Supporting information

Synthetic Studies toward (±)-Furanocembranoid 1: Construction of the Acyclic Carbon Framework

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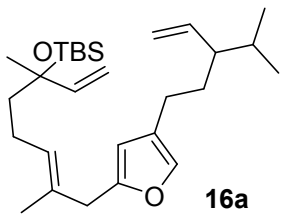
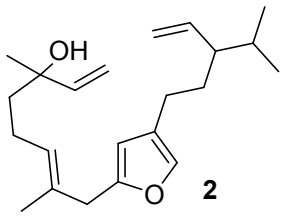
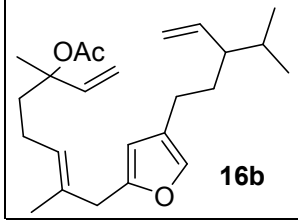
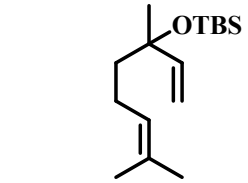
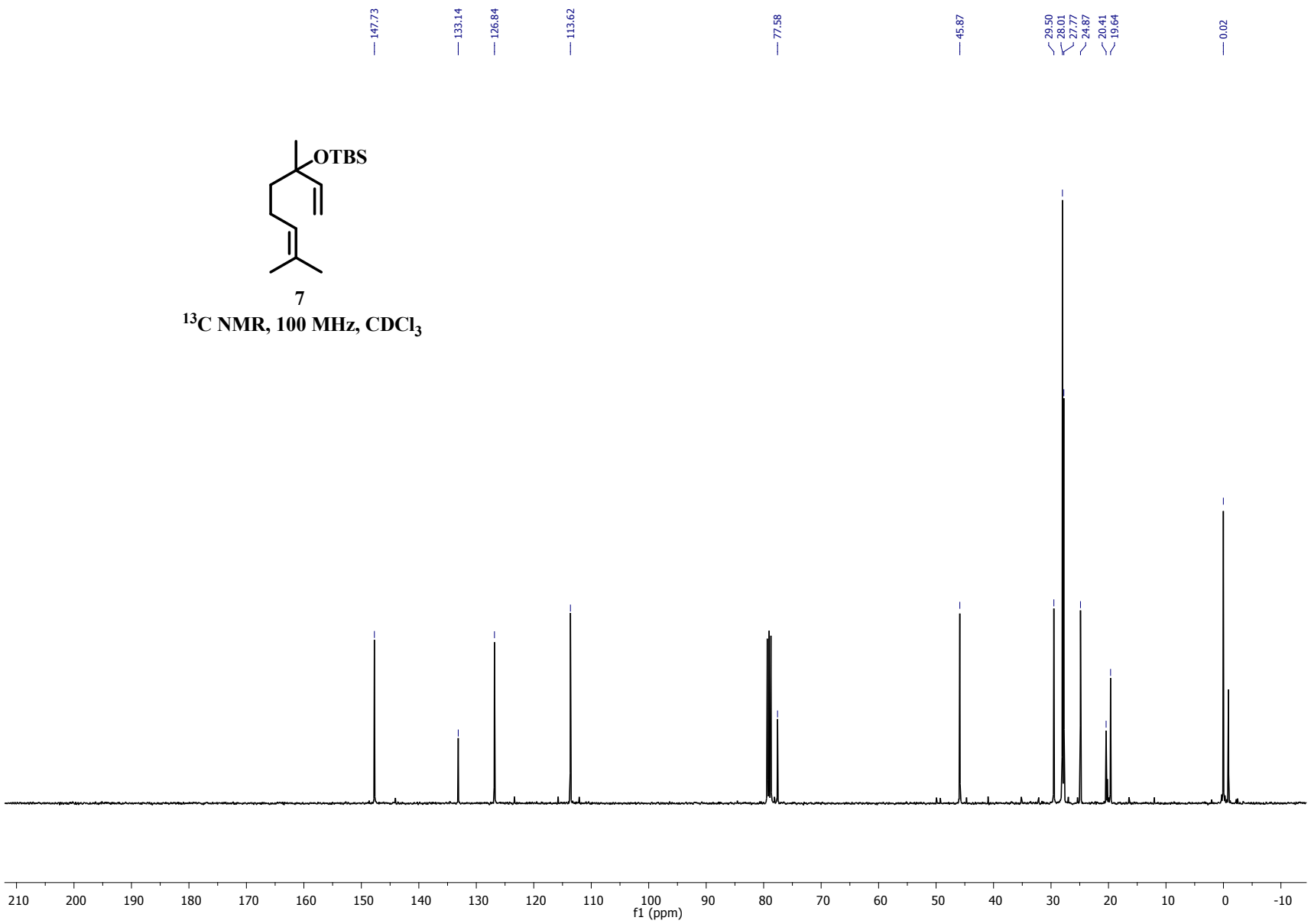
Table S1: Explored RCM conditions for the substrates 16a or 2 or 16b:

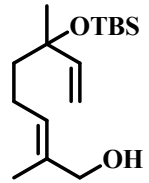
Substrate	Conditions	Observed Result
 **16a**	i) G-I, CH_2Cl_2, rt, 24 h, reflux, 24 h ii) G-II, CH_2Cl_2, rt, 24 h, reflux, 24 h iii) HG-I, CH_2Cl_2, rt, 24 h, reflux, 24 h iv) HG-II, CH_2Cl_2, rt, 24 h, reflux, 24 h v) G-I, toluene, rt, 24 h, reflux, 24 h vi) G-II, toluene, rt, 24 h, reflux, 24 h vii) HG-I, toluene, rt, 24 h, reflux, 24 h viii) HG-II, toluene, rt, 24 h, reflux, 24 h	starting material was recovered in all the cases
 **2**	i) G-I, CH_2Cl_2, rt, 24 h, reflux, 24 h ii) G-II, CH_2Cl_2, rt, 24 h, reflux, 24 h iii) HG-I, CH_2Cl_2, rt, 24 h, reflux, 24 h iv) HG-II, CH_2Cl_2, rt, 24 h, reflux, 24 h v) G-I, toluene, rt, 24 h, reflux, 24 h vi) G-II, toluene, rt, 24 h, reflux, 24 h vii) HG-I, toluene, rt, 24 h, reflux, 24 h viii) HG-II, toluene, rt, 24 h, reflux, 24 h	formation of non-polar unidentified mixture of products observed in all the cases
 **16b**	i) G-II, CH_2Cl_2, rt, 24 h, reflux, 24 h ii) G-II, toluene, rt, 24 h, reflux, 24 h	starting material was recovered in all the cases



7

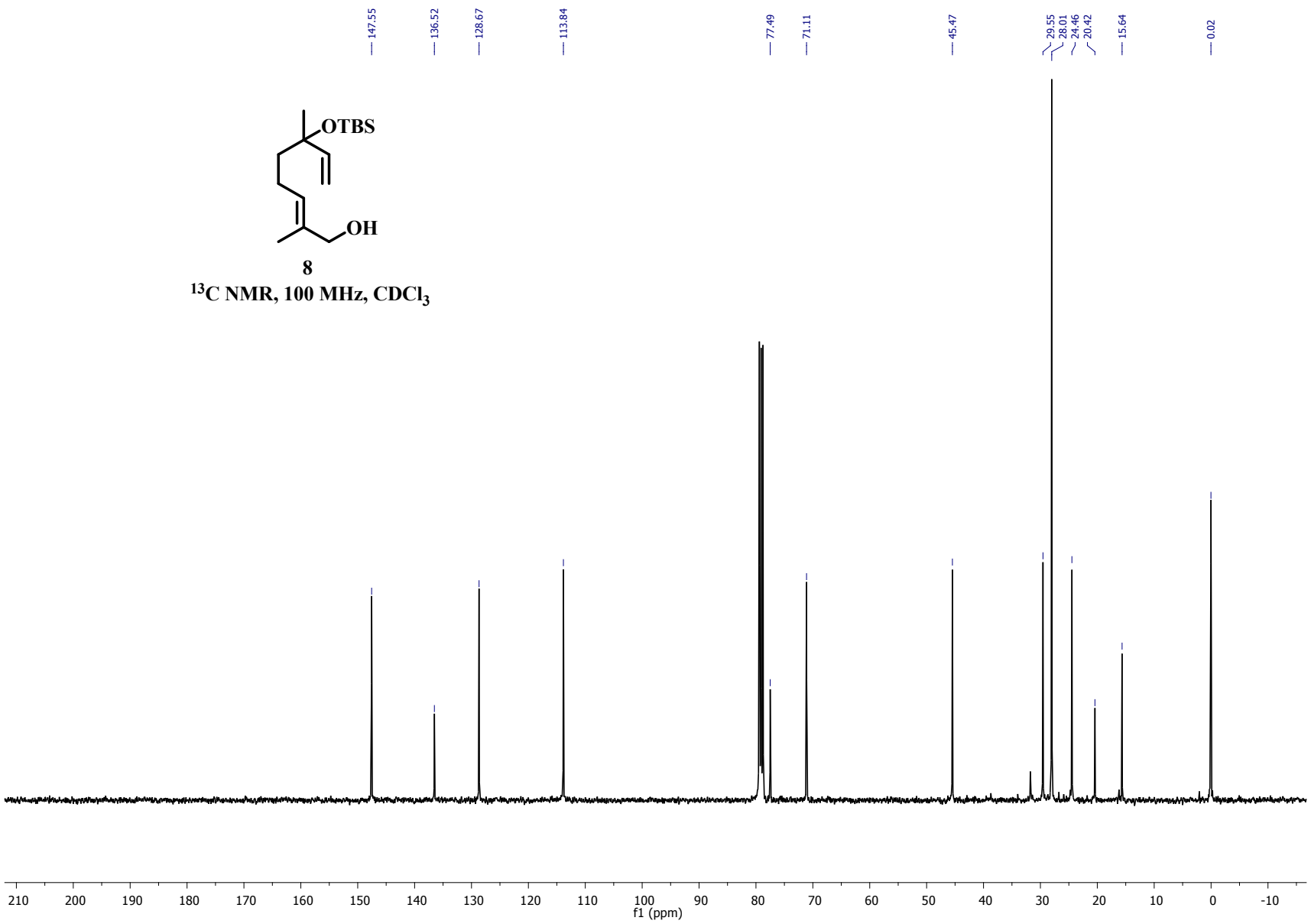
^{1}H NMR, 400 MHz, $CDCl_3$

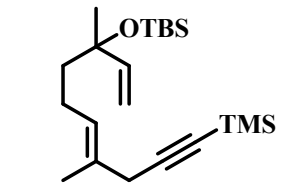

147.73
133.14
126.84
113.62
77.58
45.87
29.50
28.01
27.77
24.87
20.41
19.64
0.02
OTBS
7
^{13}C NMR, 100 MHz, CDCl$_3$
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)



8

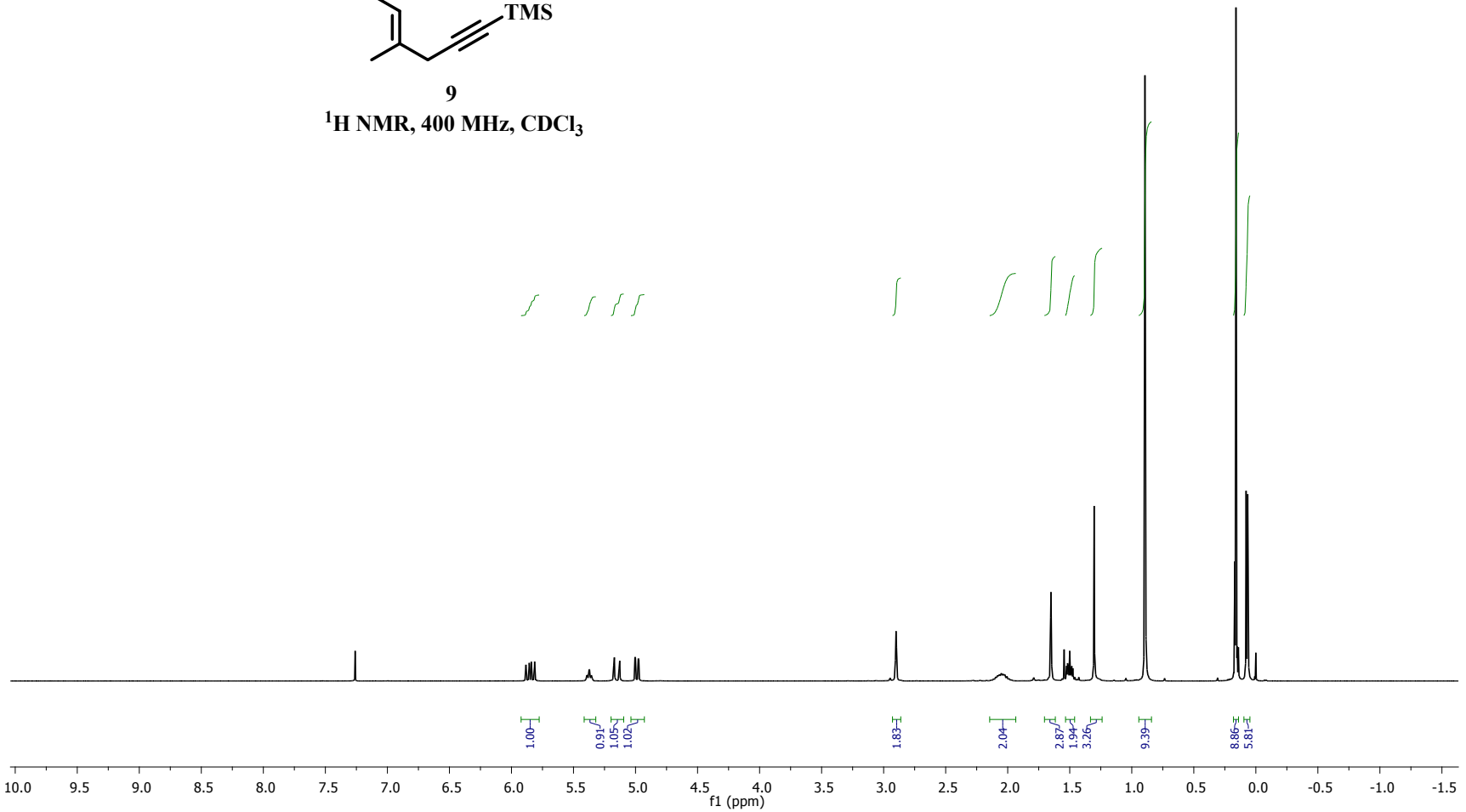
^{1}H NMR, 400 MHz, $CDCl_3$

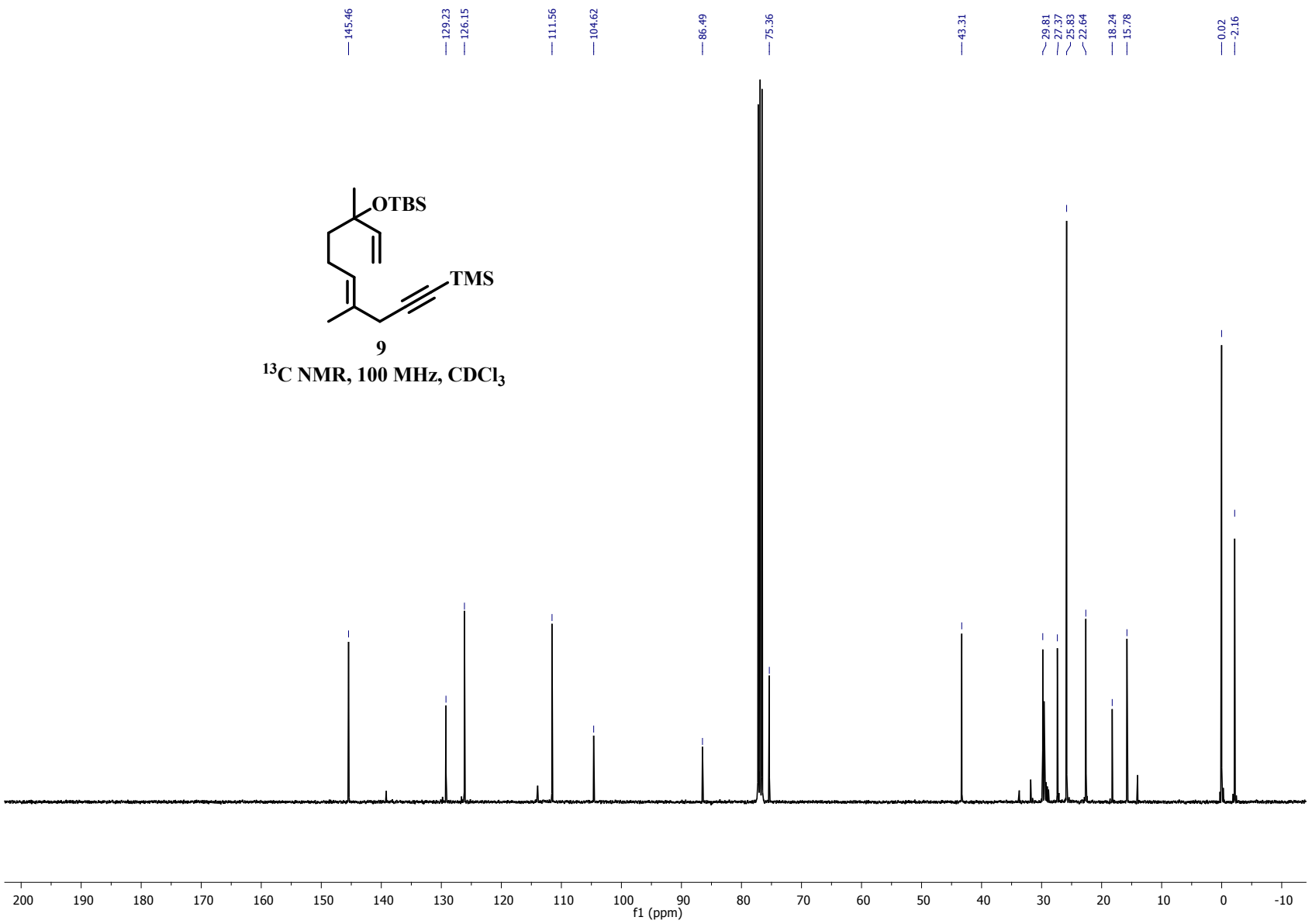

147.55
136.52
128.67
113.84
77.49
71.11
45.47
29.55
28.01
24.46
20.42
15.64
0.02
OTBS
OH
8
13C NMR, 100 MHz, CDCl3
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)



9

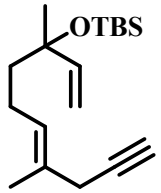
^{1}H NMR, 400 MHz, $CDCl_3$





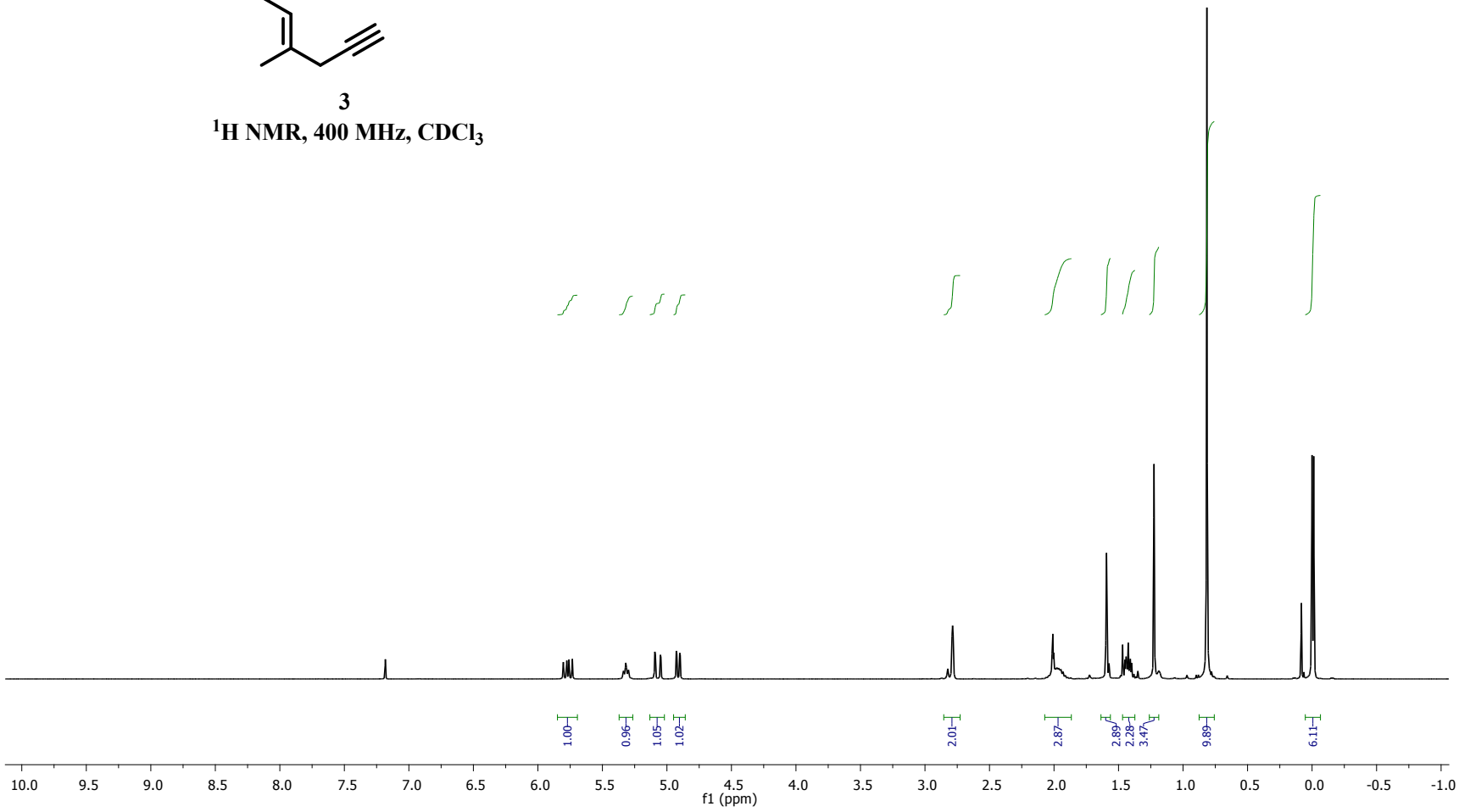
9

^{13}C NMR, 100 MHz, $CDCl_3$

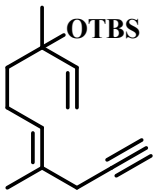


3

^{1}H NMR, 400 MHz, $CDCl_3$

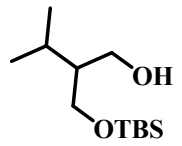


ROSHAN



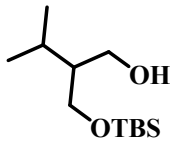
3

^{13}C NMR, 125 MHz, $CDCl_3$



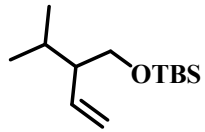
10

^{1}H NMR, 500 MHz, $CDCl_3$



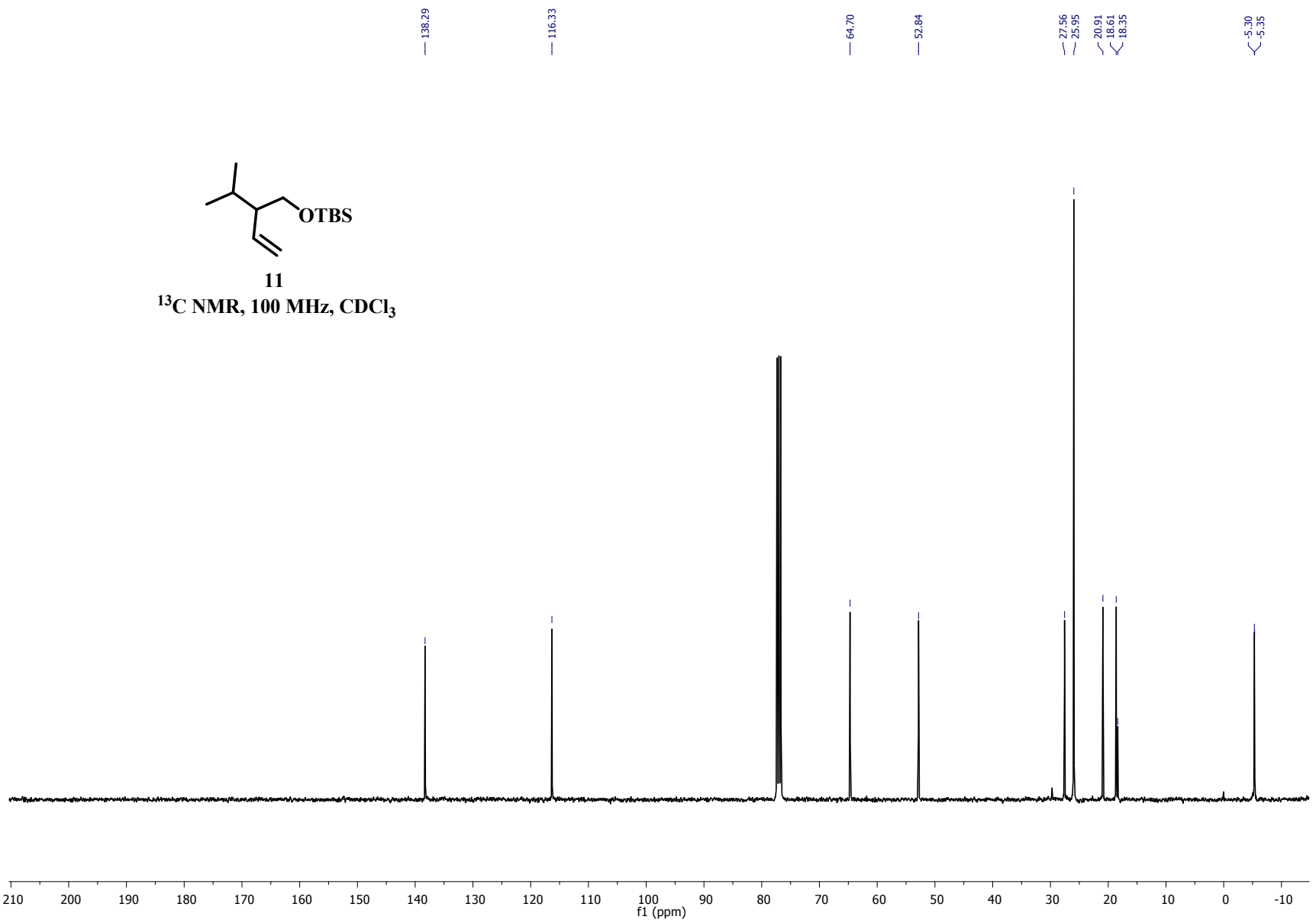
10

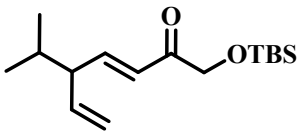
^{13}C NMR, 100 MHz, $CDCl_3$



11

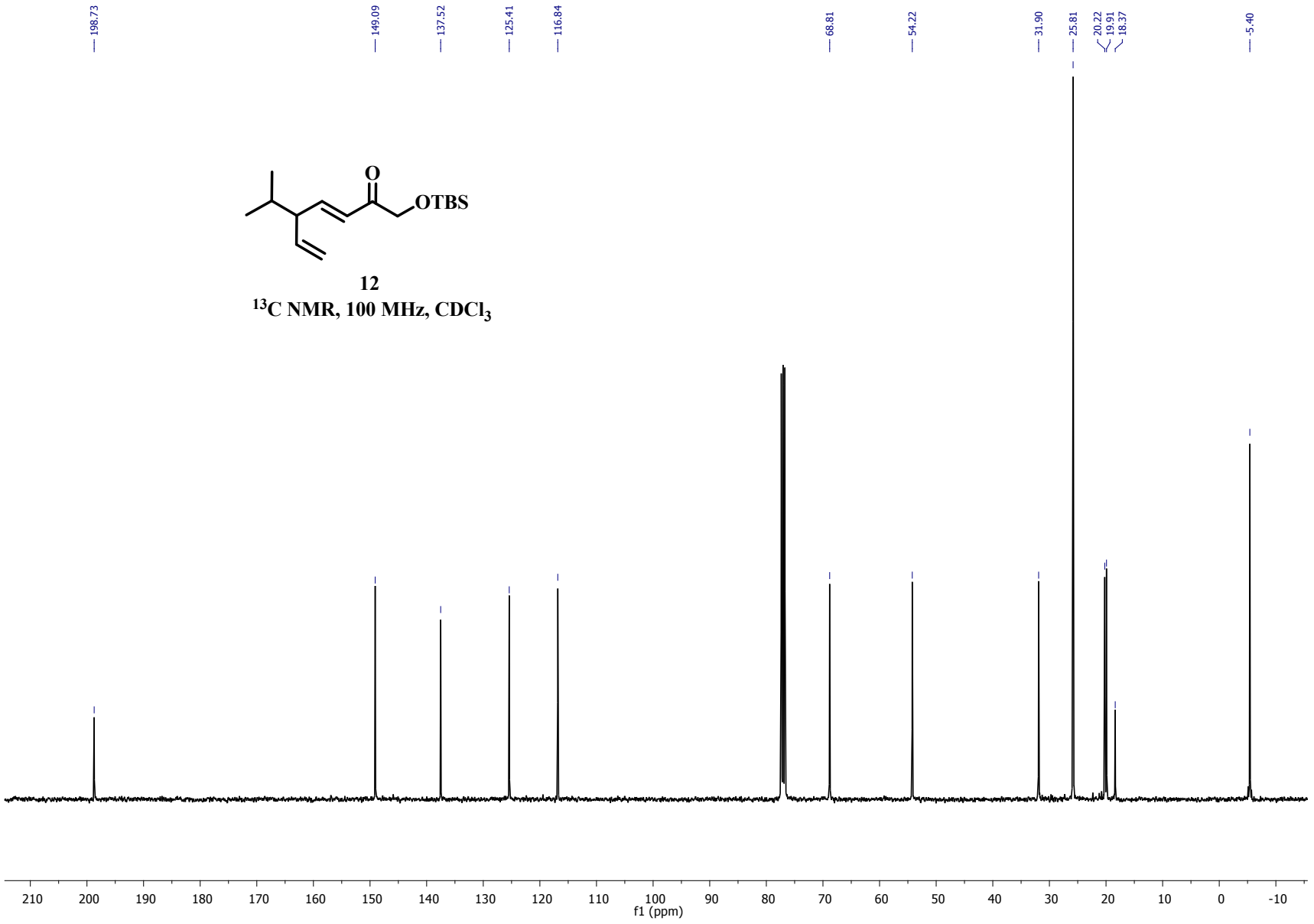
^{1}H NMR, 500 MHz, $CDCl_3$


138.29
116.33
64.70
52.84
27.56
25.95
20.91
18.61
18.35
-5.30
-5.35
OTBS
11
13C NMR, 100 MHz, CDCl3
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)



12

^{1}H NMR, 400 MHz, $CDCl_3$



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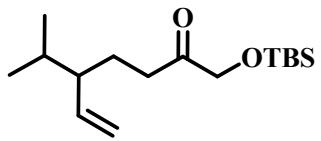
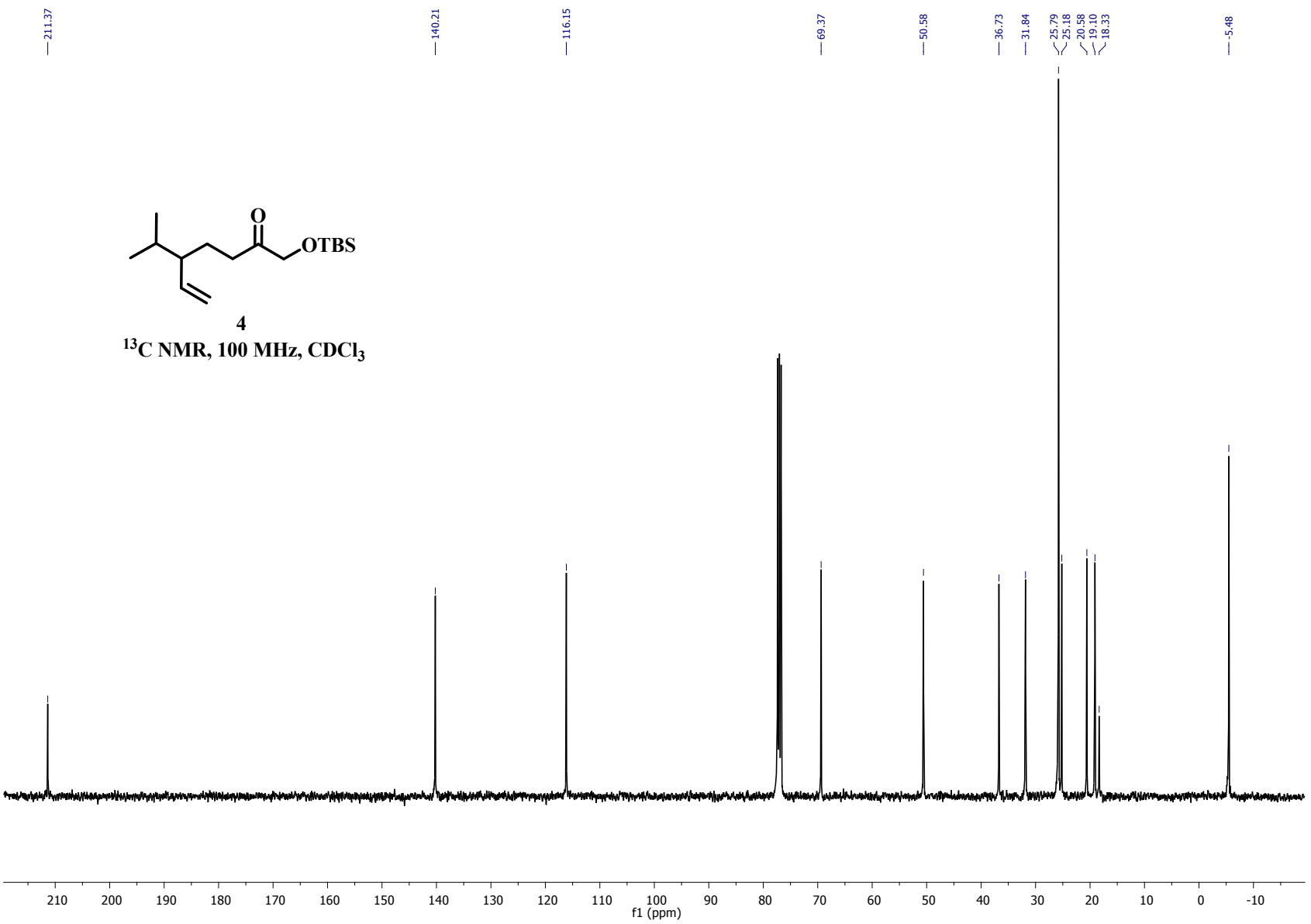
^{13}C NMR, 100 MHz, $CDCl_3$



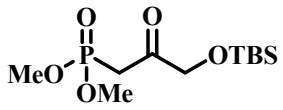
4

^{1}H NMR, 400 MHz, $CDCl_3$



4

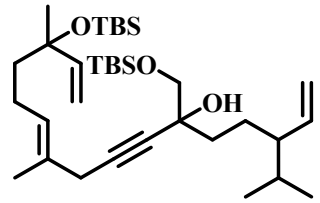
^{13}C NMR, 100 MHz, $CDCl_3$



13

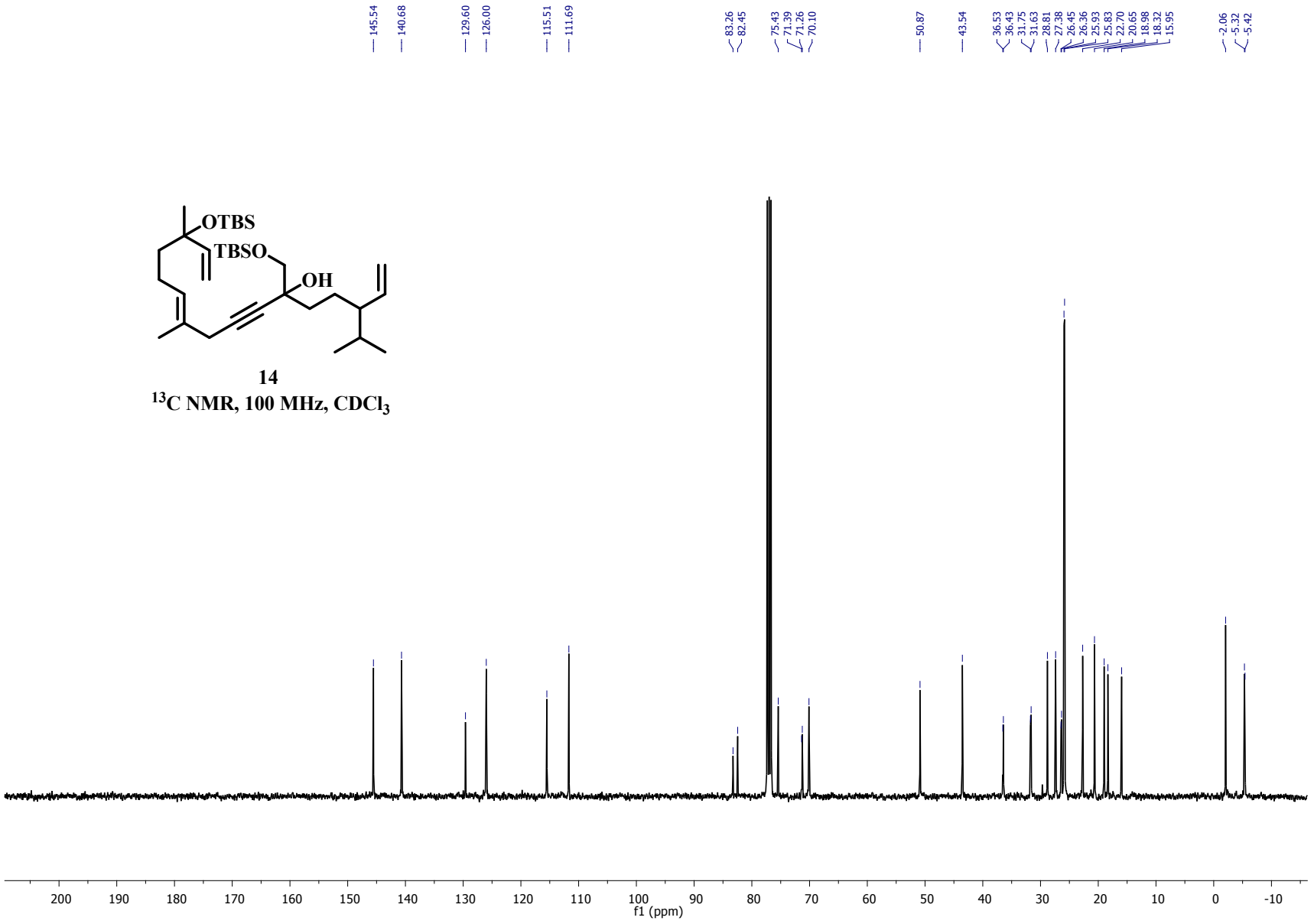
^{1}H NMR, 400 MHz, $CDCl_3$

SIDDIQUE



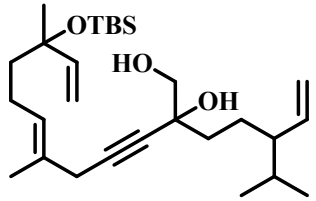
14

^{1}H NMR, 400 MHz, $CDCl_3$



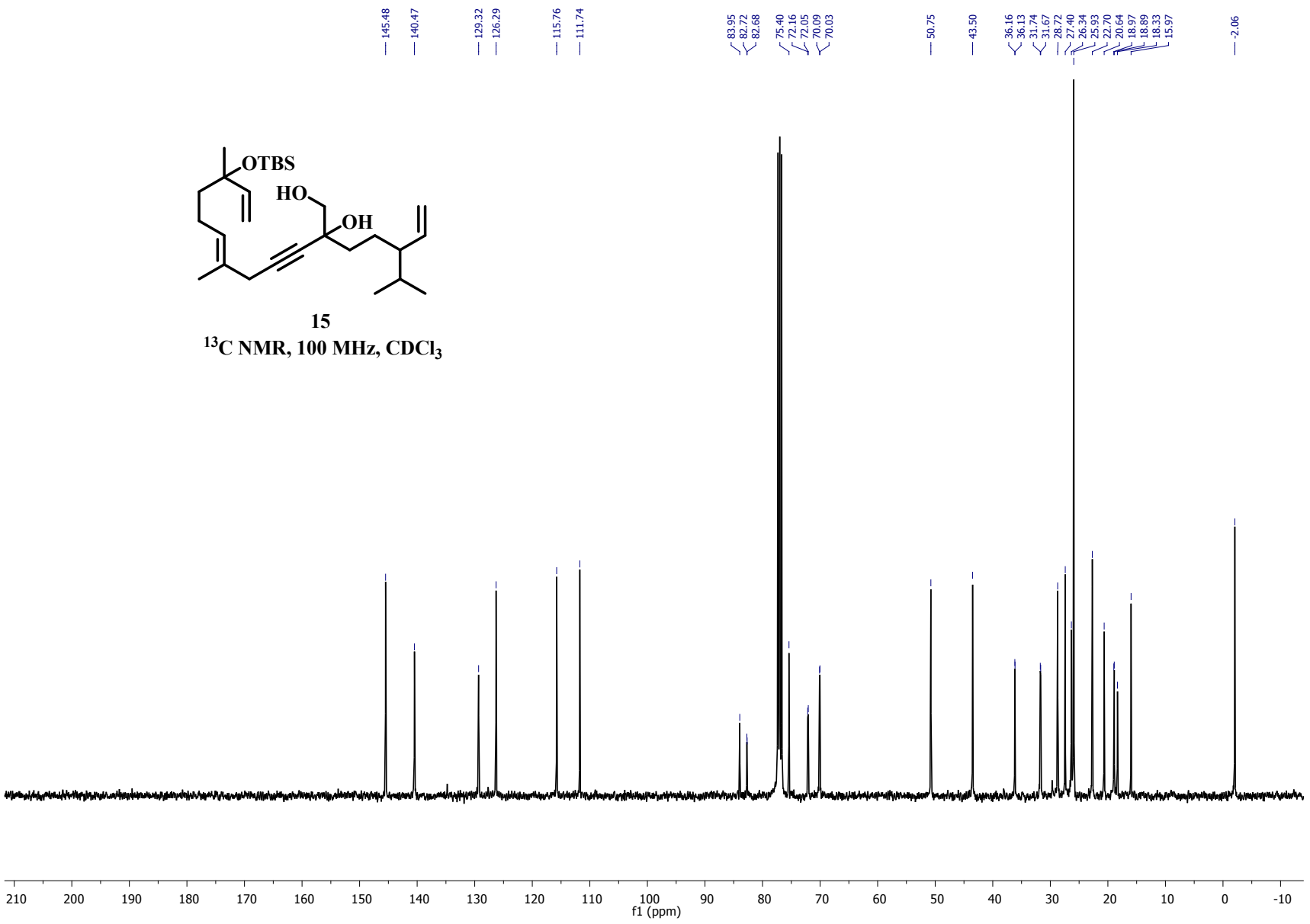
14

^{13}C NMR, 100 MHz, $CDCl_3$



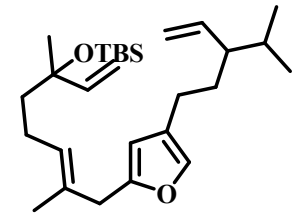
15

^{1}H NMR, 500 MHz, $CDCl_3$



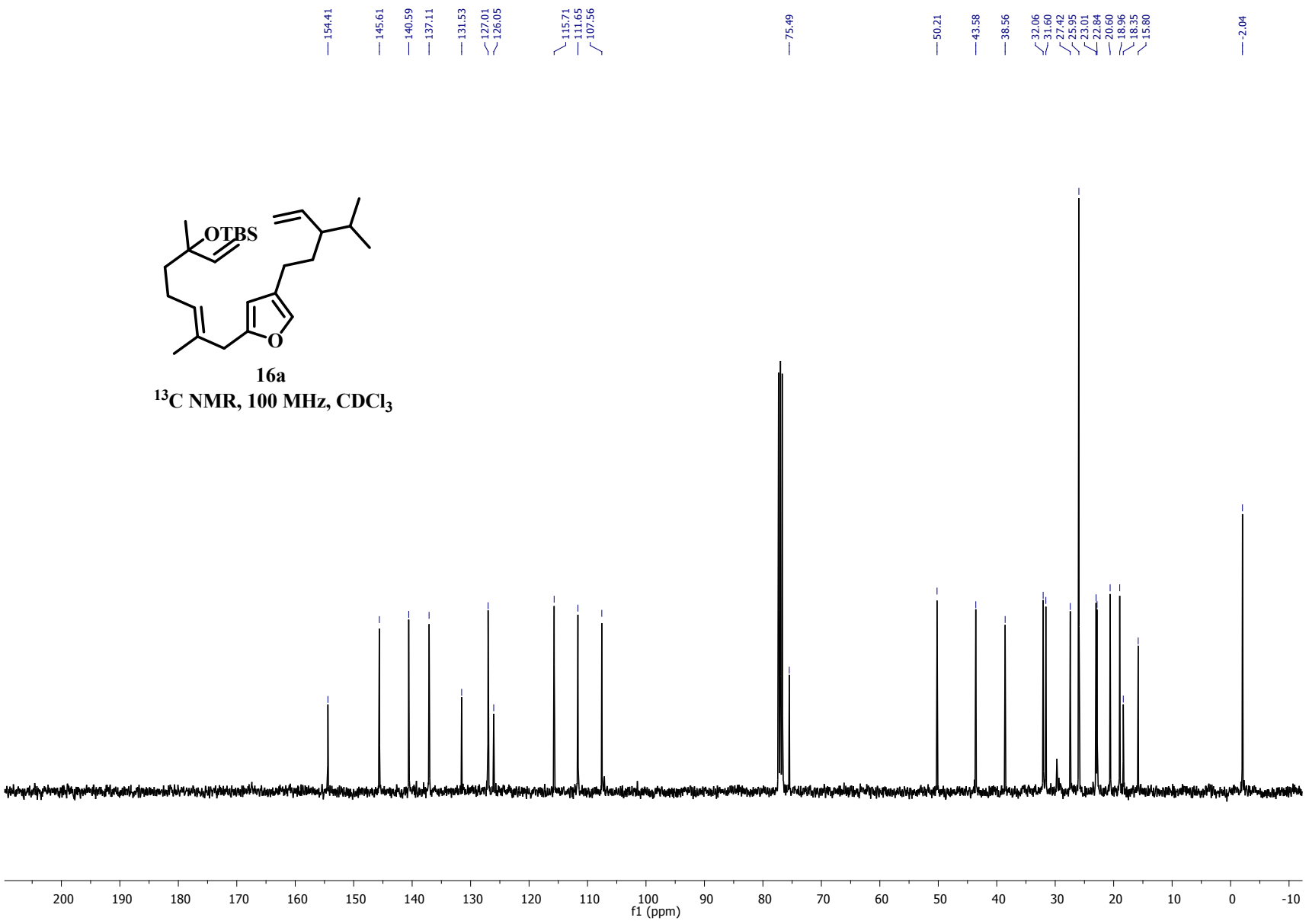
15

^{13}C NMR, 100 MHz, $CDCl_3$



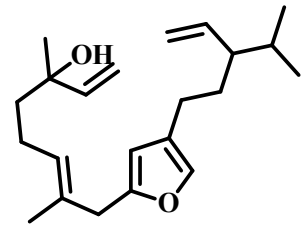
16a

^{1}H NMR, 400 MHz, $CDCl_3$



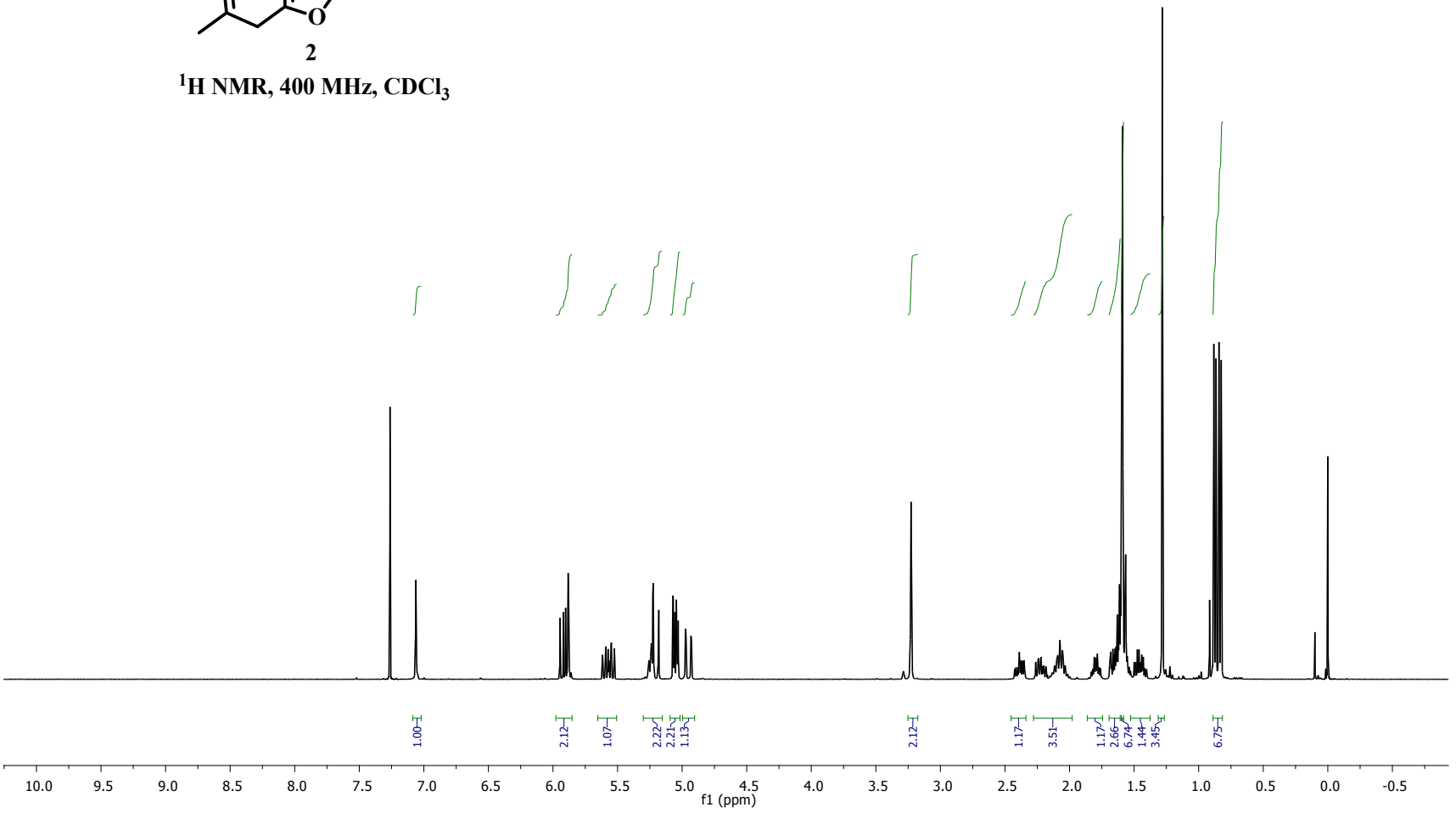
16a

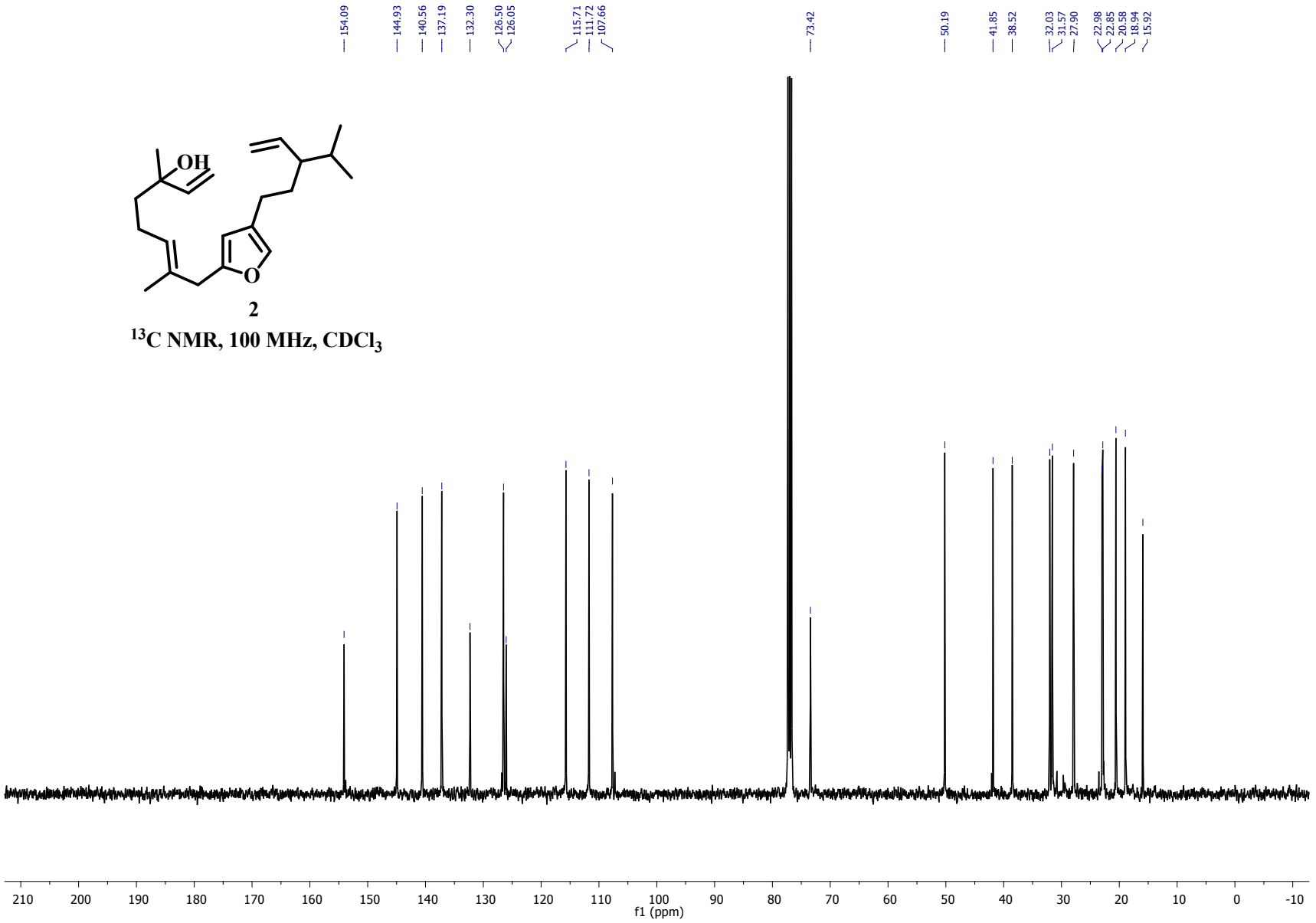
^{13}C NMR, 100 MHz, $CDCl_3$



2

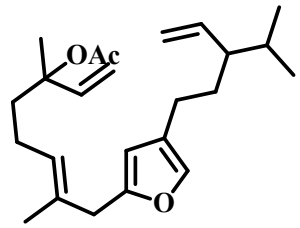
^{1}H NMR, 400 MHz, $CDCl_3$





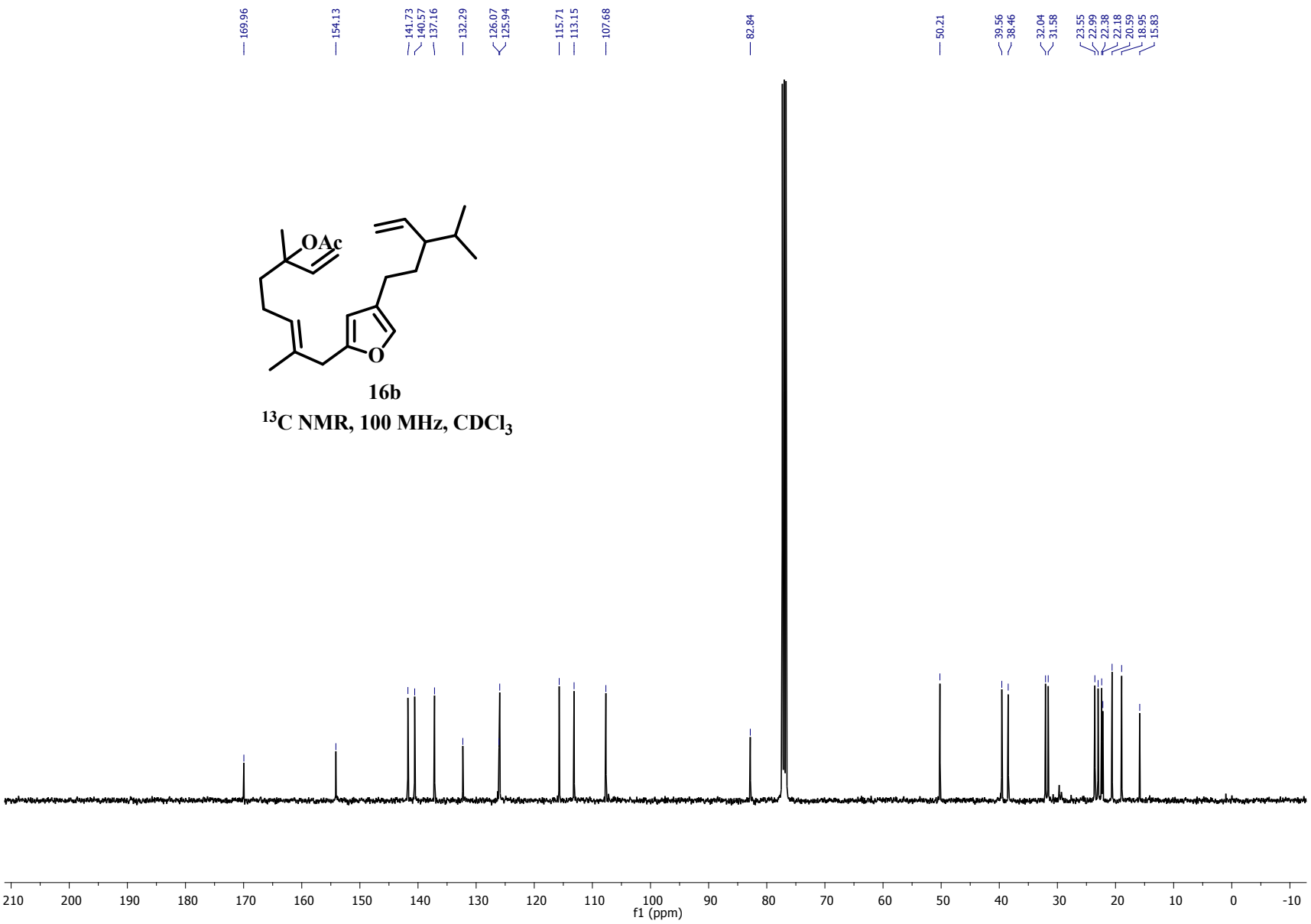
2

^{13}C NMR, 100 MHz, $CDCl_3$



16b

^{1}H NMR, 500 MHz, $CDCl_3$



16b

^{13}C NMR, 100 MHz, $CDCl_3$