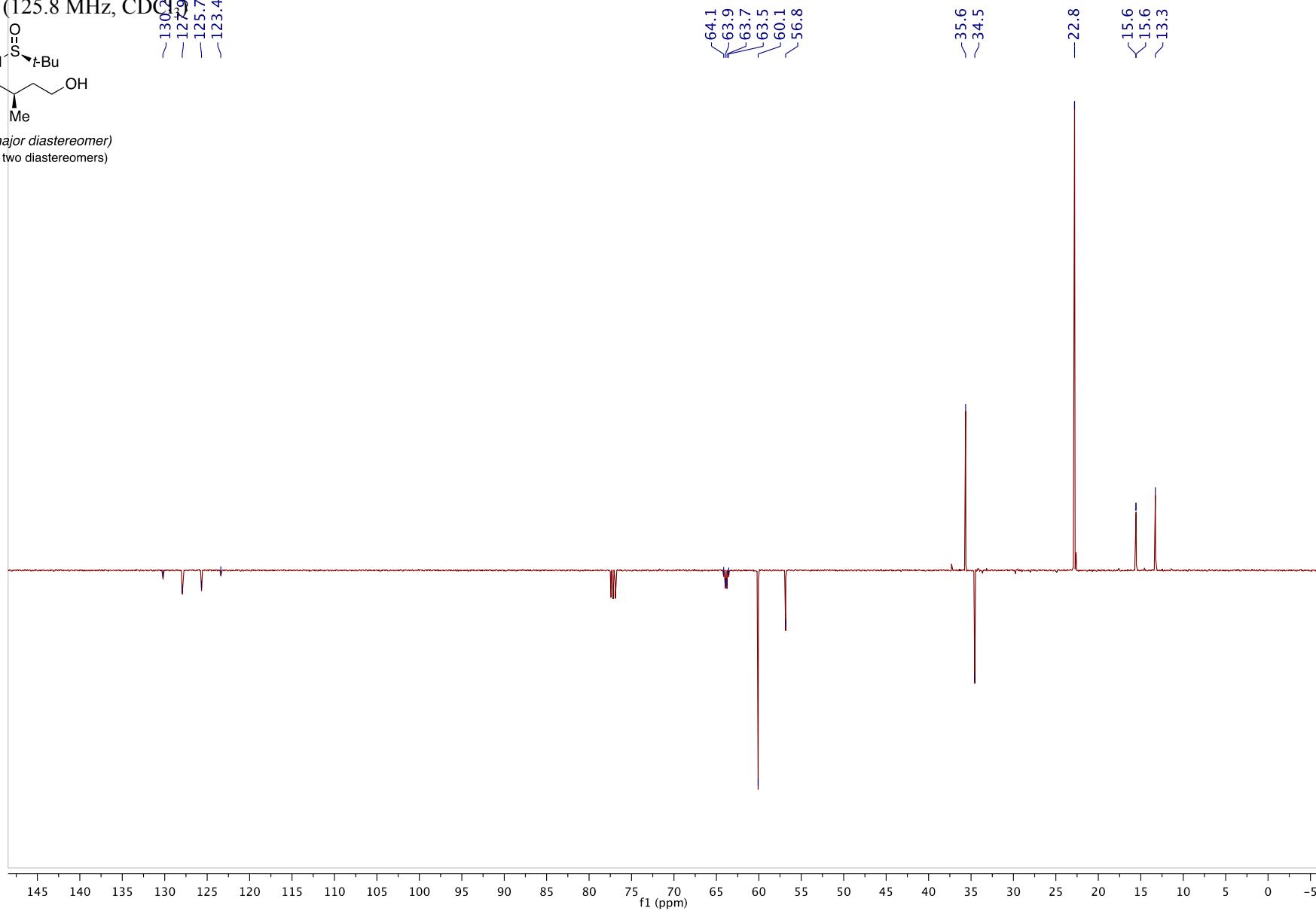
¹H NMR (500 MHz, CDCl₃)



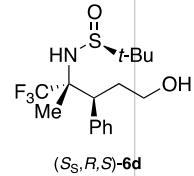
¹³C NMR (125.8 MHz, CDCl₃)



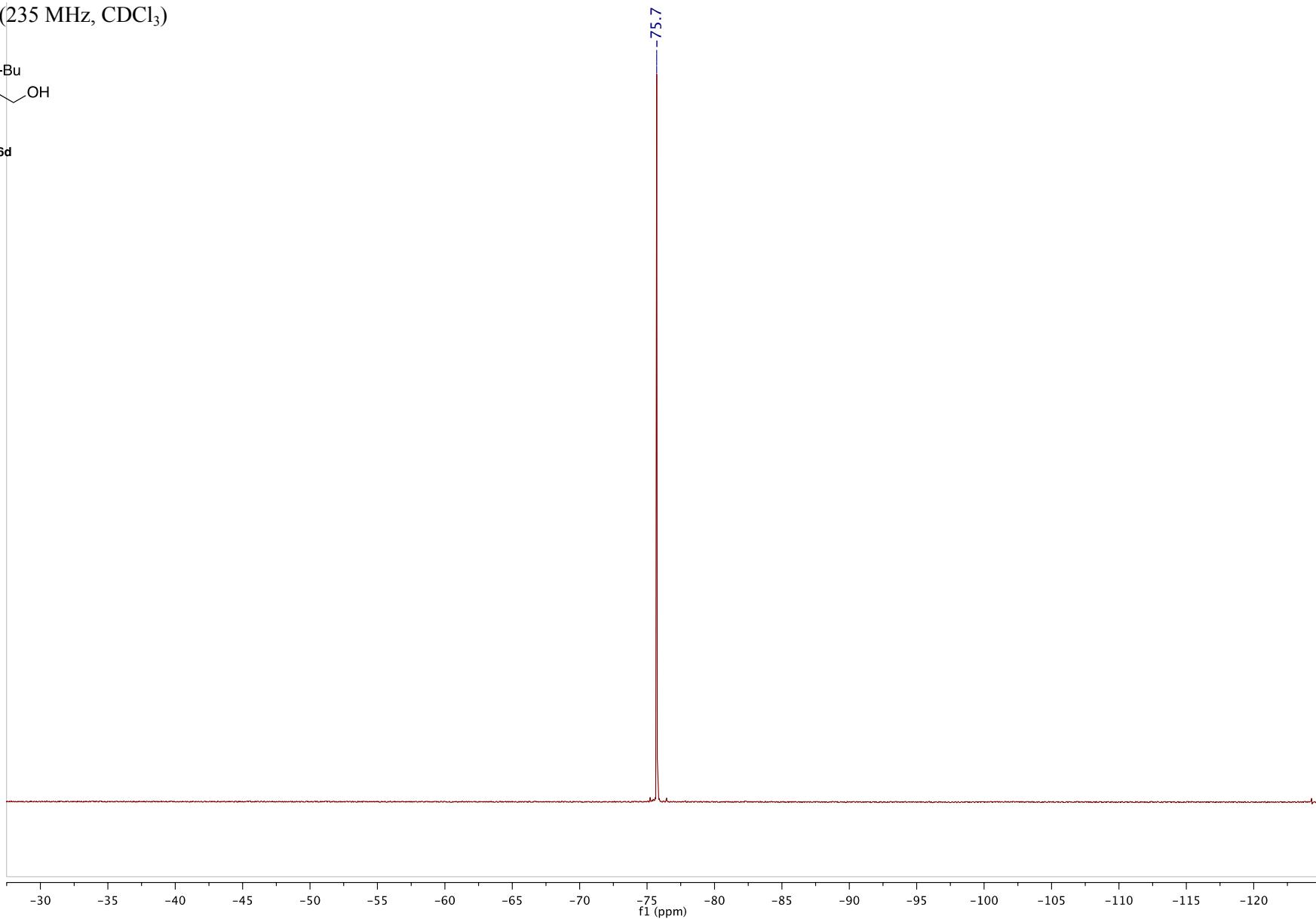
(S_S,R,R)-6c (major diastereomer)
6c (mixture of two diastereomers)



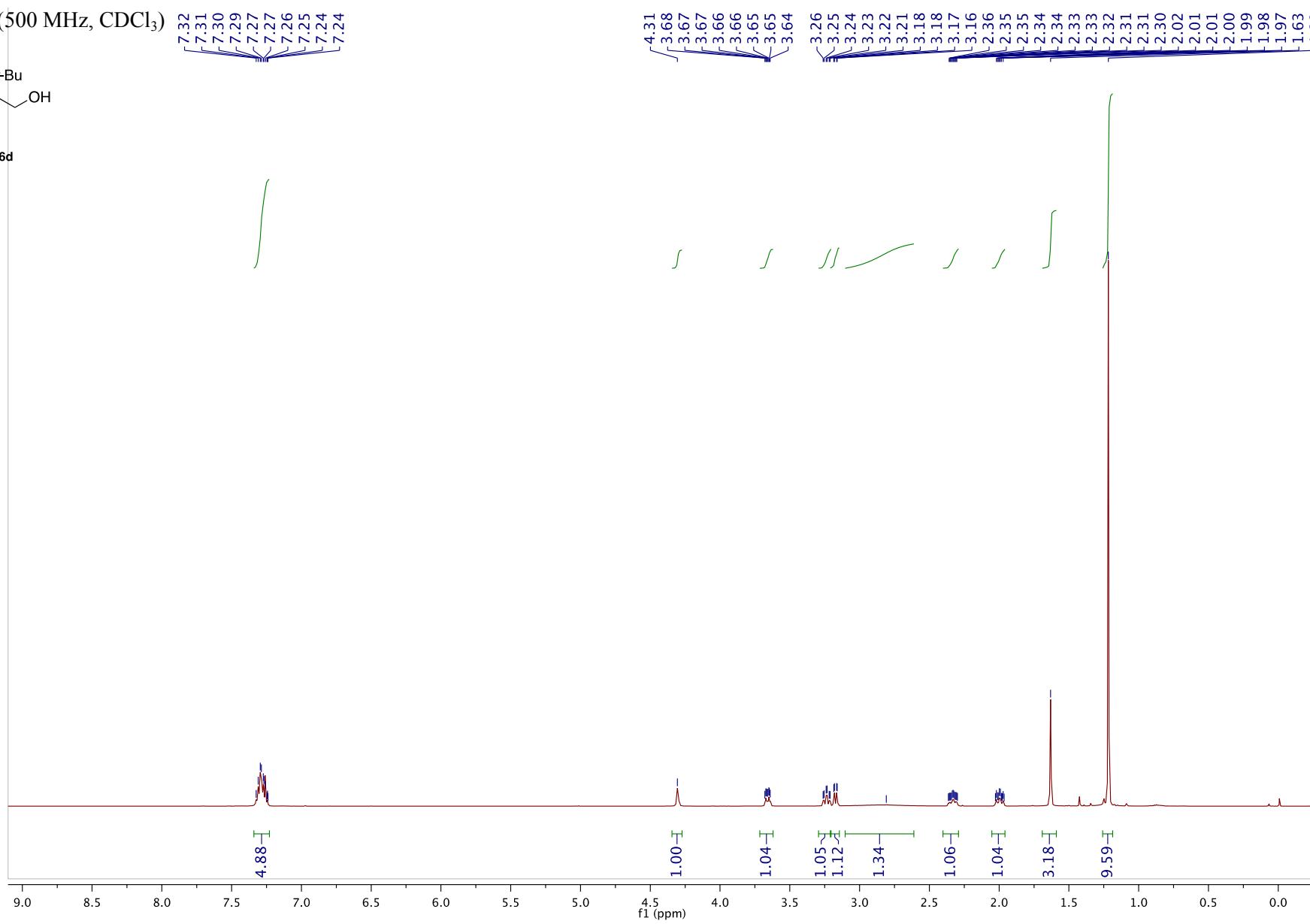
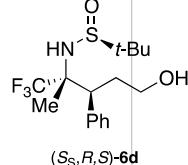
¹⁹F NMR (235 MHz, CDCl₃)

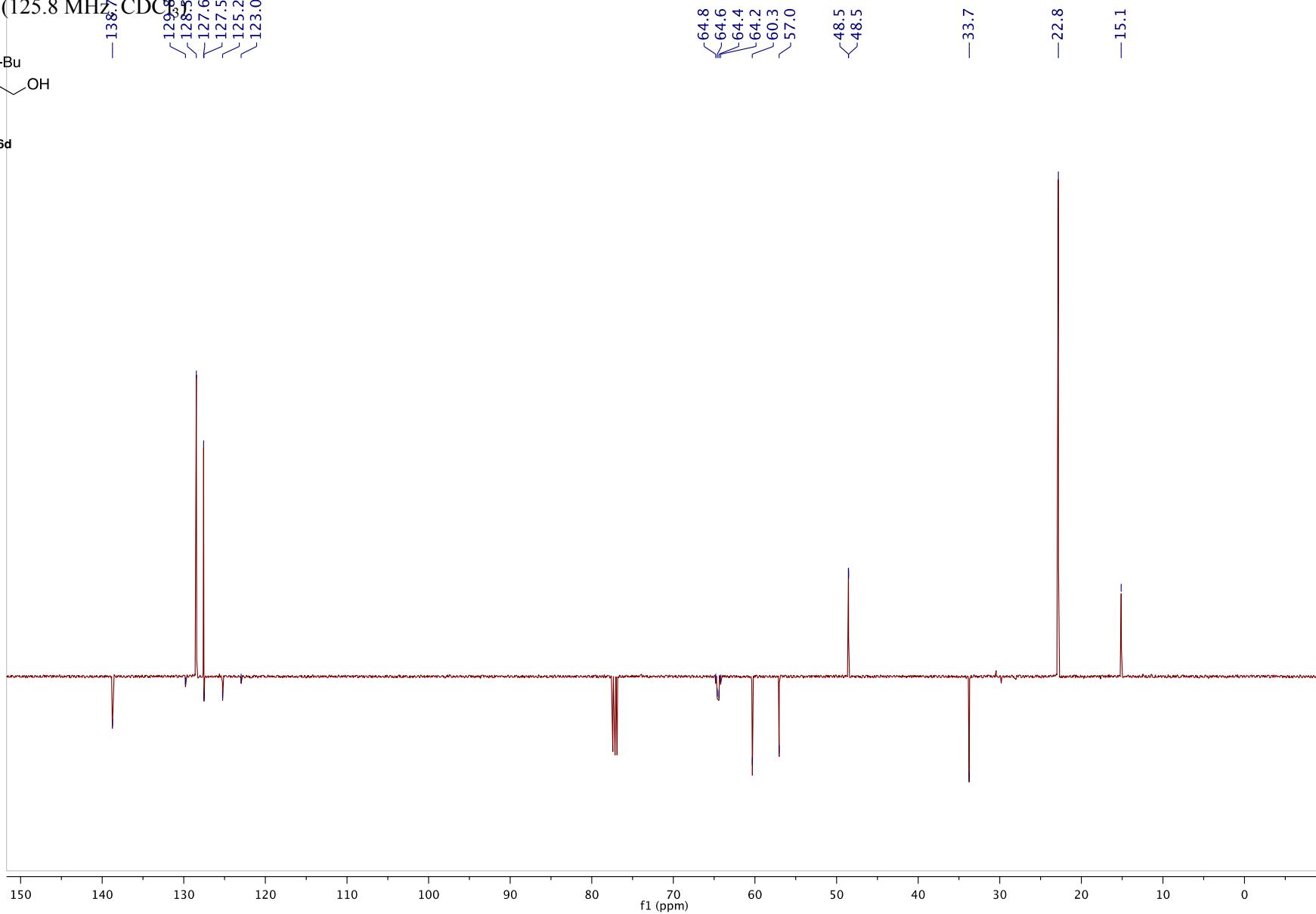
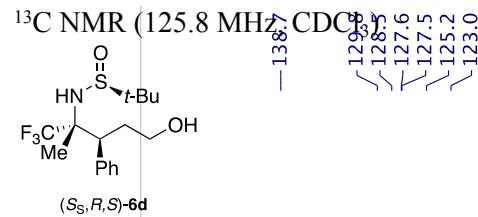


(S_S,R,S)-6d

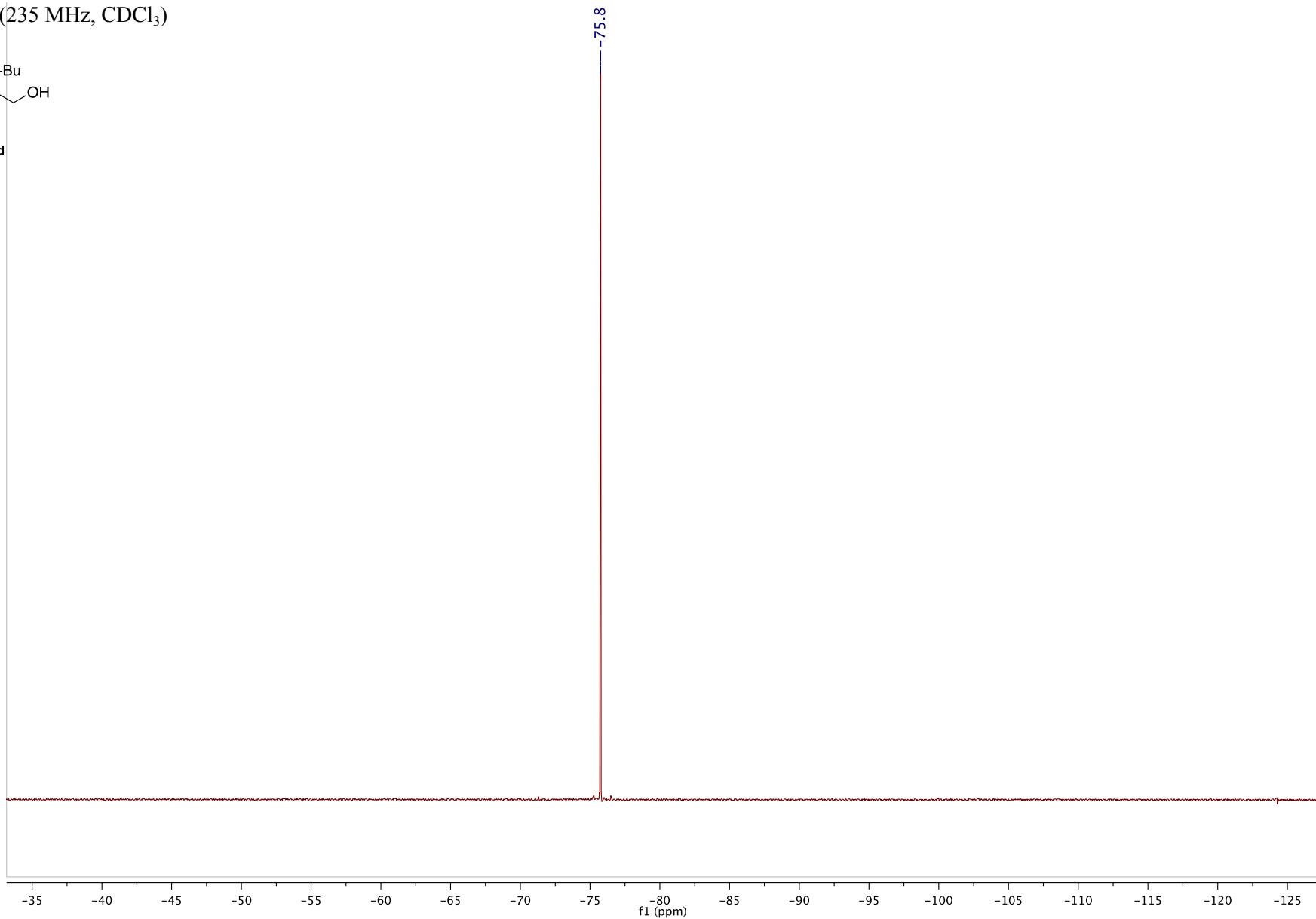
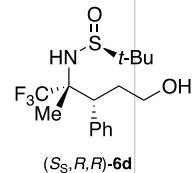


¹H NMR (500 MHz, CDCl₃)

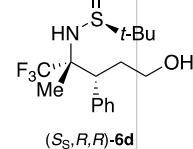


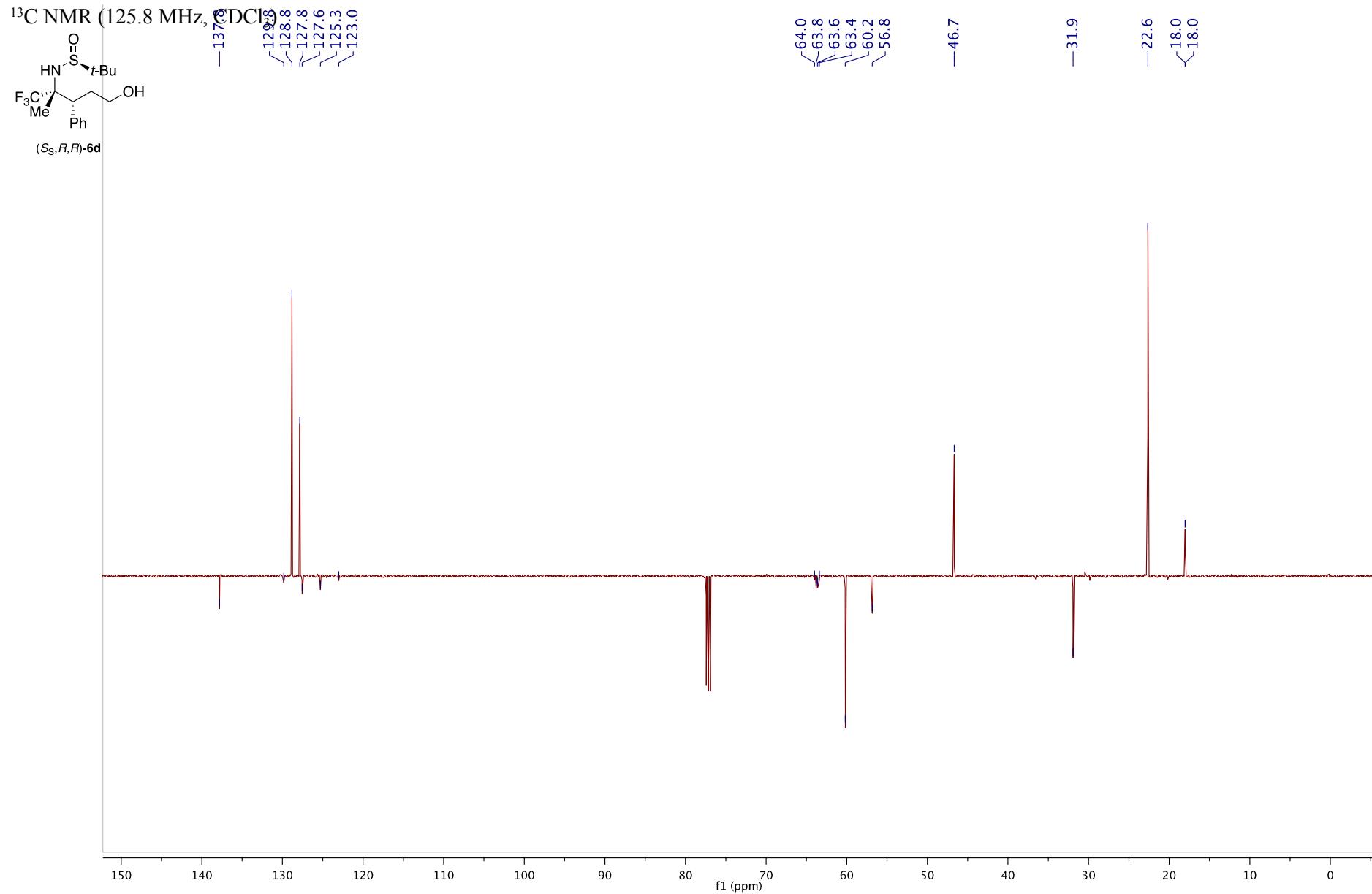


¹⁹F NMR (235 MHz, CDCl₃)

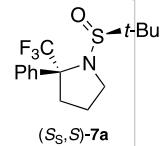


¹H NMR (500 MHz, CDCl₃)

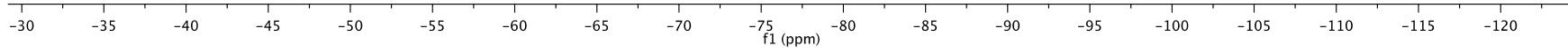


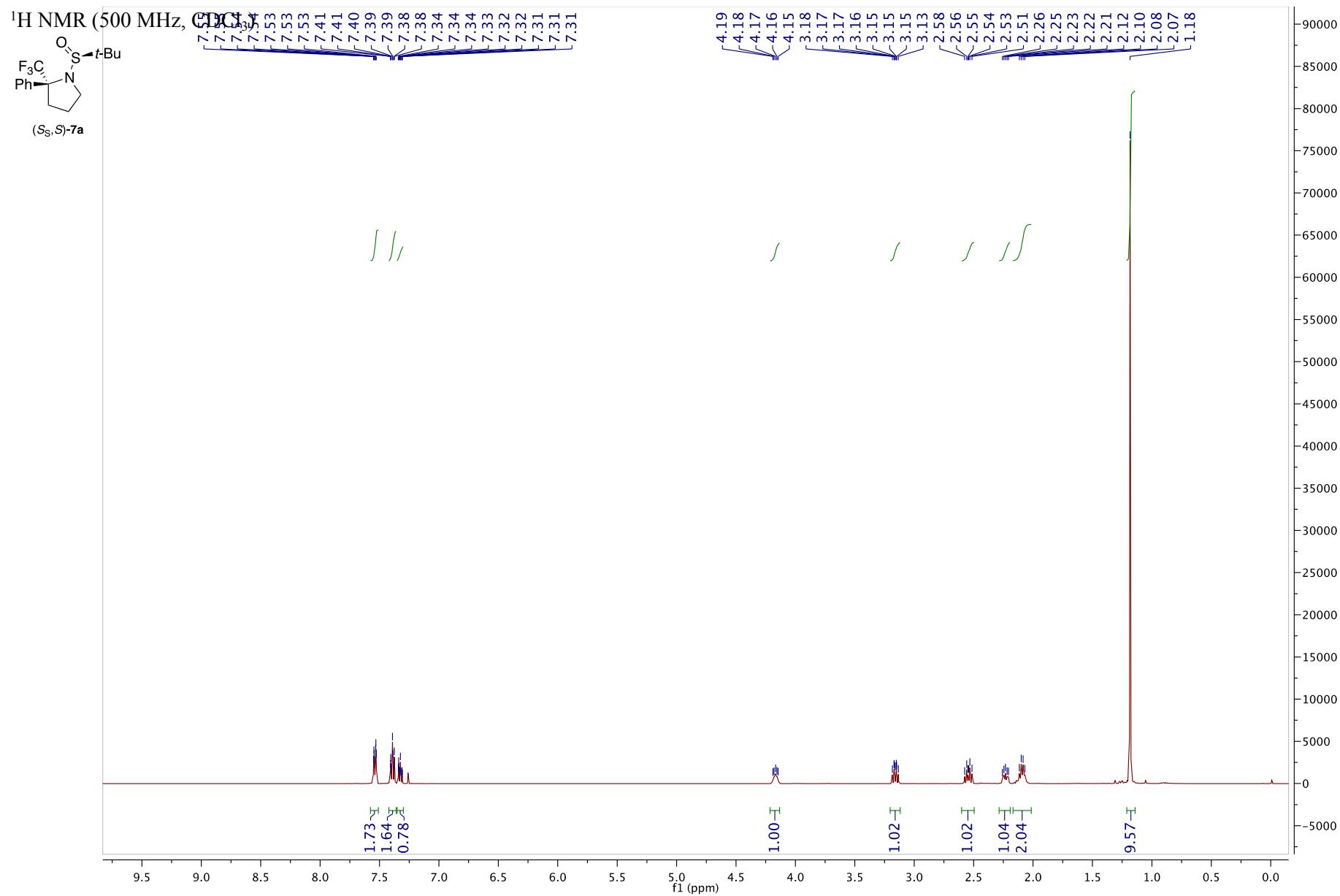


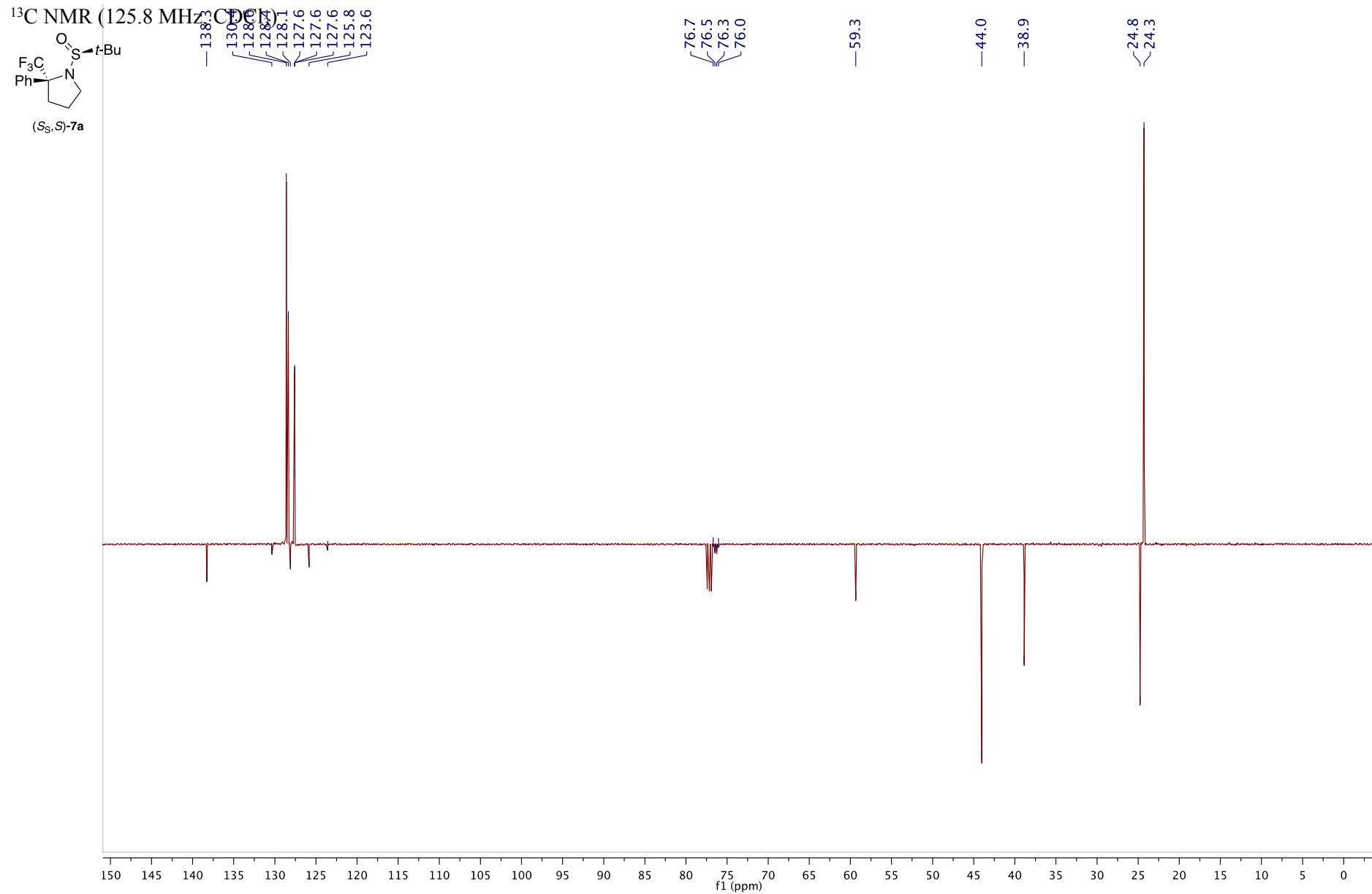
¹⁹F NMR (235 MHz, CDCl₃)



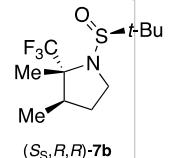
-71.2



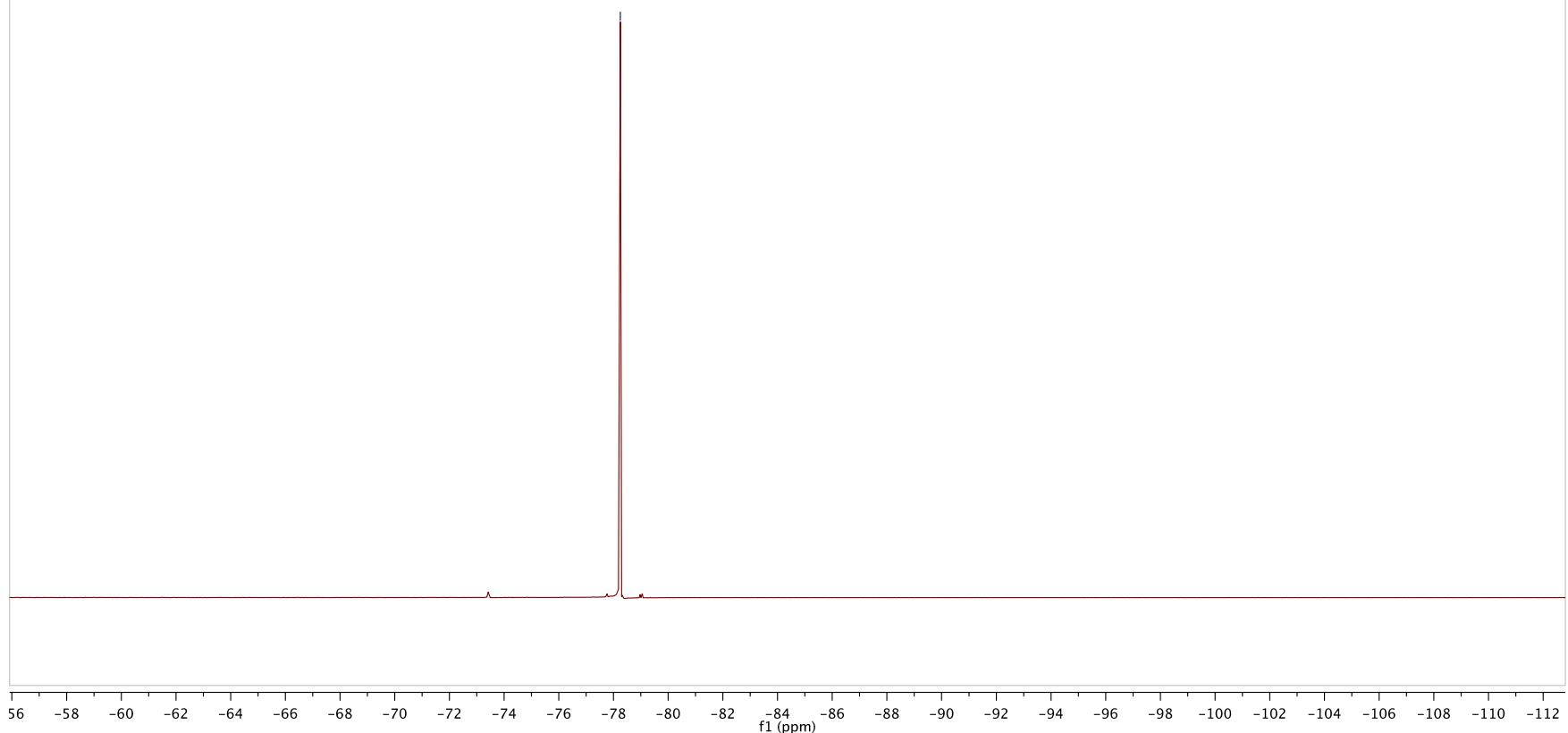




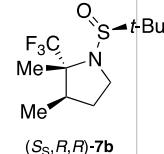
¹⁹F NMR (235 MHz, CDCl₃)



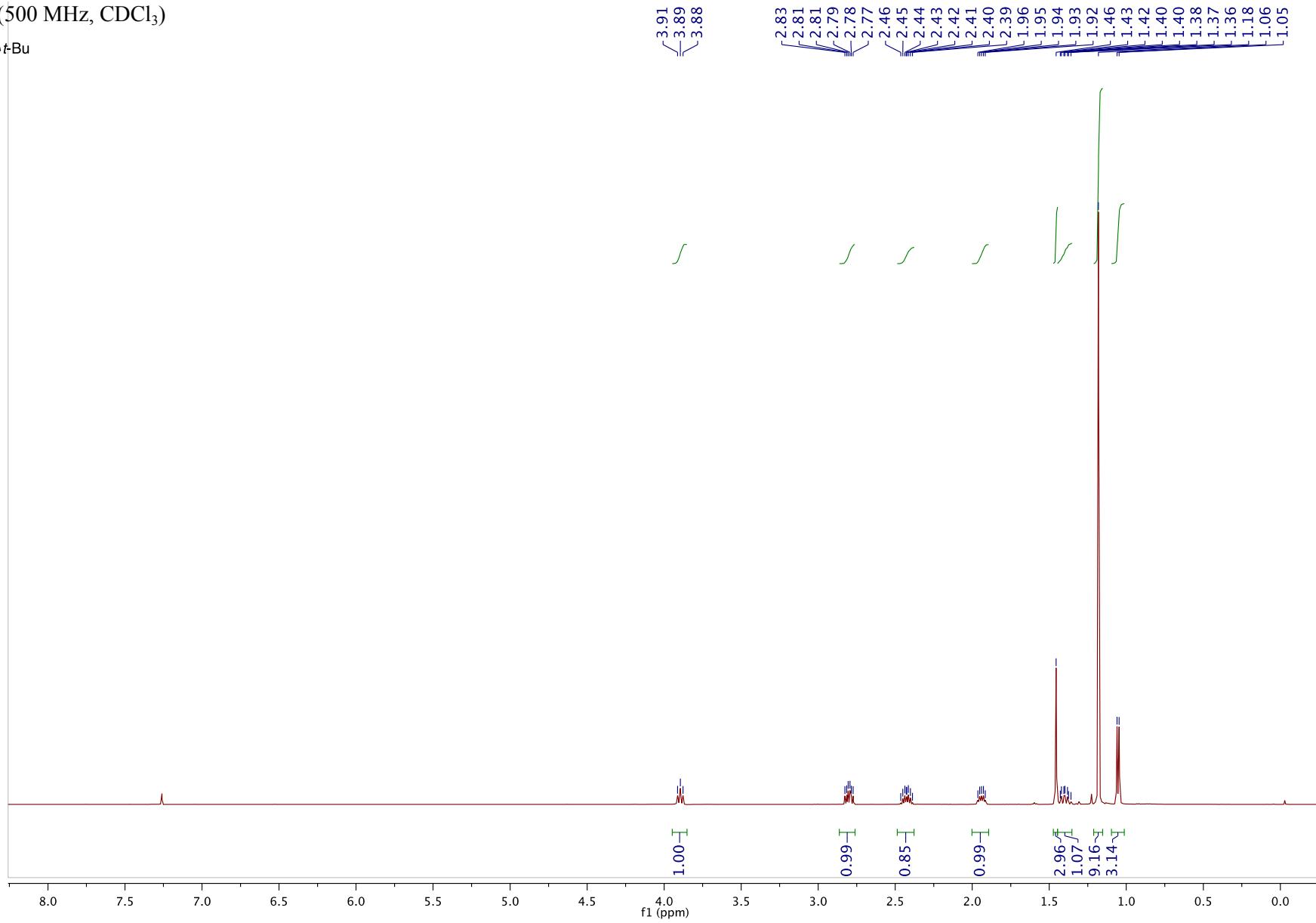
—78.2

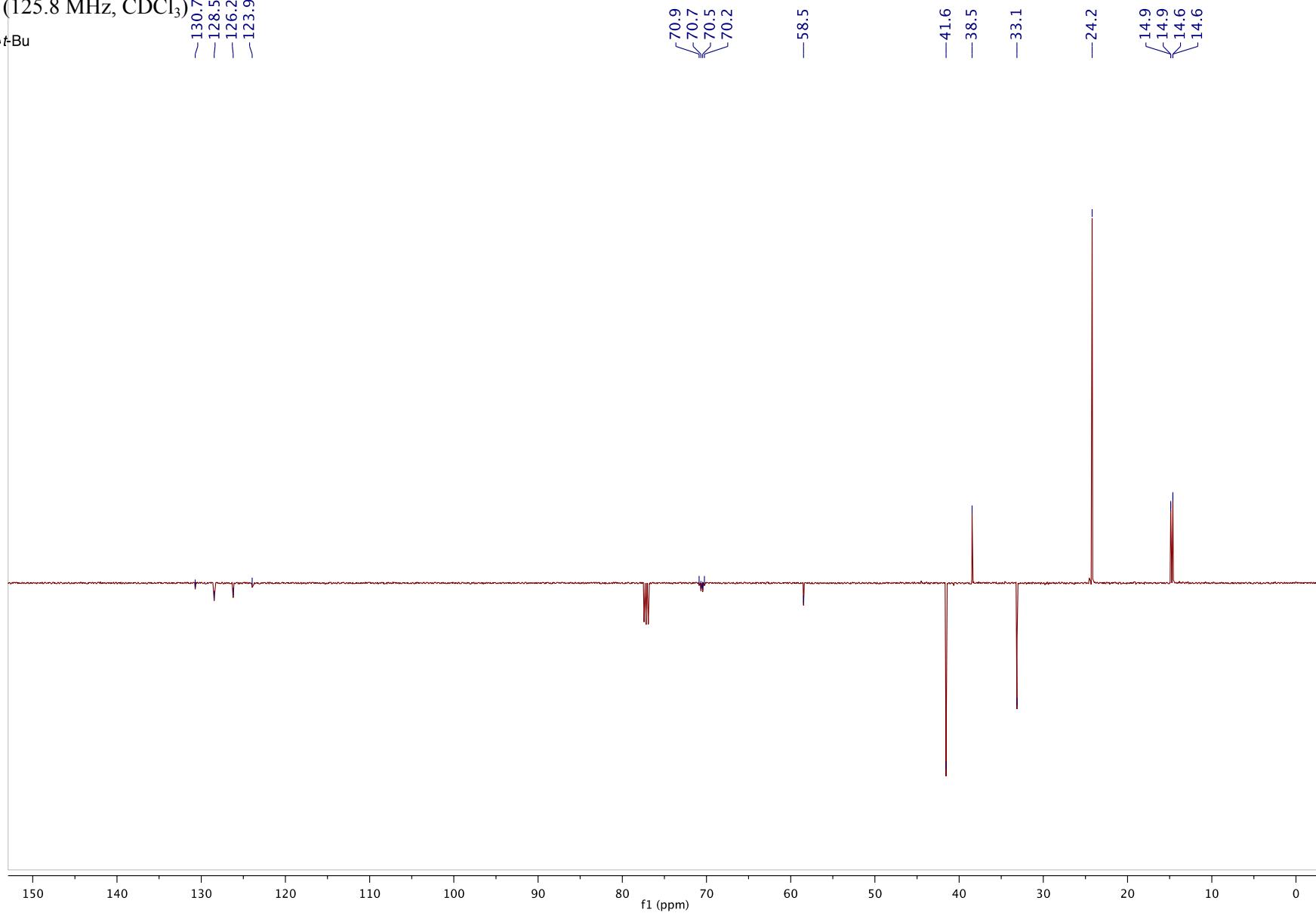
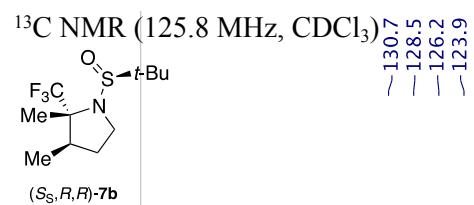


¹H NMR (500 MHz, CDCl₃)

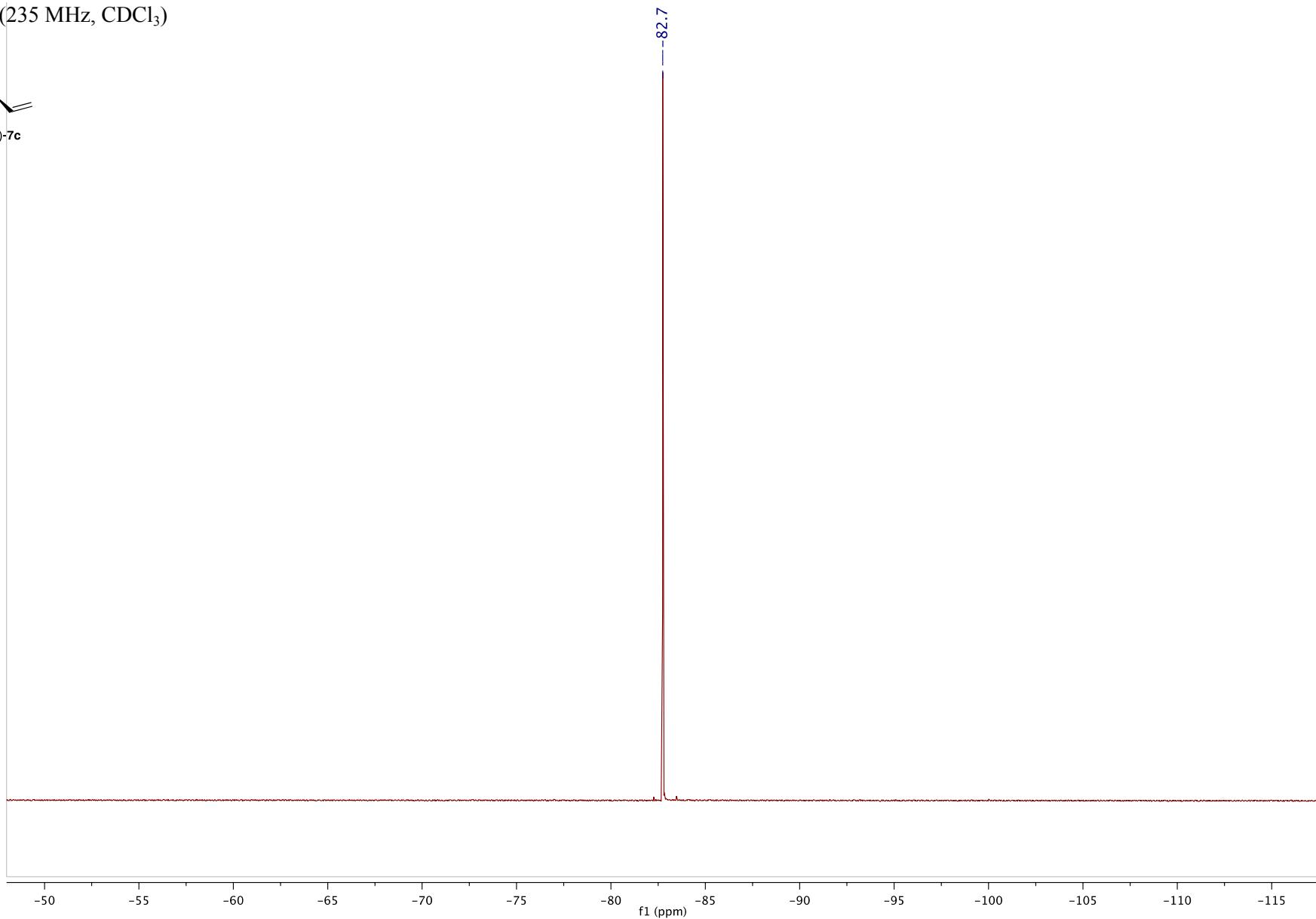
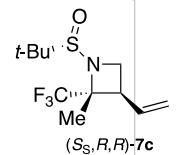


(S,S,R,R)-7b

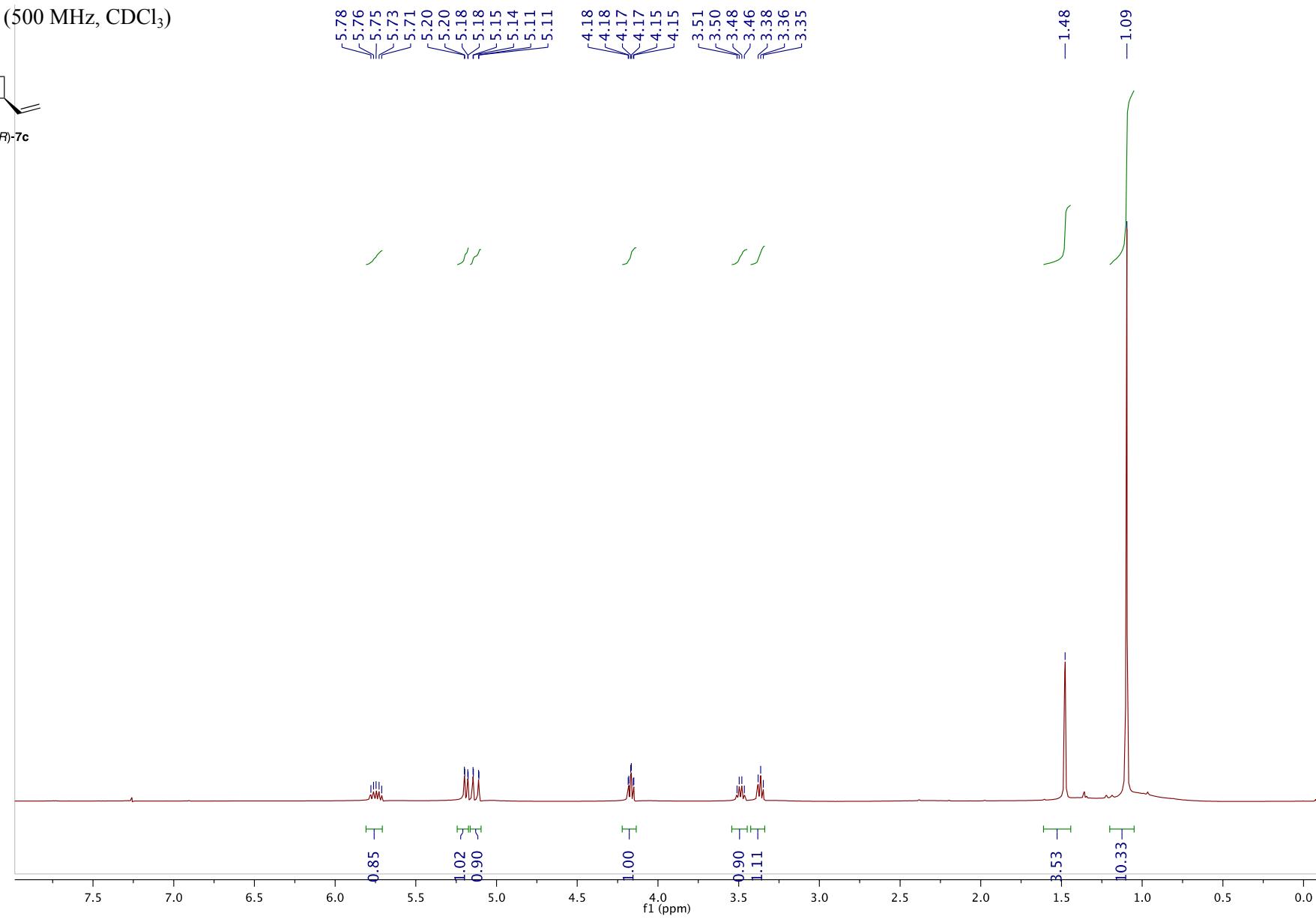
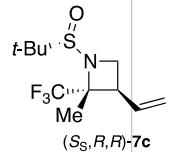




¹⁹F NMR (235 MHz, CDCl₃)



¹H NMR (500 MHz, CDCl₃)



¹³C NMR (125.8 MHz, CDCl₃)

