

Fig. S1 <sup>1</sup>H NMR of S4 in CDCl<sub>3</sub>.

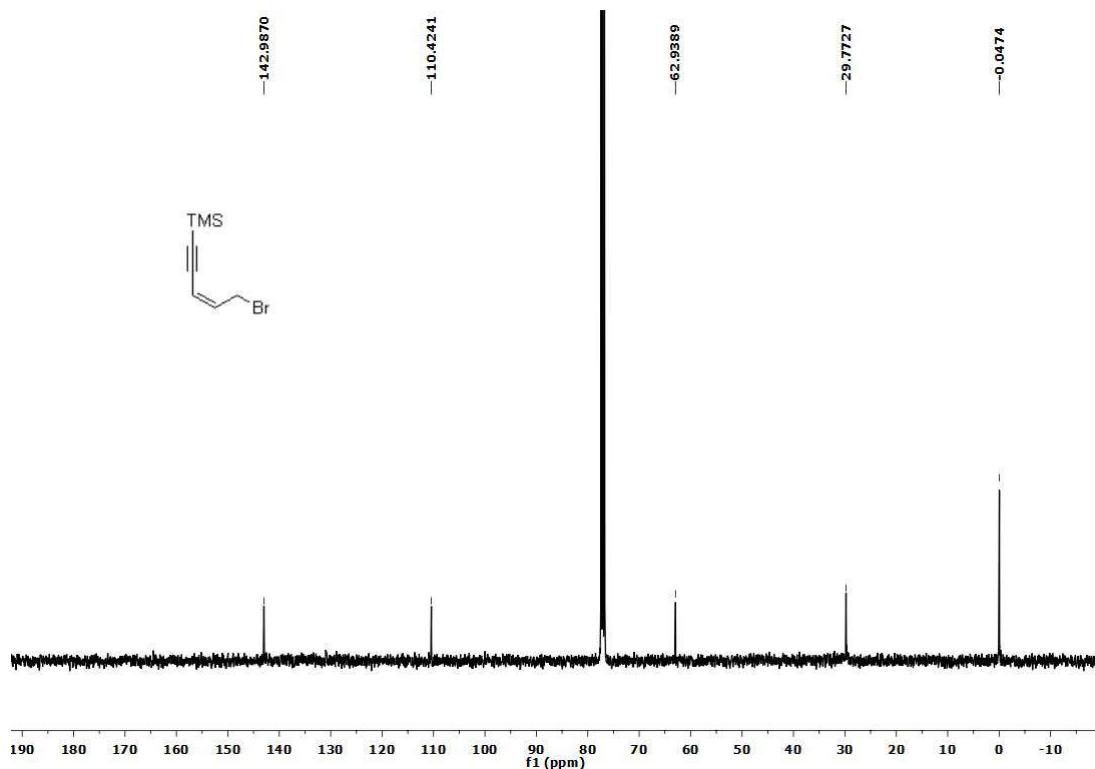
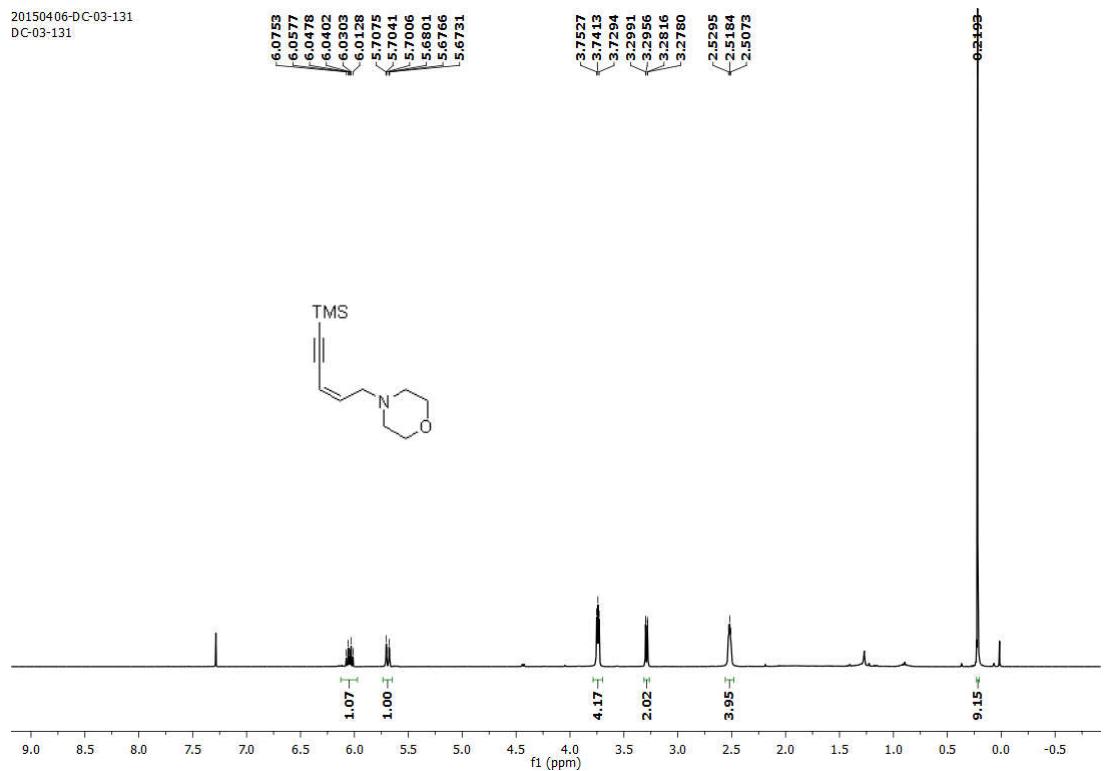


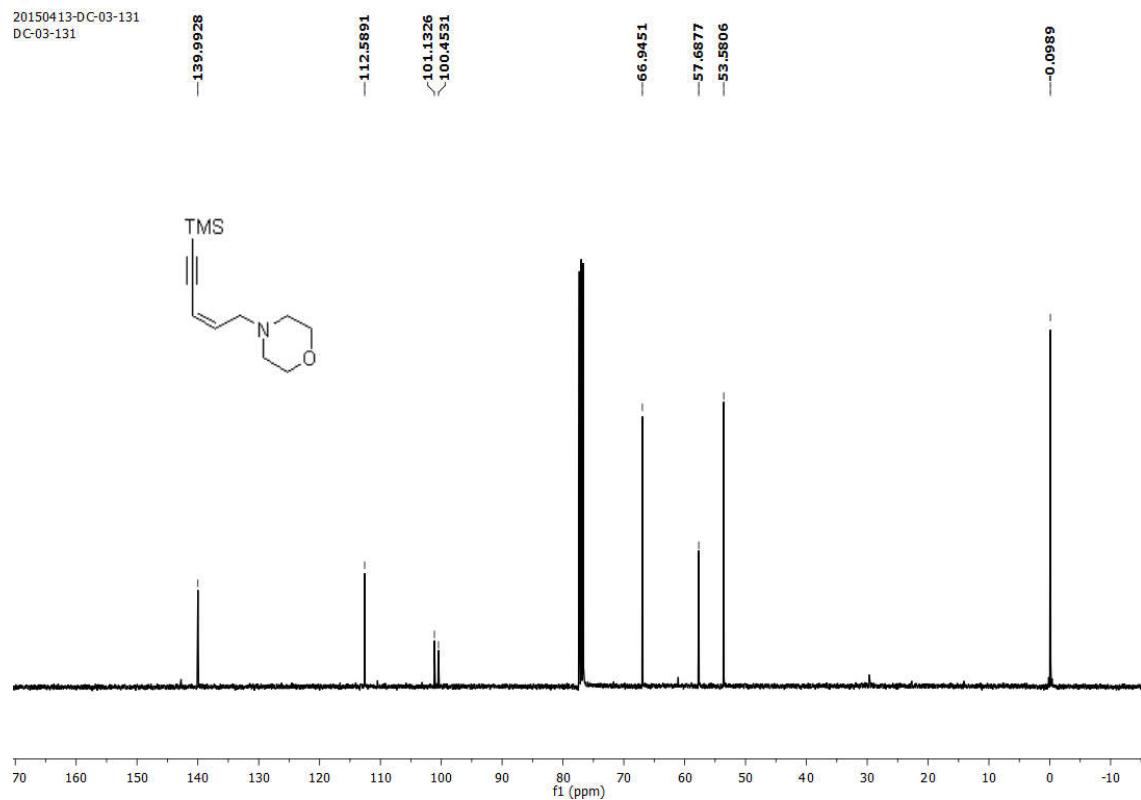
Fig. S2 <sup>13</sup>C NMR of S4 in CDCl<sub>3</sub>.

20150406-DC-03-131  
DC-03-131

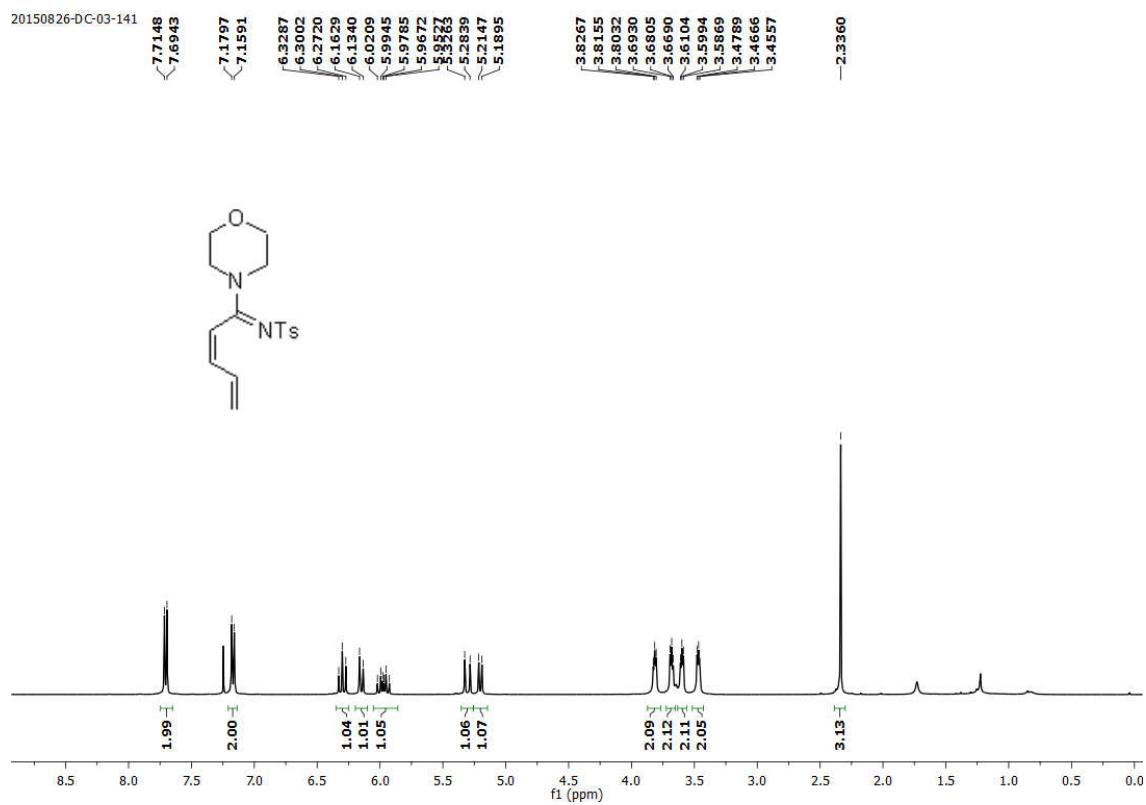


**Fig. S3** <sup>1</sup>H NMR of S5 in CDCl<sub>3</sub>.

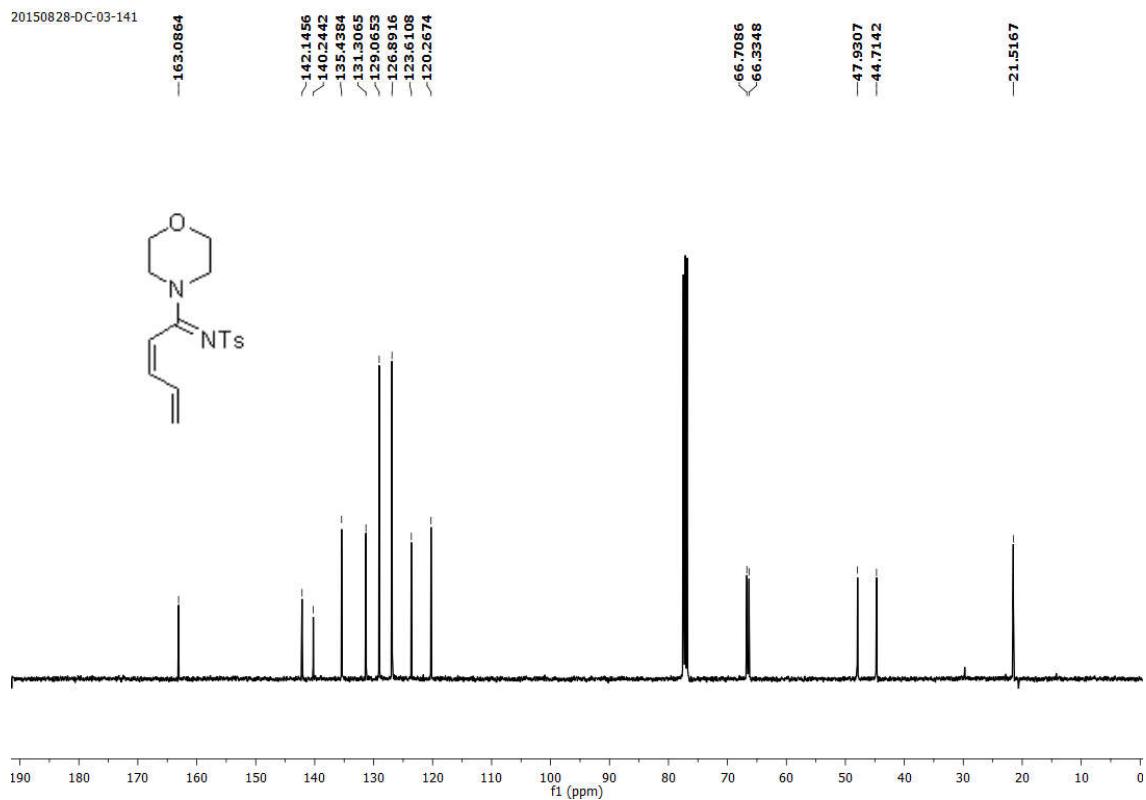
20150413-DC-03-131  
DC-03-131



**Fig. S4** <sup>13</sup>C NMR of S5 in CDCl<sub>3</sub>.



**Fig. S5**  $^1\text{H}$  NMR of **1a** in  $\text{CDCl}_3$ .



**Fig. S6**  $^{13}\text{C}$  NMR of **1a** in  $\text{CDCl}_3$ .

20150818-DC-03-196  
DC-03-196

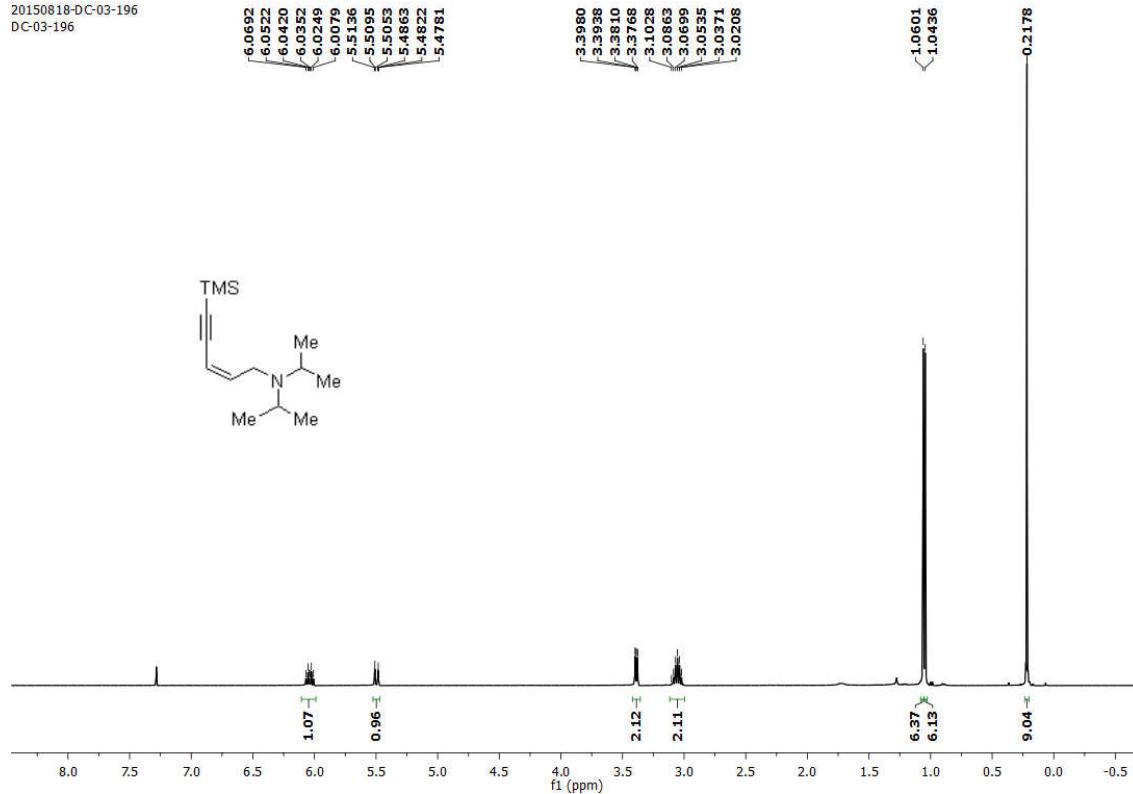


Fig. S7  $^1\text{H}$  NMR of S6 in  $\text{CDCl}_3$ .

20150826-DC-03-196

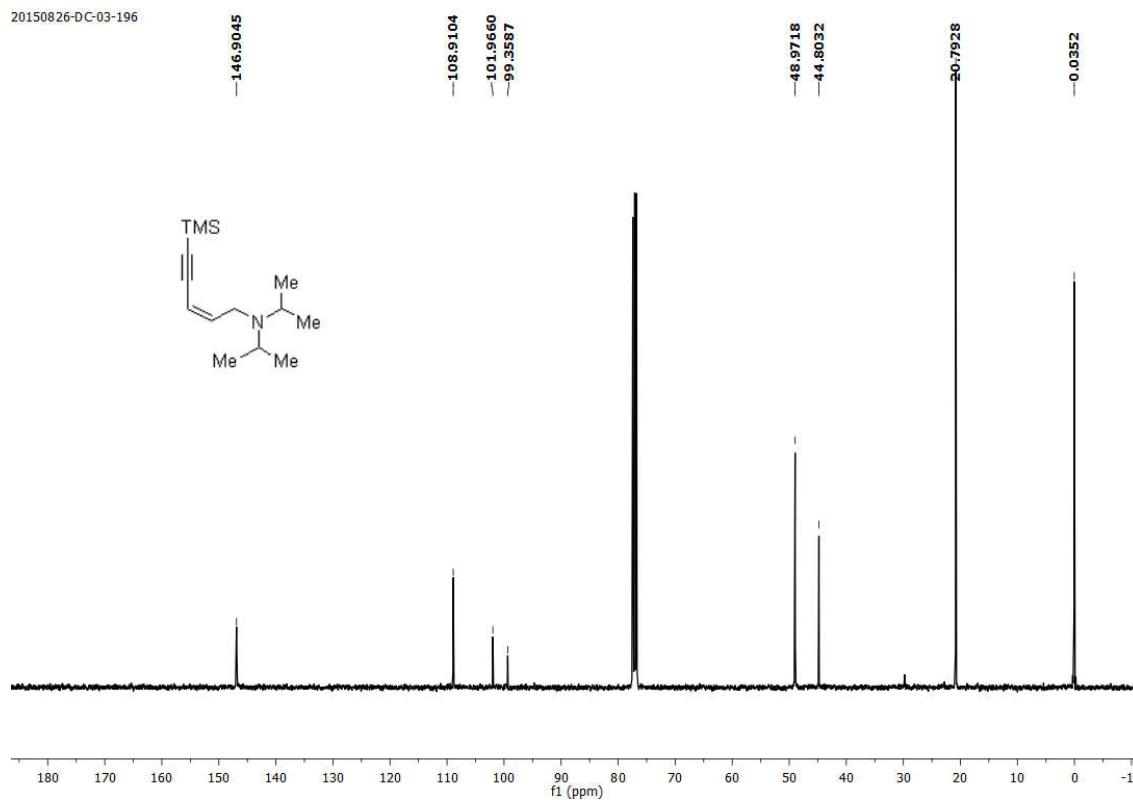


Fig. S8  $^{13}\text{C}$  NMR of S6 in  $\text{CDCl}_3$ .

20151005-DC-04-03  
DC-04-03



Fig. S9 <sup>1</sup>H NMR of 6a in CDCl<sub>3</sub>.

20151013-DC-04-03  
DC-04-03

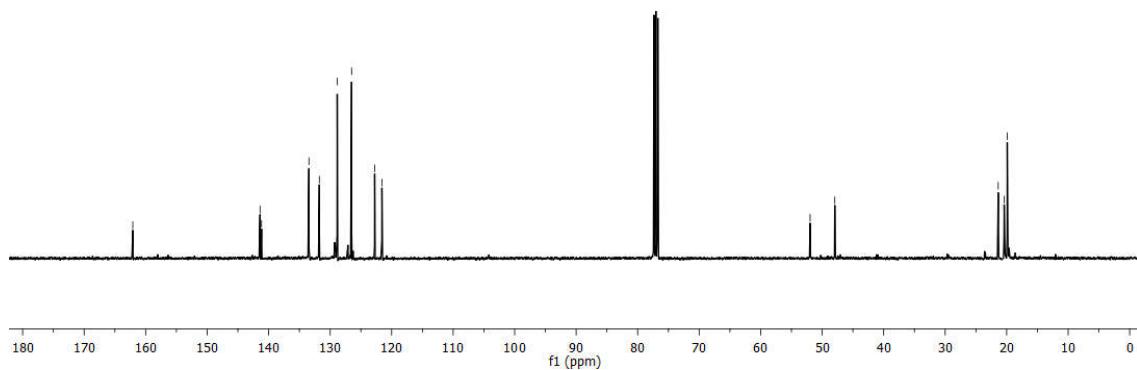
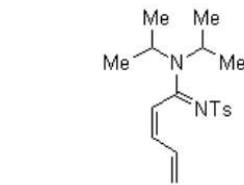
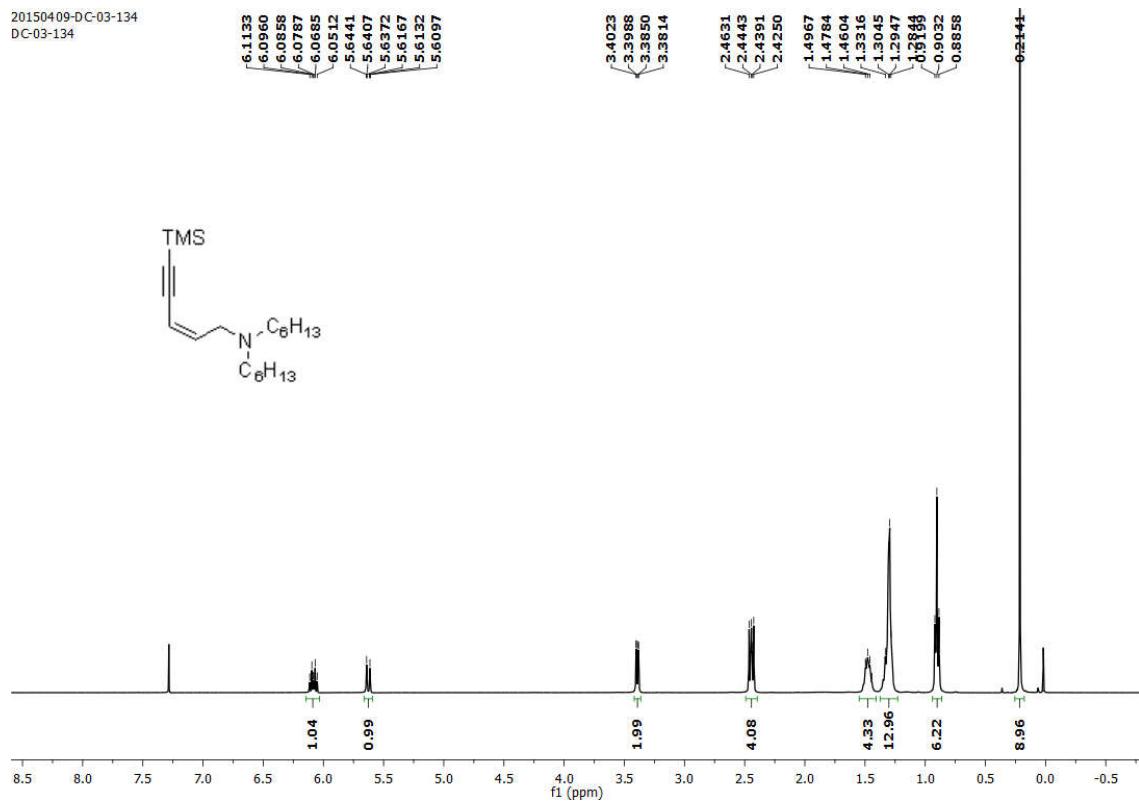


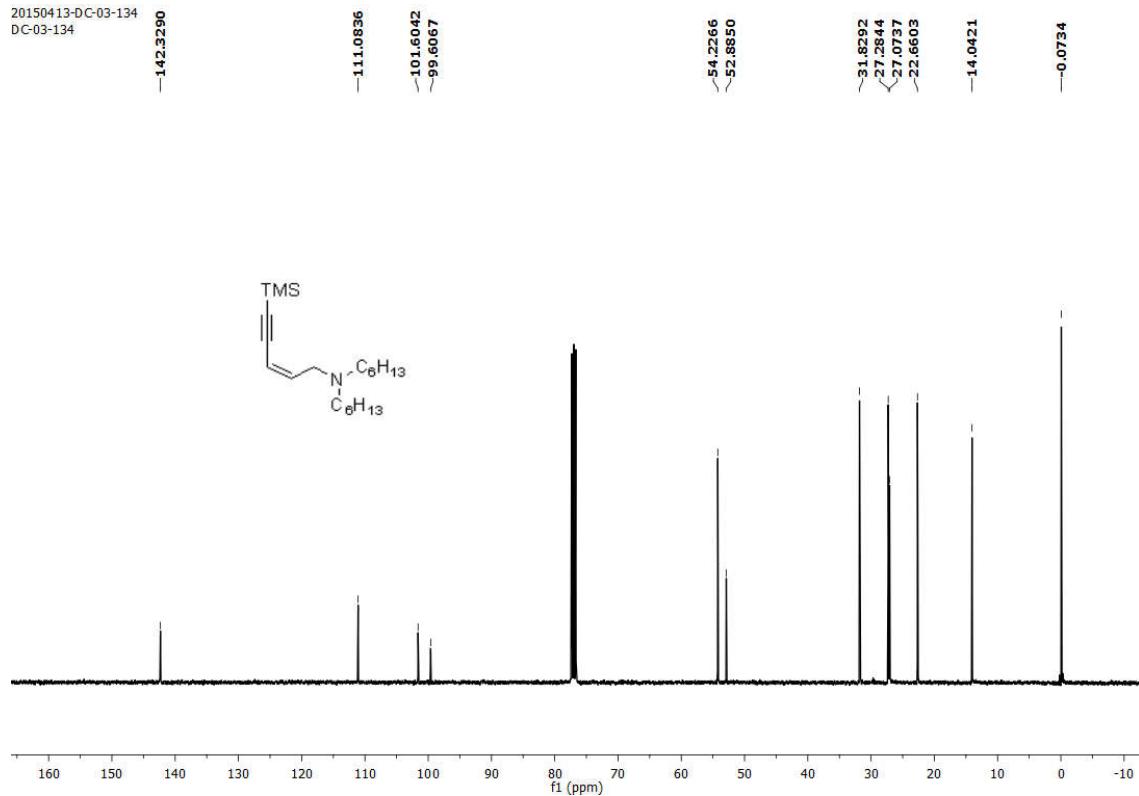
Fig. S10 <sup>13</sup>C NMR of 6a in CDCl<sub>3</sub>.

20150409-DC-03-134  
DC-03-134



**Fig. S11**  $^1\text{H}$  NMR of S7 in  $\text{CDCl}_3$ .

20150413-DC-03-134  
DC-03-134



**Fig. S12**  $^{13}\text{C}$  NMR of S7 in  $\text{CDCl}_3$ .

20150601-PJ-01-044C  
PJ-01-044C

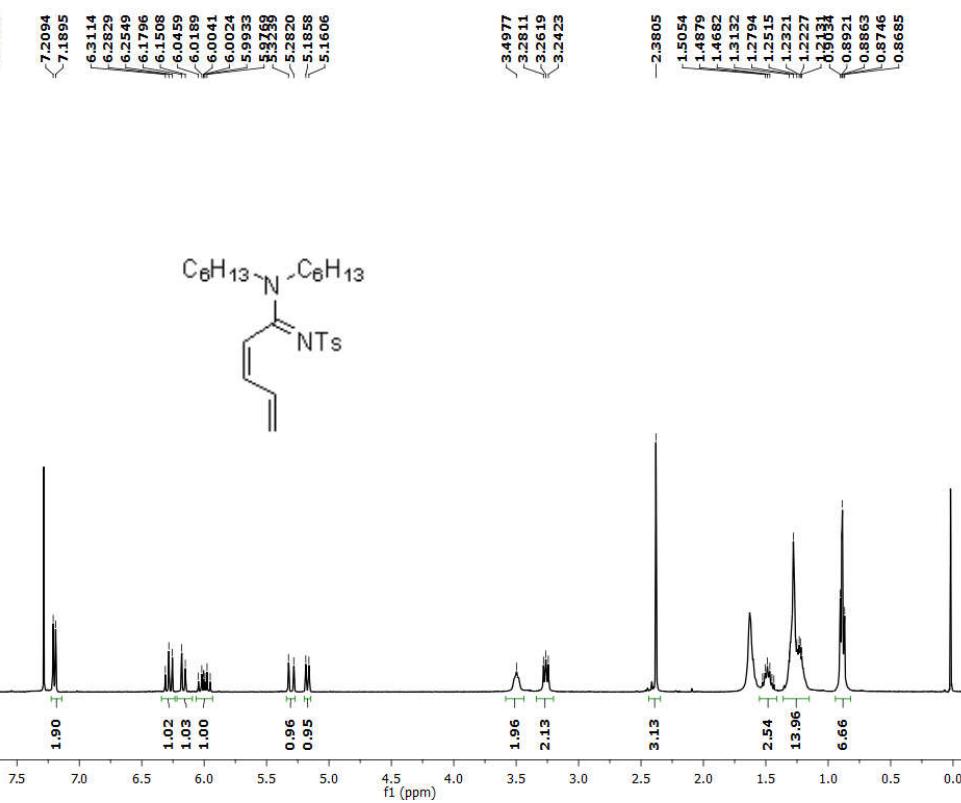


Fig. S13  $^1\text{H}$  NMR of 7a in  $\text{CDCl}_3$ .

20150610-PJ-01-44C  
PJ-01-44C

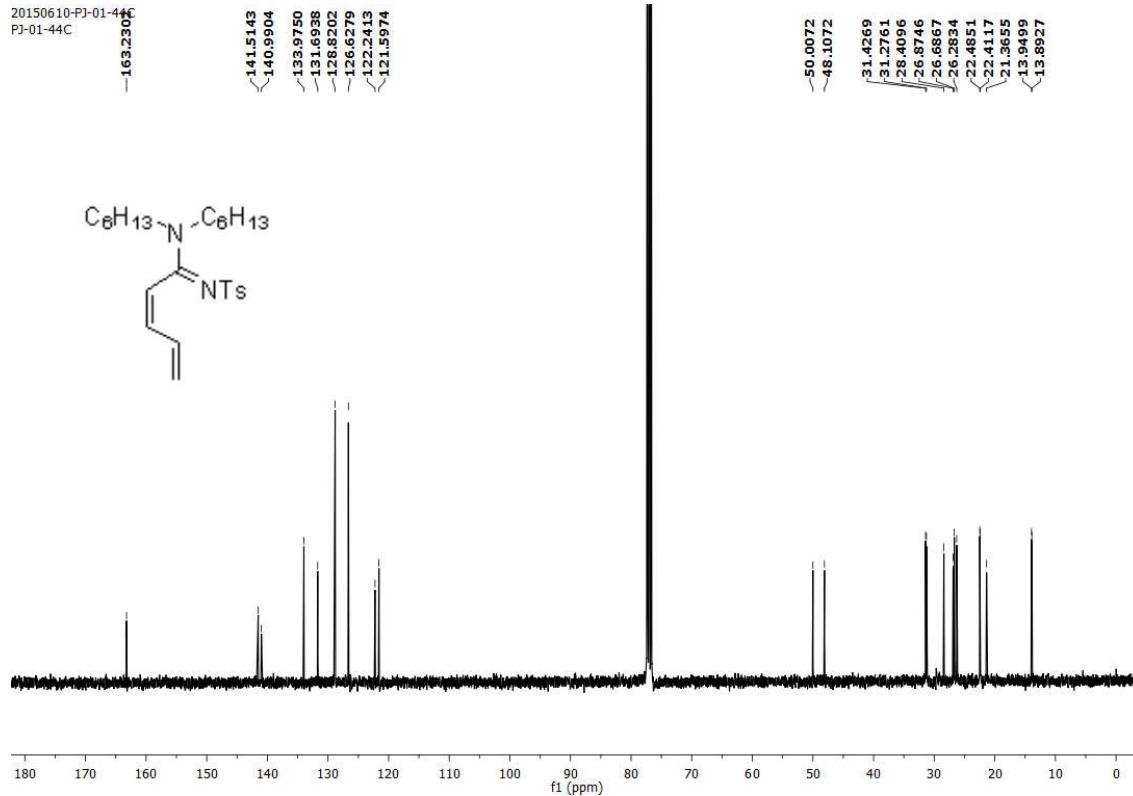
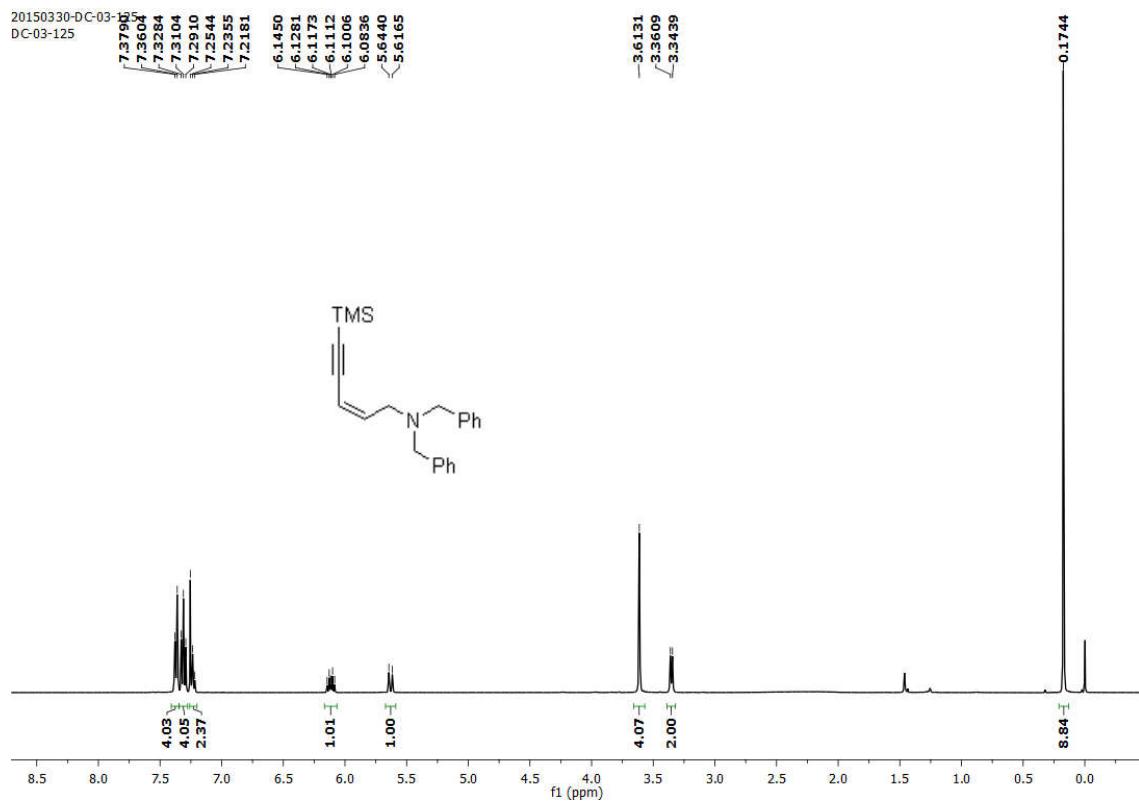
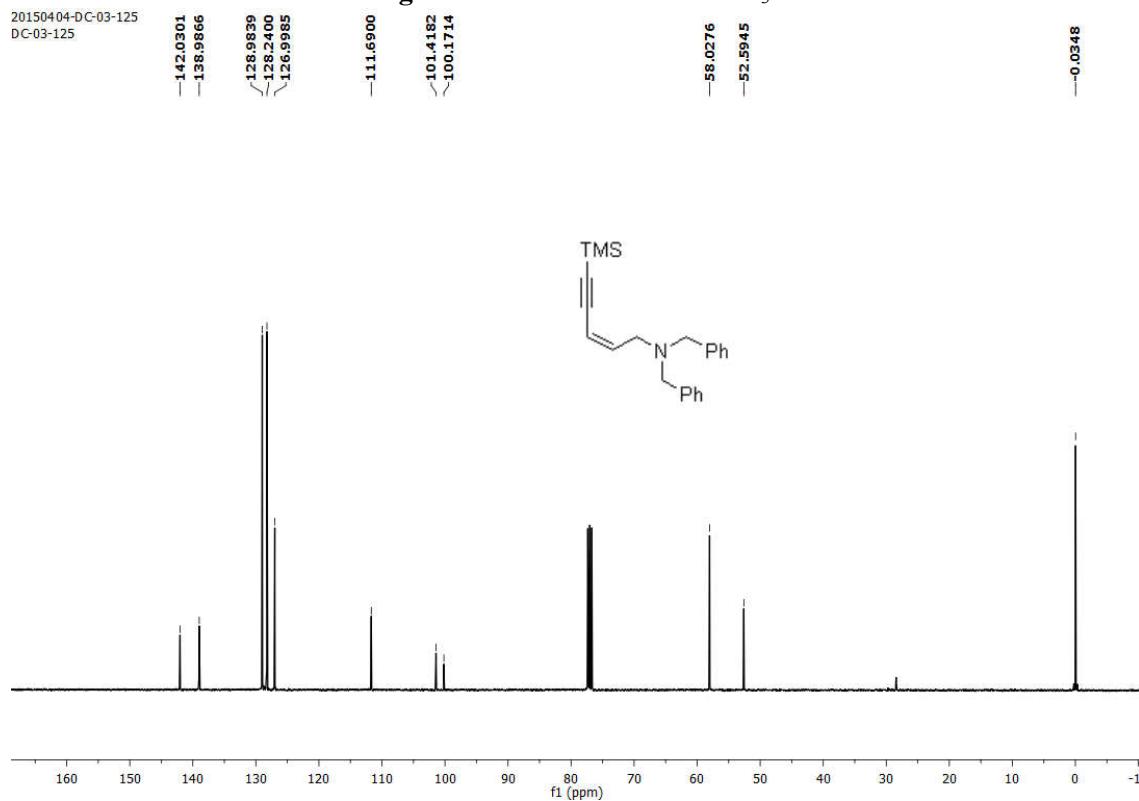


Fig. S14  $^{13}\text{C}$  NMR of 7a in  $\text{CDCl}_3$ .



**Fig. S15**  $^1\text{H}$  NMR of **S8** in  $\text{CDCl}_3$ .



**Fig. S16**  $^{13}\text{C}$  NMR of **S8** in  $\text{CDCl}_3$ .

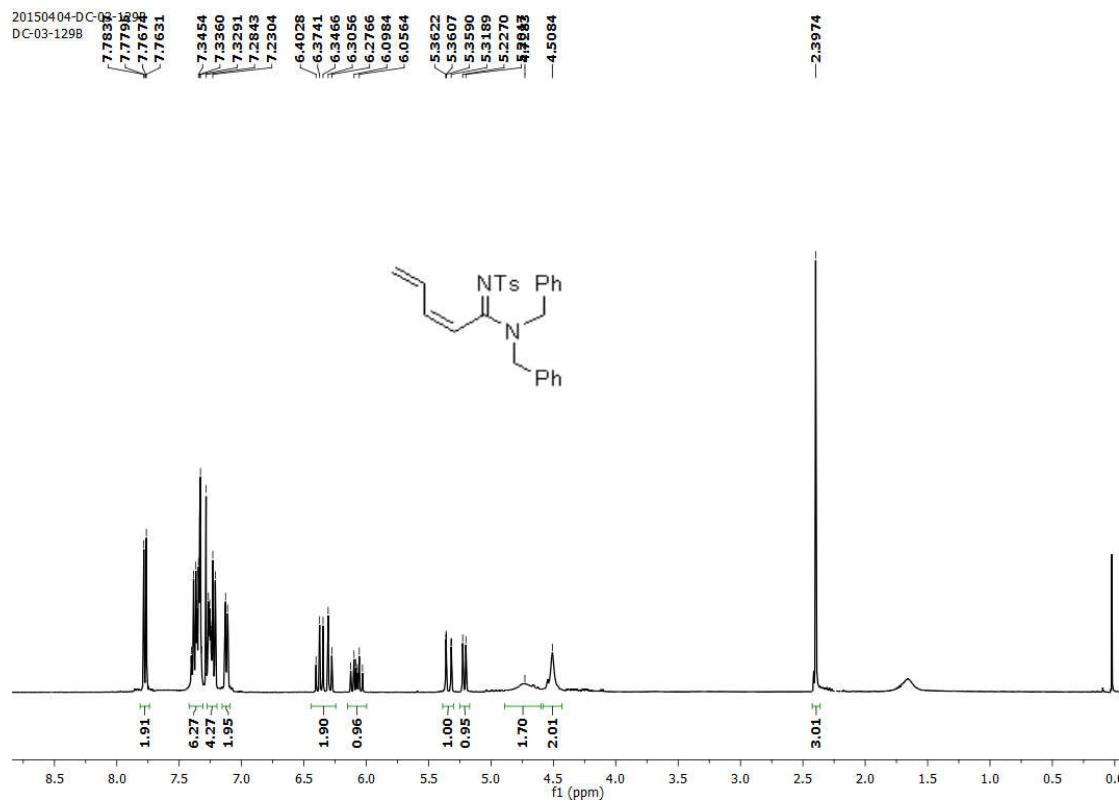


Fig. S17  $^1\text{H}$  NMR of 9a in  $\text{CDCl}_3$ .

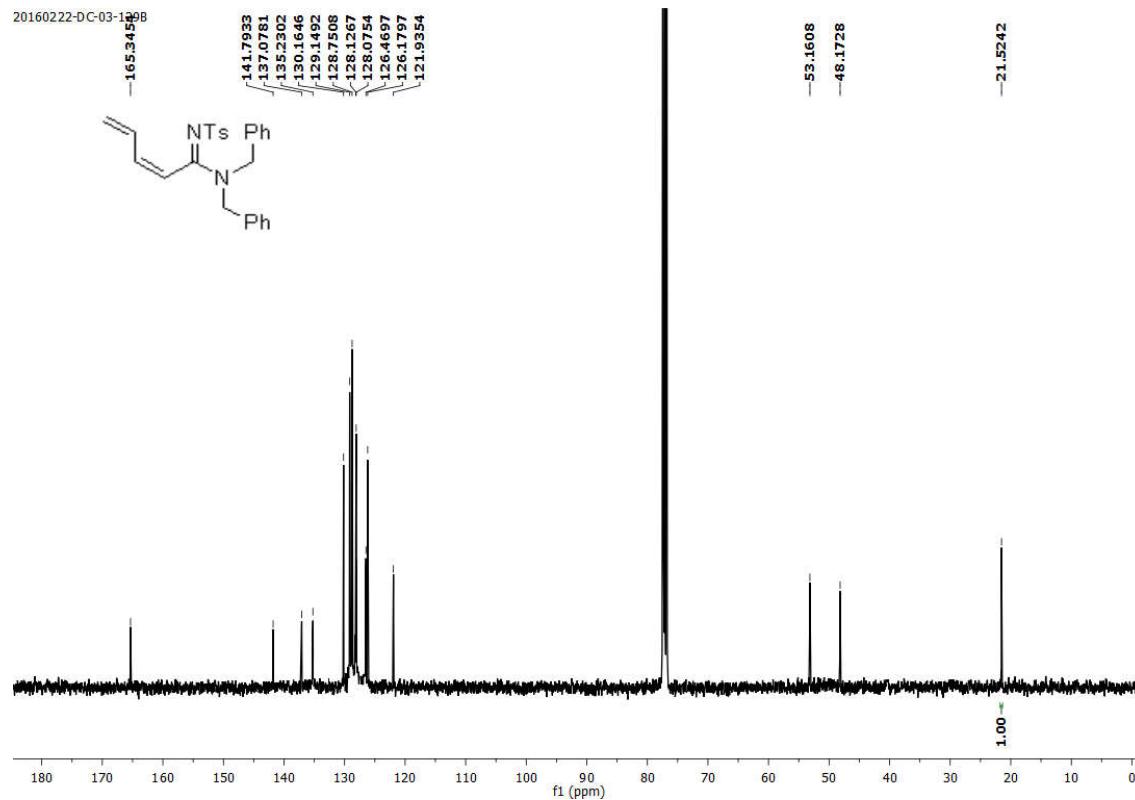
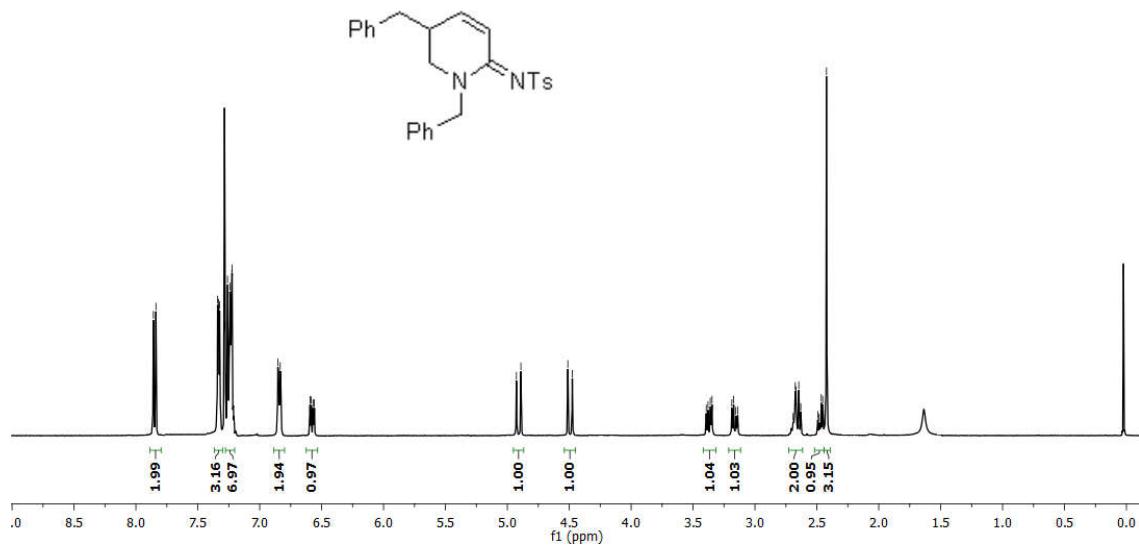


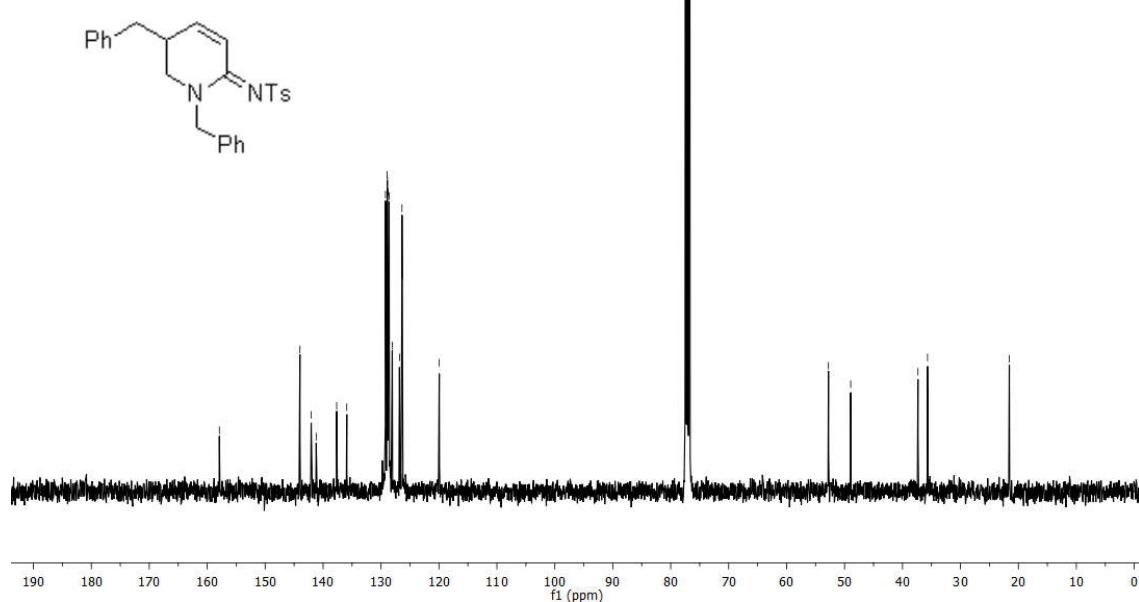
Fig. S18  $^{13}\text{C}$  NMR of 9a in  $\text{CDCl}_3$ .

20150406-DC-03-129  
DC-03-129C



**Fig. S19**  $^1\text{H}$  NMR of **9b** in  $\text{CDCl}_3$ .

20151105-DC-03-129C



**Fig. S20**  $^{13}\text{C}$  NMR of **9b** in  $\text{CDCl}_3$ .

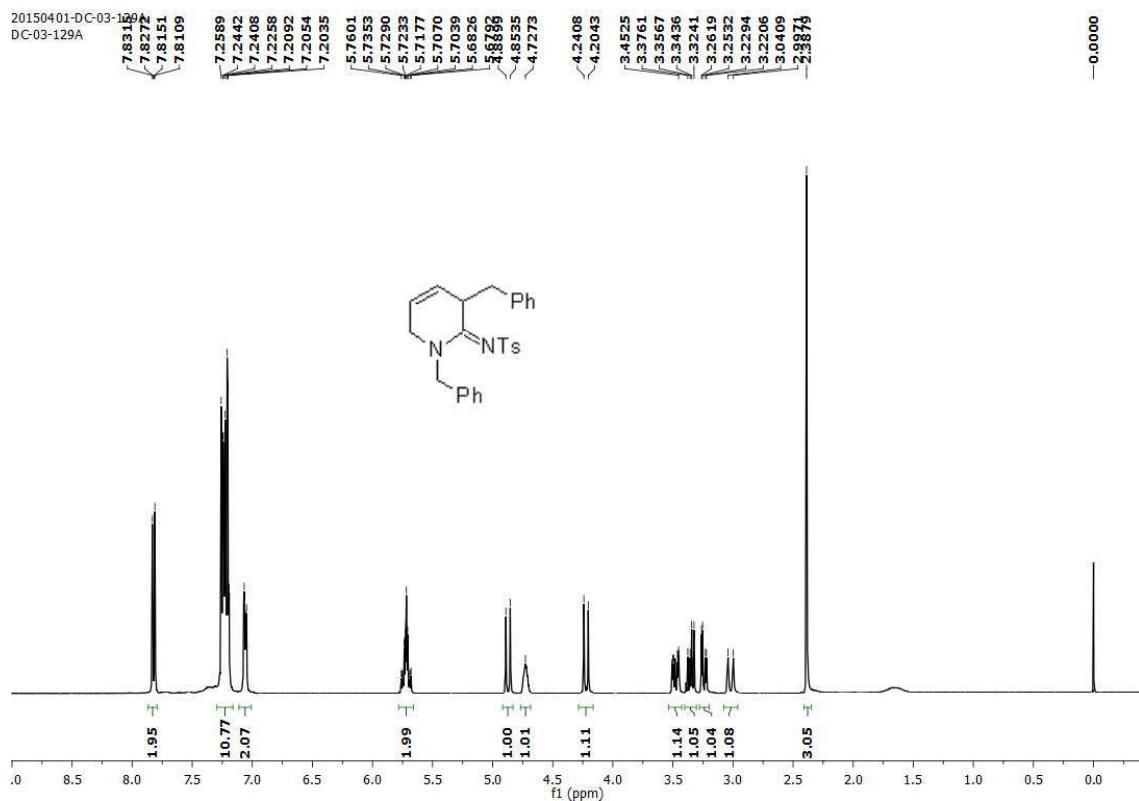


Fig. S21 <sup>1</sup>H NMR of **9c** in CDCl<sub>3</sub>.

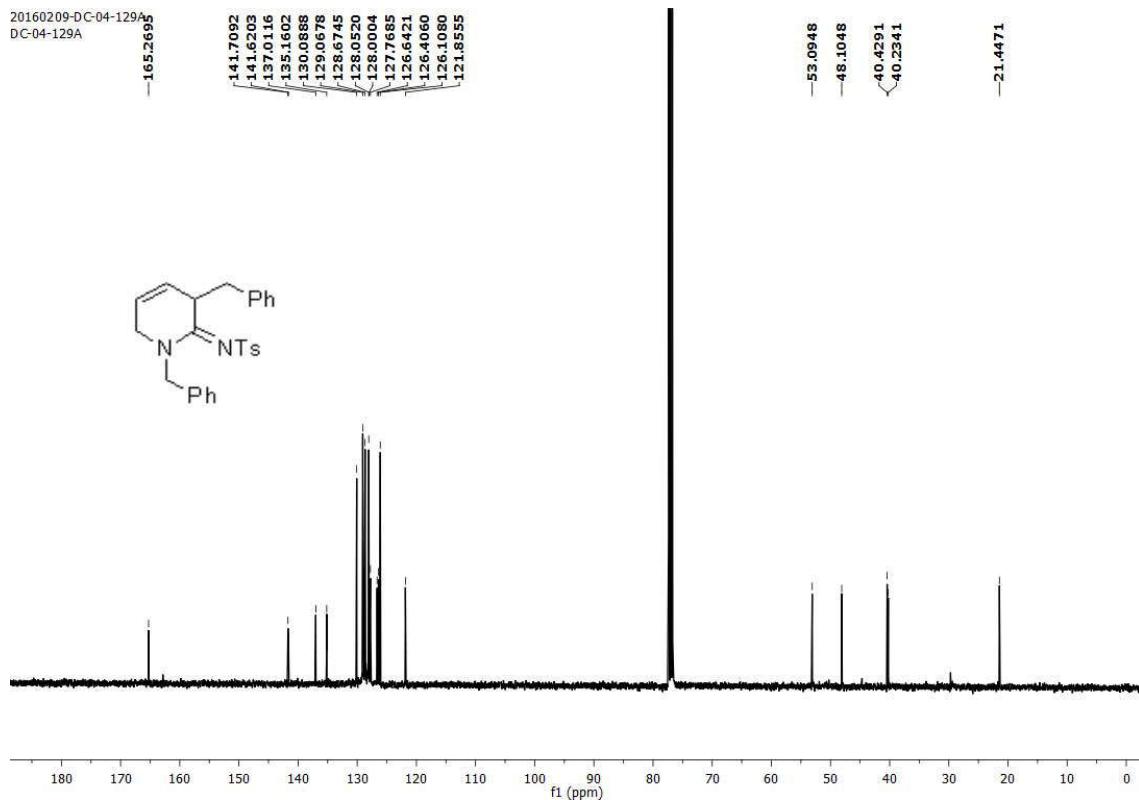


Fig. S22 <sup>13</sup>C NMR of **9c** in CDCl<sub>3</sub>.

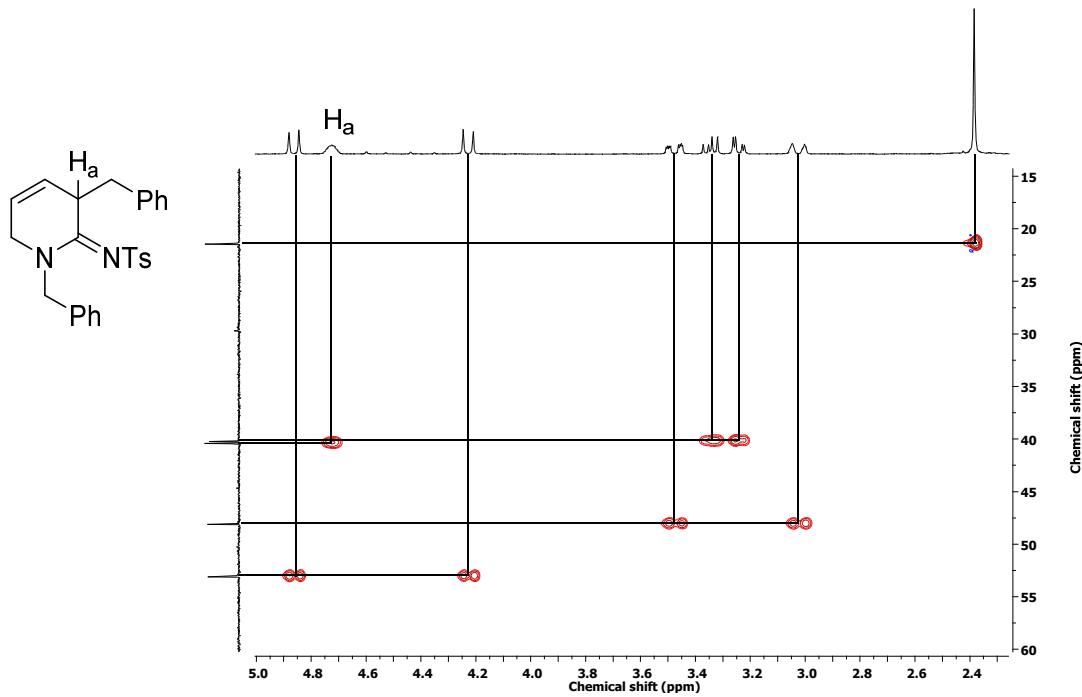
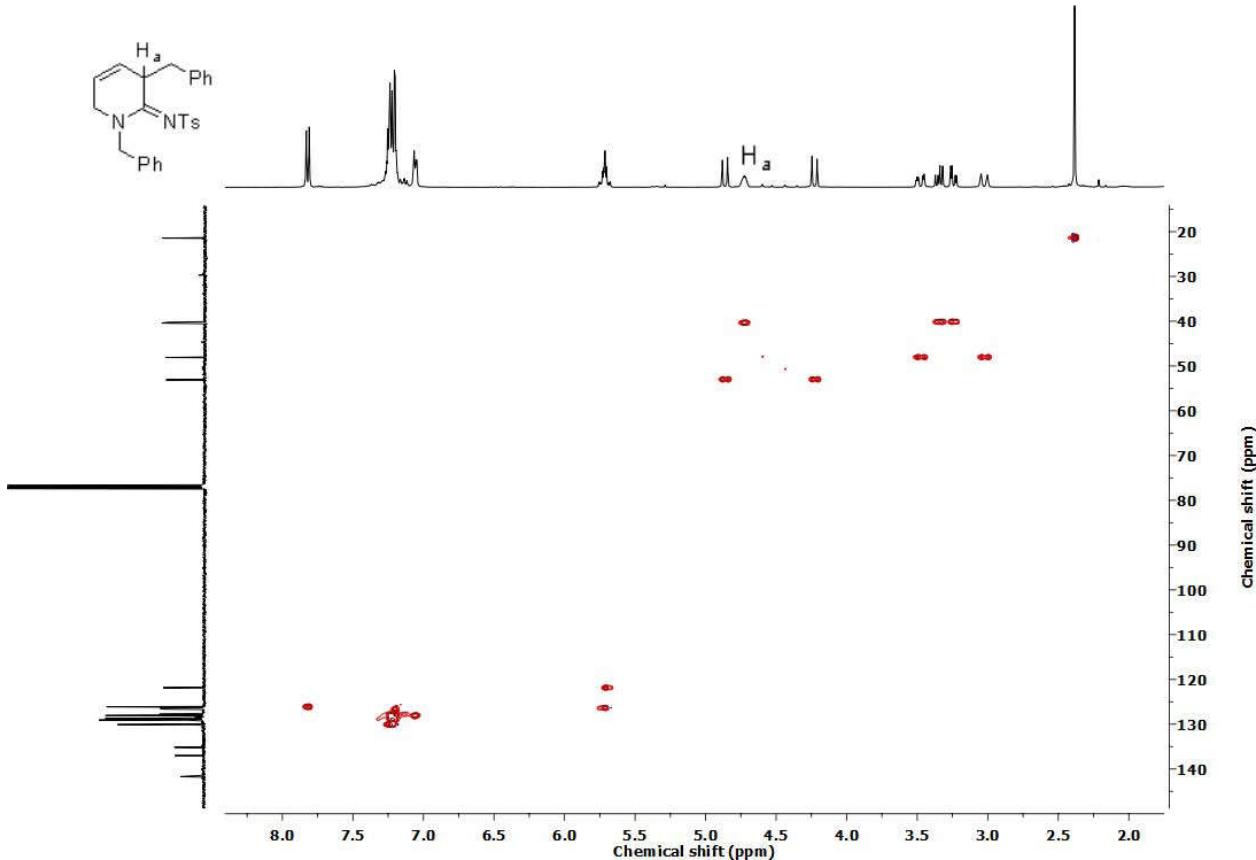
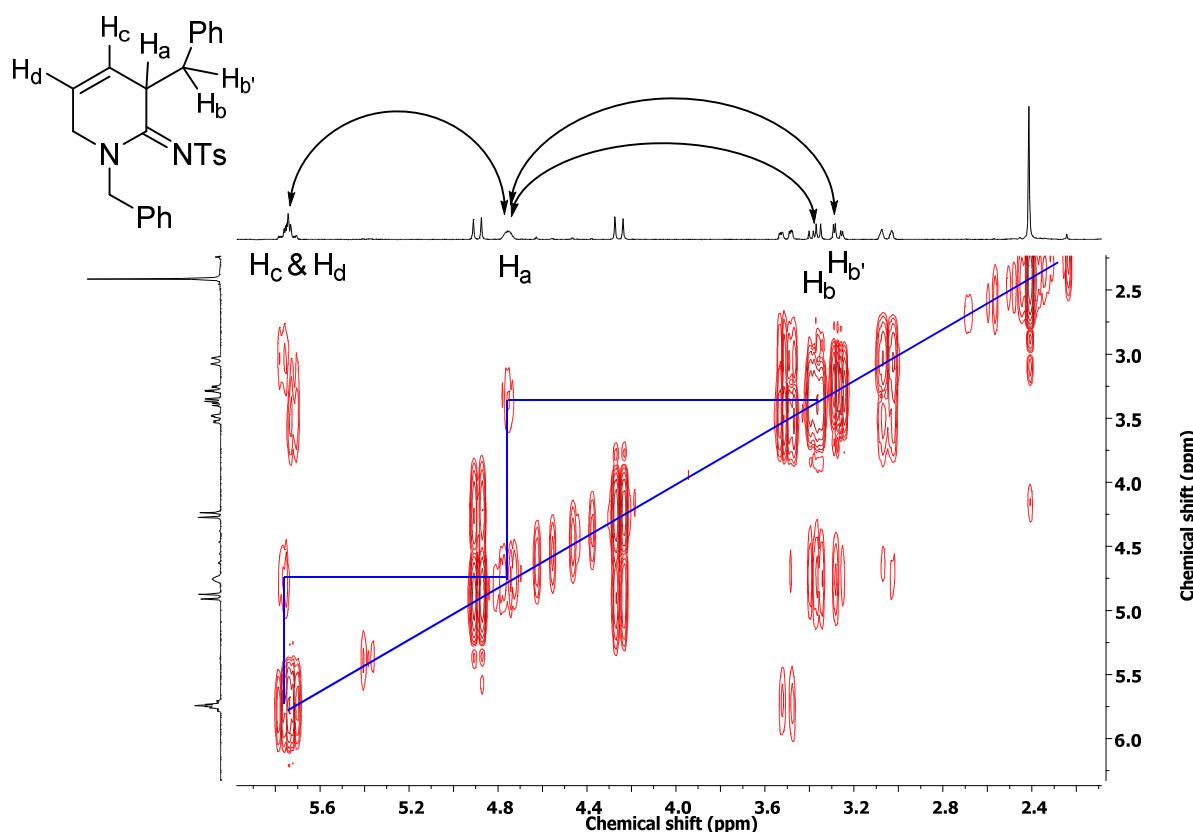
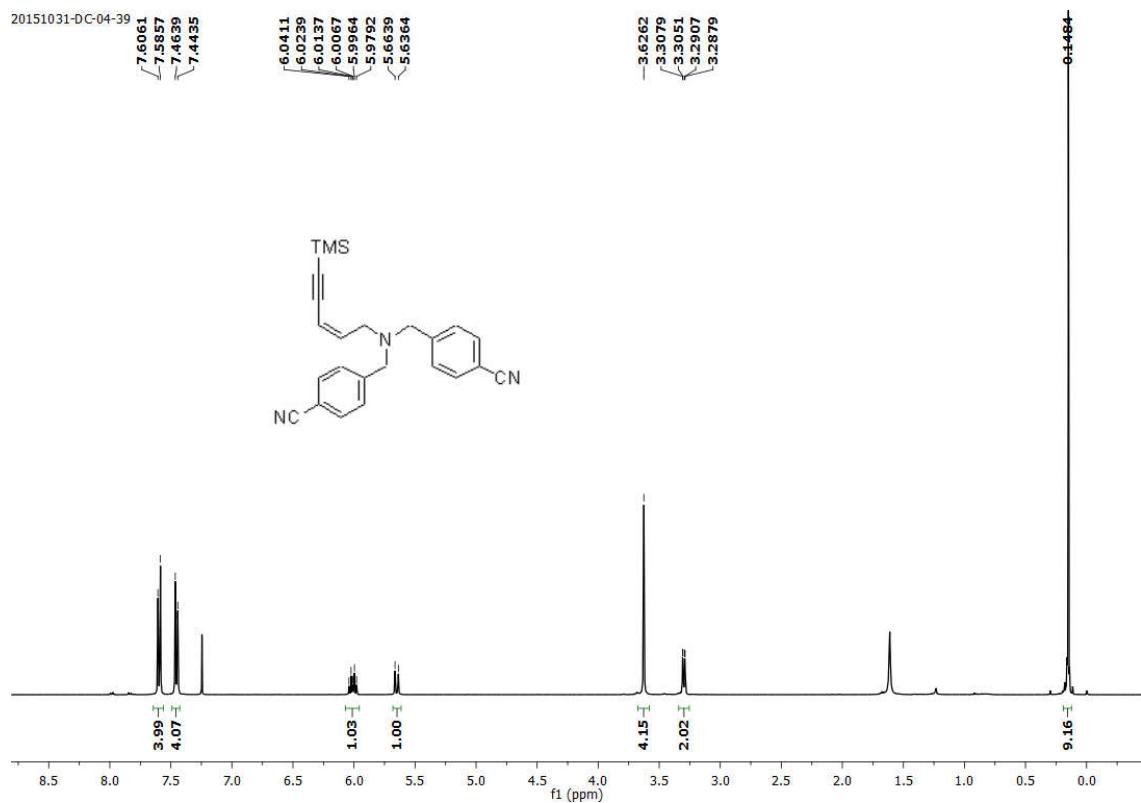


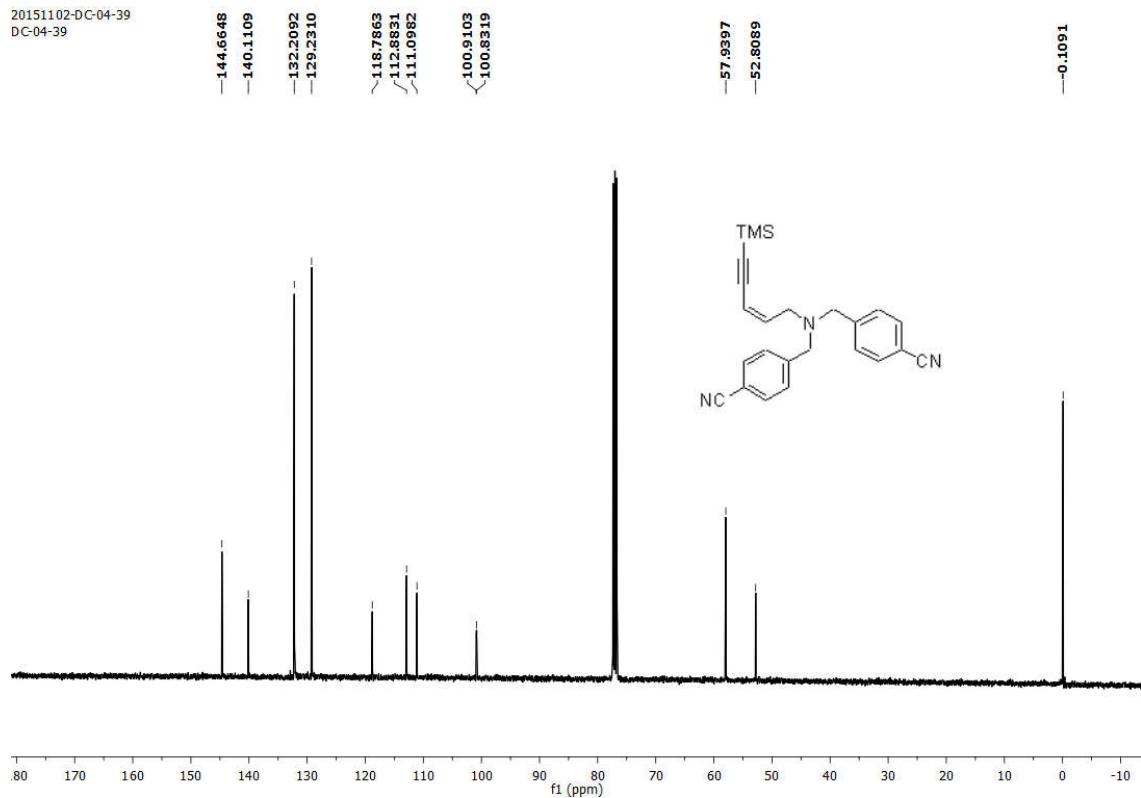
Fig. S23 Hetcor NMR spectrum of **9c** in  $\text{CDCl}_3$ .



**Fig. S24** COSY NMR spectrum of **9c** in  $\text{CDCl}_3$ .



**Fig. S25**  $^1\text{H}$  NMR of **S9** in  $\text{CDCl}_3$ .



**Fig. S26**  $^{13}\text{C}$  NMR of **S9** in  $\text{CDCl}_3$ .

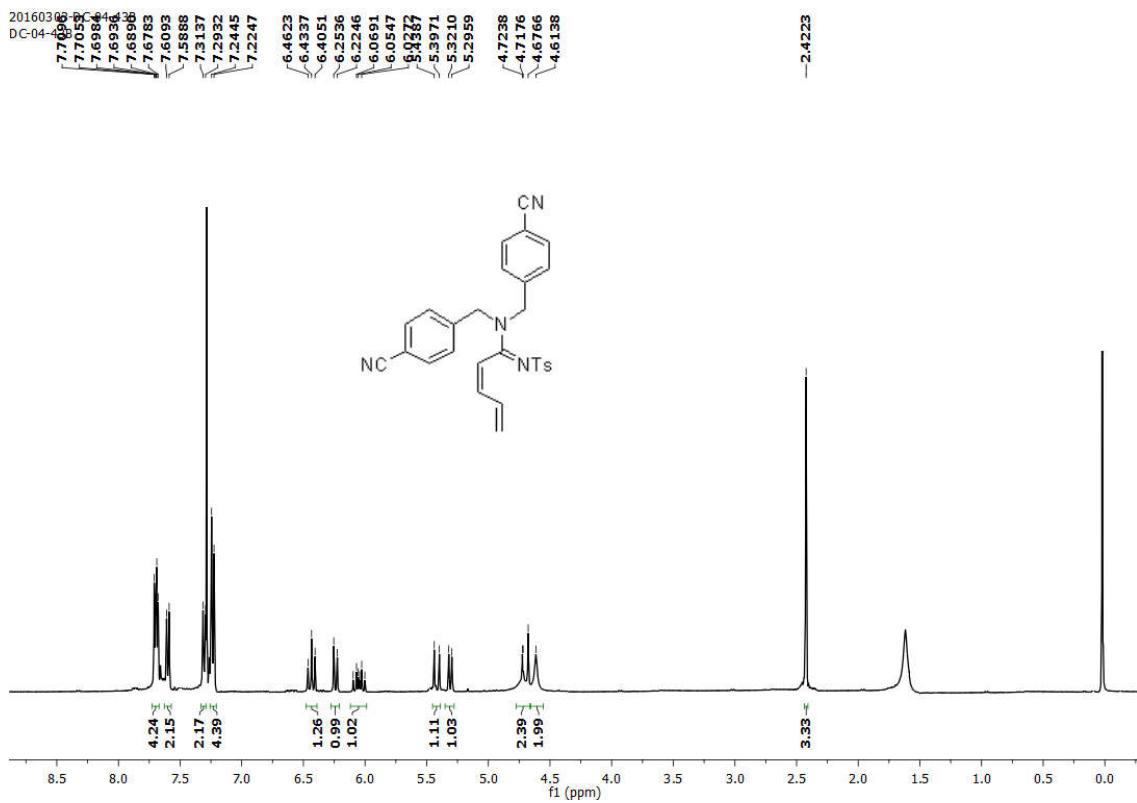


Fig. S27  $^1\text{H}$  NMR of 13a in  $\text{CDCl}_3$ .

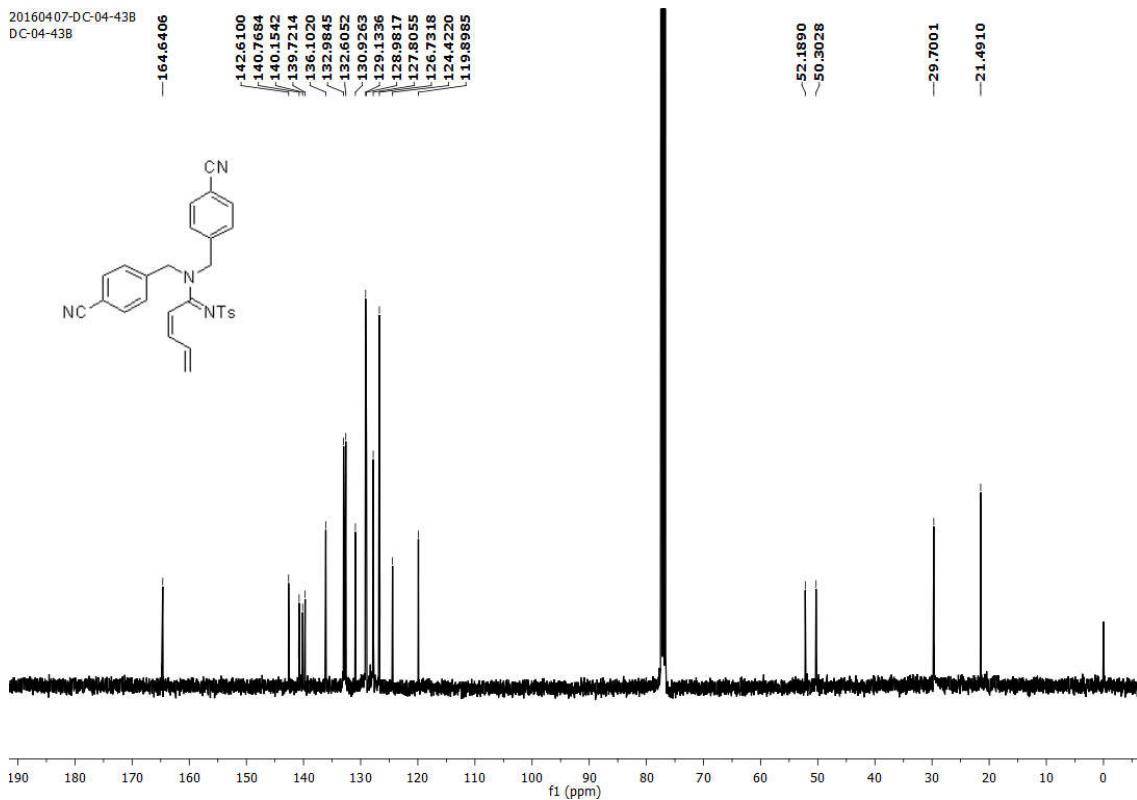
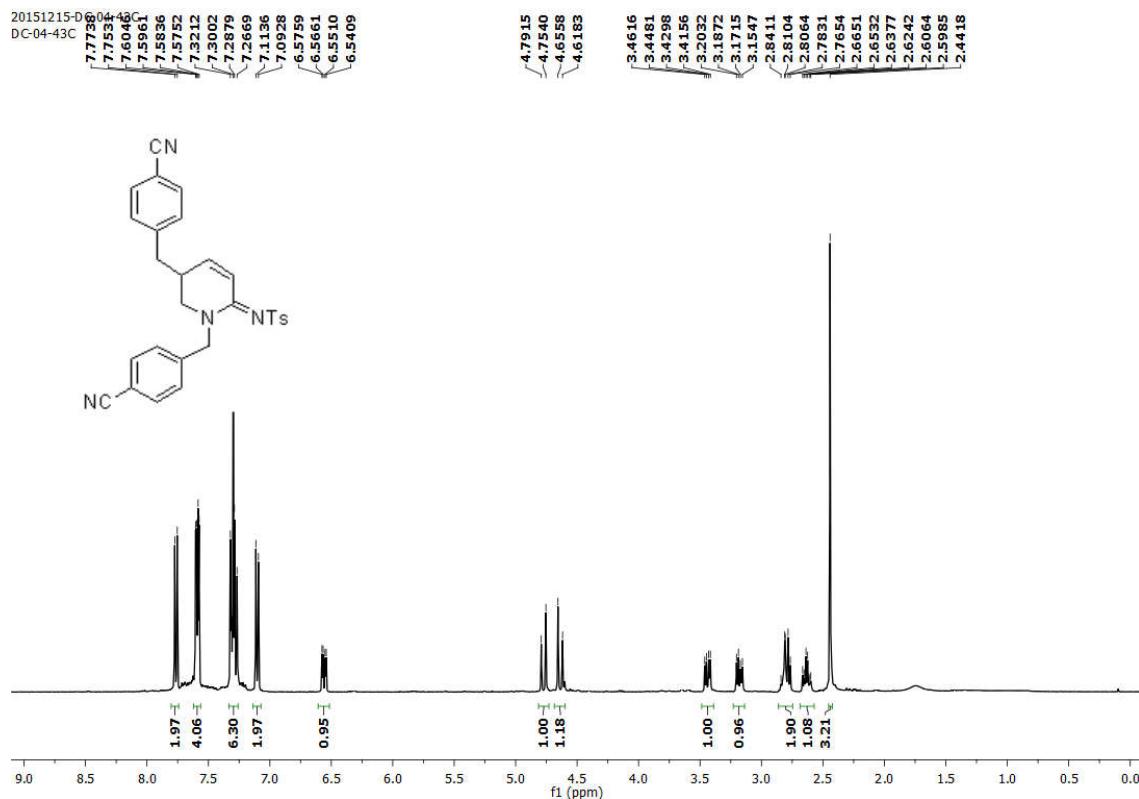
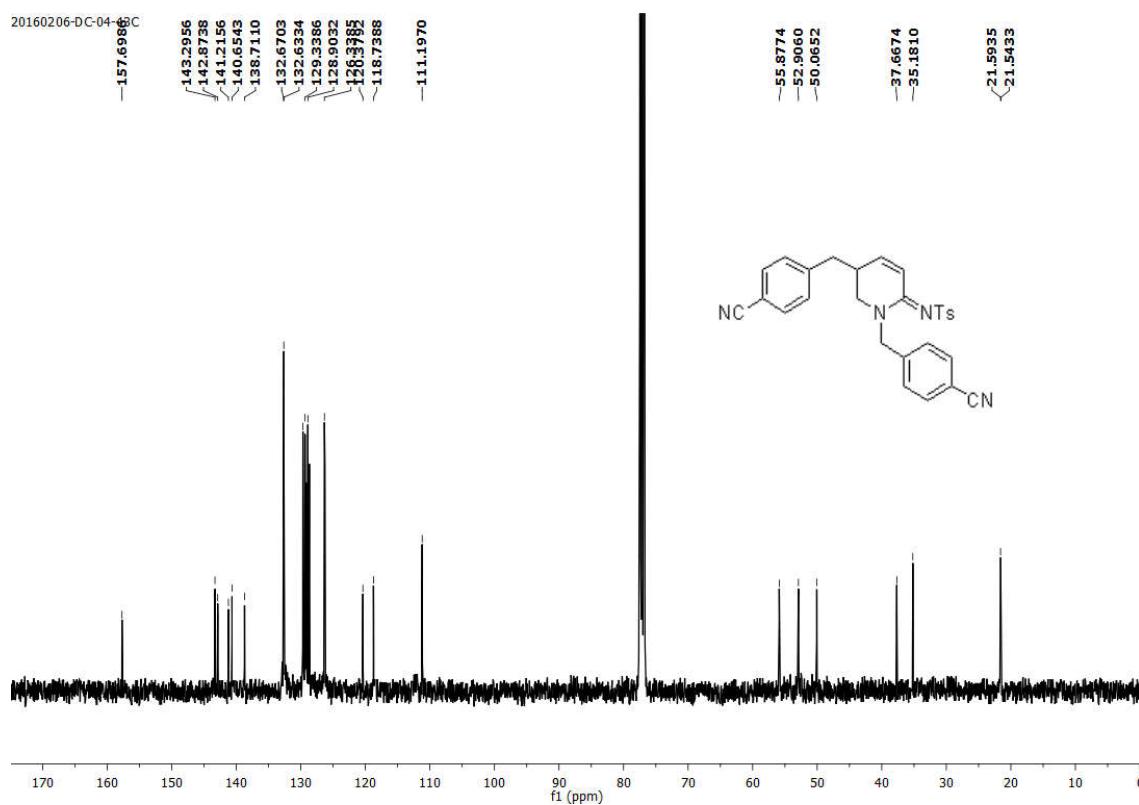


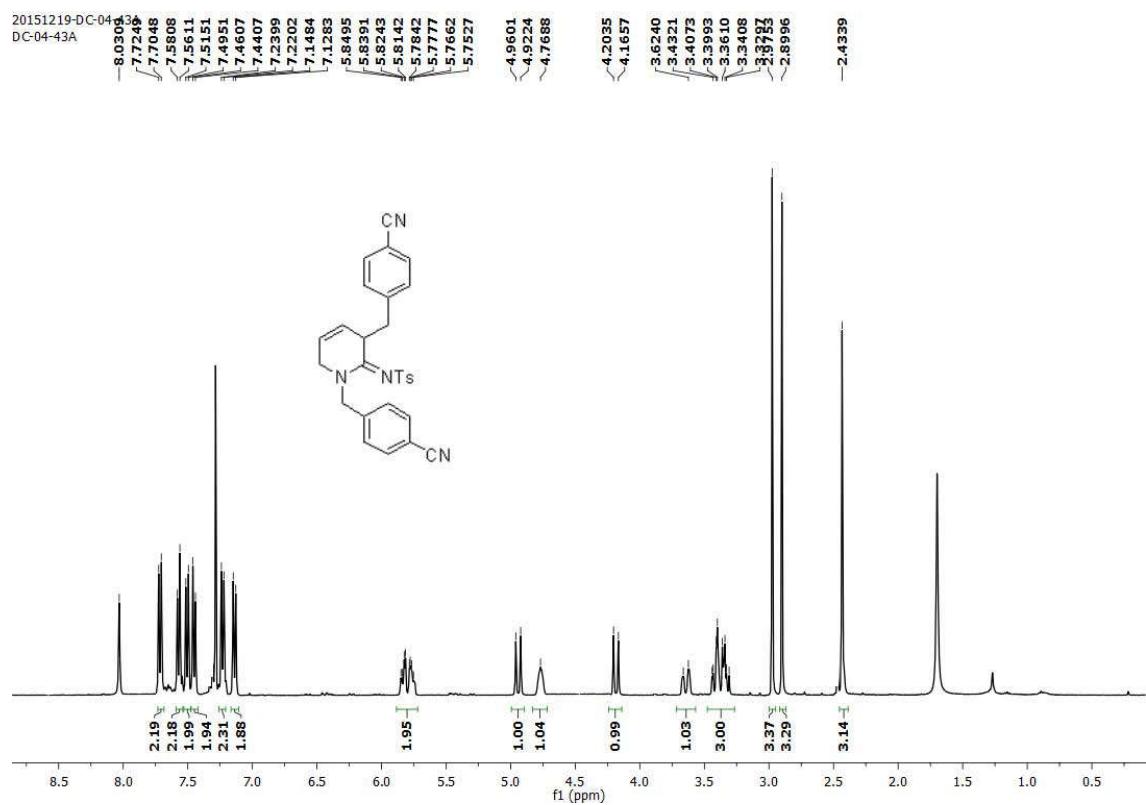
Fig. S28  $^{13}\text{C}$  NMR of 13a in  $\text{CDCl}_3$ .



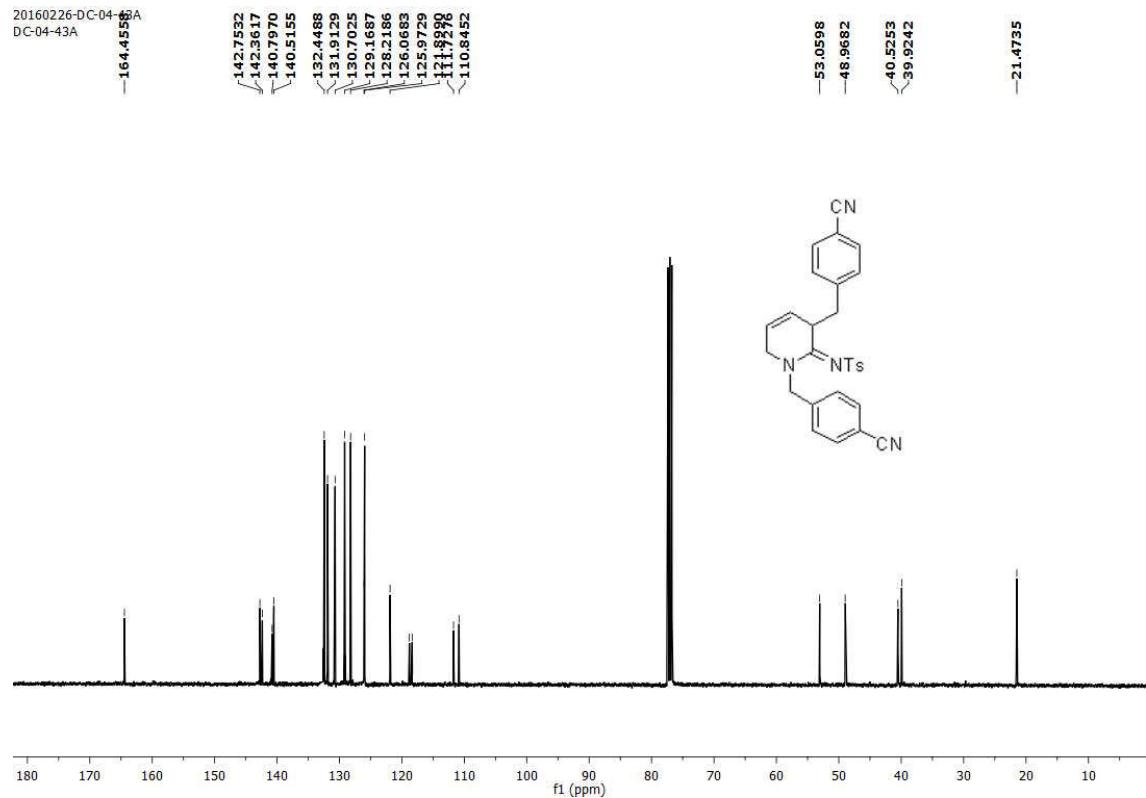
**Fig. S29**  $^1\text{H}$  NMR of **13b** in  $\text{CDCl}_3$ .



**Fig. S30**  $^{13}\text{C}$  NMR of **13b** in  $\text{CDCl}_3$ .



**Fig. S31**  $^1\text{H}$  NMR of **13c** in  $\text{CDCl}_3$ .



**Fig. S32**  $^{13}\text{C}$  NMR of **13c** in  $\text{CDCl}_3$ .

20150710-DC-03-167  
DC-03-167

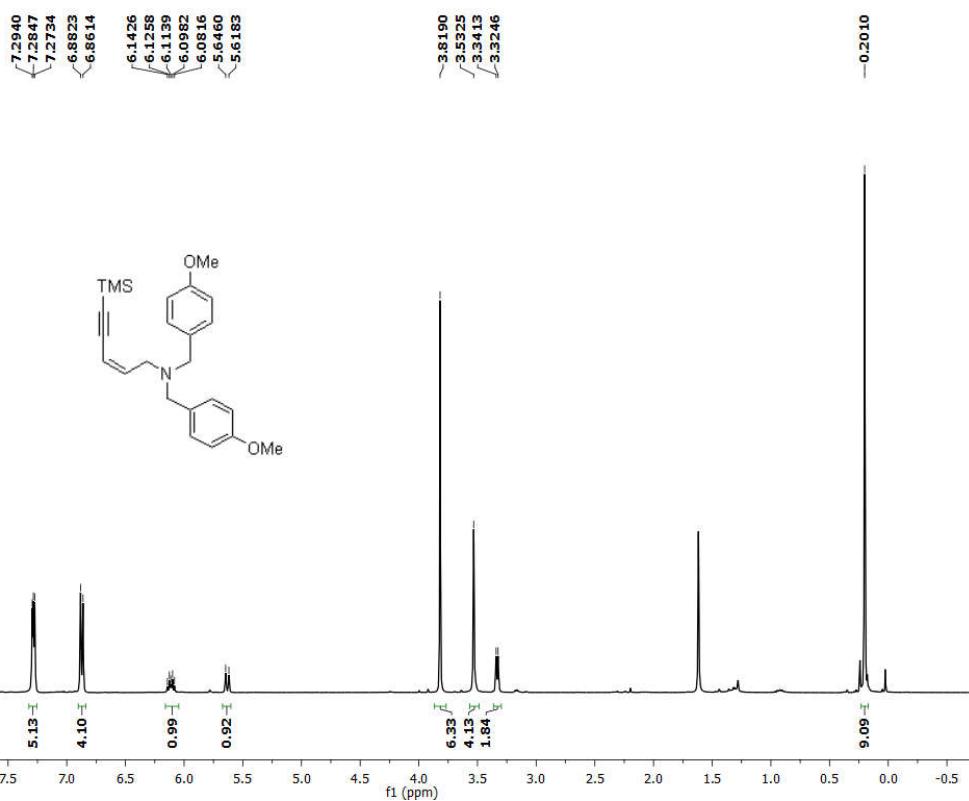


Fig. S33  $^1\text{H}$  NMR of S10 in  $\text{CDCl}_3$ .

20150722-DC-03-167  
DC-03-167

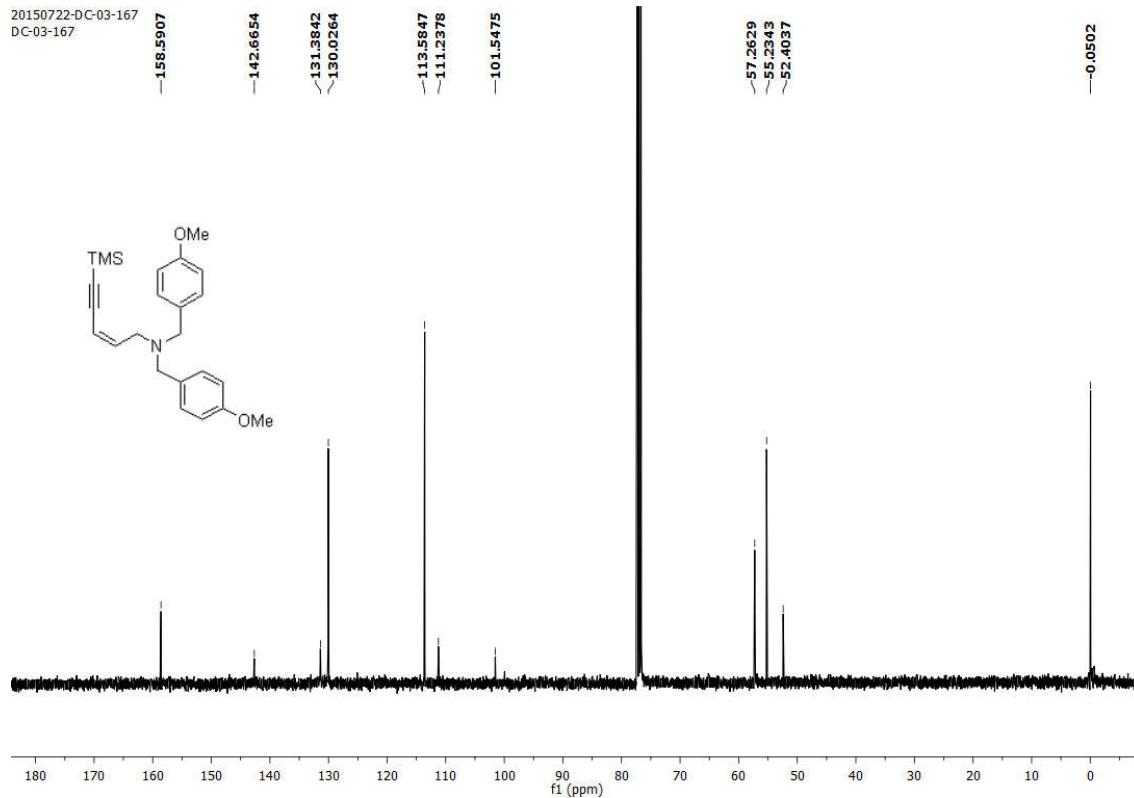
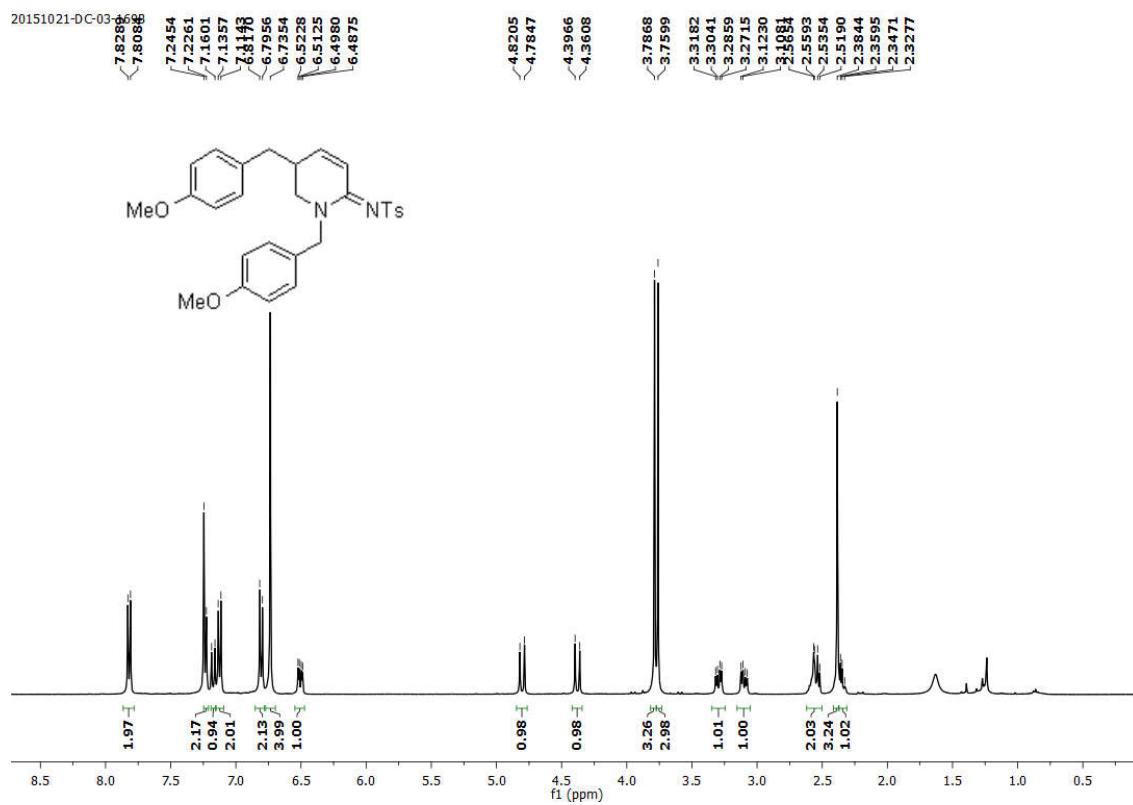
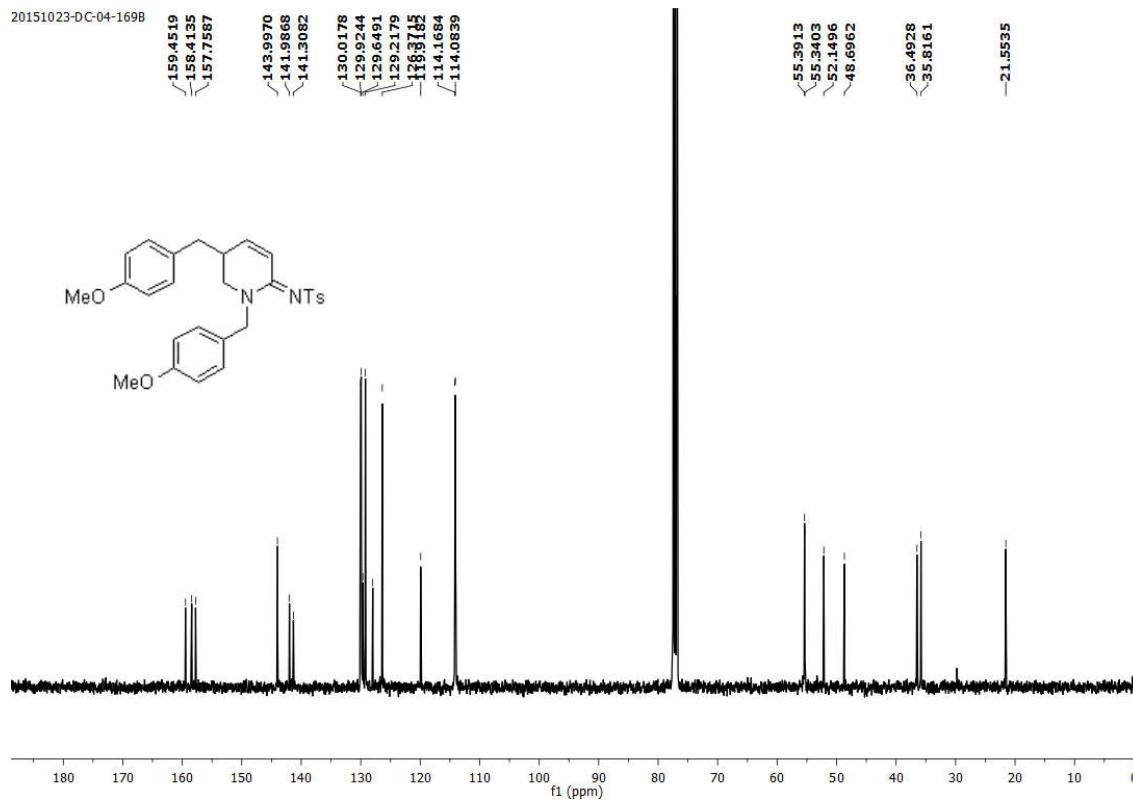


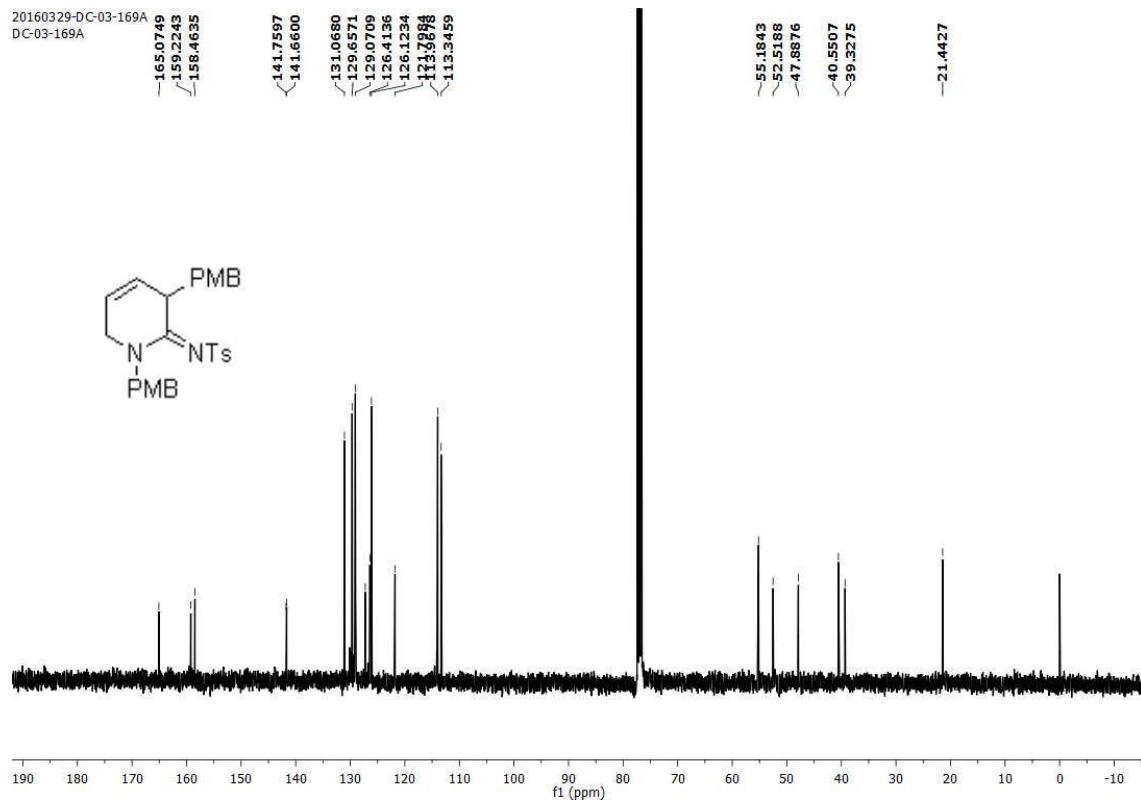
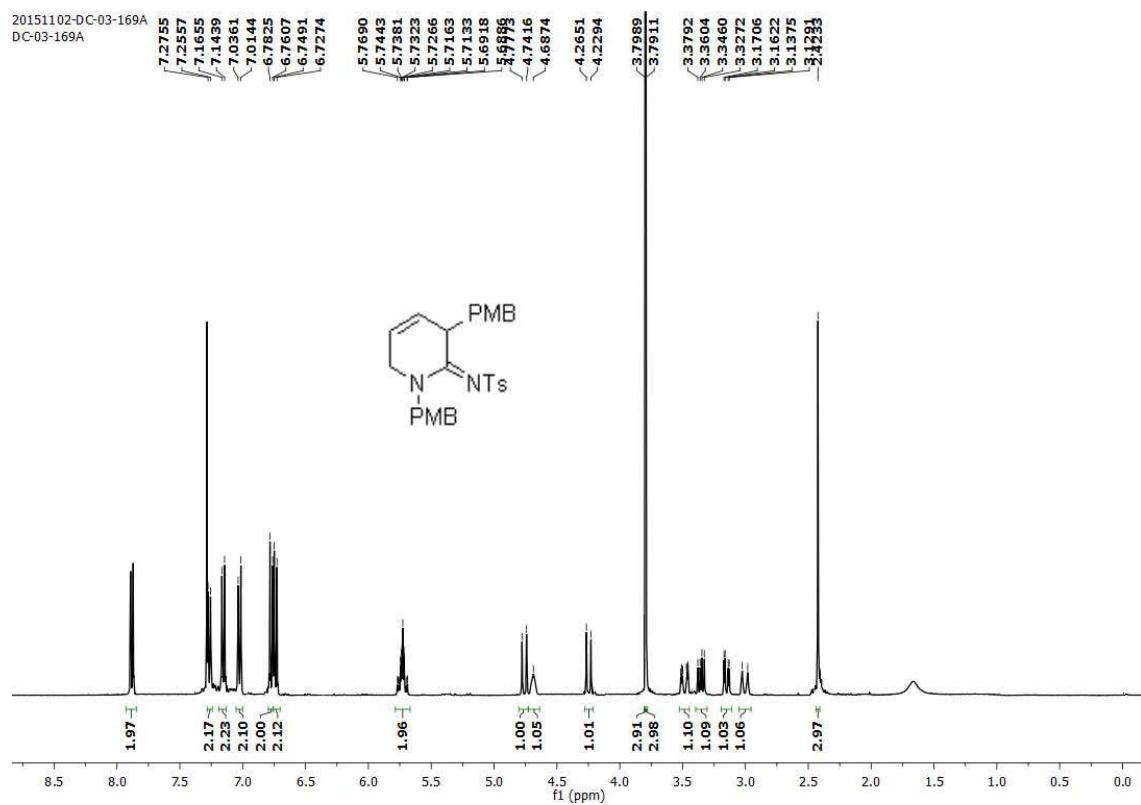
Fig. S34  $^{13}\text{C}$  NMR of S10 in  $\text{CDCl}_3$ .



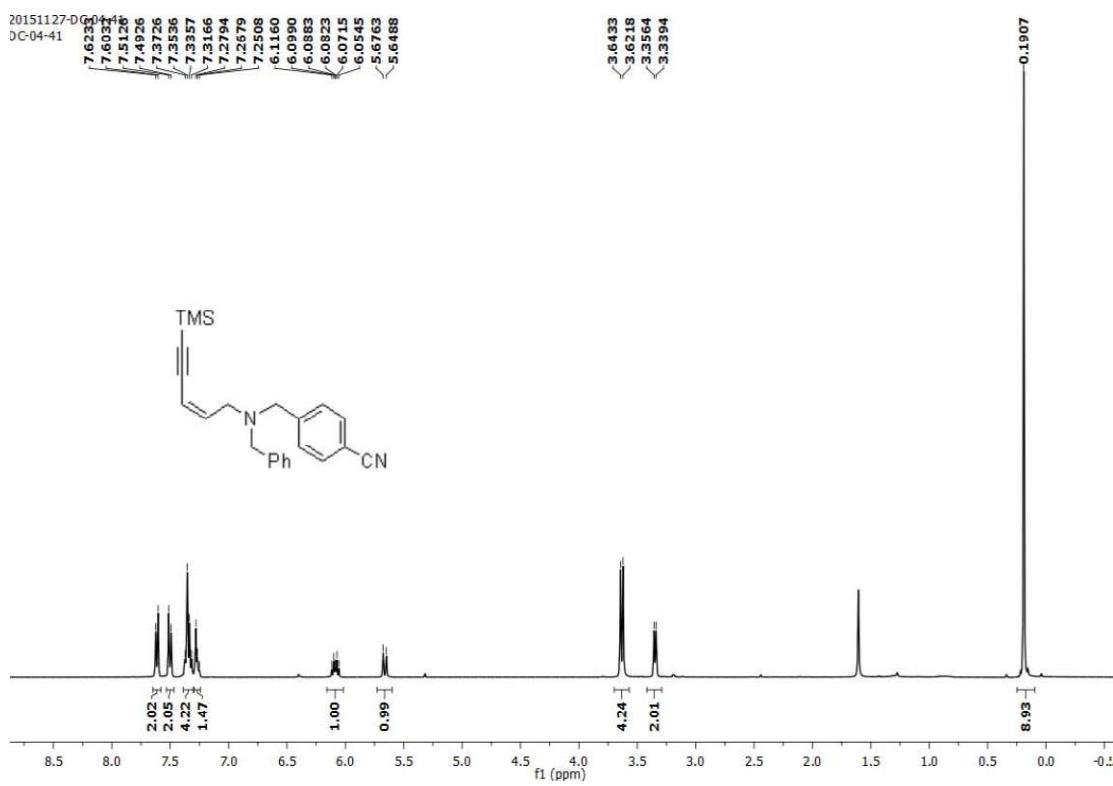
**Fig. S35**  $^1\text{H}$  NMR of **17b** in  $\text{CDCl}_3$ .



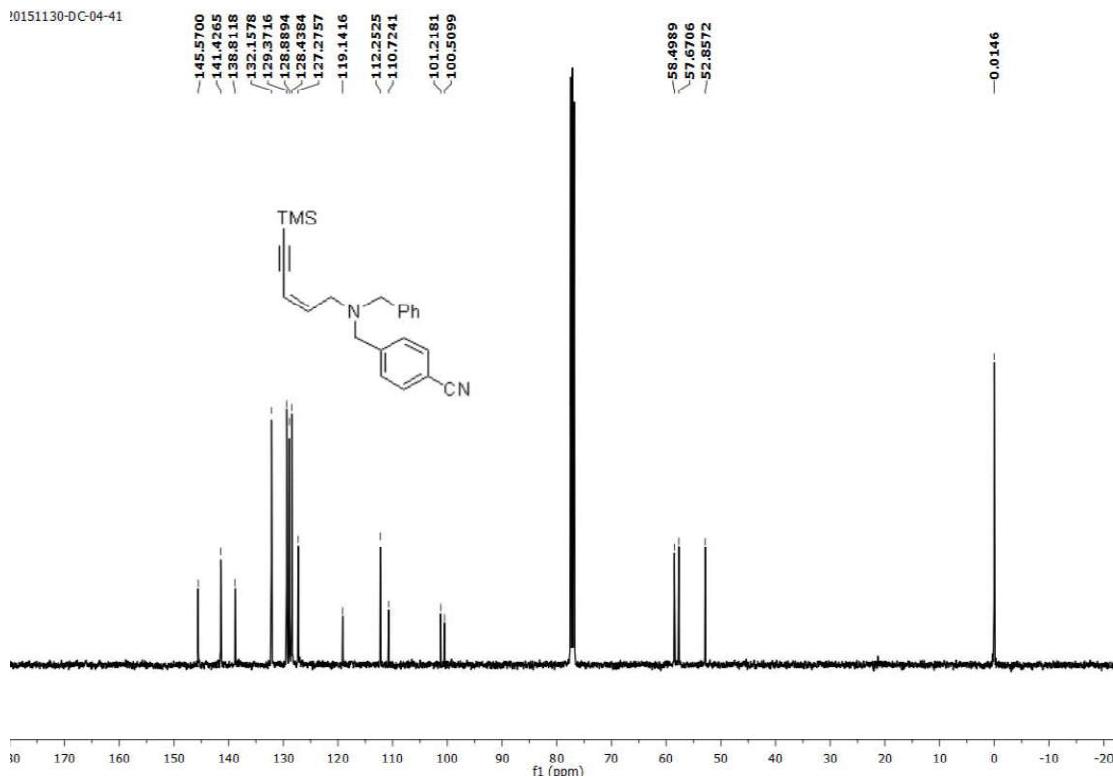
**Fig. S36**  $^{13}\text{C}$  NMR of **17b** in  $\text{CDCl}_3$ .



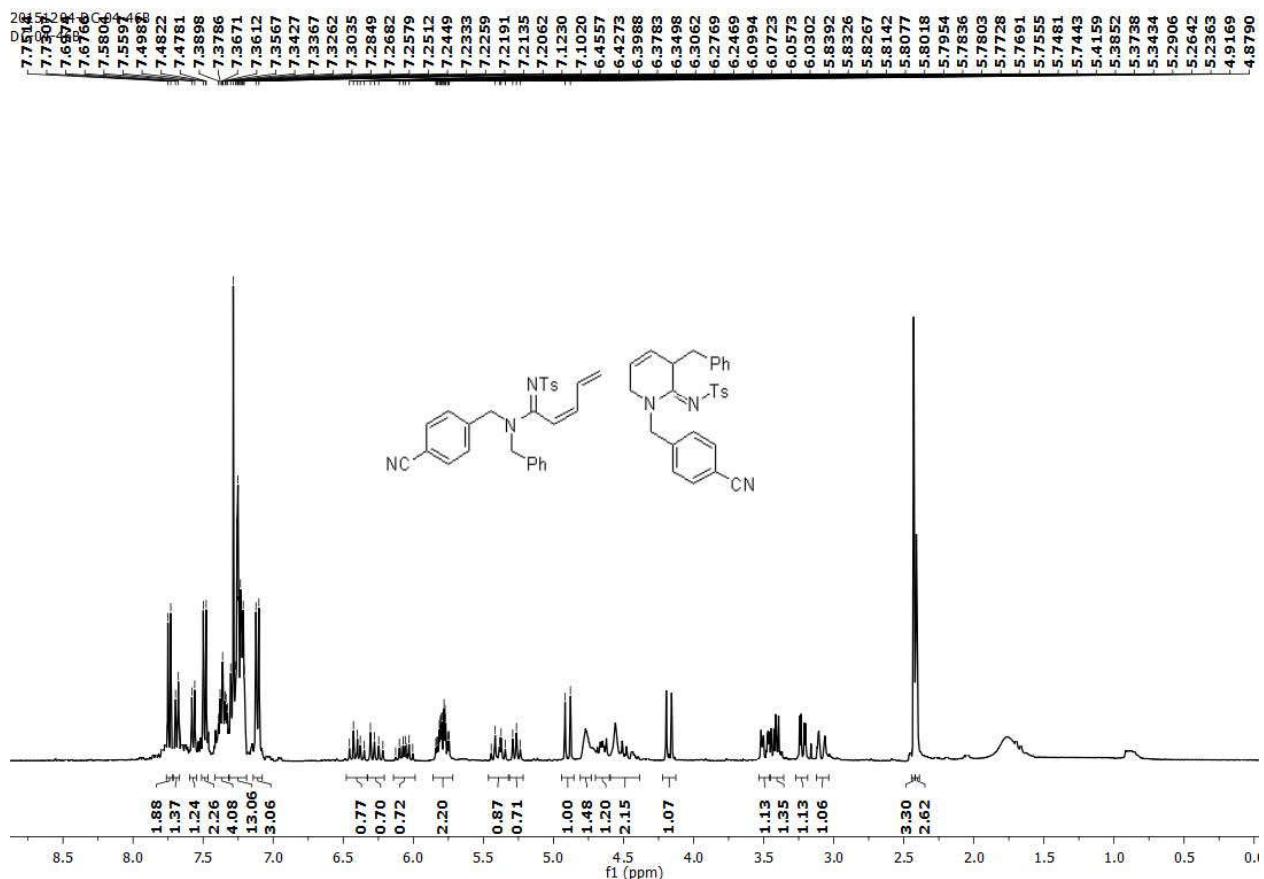
**Fig. S38**  $^{13}\text{C}$  NMR of **17c** in  $\text{CDCl}_3$ .



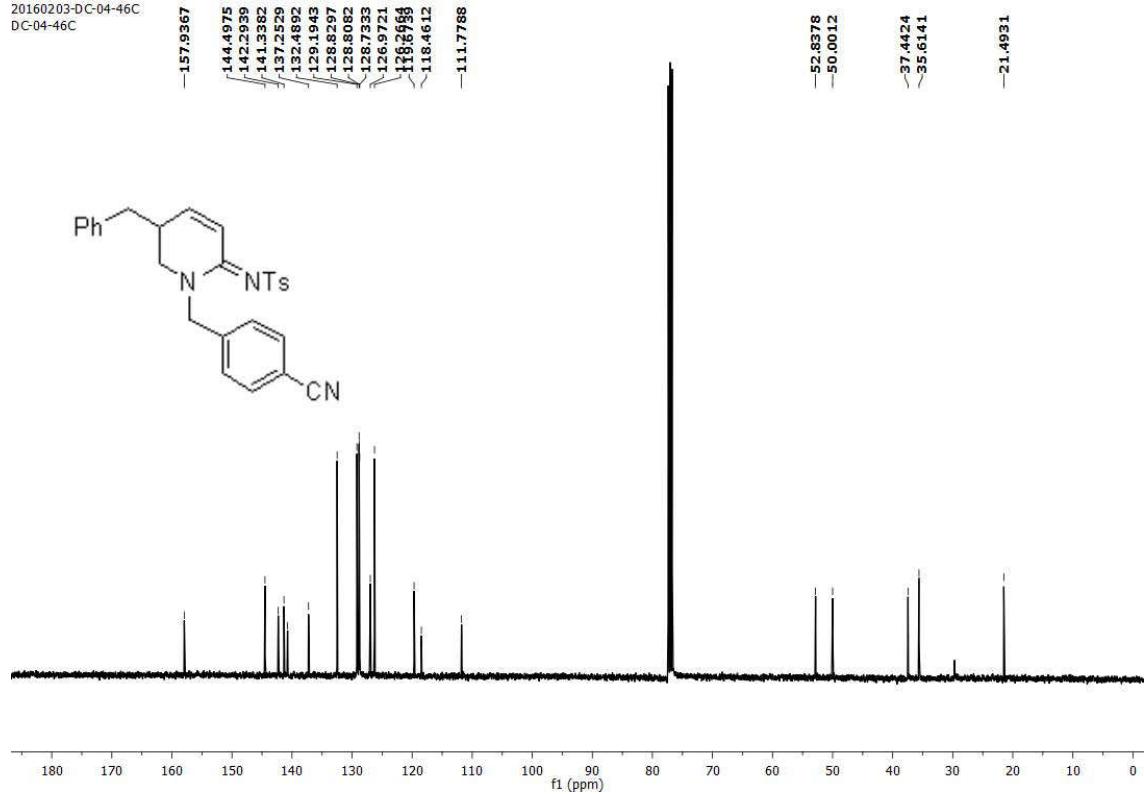
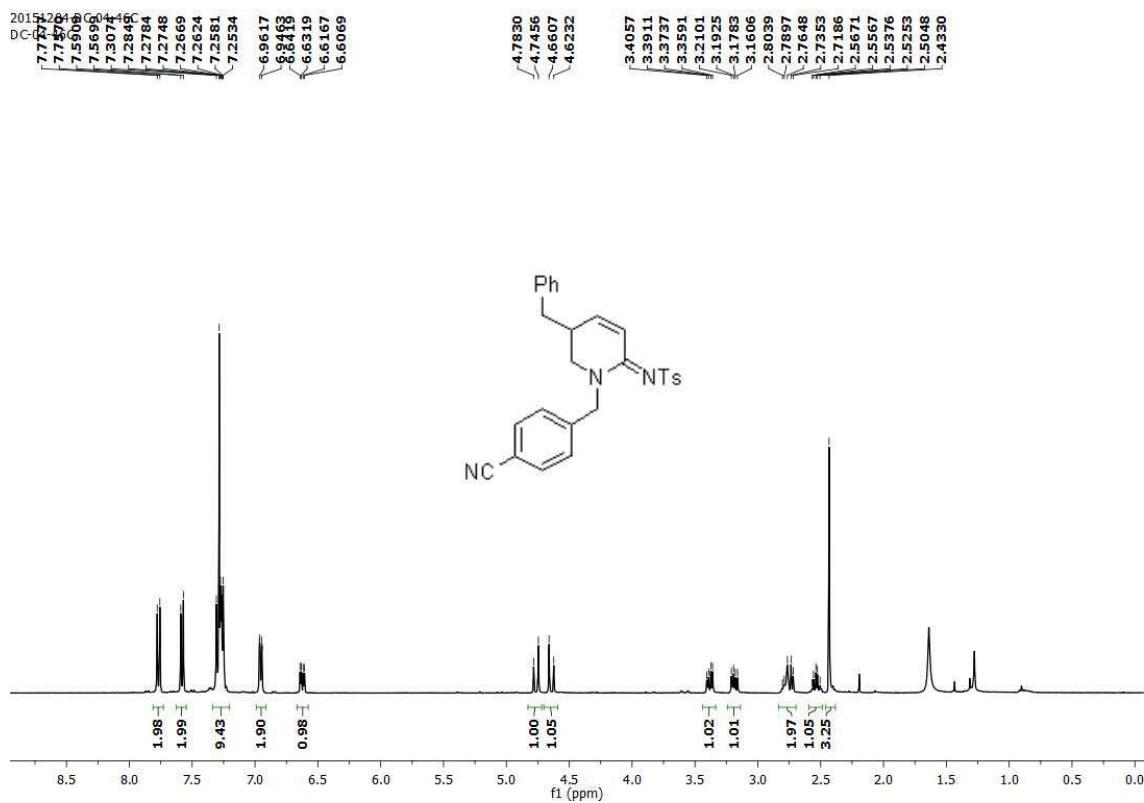
**Fig. S39**  $^1\text{H}$  NMR of **S11** in  $\text{CDCl}_3$ .

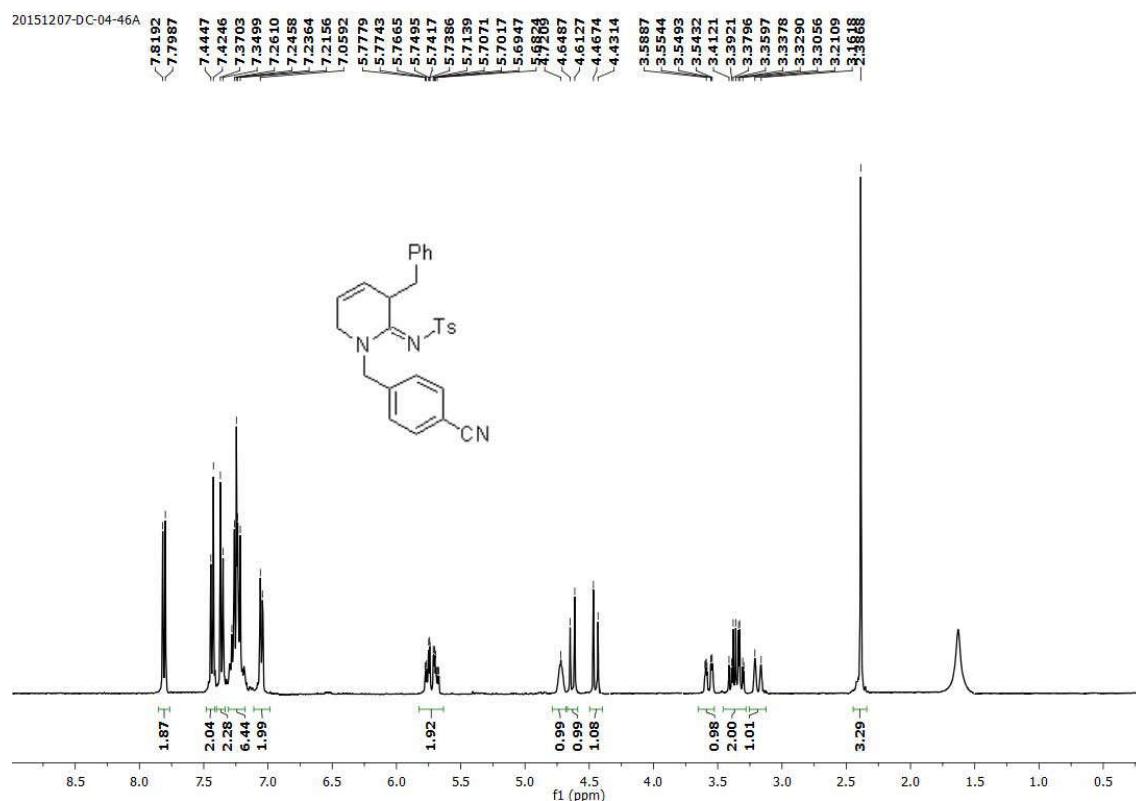


**Fig. S40**  $^{13}\text{C}$  NMR of **S11** in  $\text{CDCl}_3$ .

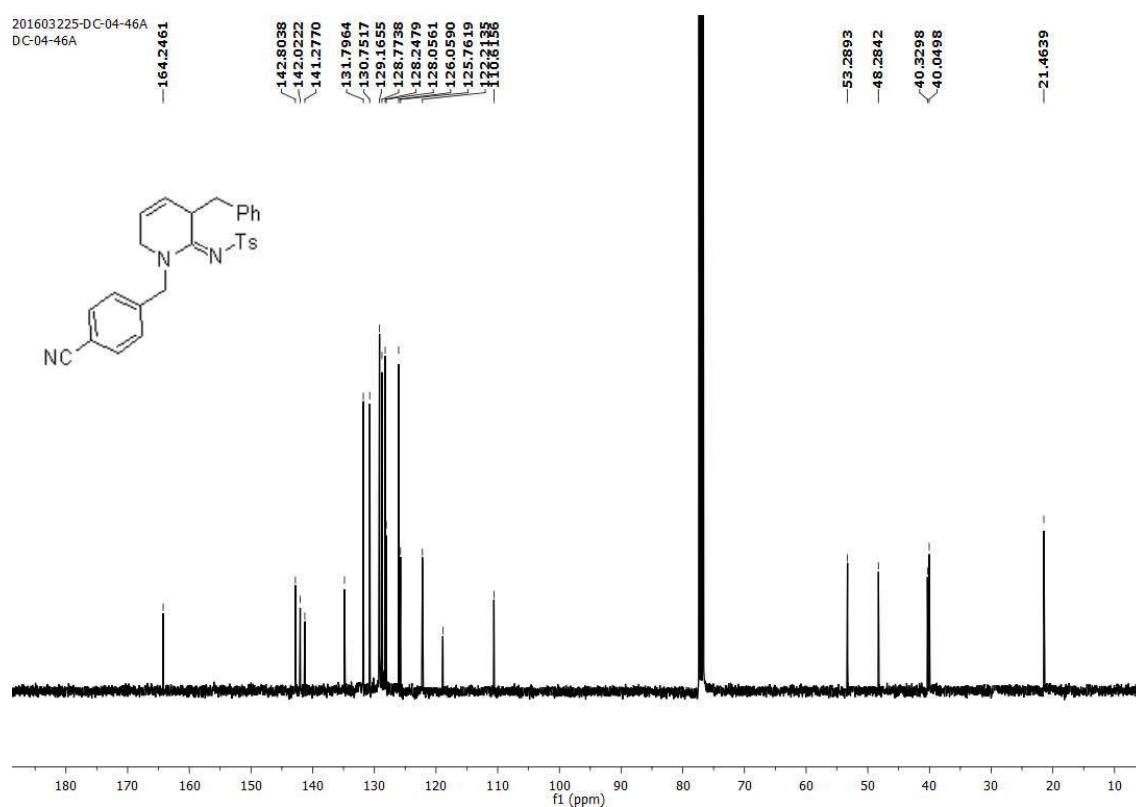


**Fig. S41**  $^1\text{H}$  NMR of mixture of **21a** and **21c** in  $\text{CDCl}_3$ .

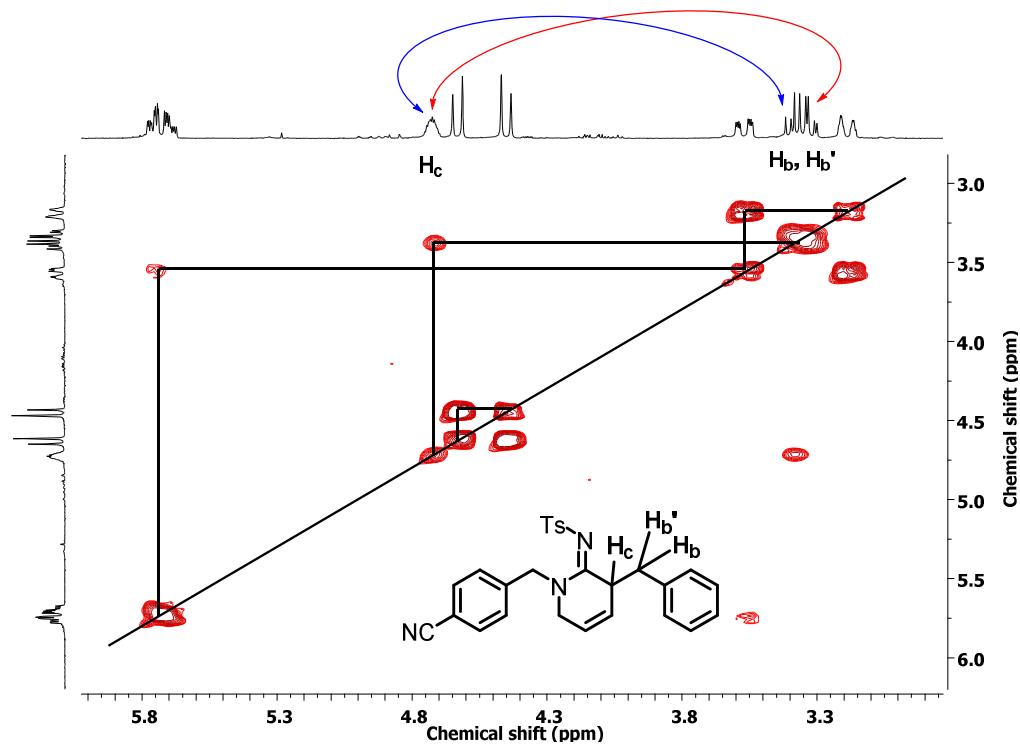




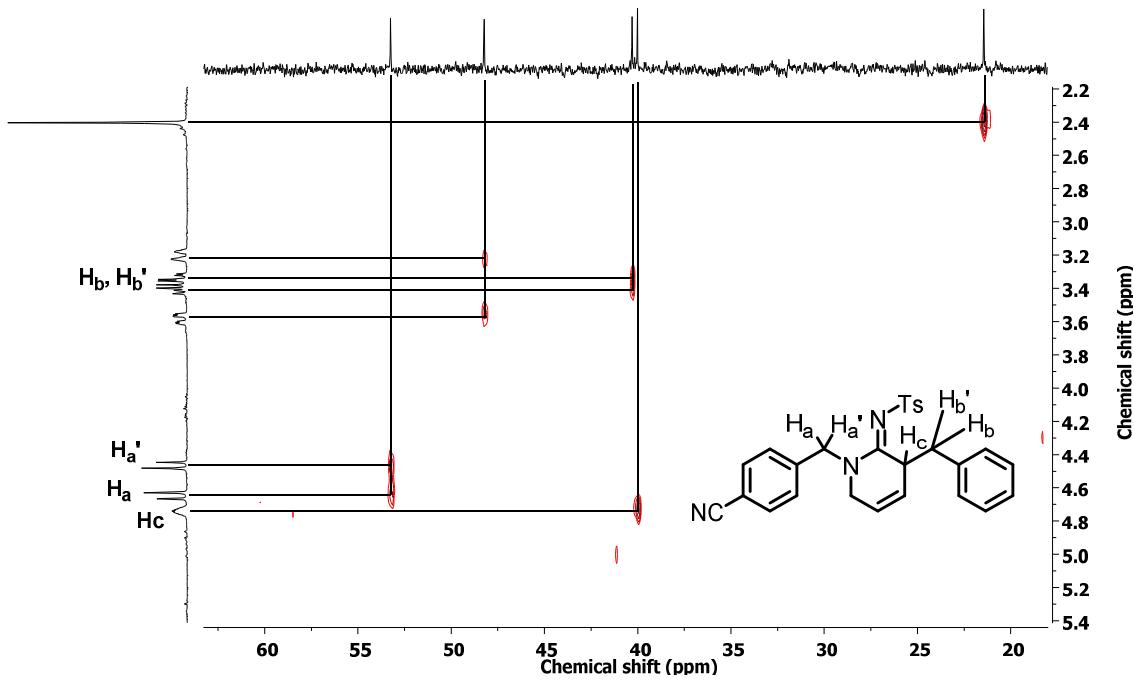
**Fig. S44**  $^1\text{H}$  NMR of **21c** in  $\text{CDCl}_3$ .



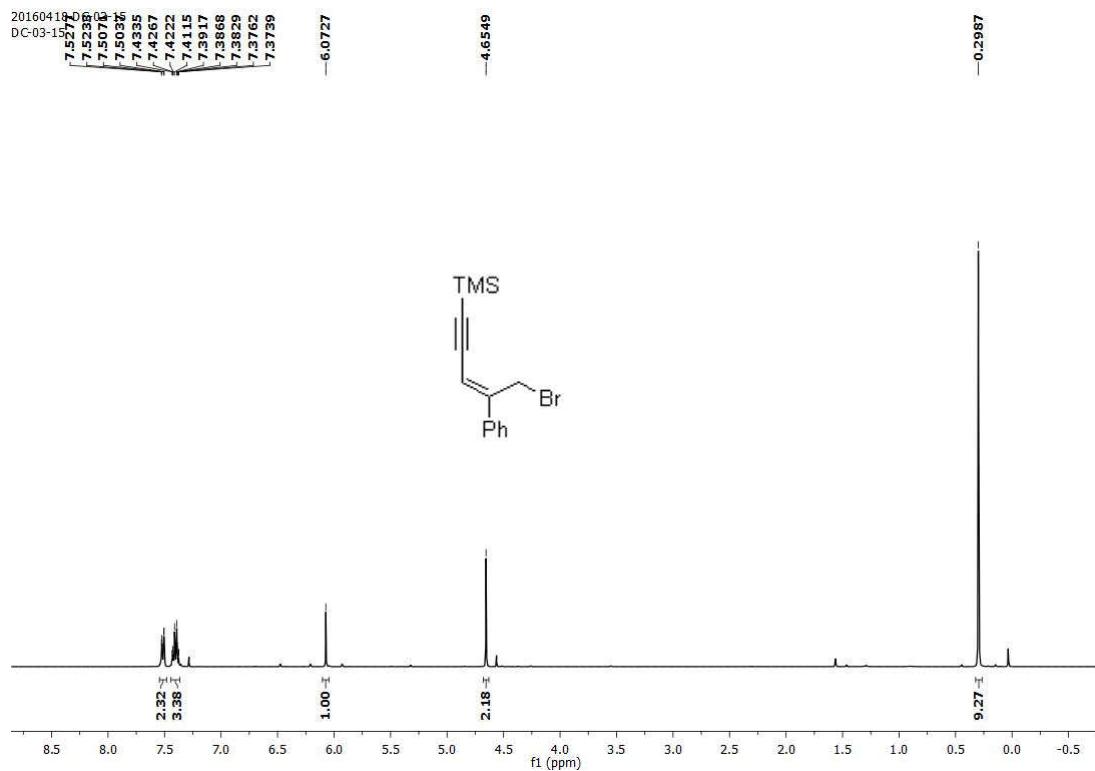
**Fig. S45**  $^{13}\text{C}$  NMR of **21c** in  $\text{CDCl}_3$ .



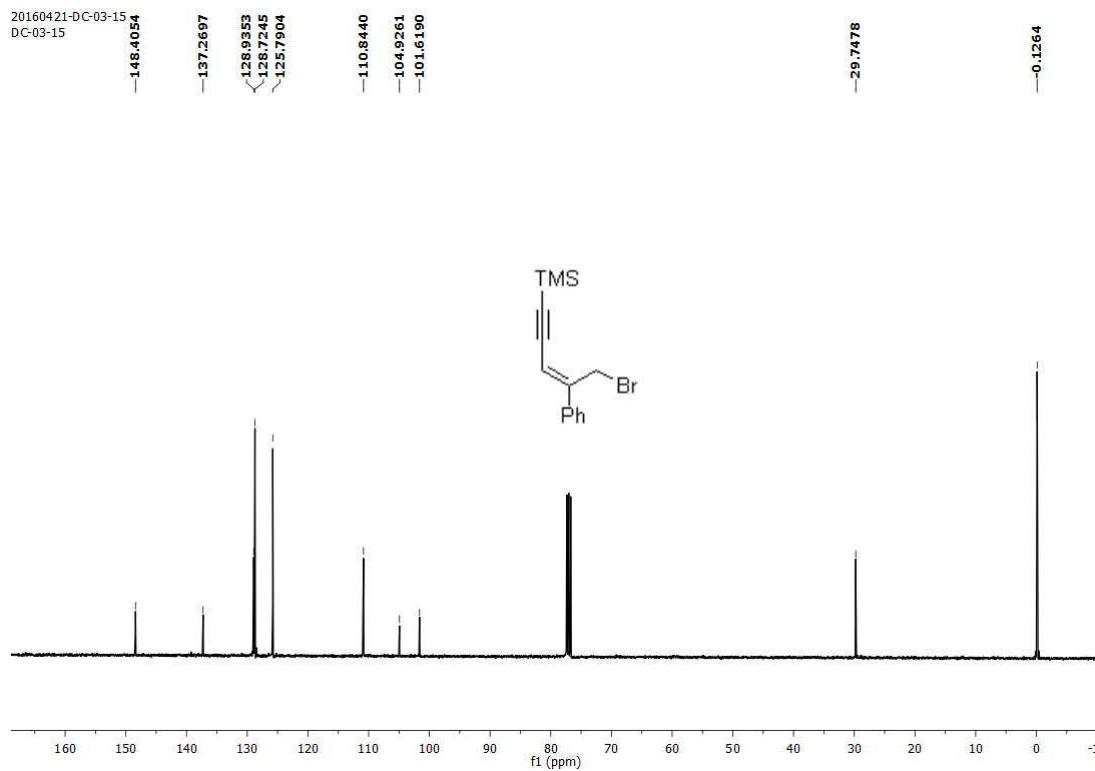
**Fig. S46** COSY NMR spectrum of **21c** in  $\text{CDCl}_3$ .



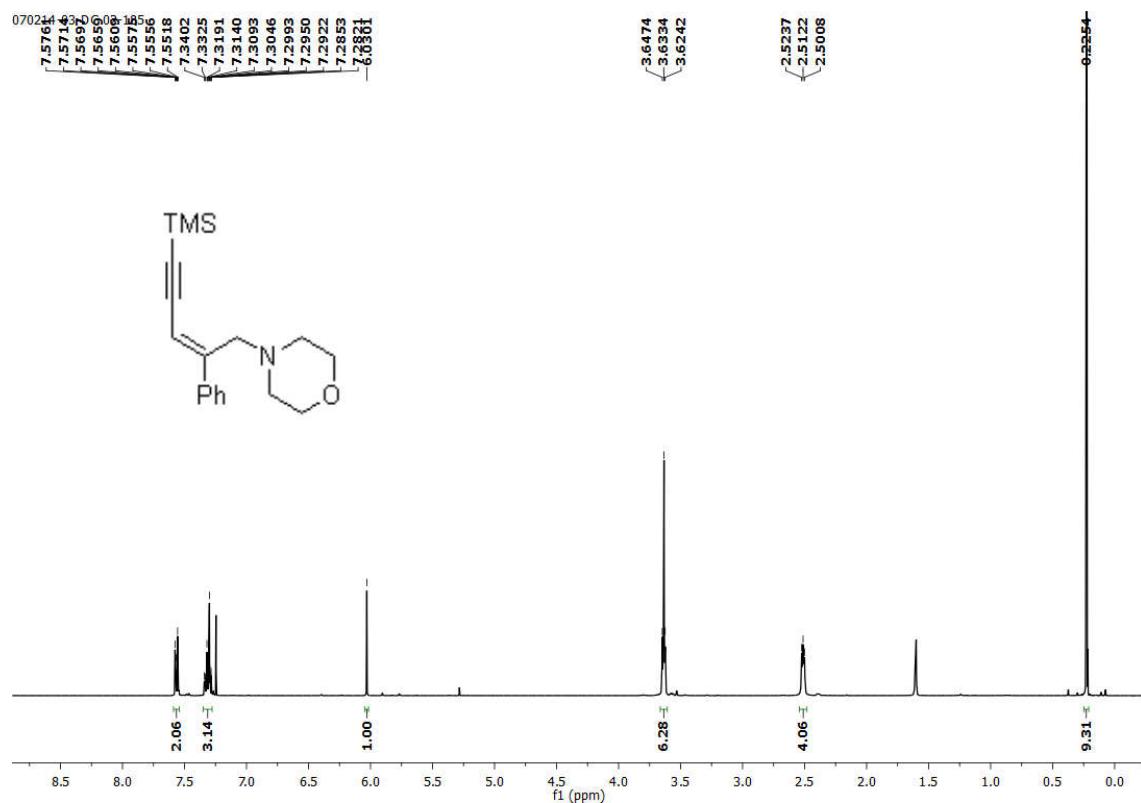
**Fig. S47** HETCOR NMR spectrum of **21c** in  $\text{CDCl}_3$ .



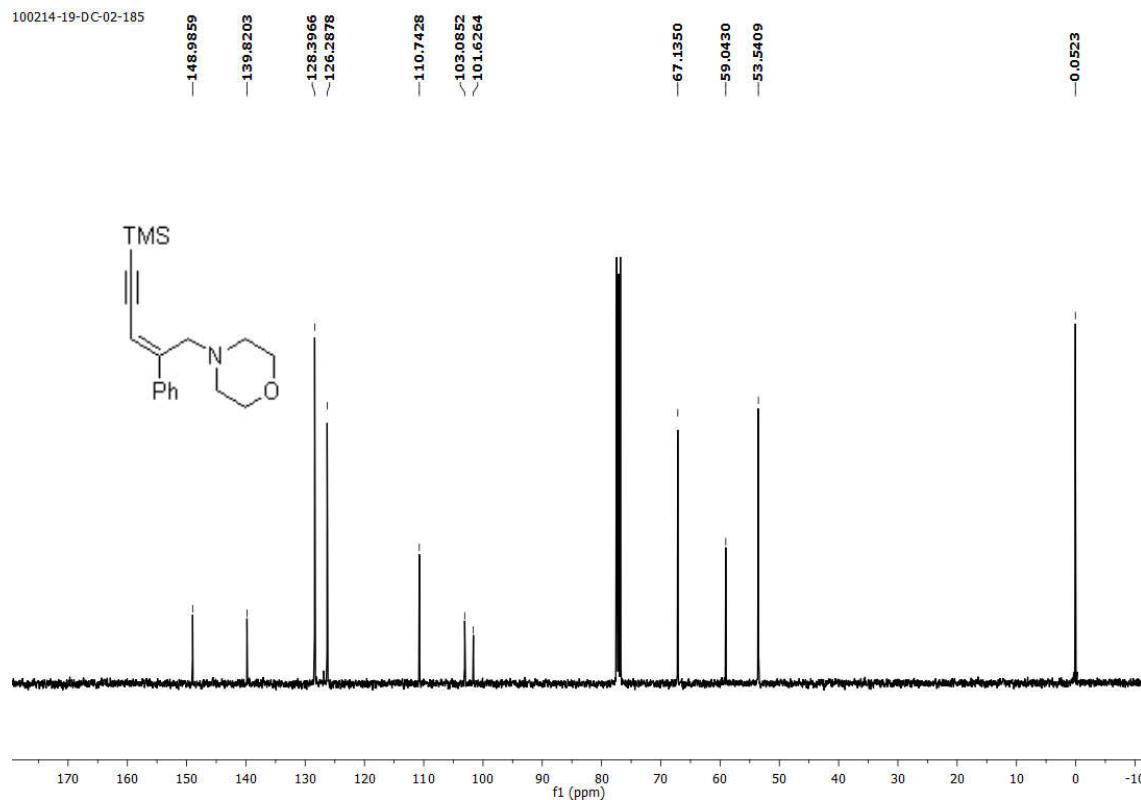
**Fig. S48**  $^1\text{H}$  NMR of **S15** in  $\text{CDCl}_3$ .



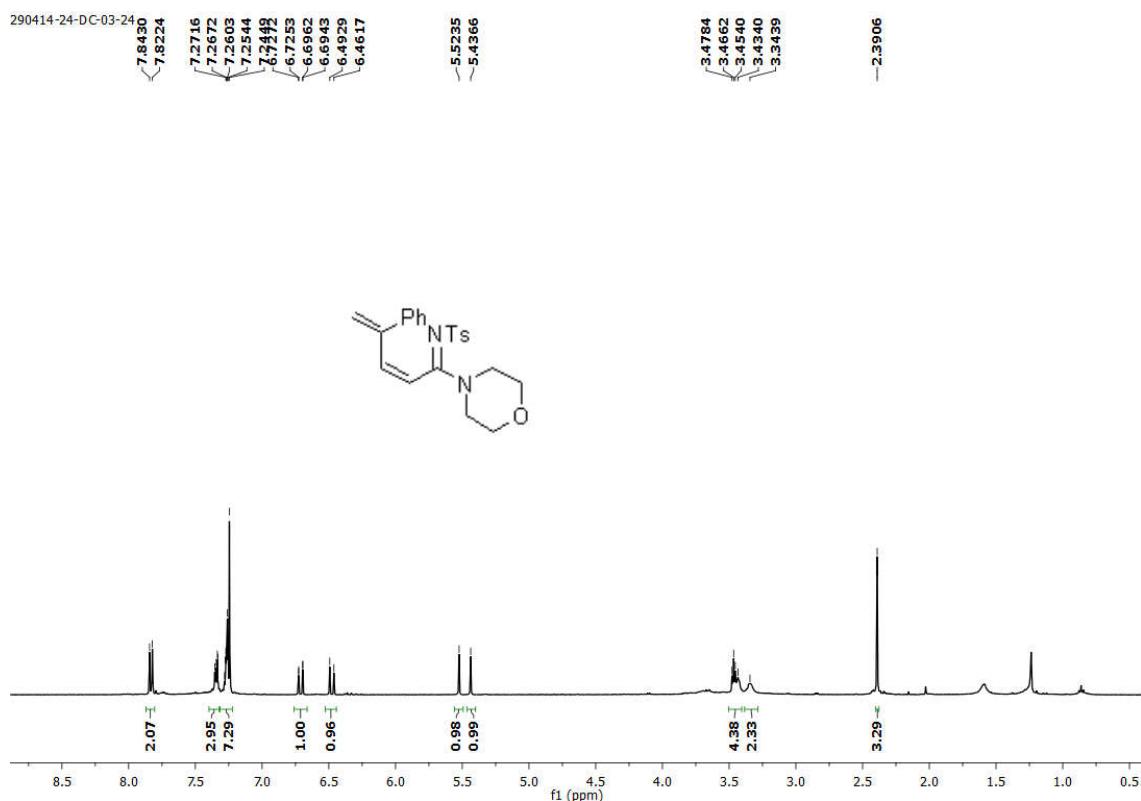
**Fig. S49**  $^{13}\text{C}$  NMR of **S15** in  $\text{CDCl}_3$ .



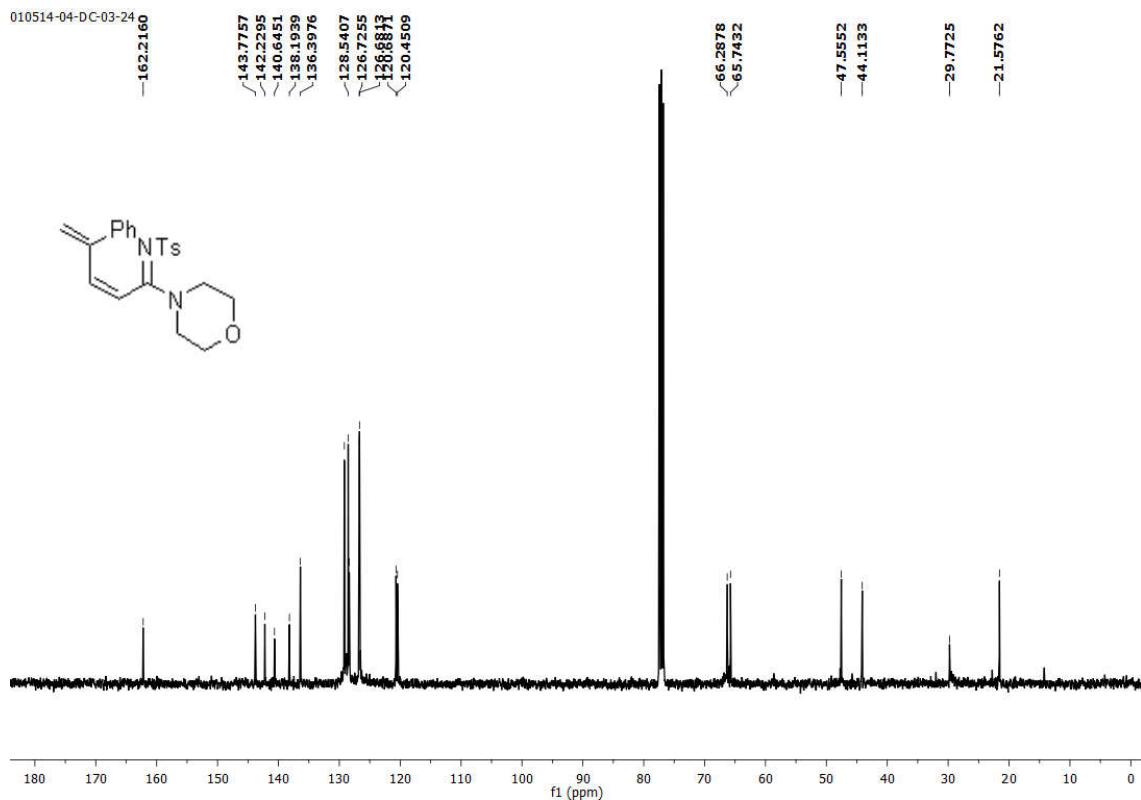
**Fig. S50**  $^1\text{H}$  NMR of S15 in  $\text{CDCl}_3$ .



**Fig. S51**  $^{13}\text{C}$  NMR of S15 in  $\text{CDCl}_3$ .



**Fig. S52**  $^1\text{H}$  NMR of **2a** in  $\text{CDCl}_3$ .



**Fig. S53**  $^{13}\text{C}$  NMR of **2a** in  $\text{CDCl}_3$ .

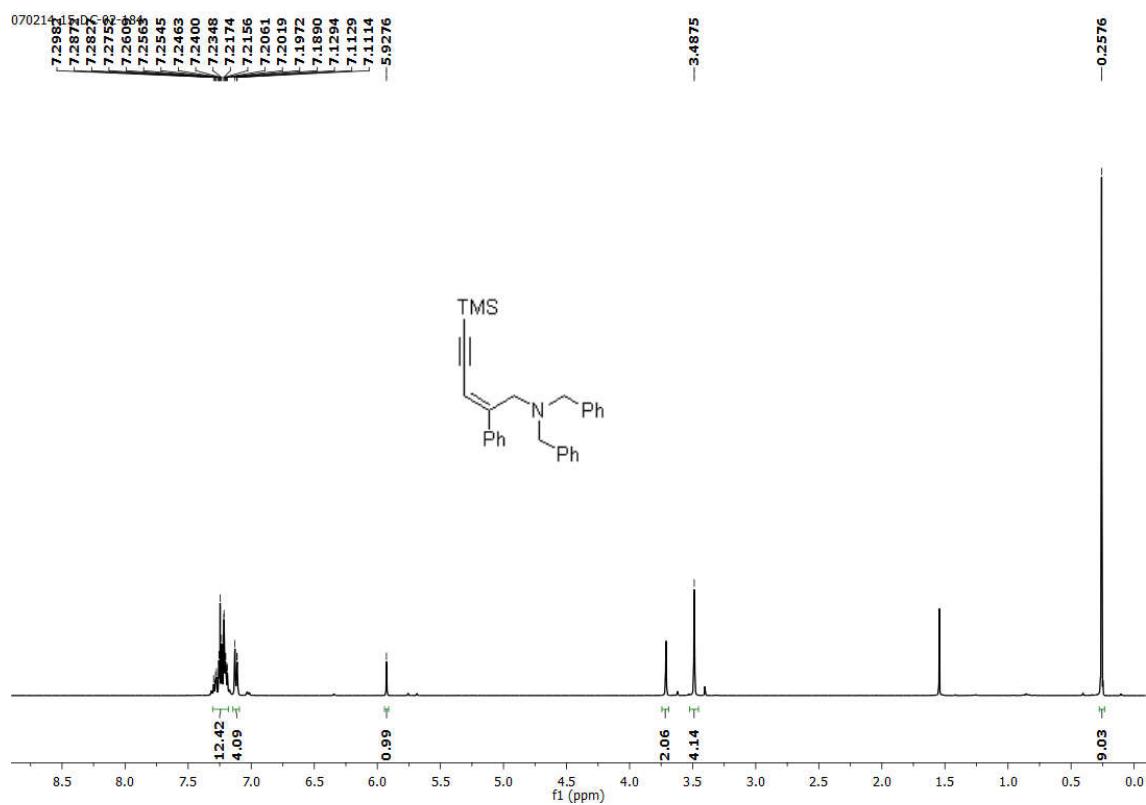


Fig. S54 <sup>1</sup>H NMR of S16 in CDCl<sub>3</sub>.

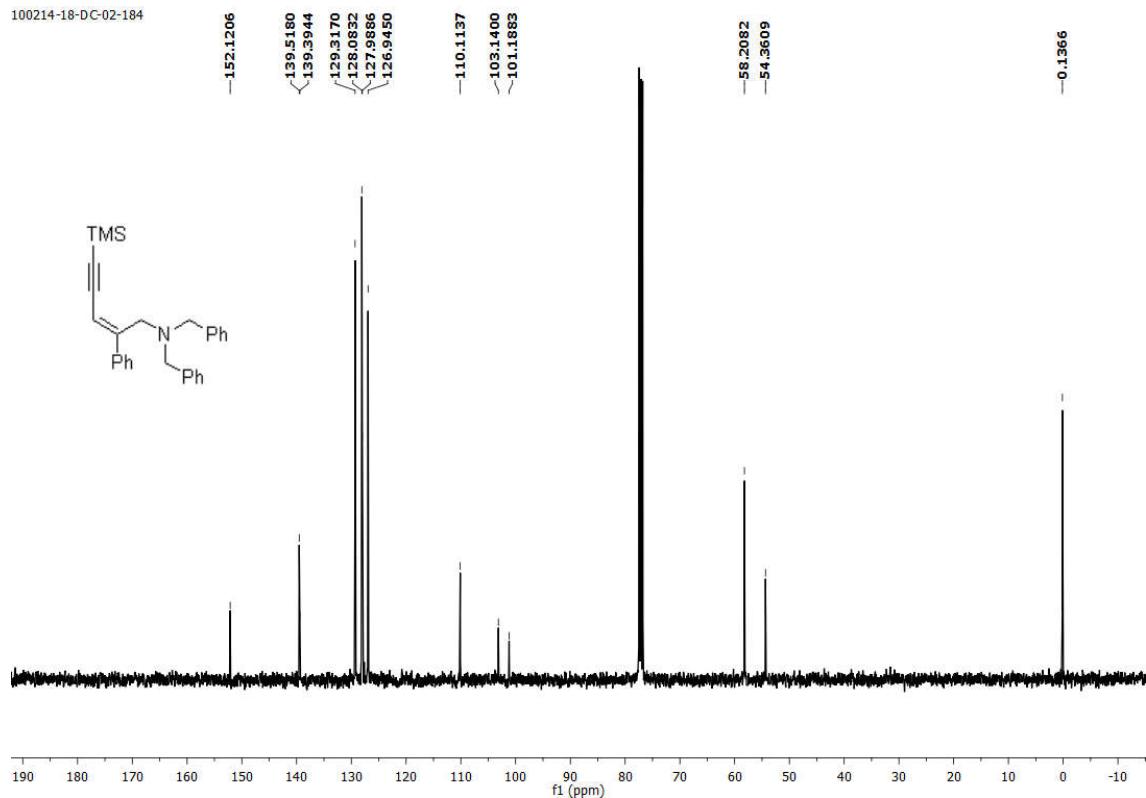
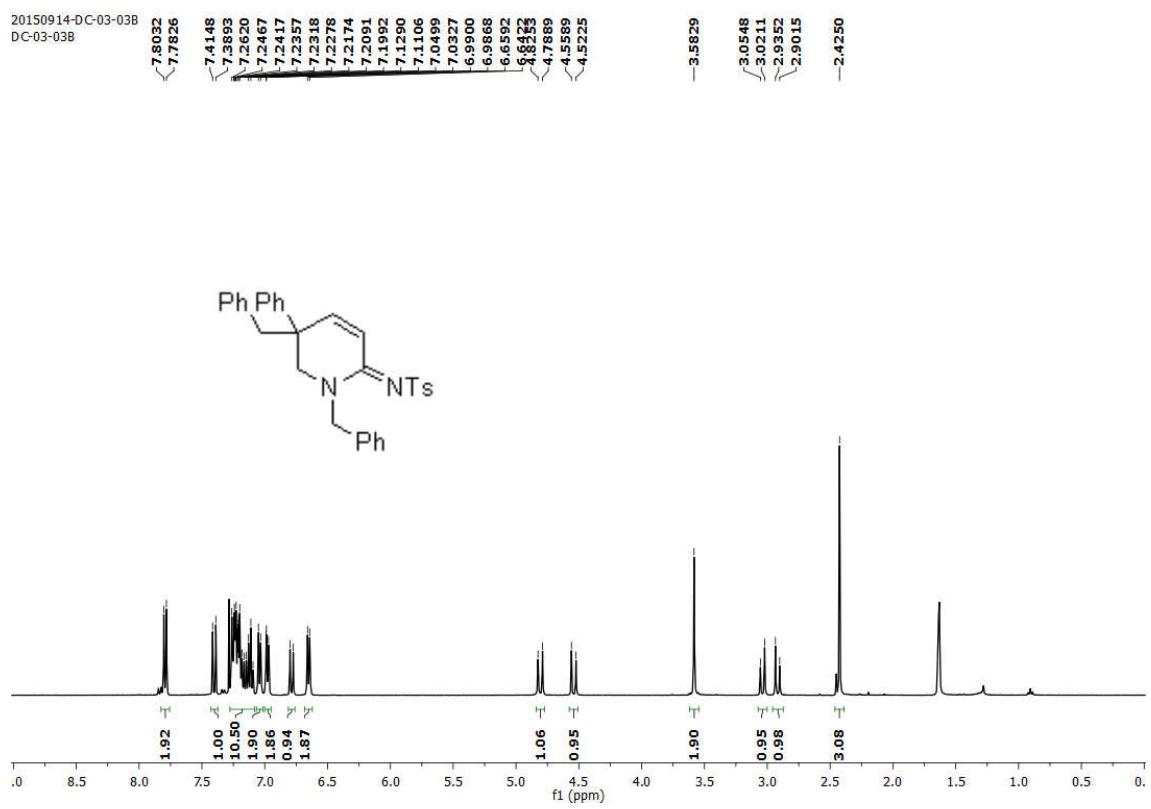
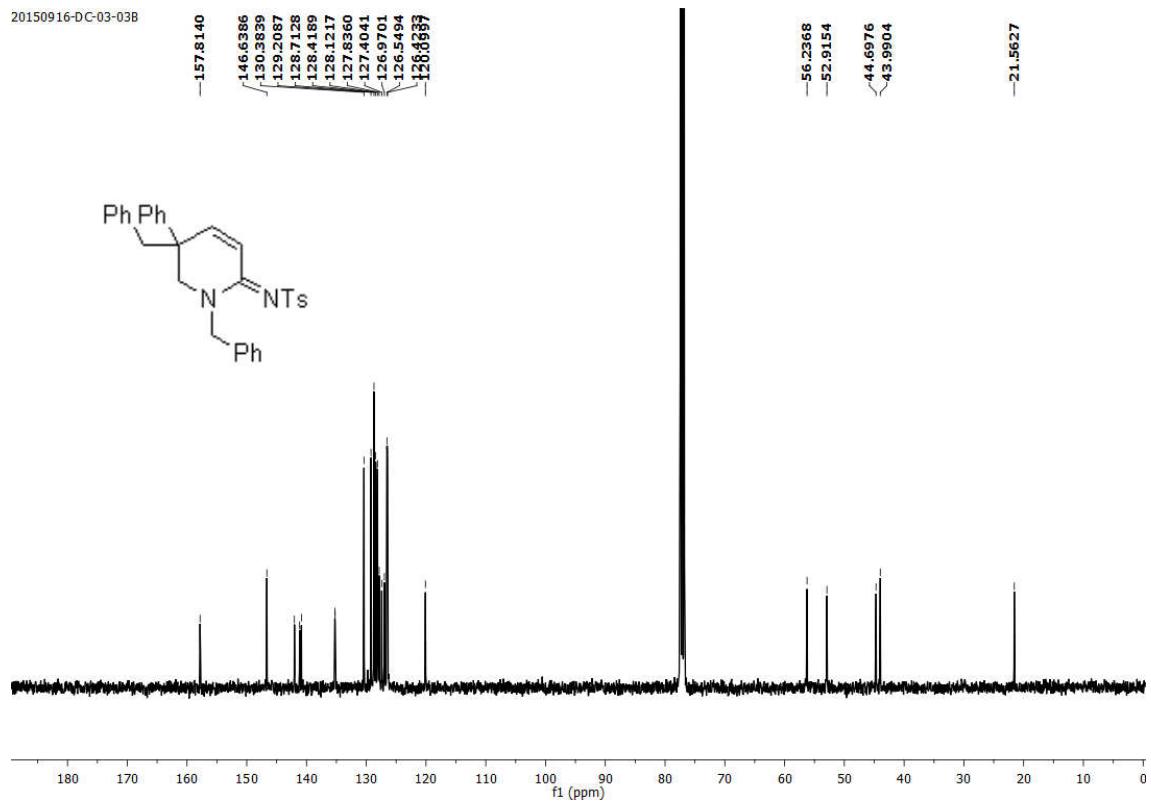


Fig. S55 <sup>13</sup>C NMR of S16 in CDCl<sub>3</sub>.

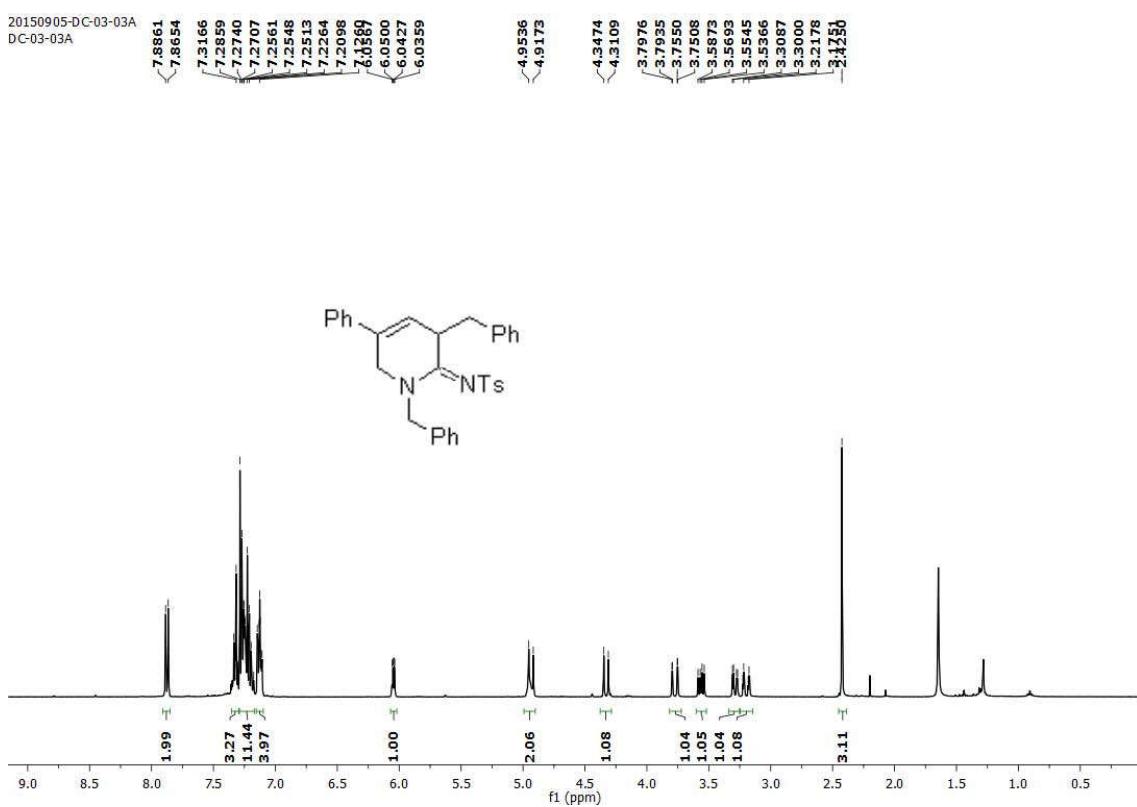


**Fig. S56**  $^1\text{H}$  NMR of **10b** in  $\text{CDCl}_3$ .



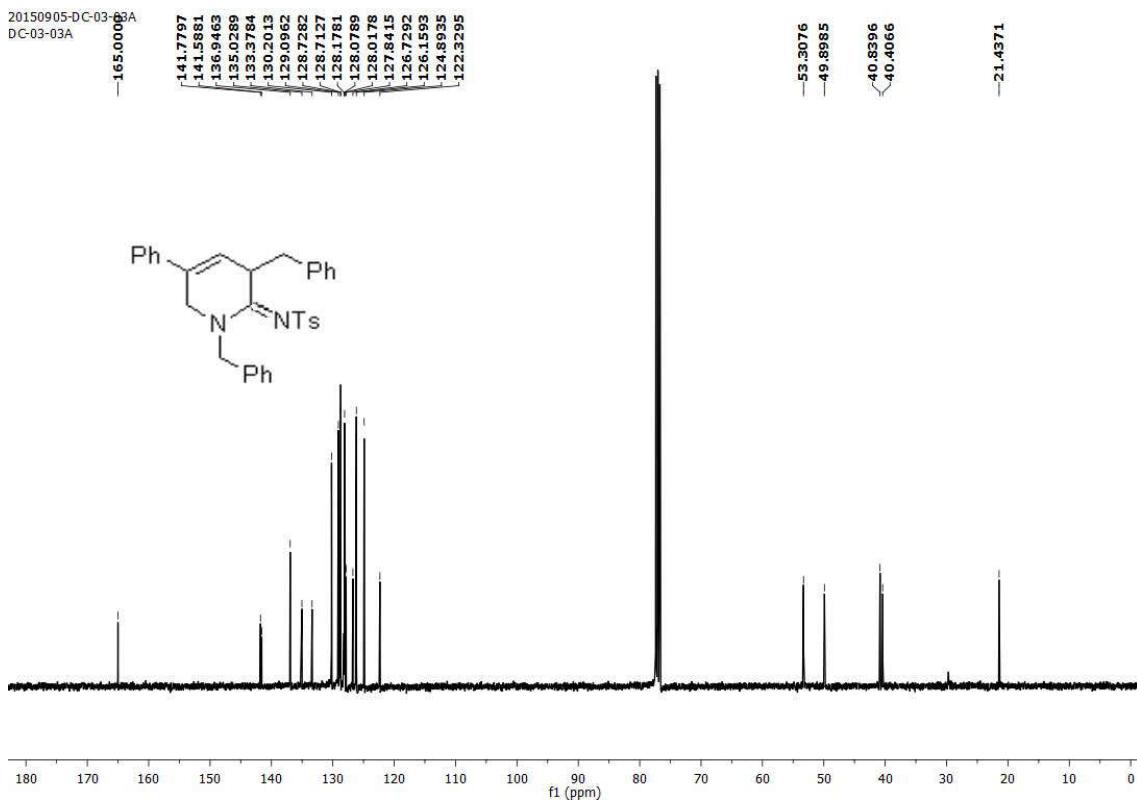
**Fig. S57**  $^{13}\text{C}$  NMR of **10b** in  $\text{CDCl}_3$ .

20150905-DC-03-03A  
DC-03-03A



**Fig. S58**  $^1\text{H}$  NMR of **10c** in  $\text{CDCl}_3$ .

20150905-DC-03-03A  
DC-03-03A



**Fig. S59**  $^{13}\text{C}$  NMR of **10c** in  $\text{CDCl}_3$ .

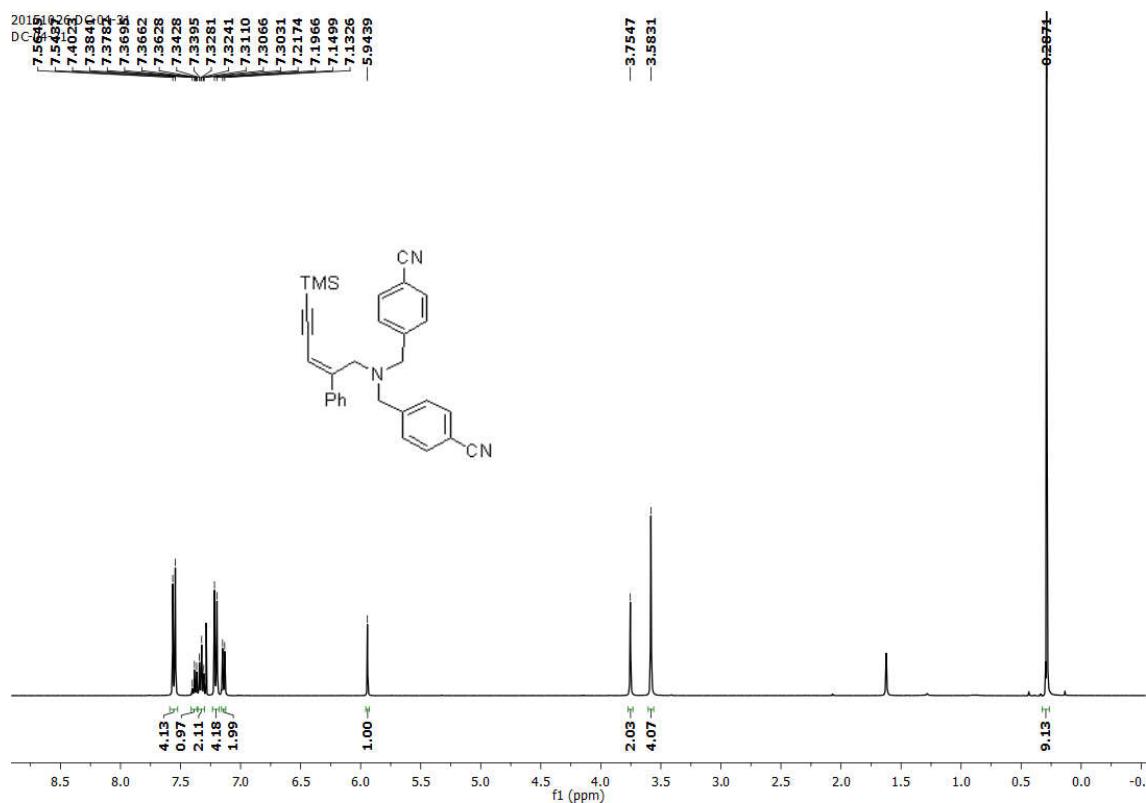


Fig. S60 <sup>1</sup>H NMR of S17 in CDCl<sub>3</sub>.

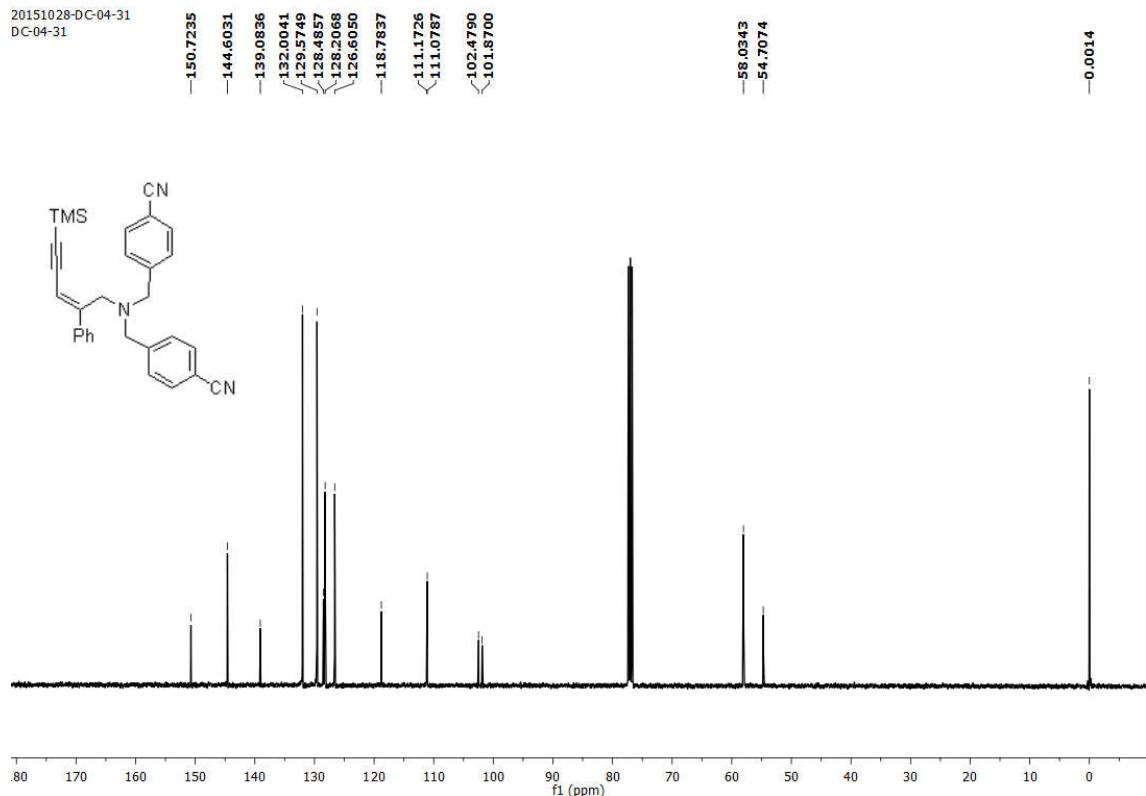
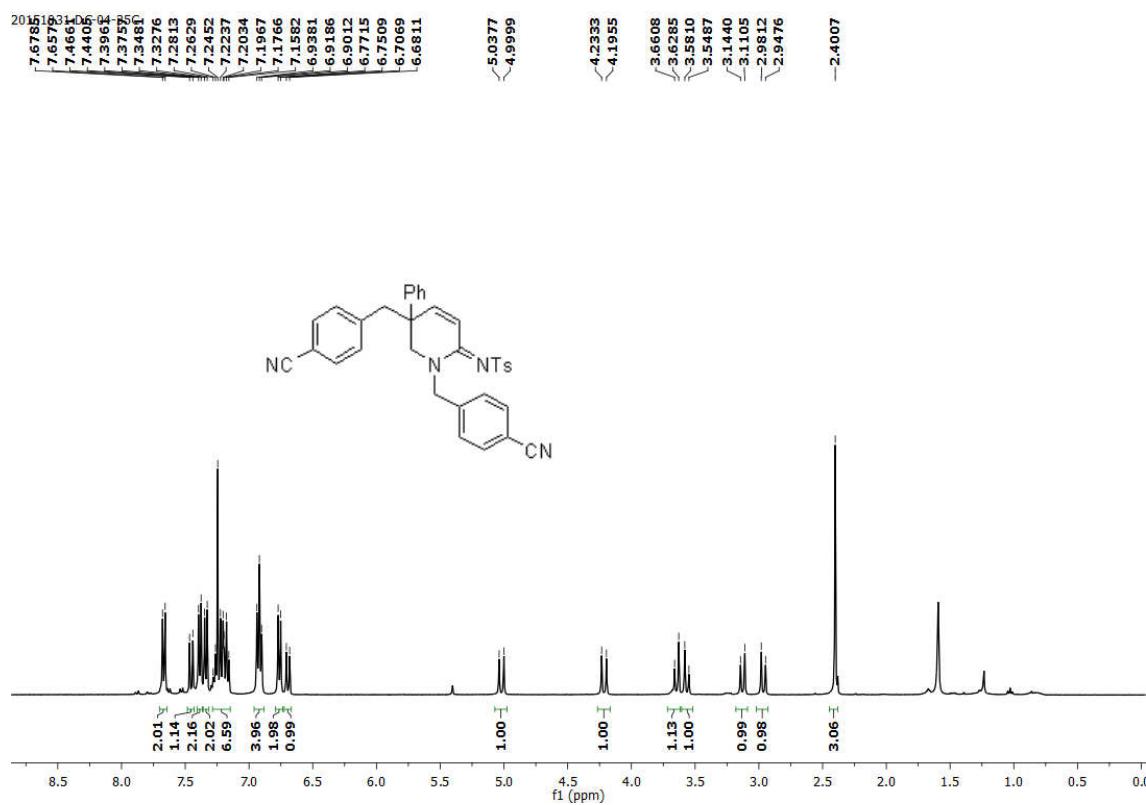
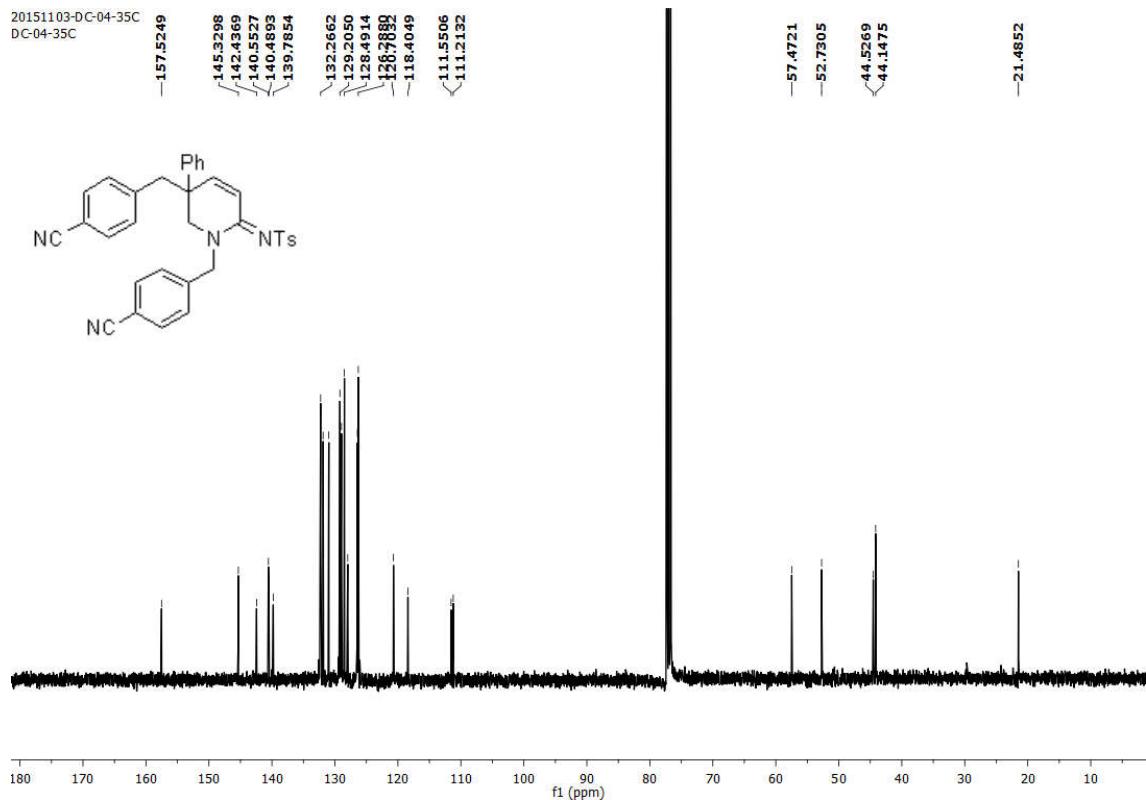


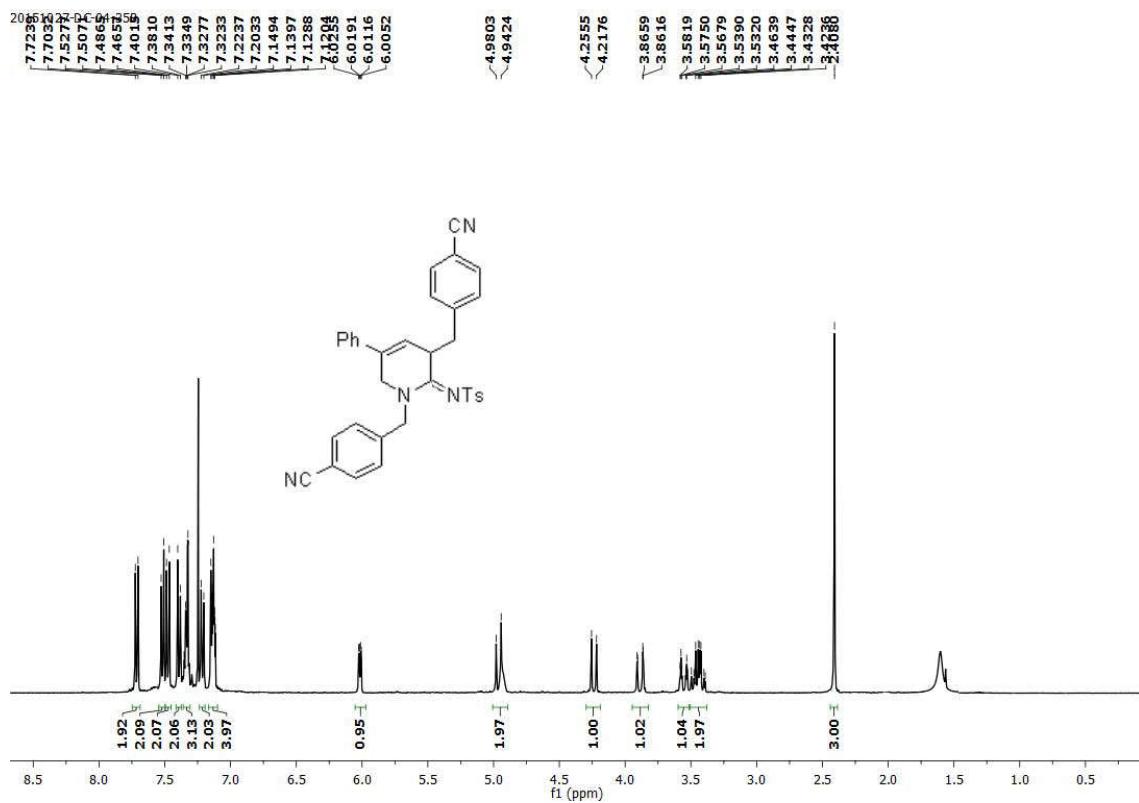
Fig. S61 <sup>13</sup>C NMR of S17 in CDCl<sub>3</sub>.



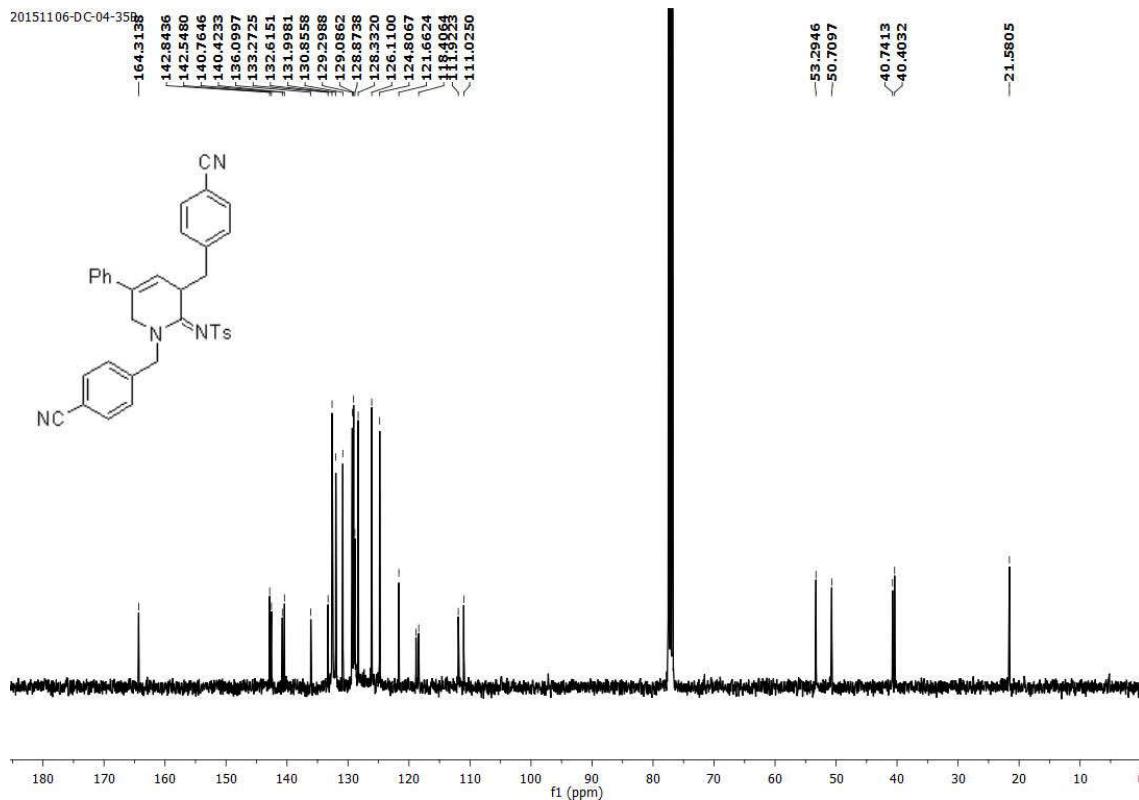
**Fig. S62** <sup>1</sup>H NMR of **14b** in CDCl<sub>3</sub>.



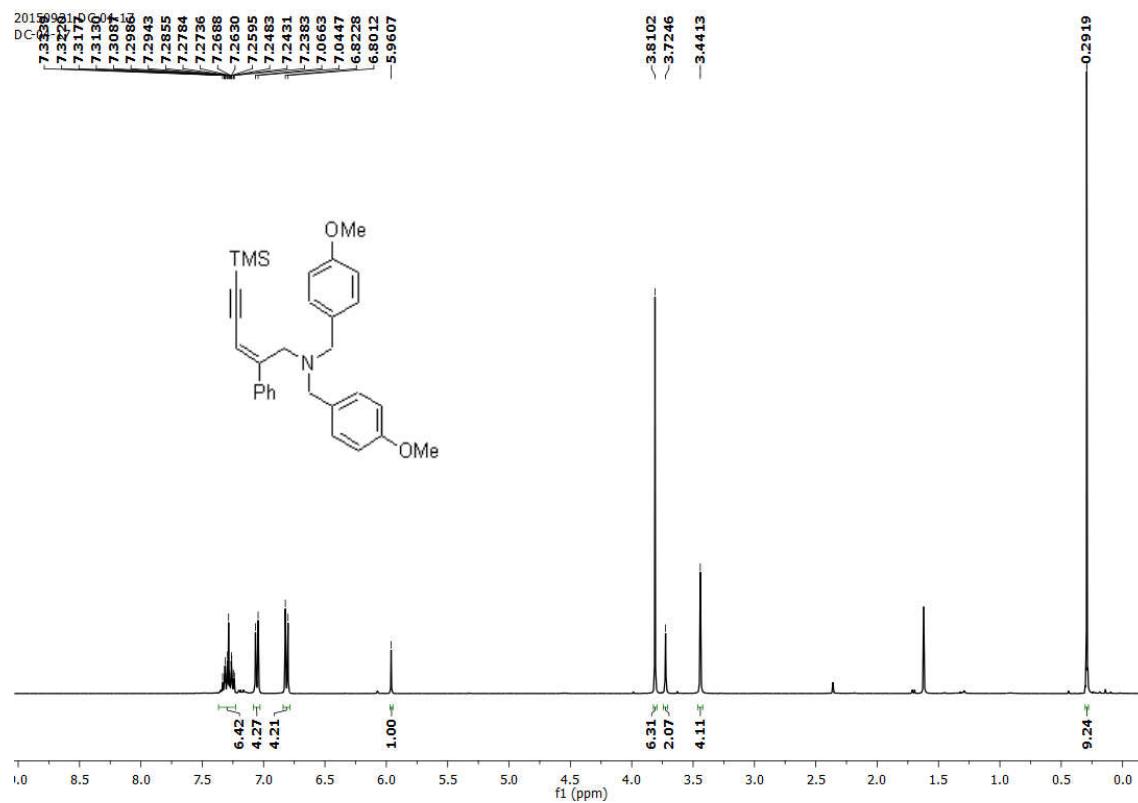
**Fig. S63** <sup>13</sup>C NMR of **14b** in CDCl<sub>3</sub>.



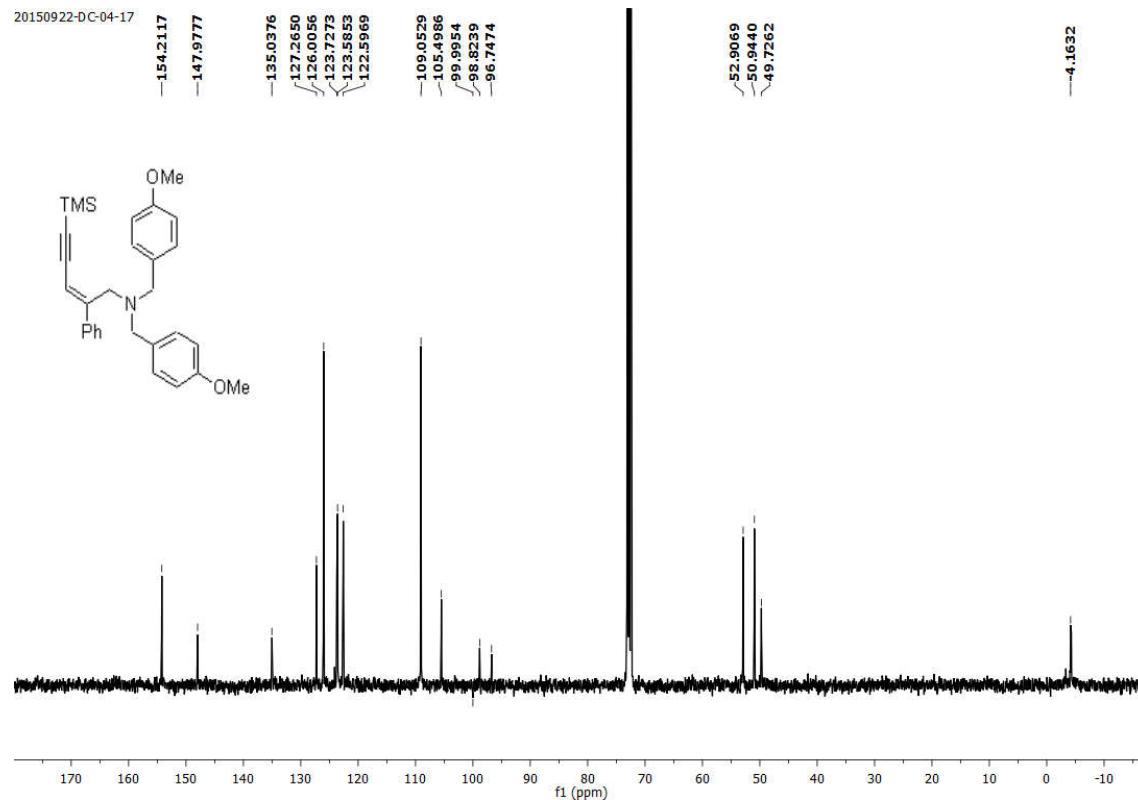
**Fig. S64**  $^1\text{H}$  NMR of **14c** in  $\text{CDCl}_3$ .



**Fig. S65**  $^{13}\text{C}$  NMR of **14c** in  $\text{CDCl}_3$ .

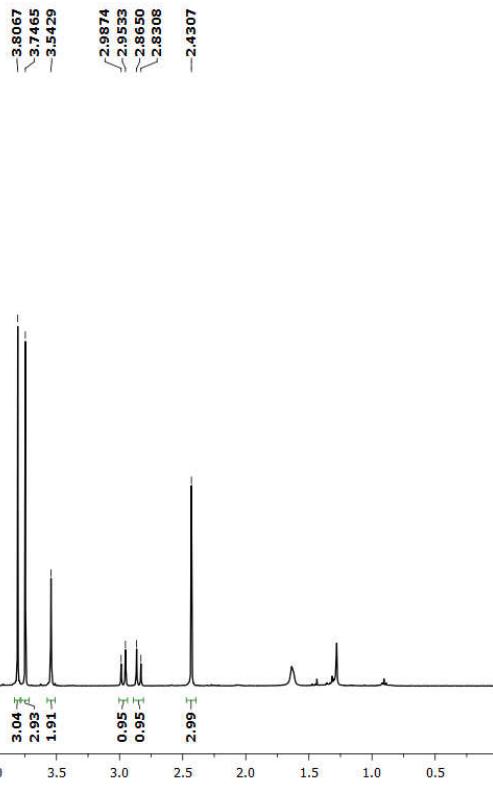


**Fig. S66**  $^1\text{H}$  NMR of **S18** in  $\text{CDCl}_3$ .

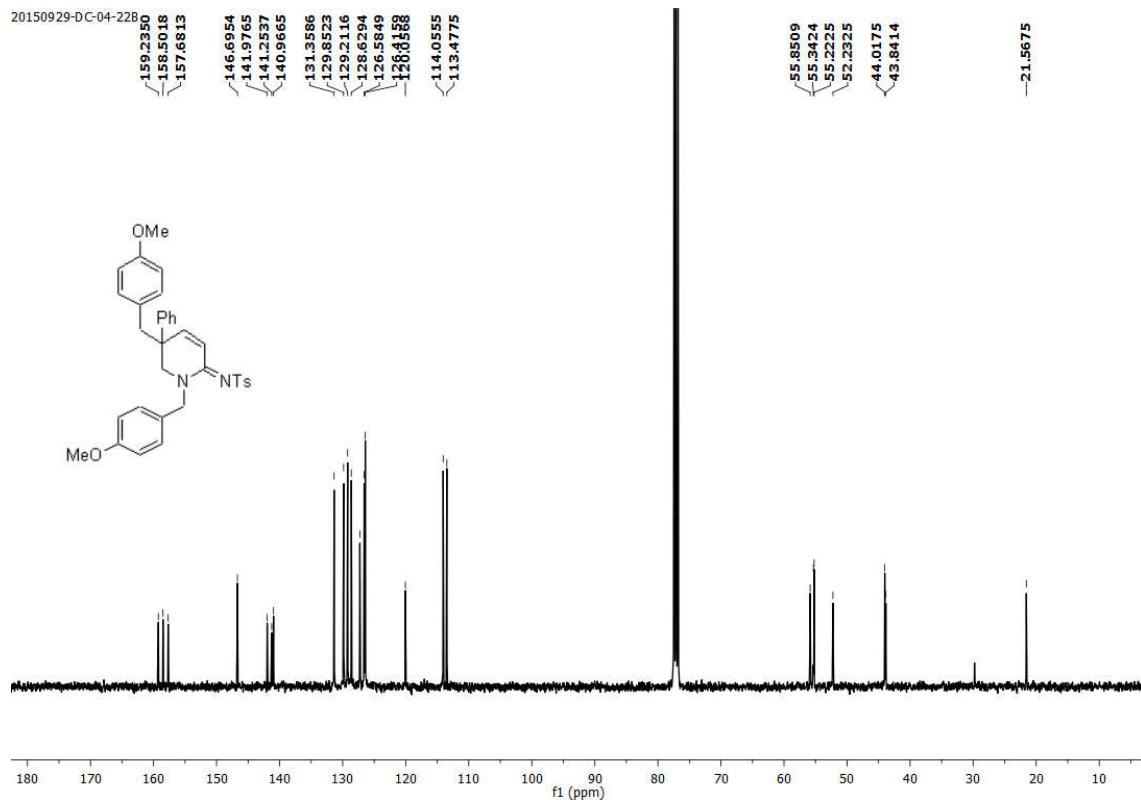


**Fig. S67**  $^{13}\text{C}$  NMR of **S18** in  $\text{CDCl}_3$ .

20150924-DC-04-22B  
DC-04-22B



**Fig. S68**  $^1\text{H}$  NMR of **18b** in  $\text{CDCl}_3$ .



**Fig. S69**  $^{13}\text{C}$  NMR of **18b** in  $\text{CDCl}_3$ .

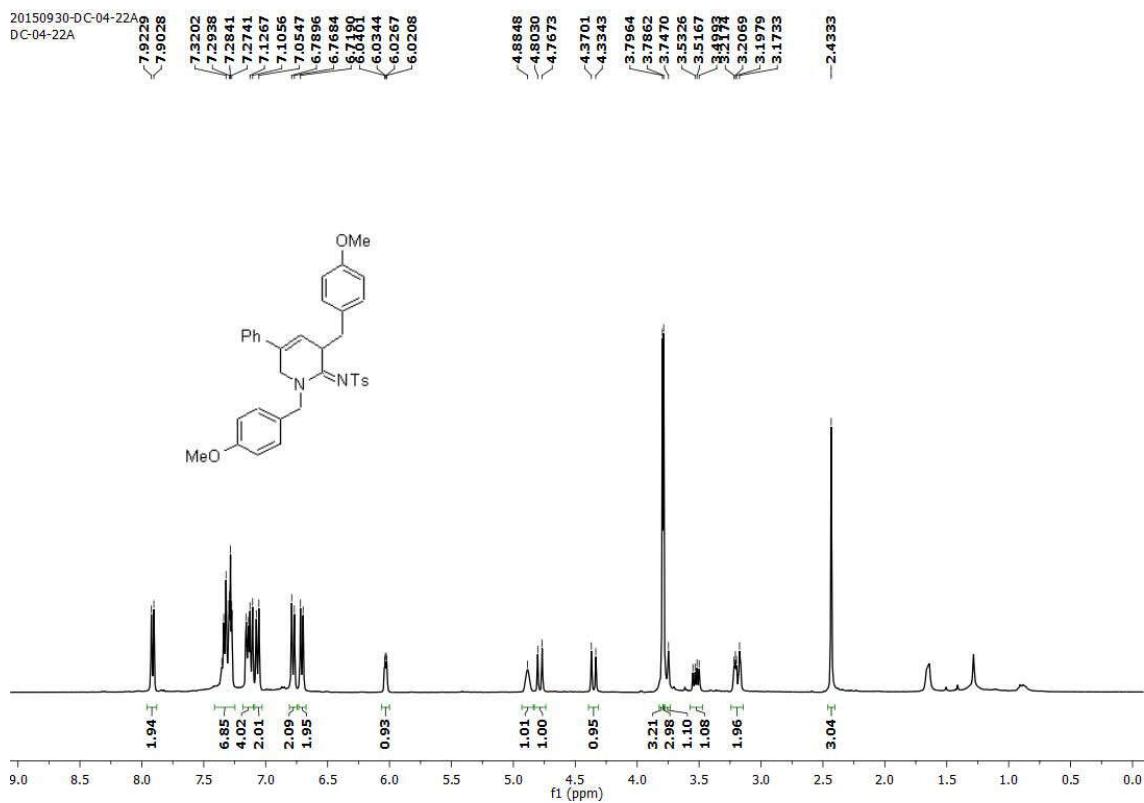


Fig. S70  $^1\text{H}$  NMR of **18c** in  $\text{CDCl}_3$ .

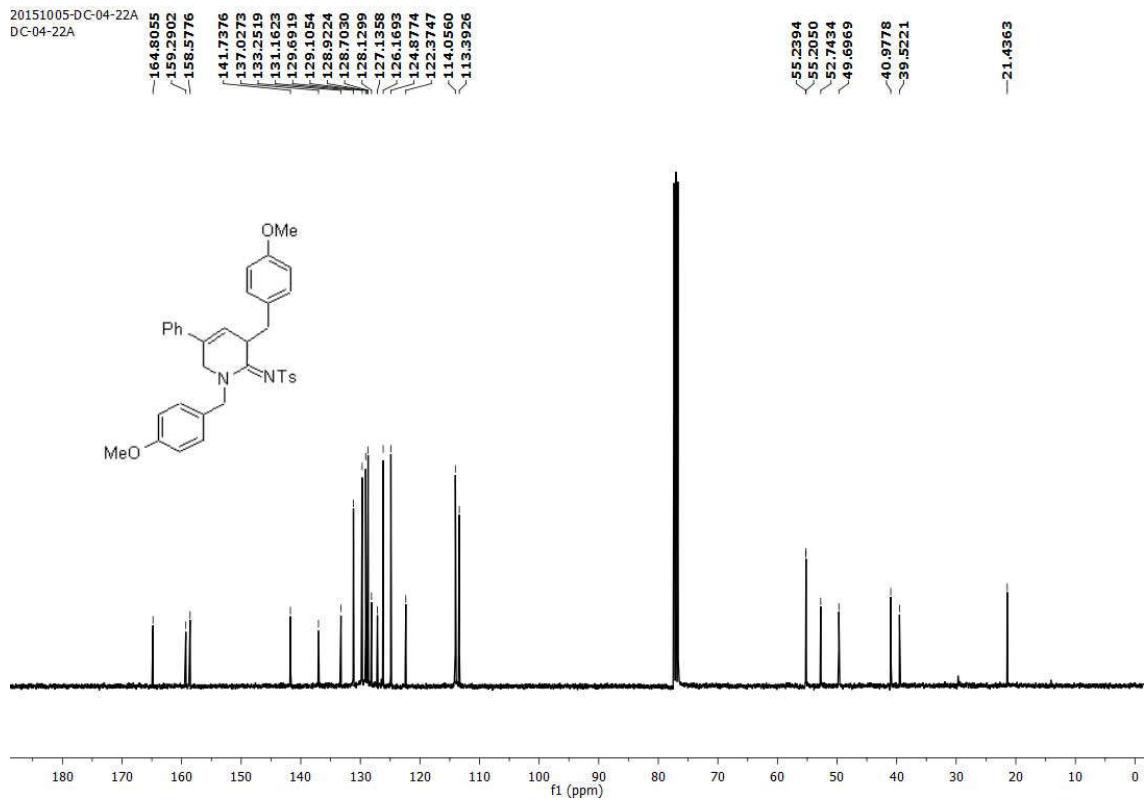
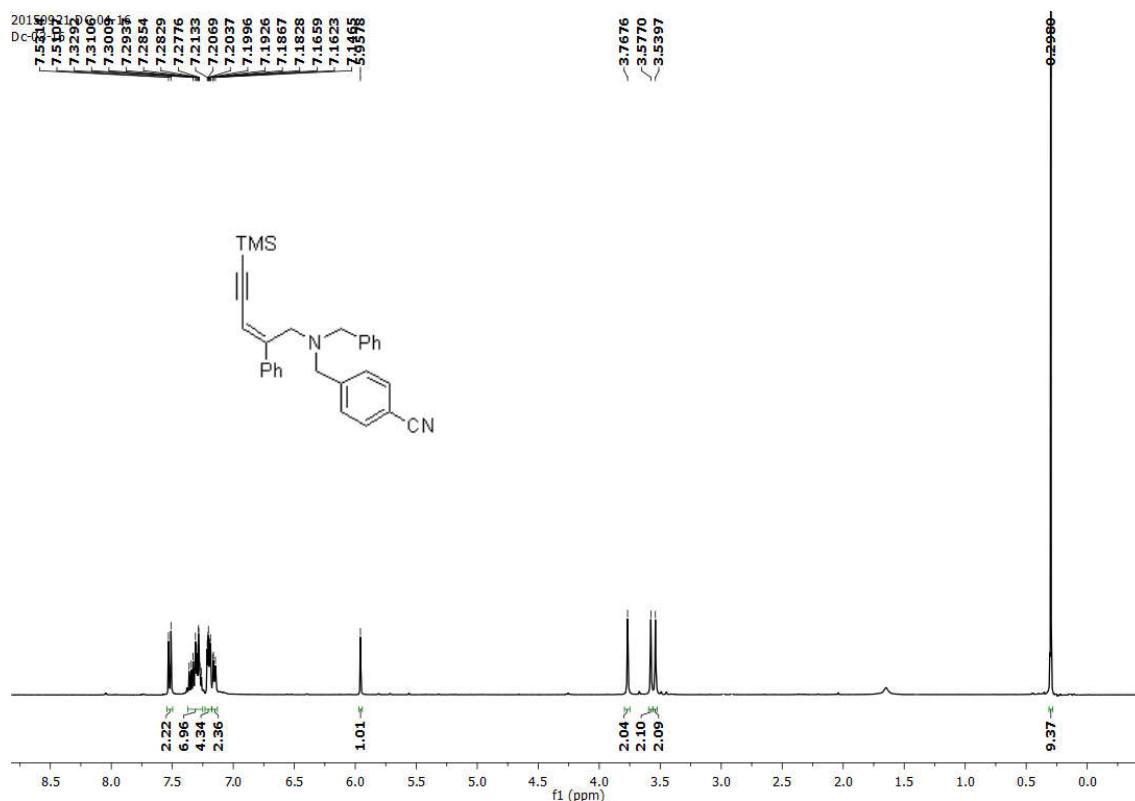
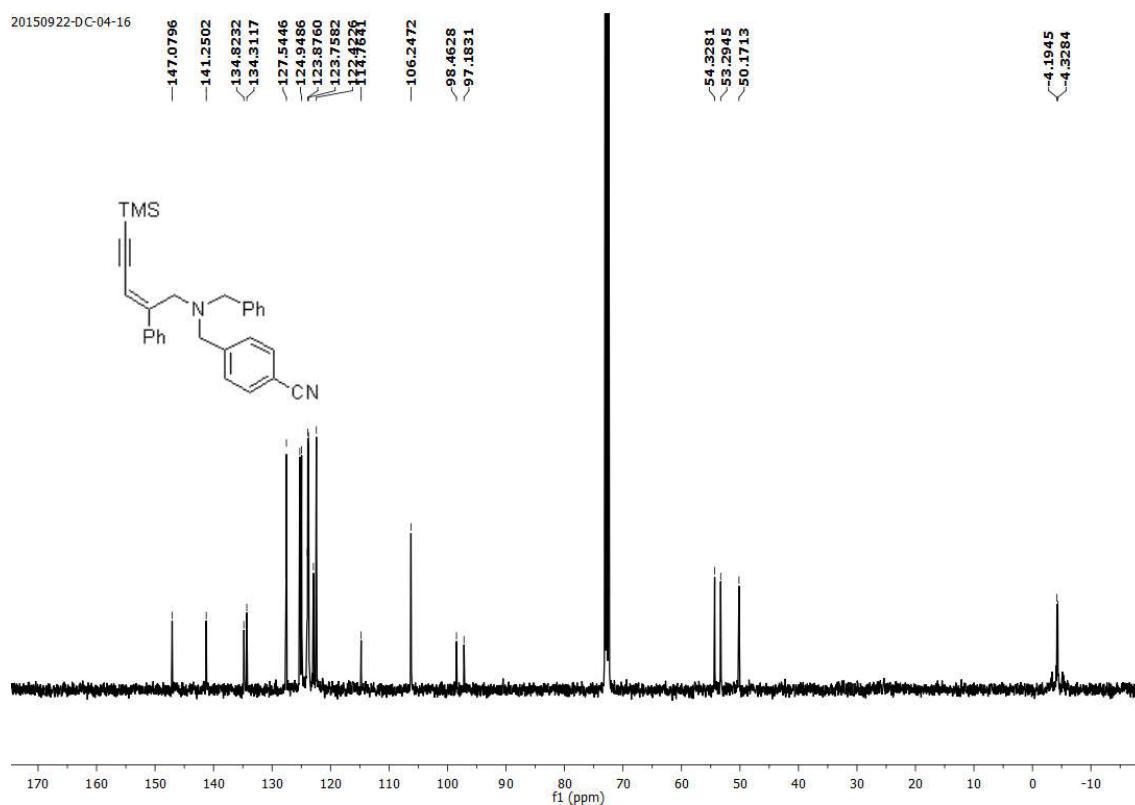


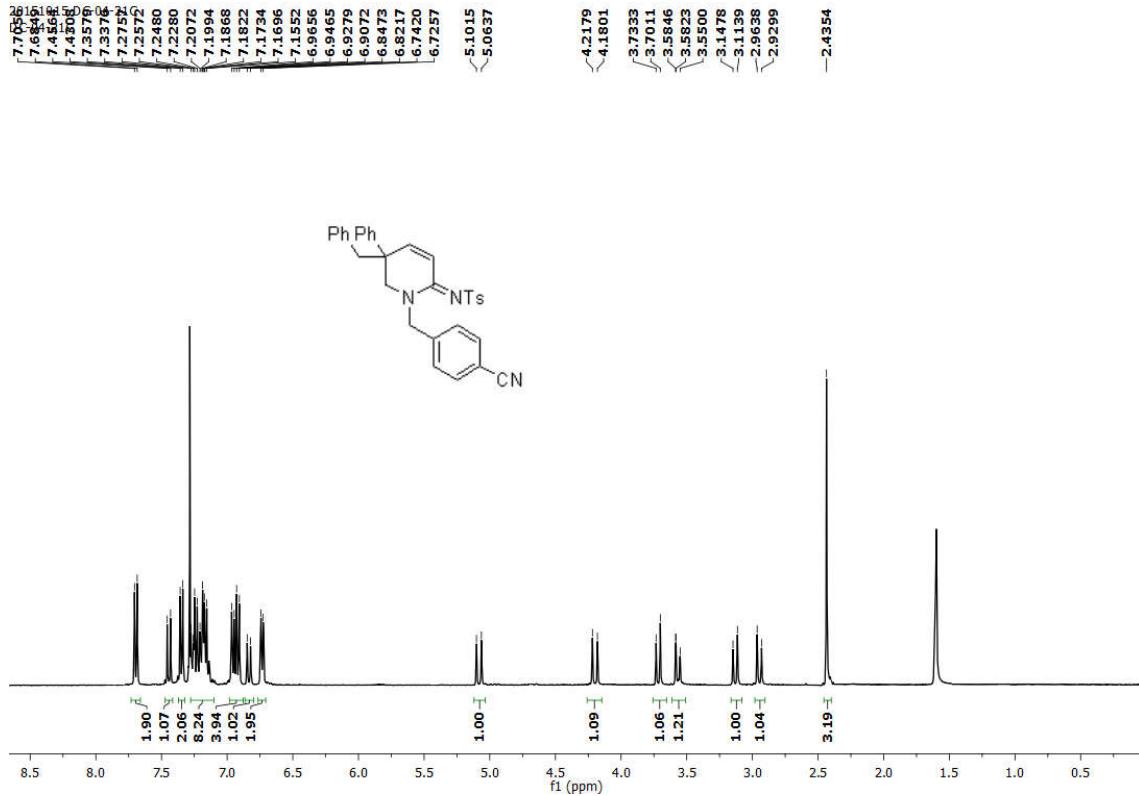
Fig. S71  $^{13}\text{C}$  NMR of **18c** in  $\text{CDCl}_3$ .



**Fig. S72**  $^1\text{H}$  NMR of **S19** in  $\text{CDCl}_3$ .

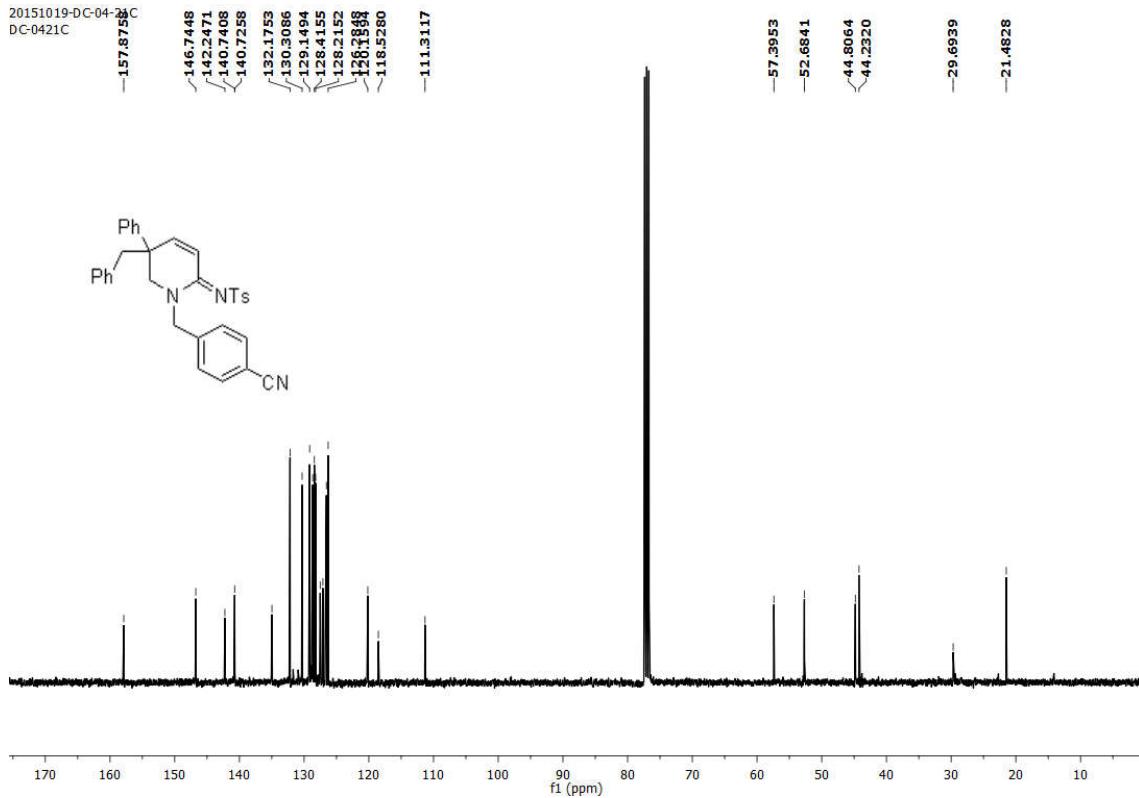
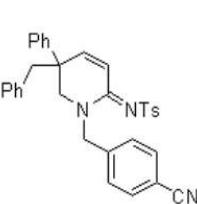


**Fig. S73**  $^{13}\text{C}$  NMR of **S19** in  $\text{CDCl}_3$ .



**Fig. S74**  $^1\text{H}$  NMR of **22b** in  $\text{CDCl}_3$ .

20151019-DC-04-28C  
DC-0421C 3758



**Fig. S75**  $^{13}\text{C}$  NMR of **22b** in  $\text{CDCl}_3$ .

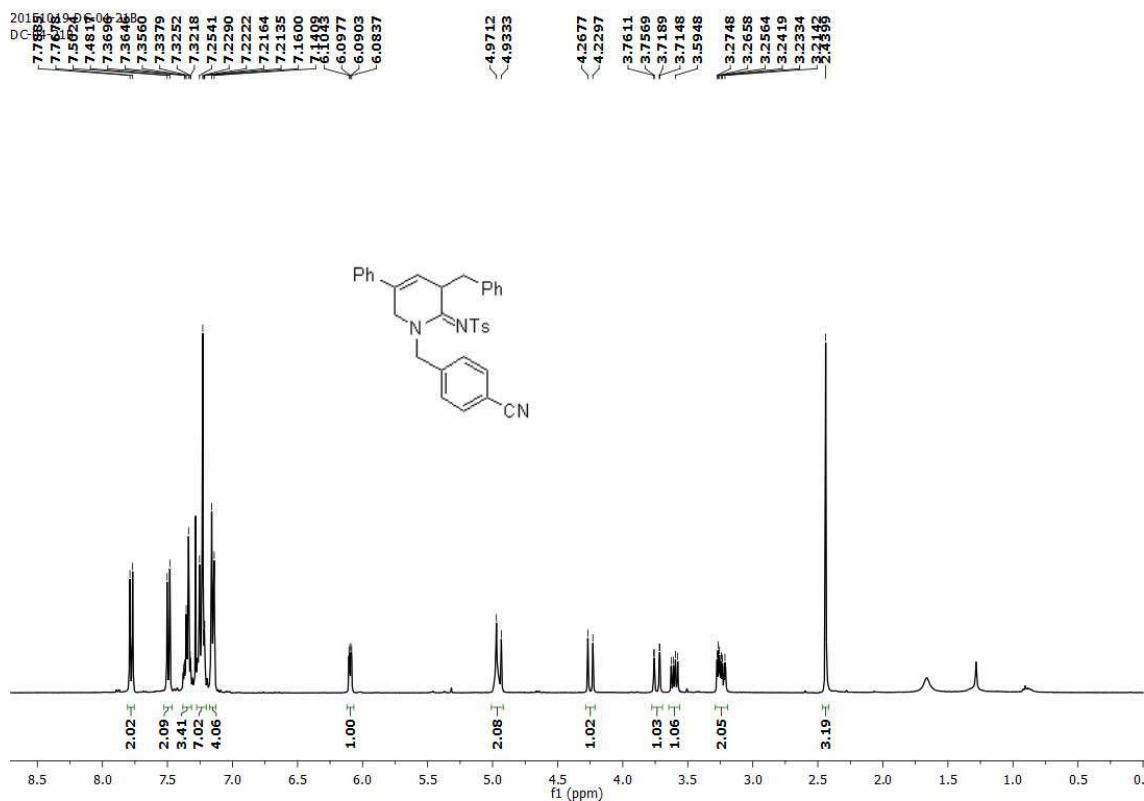


Fig. S76  $^1\text{H}$  NMR of **22c** in  $\text{CDCl}_3$ .

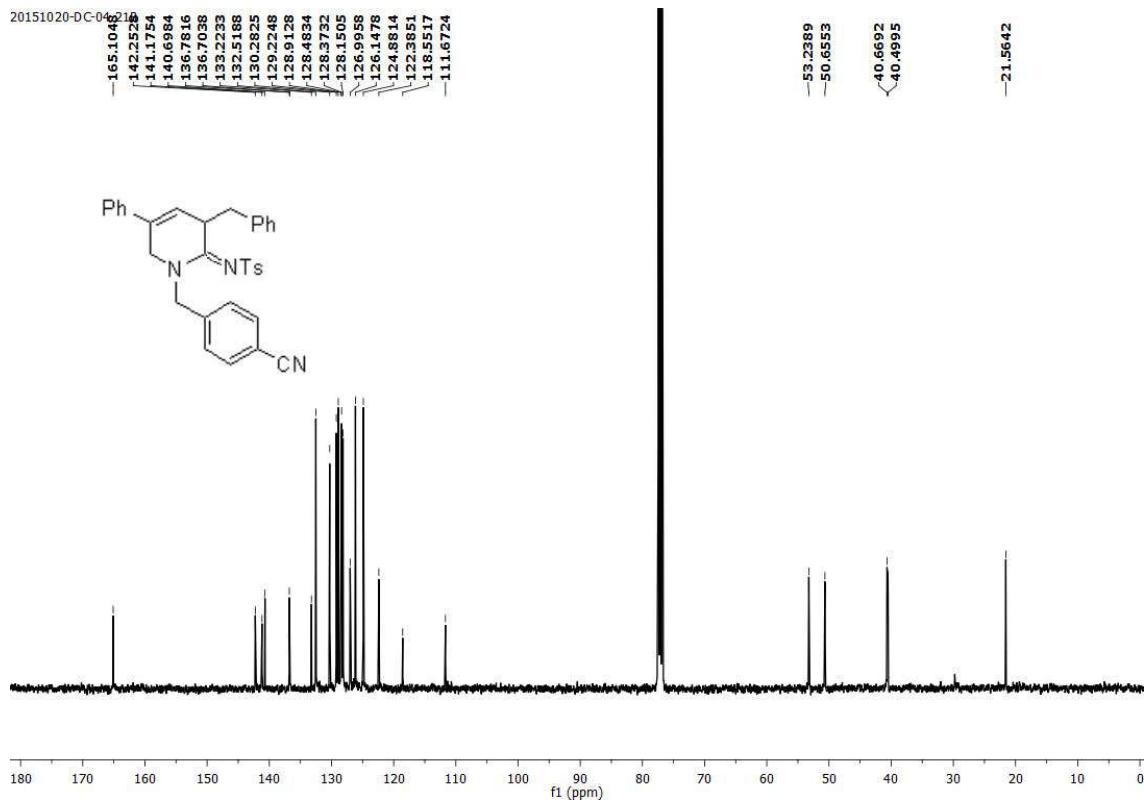
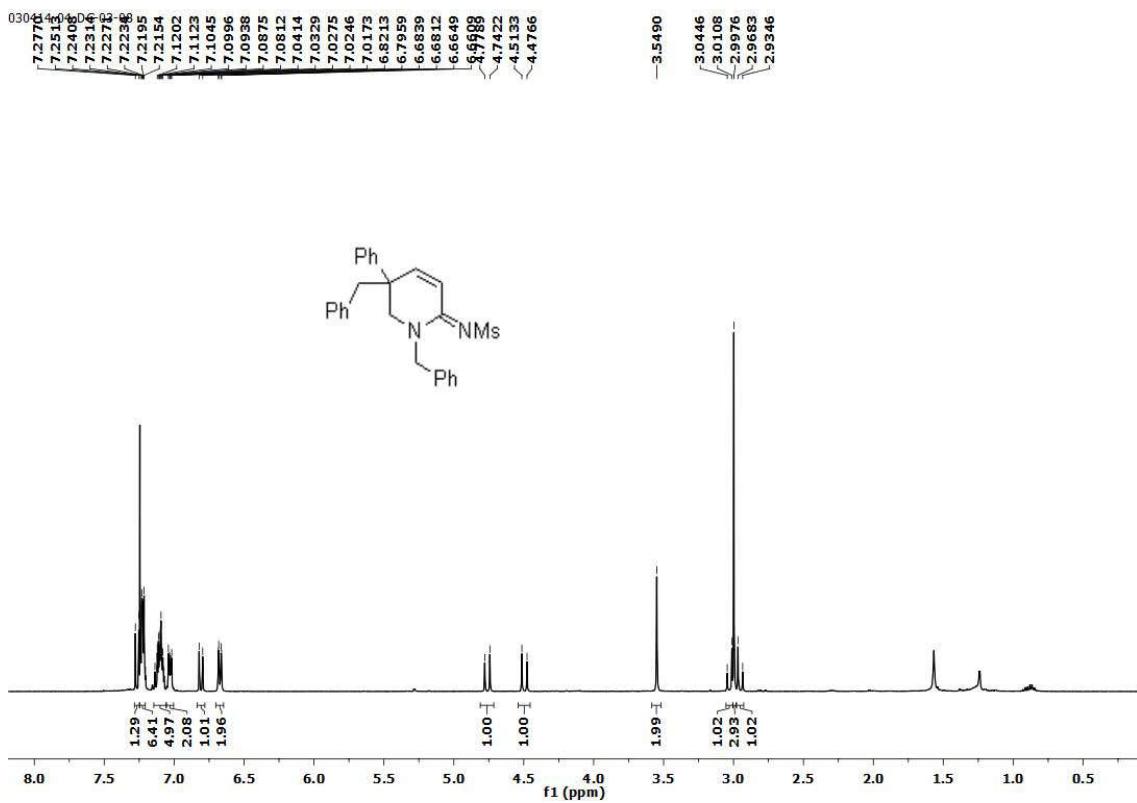
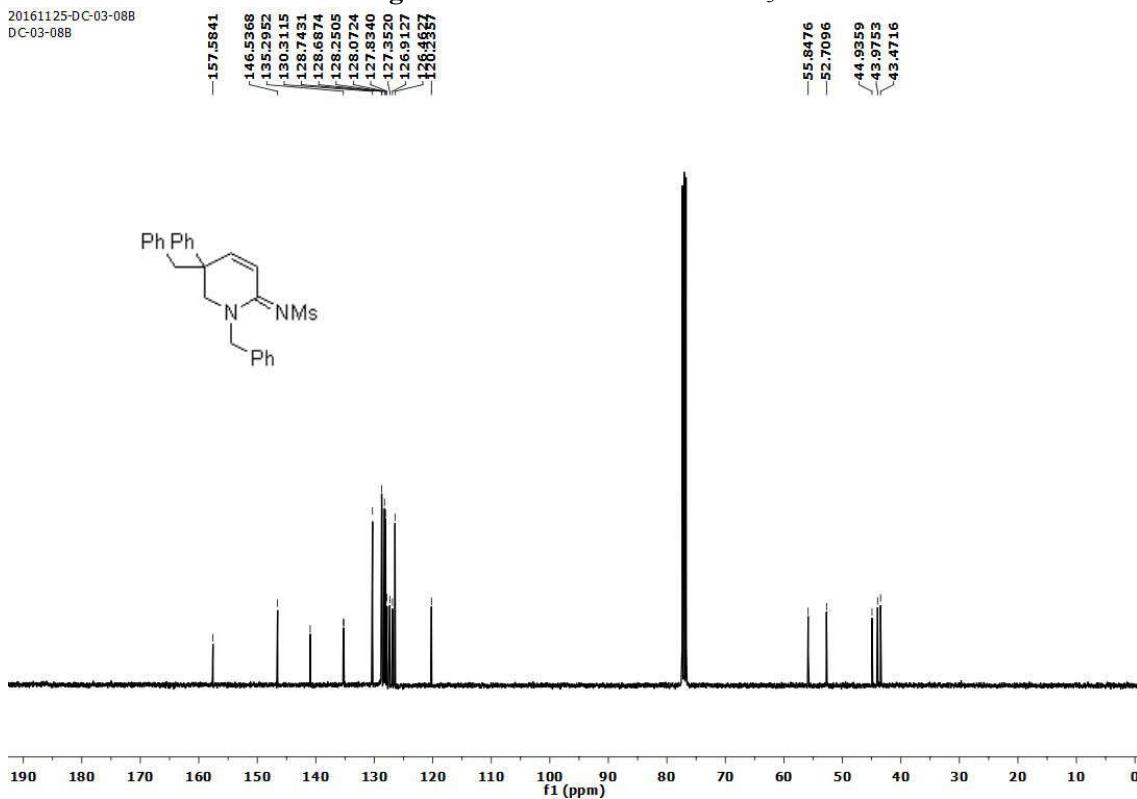


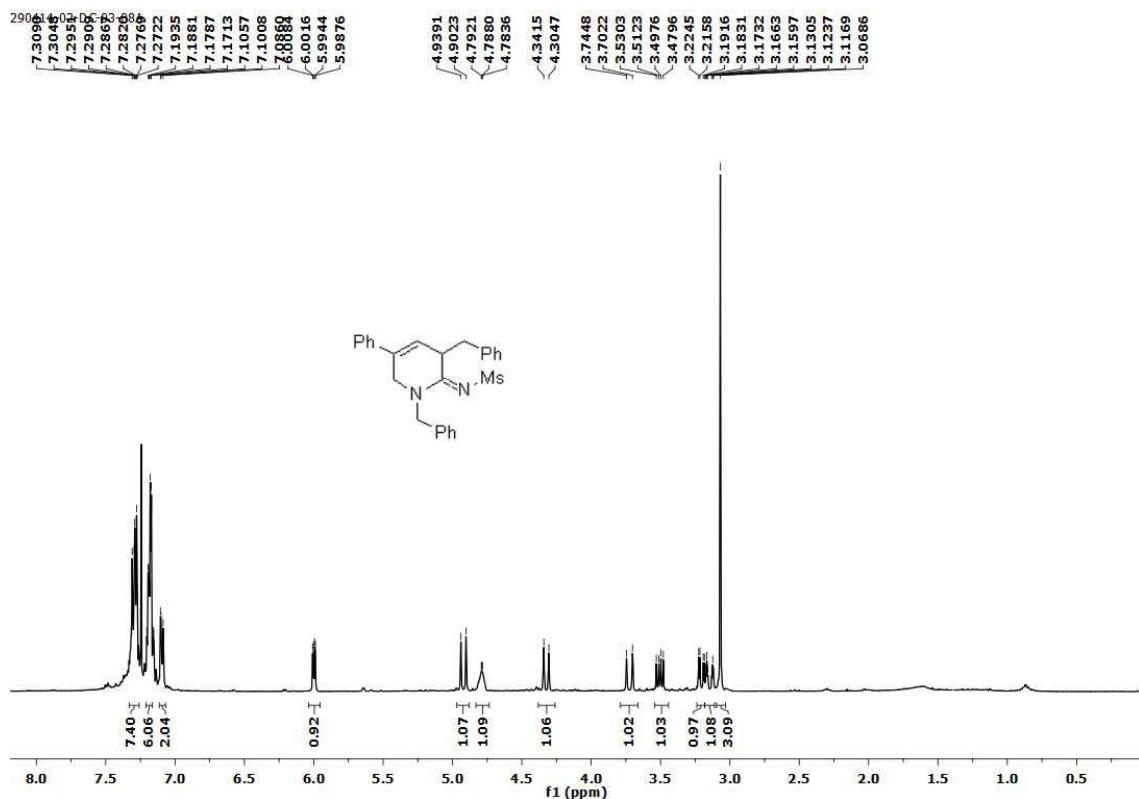
Fig. S77  $^{13}\text{C}$  NMR of **22c** in  $\text{CDCl}_3$ .



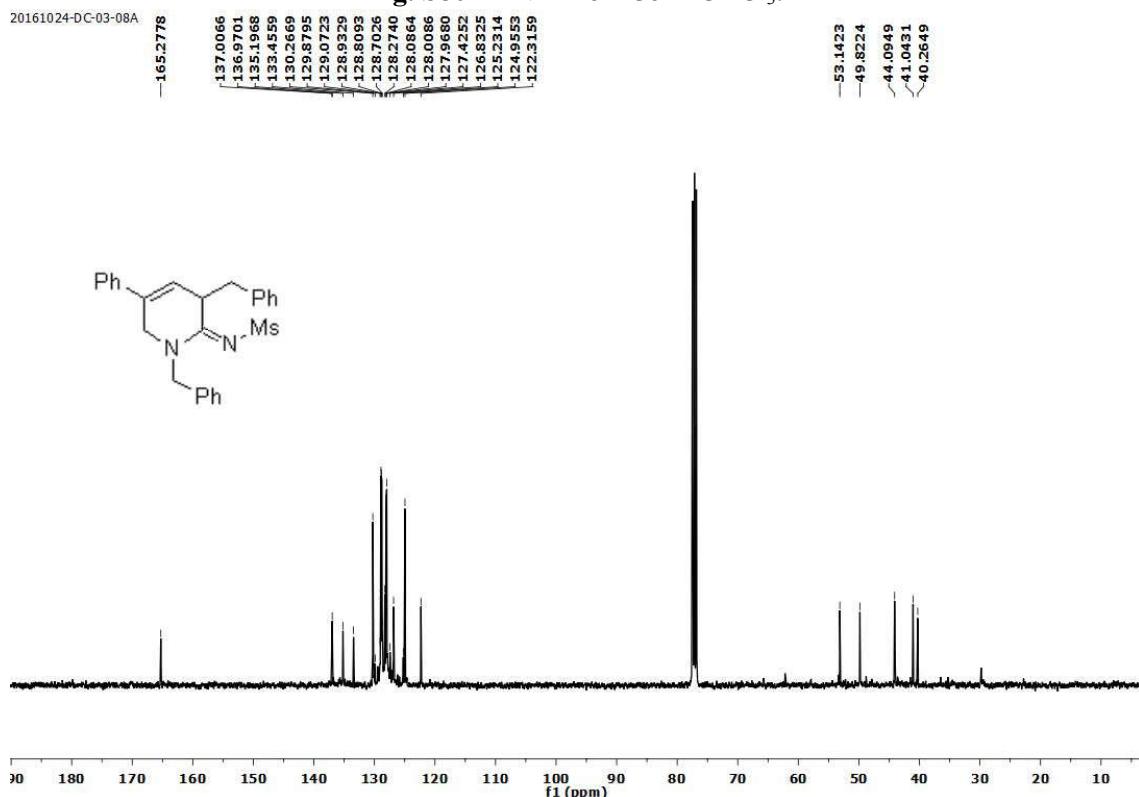
**Fig. S78**  $^1\text{H}$  NMR of **25b** in  $\text{CDCl}_3$ .



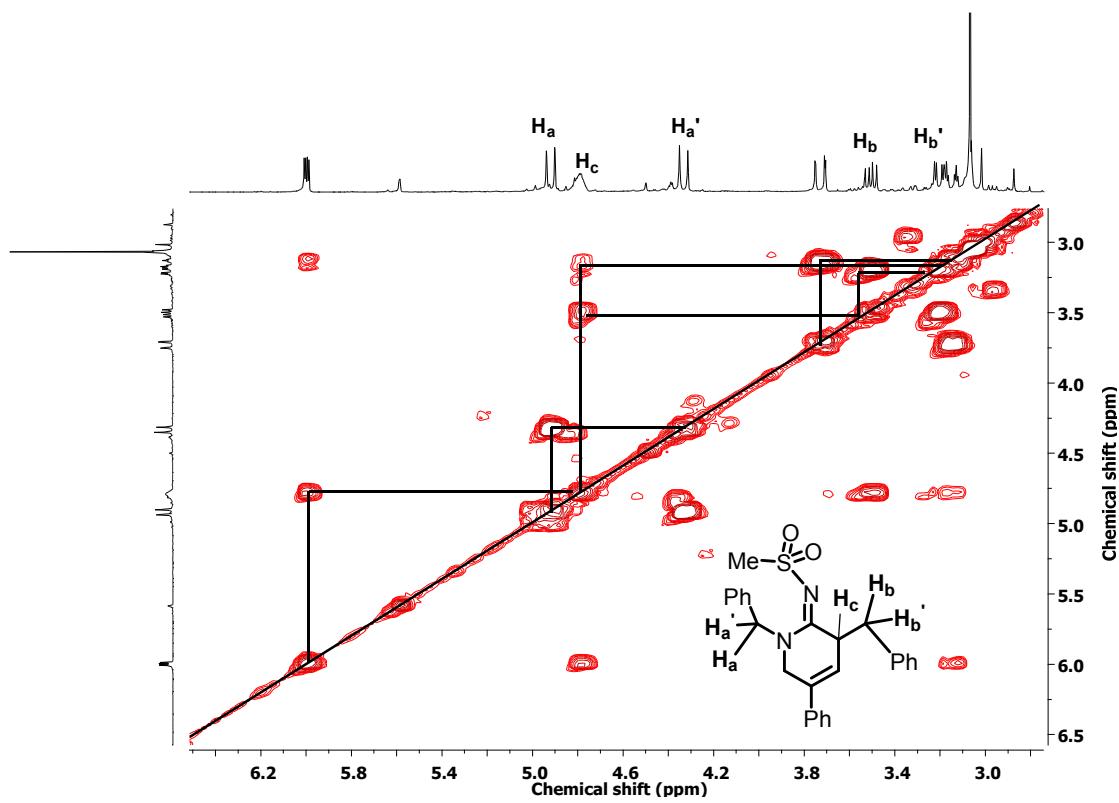
**Fig. S79**  $^{13}\text{C}$  NMR of **25b** in  $\text{CDCl}_3$ .



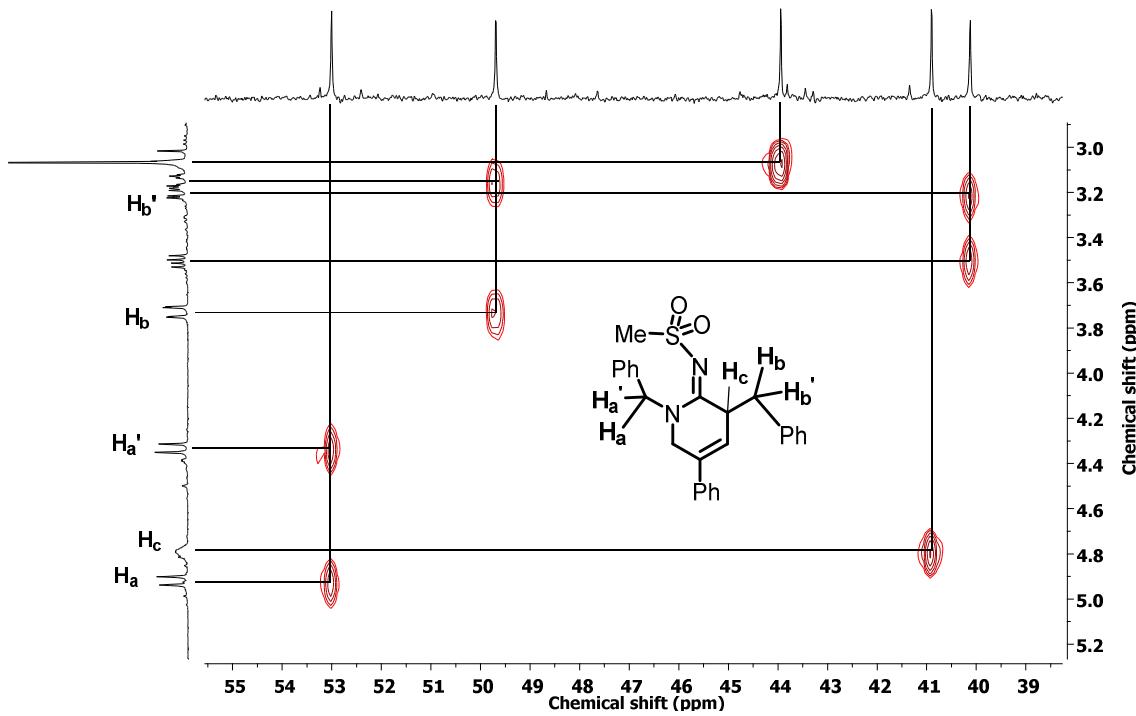
**Fig. S80**  $^1\text{H}$  NMR of **25c** in  $\text{CDCl}_3$ .



**Fig. S81**  $^{13}\text{C}$  NMR of **25c** in  $\text{CDCl}_3$ .



**Fig. S82** COSY NMR spectrum of **25c** in  $\text{CDCl}_3$ .



**Fig. S83** HETCOR NMR spectrum of **25c** in  $\text{CDCl}_3$ .

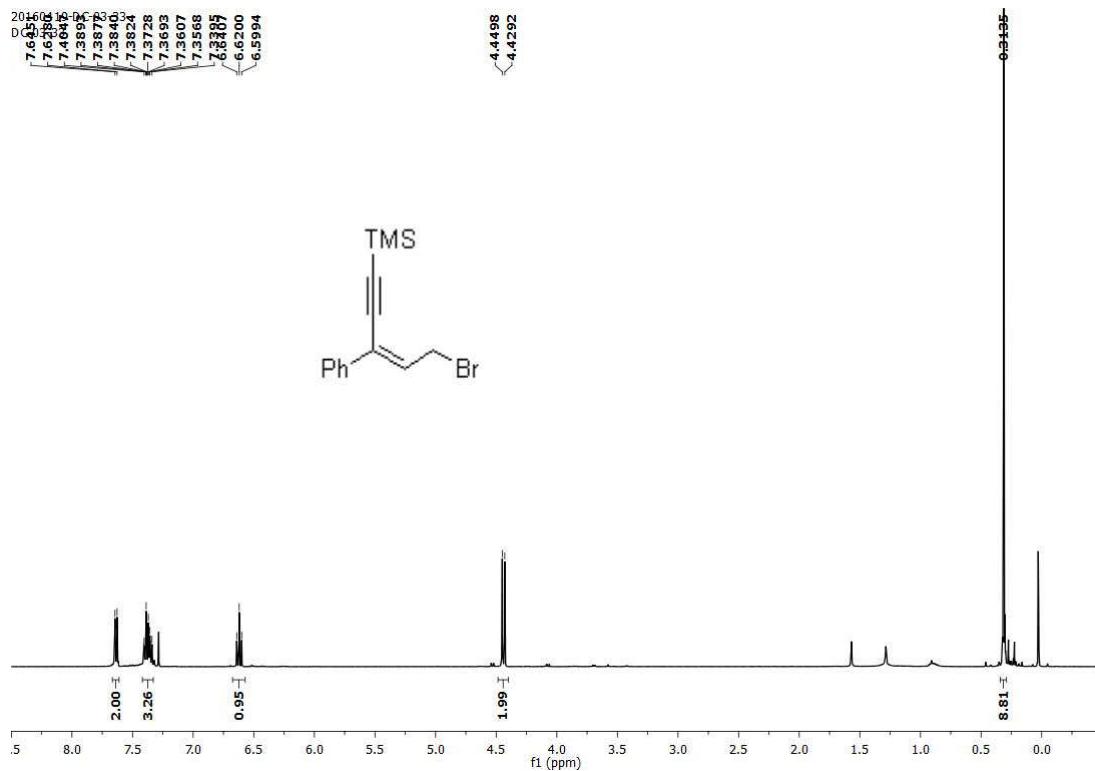


Fig. S84 <sup>1</sup>H NMR of S24 in CDCl<sub>3</sub>.

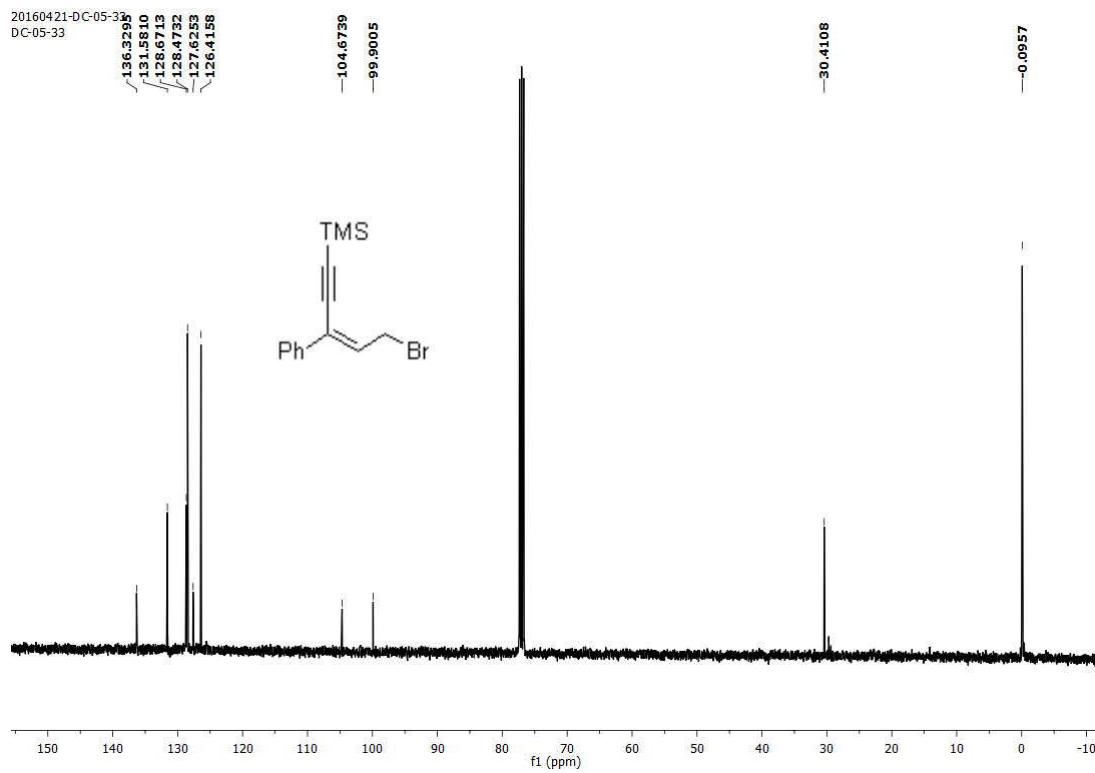


Fig. S85 <sup>13</sup>C NMR of S24 in CDCl<sub>3</sub>.

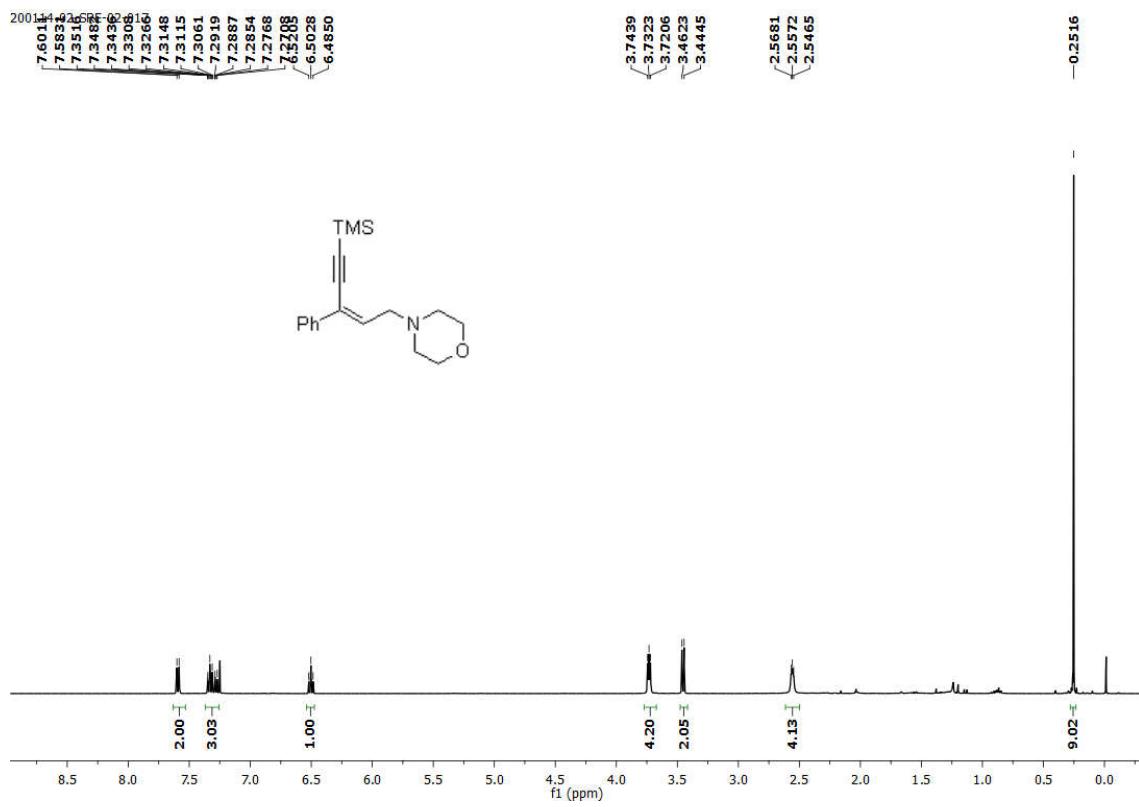


Fig. S86  $^1\text{H}$  NMR of S24 in  $\text{CDCl}_3$ .

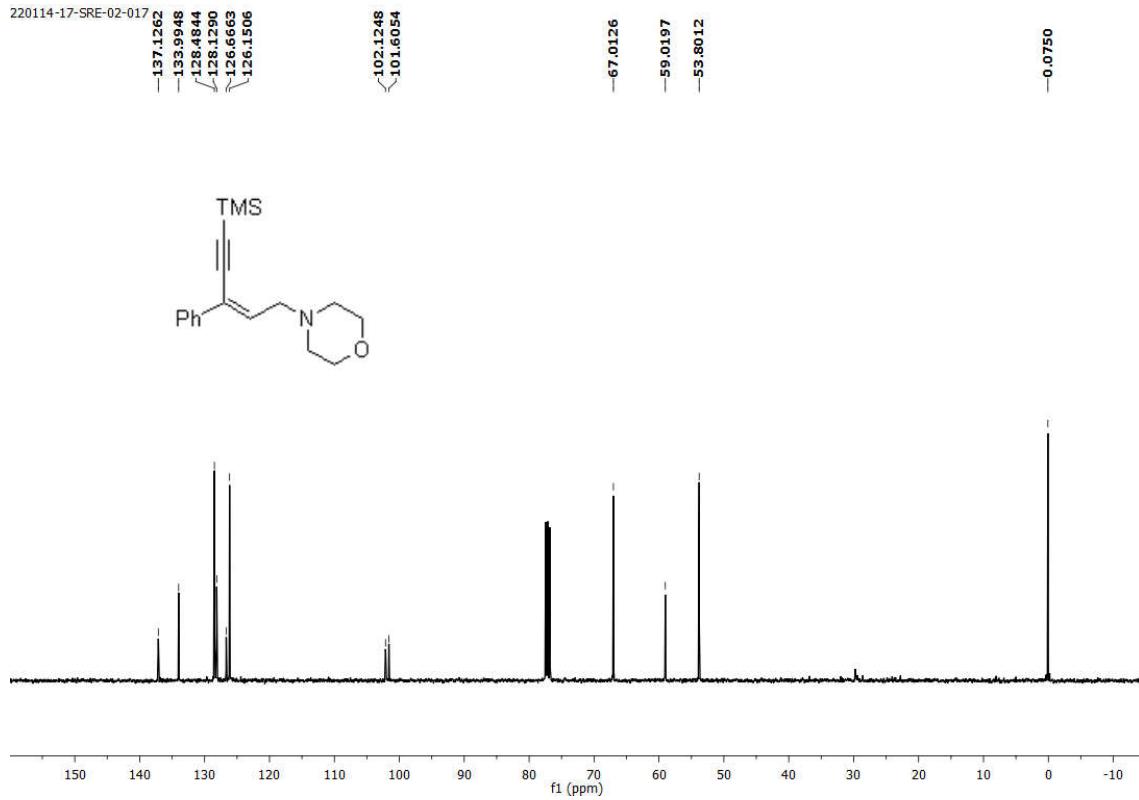
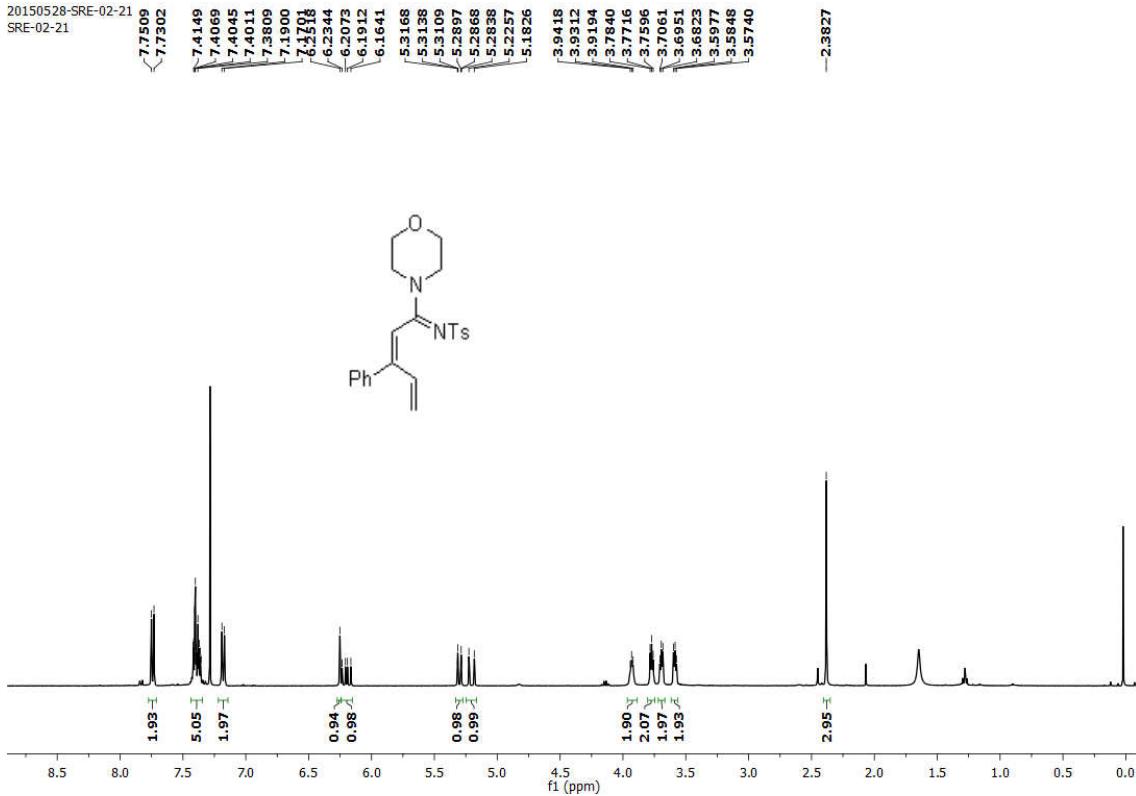


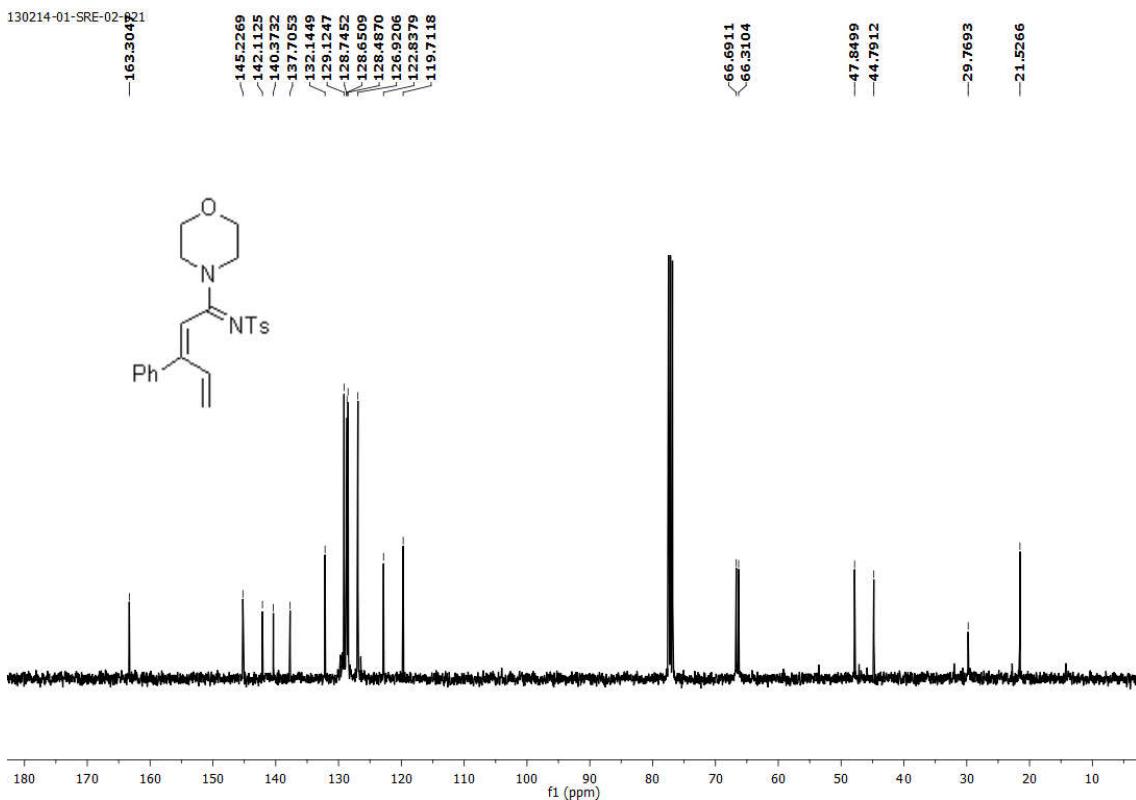
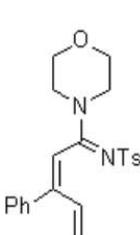
Fig. S87  $^{13}\text{C}$  NMR of S24 in  $\text{CDCl}_3$ .

20150528-SRE-02-21  
SRE-02-21



**Fig. S88**  $^1\text{H}$  NMR of **3a** in  $\text{CDCl}_3$ .

130214-01-SRE-02-B21



**Fig. S89**  $^{13}\text{C}$  NMR of **3a** in  $\text{CDCl}_3$

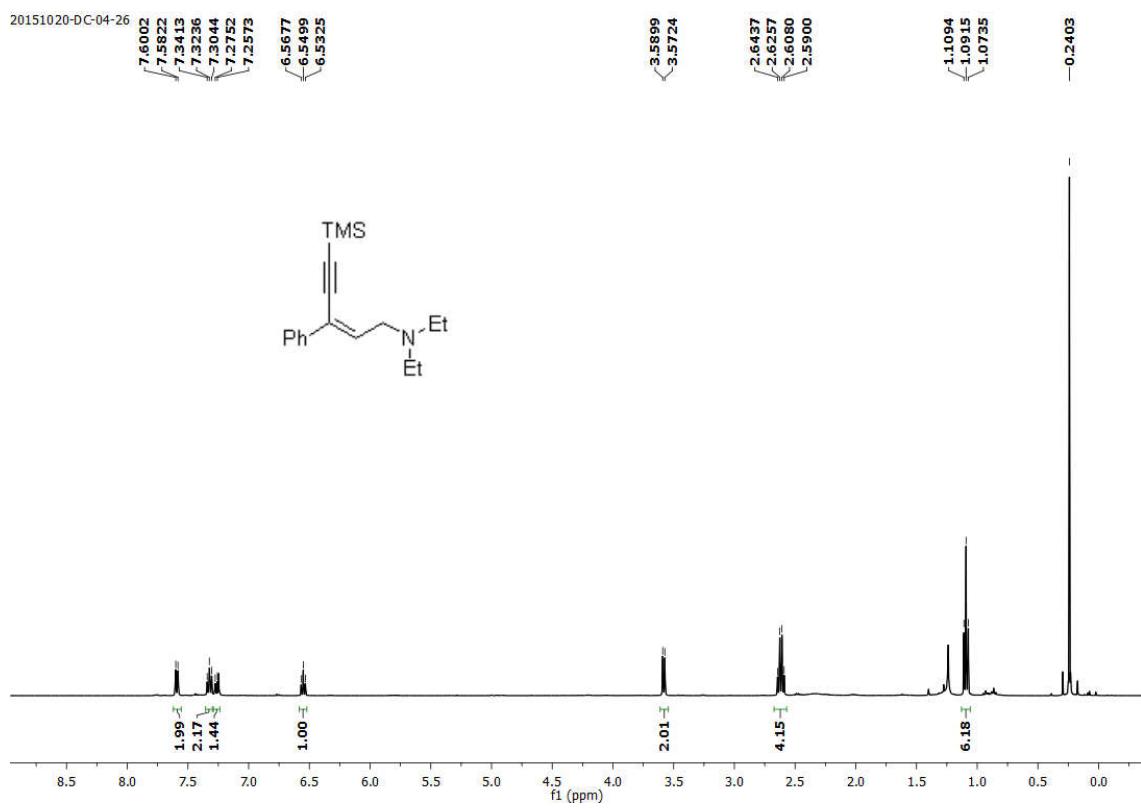


Fig. S90  $^1\text{H}$  NMR of S25 in  $\text{CDCl}_3$ .

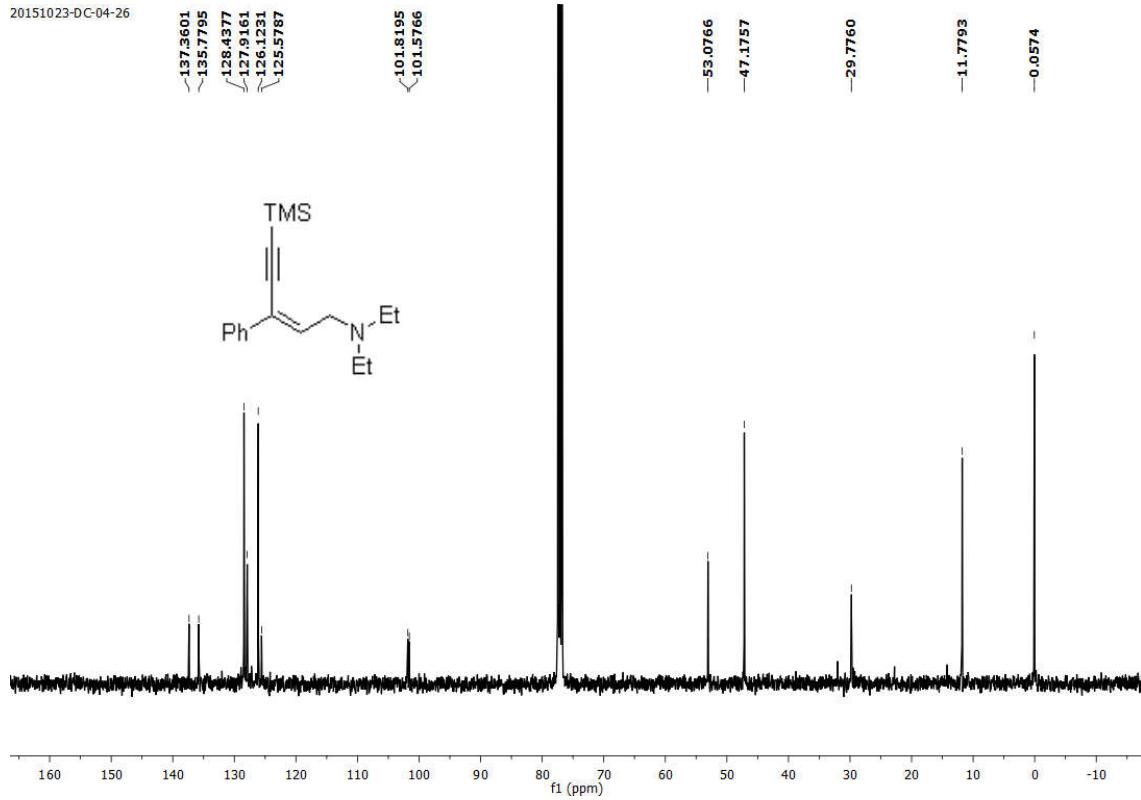


Fig. S91  $^{13}\text{C}$  NMR of S25 in  $\text{CDCl}_3$ .

Thu4av400#001  
Amol  
1H  
109

7.705  
7.7501  
7.3951  
7.1813  
7.1610

6.2126  
6.1776  
6.1505  
6.1345  
6.1075

3.6746  
3.6589  
3.4660  
3.4483  
3.4304  
3.4126

—2.3696  
1.2955  
1.2777  
1.2601  
1.1974  
1.1795  
1.1616

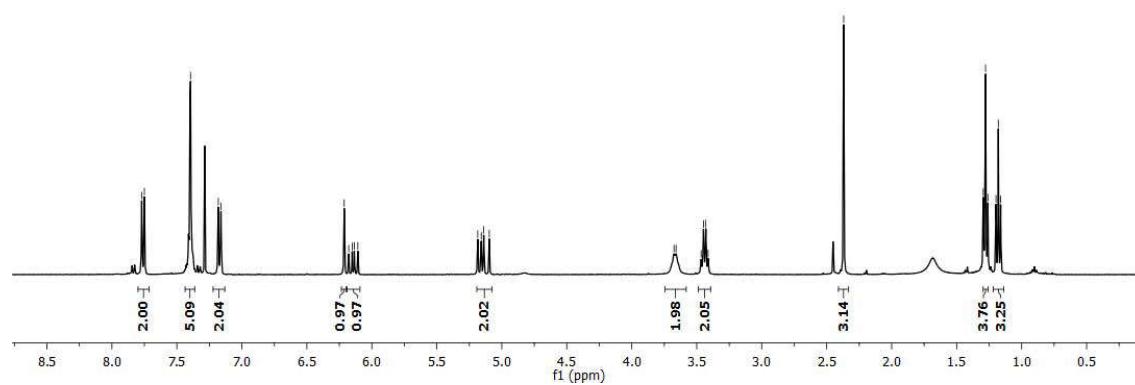
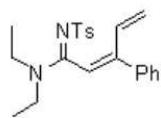


Fig. S92  $^1\text{H}$  NMR of **5a** in  $\text{CDCl}_3$ .

20160901-DC-02-109  
DC-02-109

-163.3480

143.5032  
141.6050  
140.9579  
137.9946  
132.0970  
128.9907  
128.9377  
128.6745  
128.3256  
126.7356  
122.5822  
121.1472

-44.5082  
-42.6256  
-21.4082  
-13.8093  
-12.1719

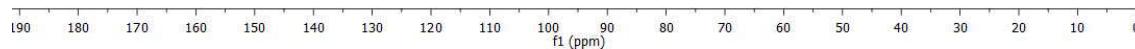
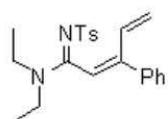


Fig. S93  $^{13}\text{C}$  NMR of **5a** in  $\text{CDCl}_3$ .

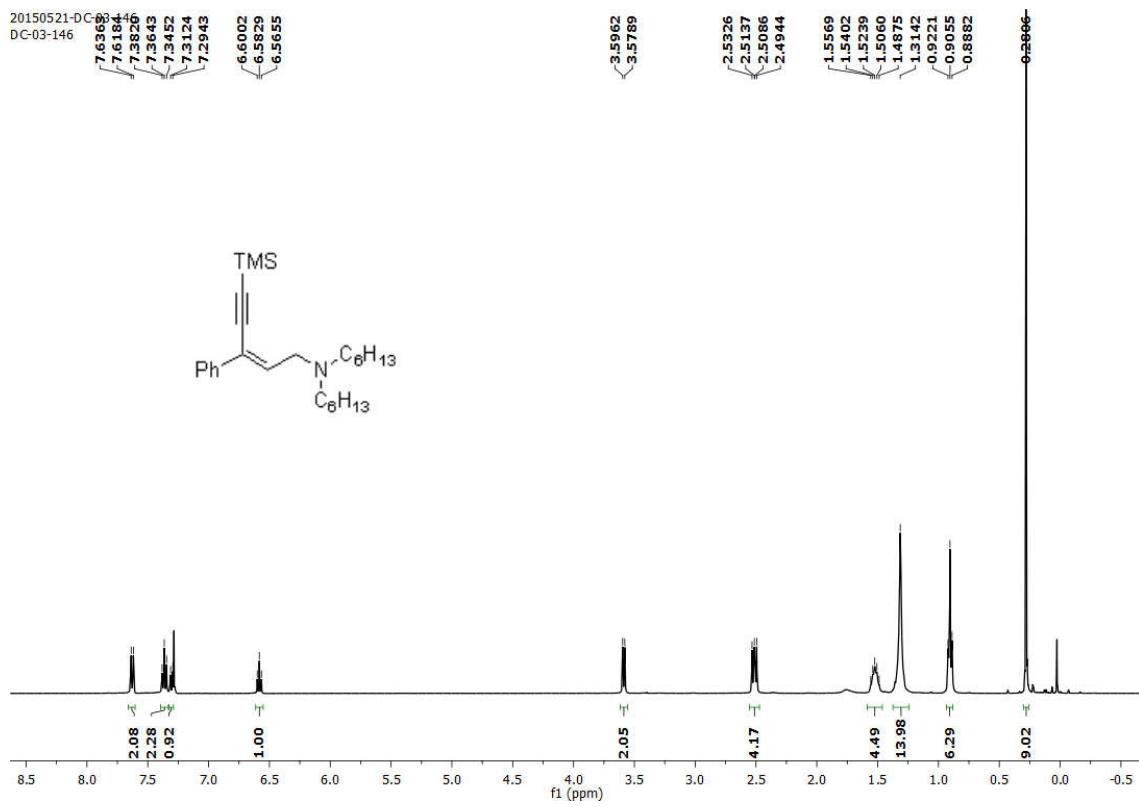


Fig. S94  $^1\text{H}$  NMR of S26 in  $\text{CDCl}_3$ .

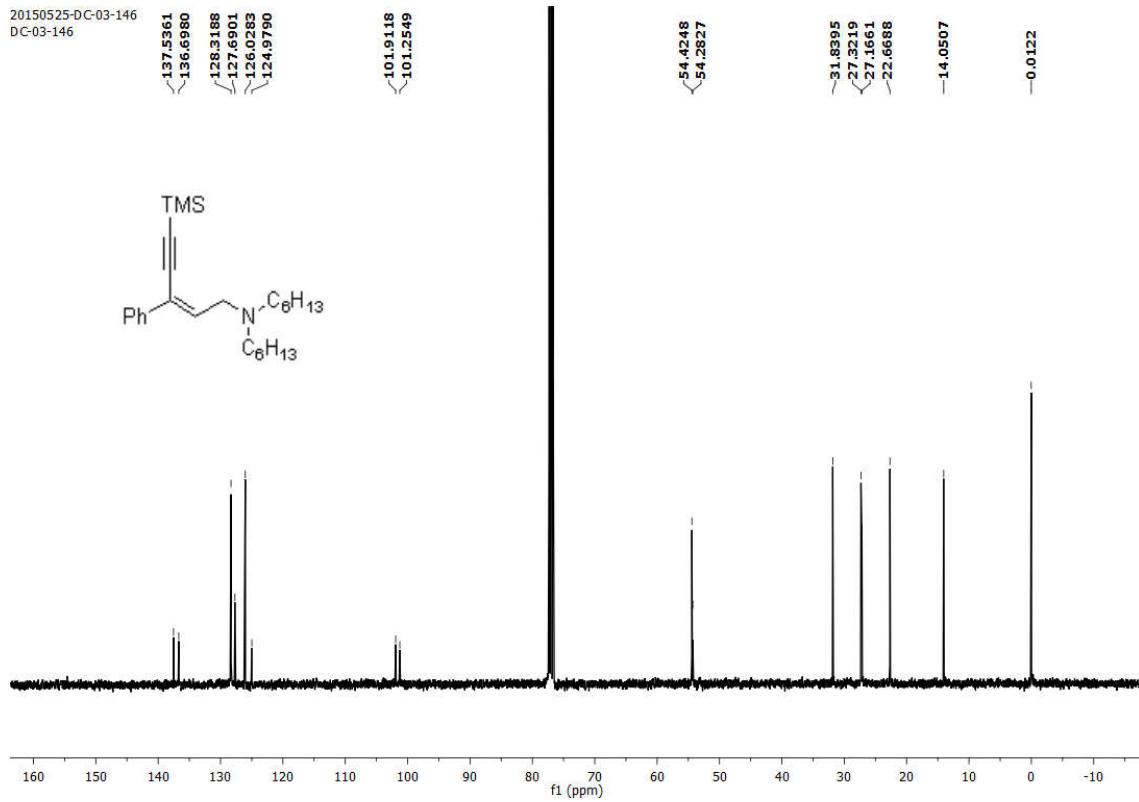
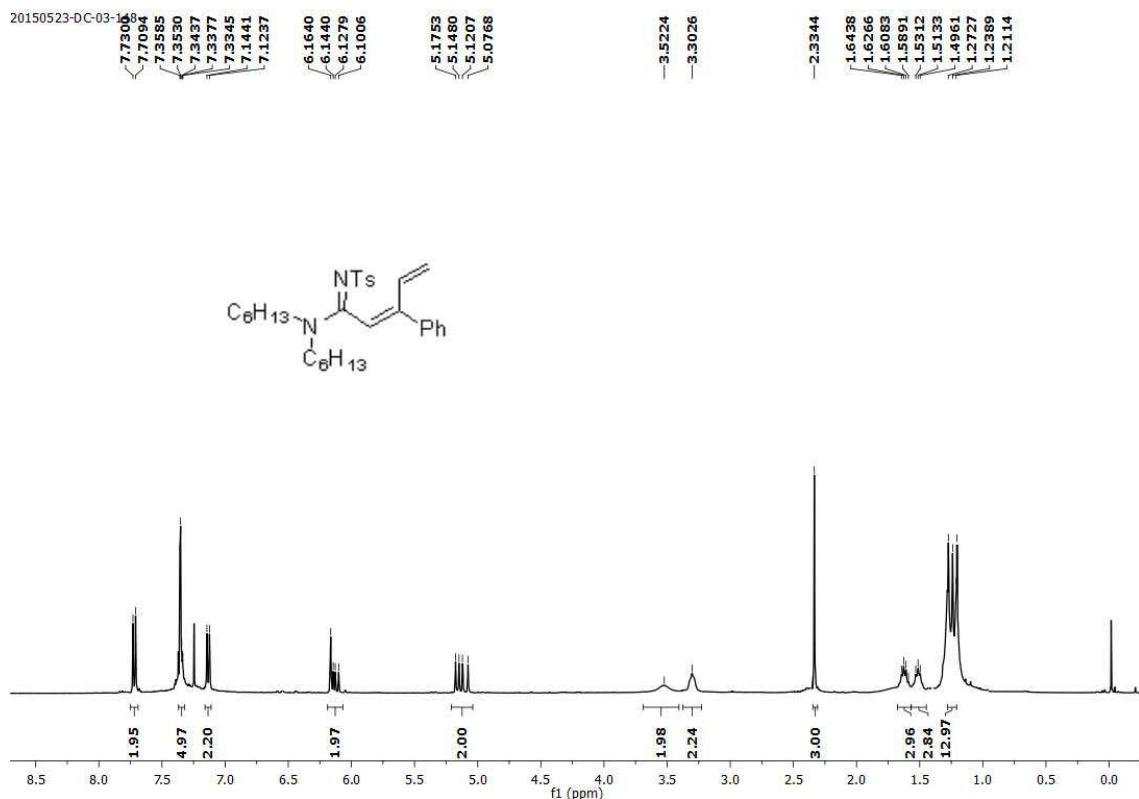
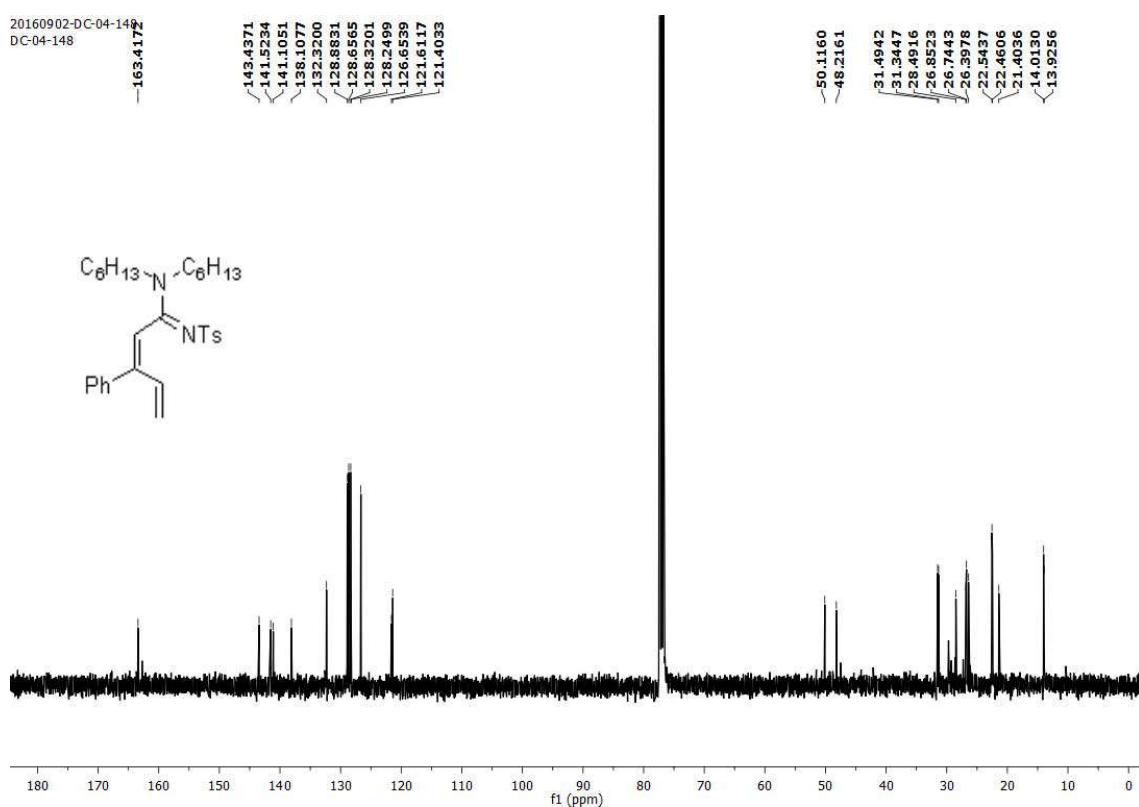


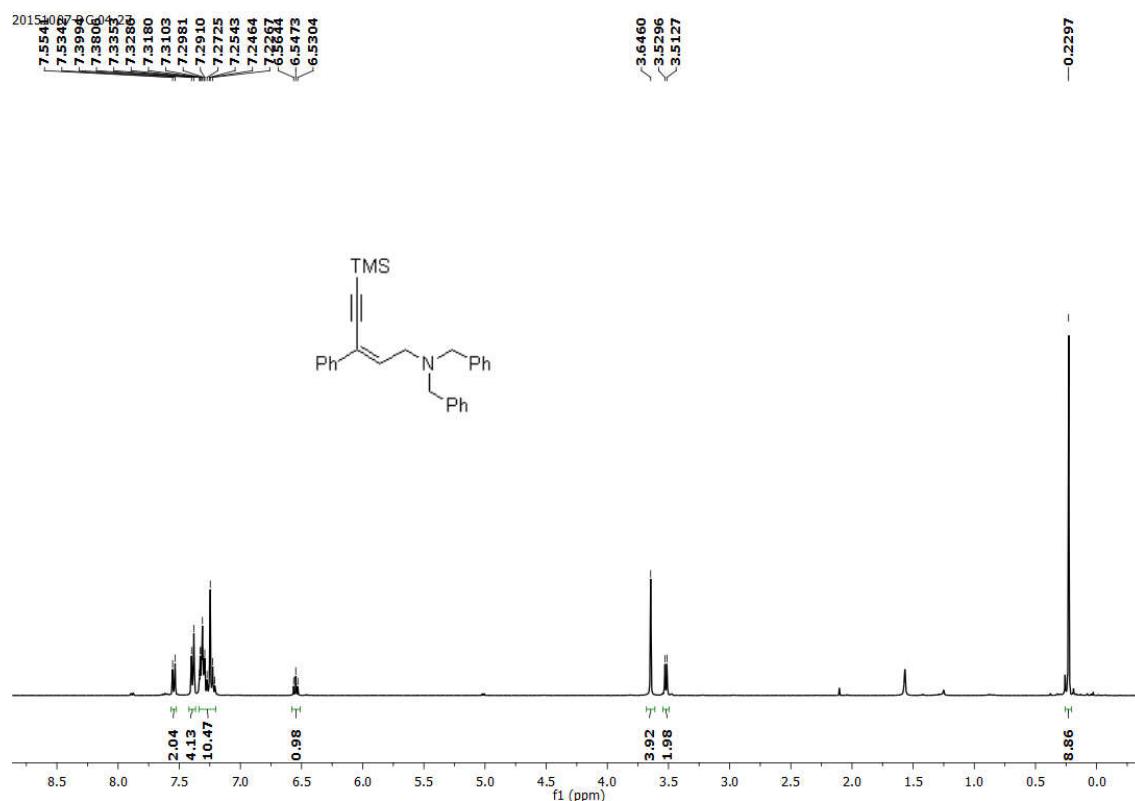
Fig. S95  $^{13}\text{C}$  NMR of S26 in  $\text{CDCl}_3$ .



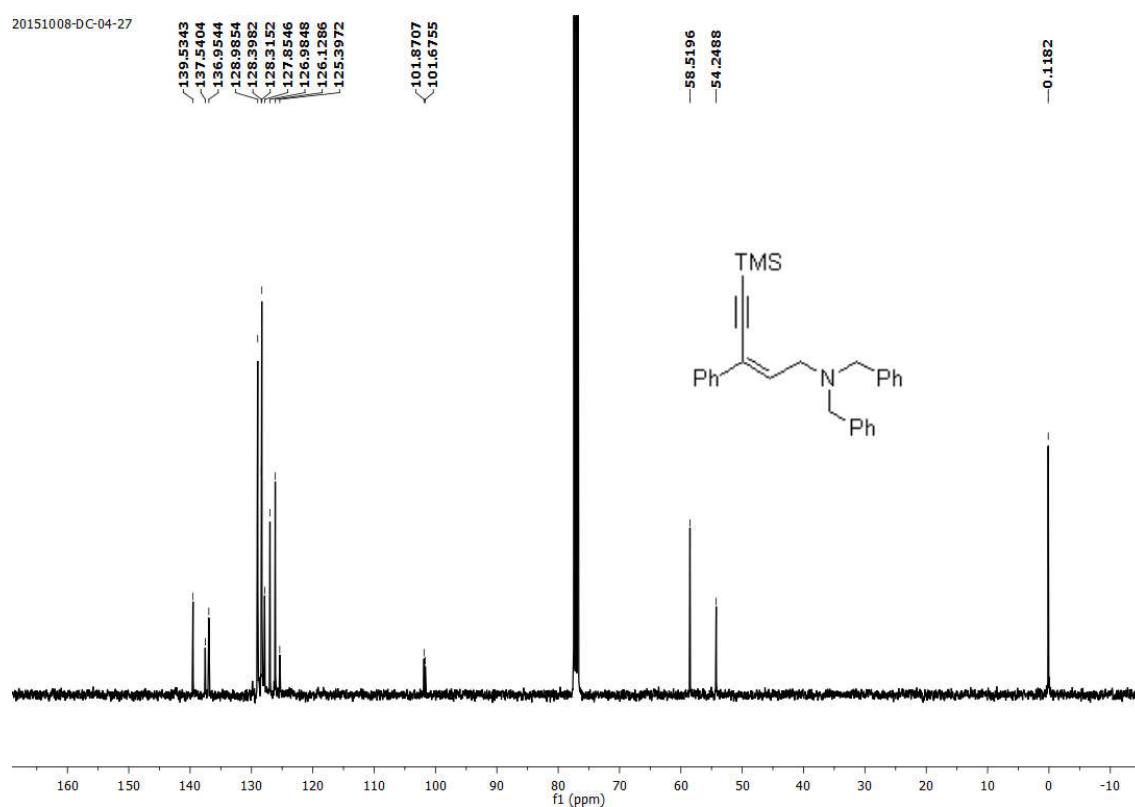
**Fig. S96**  $^1\text{H}$  NMR of **8a** in  $\text{CDCl}_3$ .



**Fig. S97**  $^{13}\text{C}$  NMR of **8a** in  $\text{CDCl}_3$ .



**Fig. S98**  $^1\text{H}$  NMR of **S27** in  $\text{CDCl}_3$ .



**Fig. S99**  $^{13}\text{C}$  NMR of **S27** in  $\text{CDCl}_3$ .

20150901-DC-02-124  
DC-02-124

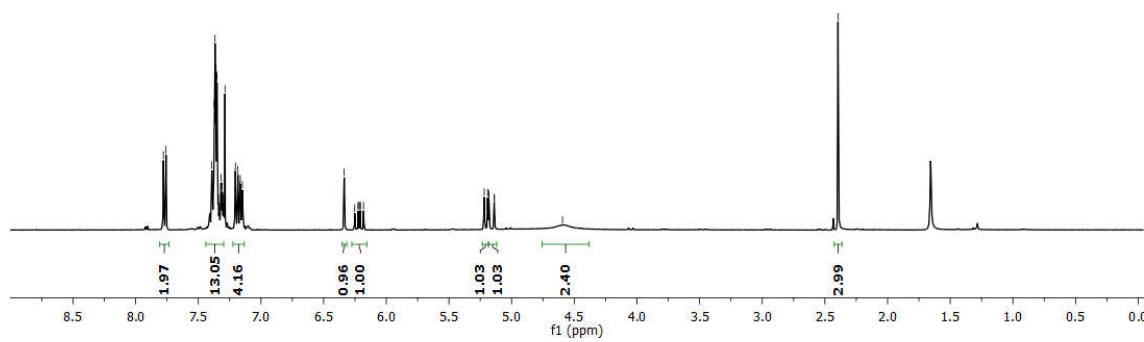


Fig. S100  $^1\text{H}$  NMR of 11a in  $\text{CDCl}_3$ .

20150903-DC-02-124

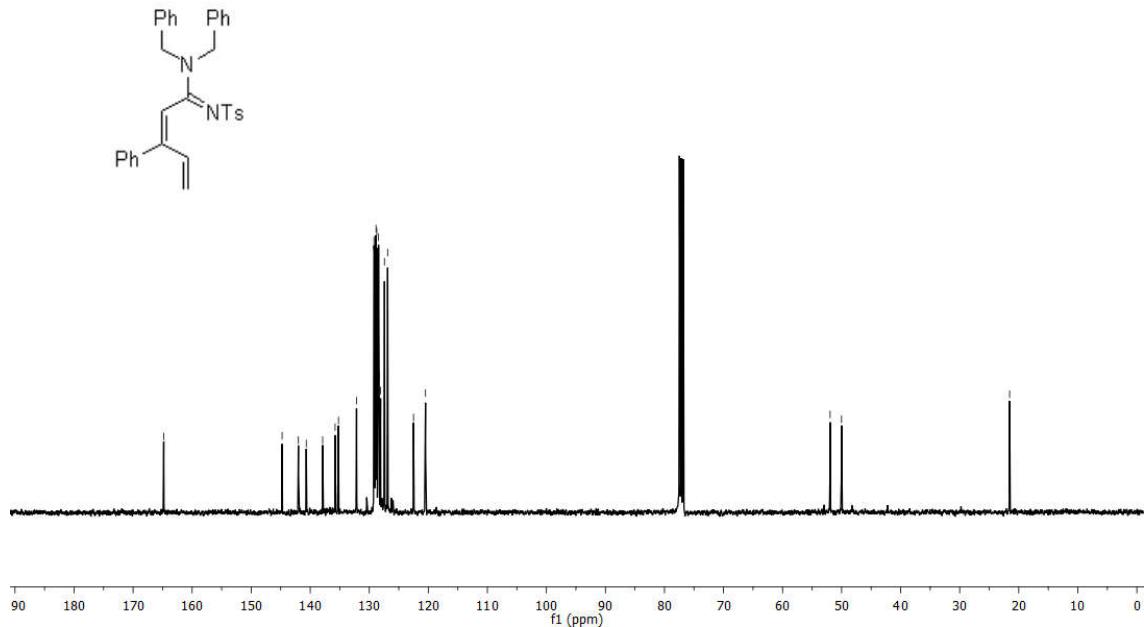
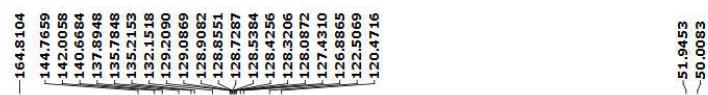
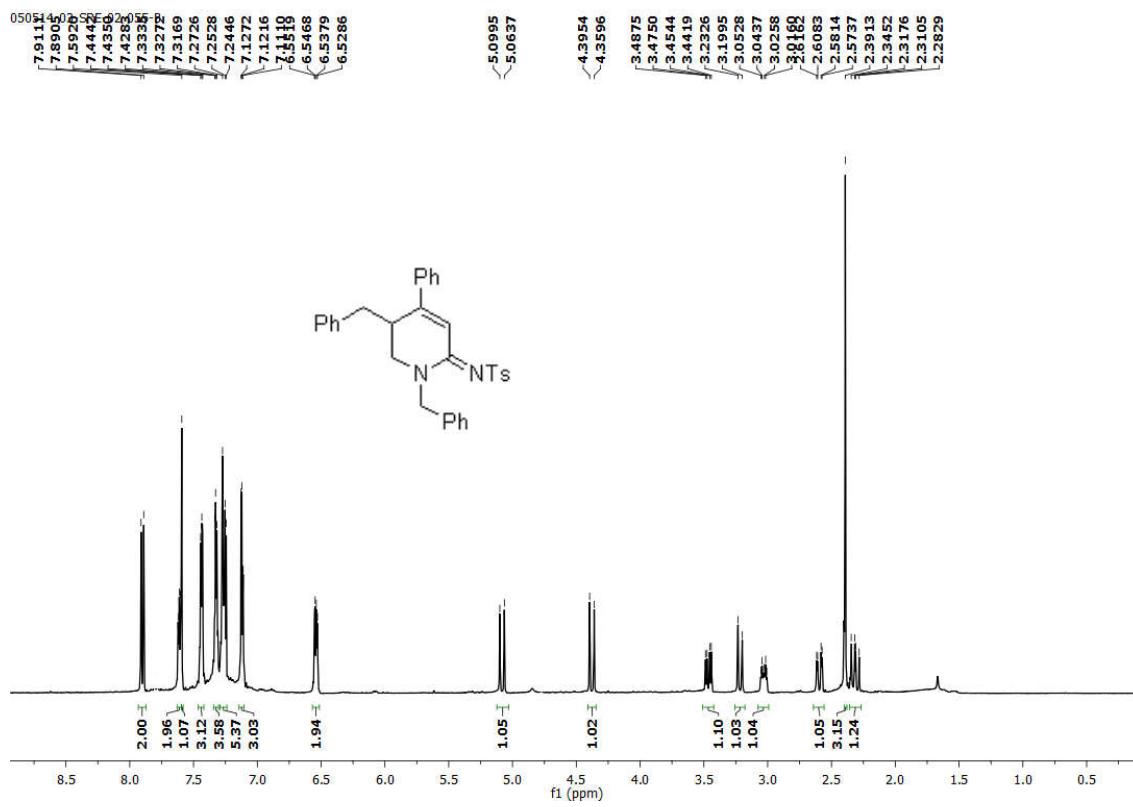
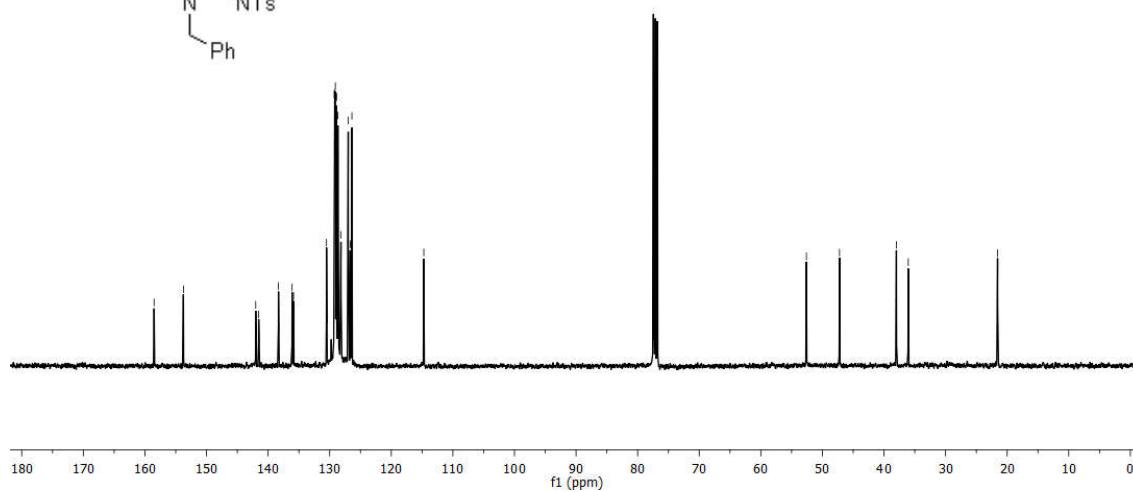
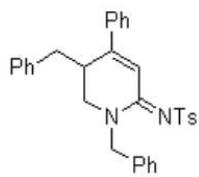


Fig. S101  $^{13}\text{C}$  NMR of 11a in  $\text{CDCl}_3$ .



**Fig. S102**  $^1\text{H}$  NMR of **11b** in  $\text{CDCl}_3$ .



**Fig. S103**  $^{13}\text{C}$  NMR of **11b** in  $\text{CDCl}_3$ .

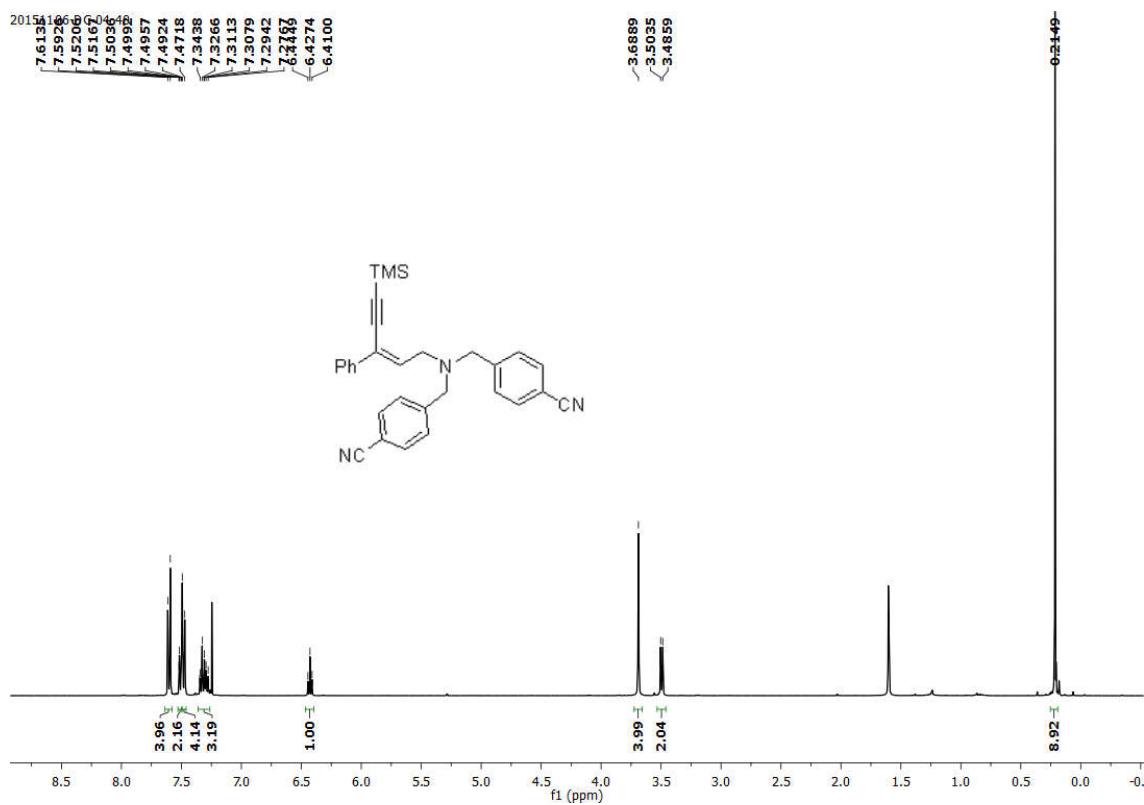


Fig. S104  $^1\text{H}$  NMR of S28 in  $\text{CDCl}_3$ .

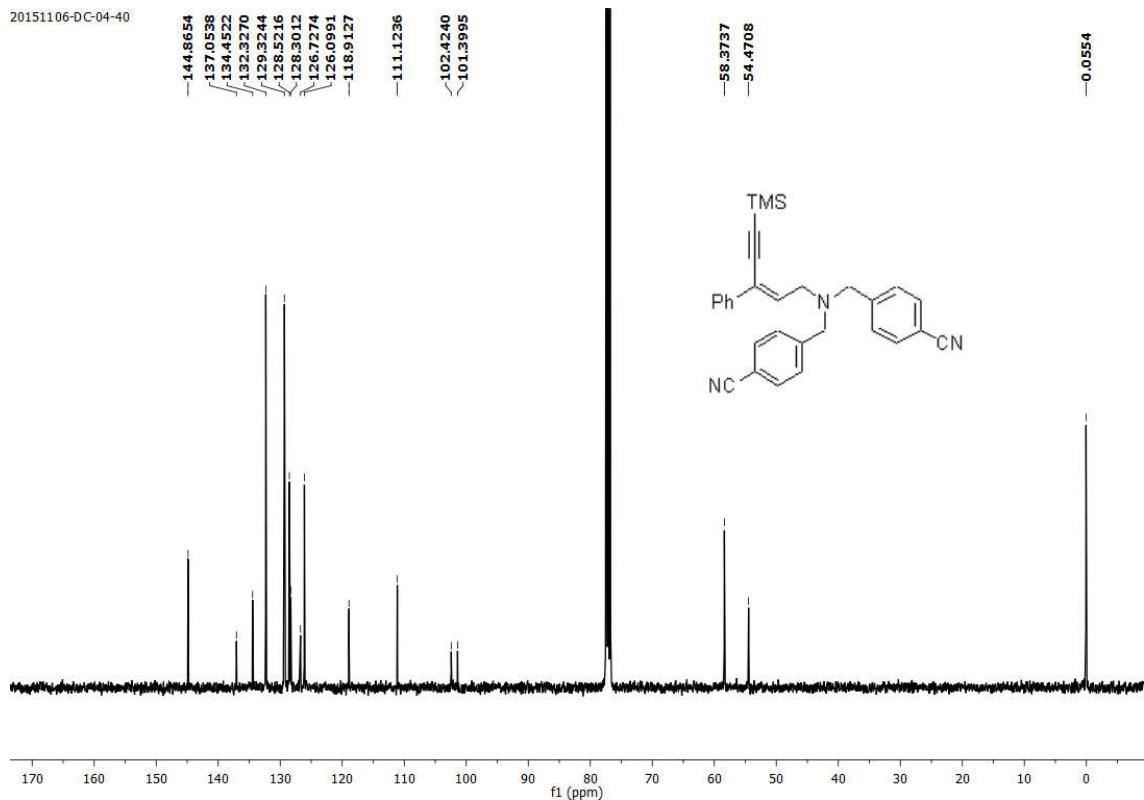
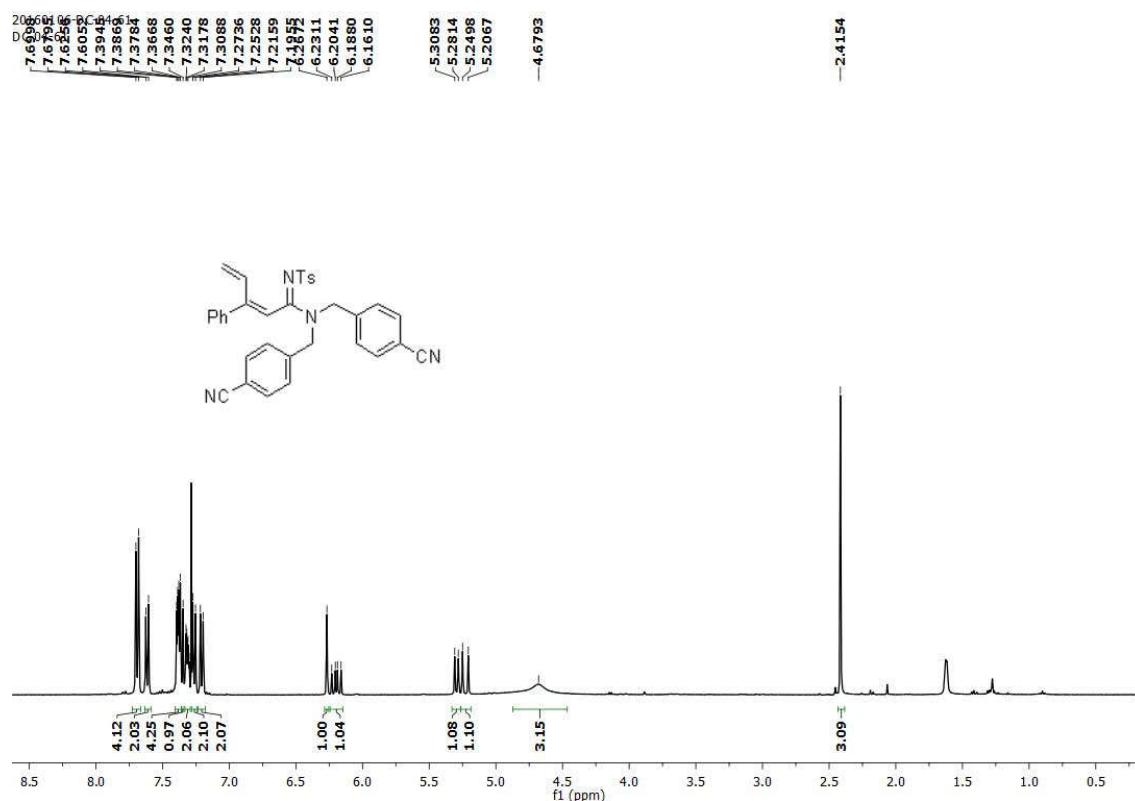
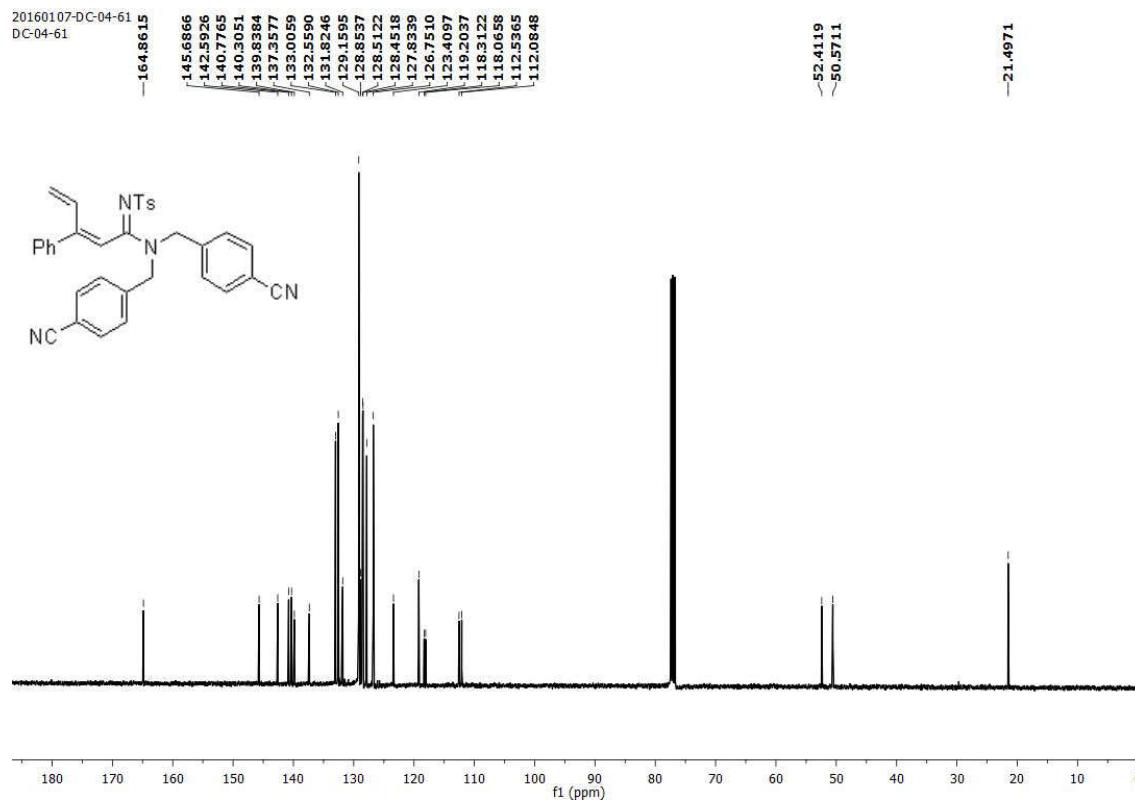


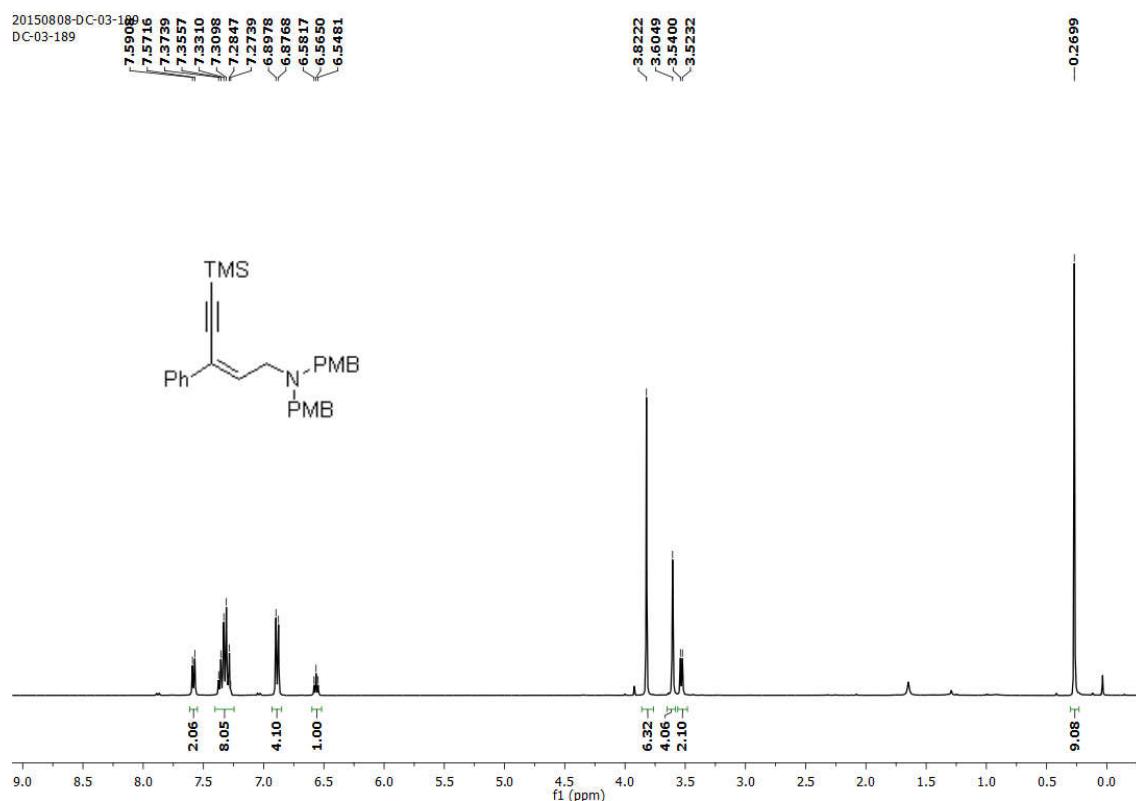
Fig. S105  $^{13}\text{C}$  NMR of S28 in  $\text{CDCl}_3$ .



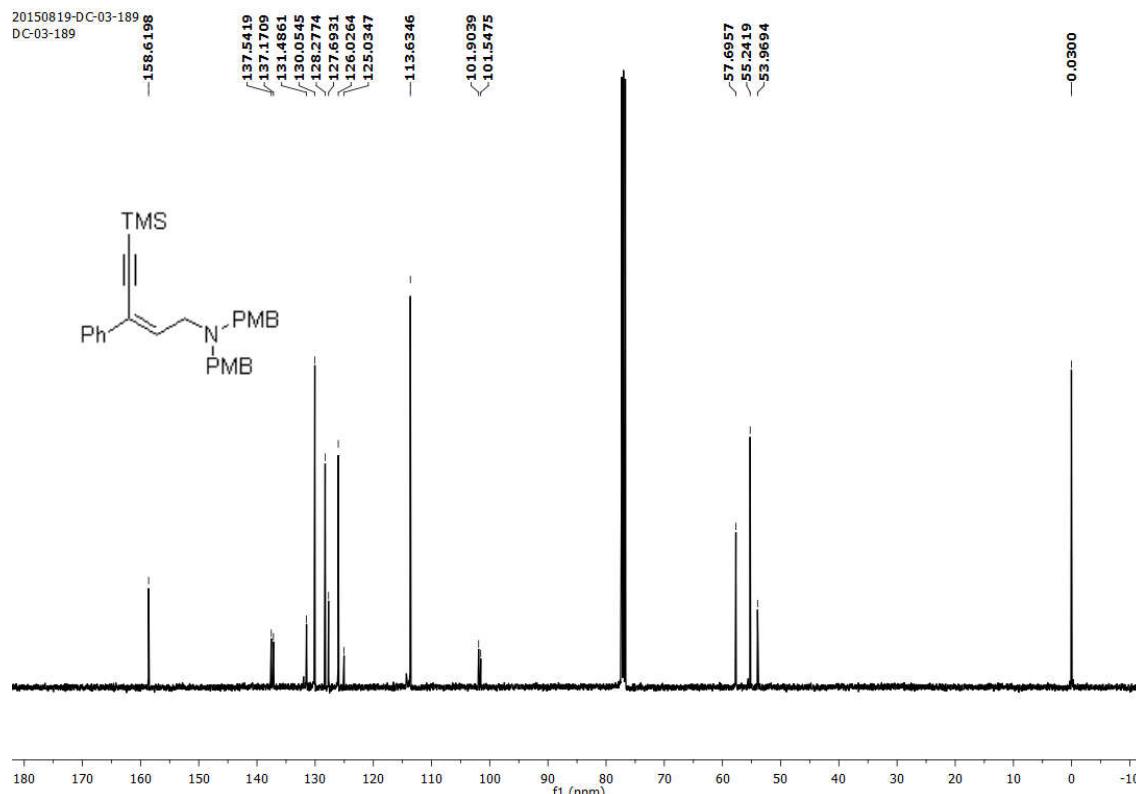
**Fig. S106**  $^1\text{H}$  NMR of **15a** in  $\text{CDCl}_3$ .



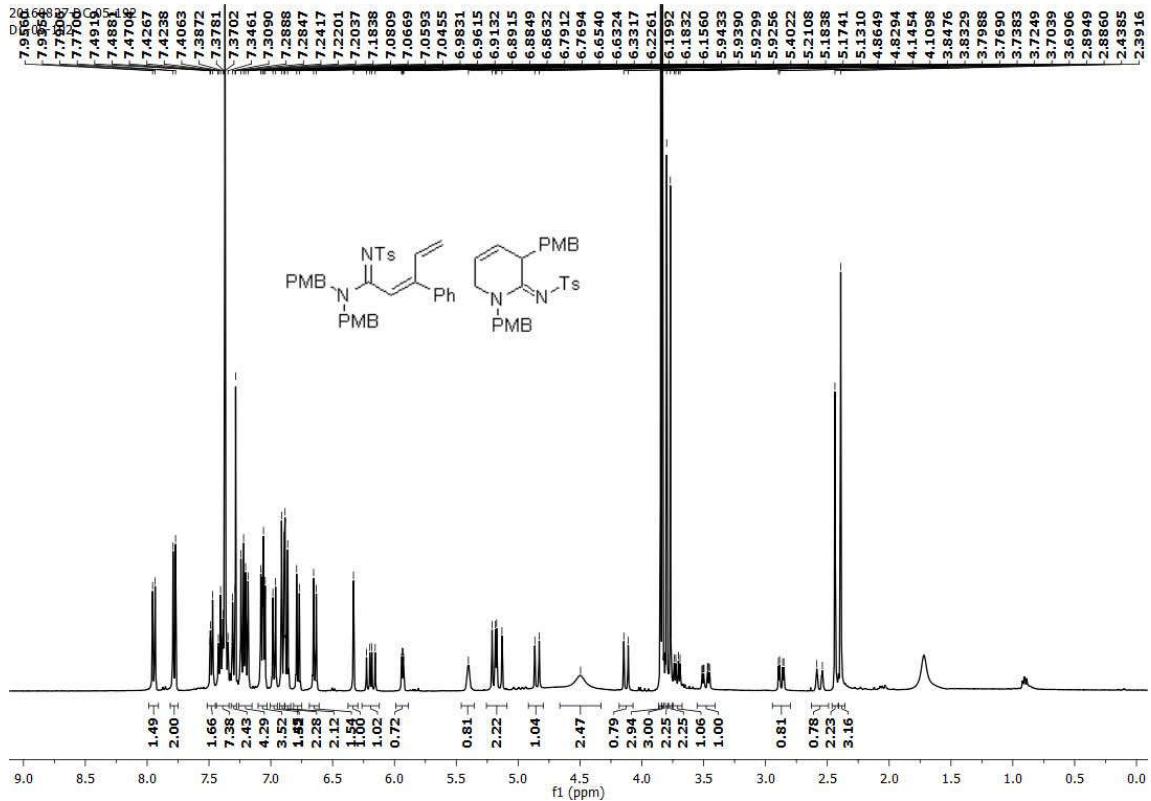
**Fig. S107**  $^{13}\text{C}$  NMR of **15a** in  $\text{CDCl}_3$ .



**Fig. S108**  $^1\text{H}$  NMR of **S29** in  $\text{CDCl}_3$ .



**Fig. S109**  $^{13}\text{C}$  NMR of **S29** in  $\text{CDCl}_3$ .



**Fig. S110**  $^1\text{H}$  NMR of mixture of **19a** and **19c** in  $\text{CDCl}_3$ .

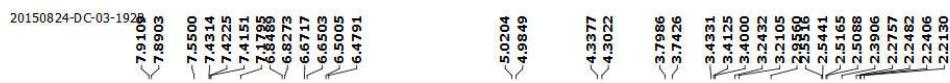


Fig. S111  $^1\text{H}$  NMR of **19b** in  $\text{CDCl}_3$ .

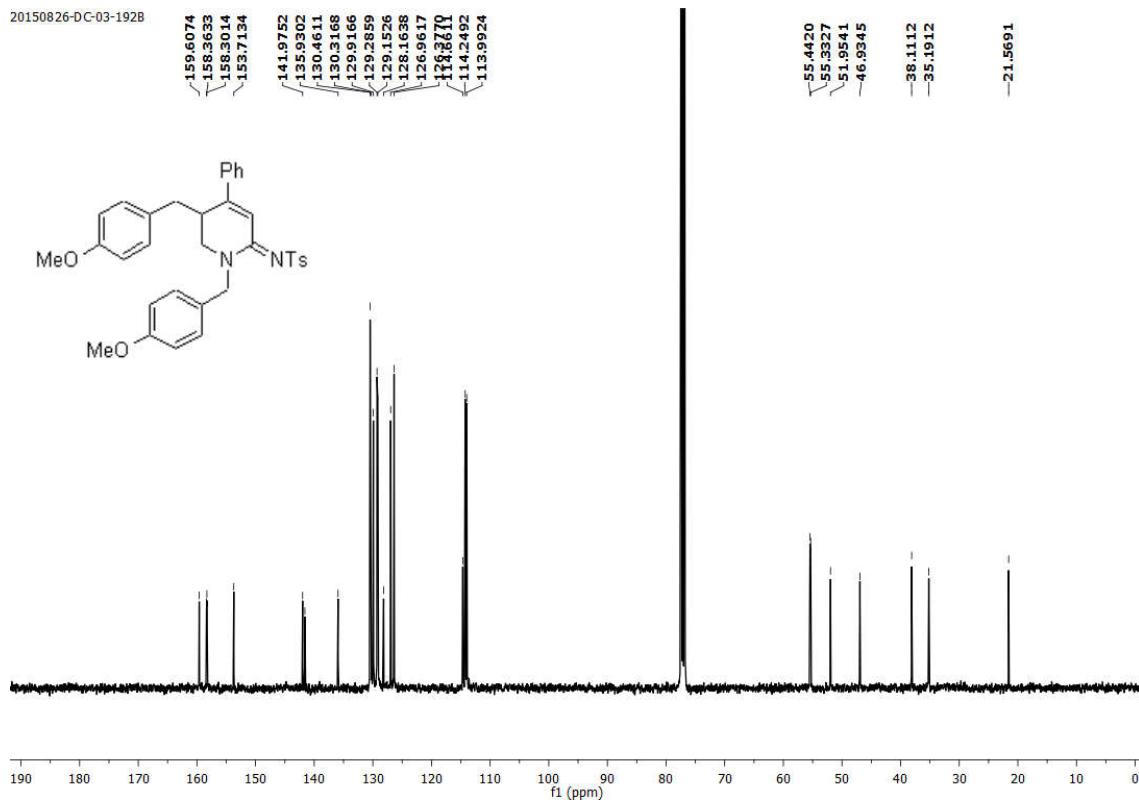
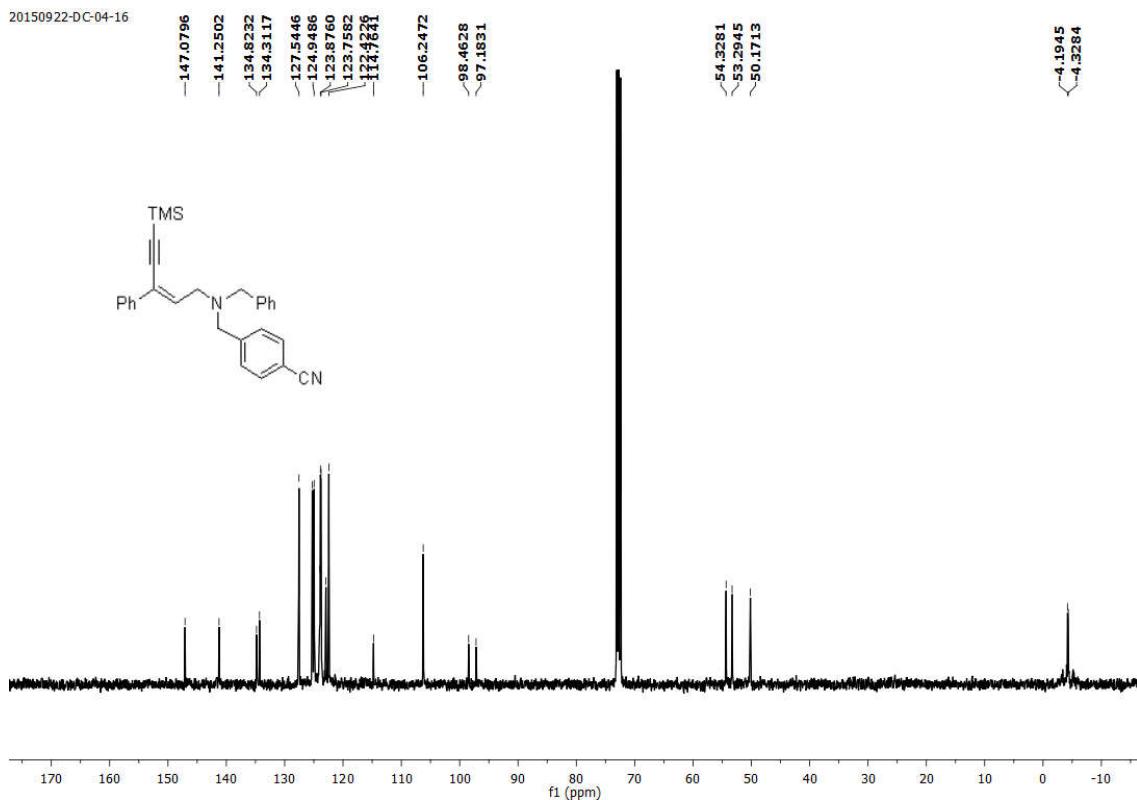
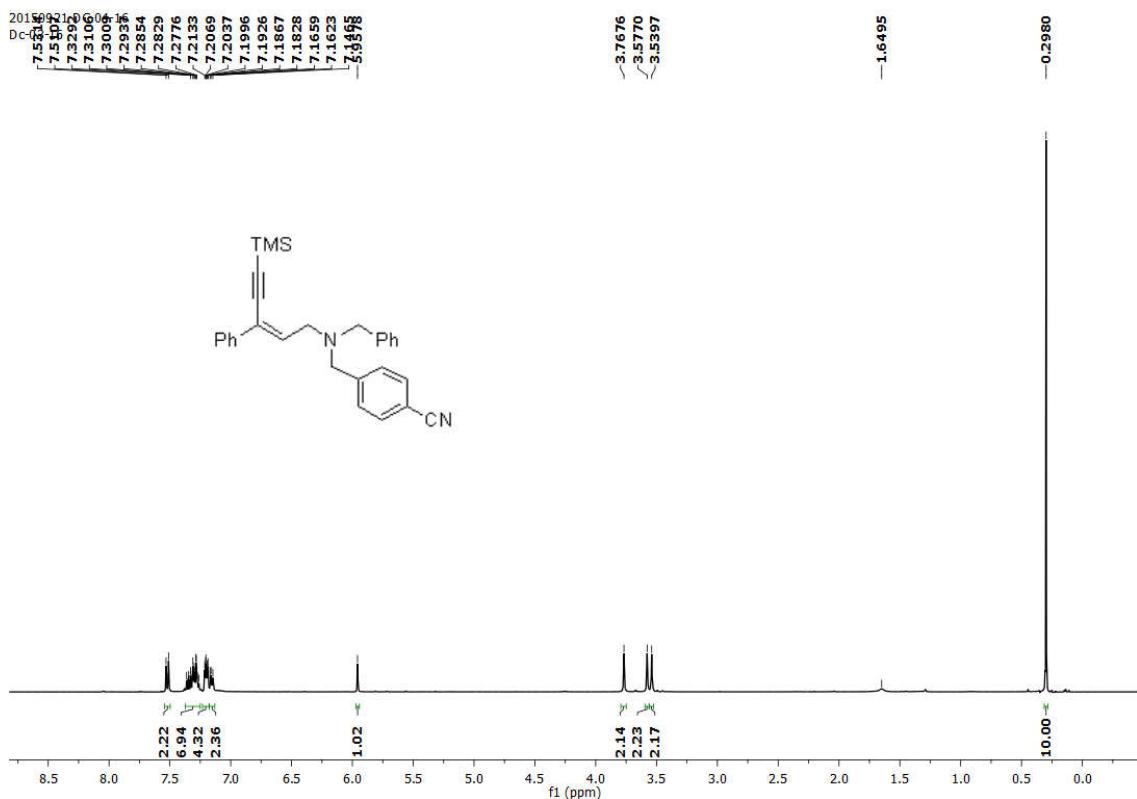
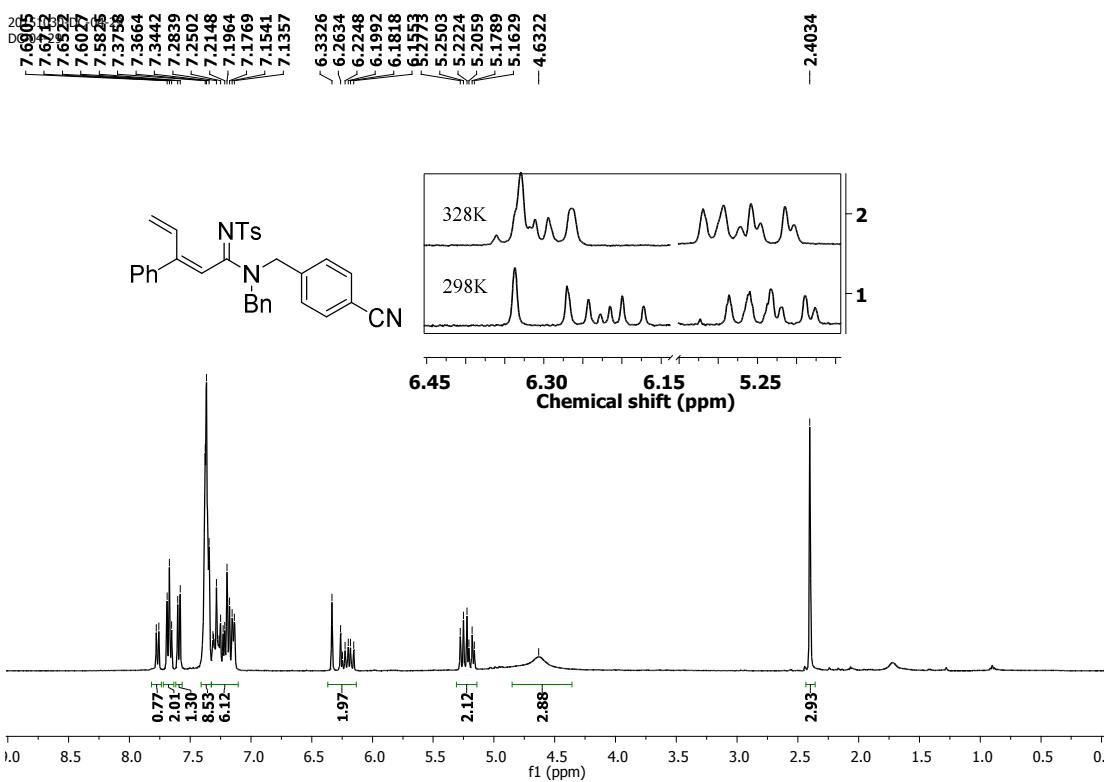


Fig. S112  $^{13}\text{C}$  NMR of **19b** in  $\text{CDCl}_3$ .

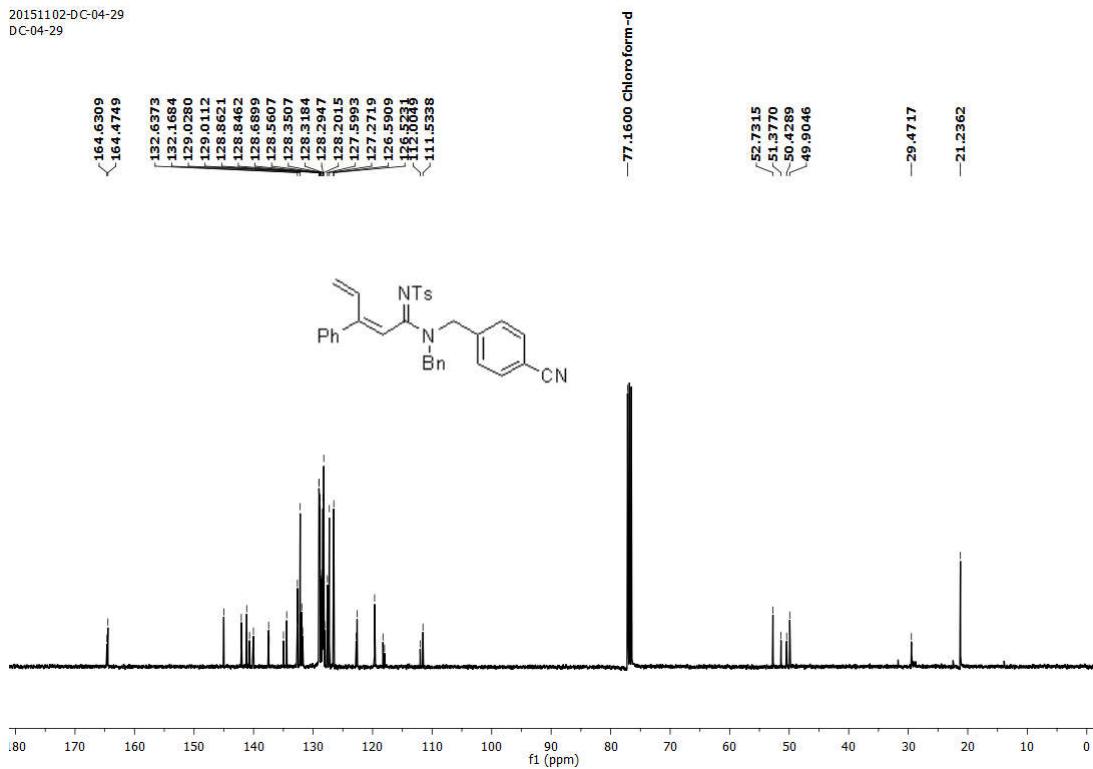


**Fig. S114**  $^{13}\text{C}$  NMR of **S30** in  $\text{CDCl}_3$ .



**Fig. S115** <sup>1</sup>H NMR of **23a** in CDCl<sub>3</sub>. Inset shows the comparison between <sup>1</sup>H NMRs recorded at 298K and 328K. The data indicate the presence of rotational isomers for the compound.

20151102-DC-04-29  
DC-04-29



**Fig. S116** <sup>13</sup>C NMR of **23a** in CDCl<sub>3</sub>.

20150908-Aish-01-32A  
Aish-01-32A

8.2268  
8.2045  
8.0109  
7.9885  
7.4093  
7.3993  
7.3922  
7.3833  
7.3802  
7.3728  
6.2825  
6.2855  
6.2403  
5.1973  
6.2087  
4.6556

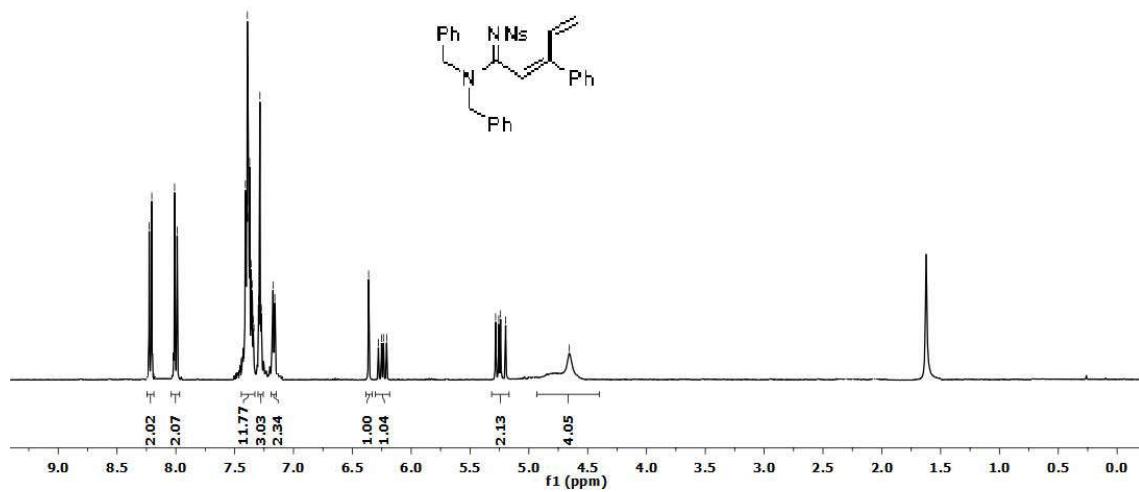
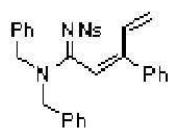


Fig. S117  $^1\text{H}$  NMR of **26a** in  $\text{CDCl}_3$ .

280314-14-SRE-02-004

-149.3275  
-149.1149  
-145.3037  
-137.4326  
-135.4062  
-134.6760  
-131.8561  
-129.3440  
-129.0293  
-128.8976  
-128.6538  
-128.3326  
-128.0582  
-127.5246  
-123.8219  
-120.1586  
-52.7484  
-50.6533

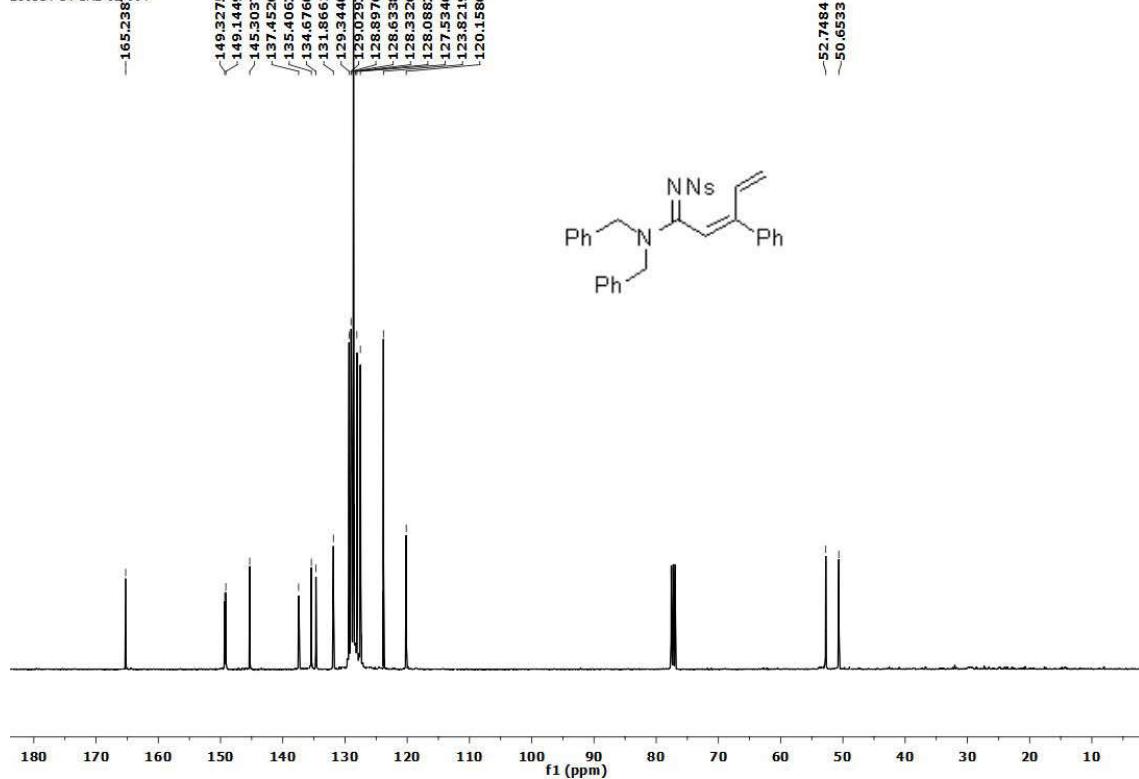
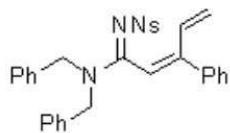
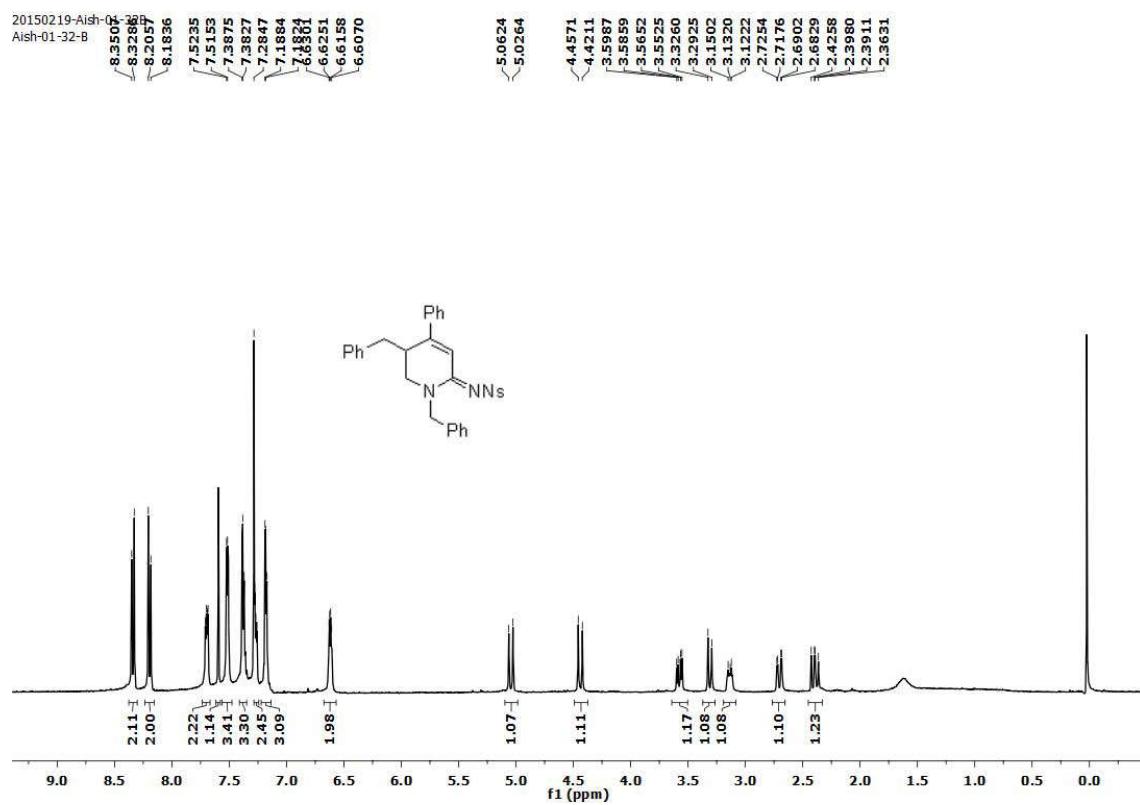
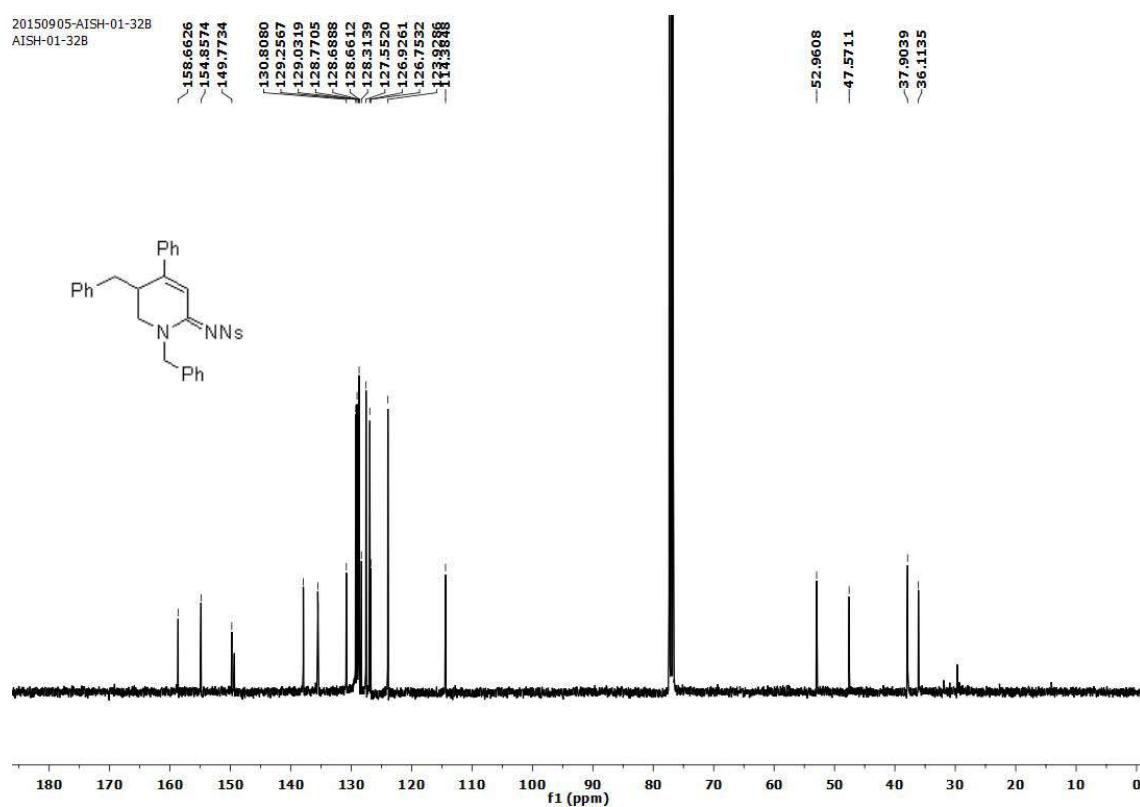


Fig. S118  $^{13}\text{C}$  NMR of **26a** in  $\text{CDCl}_3$ .



**Fig. S119**  $^1\text{H}$  NMR of **26b** in  $\text{CDCl}_3$ .



**Fig. S120**  $^{13}\text{C}$  NMR of **26b** in  $\text{CDCl}_3$ .

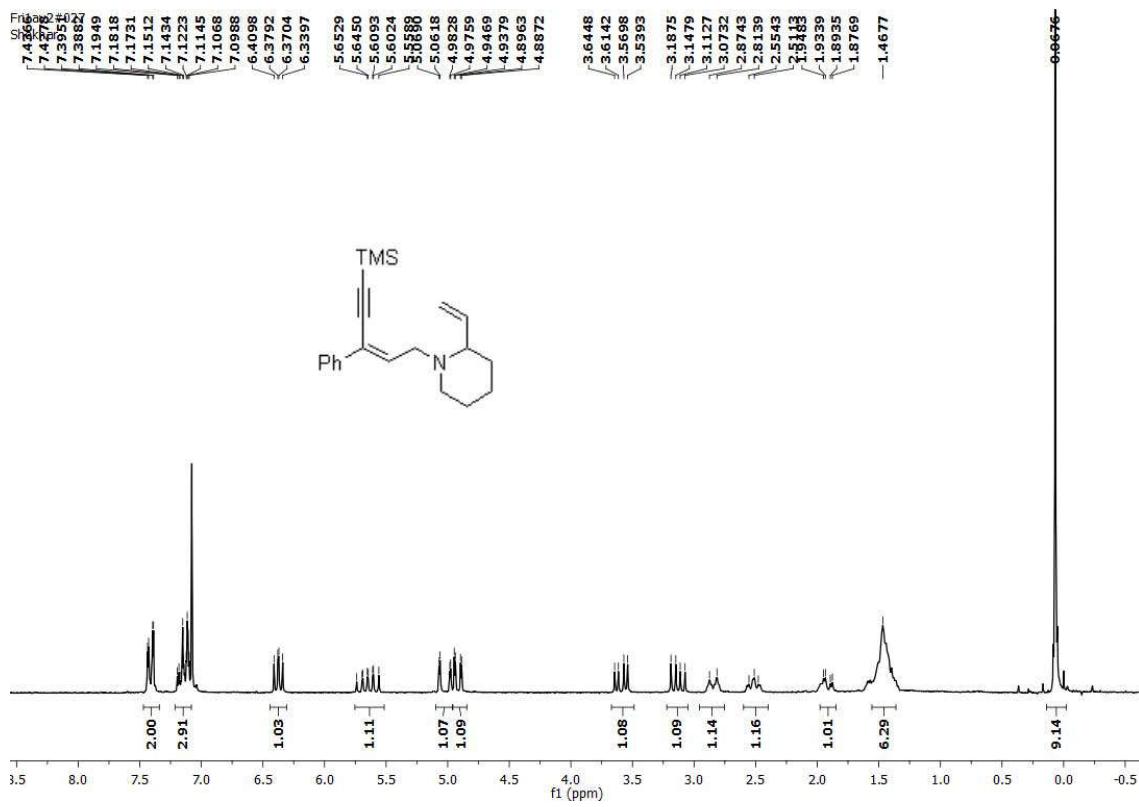


Fig. S121  $^1\text{H}$  NMR of **28** in  $\text{CDCl}_3$ .

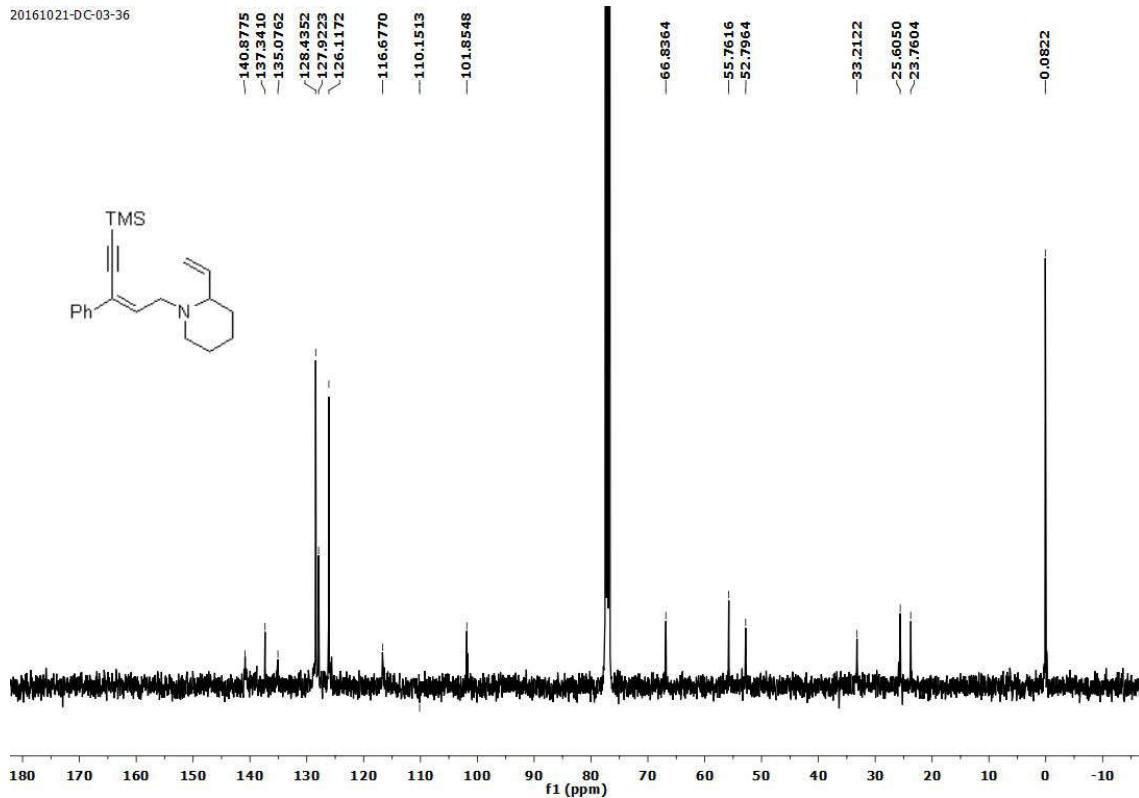
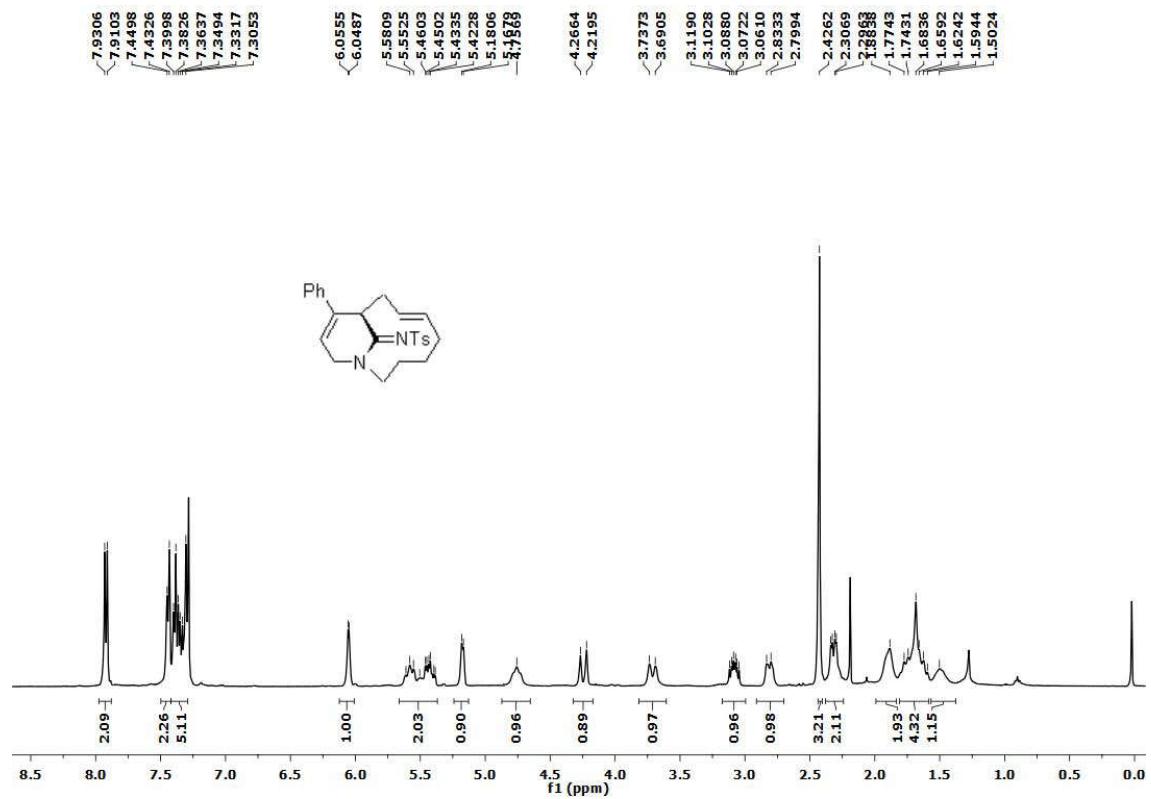
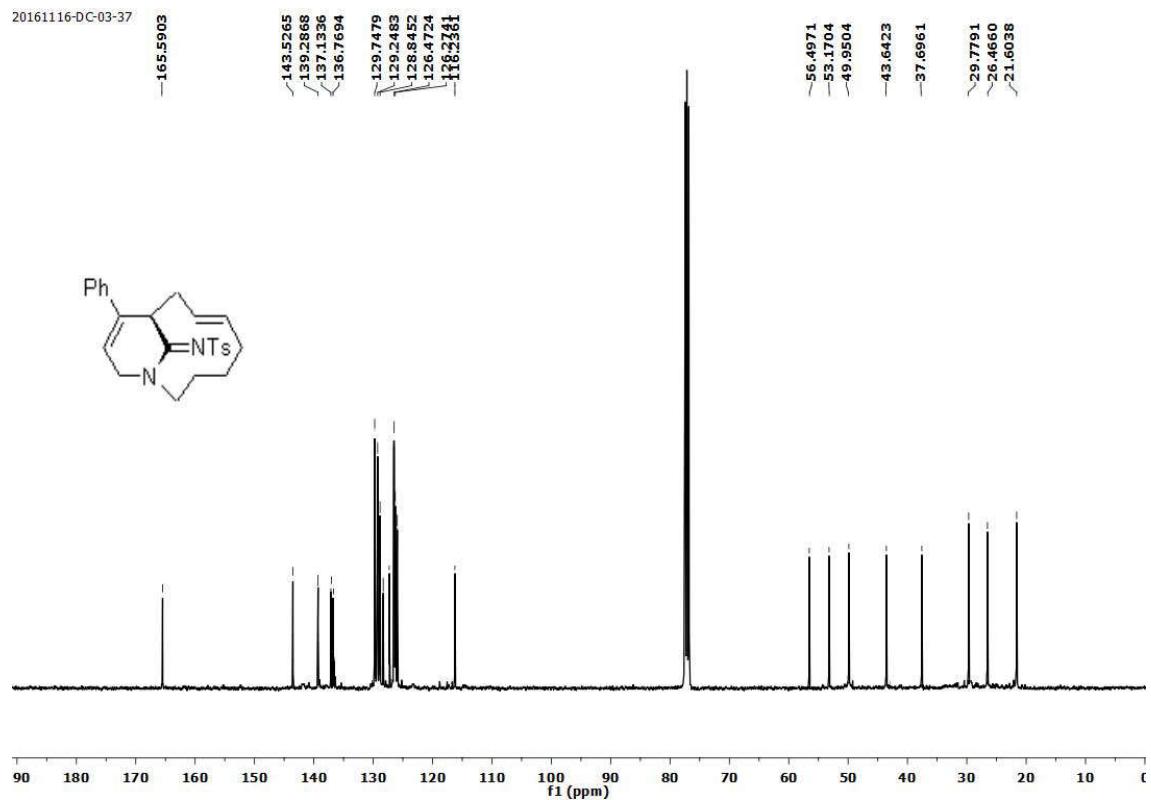


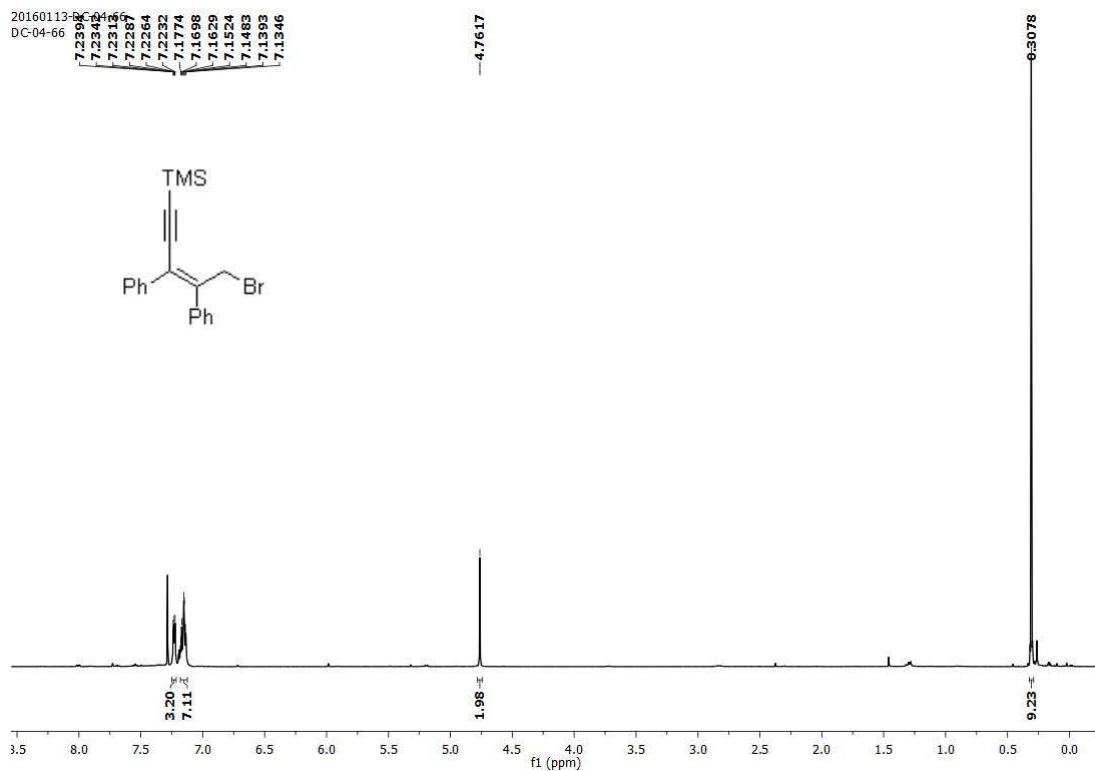
Fig. S122  $^{13}\text{C}$  NMR of **28** in  $\text{CDCl}_3$ .



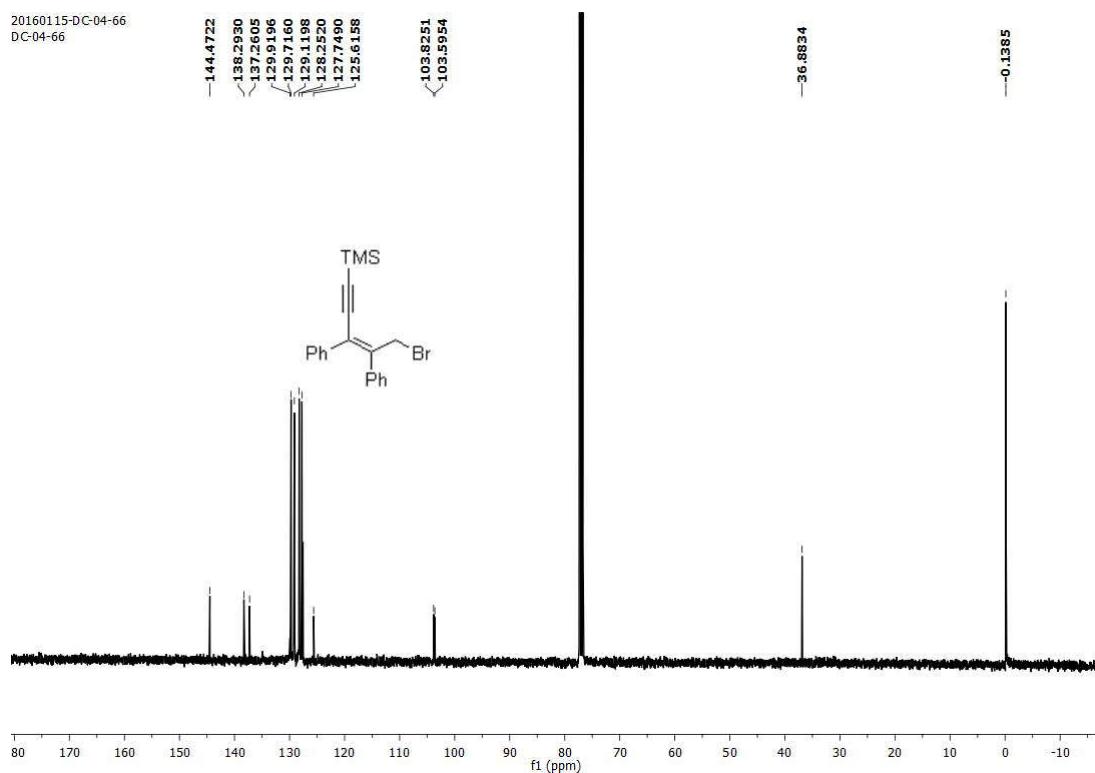
**Fig. S123** <sup>1</sup>H NMR of **28a** in CDCl<sub>3</sub>.



**Fig. S124** <sup>13</sup>C NMR of **28a** in CDCl<sub>3</sub>.



**Fig. S125**  $^1\text{H}$  NMR of **S35** in  $\text{CDCl}_3$ .



**Fig. S126**  $^{13}\text{C}$  NMR of **S35** in  $\text{CDCl}_3$ .

20160115-DC-04-69  
DC-04-69

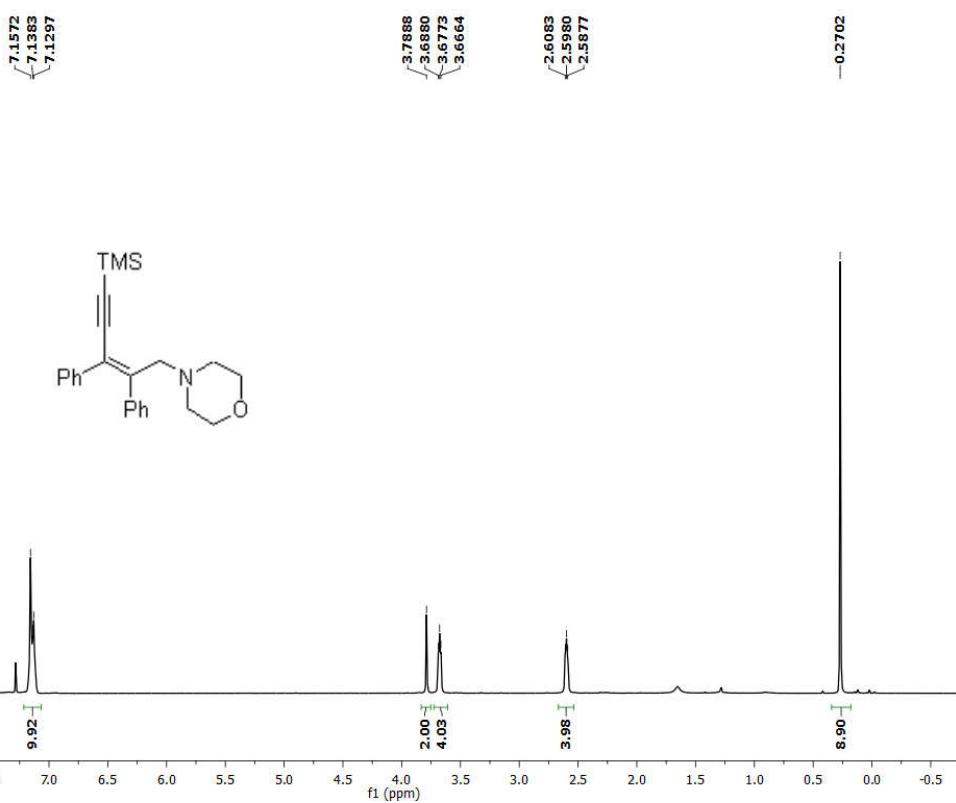


Fig. S127  $^1\text{H}$  NMR of S35 in  $\text{CDCl}_3$ .

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DC-04-69

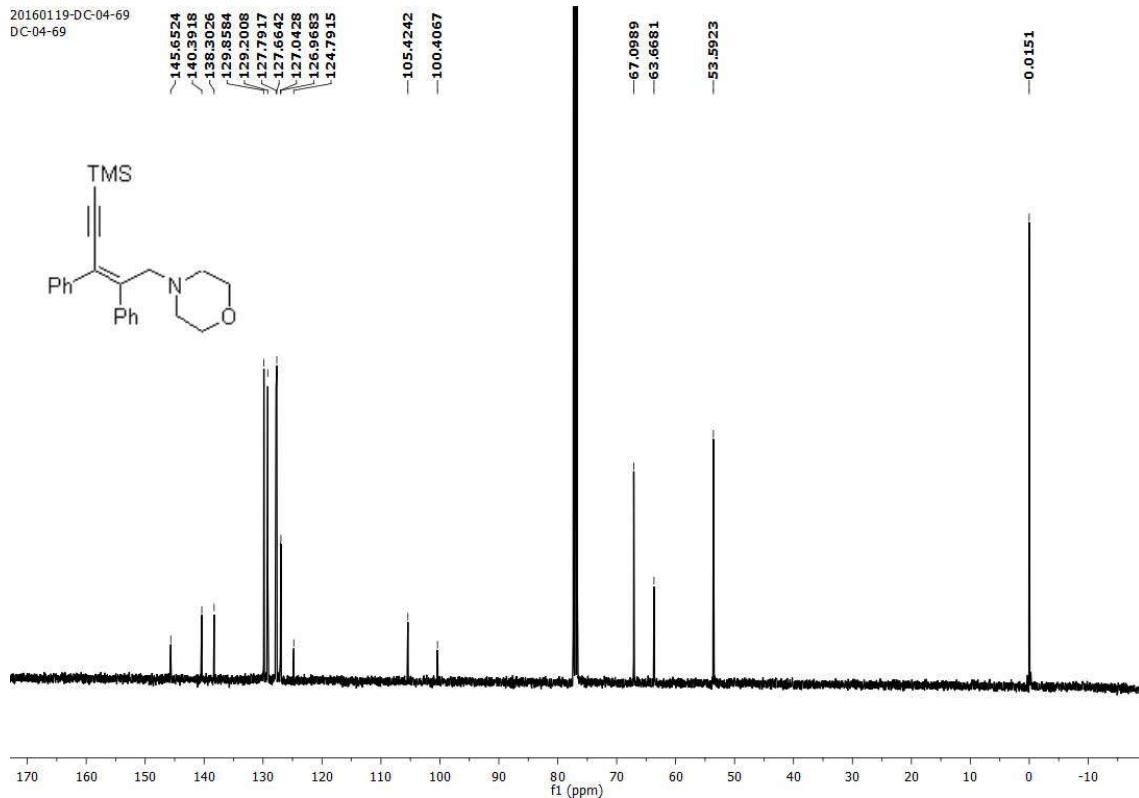
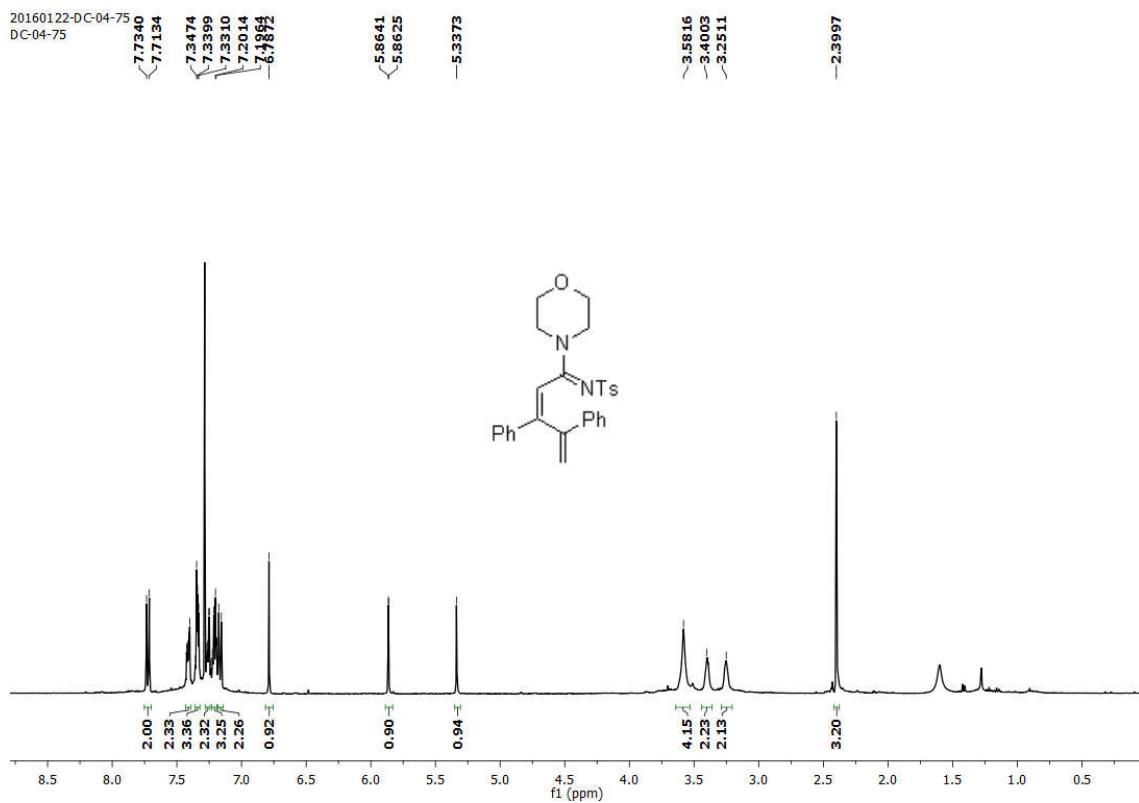
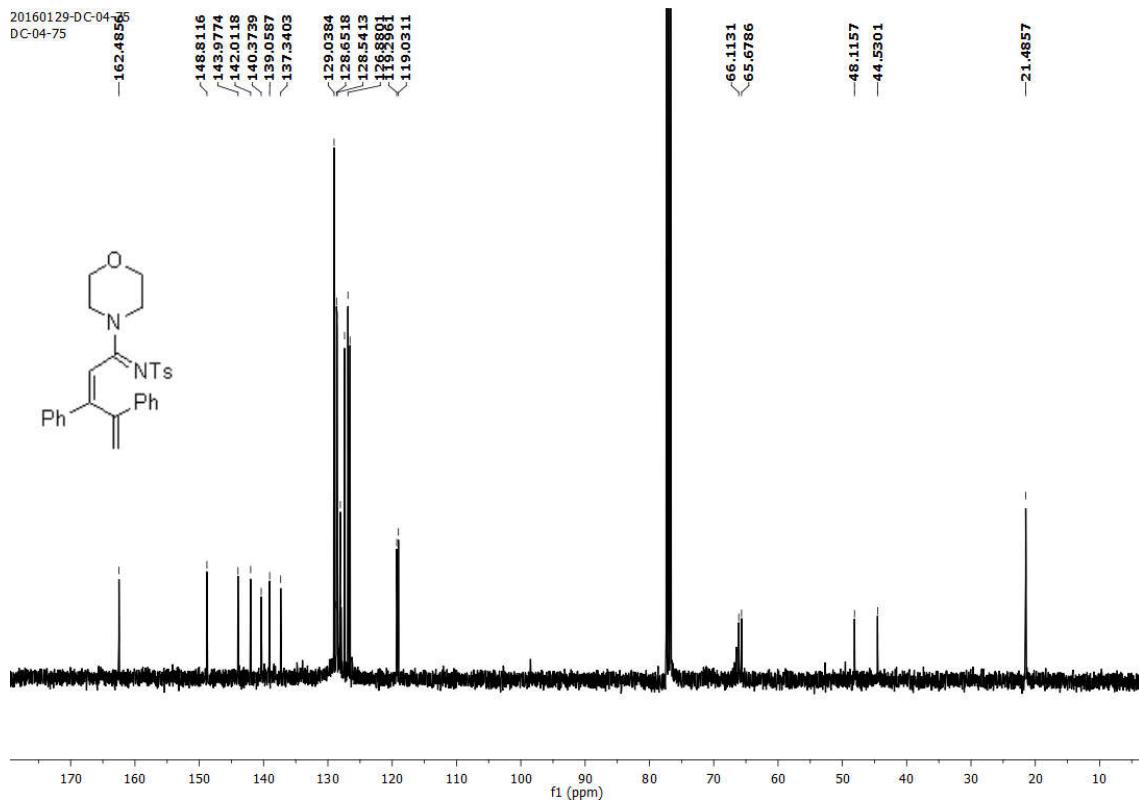


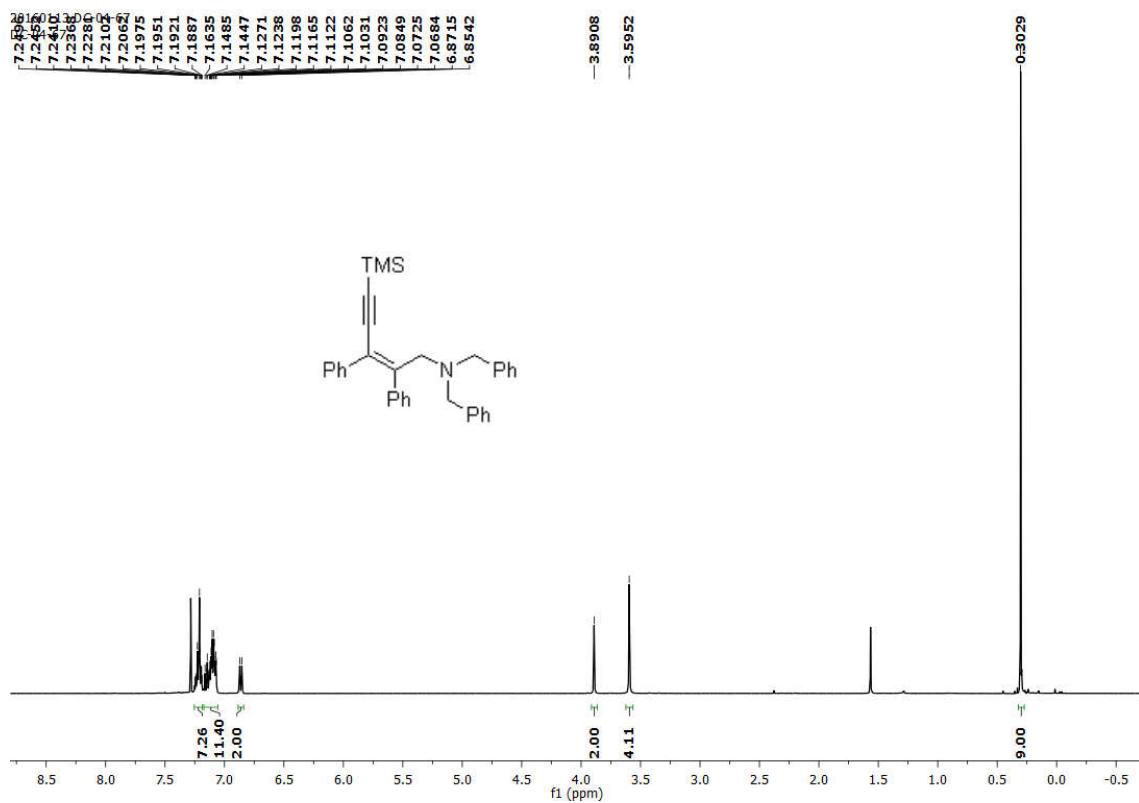
Fig. S128  $^{13}\text{C}$  NMR of S35 in  $\text{CDCl}_3$ .



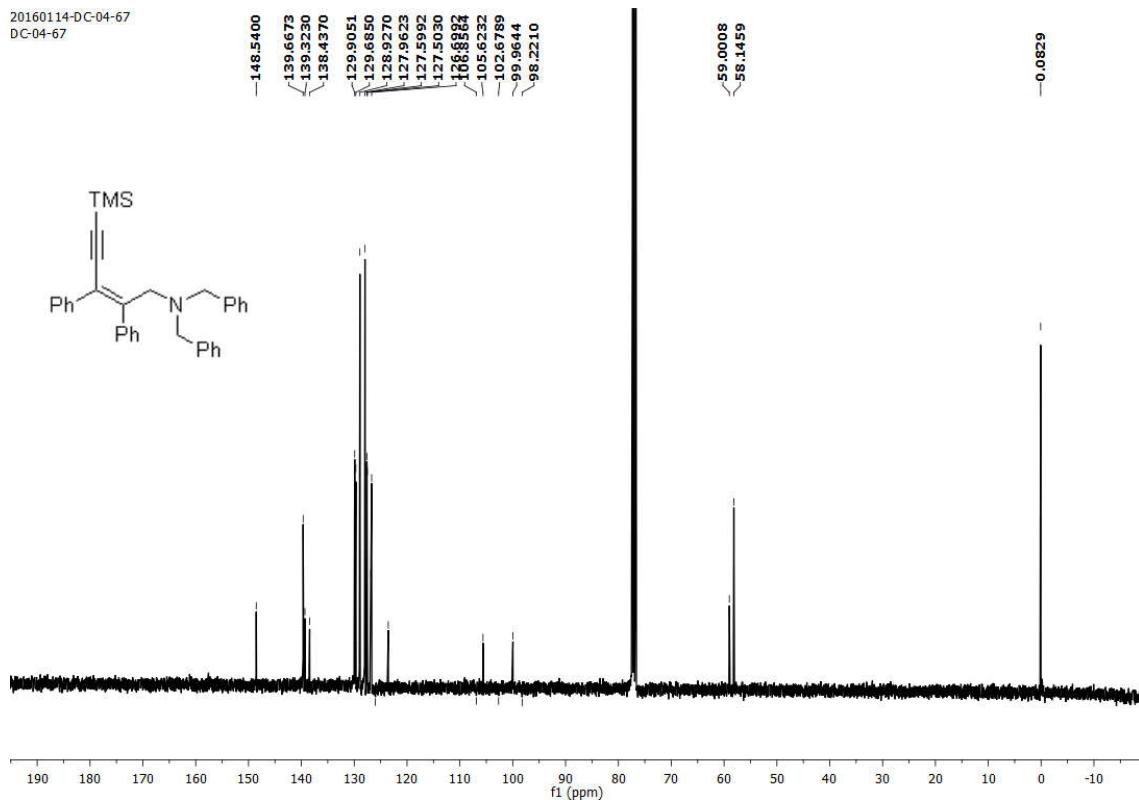
**Fig. S129**  $^1\text{H}$  NMR of **4a** in  $\text{CDCl}_3$ .



**Fig. S130**  $^{13}\text{C}$  NMR of **4a** in  $\text{CDCl}_3$ .

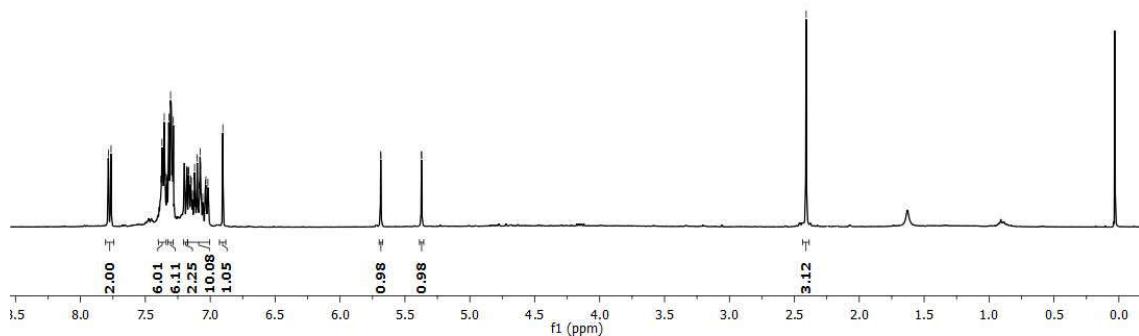
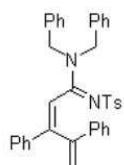


**Fig. S131**  $^1\text{H}$  NMR of S36 in  $\text{CDCl}_3$ .



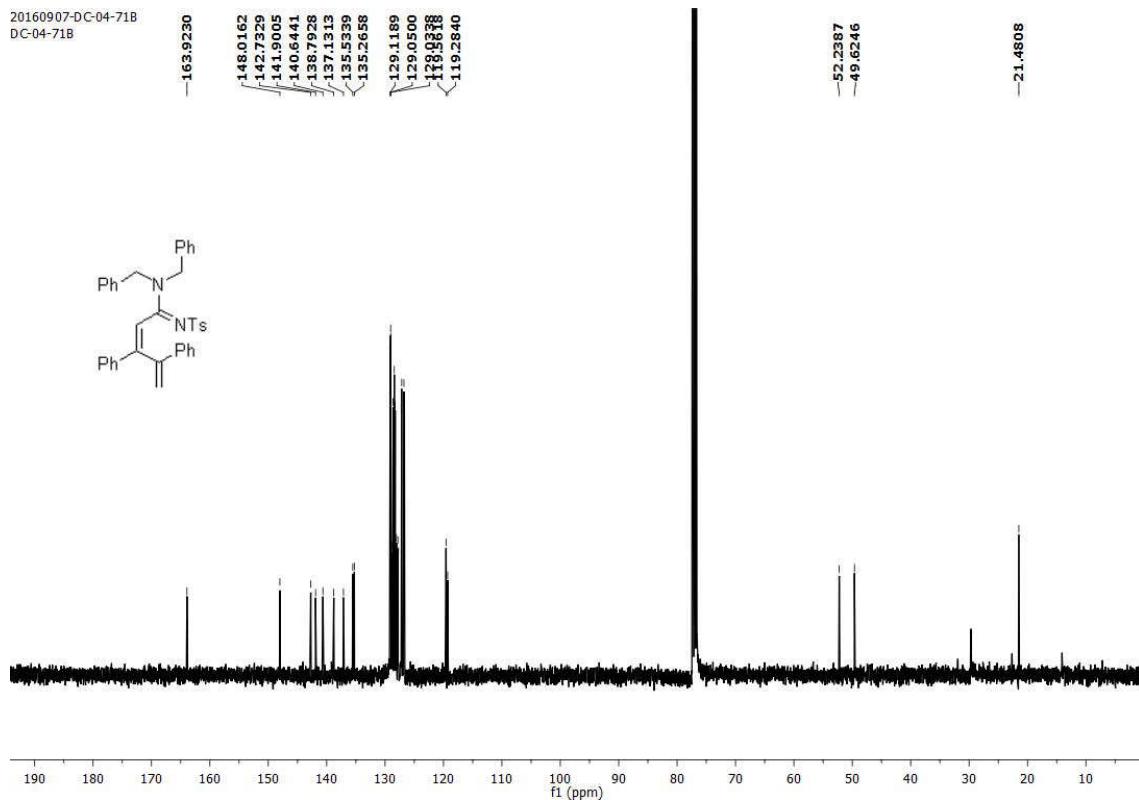
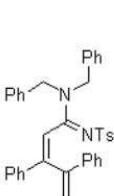
**Fig. S132**  $^{13}\text{C}$  NMR of S36 in  $\text{CDCl}_3$ .

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DC-04-71B

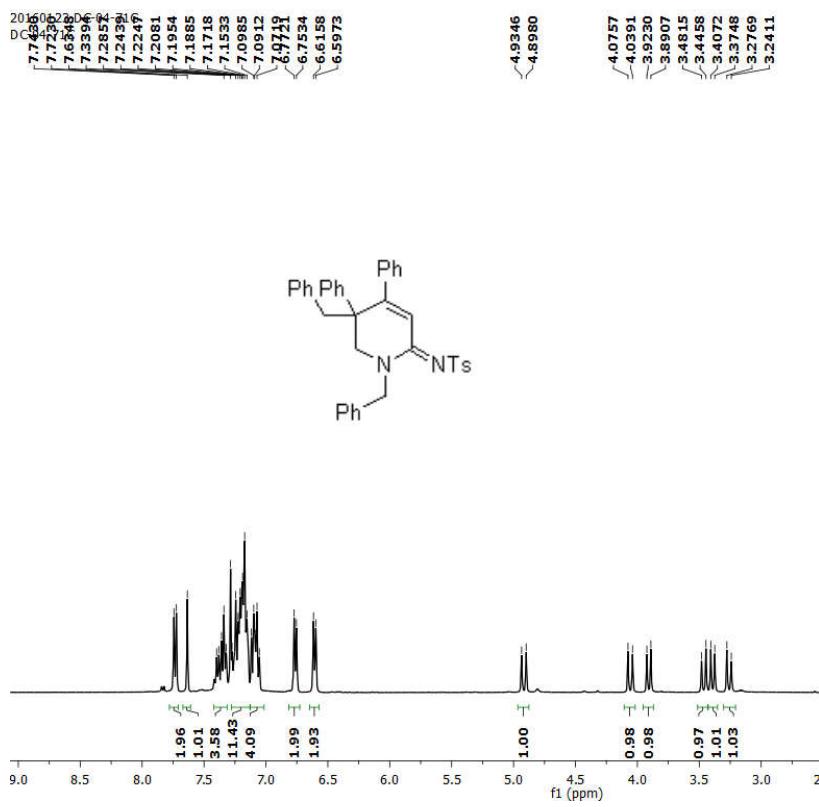


**Fig. S133**  $^1\text{H}$  NMR of **12a** in  $\text{CDCl}_3$ .

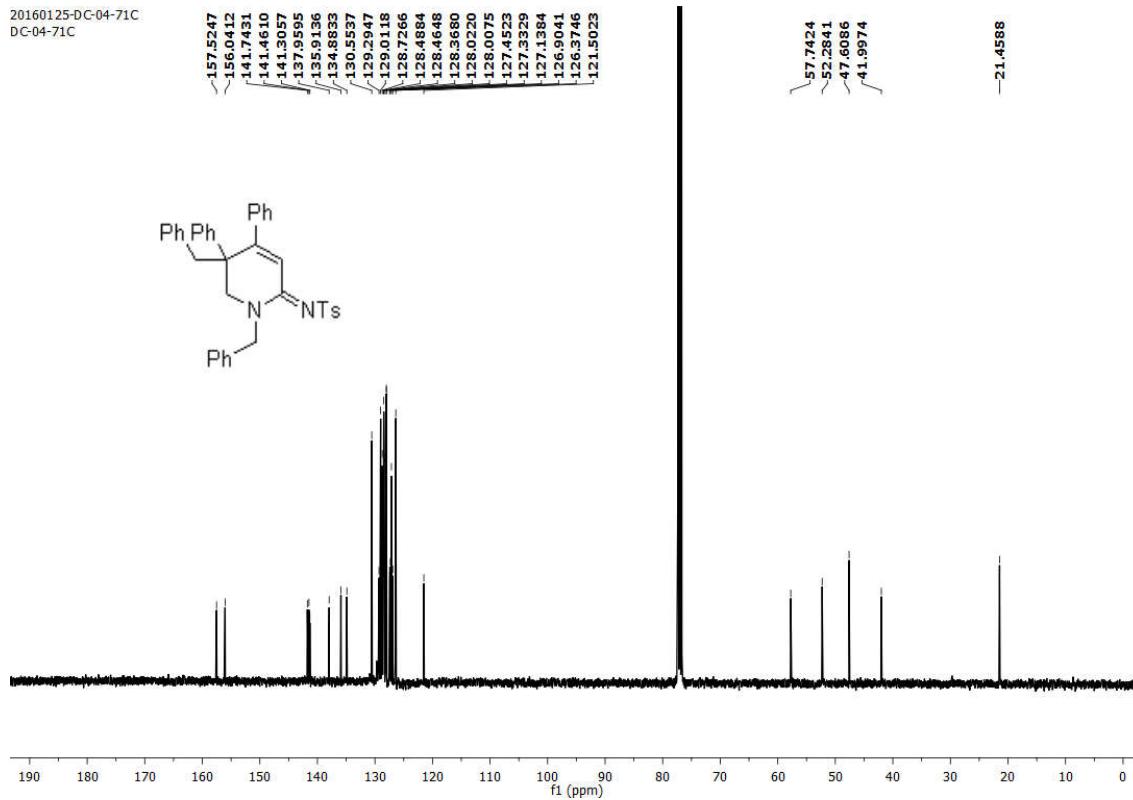
20160907-DC-04-71B  
DC-04-71B



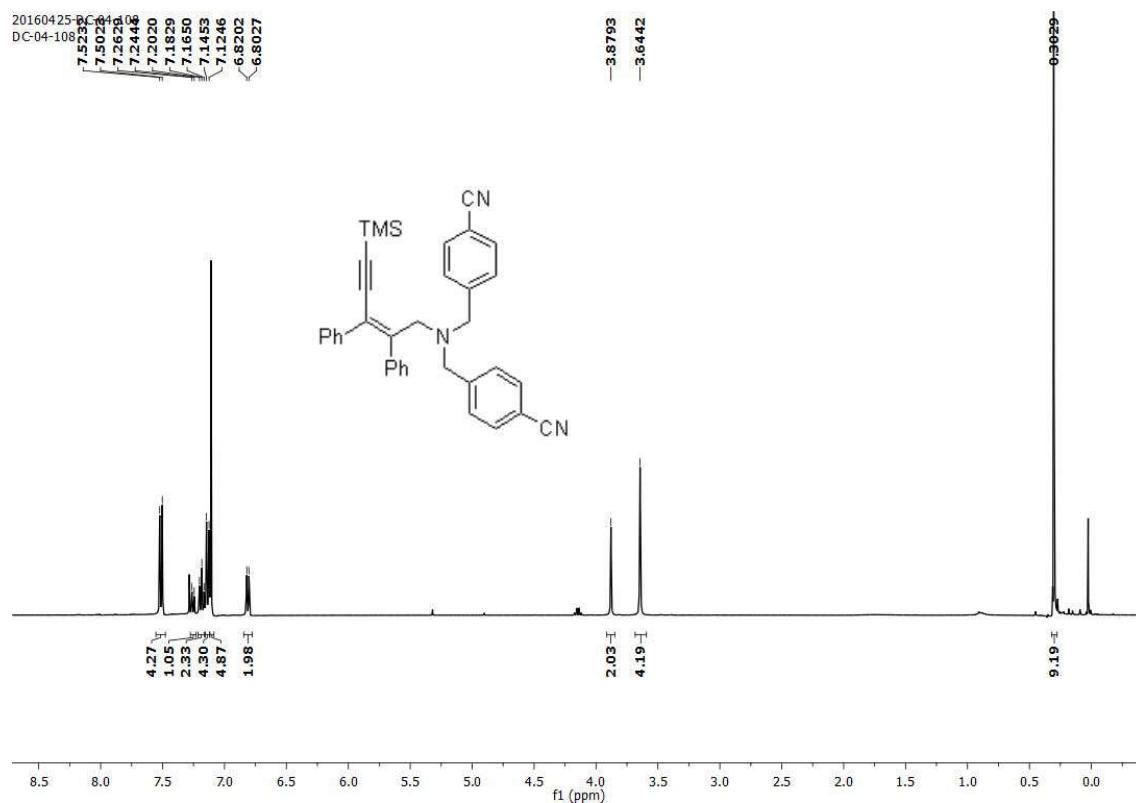
**Fig. S134**  $^{13}\text{C}$  NMR of **12a** in  $\text{CDCl}_3$ .



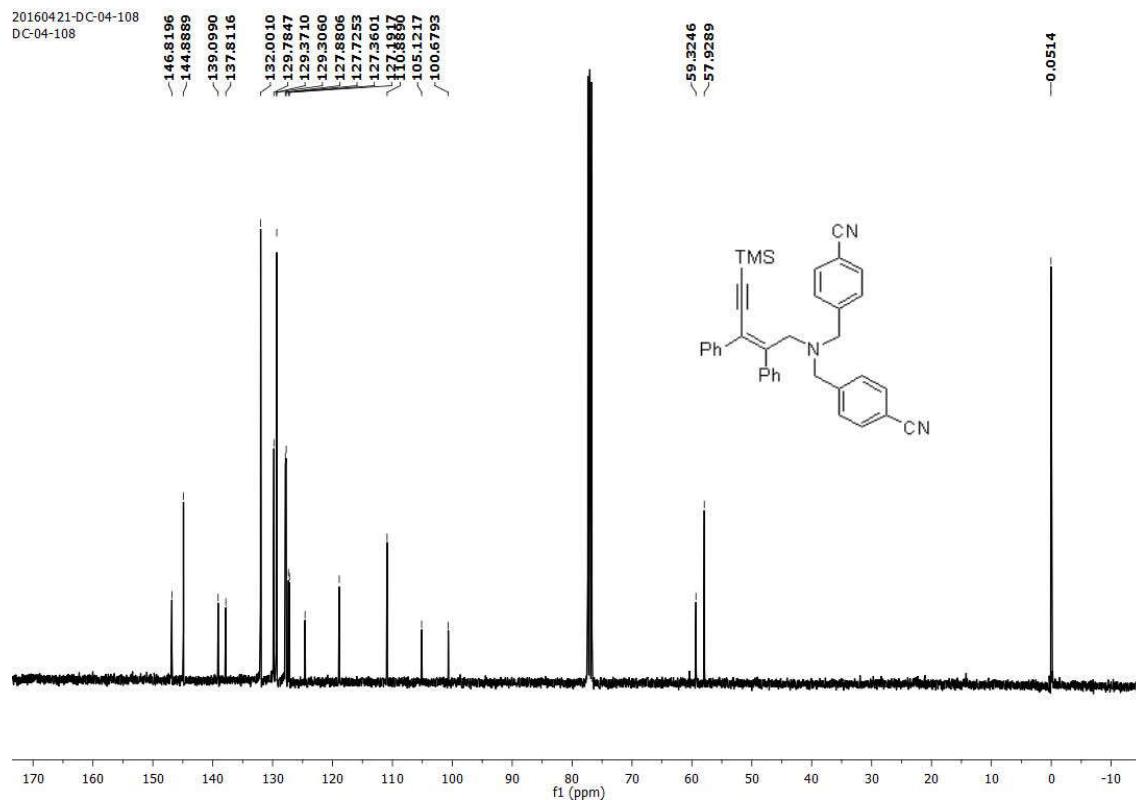
**Fig. S135** <sup>1</sup>H NMR of **12b** in CDCl<sub>3</sub>.



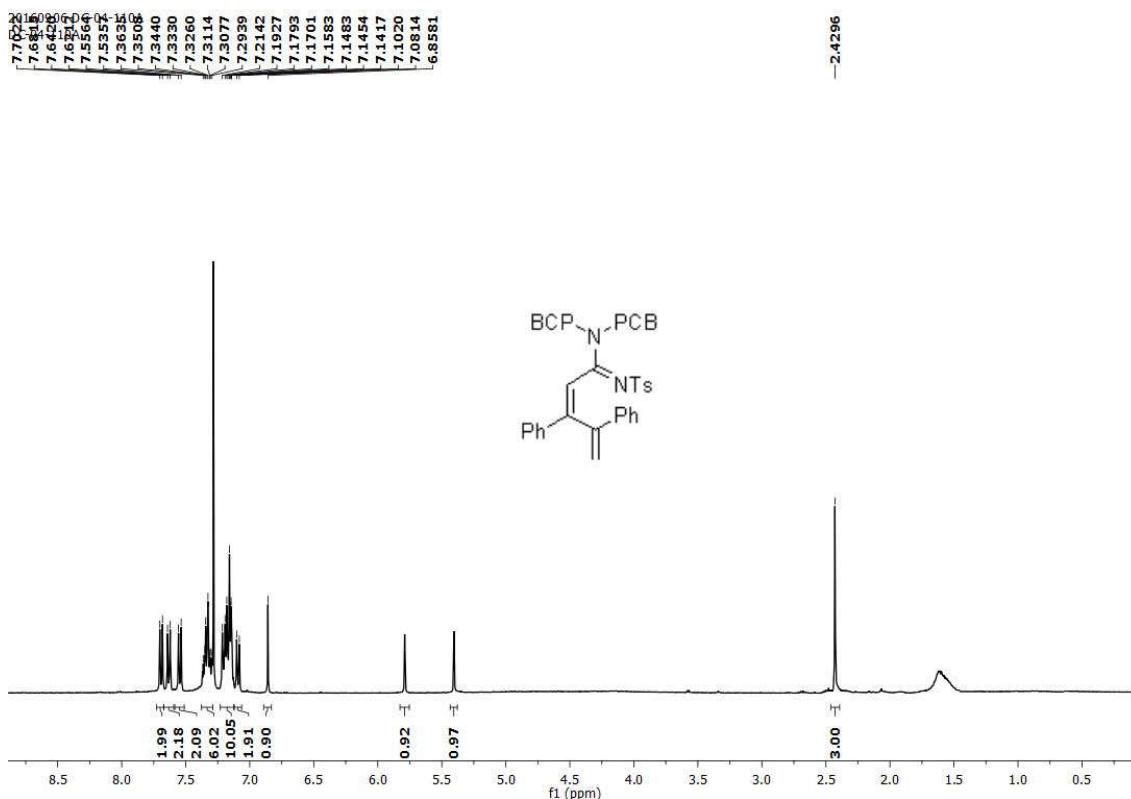
**Fig. S136** <sup>13</sup>C NMR of **12b** in CDCl<sub>3</sub>.



**Fig. S137**  $^1\text{H}$  NMR of S37 in  $\text{CDCl}_3$ .

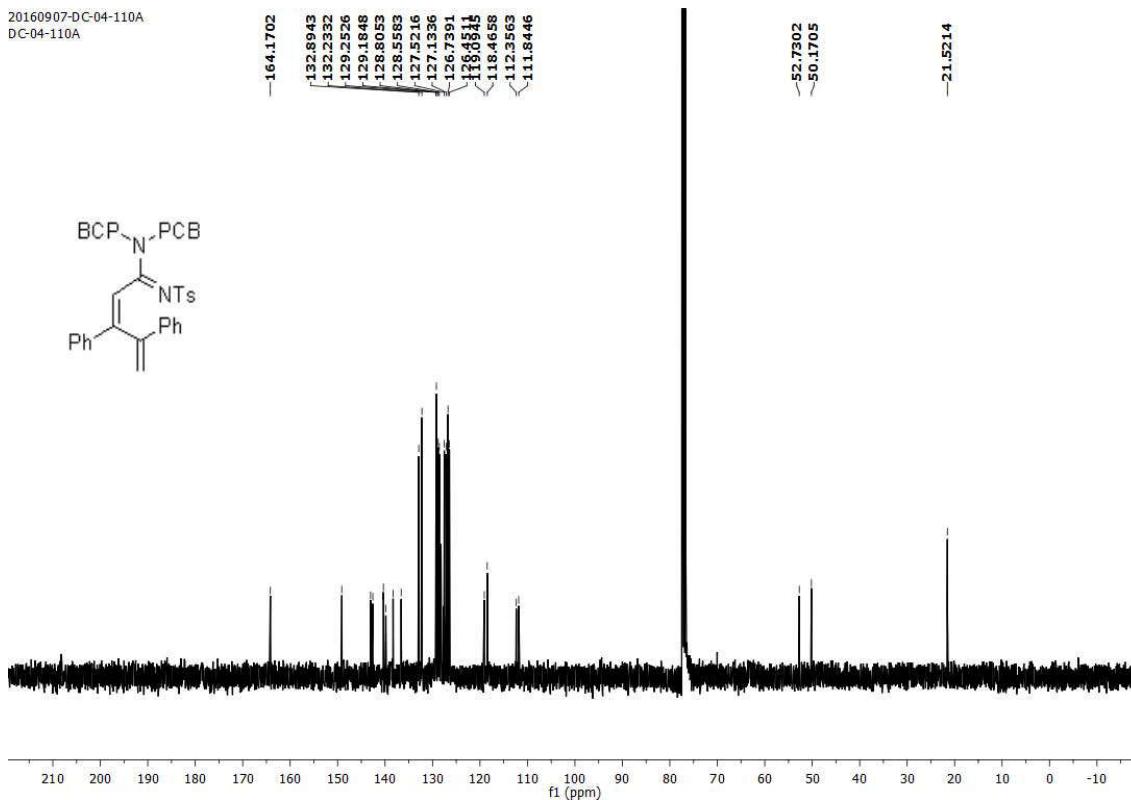
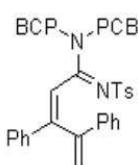


**Fig. S138**  $^{13}\text{C}$  NMR of S37 in  $\text{CDCl}_3$ .

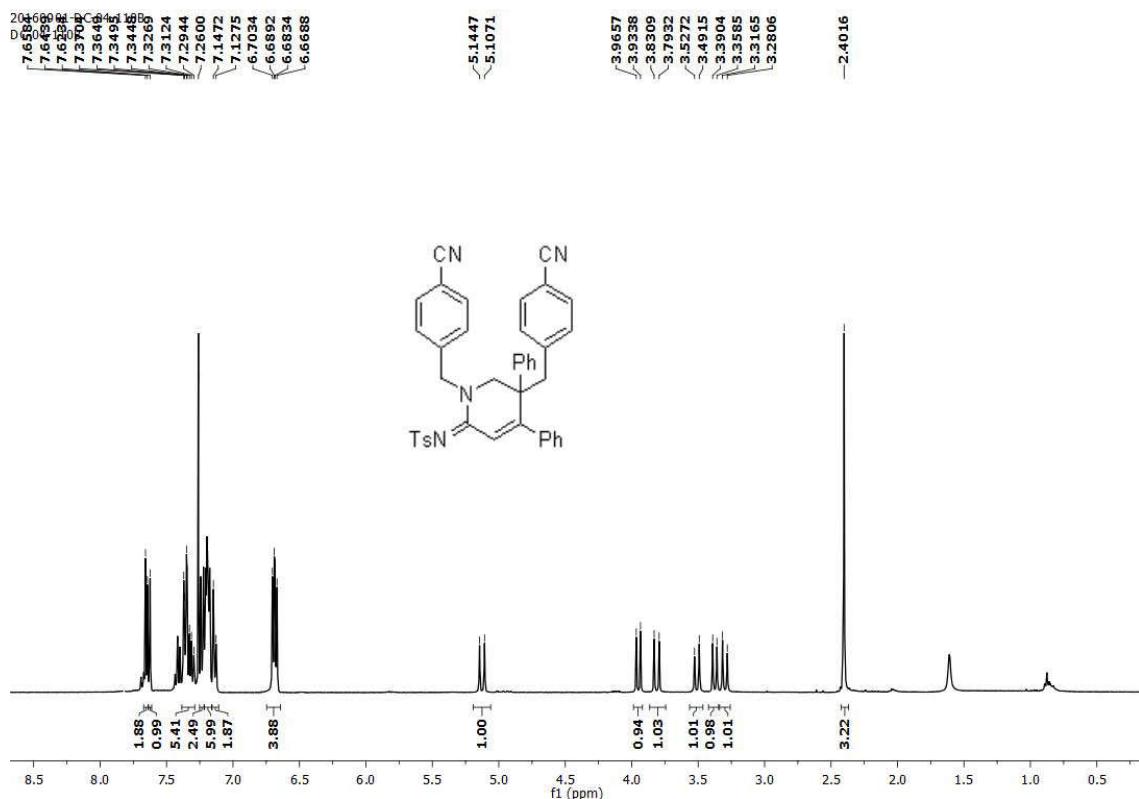


**Fig. S139**  $^1\text{H}$  NMR **16a** in  $\text{CDCl}_3$ .

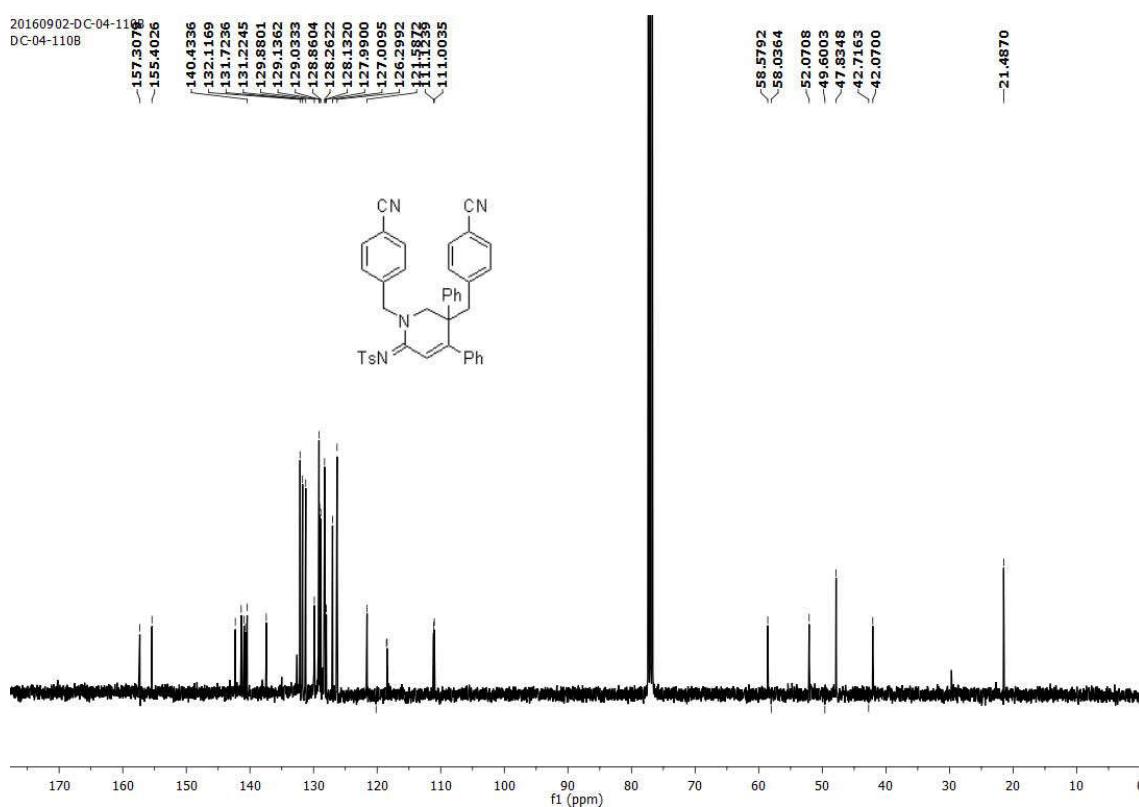
20160907-DC-04-110A  
DC-04-110A



**Fig. S140**  $^{13}\text{C}$  NMR of **16a** in  $\text{CDCl}_3$ .



**Fig. S141**  $^1\text{H}$  NMR of **16b** in  $\text{CDCl}_3$ .



**Fig. S142**  $^{13}\text{C}$  NMR of **16b** in  $\text{CDCl}_3$ .

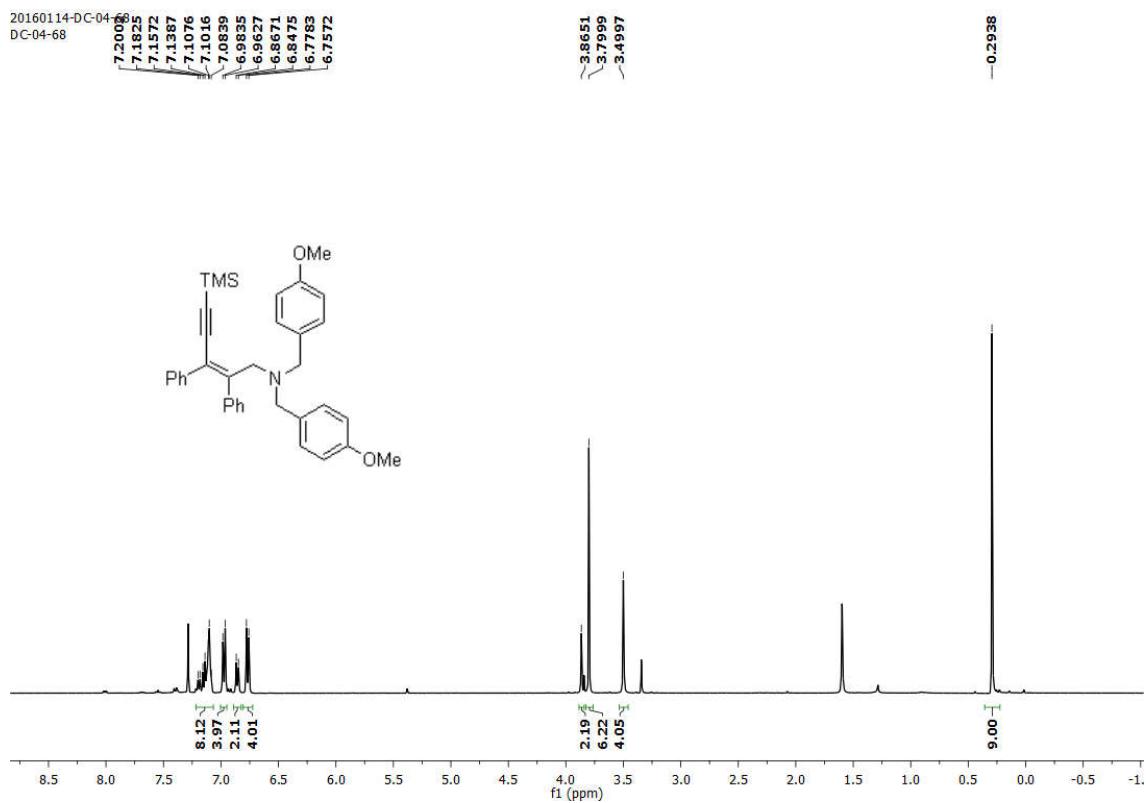


Fig. S143  $^1\text{H}$  NMR of S38 in  $\text{CDCl}_3$ .

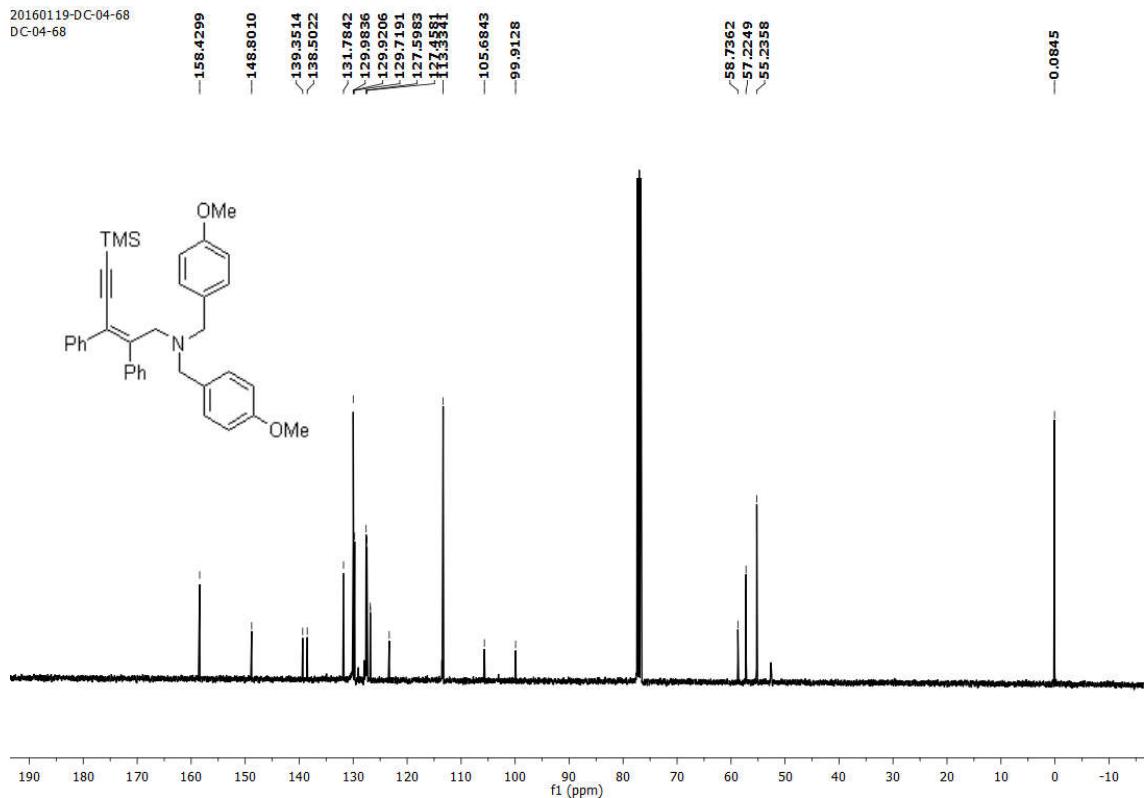
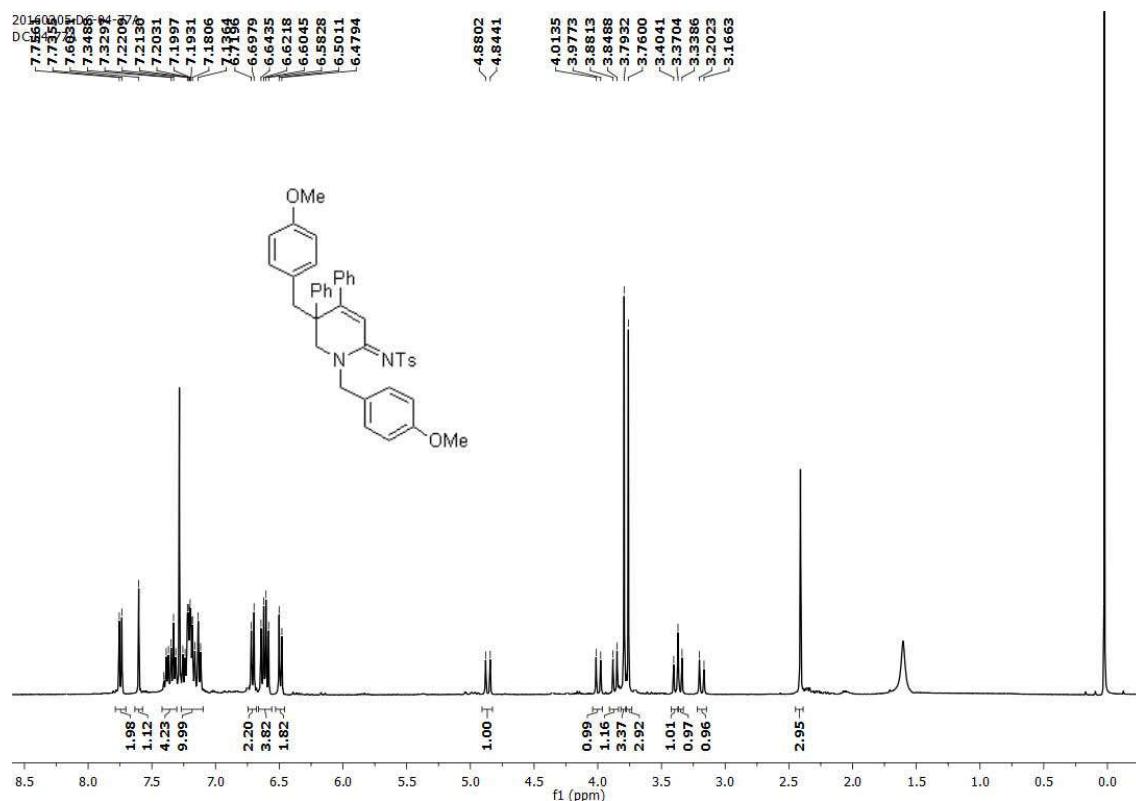
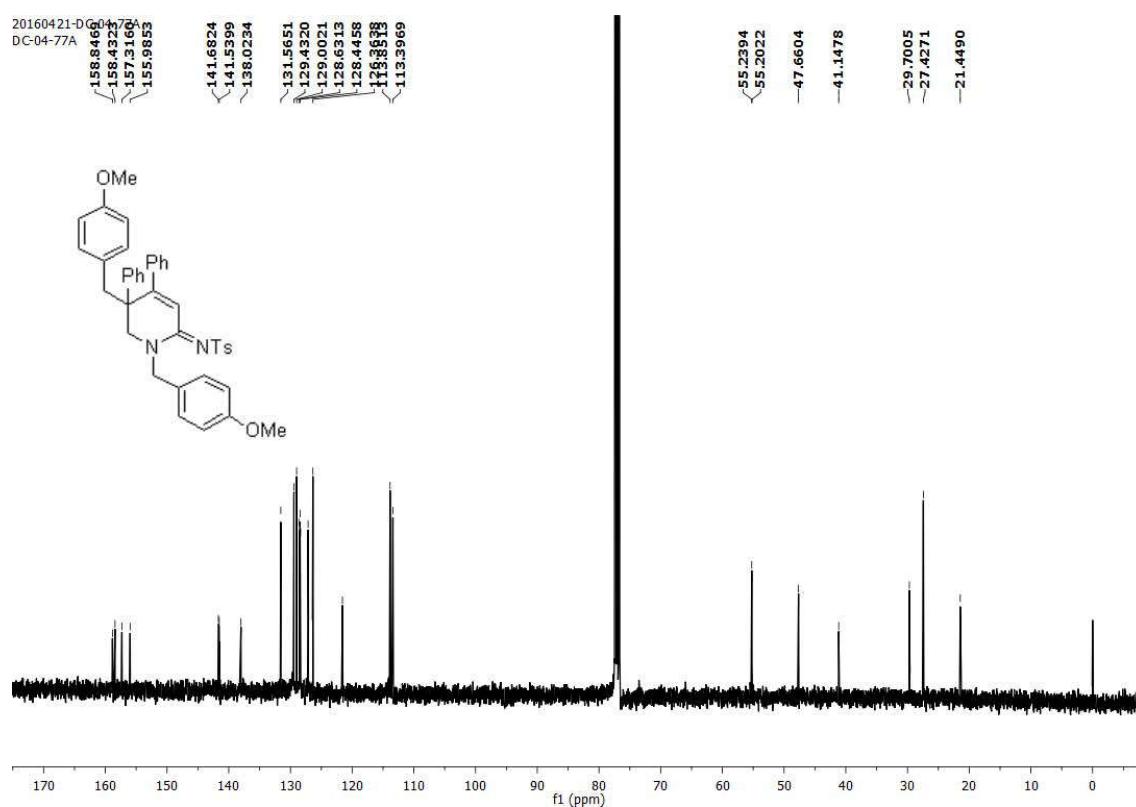


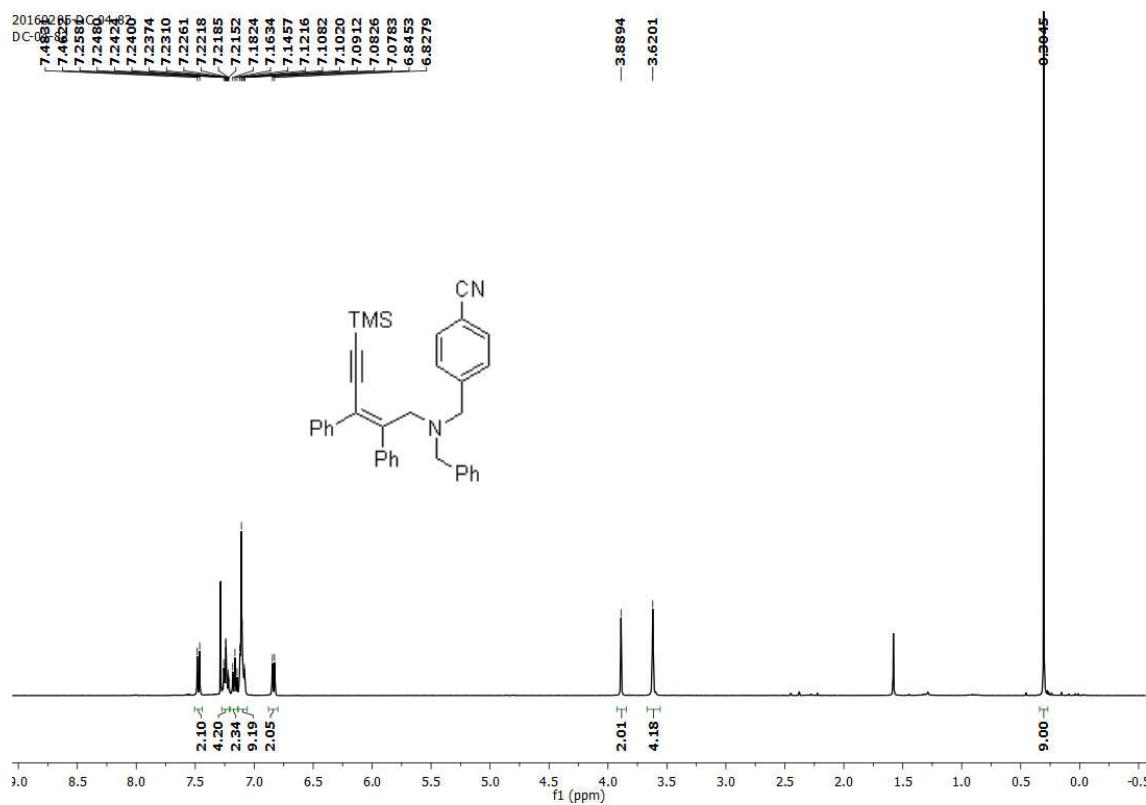
Fig. S144  $^{13}\text{C}$  NMR of S38 in  $\text{CDCl}_3$ .



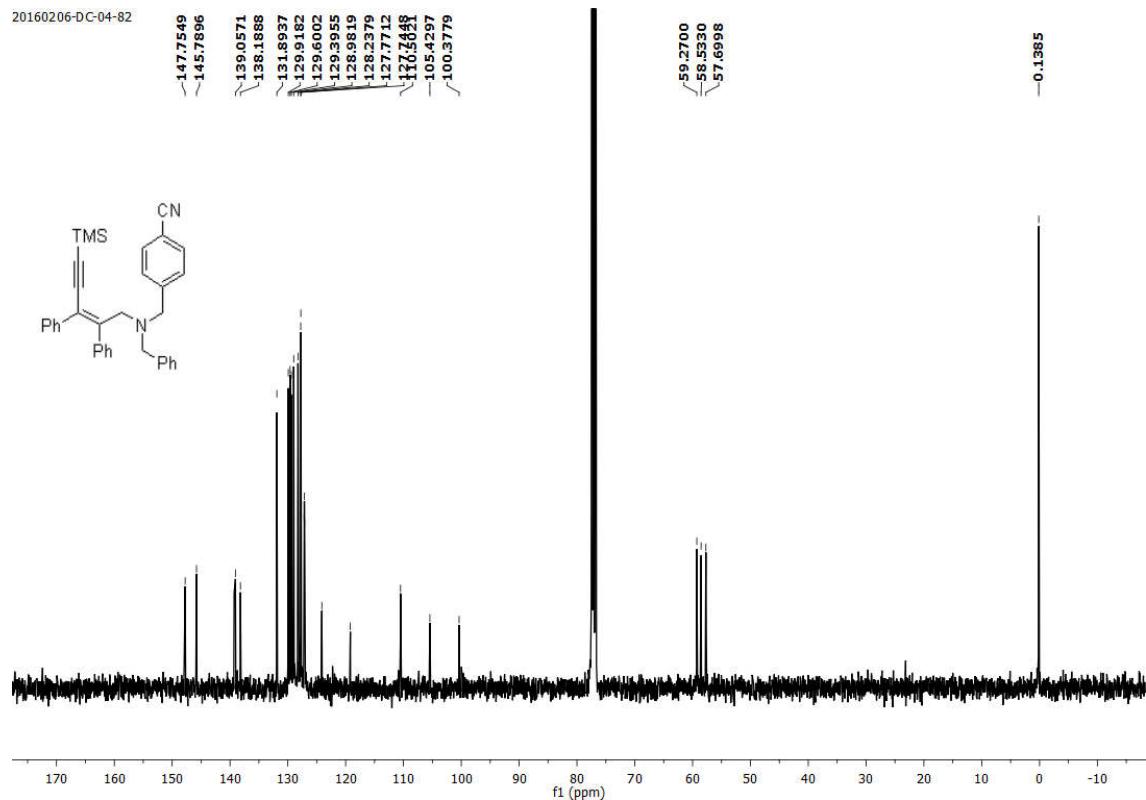
**Fig. S145**  $^1\text{H}$  NMR of **20b** in  $\text{CDCl}_3$ .



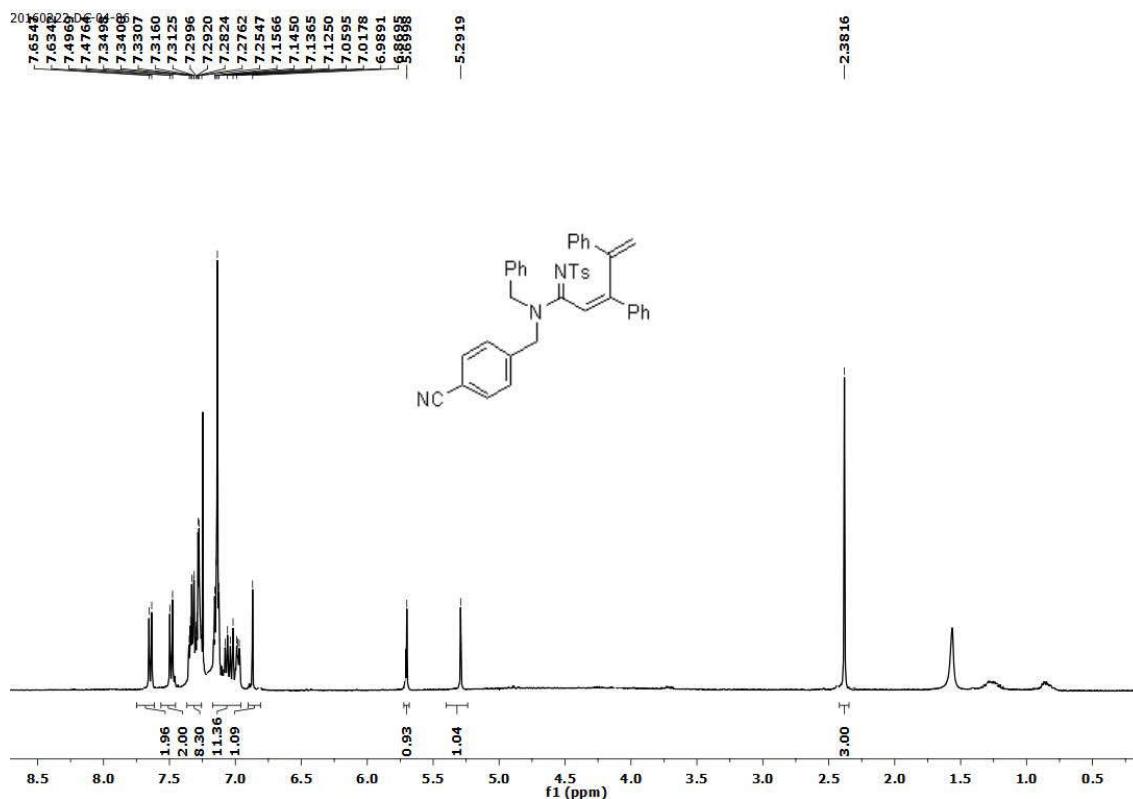
**Fig. S146**  $^{13}\text{C}$  NMR of **20b** in  $\text{CDCl}_3$ .



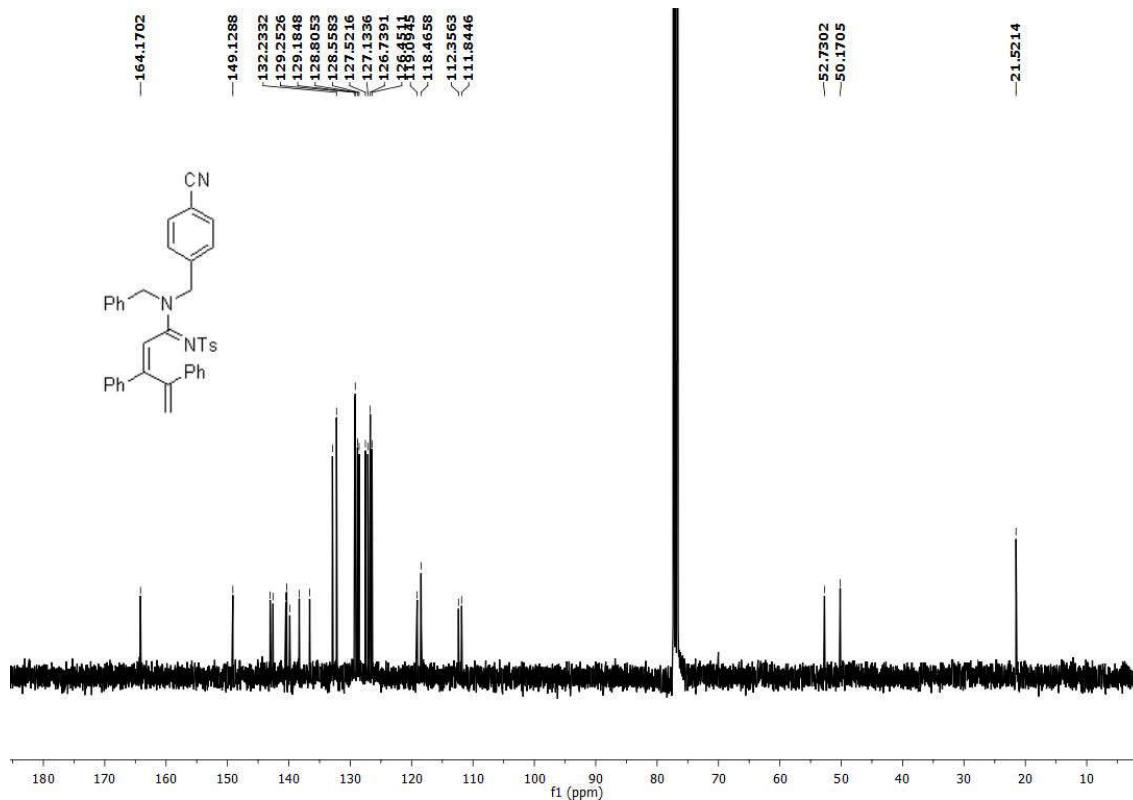
**Fig. S147**  $^1\text{H}$  NMR of S39 in  $\text{CDCl}_3$ .



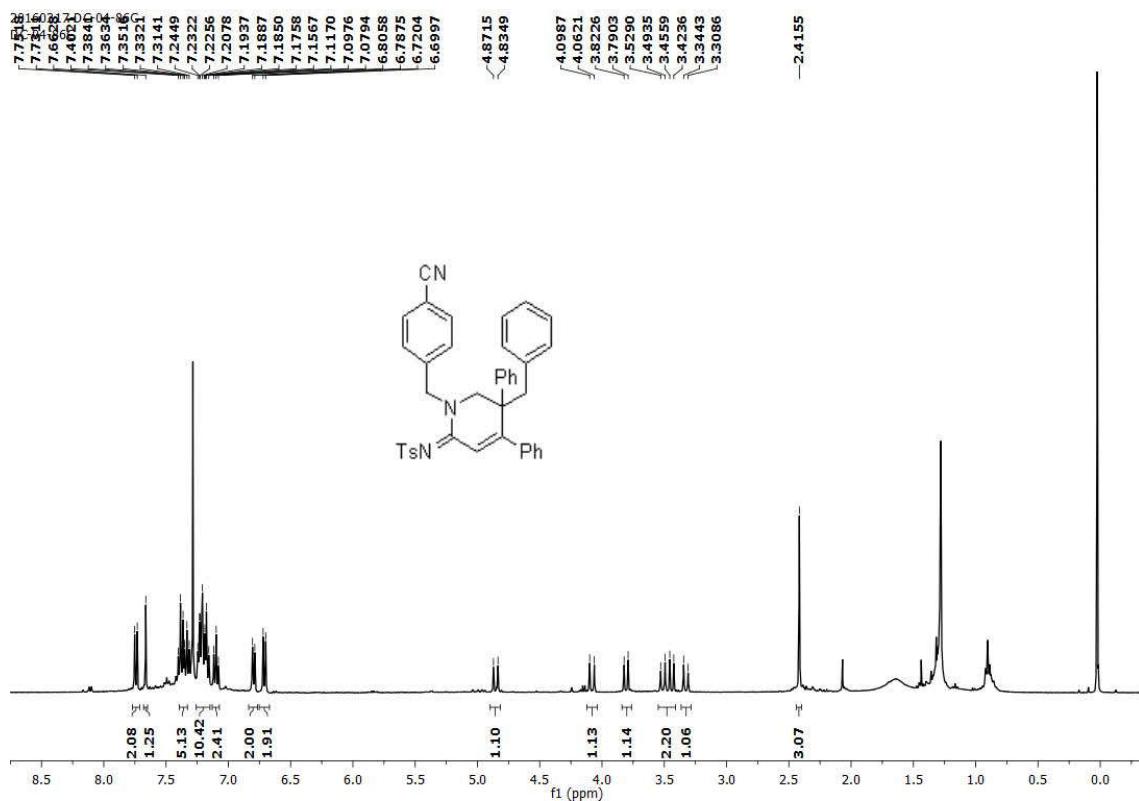
**Fig. S148**  $^{13}\text{C}$  NMR of S39 in  $\text{CDCl}_3$ .



**Fig. S149**  $^1\text{H}$  NMR of **24a** in  $\text{CDCl}_3$ .



**Fig. S150**  $^{13}\text{C}$  NMR of **24a** in  $\text{CDCl}_3$ .



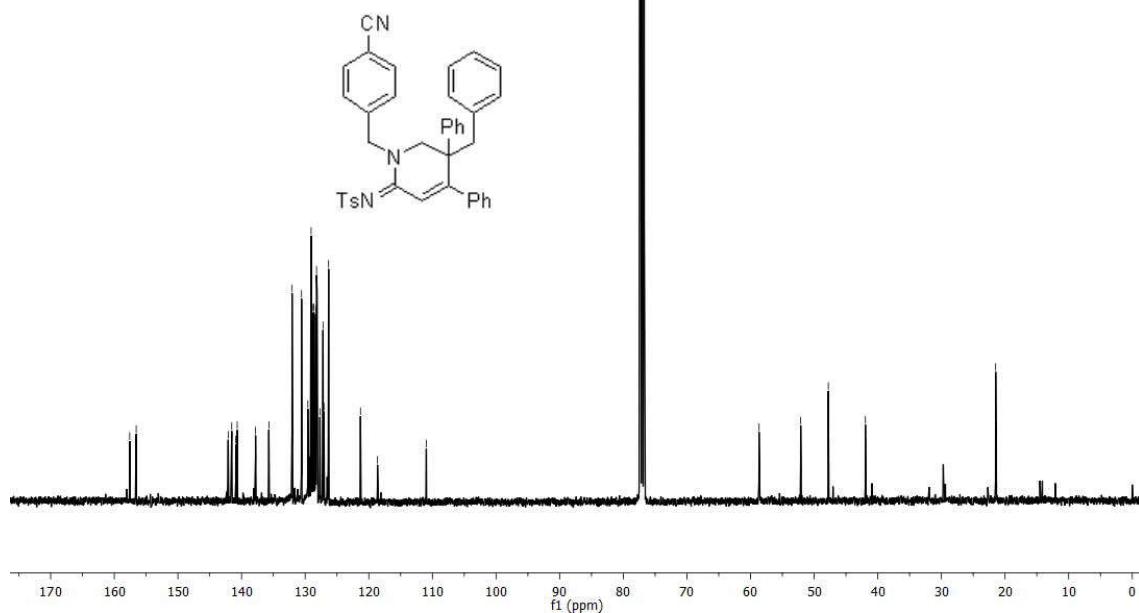
**Fig. S151** <sup>1</sup>H NMR of **24b** in CDCl<sub>3</sub>.

20160407-DC-04-<sup>13</sup>C-86D  
DC-04-86D

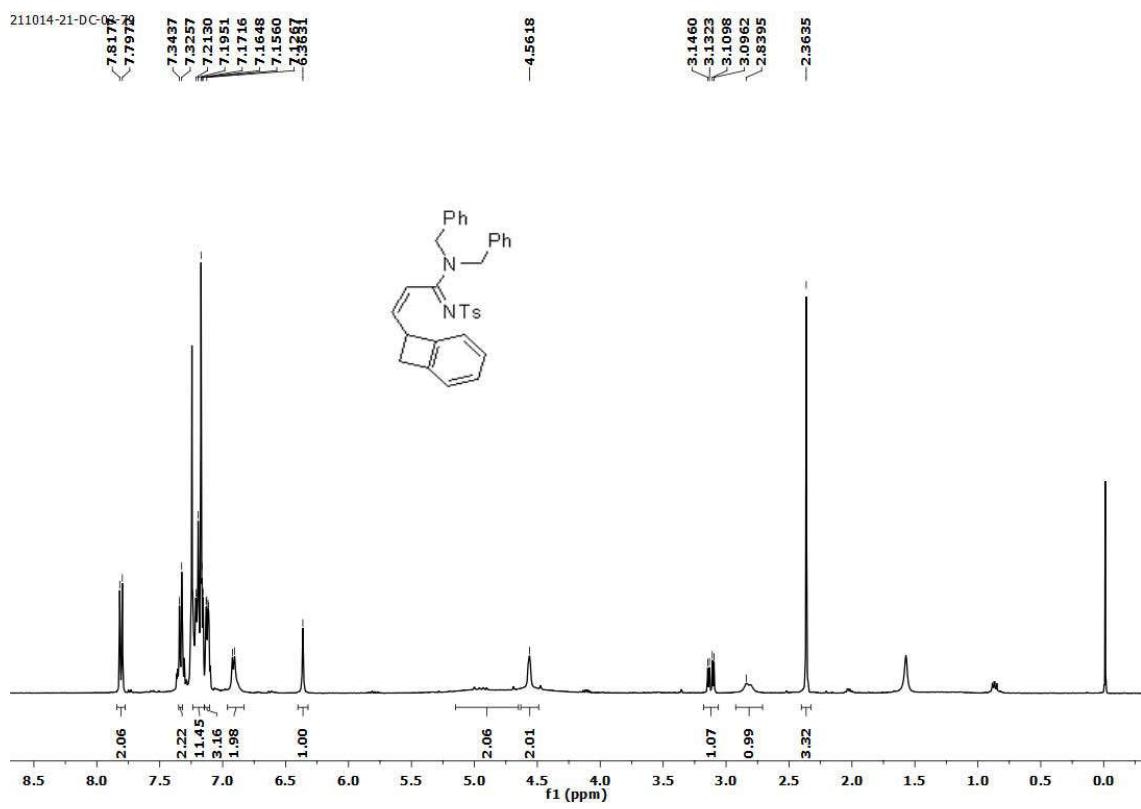
157.5768, 156.5523, 135.7046, 132.0572, 130.5678, 129.5747, 129.0594, 128.8480, 128.6450, 128.3432, 128.2081, 128.1169, 127.6804, 127.1922, 127.0462, 126.3134, 126.3064

4.0987, 4.0621, 3.8226, 3.7903, 3.5290, 3.4935, 3.4559, 3.4236, 3.3443, 3.3086

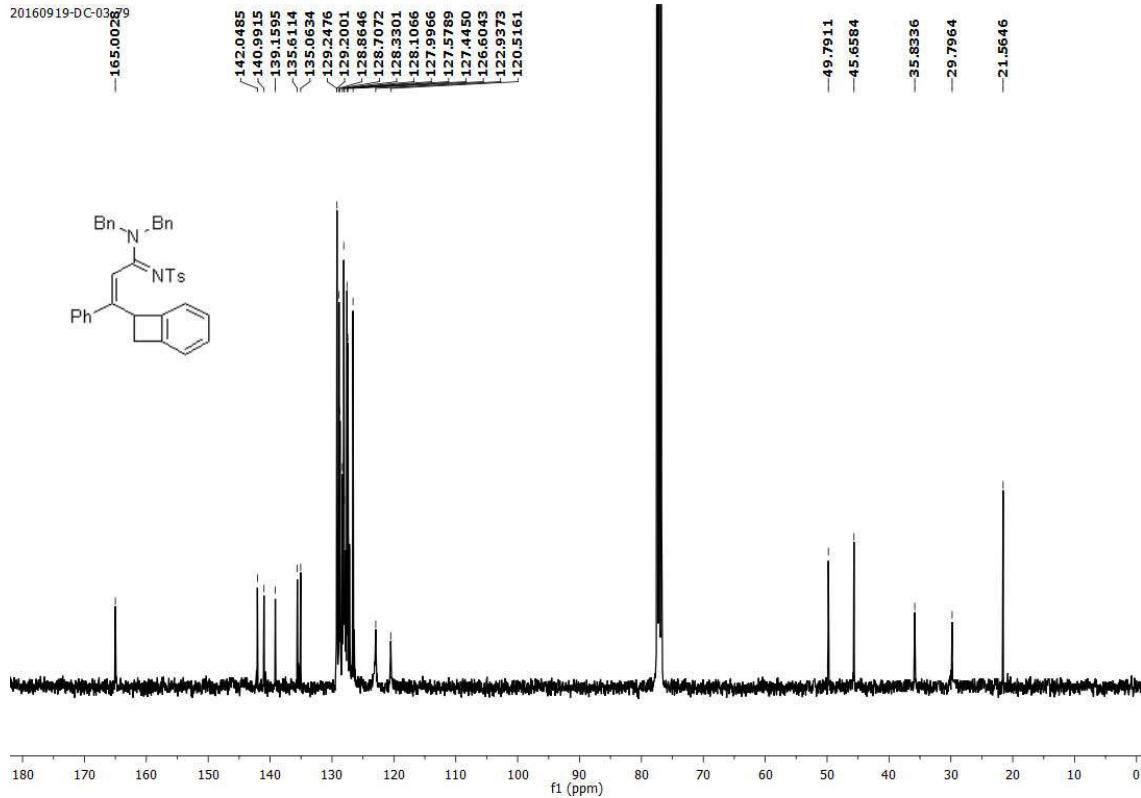
-2.4155, -56.6587, -52.1148, -47.7774, -41.9459, -21.4734



**Fig. S152** <sup>13</sup>C NMR of **24b** in CDCl<sub>3</sub>.



**Fig. S153**  $^1\text{H}$  NMR of **30** in  $\text{CDCl}_3$ .



**Fig. S154**  $^{13}\text{C}$  NMR of **30** in  $\text{CDCl}_3$ .