

A Three-Component Synthesis of Aryl(heteroaryl)acylamides

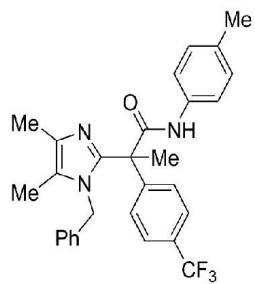
Supporting information

(part 2)

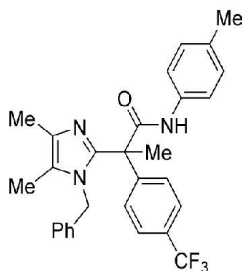
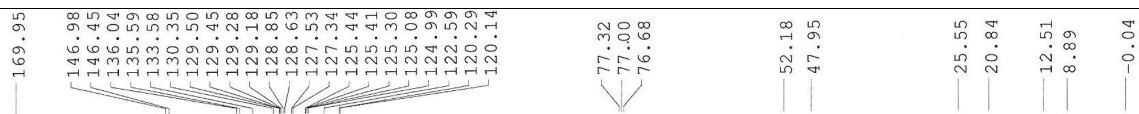
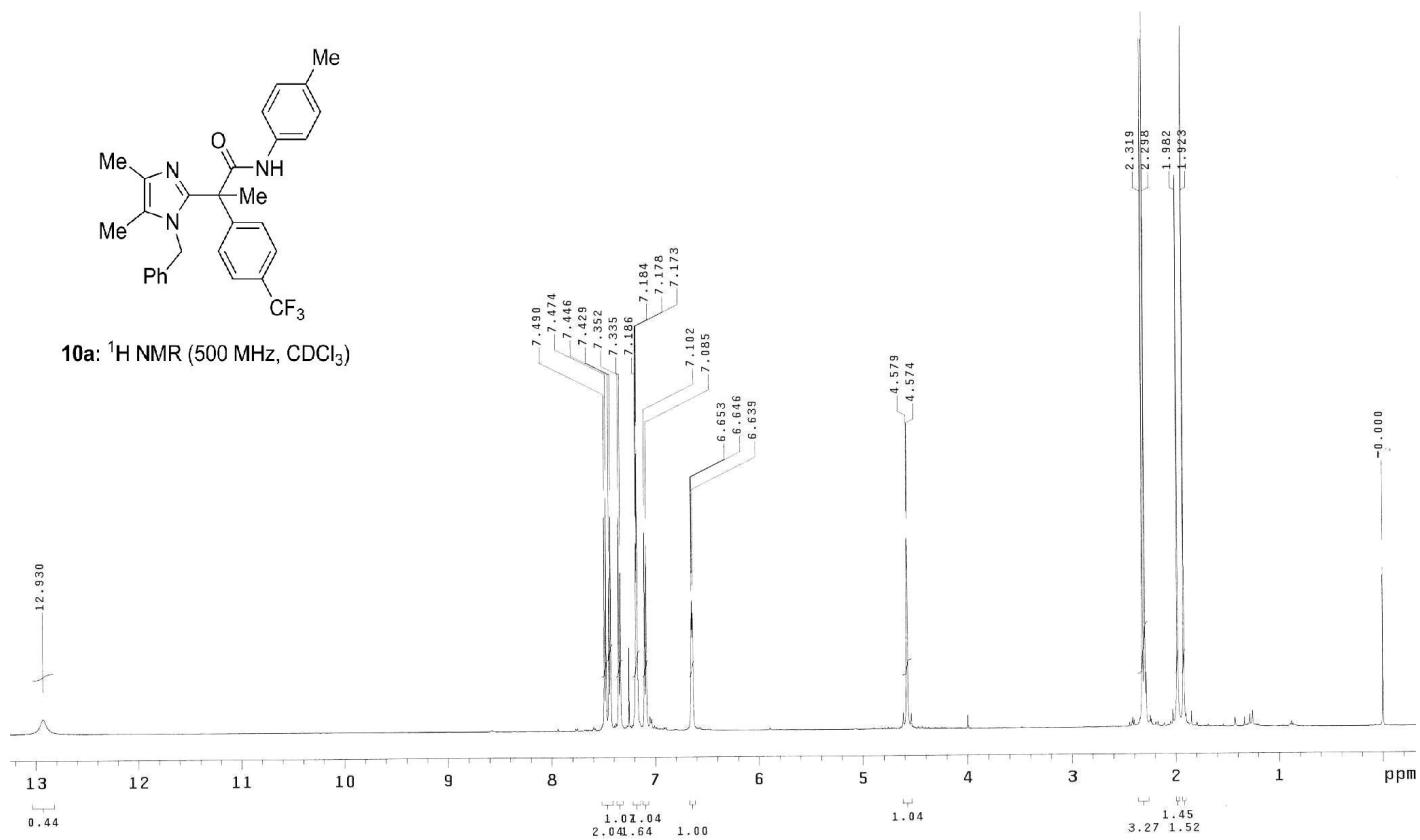
Rafał Loska,* Patrycja Bukowska

Institute of Organic Chemistry, Polish Academy of Sciences, Kasprzaka 44/52, 01-224 Warsaw 42, Poland

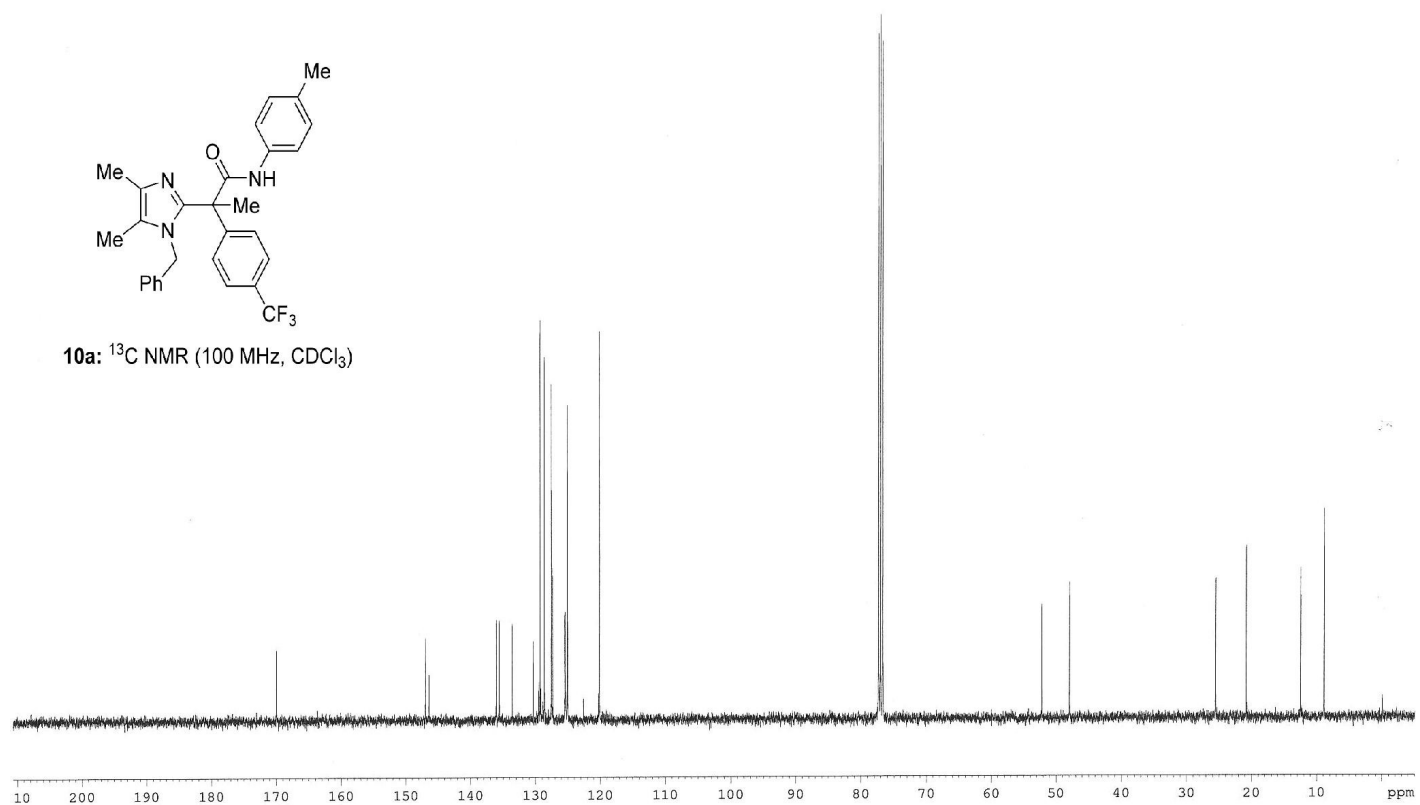
E-mail: rafal.loska@icho.edu.pl

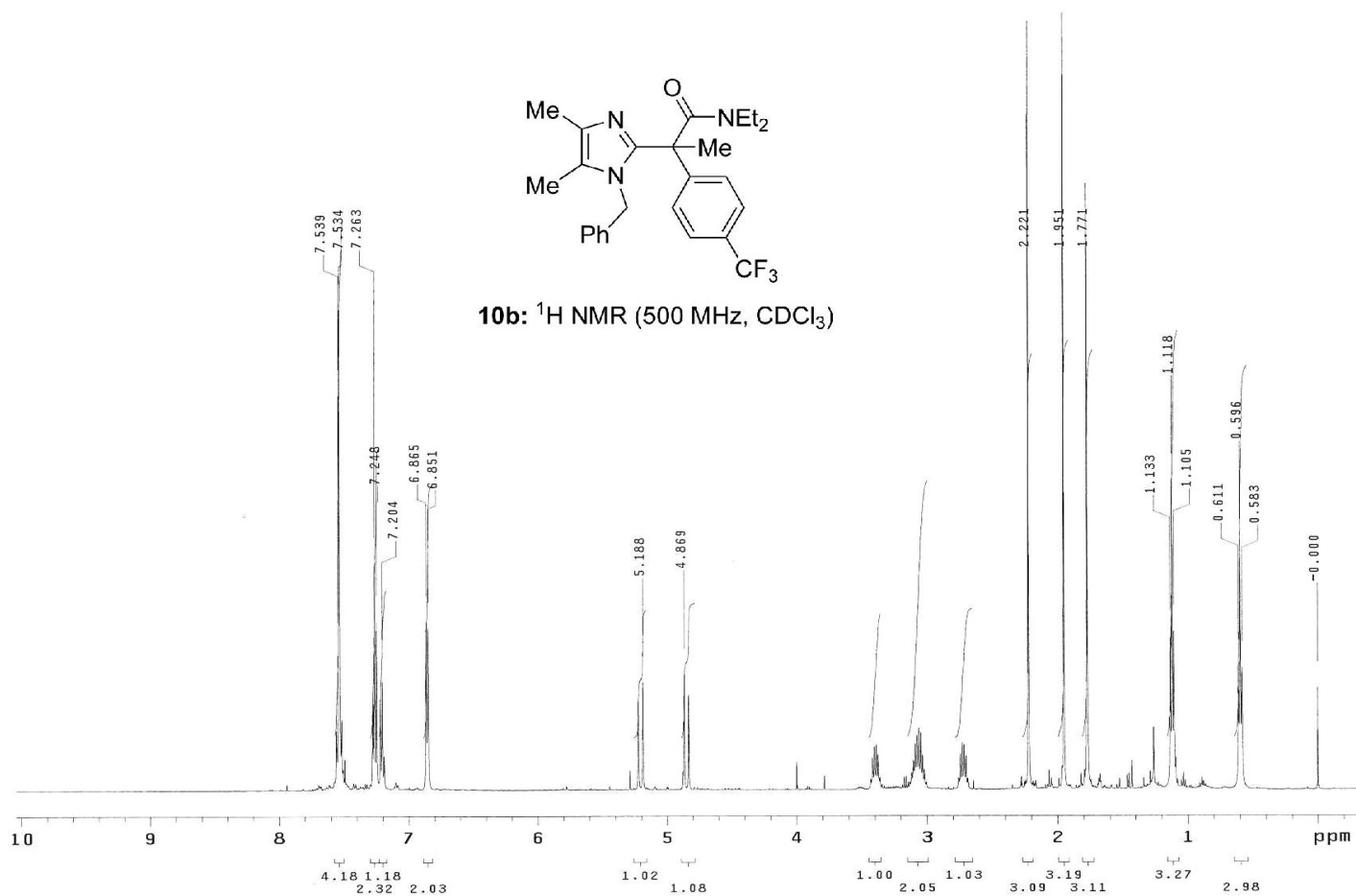
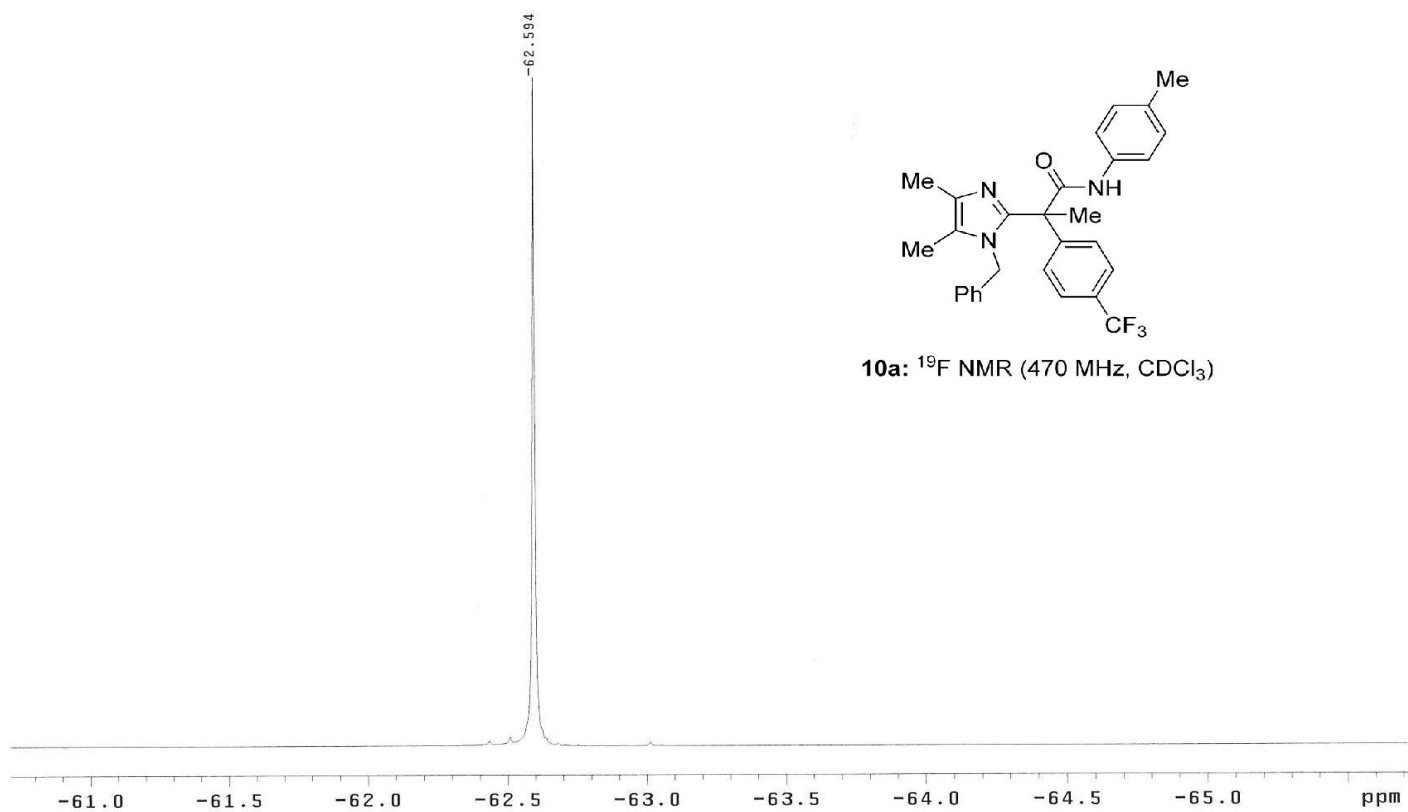


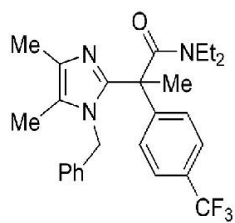
10a: ^1H NMR (500 MHz, CDCl_3)



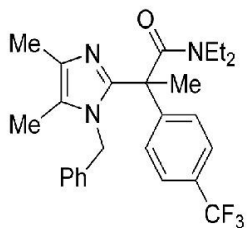
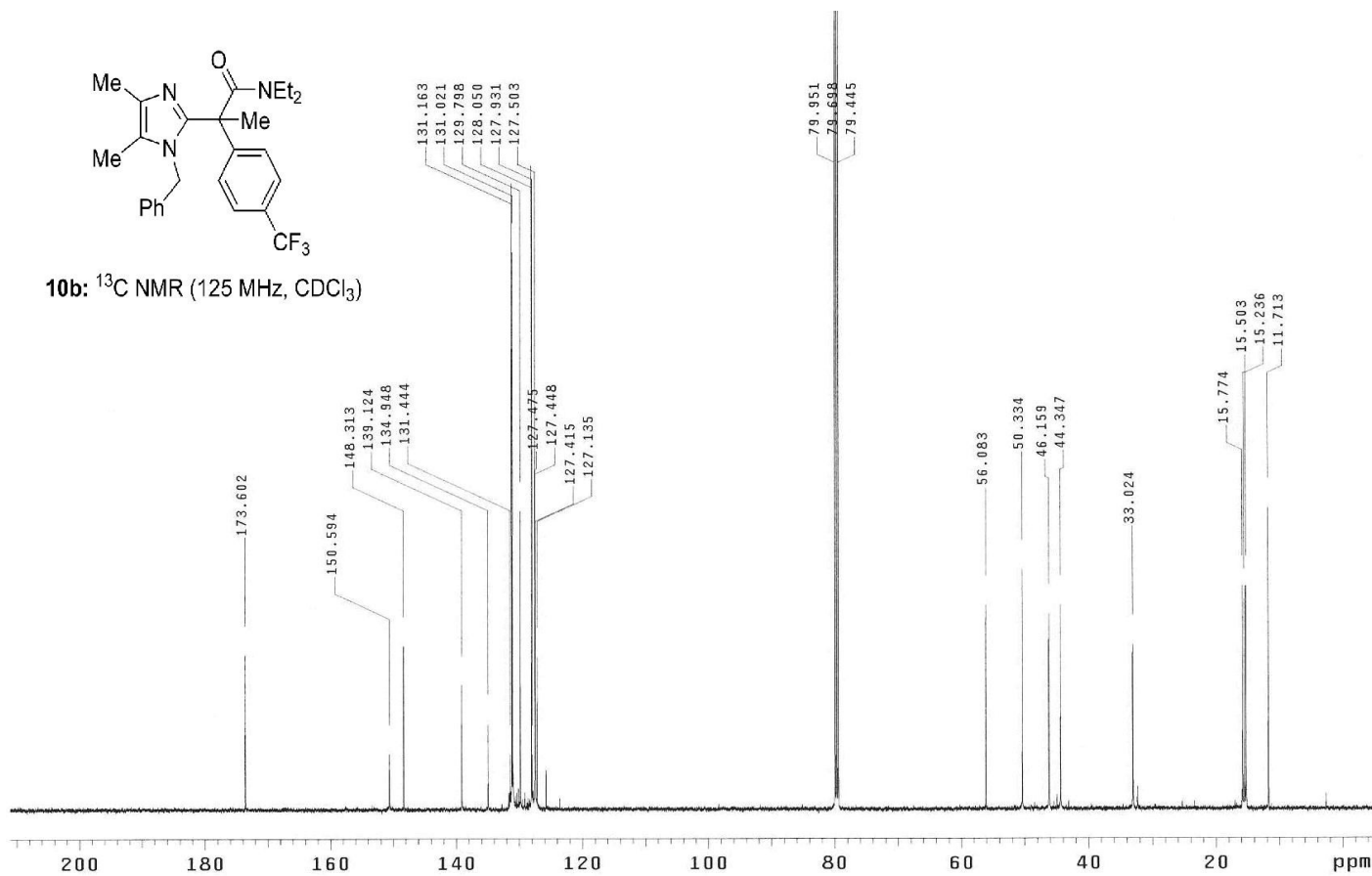
10a: ^{13}C NMR (100 MHz, CDCl_3)



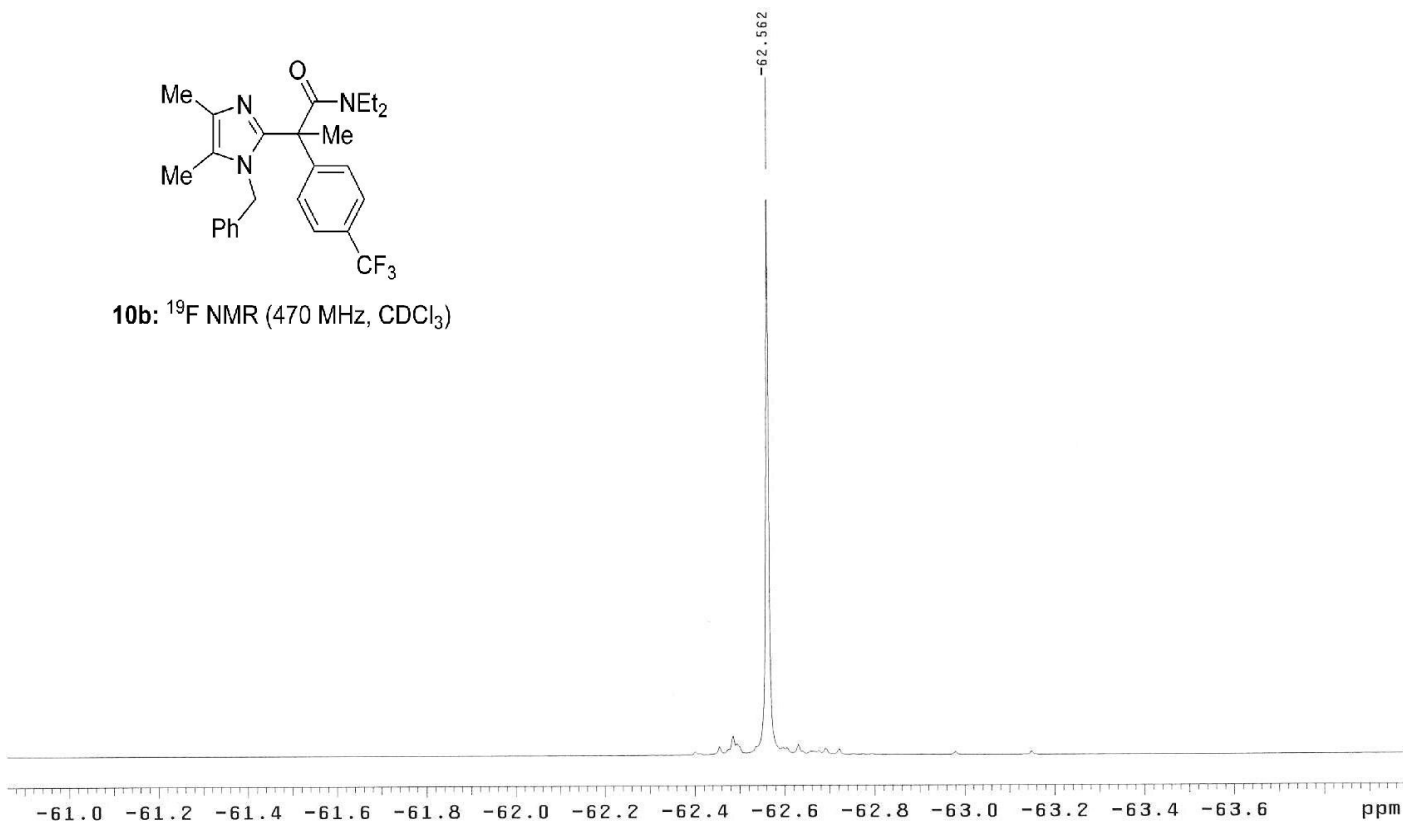


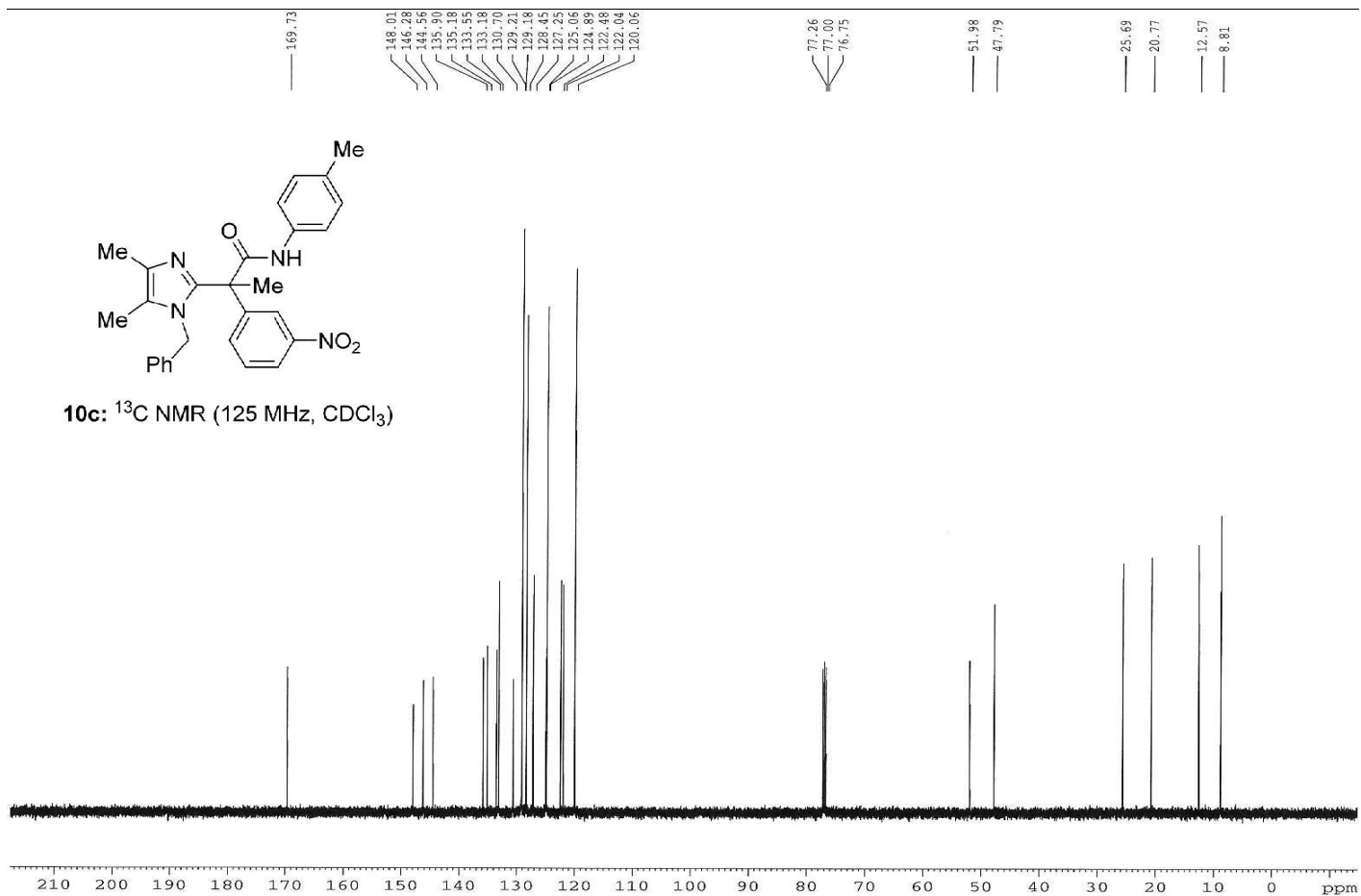
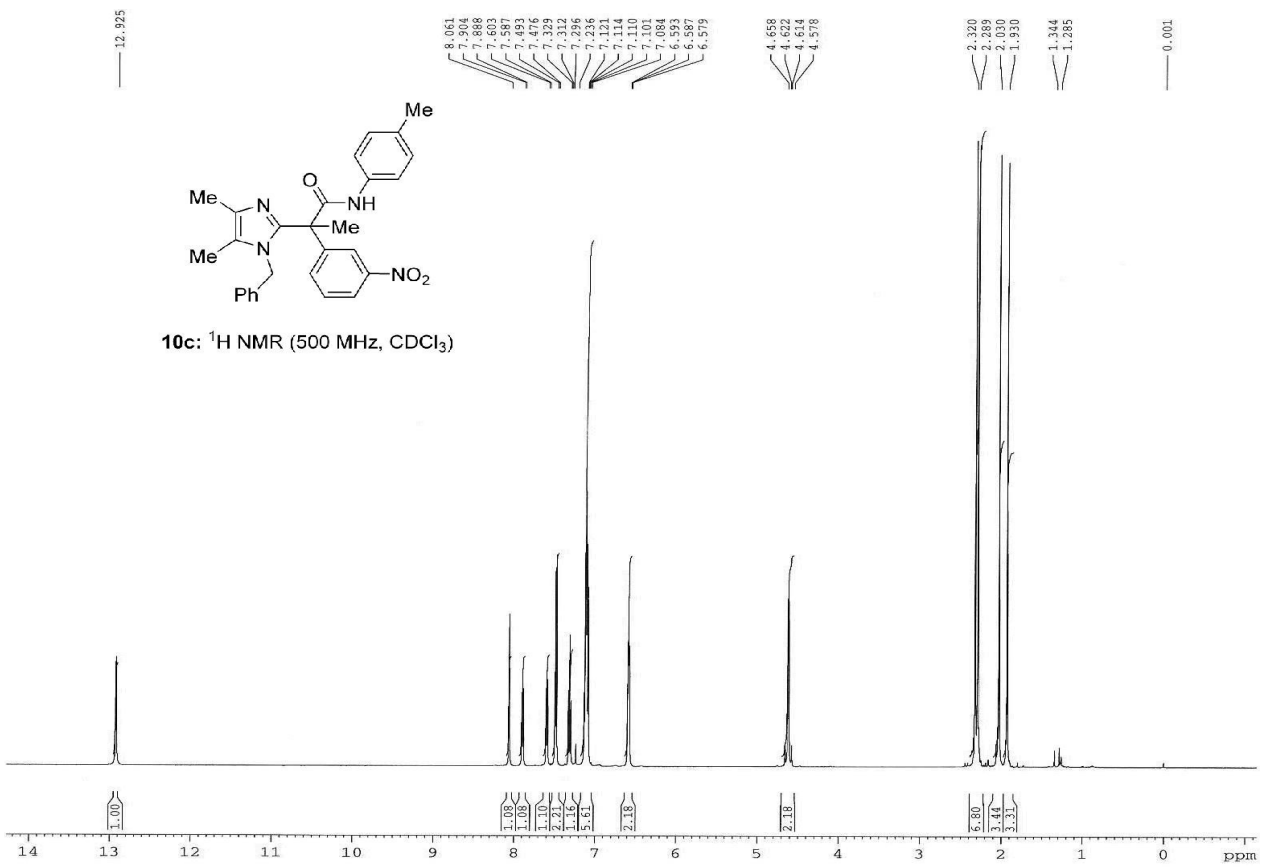


10b: ^{13}C NMR (125 MHz, CDCl_3)

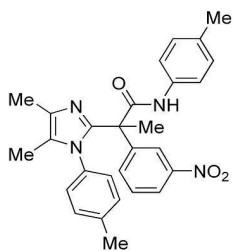


10b: ^{19}F NMR (470 MHz, CDCl_3)

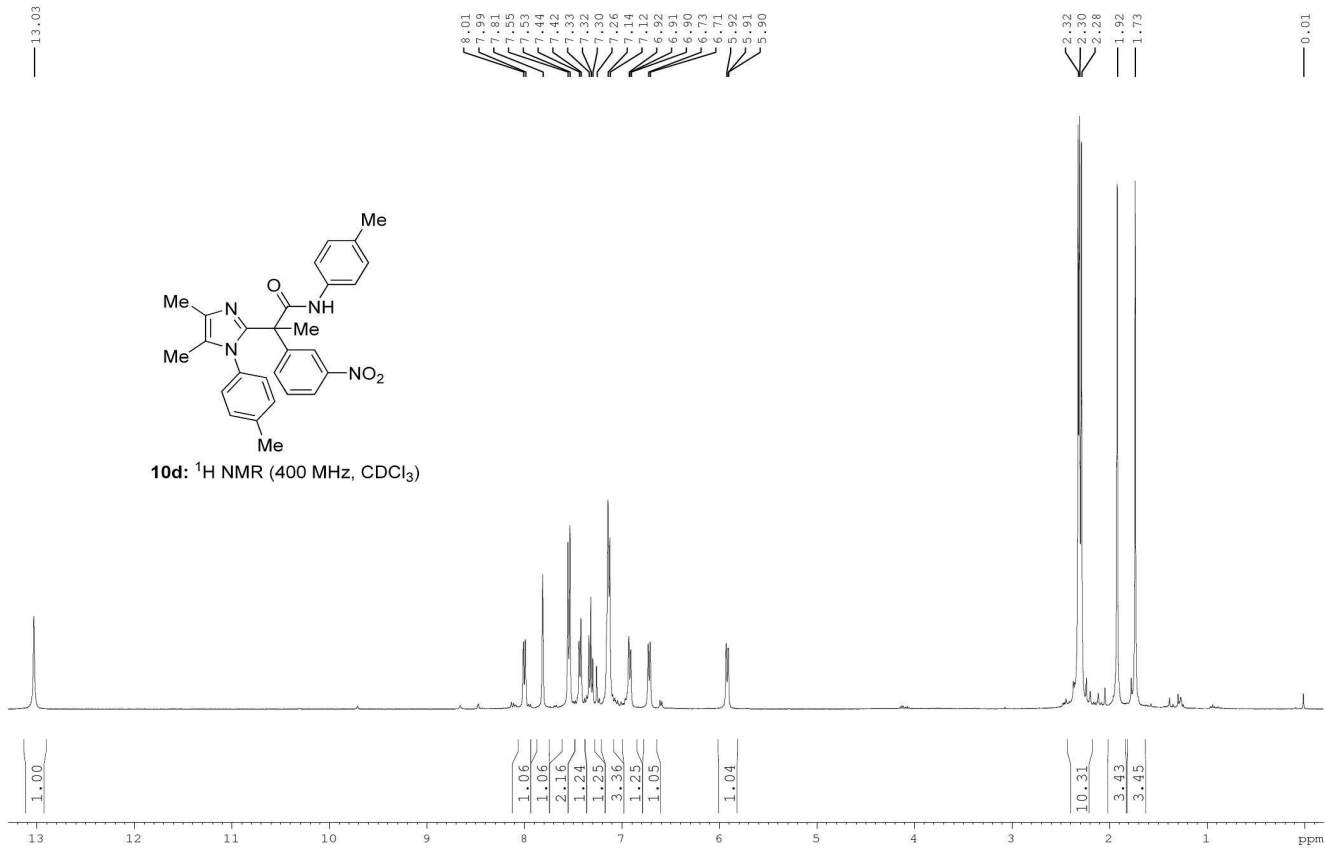




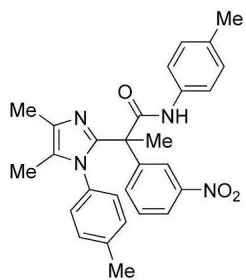
13.03



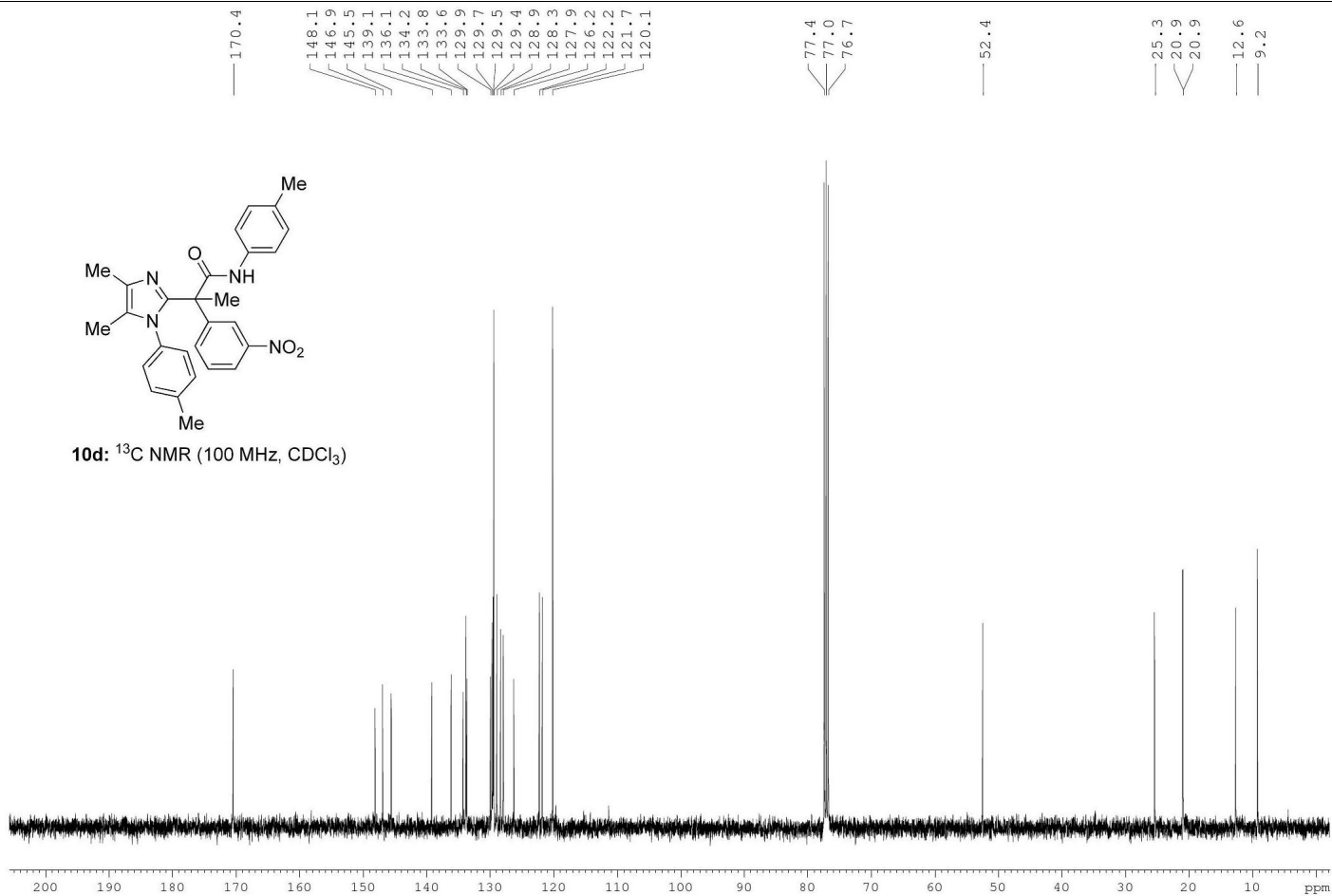
10d: ¹H NMR (400 MHz, CDCl₃)

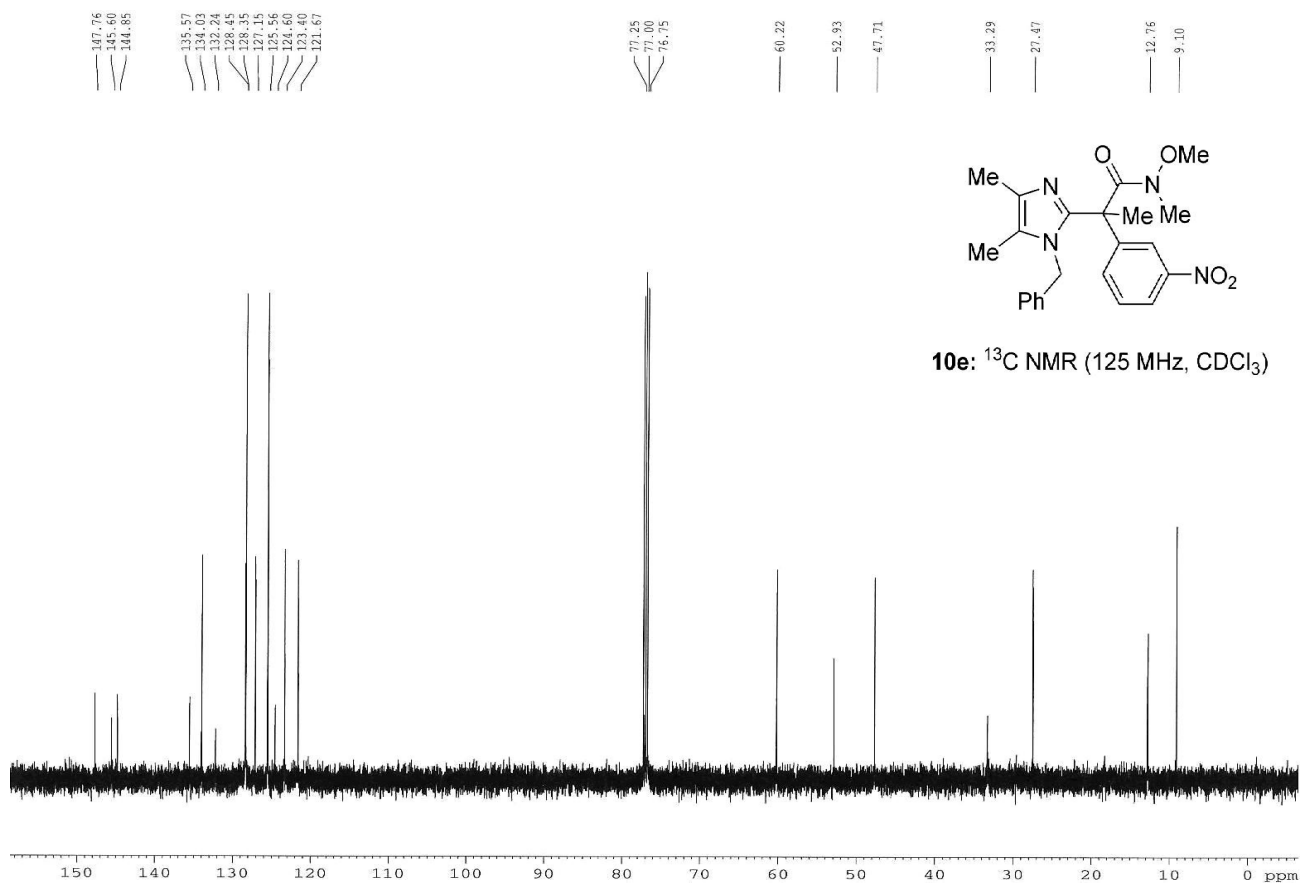
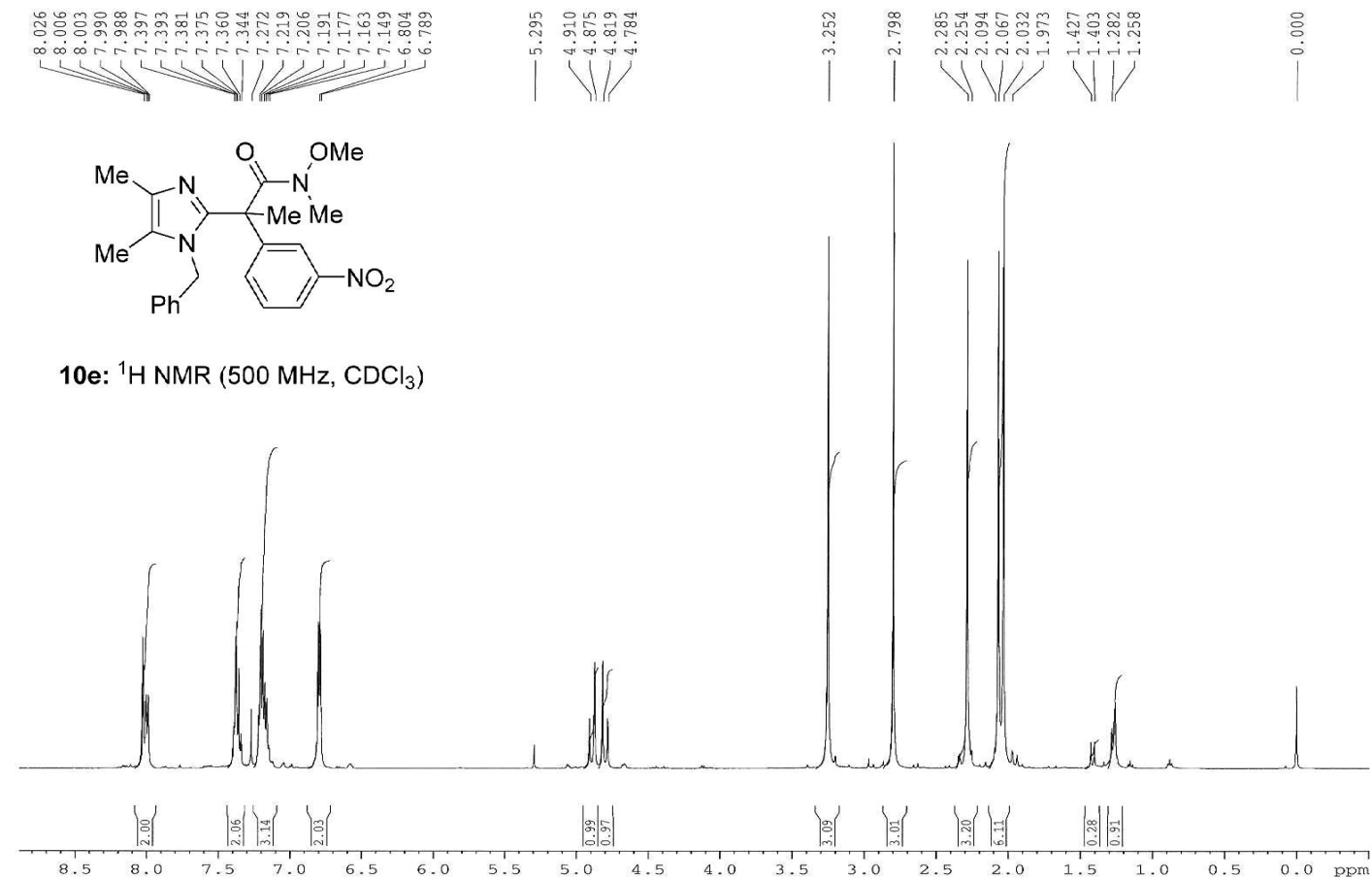


170.4

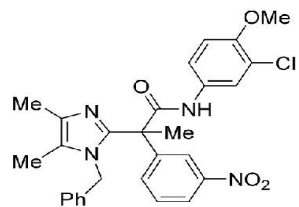


10d: ¹³C NMR (100 MHz, CDCl₃)

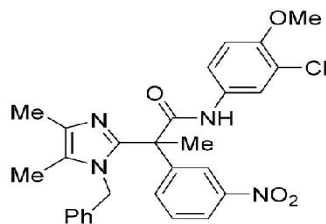
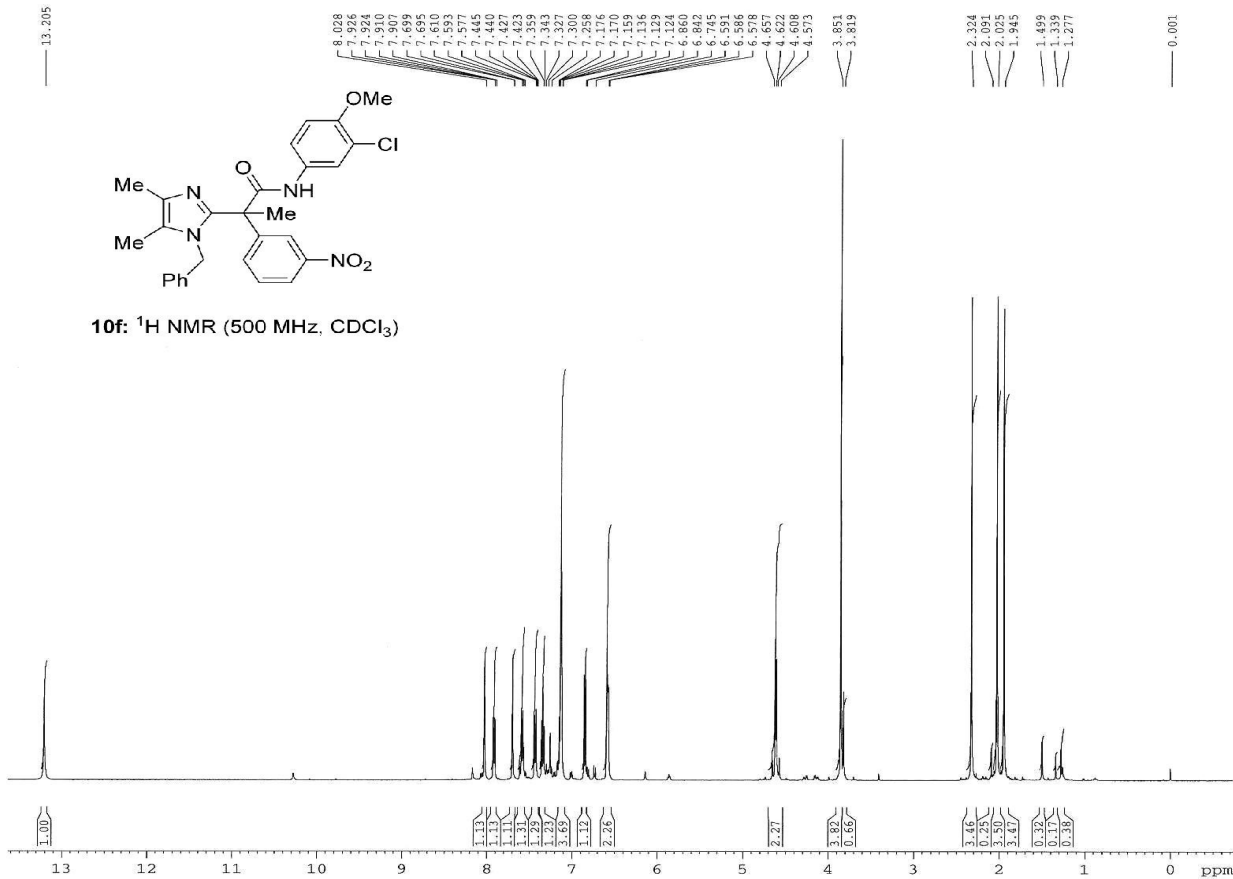




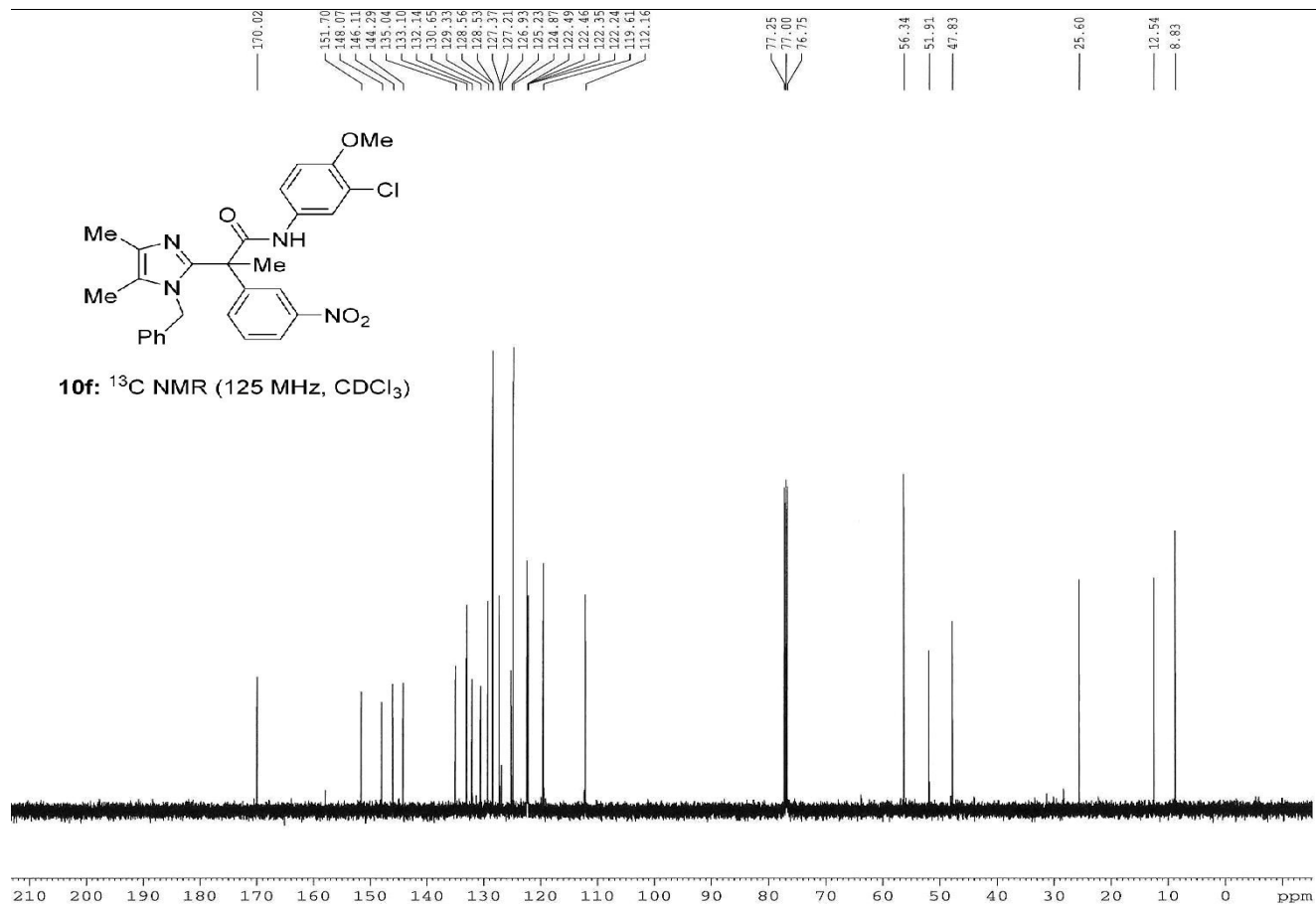
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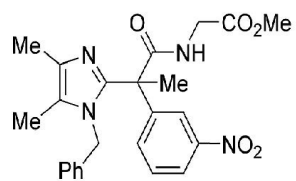


10f: ^1H NMR (500 MHz, CDCl_3)

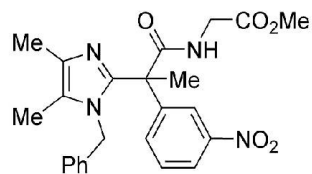
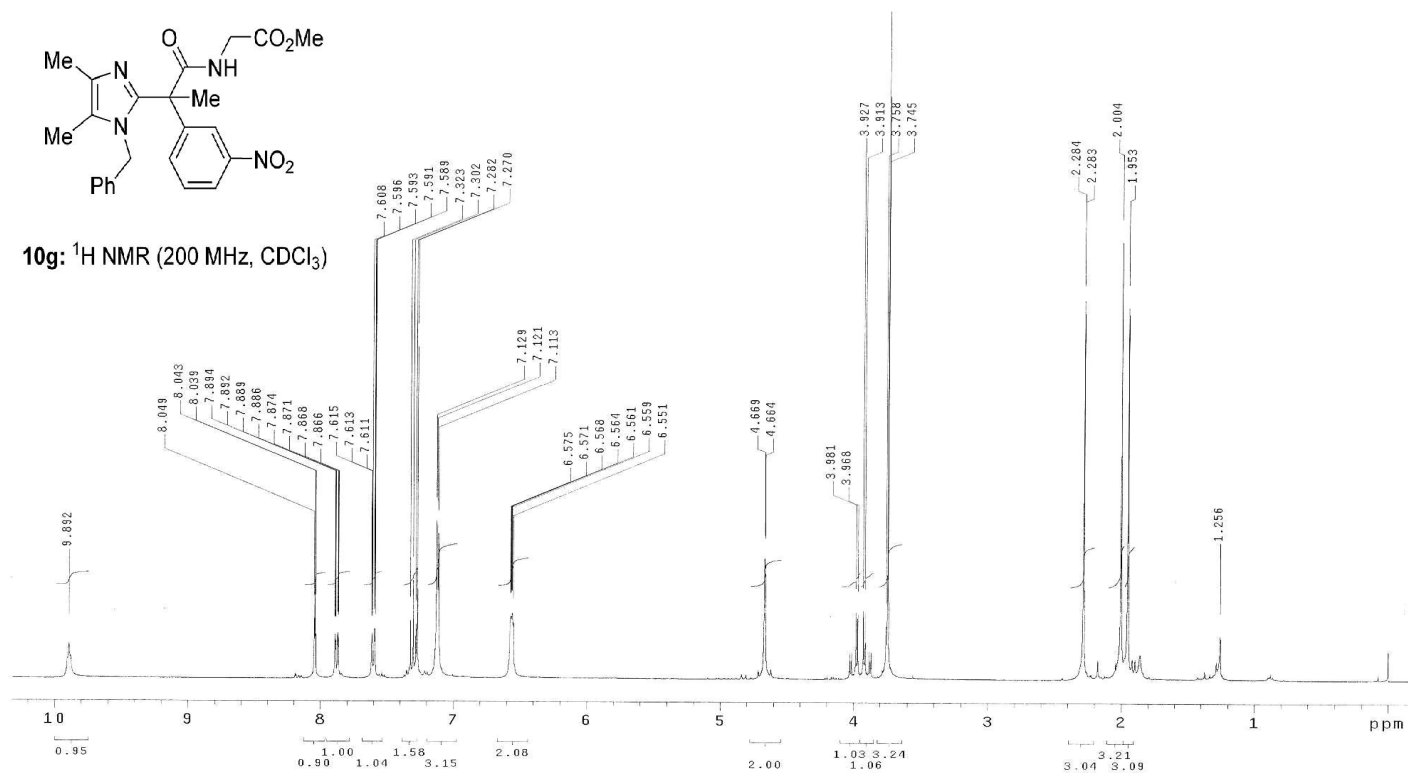


10f: ^{13}C NMR (125 MHz, CDCl_3)

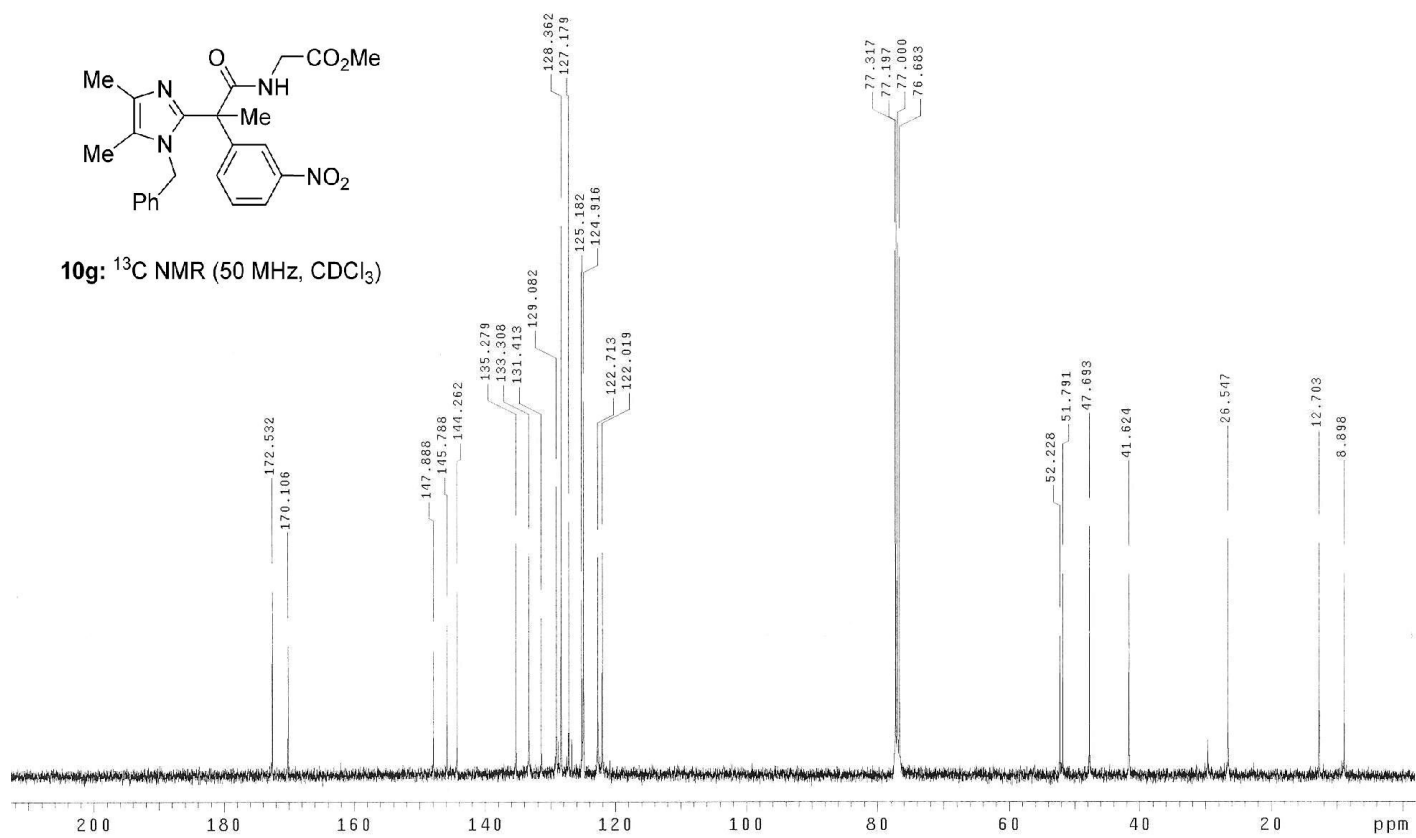


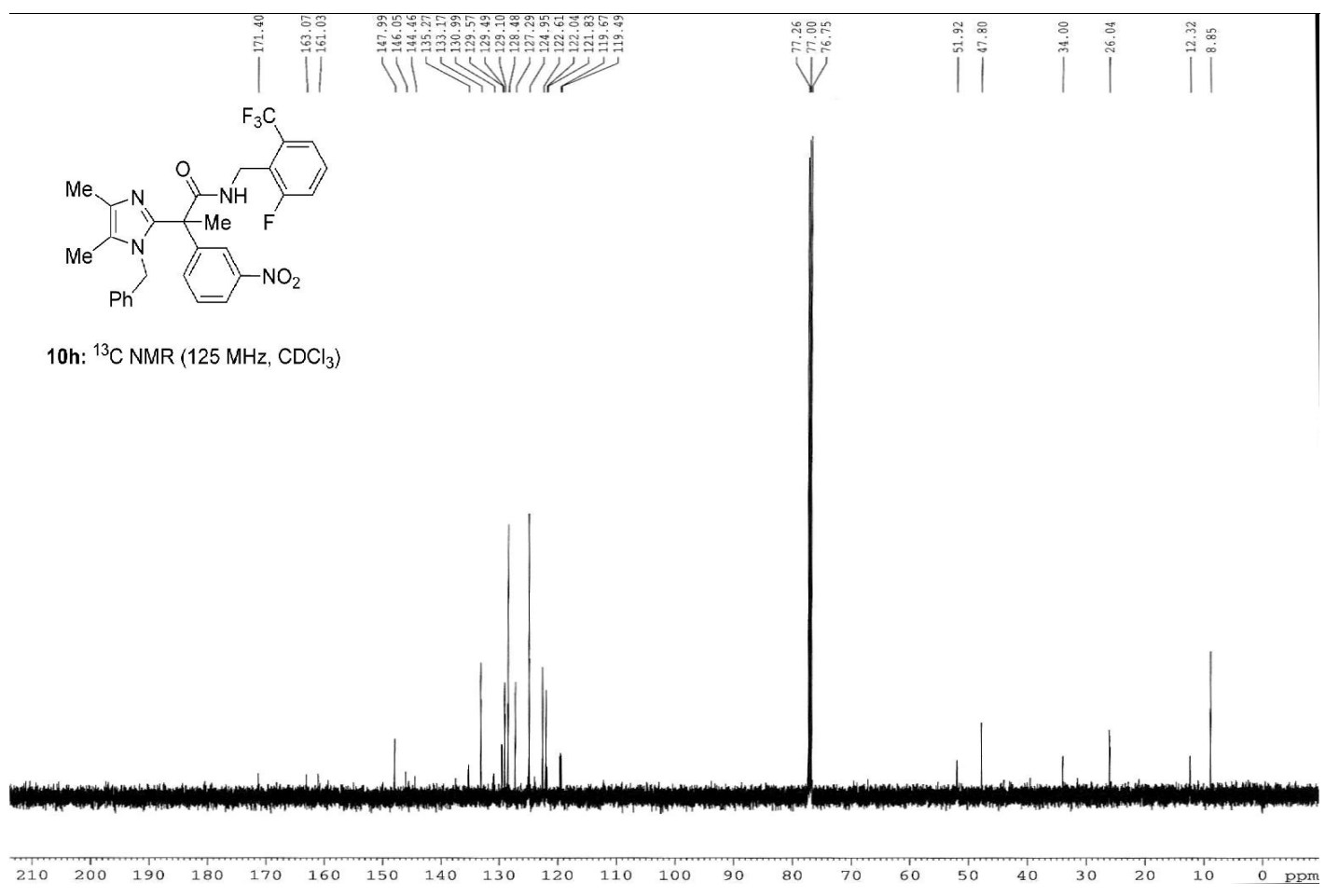
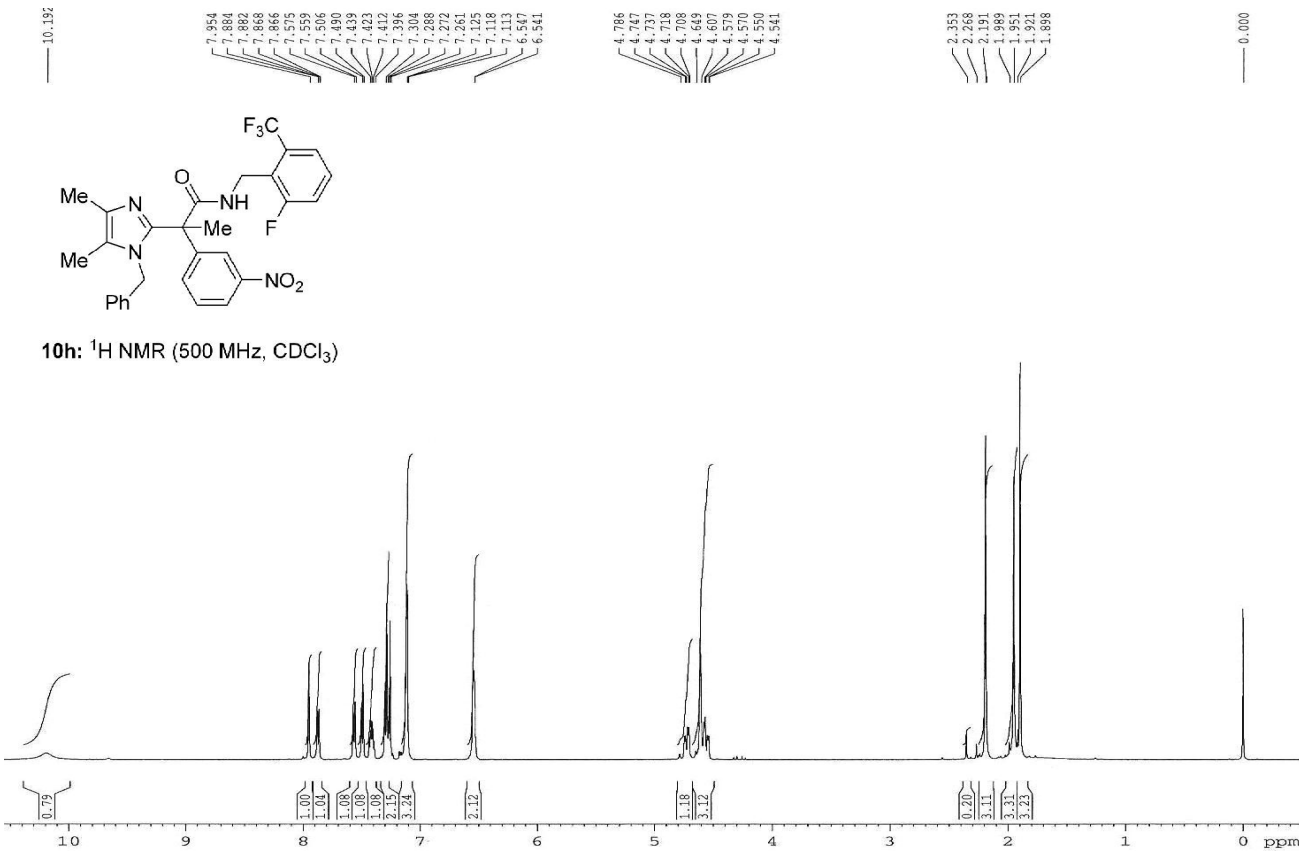


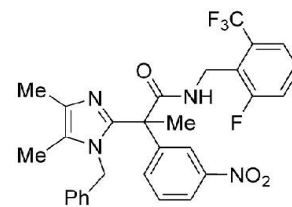
10g: ^1H NMR (200 MHz, CDCl_3)



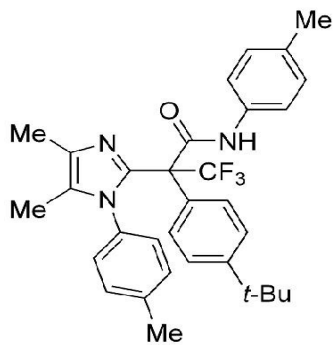
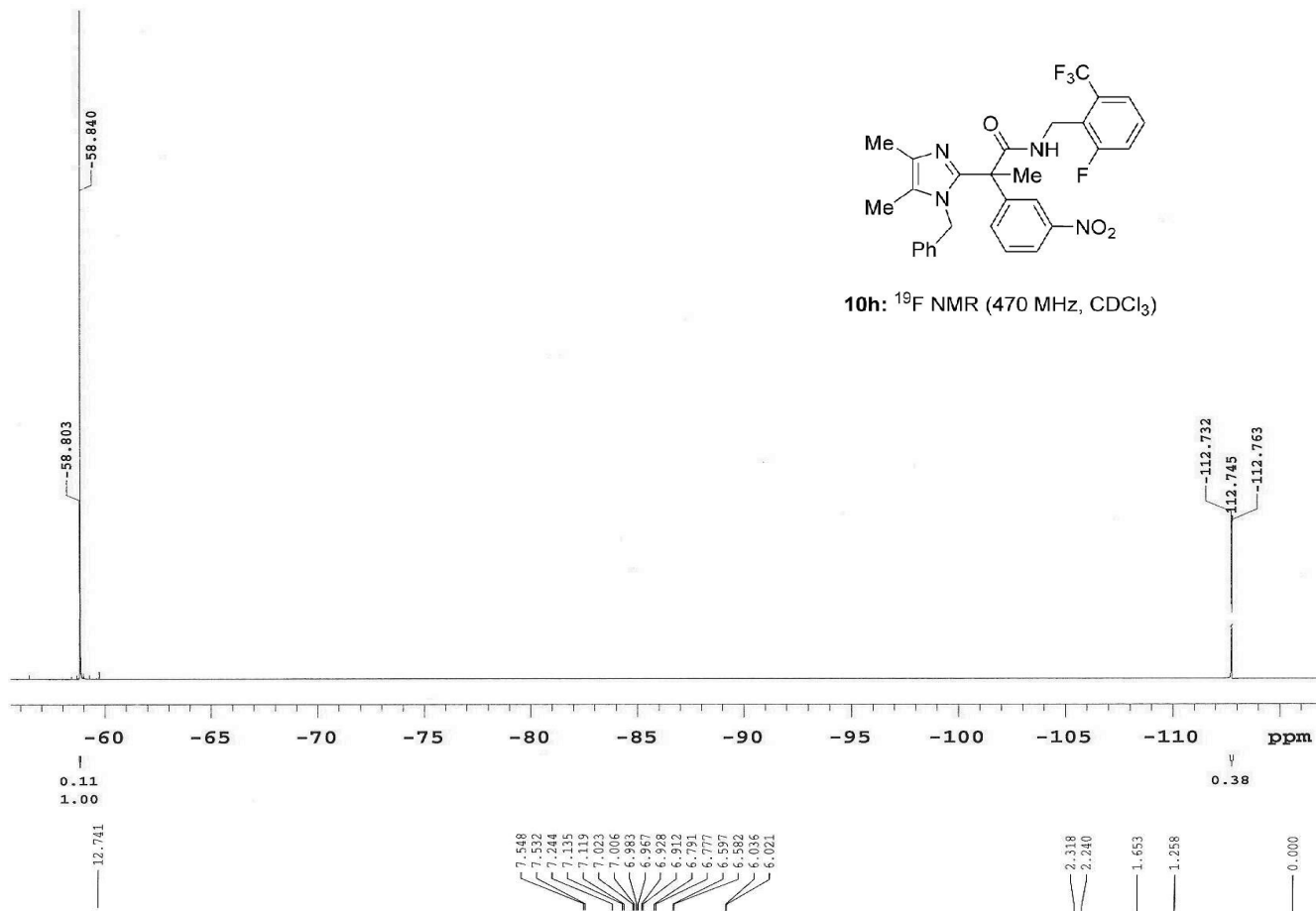
10g: ^{13}C NMR (50 MHz, CDCl_3)



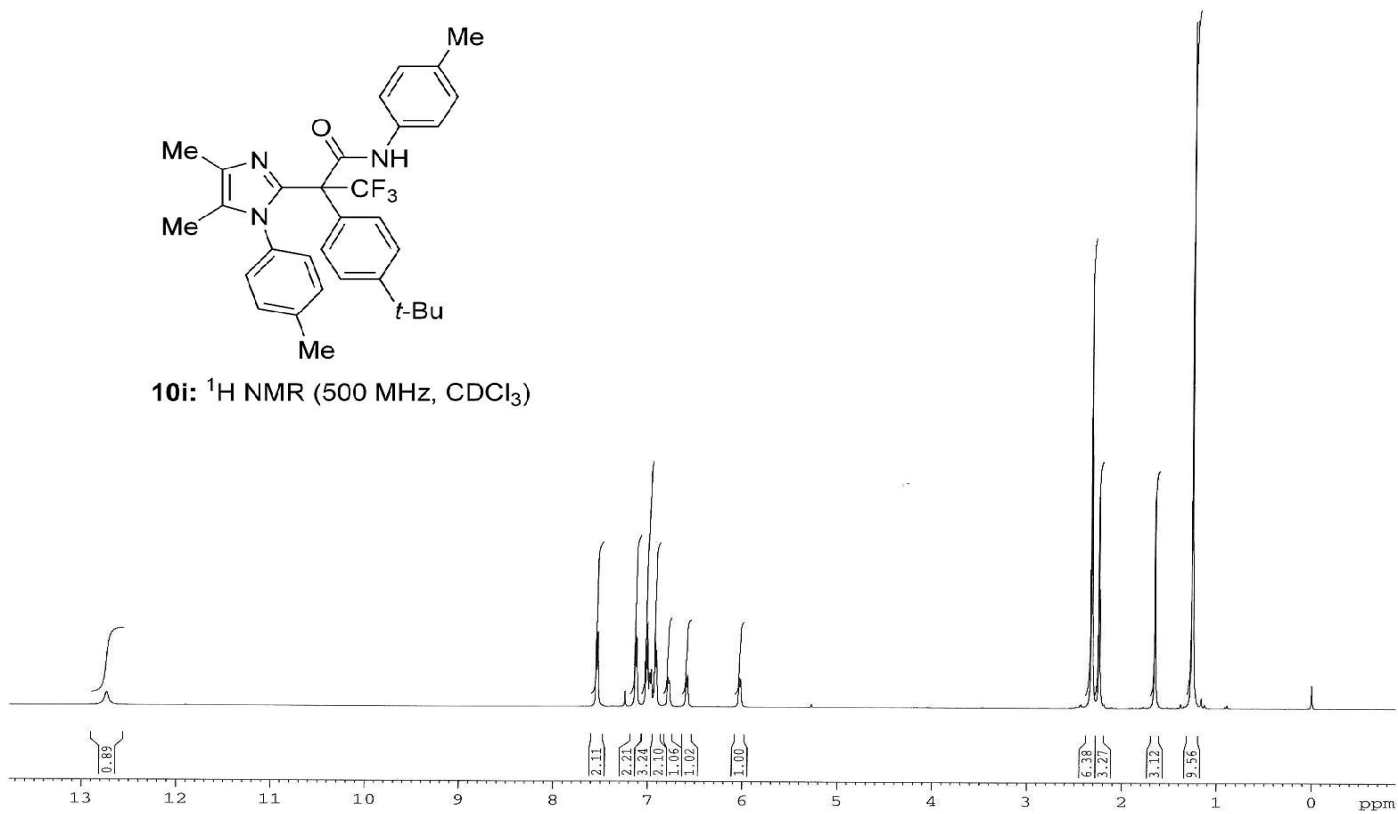


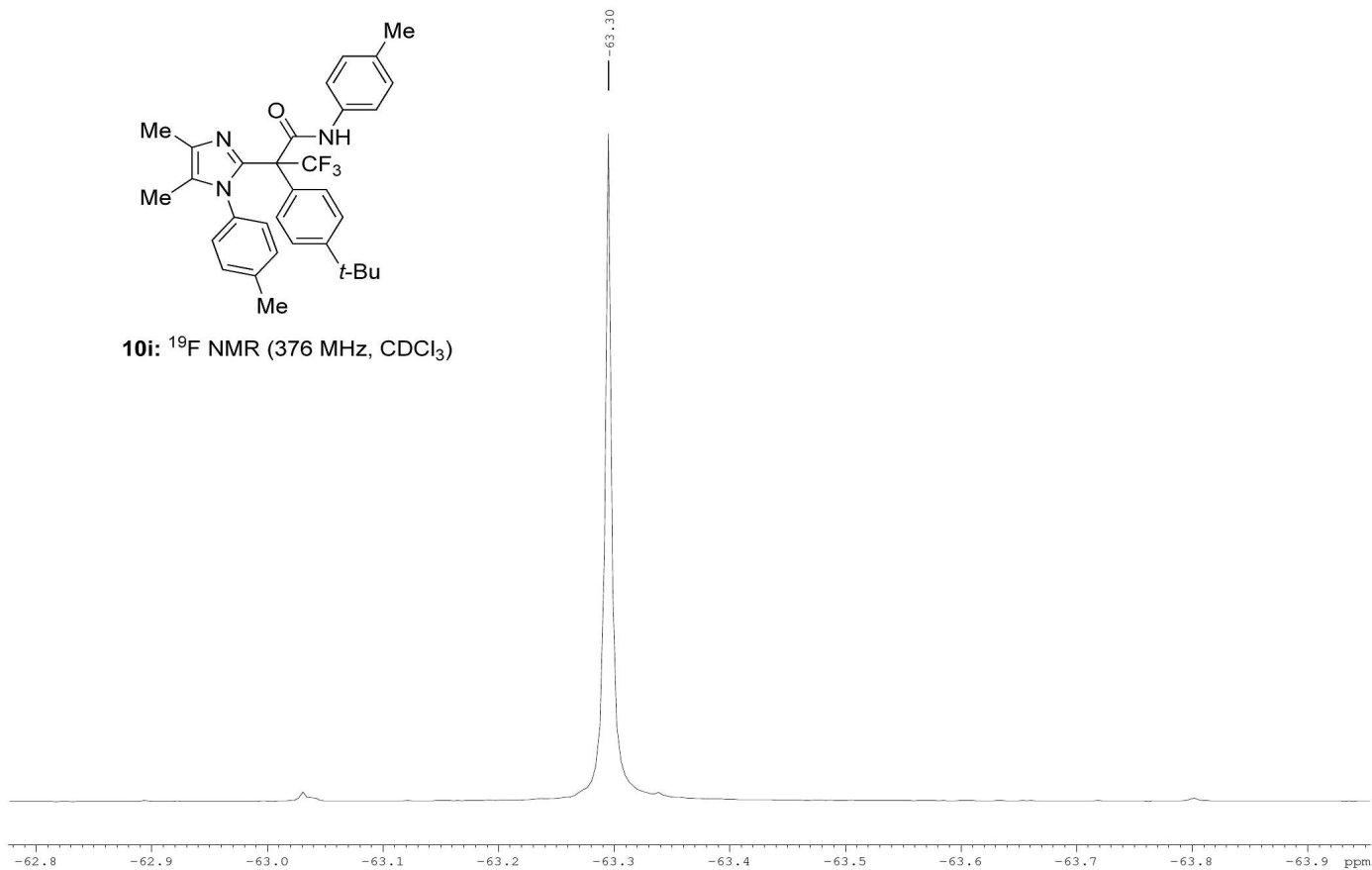
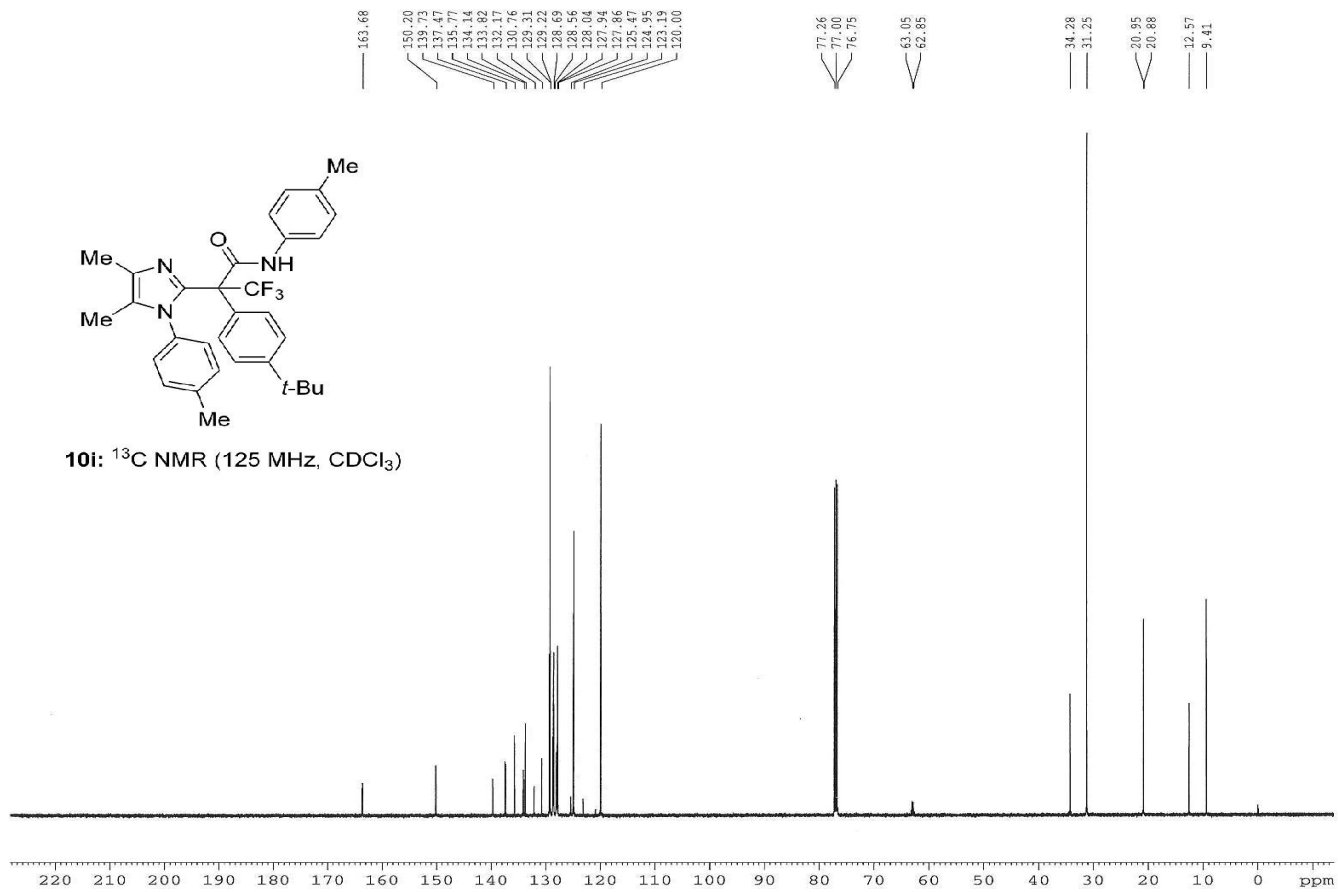


10h: ^{19}F NMR (470 MHz, CDCl_3)



10i: ^1H NMR (500 MHz, CDCl_3)





9.83
9.82
9.80

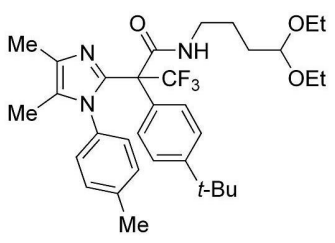
7.02
7.00
6.94
6.92
6.90
6.69
6.67
6.17
6.15
6.15

4.54
4.53
4.52

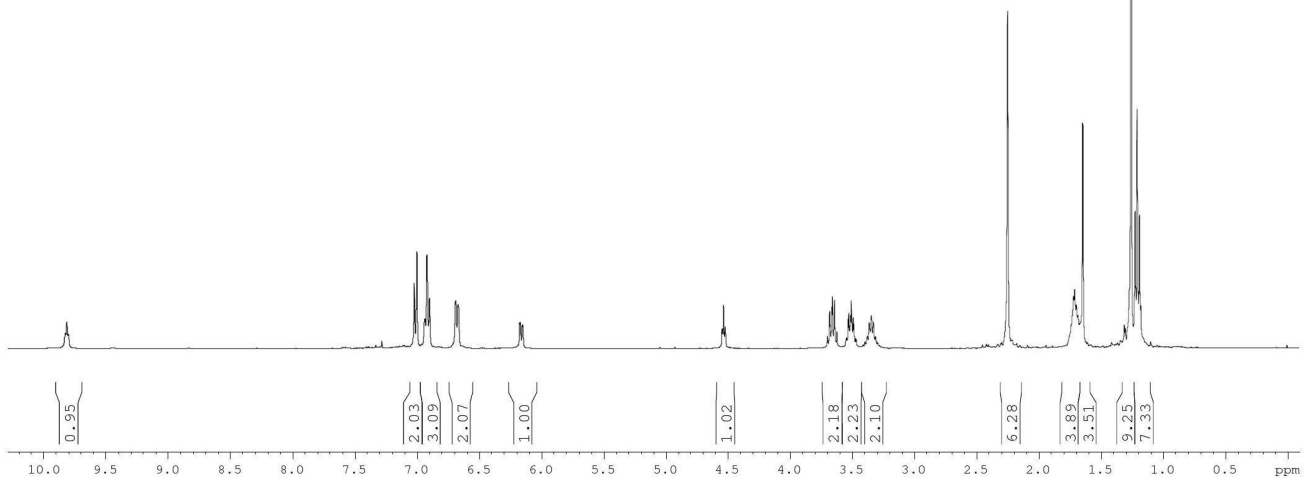
3.68
3.66
3.66
3.64
3.52
3.51
3.51
3.49
3.36
3.34
3.33

2.25
1.71
1.71
1.69
1.64
1.25
1.22
1.21
1.20
1.19

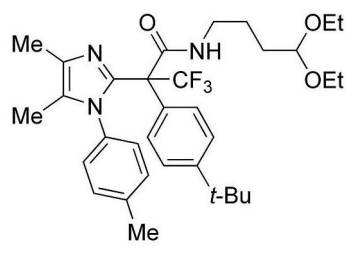
0.00



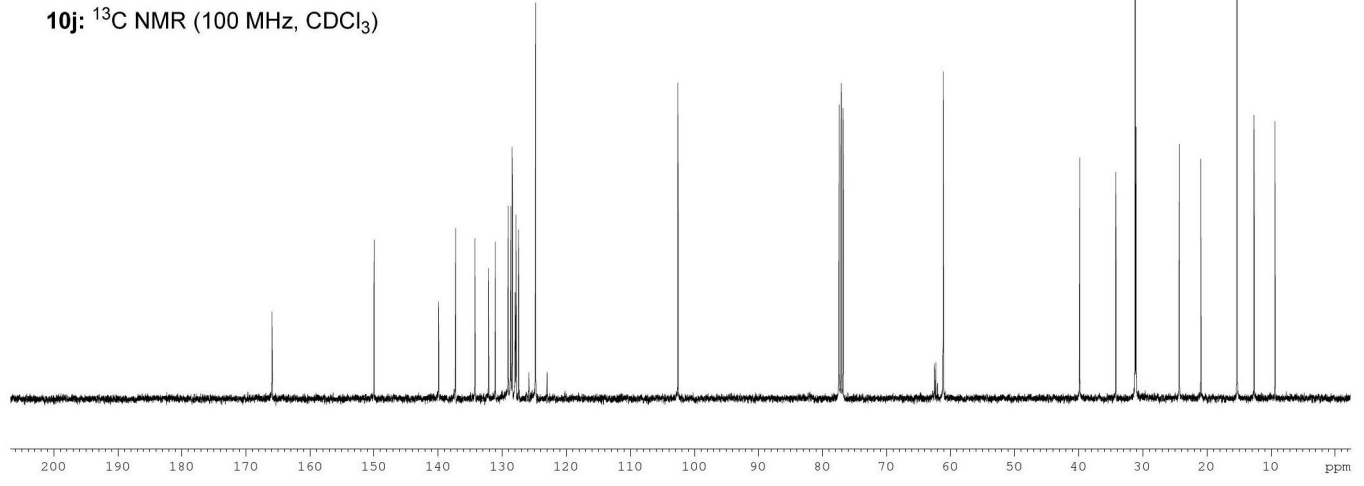
10j: ¹H NMR (400 MHz, CDCl₃)

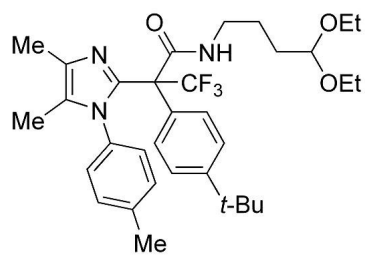


165.9
149.9
139.8
137.2
134.2
132.0
131.0
129.0
128.6
128.3
127.9
127.8
127.3
125.7
124.7
122.9
102.5
77.3
77.0
76.7
62.5
62.2
61.1
61.0
39.8
34.1
31.1
30.9
24.2
20.8
15.2
12.5
9.3

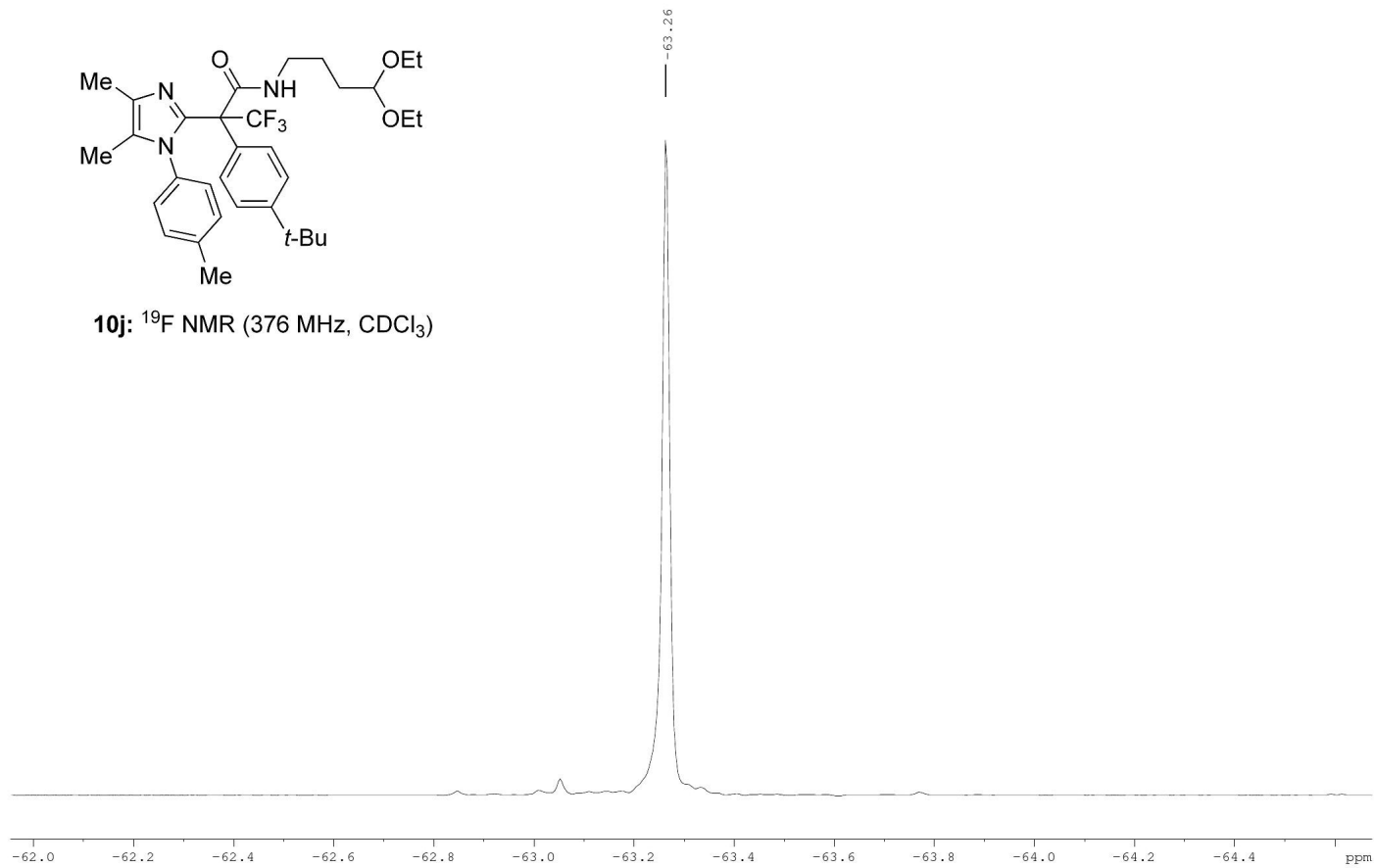


10j: ¹³C NMR (100 MHz, CDCl₃)

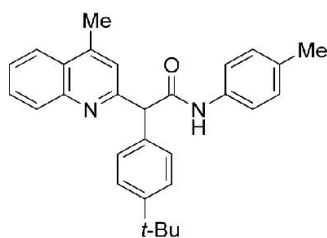




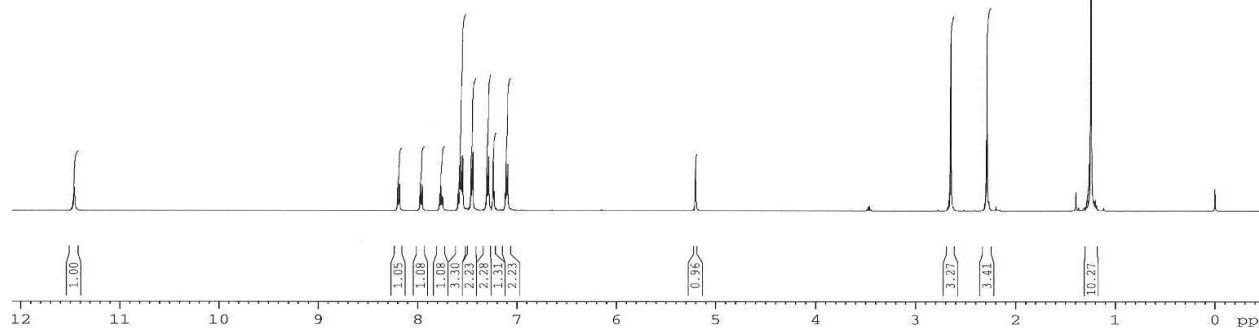
10j: ¹⁹F NMR (376 MHz, CDCl₃)



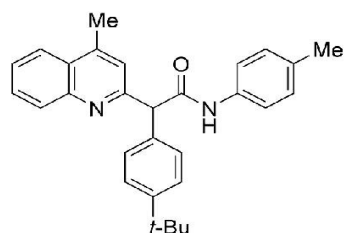
11.46
8.202
8.186
7.976
7.960
7.781
7.779
7.765
7.750
7.748
7.590
7.576
7.565
7.548
7.464
7.447
7.305
7.288
7.243
7.233
7.113
7.097
5.205
2.649
2.288
1.397
1.245
0.000



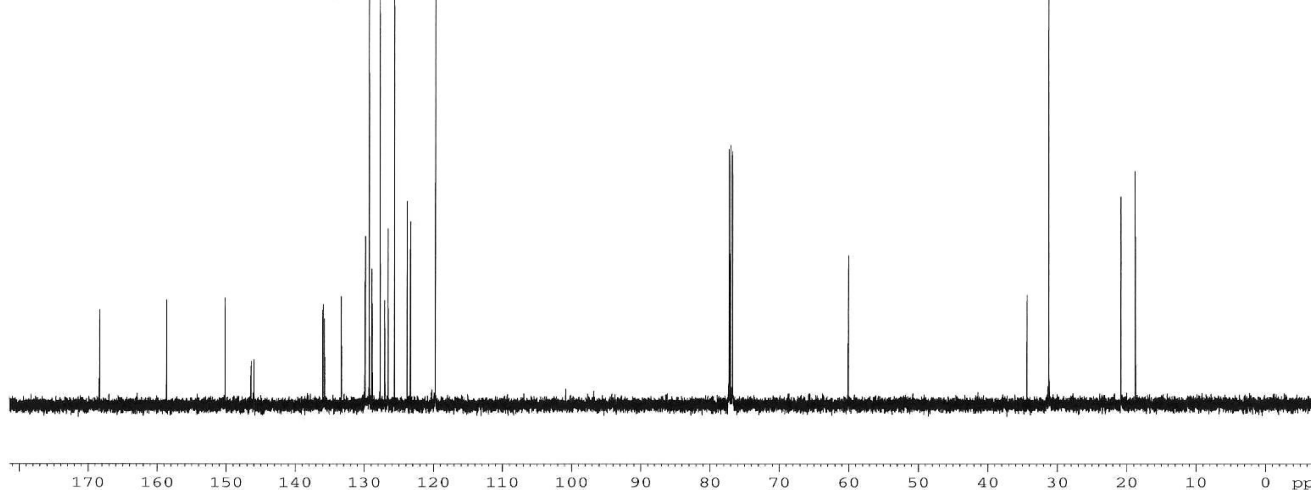
11a: ^1H NMR (500 MHz, CDCl_3)

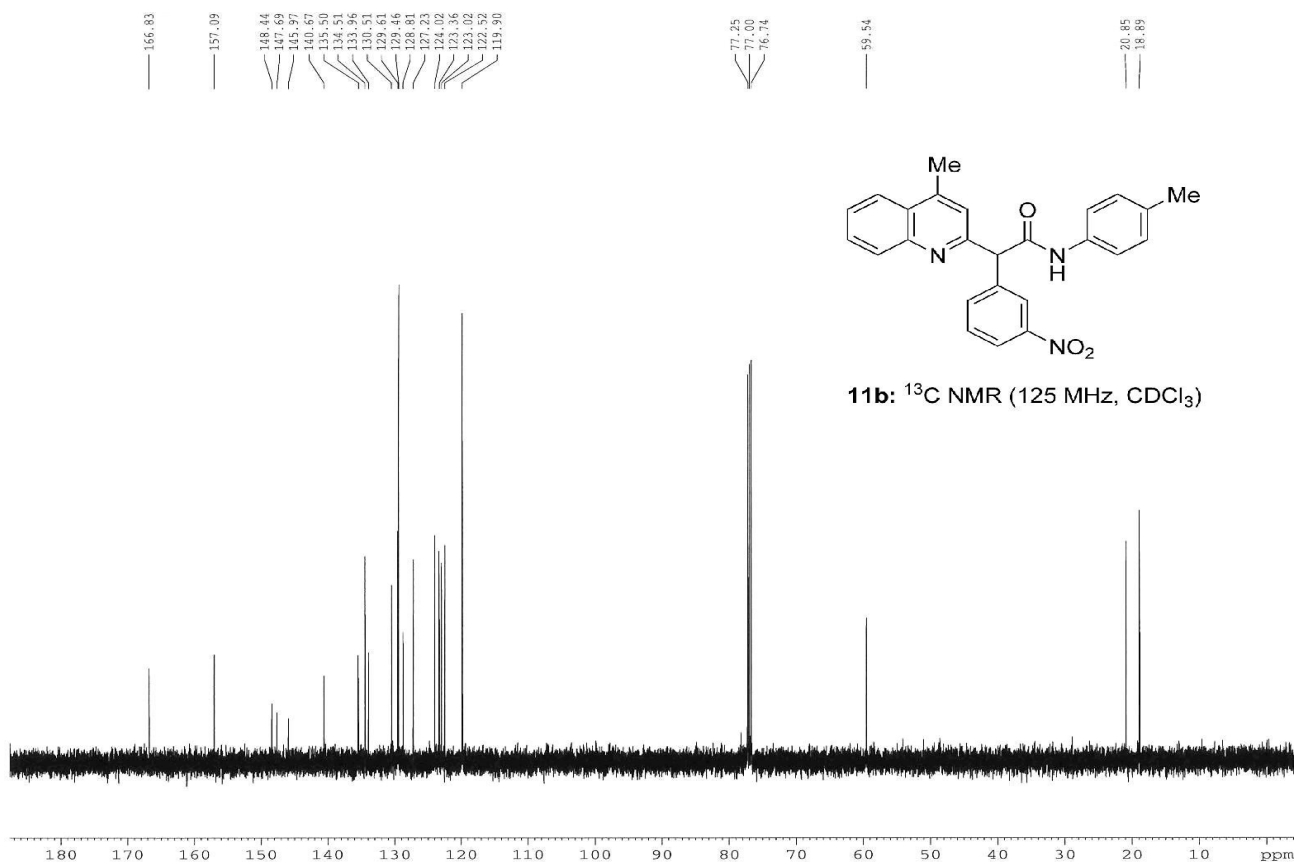
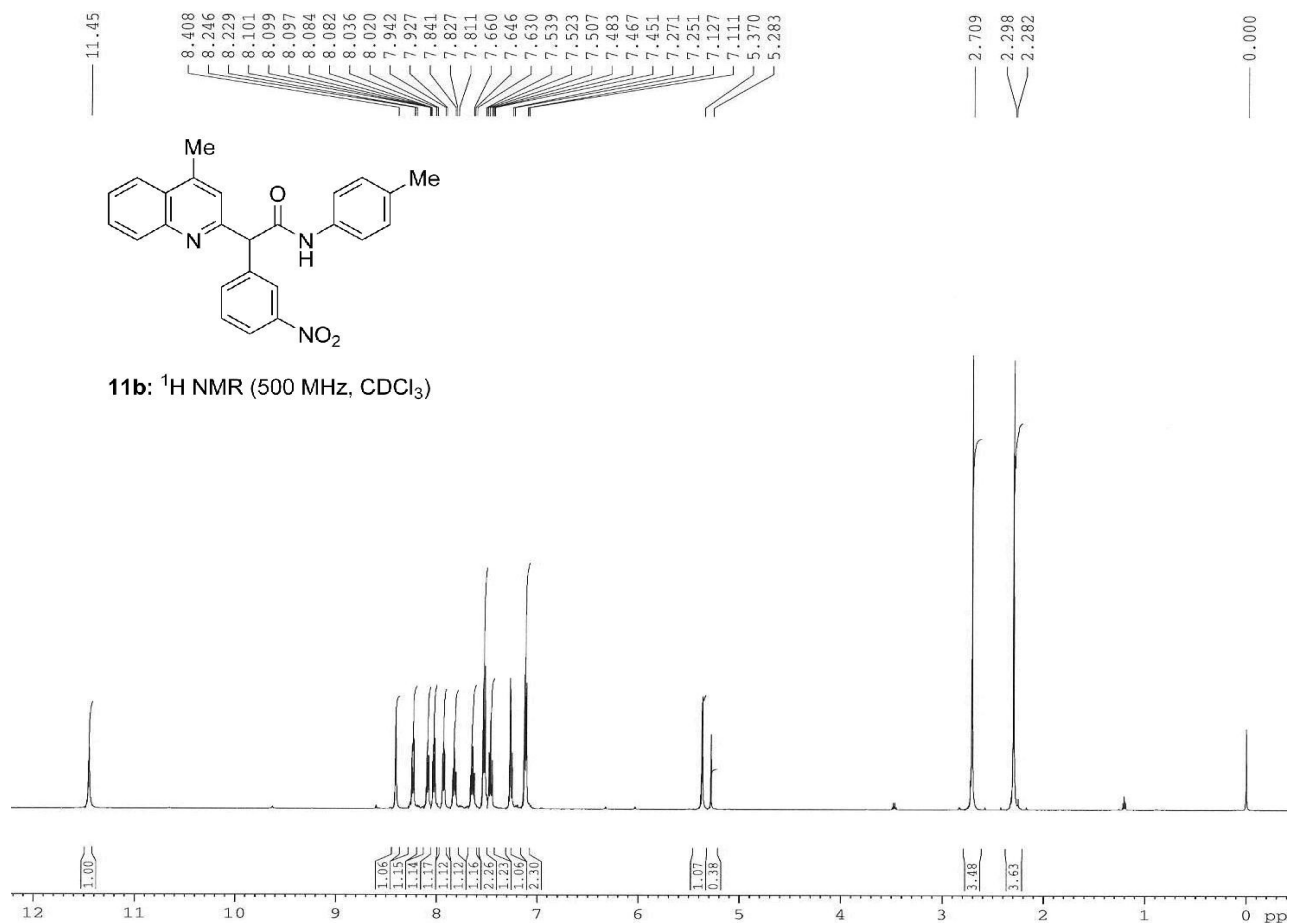


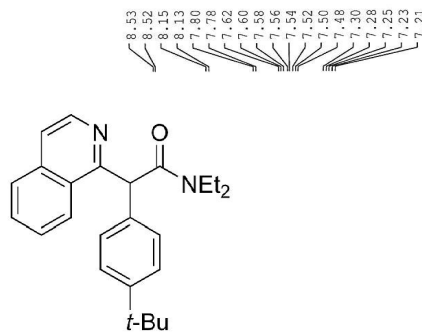
168.38
158.66
150.26
146.44
146.01
136.04
135.80
133.33
129.89
129.33
128.92
127.77
127.08
124.61
125.71
123.86
123.35
119.77
77.26
77.00
76.75
60.06
34.37
31.23
20.83
18.75
0 ppm



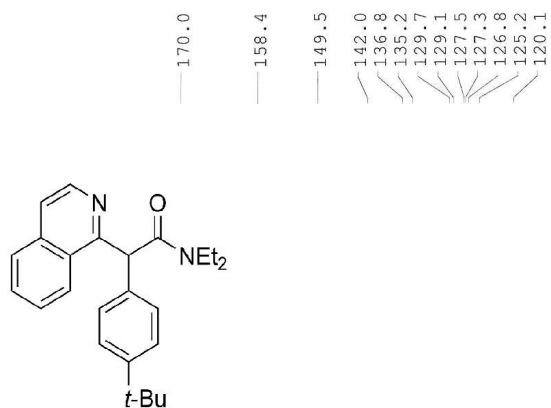
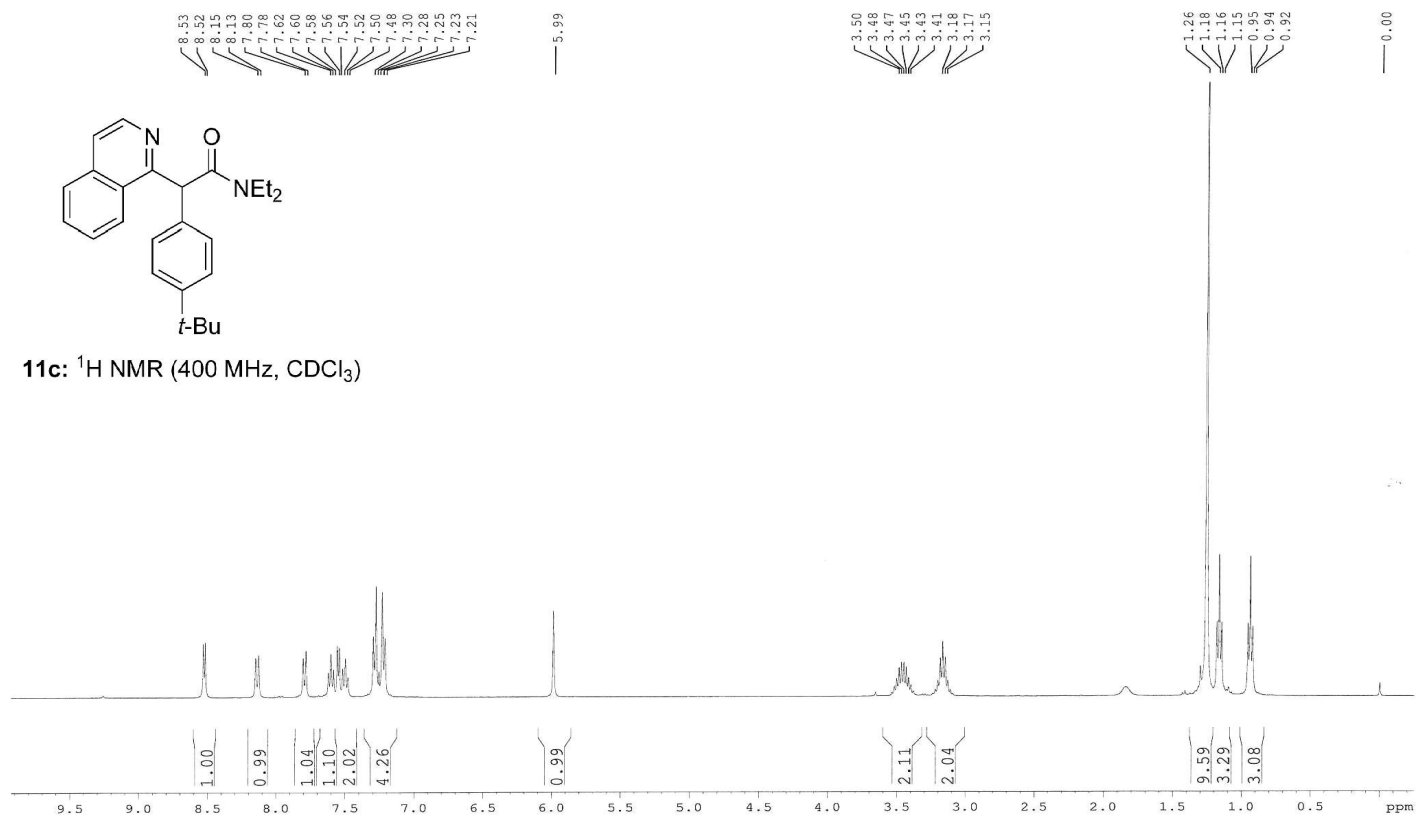
11a: ^{13}C NMR (125 MHz, CDCl_3)



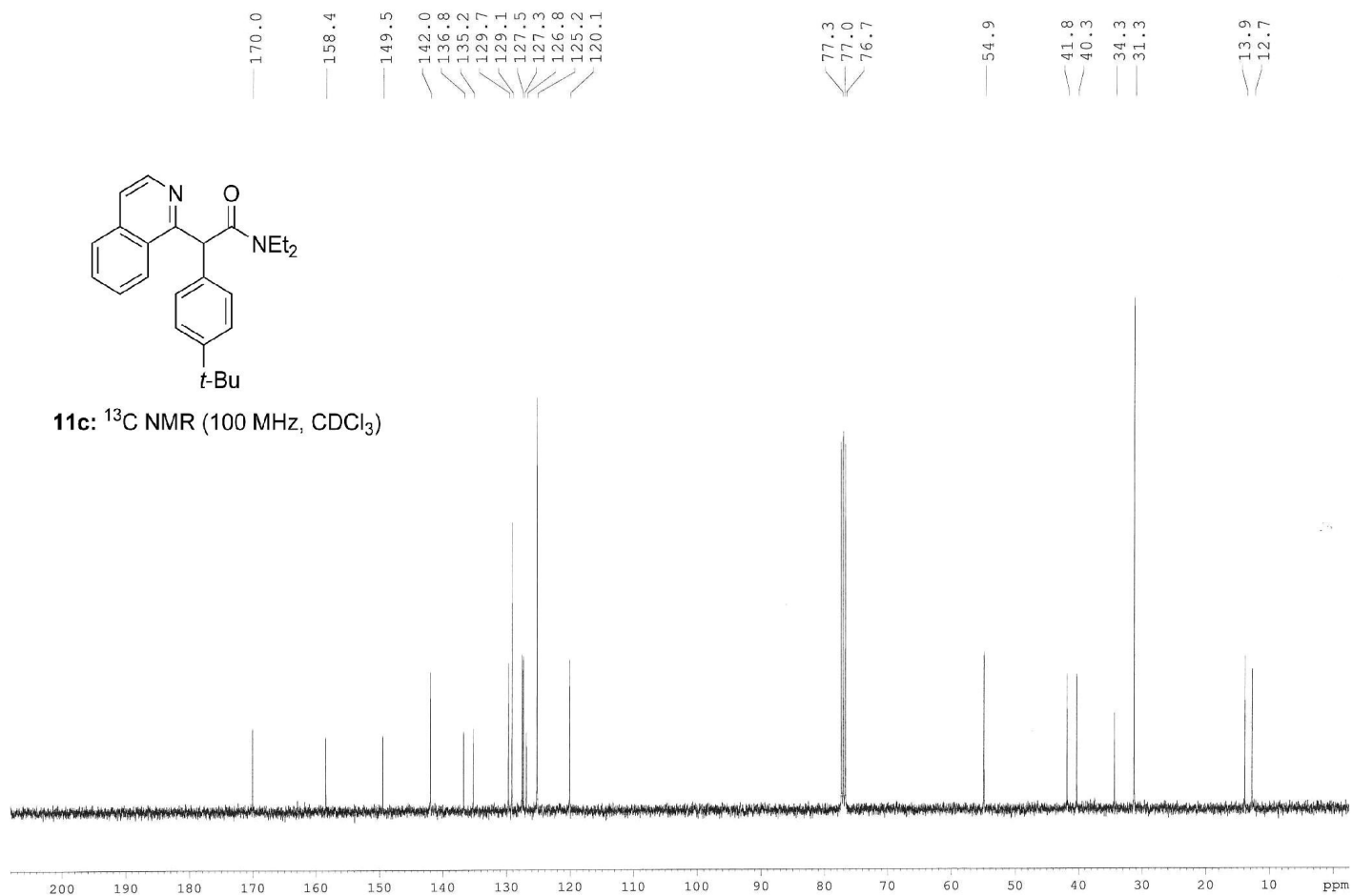


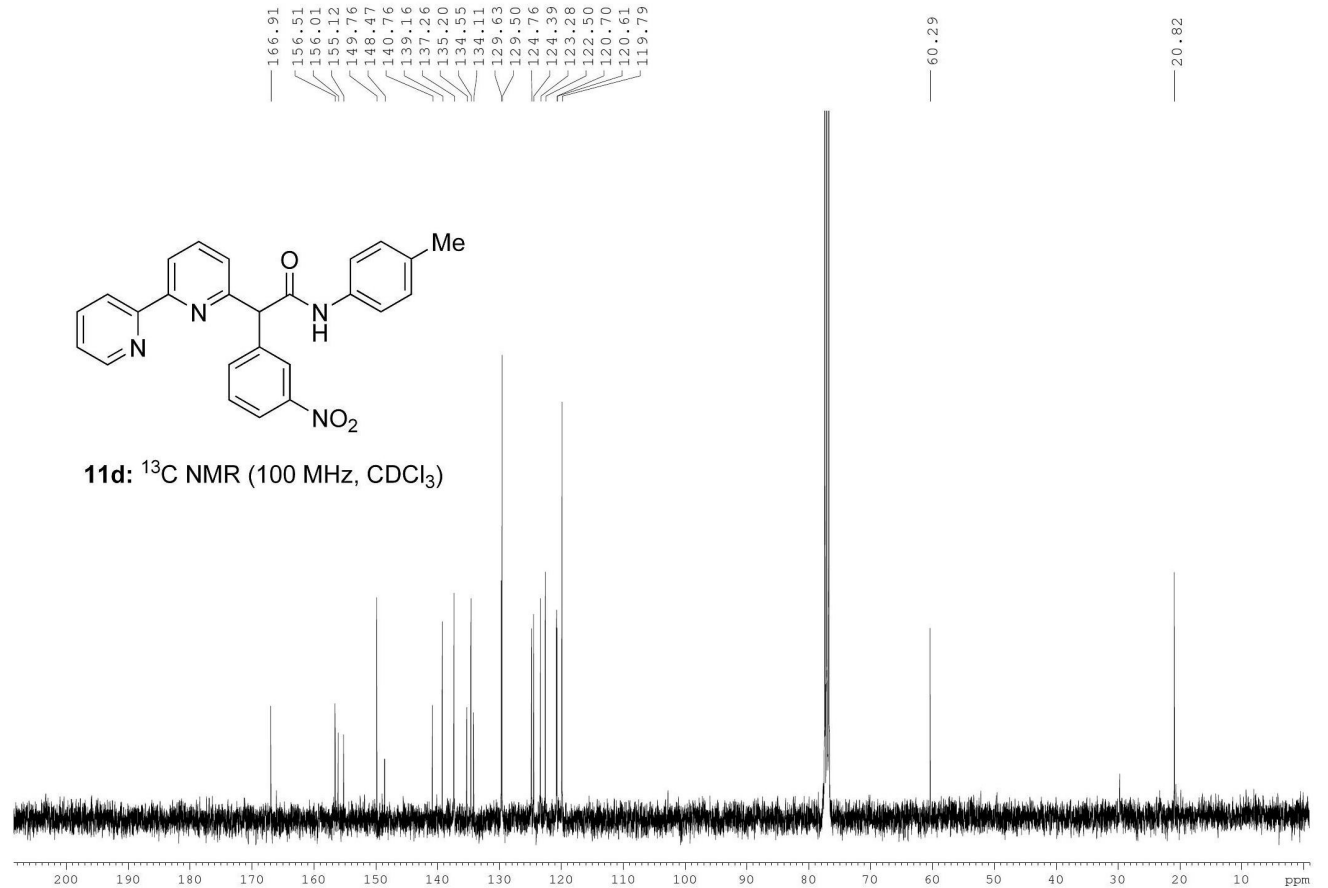
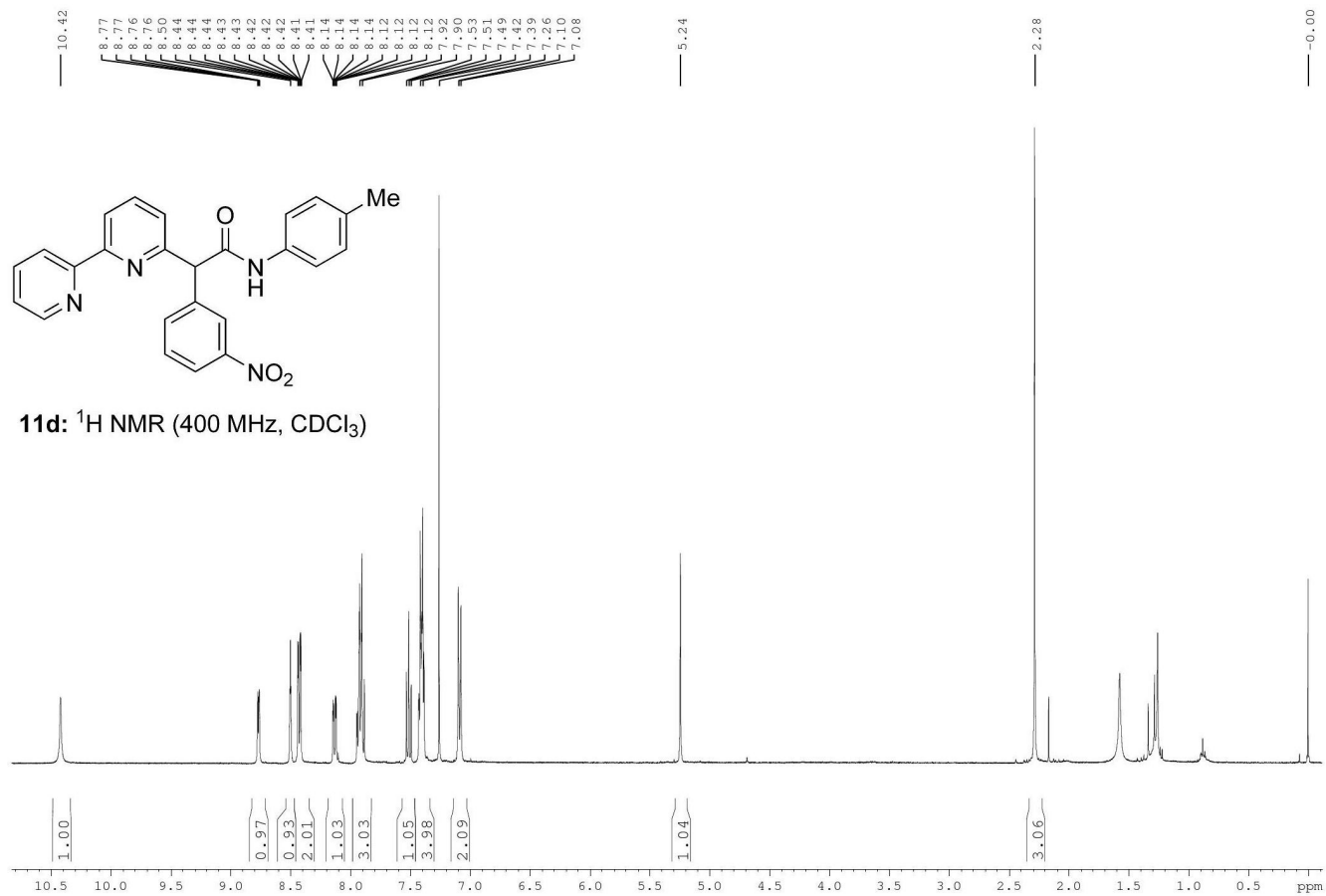


11c: ^1H NMR (400 MHz, CDCl_3)



11c: ^{13}C NMR (100 MHz, CDCl_3)





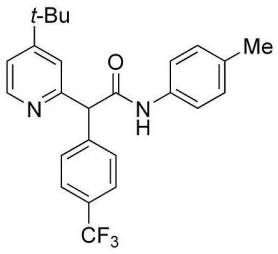
10.69

8.60
8.58
7.61
7.59
7.55
7.53
7.47
7.45
7.34
7.34
7.34
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7.28
7.27
7.26
7.26
7.24
7.10
7.08

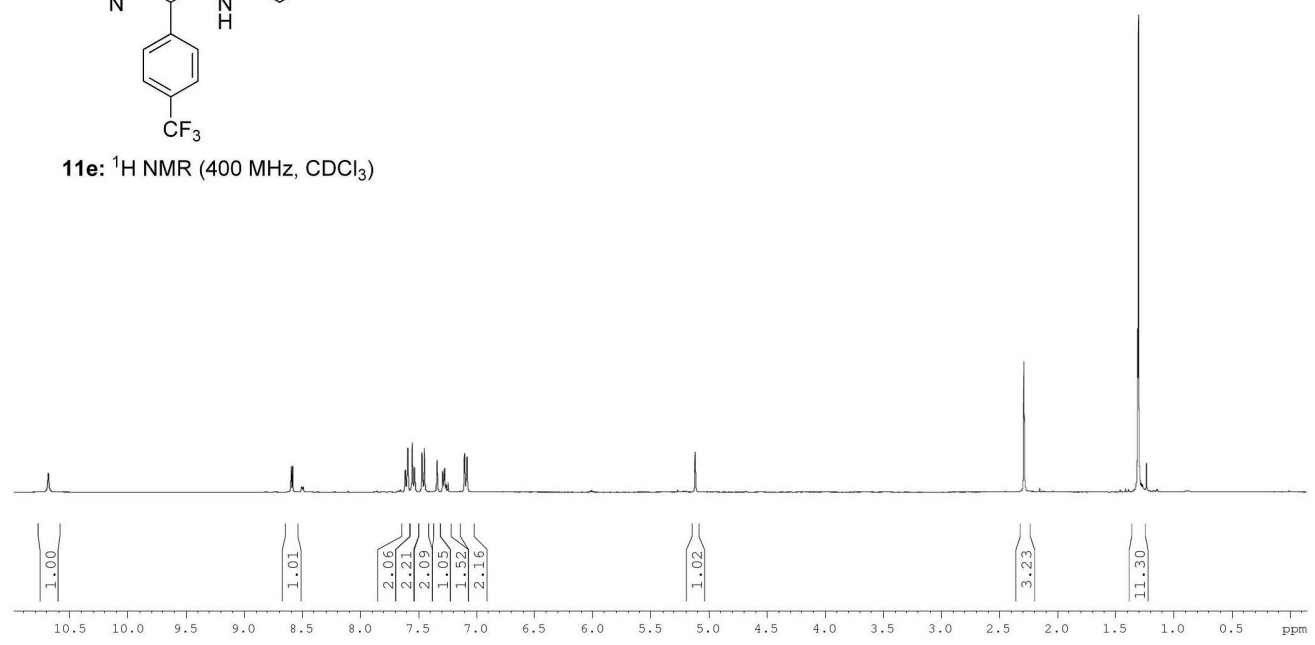
5.12

2.28

1.30



11e: ¹H NMR (400 MHz, CDCl₃)



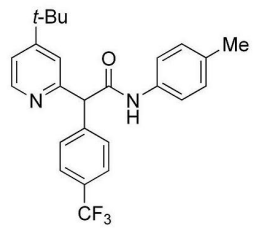
167.7
162.4
157.4
149.6
148.8
143.2
135.6
133.8
129.4
128.4
125.6
125.6
125.5
122.7
122.0
120.7
120.0
119.9

77.4
77.0
76.7

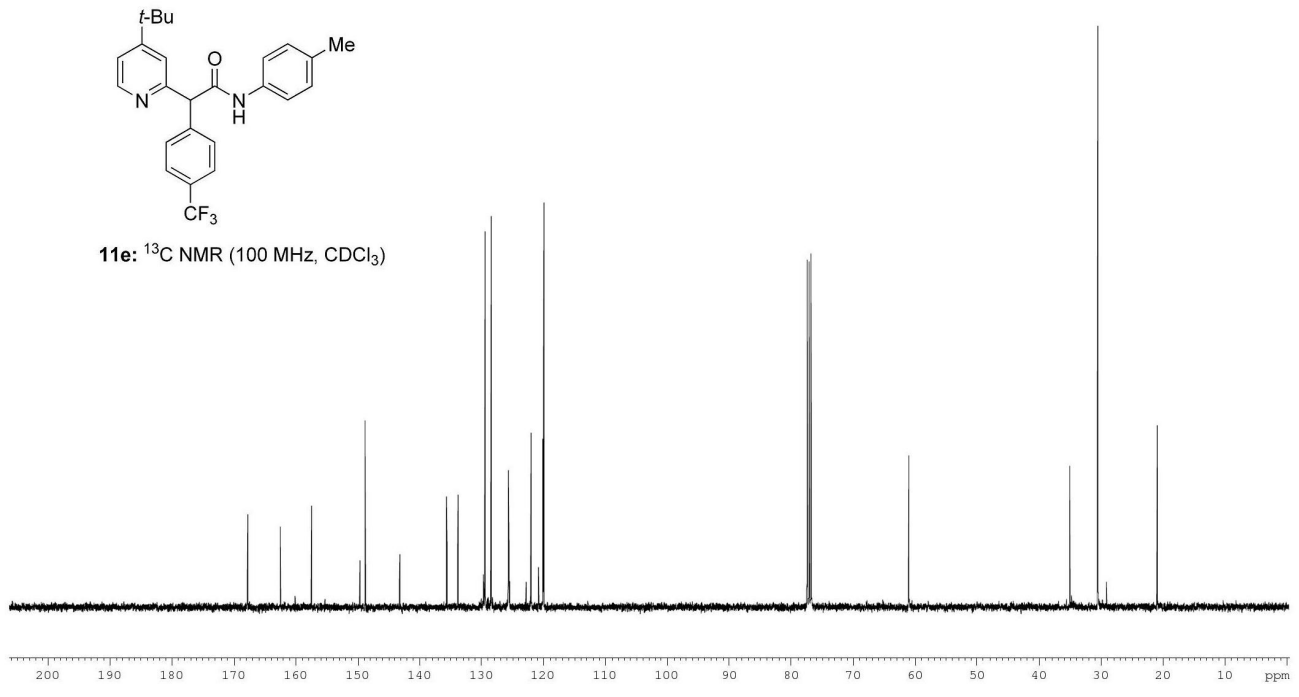
60.9

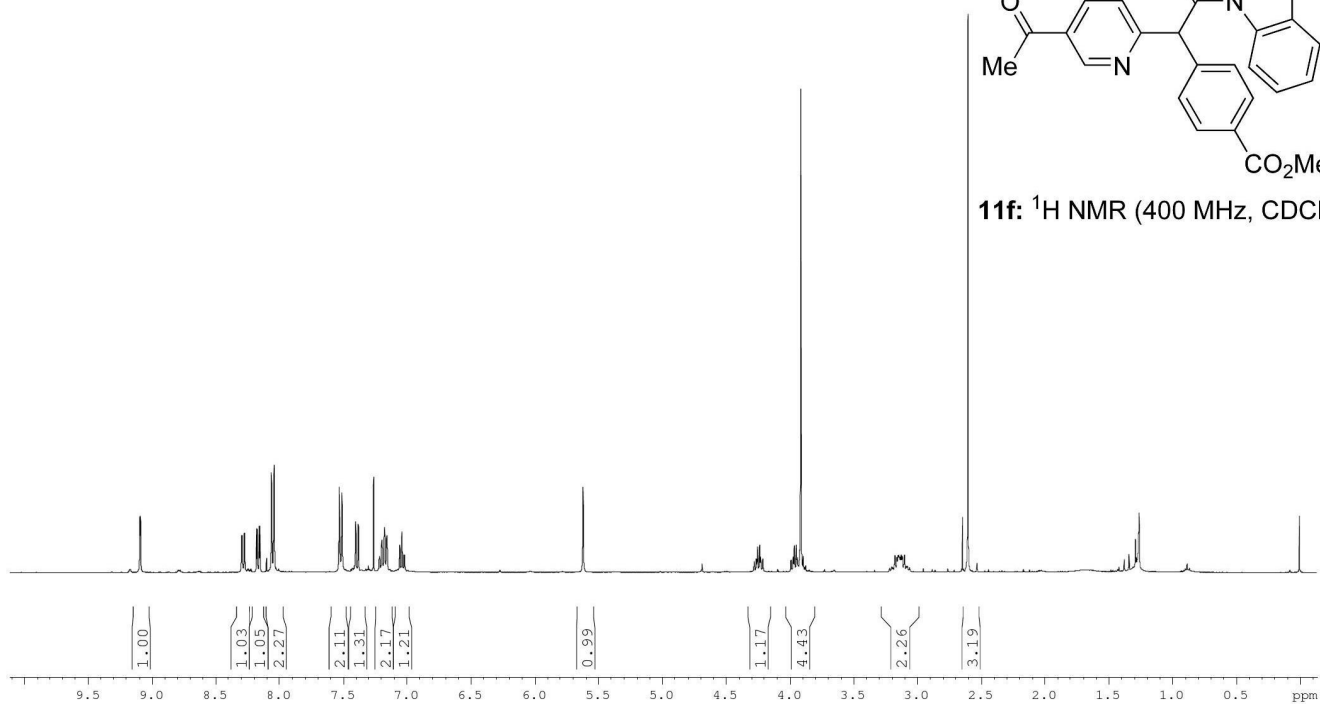
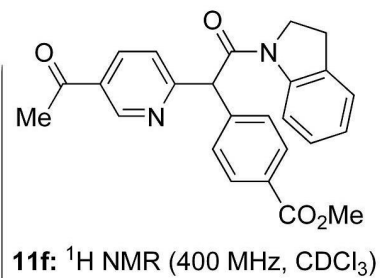
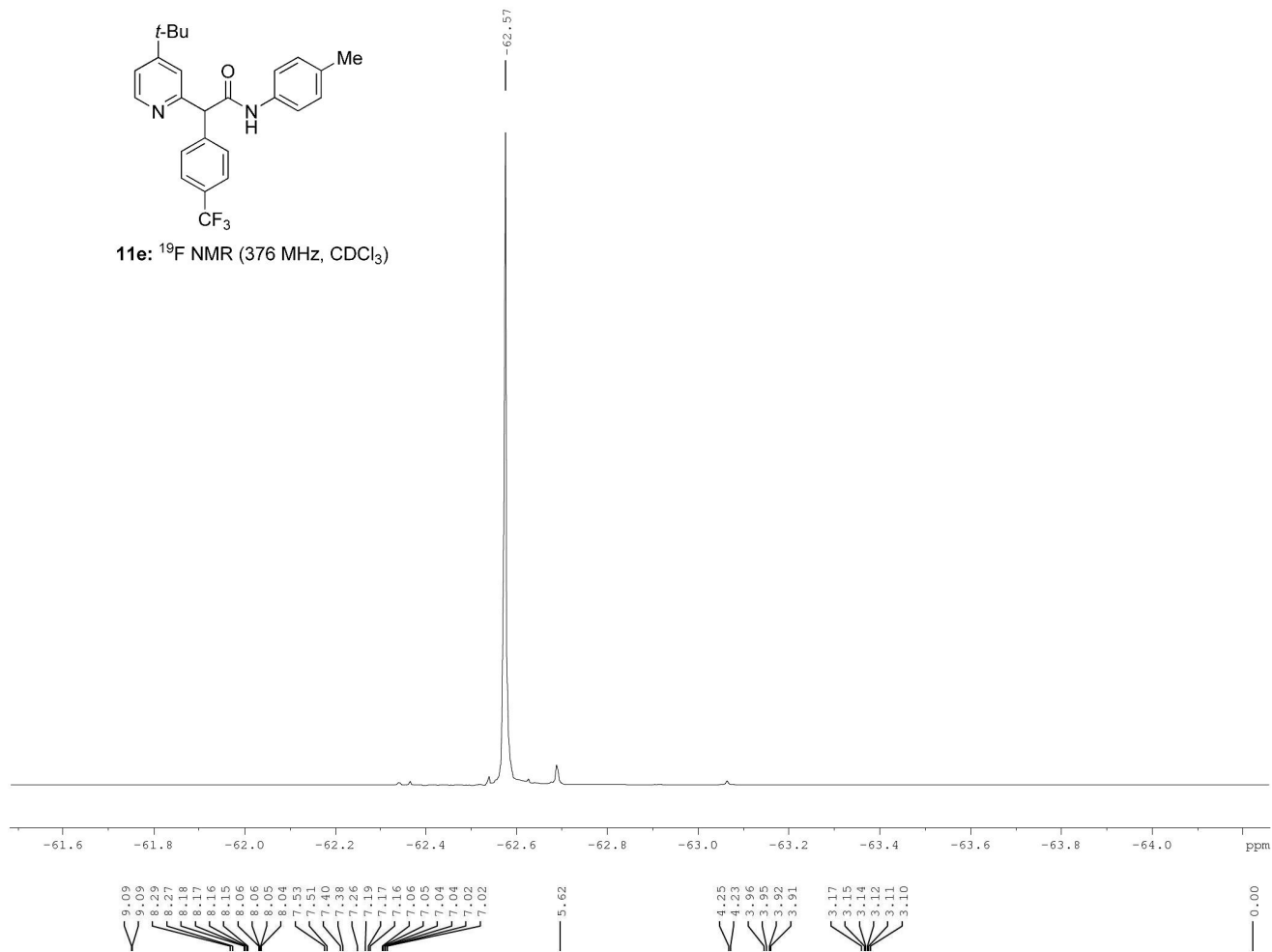
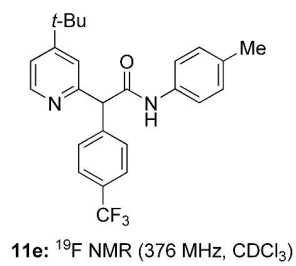
34.9
30.4

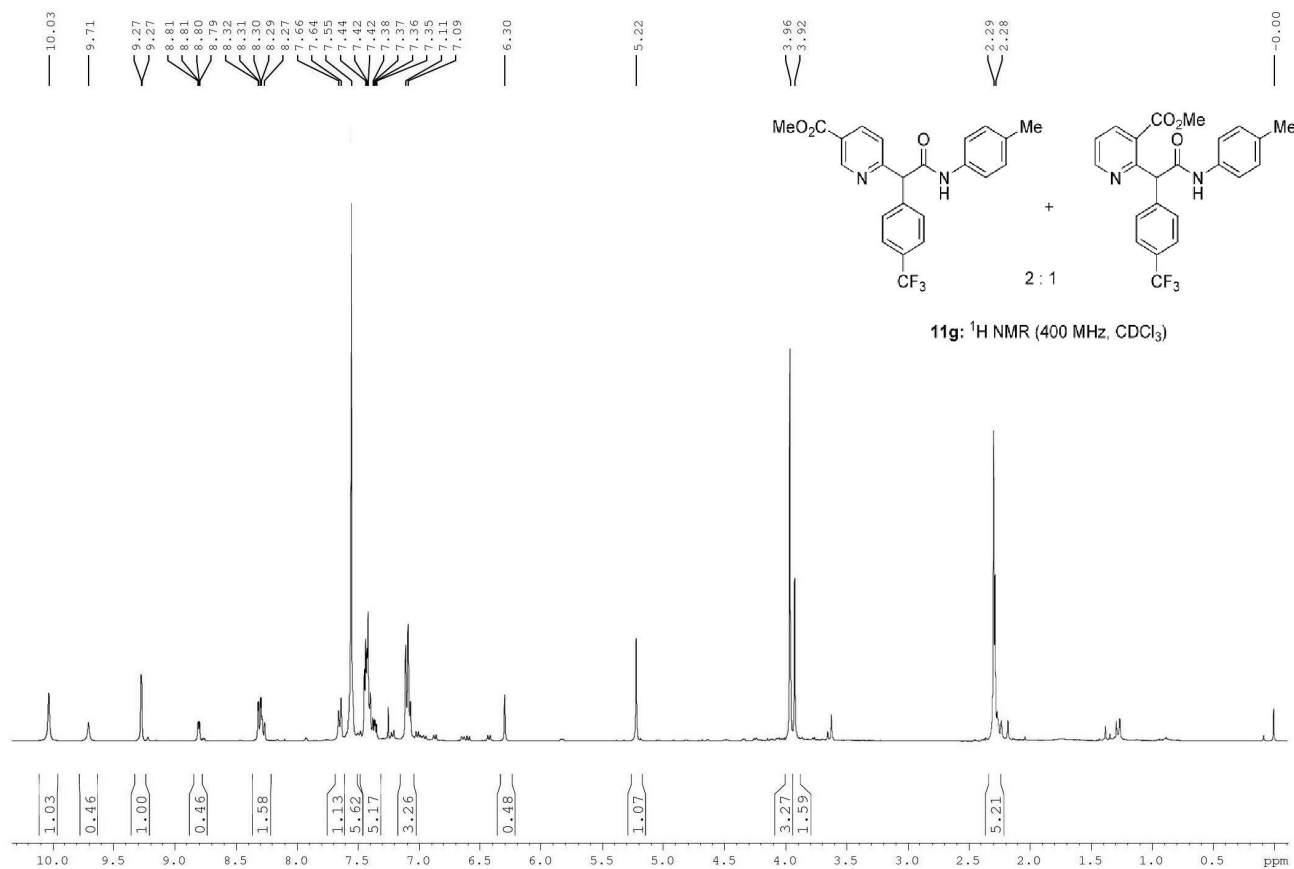
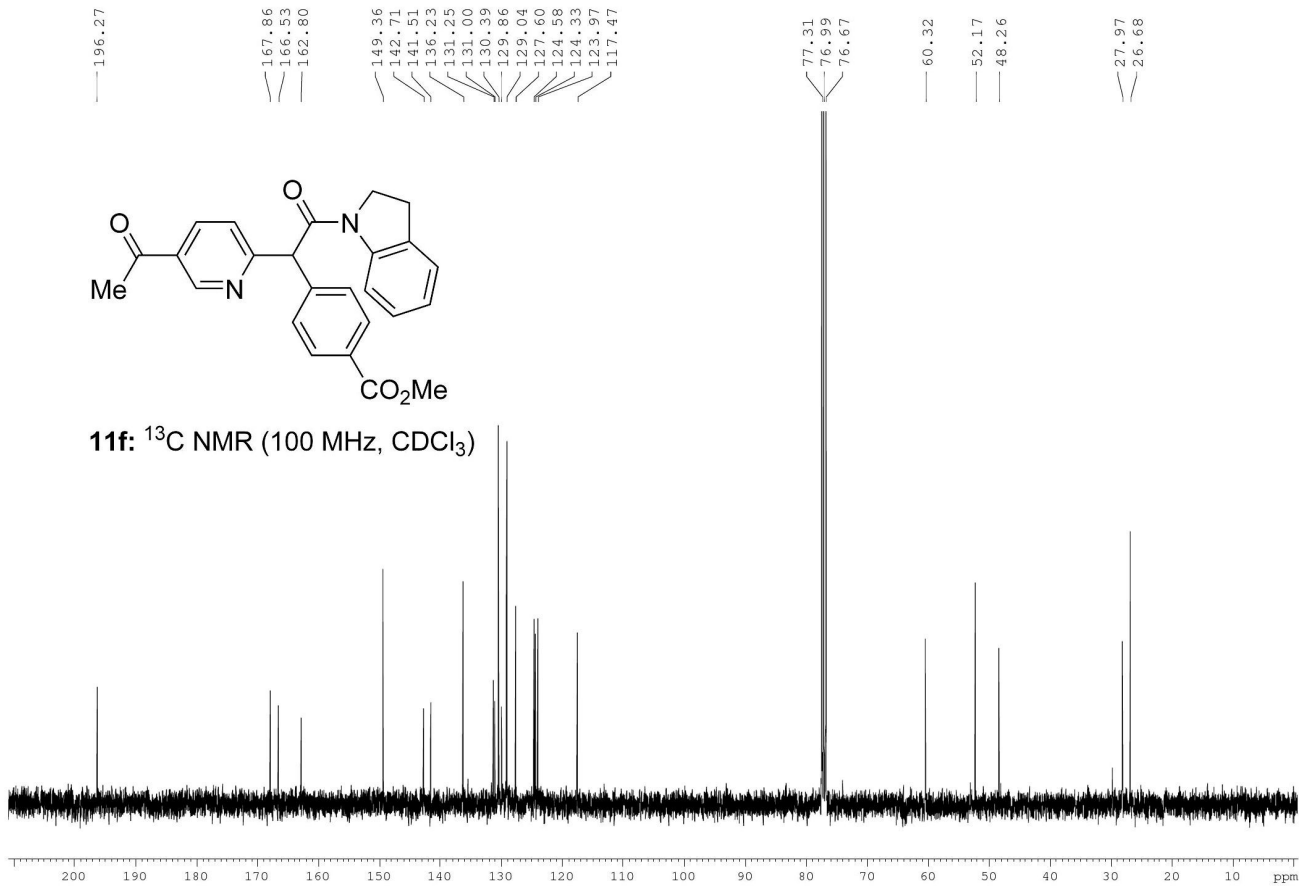
20.8

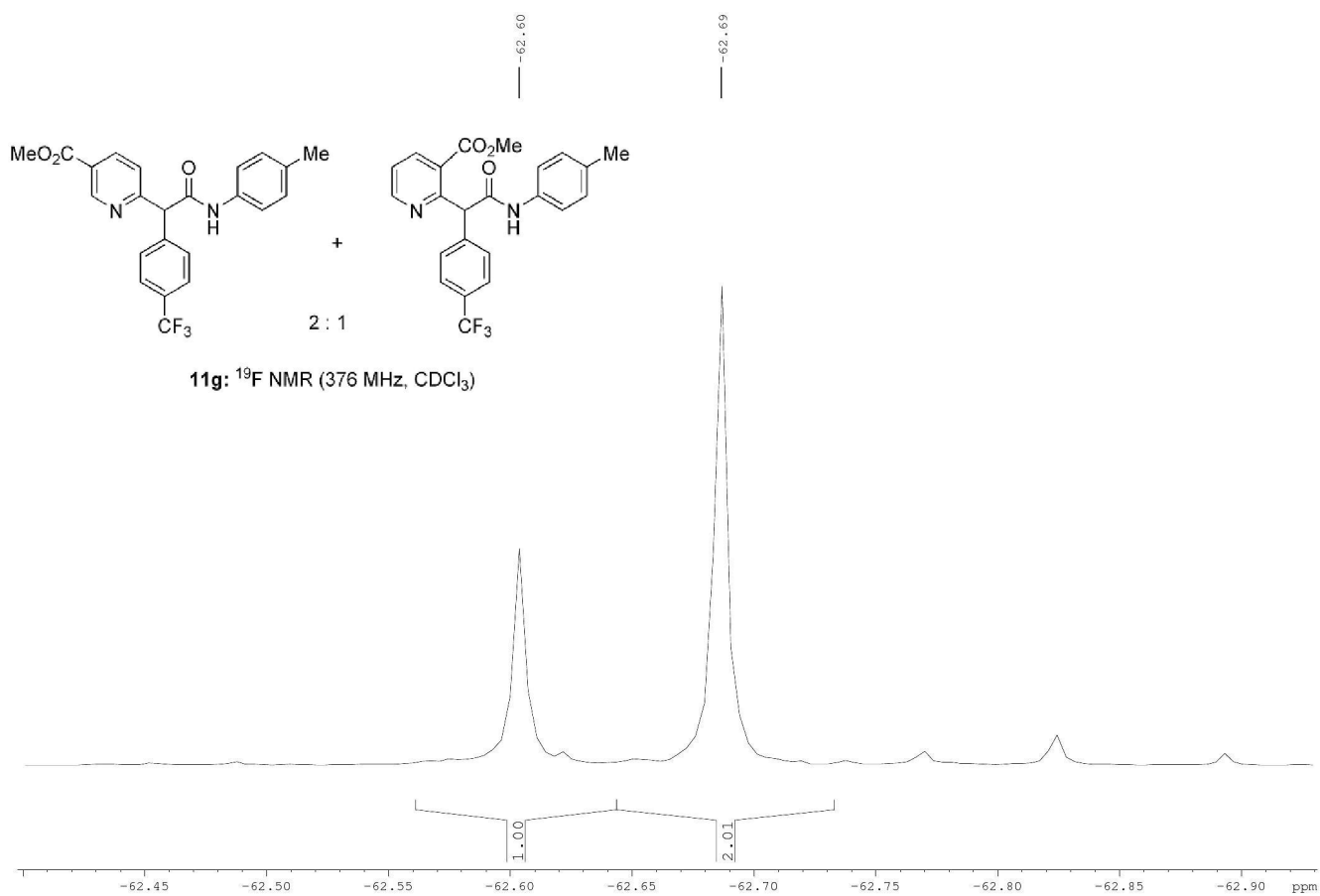
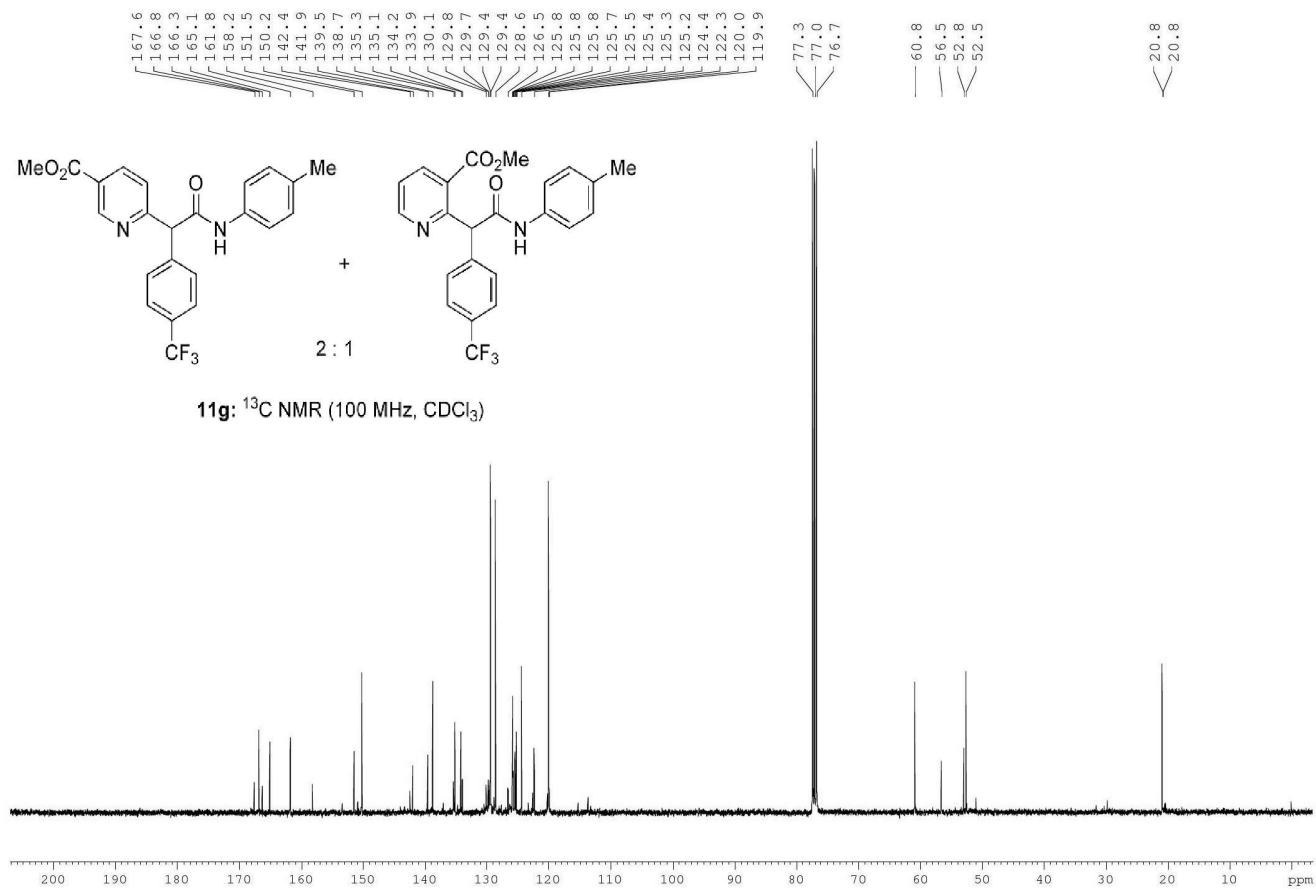


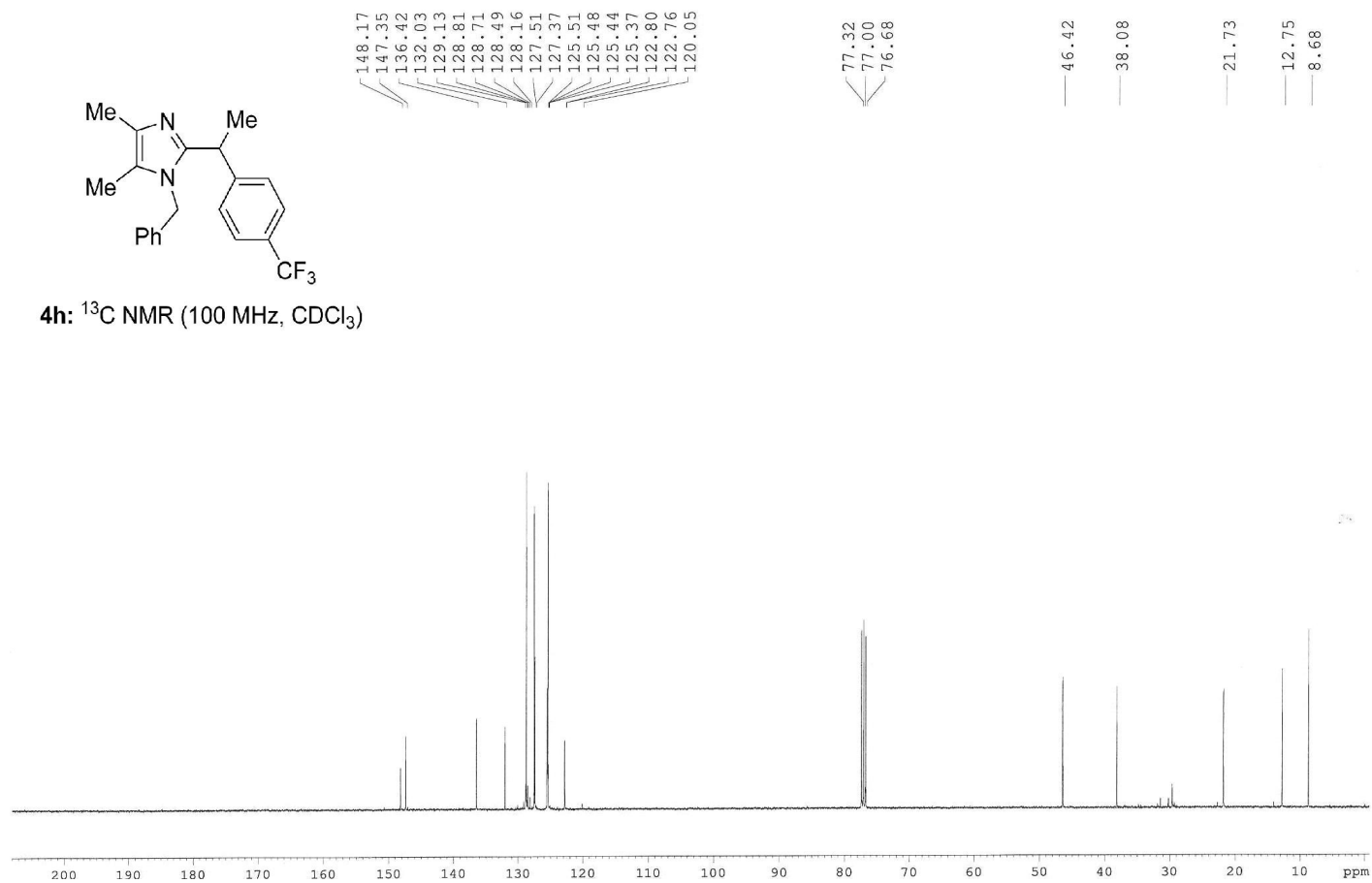
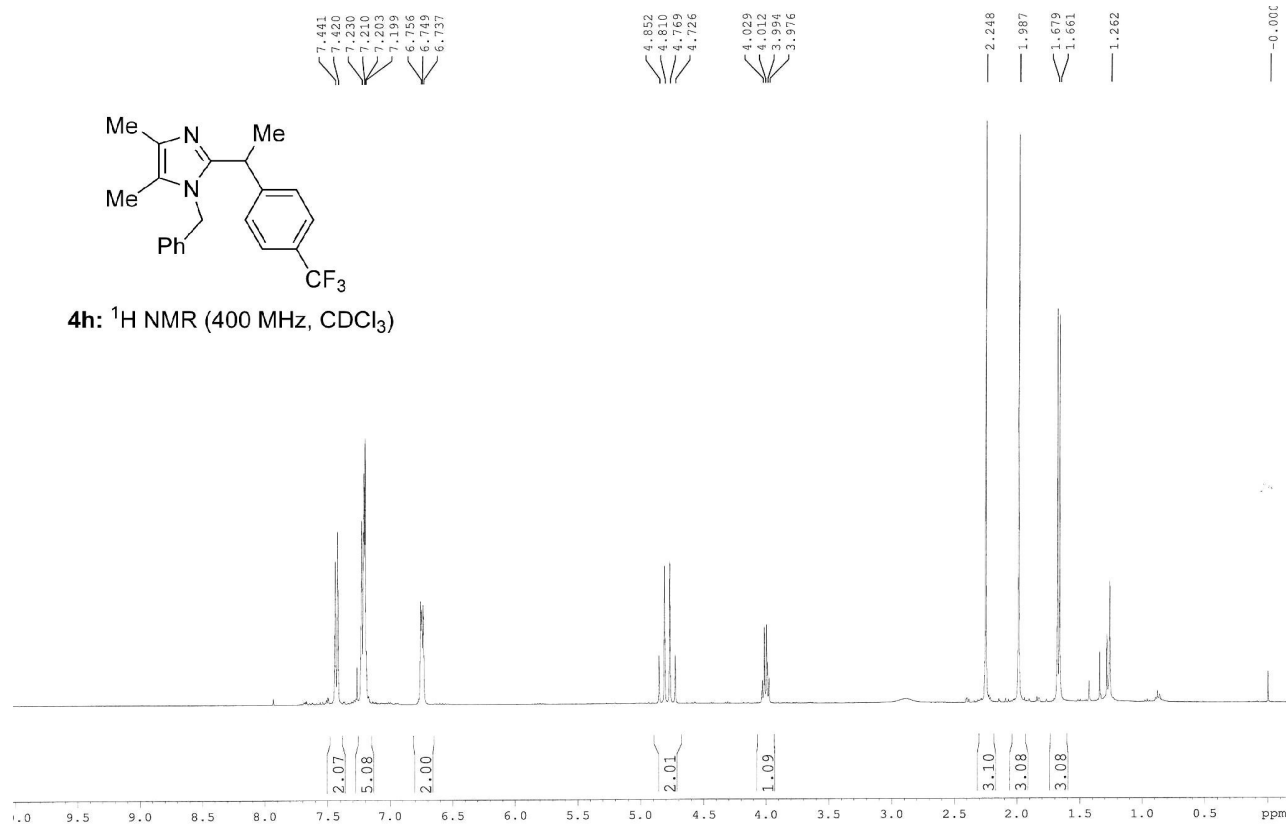
11e: ¹³C NMR (100 MHz, CDCl₃)

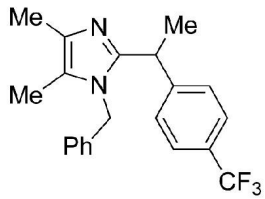




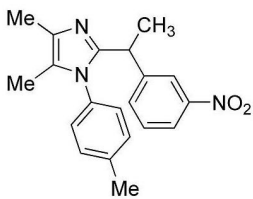
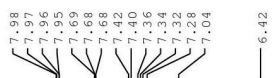
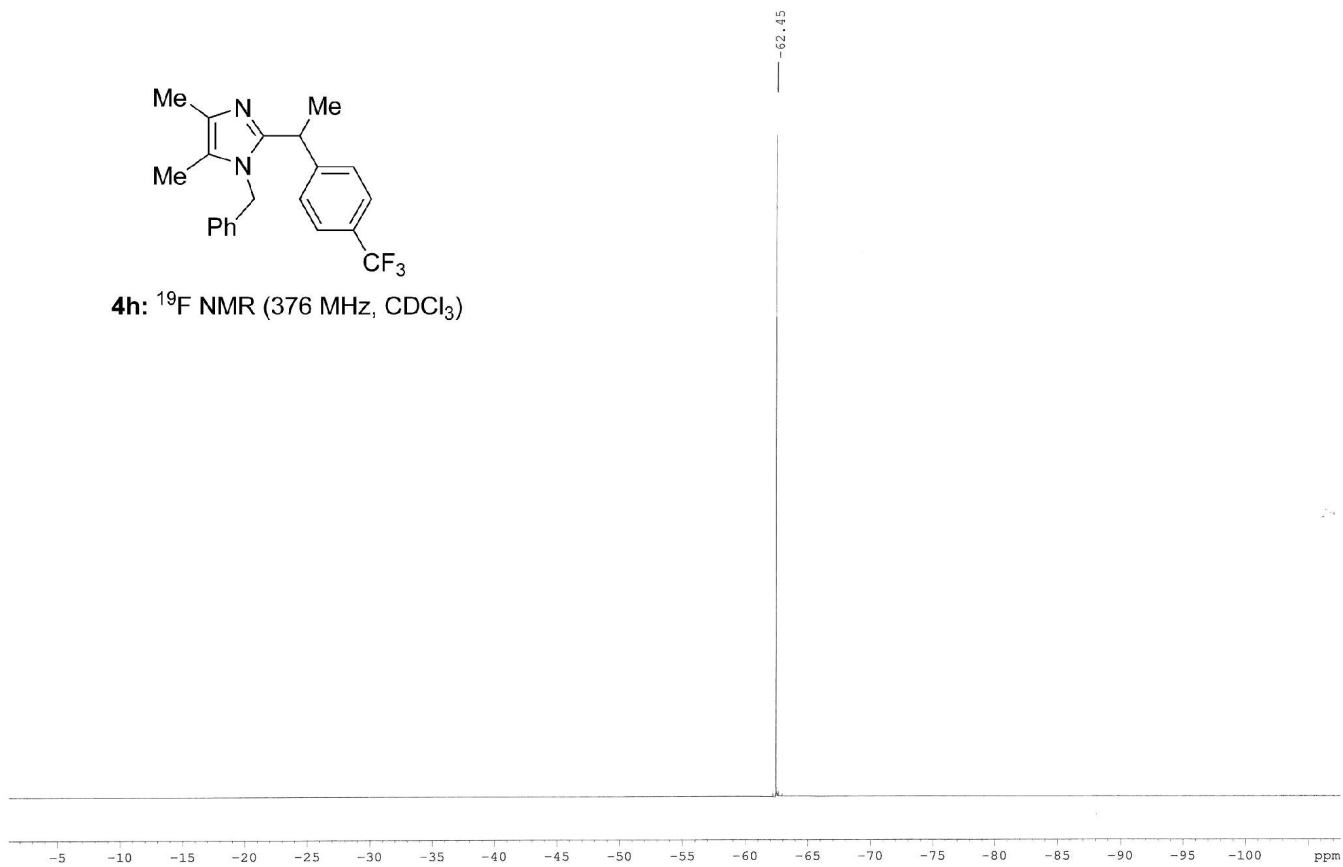




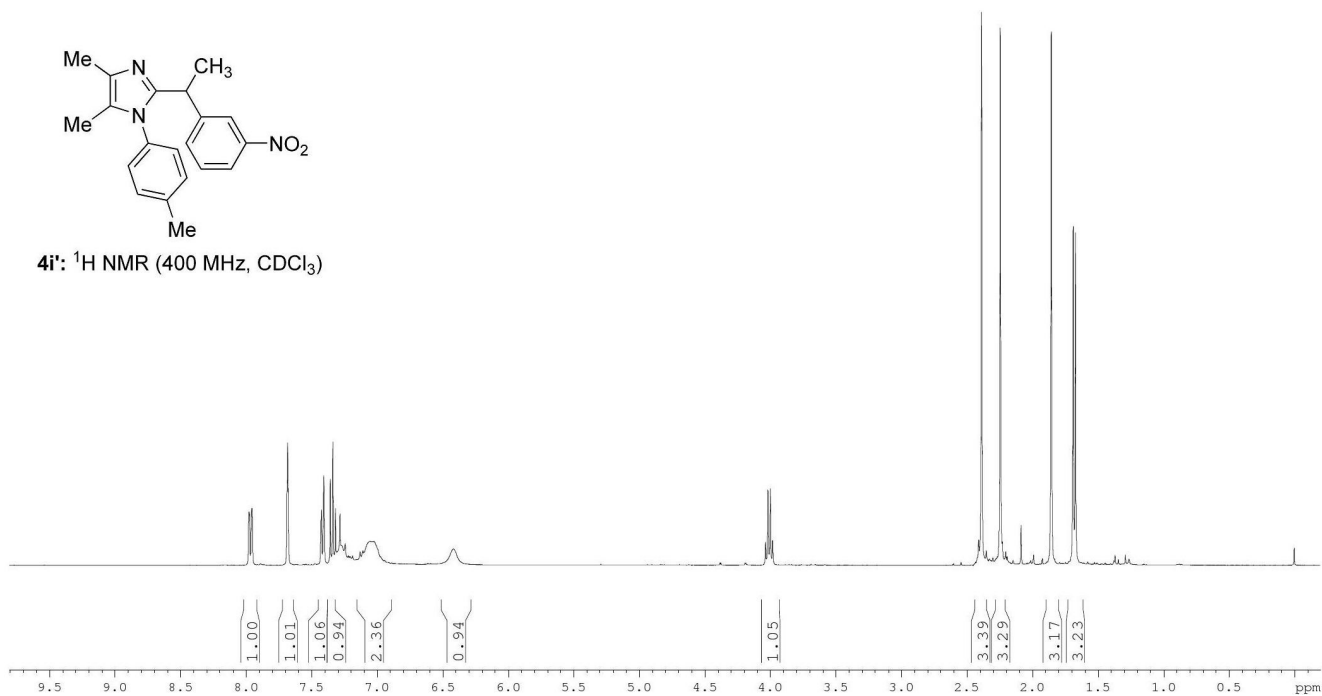




4h: ^{19}F NMR (376 MHz, CDCl_3)



4i: ^1H NMR (400 MHz, CDCl_3)



1.00

1.01

1.06

0.94

2.36

0.94

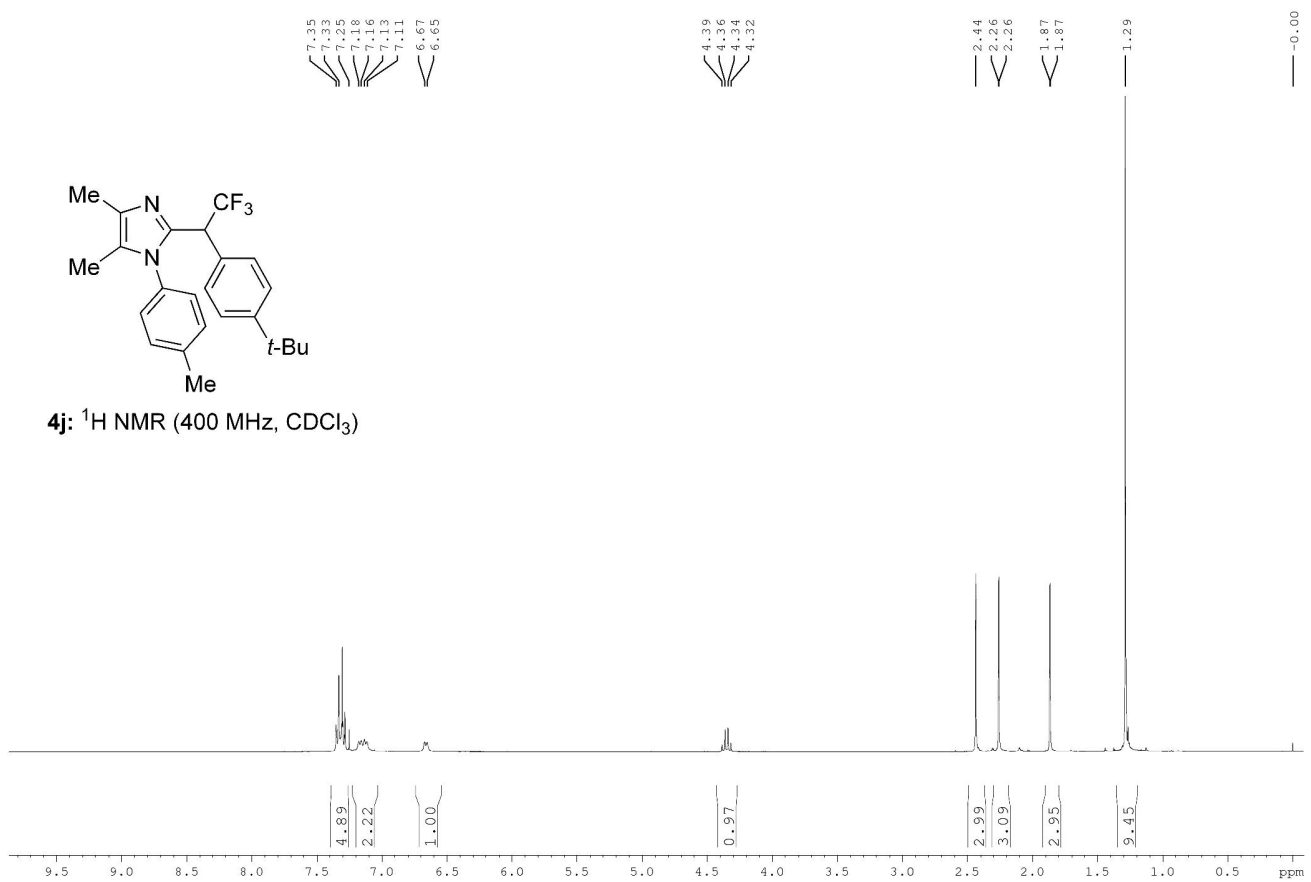
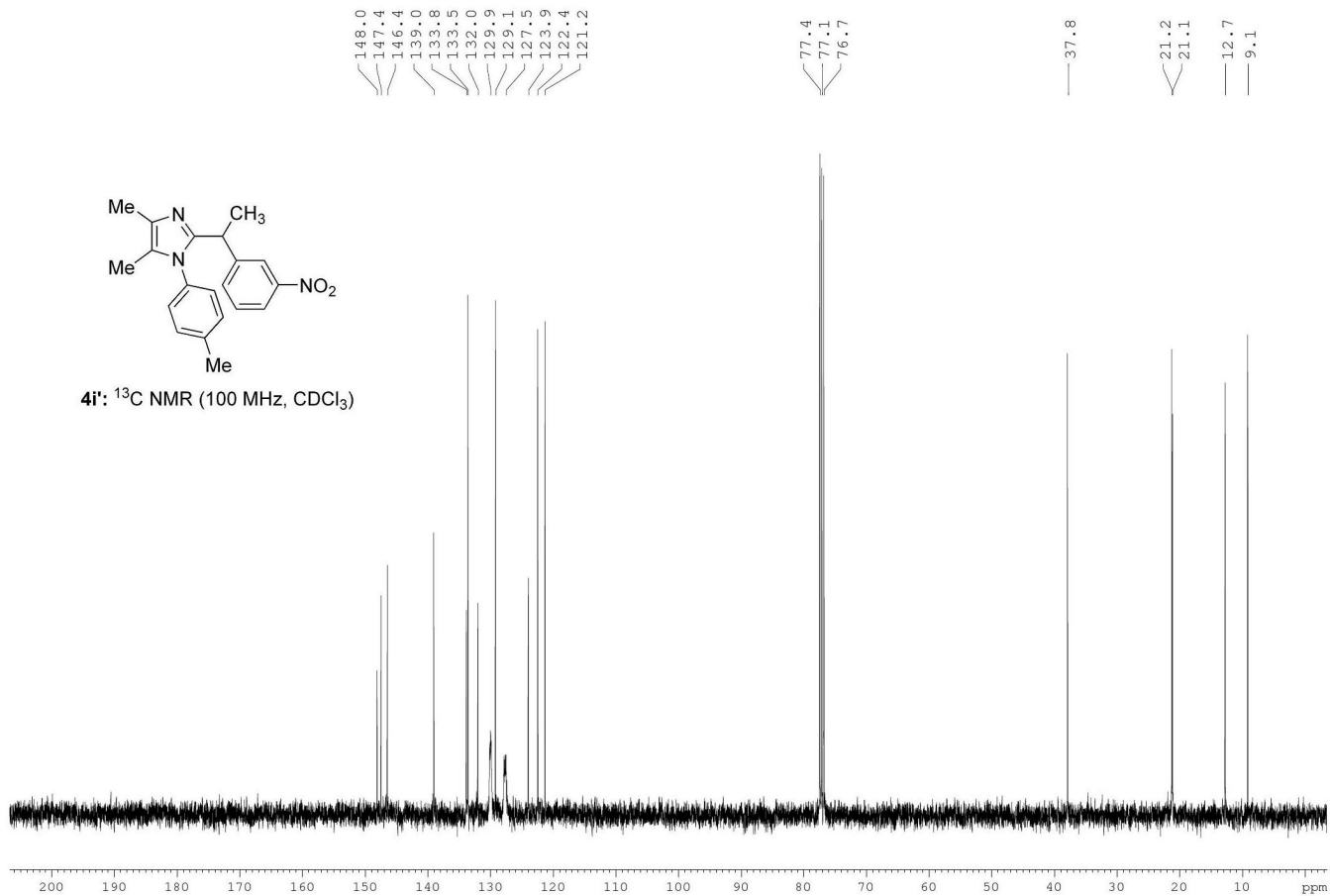
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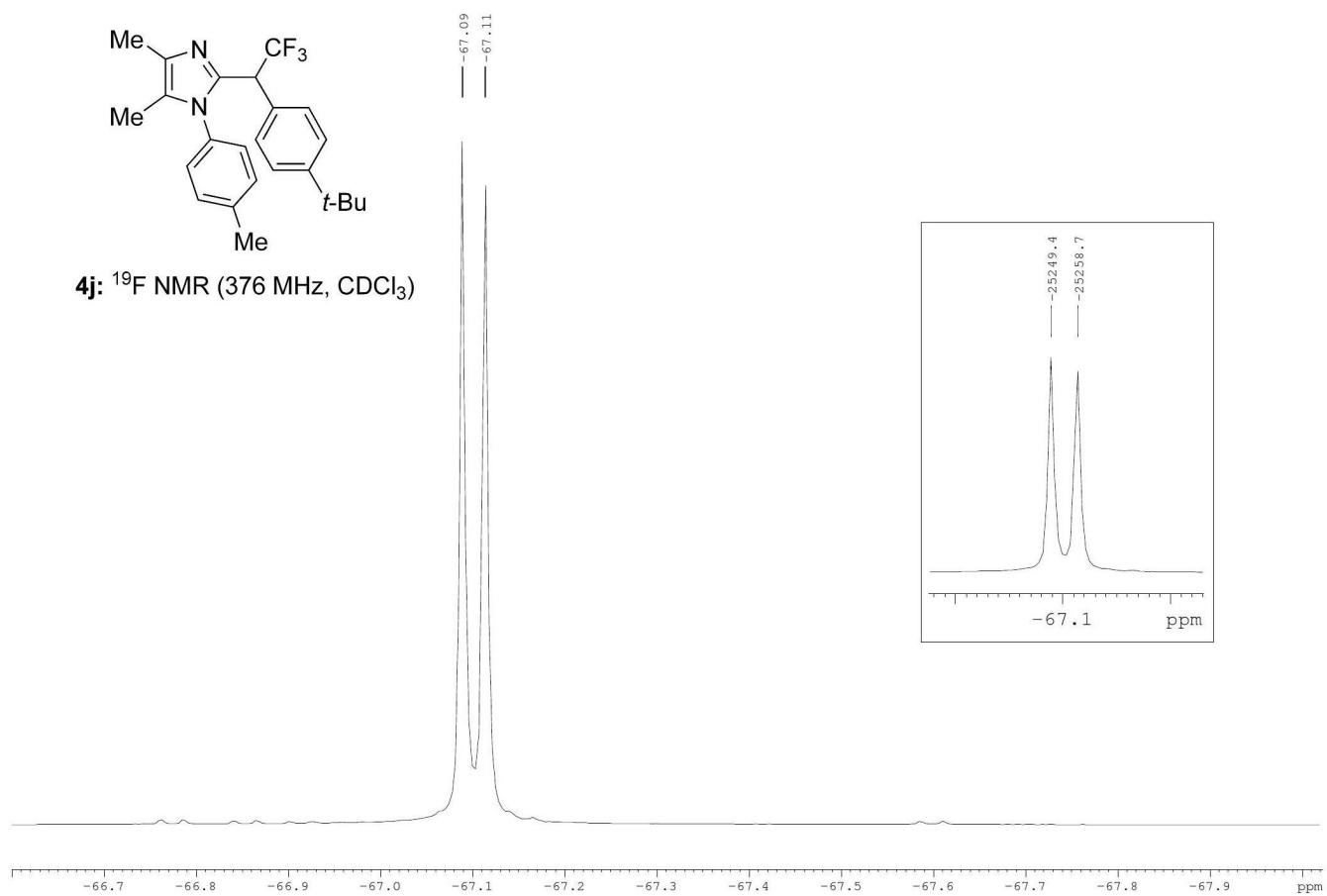
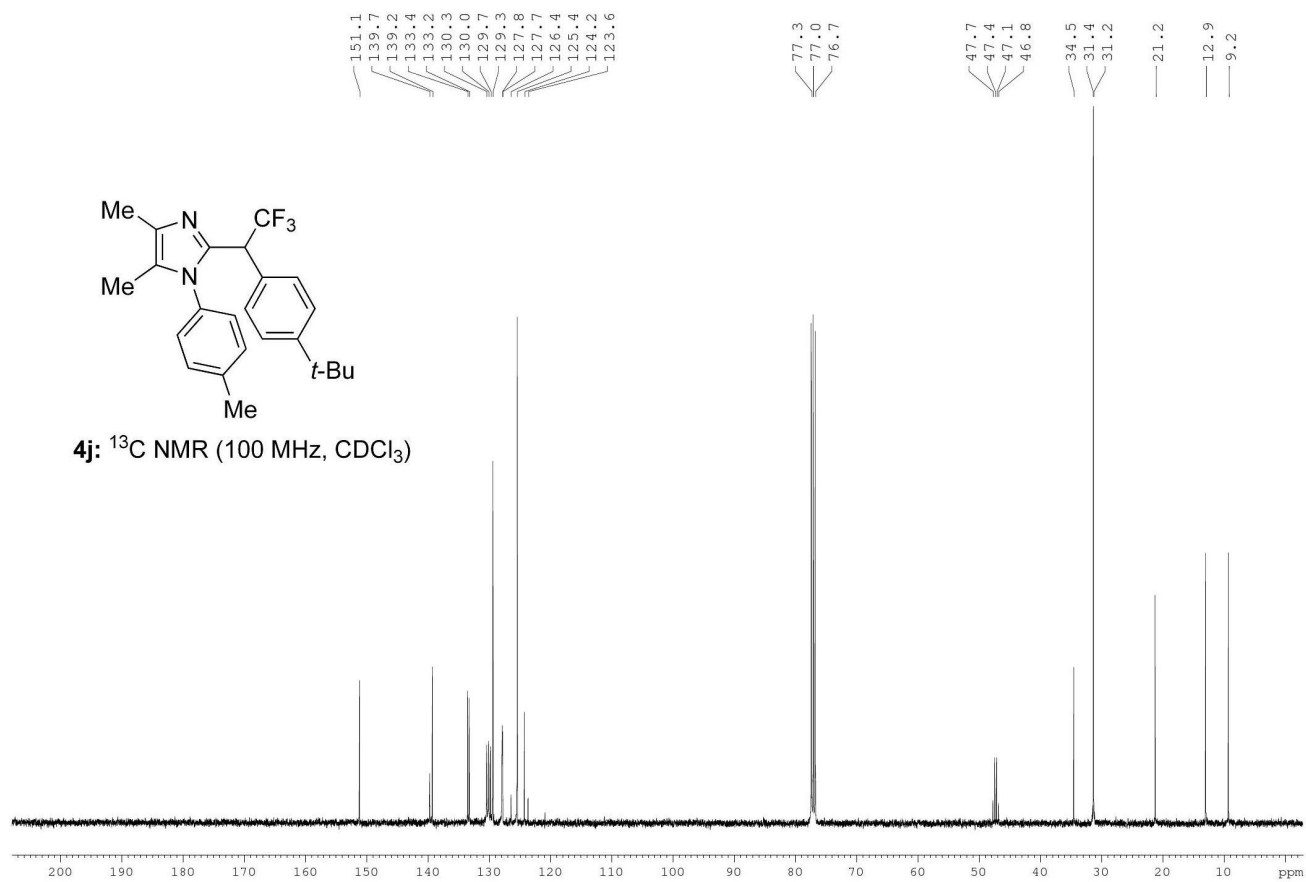
3.39

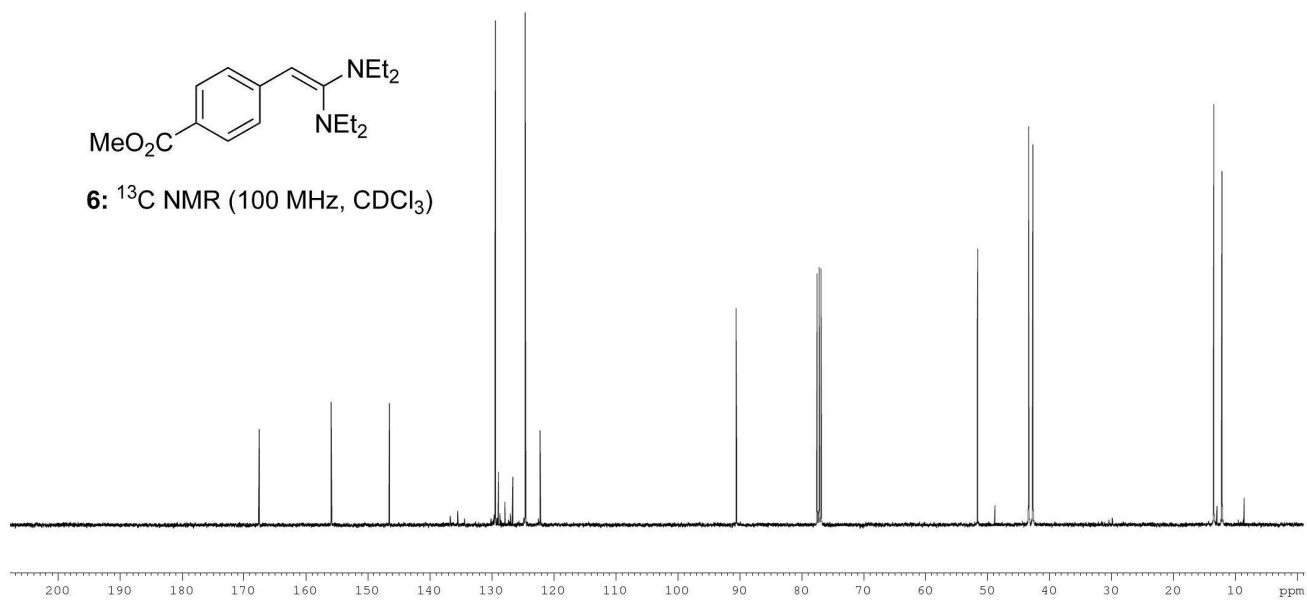
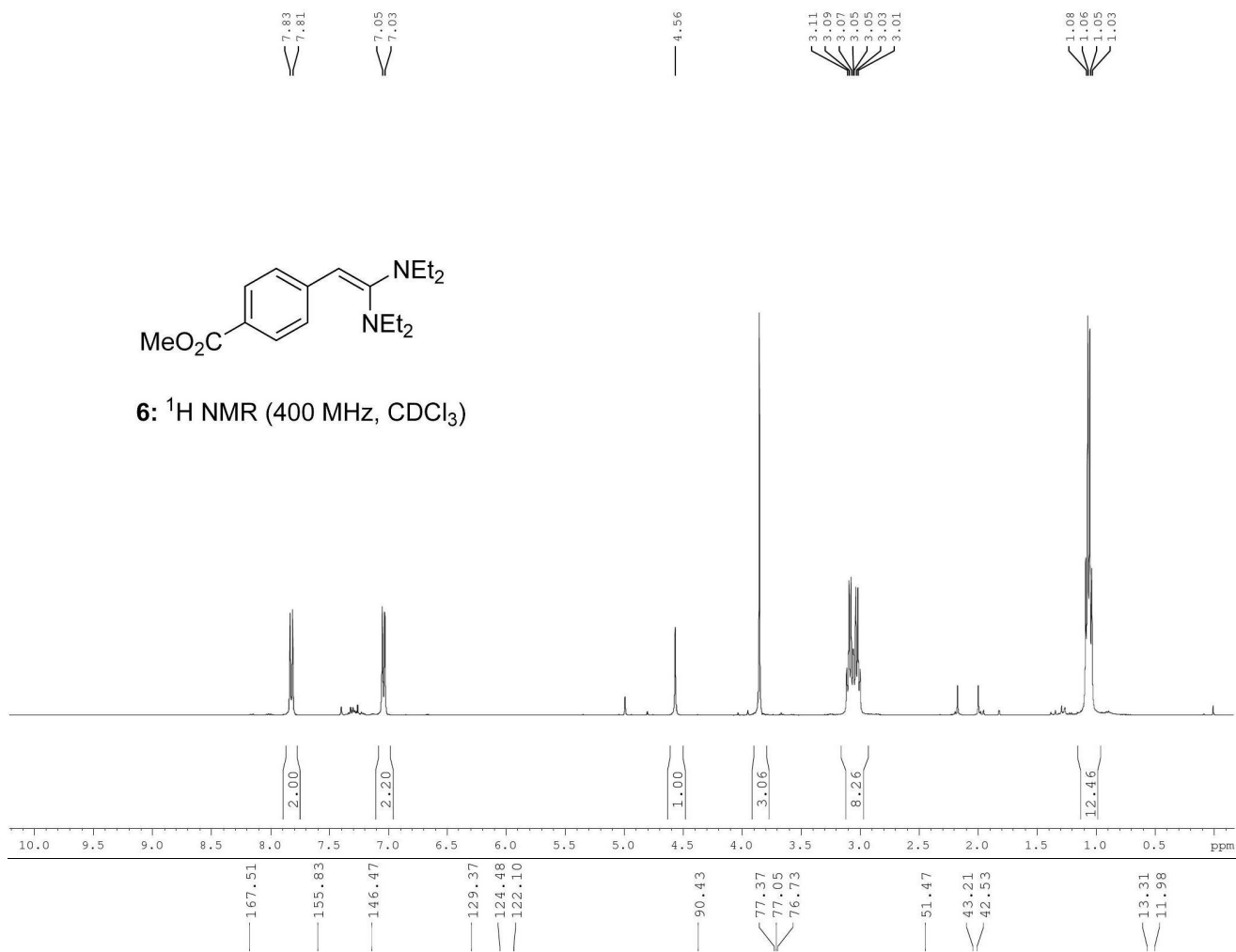
3.29

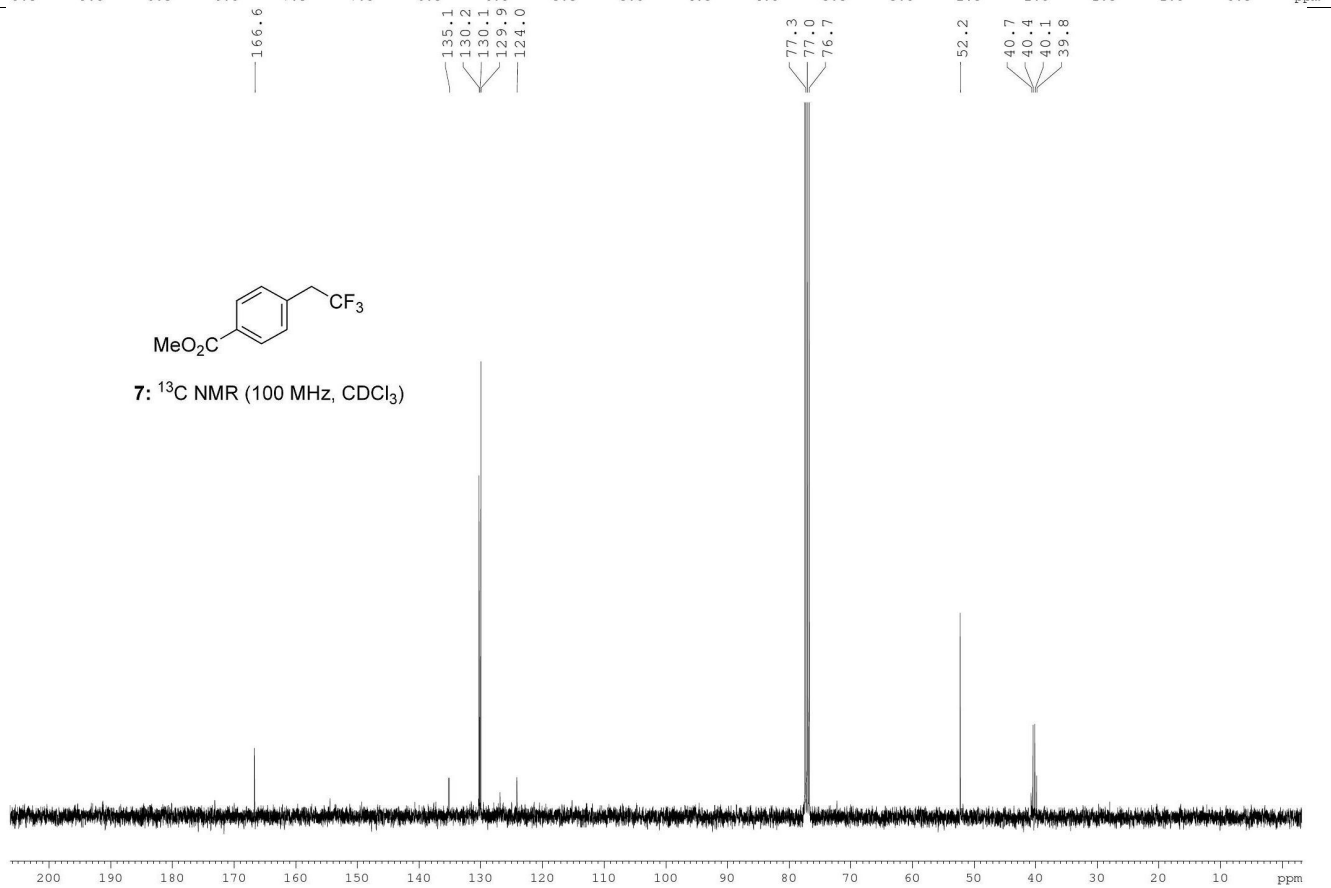
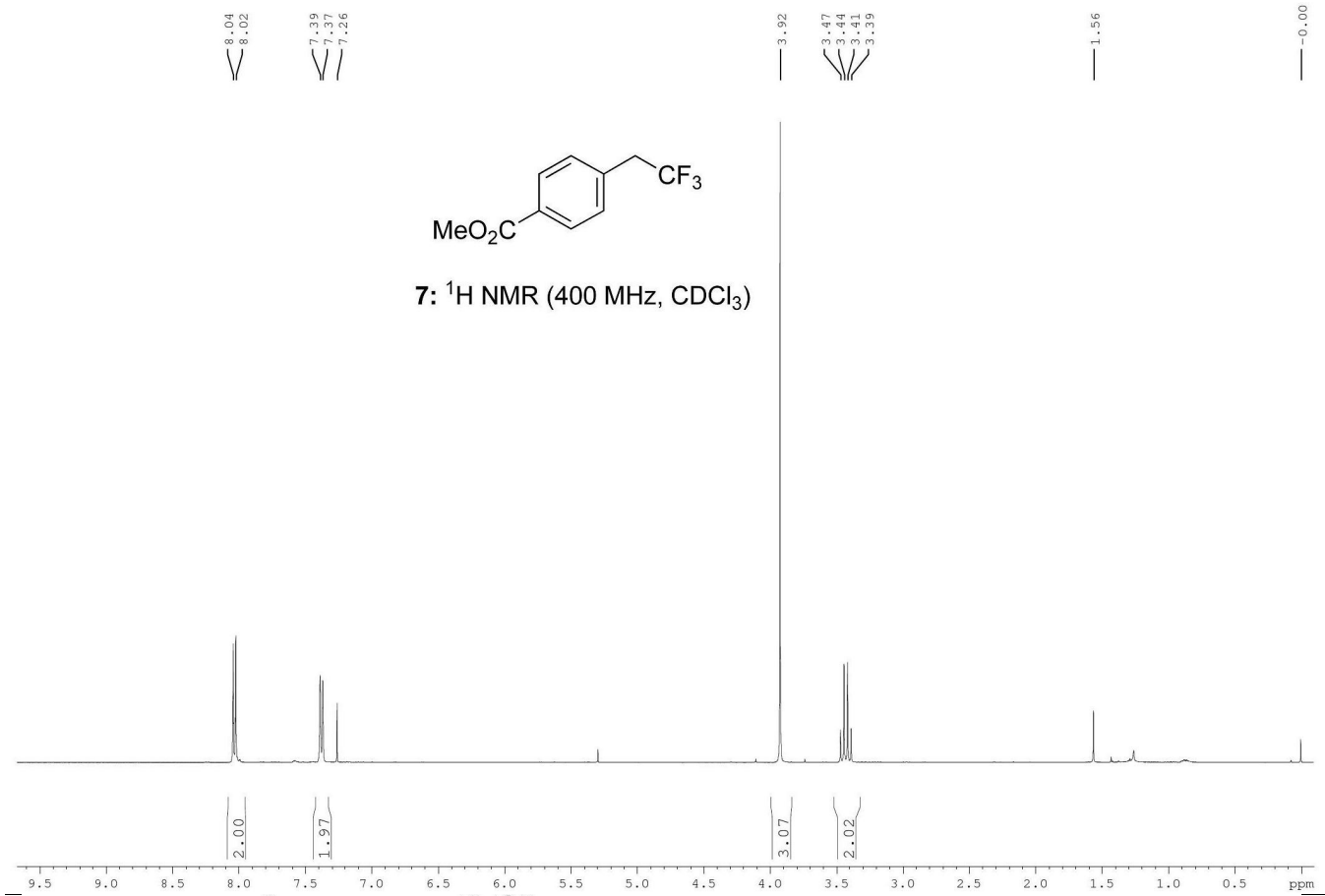
3.17

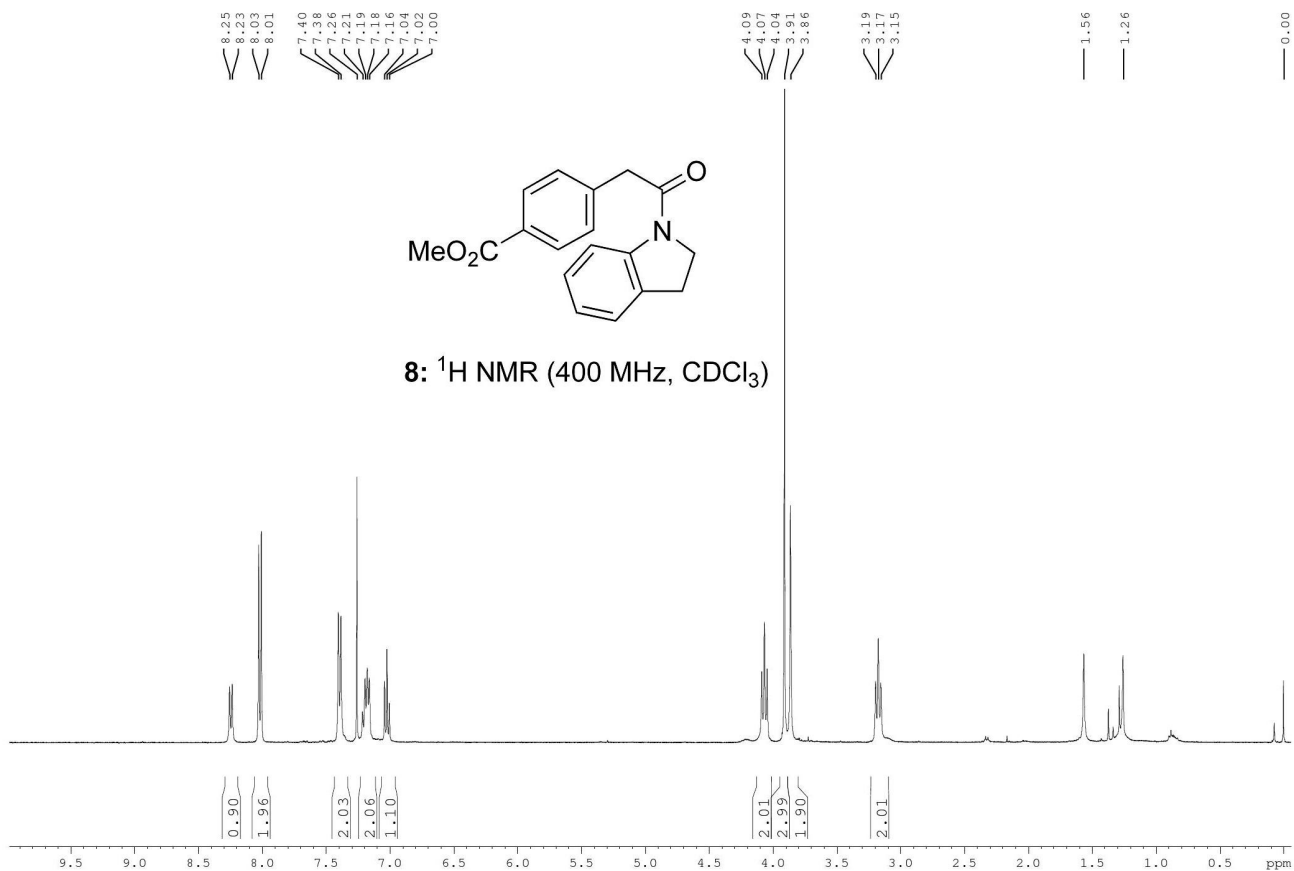
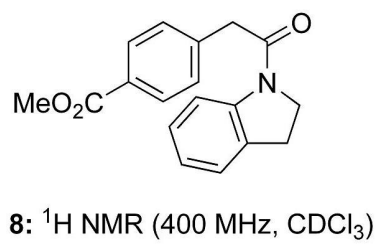
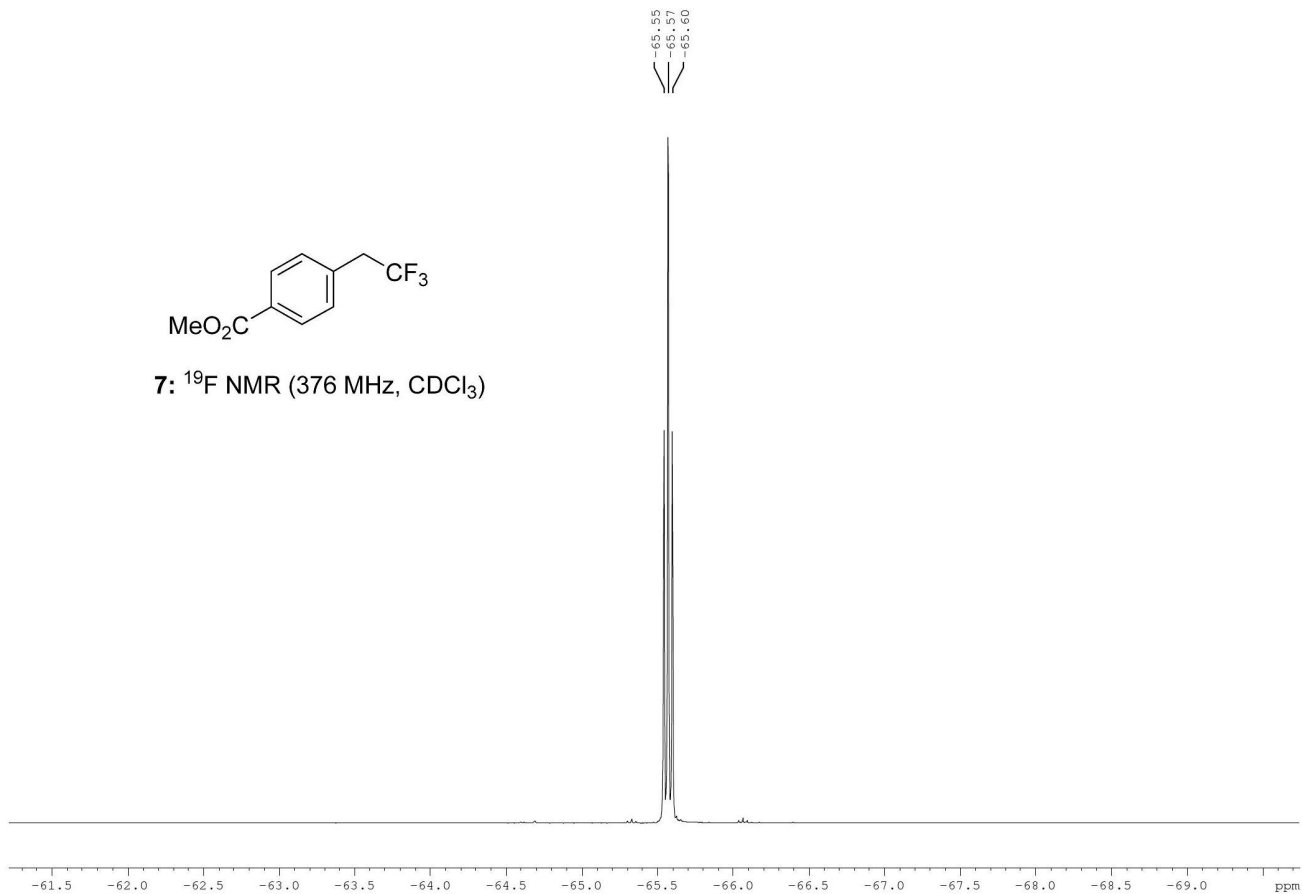
3.23

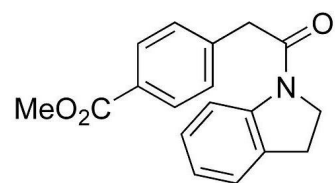




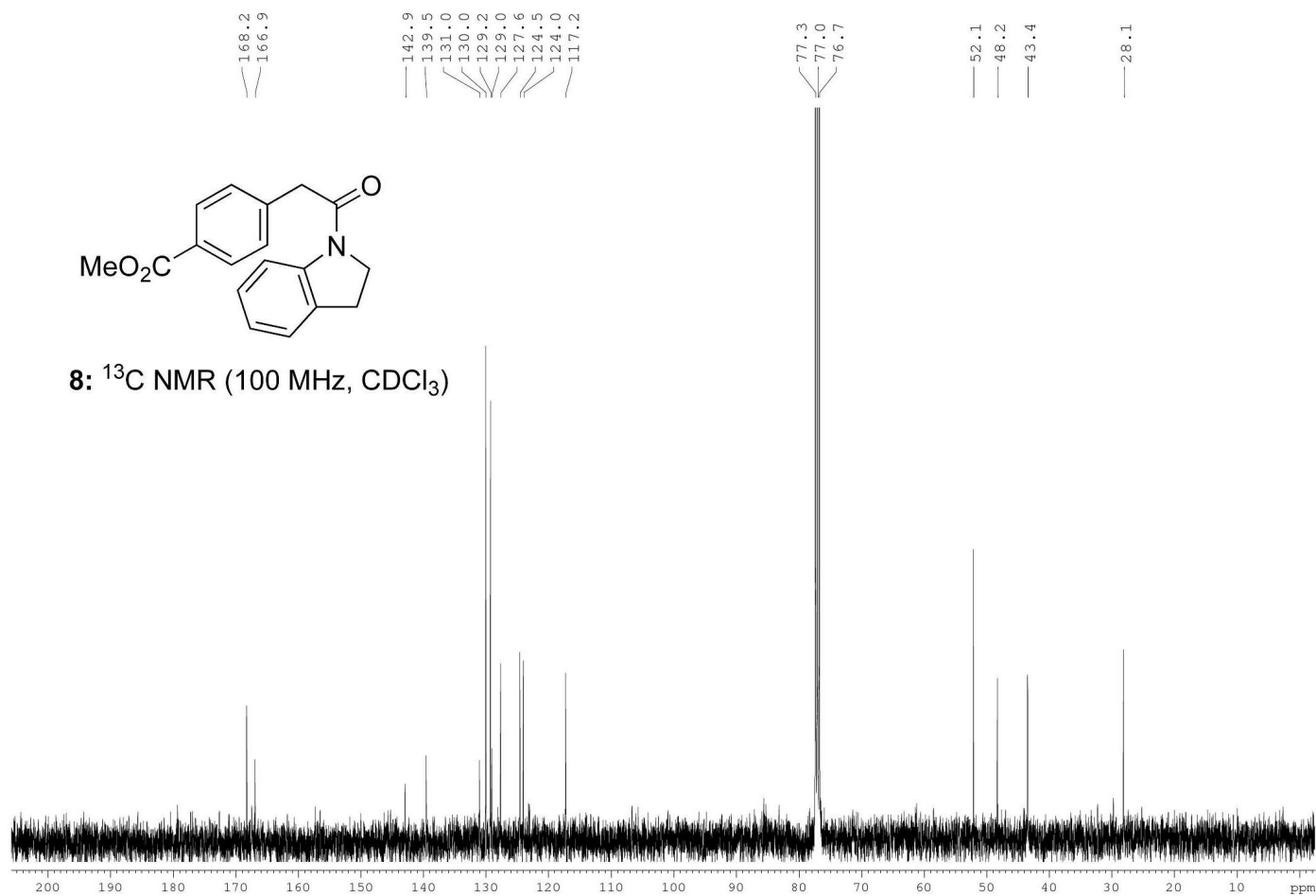


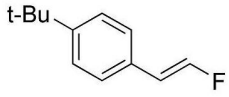




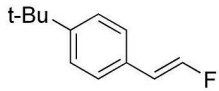
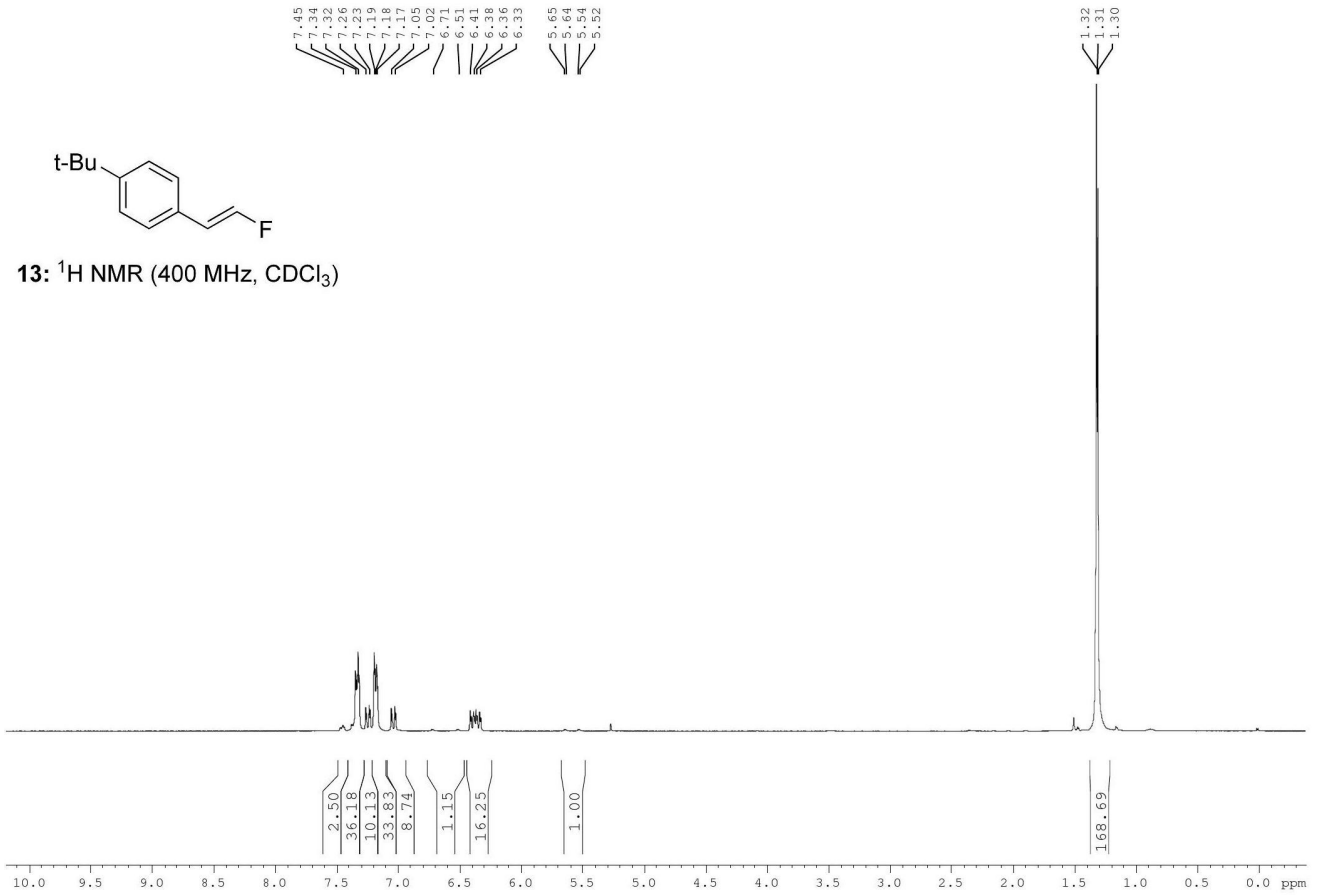


8: ^{13}C NMR (100 MHz, CDCl_3)

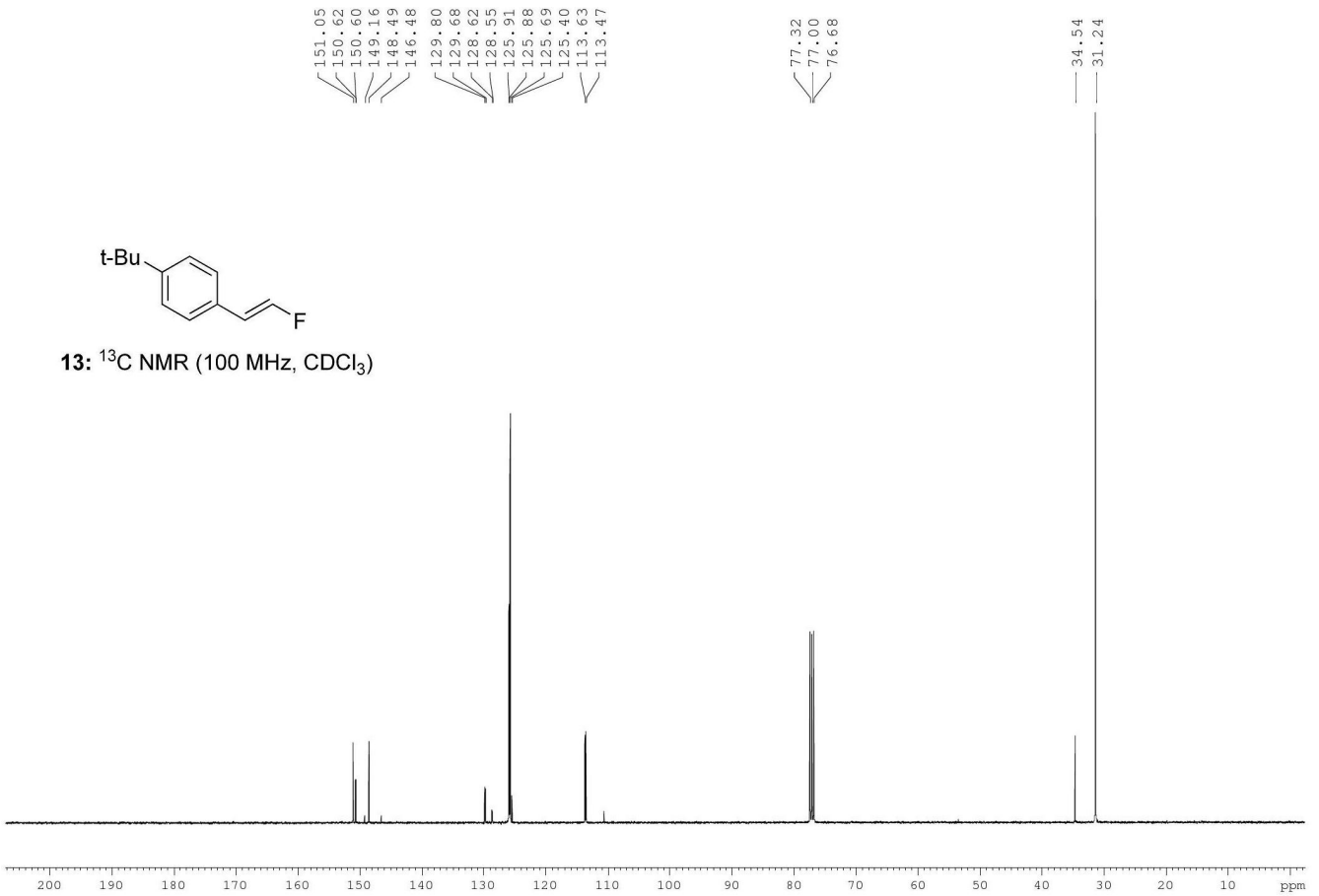


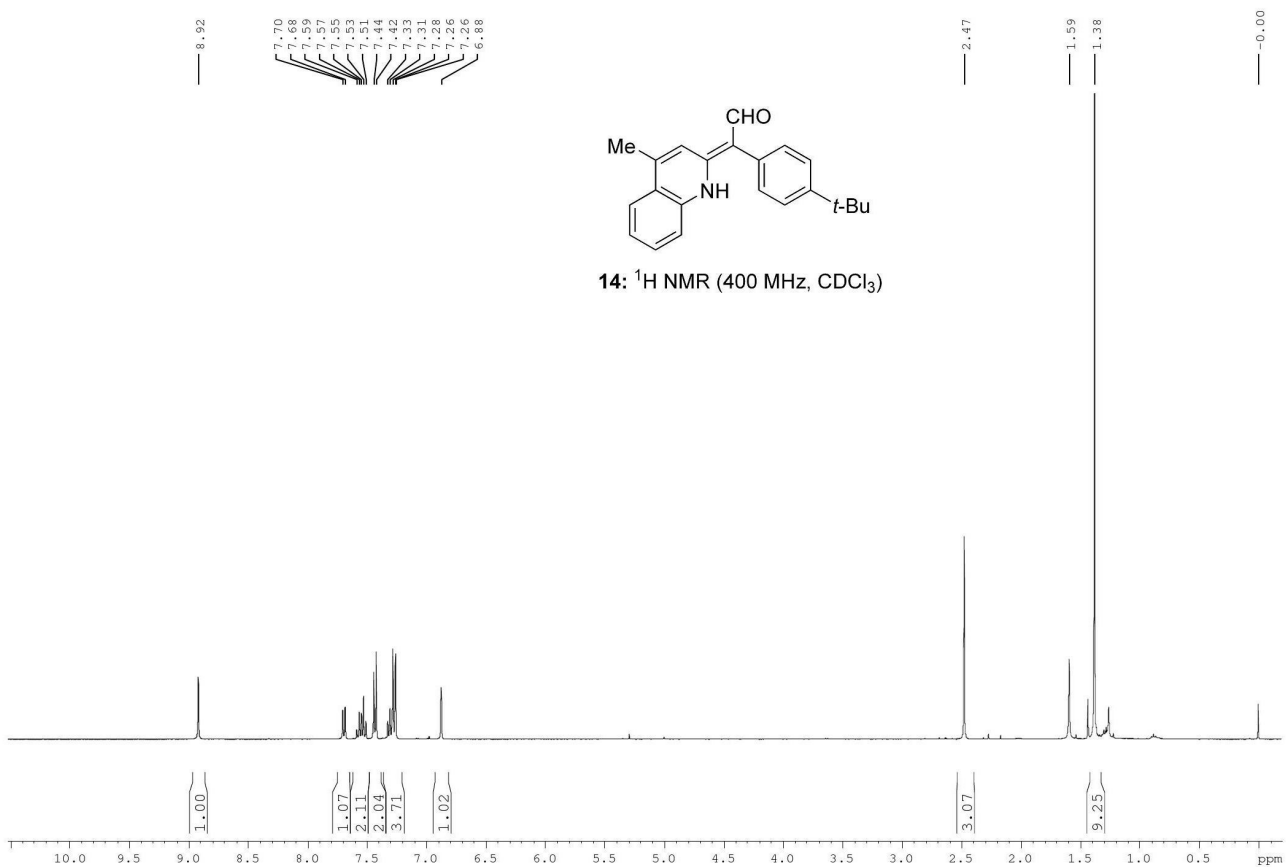
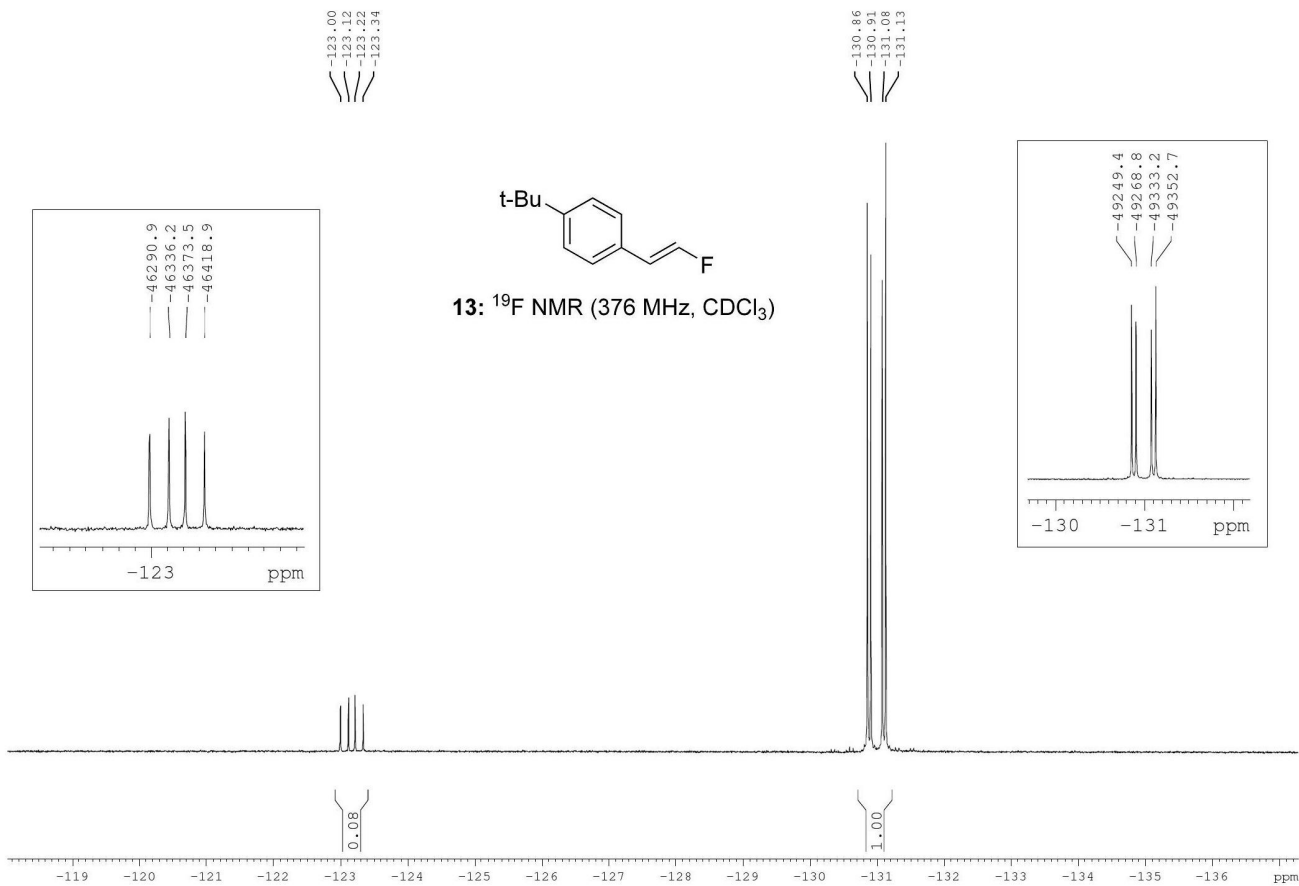


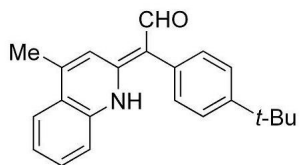
13: ¹H NMR (400 MHz, CDCl₃)



13: ¹³C NMR (100 MHz, CDCl₃)







14: ^{13}C NMR (100 MHz, CDCl_3)

