

Supporting Information For
 N^2 -Selective Iodofunctionalization of Olefin with
 NH -1,2,3-Triazole to provide N^2 -Alkyl Substituted
1,2,3-Triazole

Li-Li Zhu,^{1†} Xiao-Qi Xu, Jin-Wei Shi, Bai-Ling Chen, Zili Chen^{*}

Department of Chemistry, Renmin University of China, Beijing 100872, China

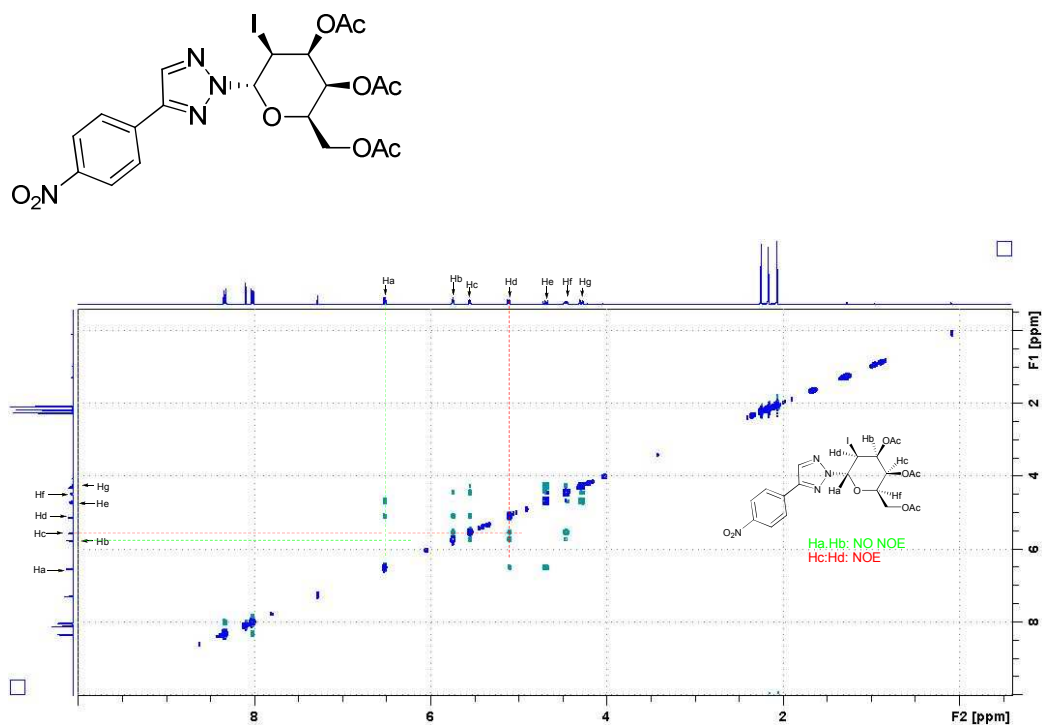
ziliChen@ruc.edu.cn

Contents

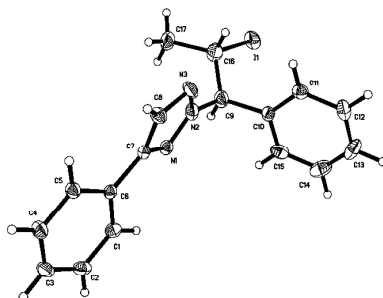
Page	S2	Determination of the Absolute Stereochemistry of Compound 4m by NOESY Spectrum.
Page	S3	The Crystal Structure and Date of Compound 8a .
Page	S5	The reaction of N^I -iodo-1,2,3-triazole 1a-I with 2a .
Page	S6	NMR Date and Spectra.

[†] The current address of this author is at School of Chemistry & Chemical Engineering, Zhoukou Normal University, Zhoukou, Henan, 466001 China

Determination of the Absolute Stereochemistry of Compound 4m by NOESY Spectrum.



The Crystal Structure and Data of Compound **8a**.



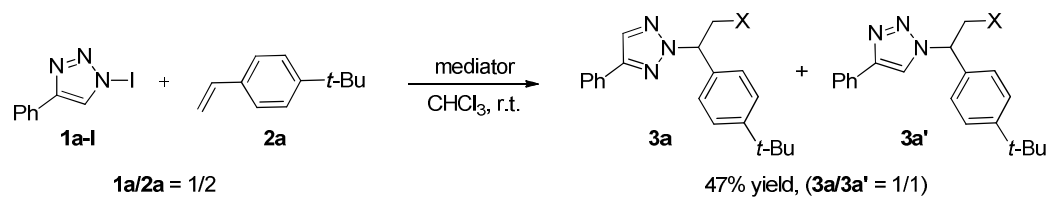
ORTEP (Oak Ridge Thermal Ellipsoid plot) picture of compound **8a** with the displacement ellipsoid drawn at 30% probability.

Table 1. Crystal data and structure refinement for compound **8a**.

Empirical formula	C ₁₇ H ₁₆ I N ₃
Formula weight	389.23
Temperature	153(2) K
Wavelength	0.71073 Å
Crystal system, space group	Monoclinic, P2(1)/c
Unit cell dimensions	a = 16.715(4) Å alpha = 90 deg. b = 5.5827(12) Å beta = 97.706(3) deg. c = 17.440(4) Å gamma = 90 deg.
Volume	1612.8(7) Å ³
Z, Calculated density	4, 1.603 Mg/m ³
Absorption coefficient	1.983 mm ⁻¹
F(000)	768
Crystal size	0.53 x 0.24 x 0.19 mm
Theta range for data collection	2.80 to 28.49 deg.
Limiting indices	-17<=h<=22, -6<=k<=7, -23<=l<=23
Reflections collected / unique	13087 / 4083 [R(int) = 0.0268]

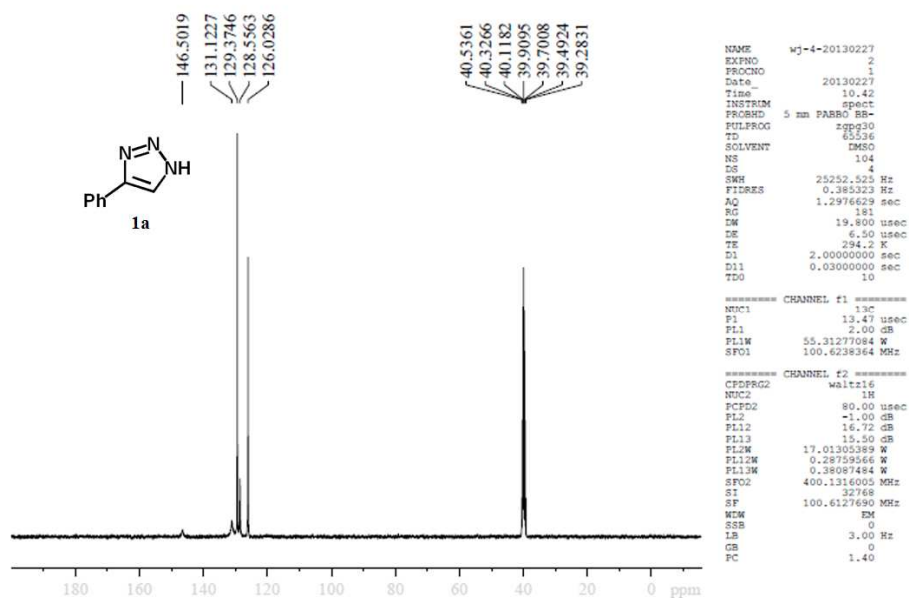
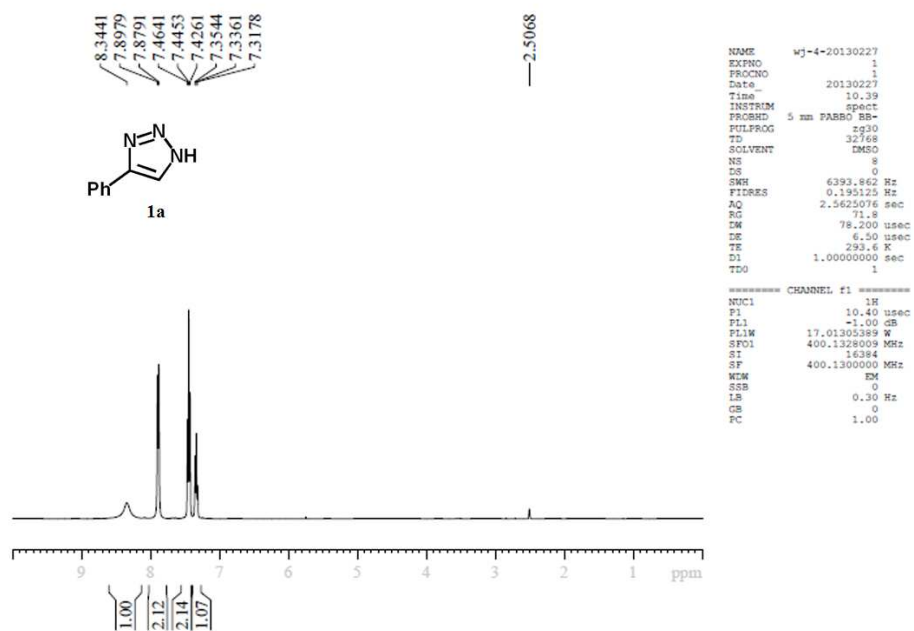
Completeness to theta = 28.49	99.7 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	0.7045 and 0.4196
Refinement method	Full-matrix least-squares on F ²
Data / restraints / parameters	4083 / 0 / 191
Goodness-of-fit on F ²	1.003
Final R indices [I>2sigma(I)]	R ₁ = 0.0495, wR ₂ = 0.1266
R indices (all data)	R ₁ = 0.0578, wR ₂ = 0.1341
Largest diff. peak and hole	1.894 and -1.862 e.Å ⁻³

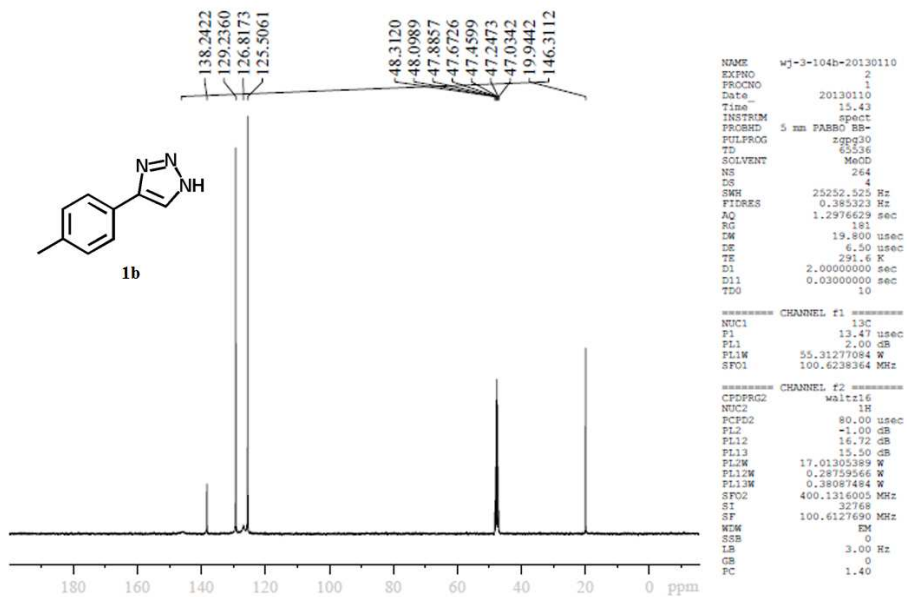
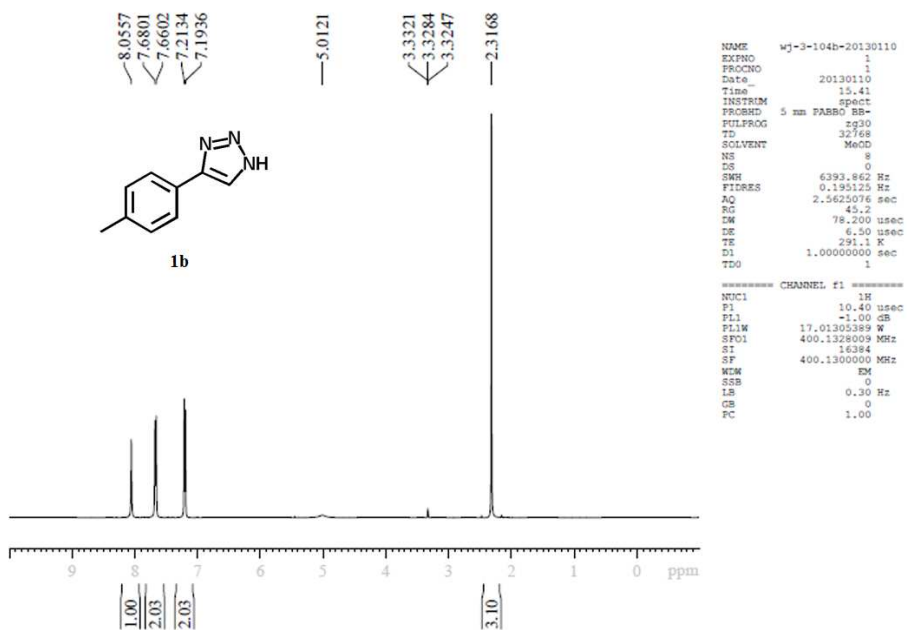
The reaction of *N*^{*l*}-iodo-1,2,3-triazole **1a-I** with **2a**:

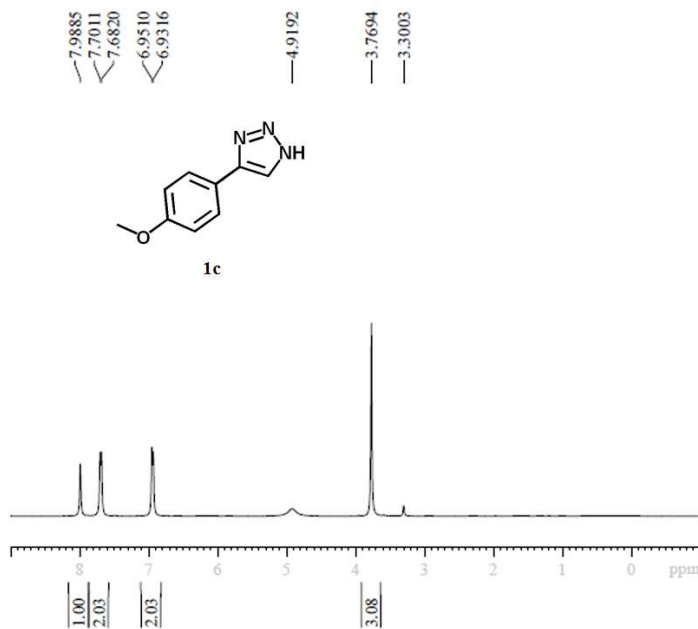


In order to elucidate the reaction mechanism, the reaction of *N*^{*l*}-iodo-1,2,3-triazole **1a-I** with **2a** was performed, which provided N²-triazole **3a** and N¹-triazole **3a'** with a ratio of $N^2/N^l = 1/1$.

NMR Spectra:



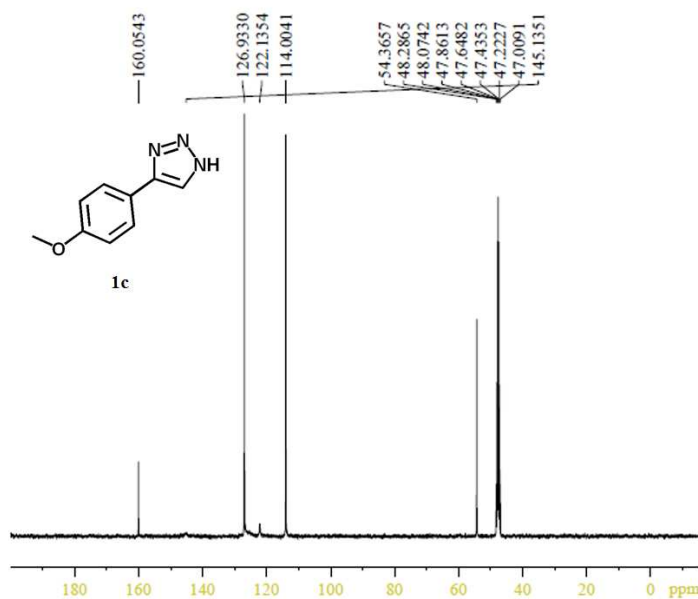




```

NAME      z-11-95a1
EXPNO     1
PROCNO    1
Date_     20121116
Time      17:18
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         32768
SOLVENT   MeOD
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         101
DM         78.200 usec
DE         6.50 usec
TE         295.6 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300114 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

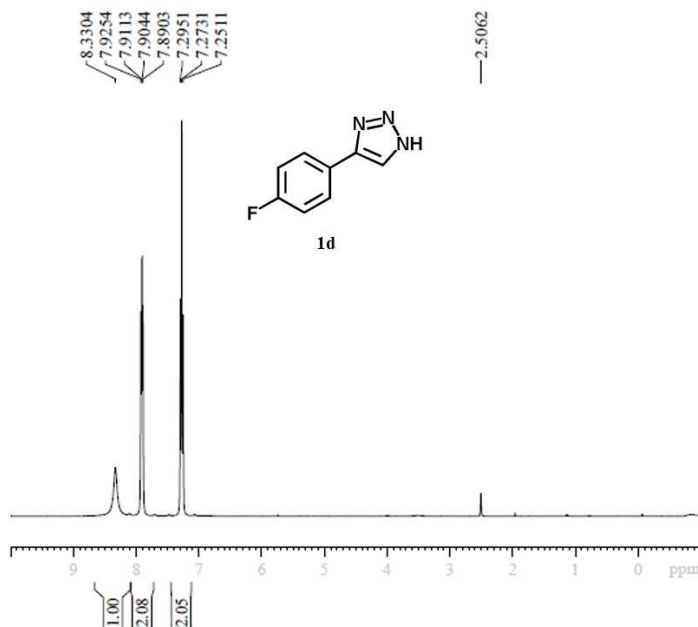
```



```

NAME      z-11-95a1
EXPNO     2
PROCNO    1
Date_     20121116
Time      17:20
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   MeOD
NS         344
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         296.0 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

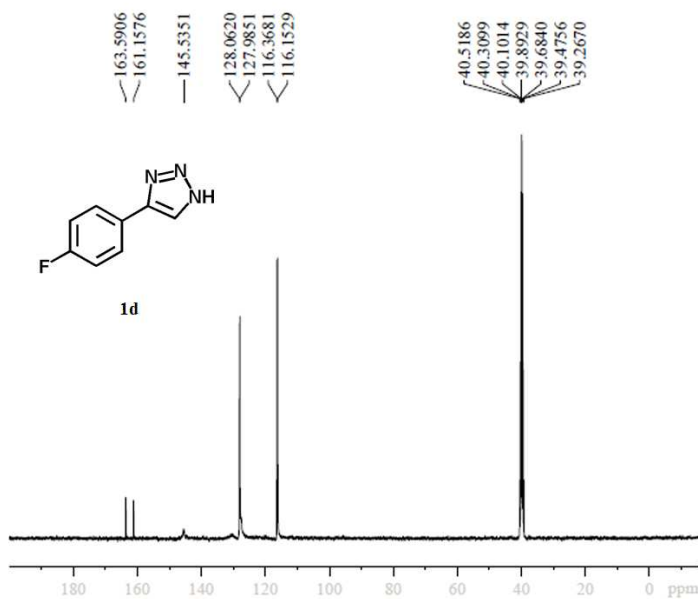
```



```

NAME      wj-3-111a-20130117
EXPNO     1
PROCNO    1
Date_     20130117
Time      10.50
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   DMSO
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         57
EW         78.200 usec
DE         6.50 usec
TE         292.6 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300000 MHz
WDW        EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

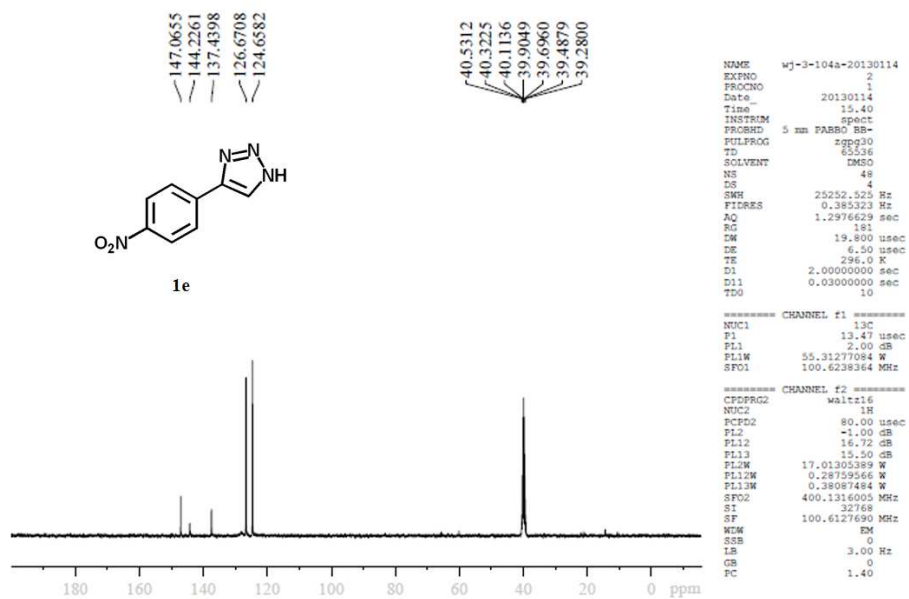
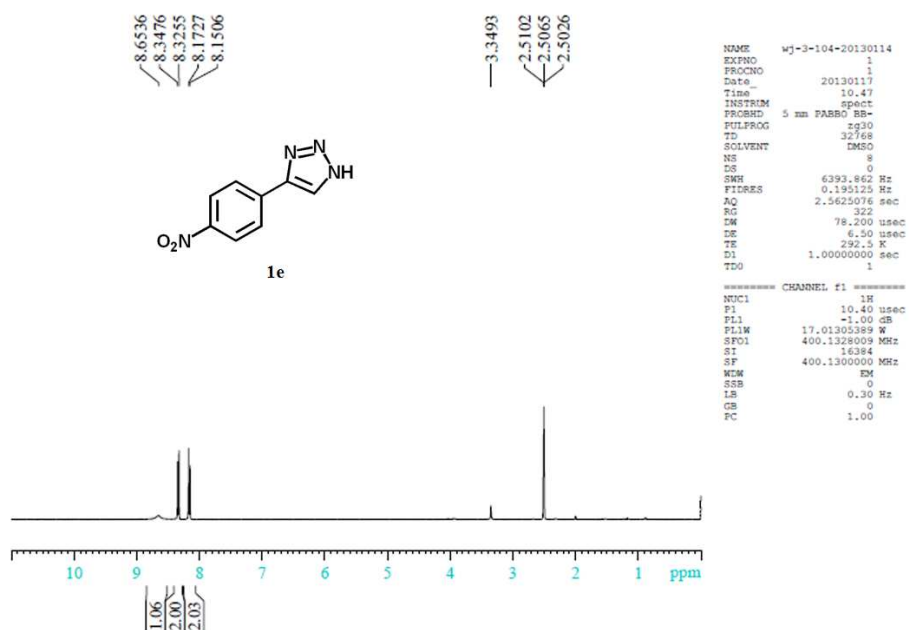
```

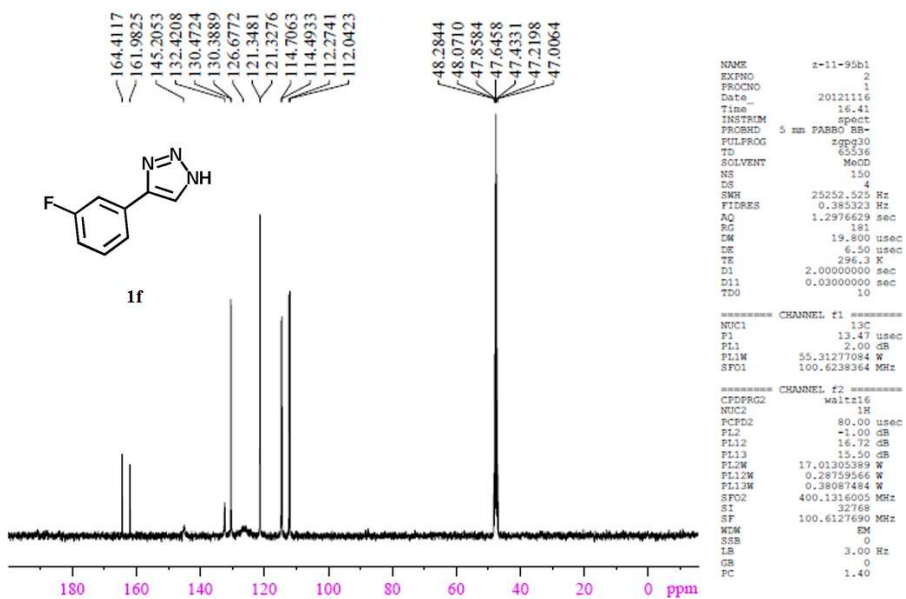
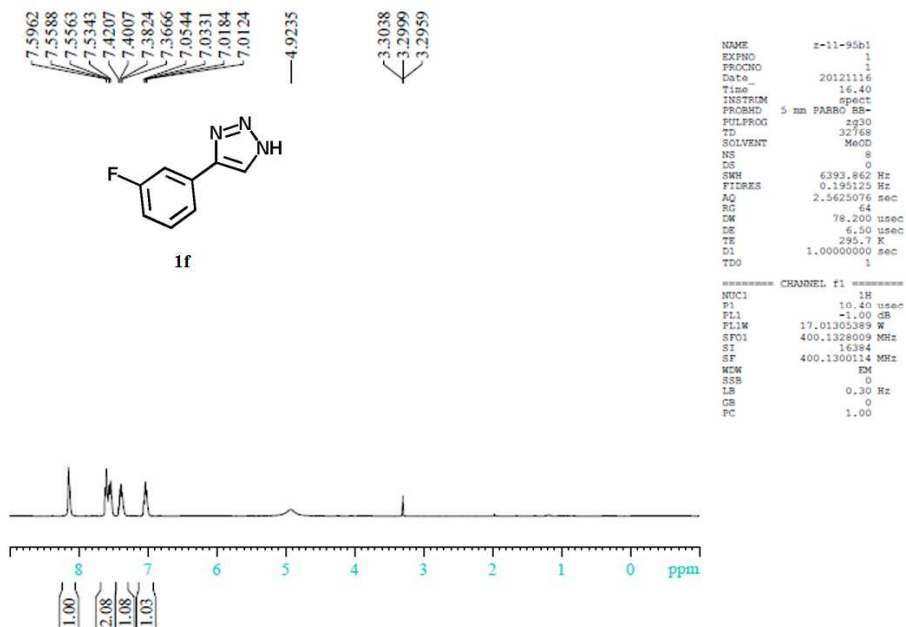


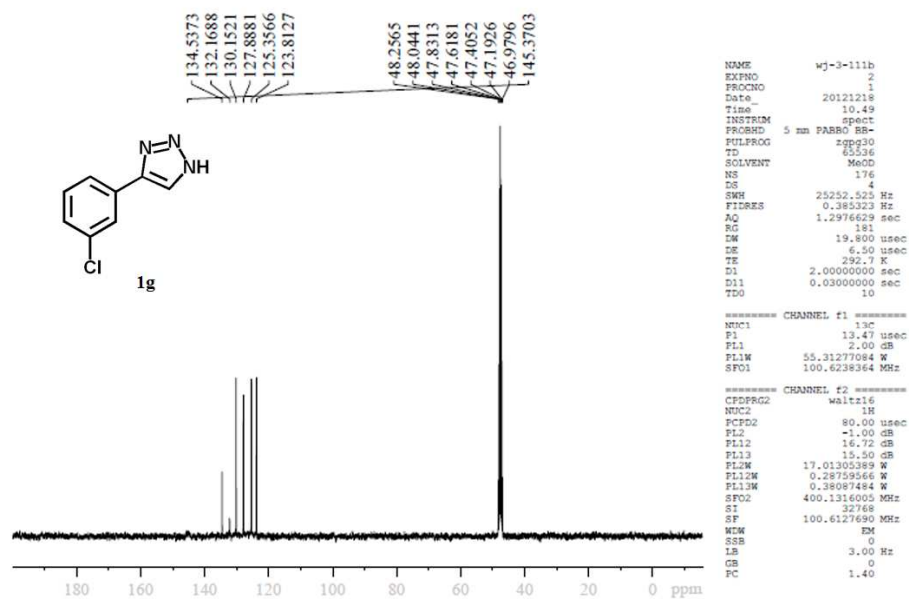
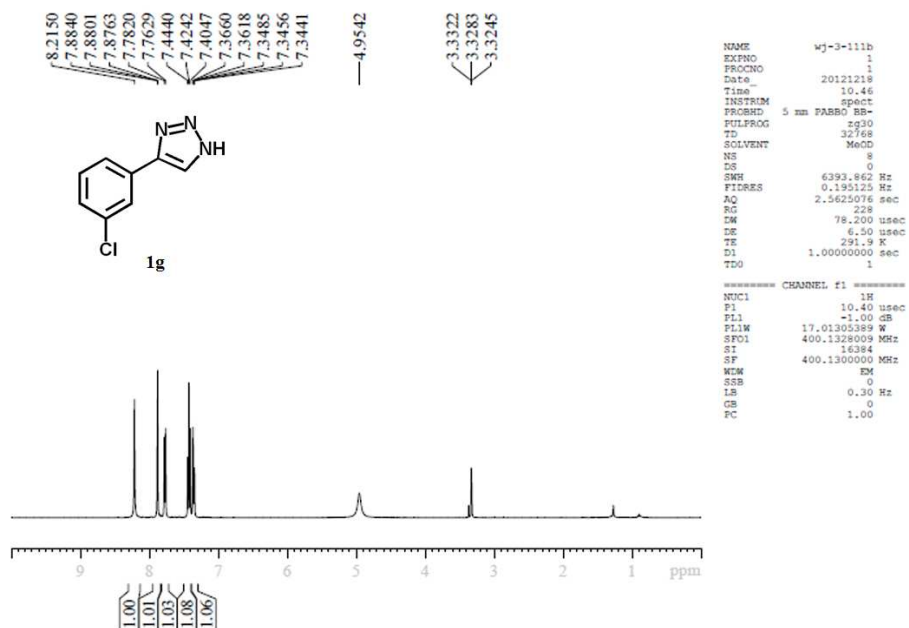
```

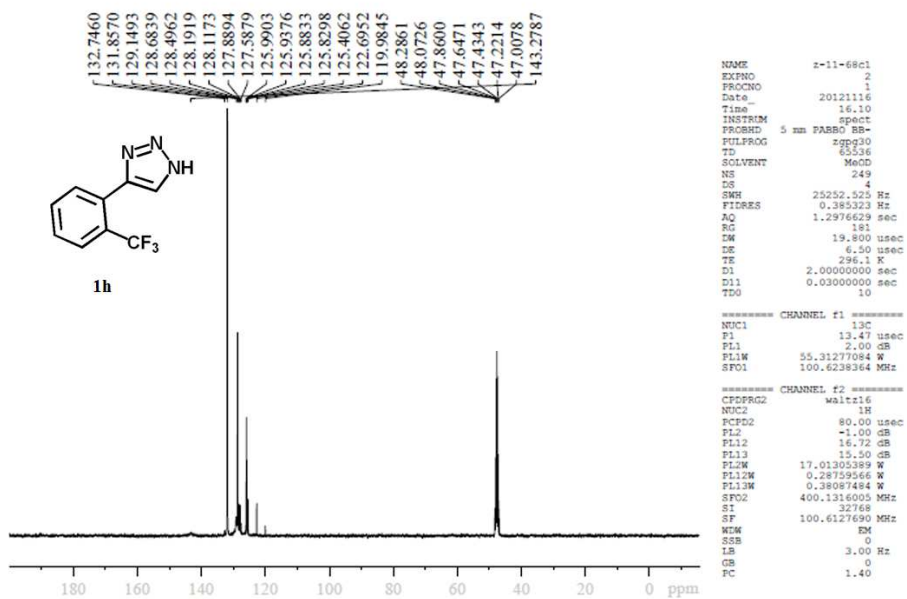
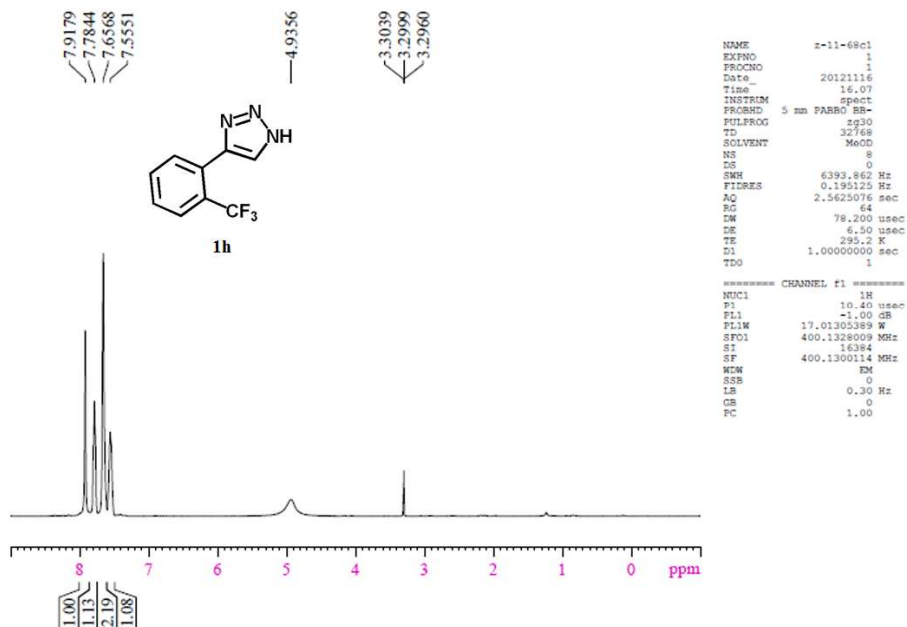
NAME      wj-3-111a-20130117
EXPNO     2
PROCNO    1
Date_     20130117
Time      10.53
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   DMSO
NS         4
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
EW         19.800 usec
DE         6.50 usec
TE         293.2 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38987484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

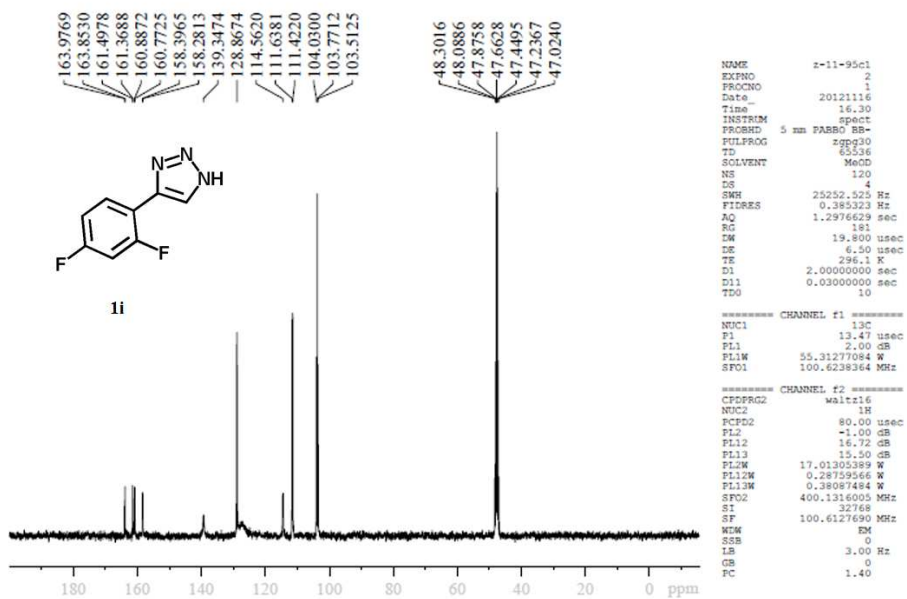
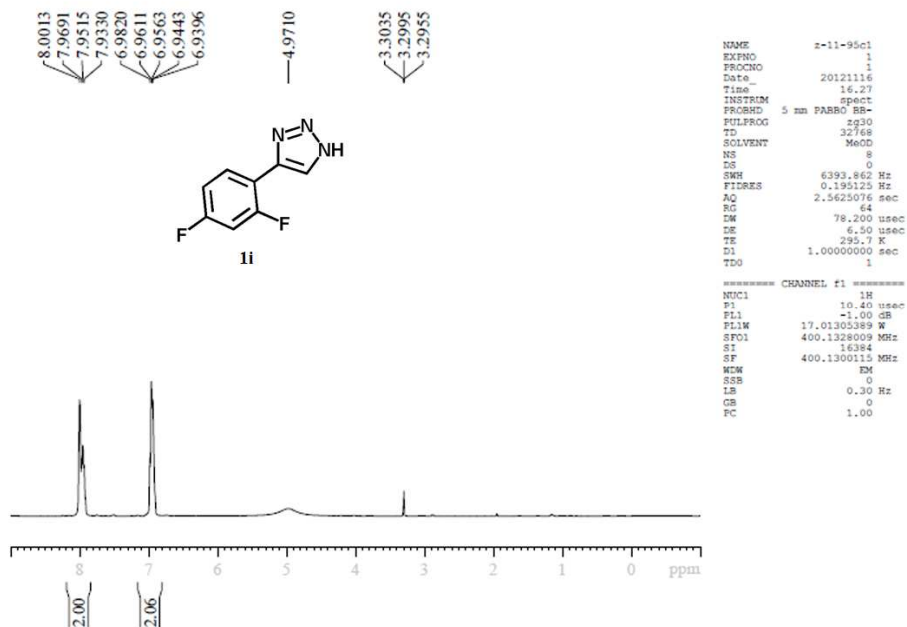
```

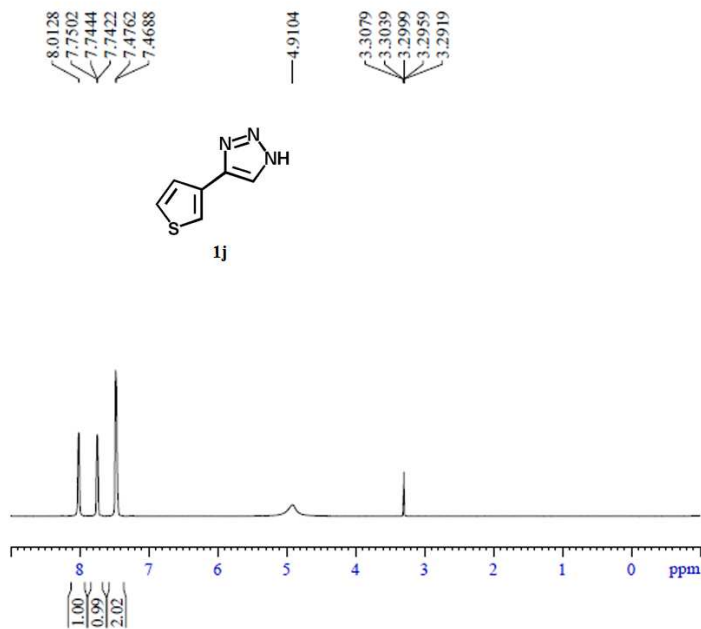








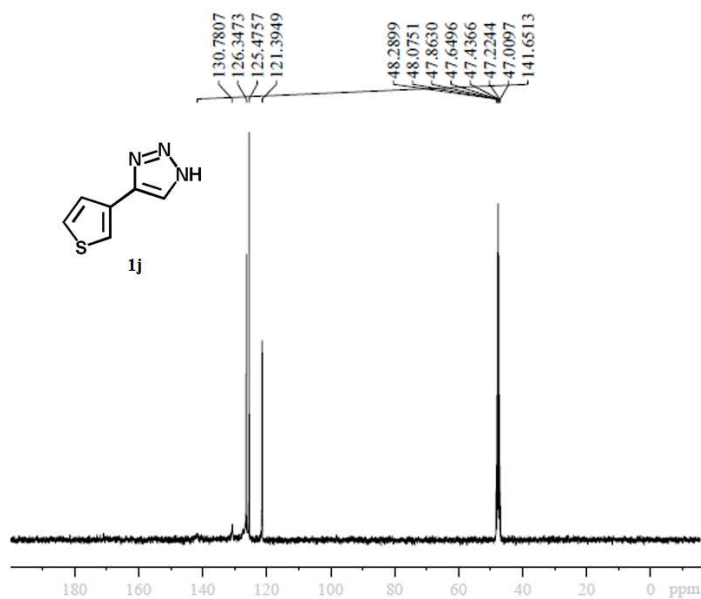




```

NAME      z-11-68b1
EXPNO     1
PROCNO    1
Date_     20121116
Time      16.52
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         32768
SOLVENT    MeOD
NS          8
DS          0
SWH         6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         144
DM         78.200 usec
DE         6.50 usec
TE         295.8 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300114 MHz
WDW         EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

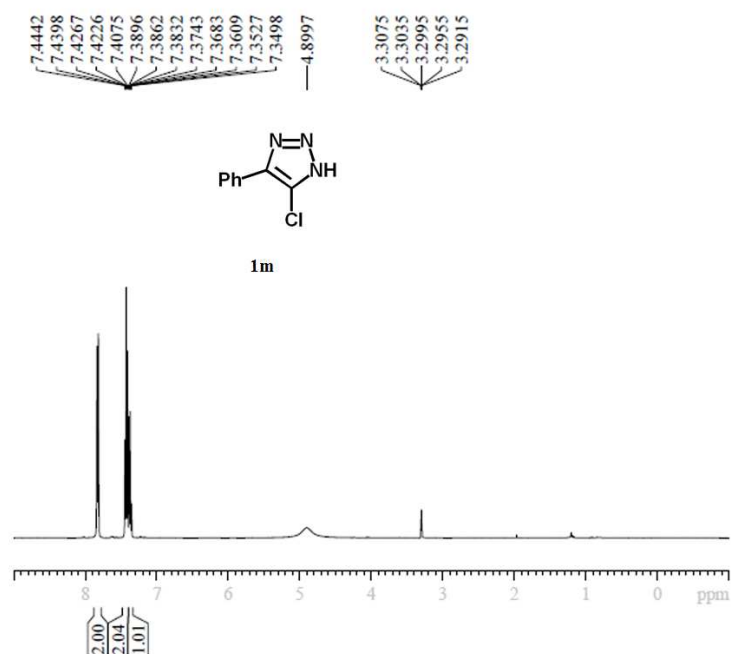
```



```

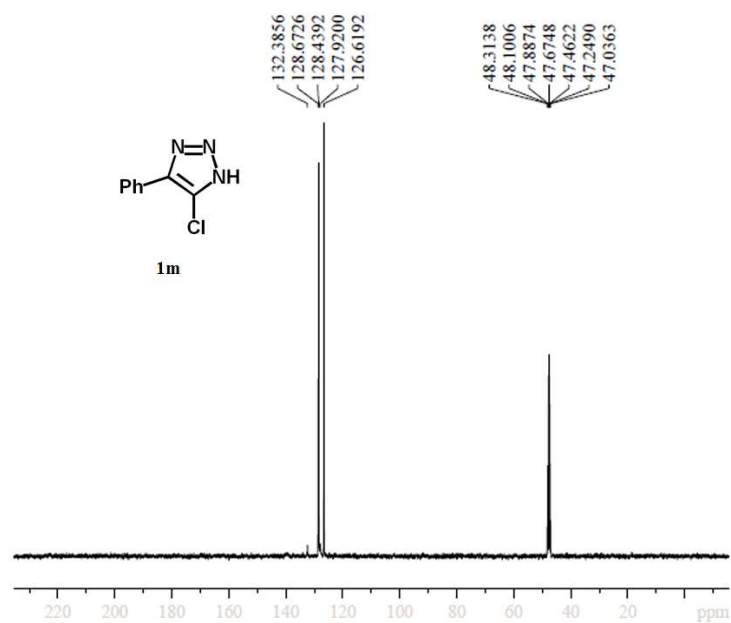
NAME      z-11-68b1
EXPNO     2
PROCNO    1
Date_     20121116
Time      16.54
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         65536
SOLVENT    MeOD
NS         240
DS          4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         296.6 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW         EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```



```
NAME          =a-12-177A1
EXPNO         1
PROCNO        1
Date_         20180604
Time          18.46
INSTRUM       5 mm FARE-BB Spect
PROBHD        QNP1H
PULPRG        zgpg
TD            92768
SOLVENT       MeOD
NS            1600
DS            4
SWH           6392.864 Hz
FIDRES        0.168126 Hz
AQ            2.5628976 sec
RG            65.5
DQ            78.700 ns used
DE            6.80 us used
TE            298.2 K N
DELTA          1.000000 s
TDO           1
```

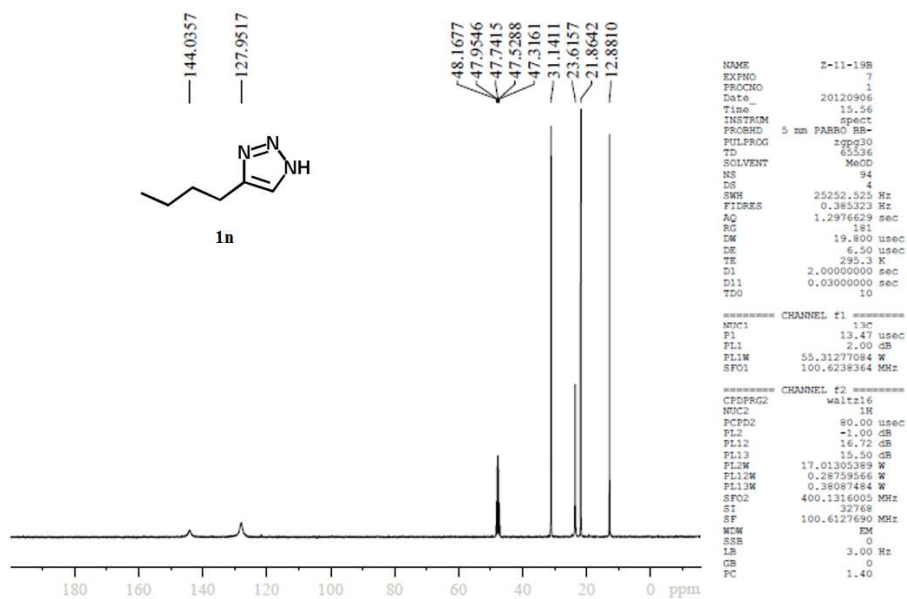
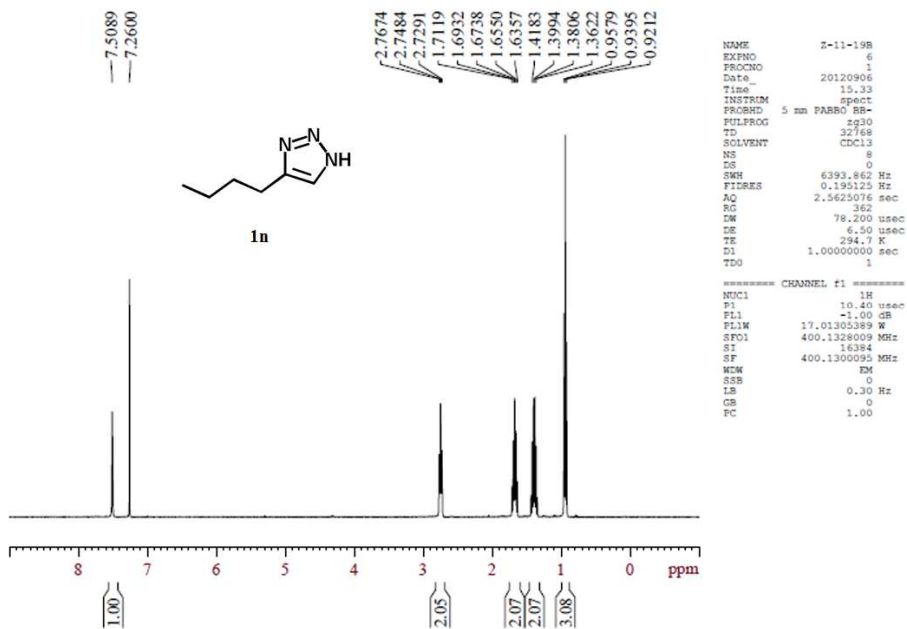
```
===== CHANNEL f1 =====
NUC1          1H      1.00 MHz
F1A           10.40 dB
PL1           17.01328989 MHz
PL2           400.1328989 MHz
SSB           2    16984
STW           400.1300116 MHz
SFN           400
GB            0.30 Hz
PC            0.00
SC            0
EC            0
```

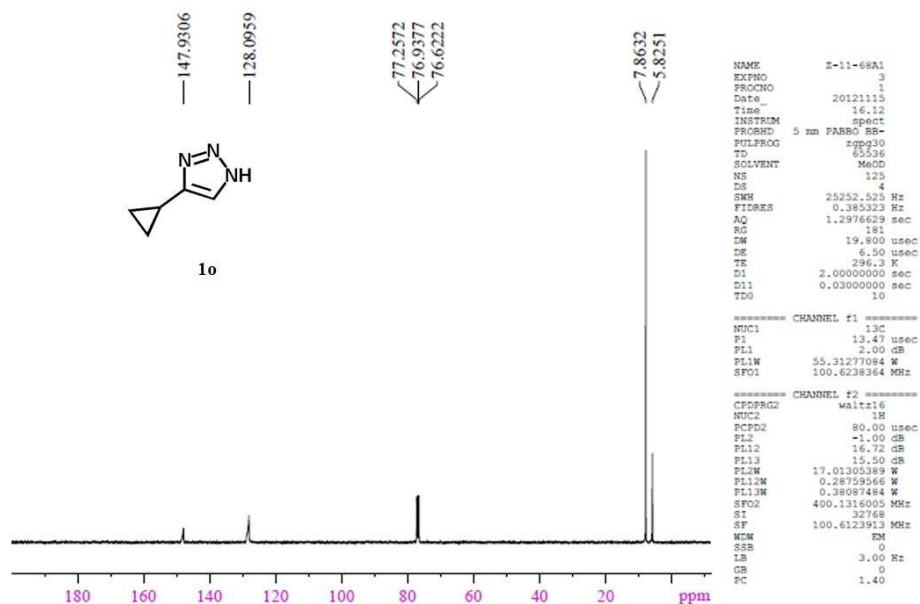
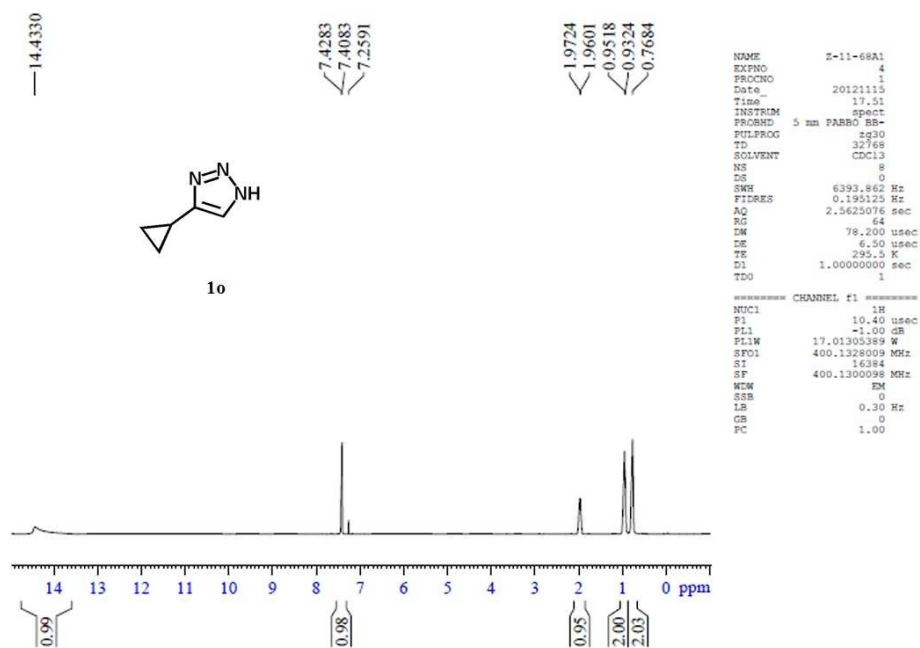


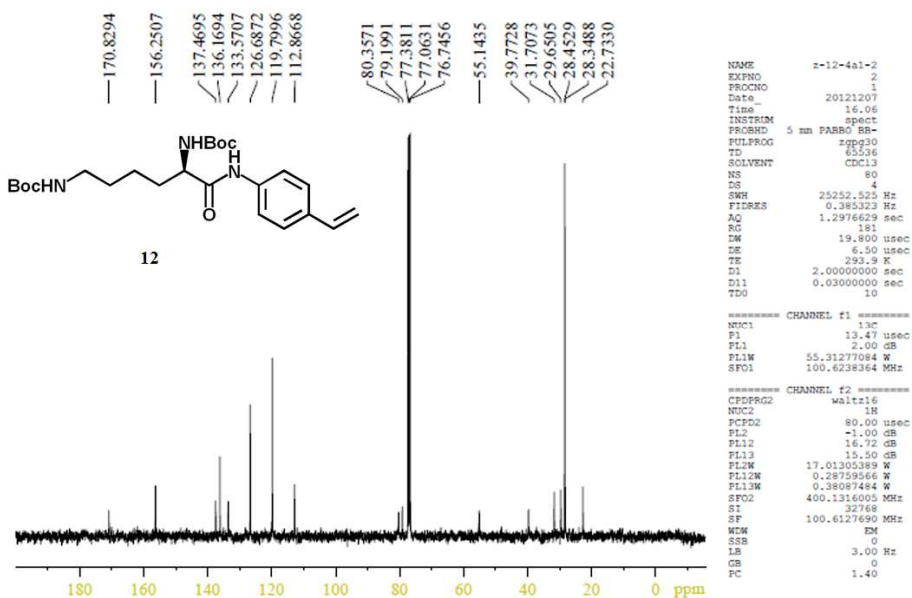
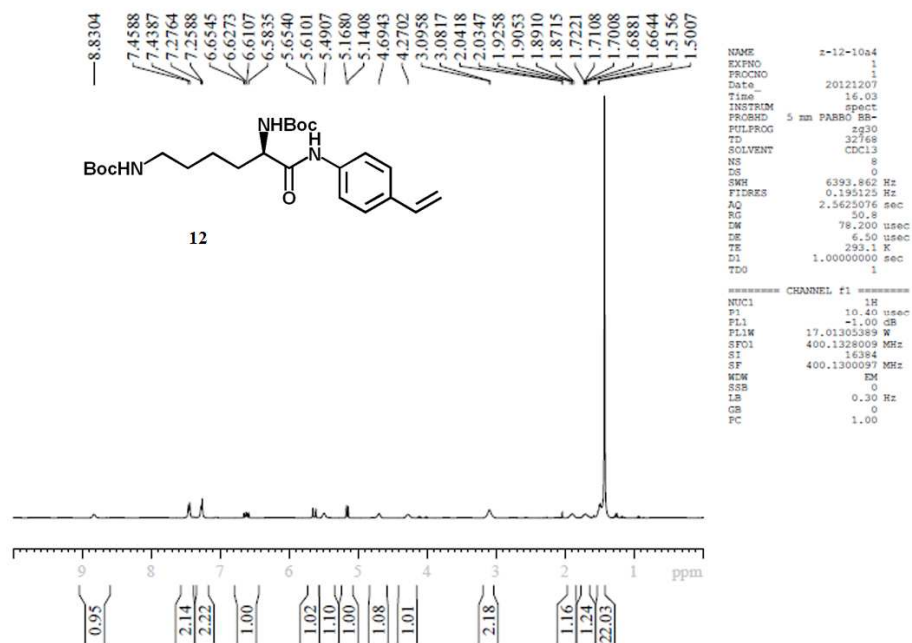
```
NAME          =-12-117A1
EXPNO         1
PROCNO       1
Time         20180604
Time         15:48
INSTRUM      spect
PROBHD       5 mm FAREO-BB-
PULPROG      zgpg30
SOLVENT      MeOD
DS           112
US           1
WINDW        25362.502 Hz
AQ          0.35523 Hz
FIDRES       1.23767629 sec
RG           80.6
DE           15.000 usec
TE           299.6 K
DQ           2.00000000 sec
DELTA        0.03000000 sec
TD0          10

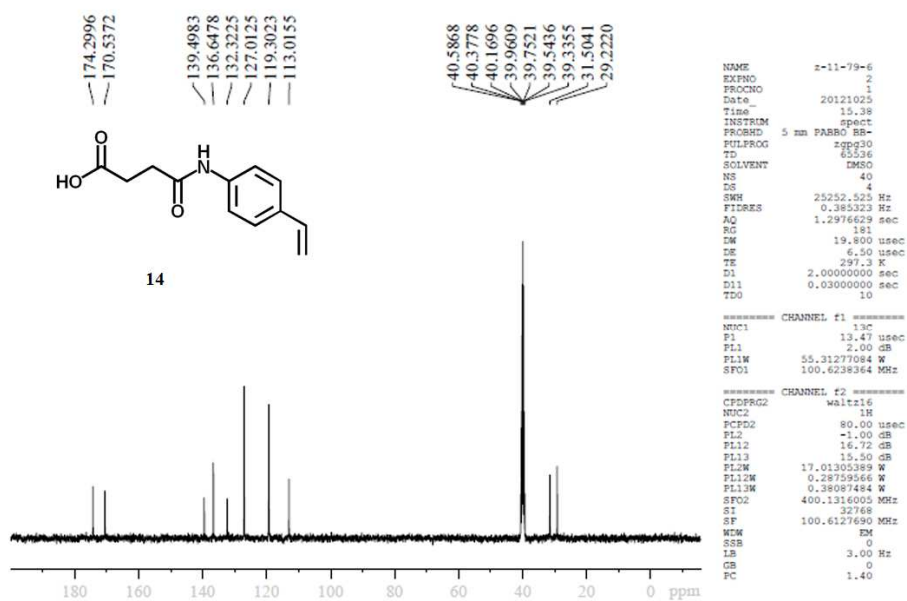
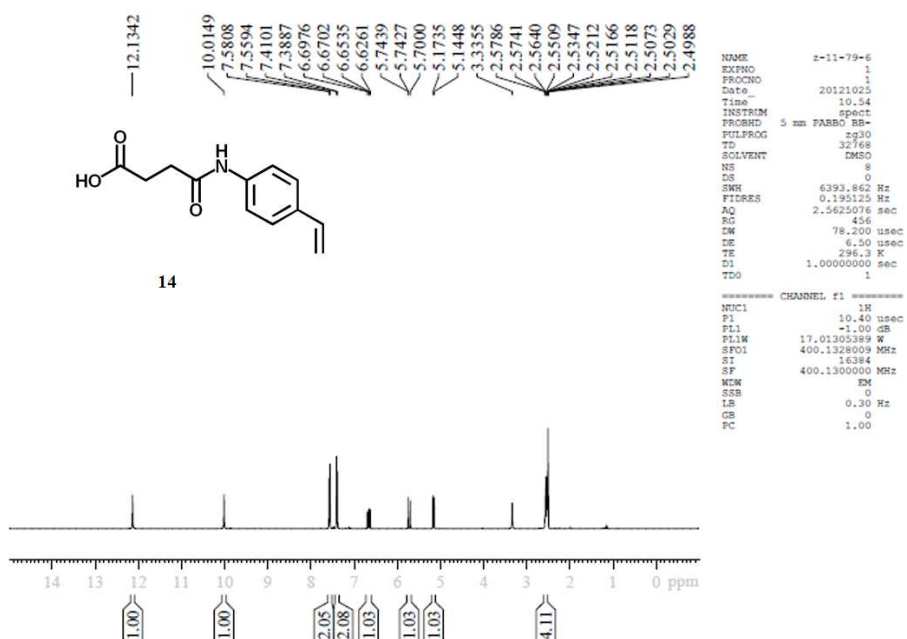
===== CHANNEL #1 =====
NUC1         13C
P1           13.47 usec
PL1          0.00000000 dB
F1          55.1312000 MHz
SF01         100.6283634 MHz

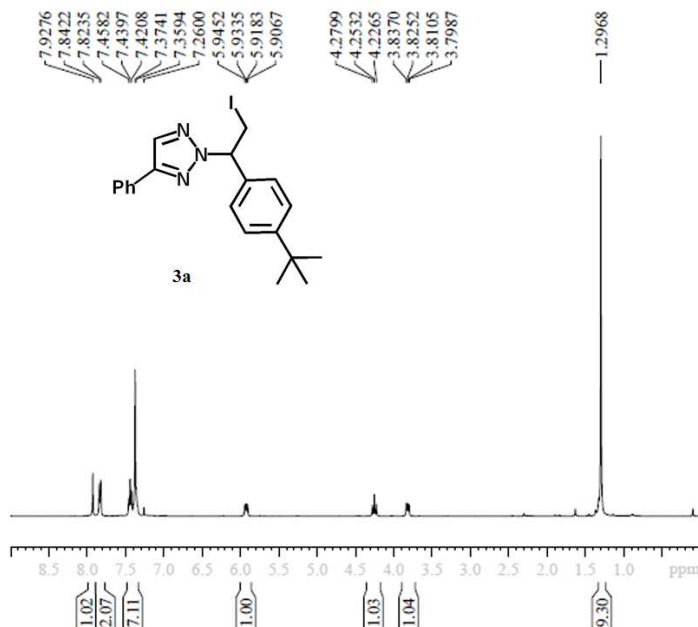
===== CHANNEL #2 =====
CPDPRG2      waltz16
NUC2         1H
PCPD2        80.00 usec
PL2          0.00000000 dB
F12         16.0125000 MHz
PL12         15.90 dB
PL13         17.12103859 MHz
PL14         0.3876688 MHz
PL15         0.38087194 MHz
PL16         400.1316058 MHz
SF02         32.7678 MHz
SF          100.6127680 MHz
WINDW        EM
SSB          0.00 Hz
GB           0.0
PC           1.40
```







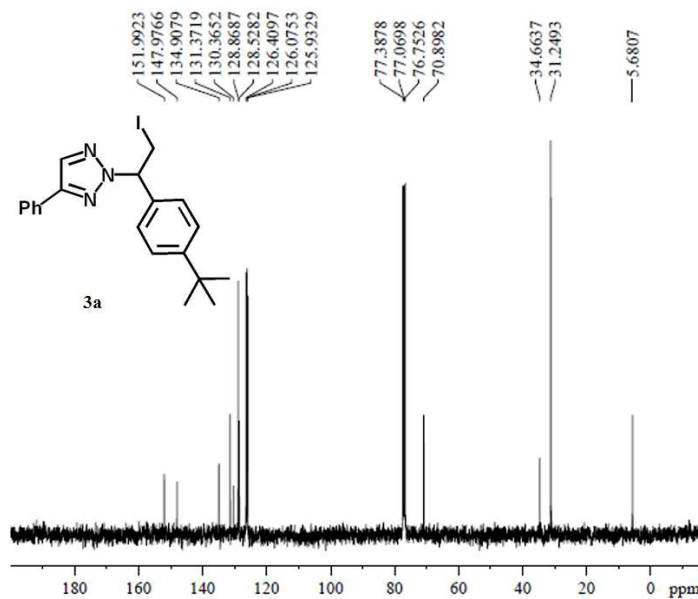




```

NAME      z-11-42C1
EXPNO     1
PROCNO    1
Date_     20120914
Time      16.08
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         101
DM         78.200 usec
DE         6.50 usec
TE         294.8 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300094 MHz
WDW        EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

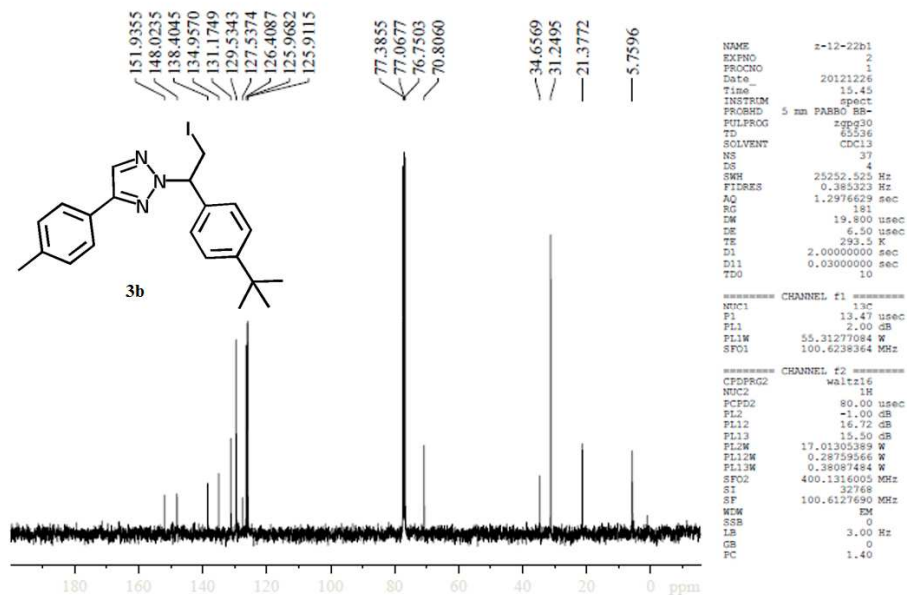
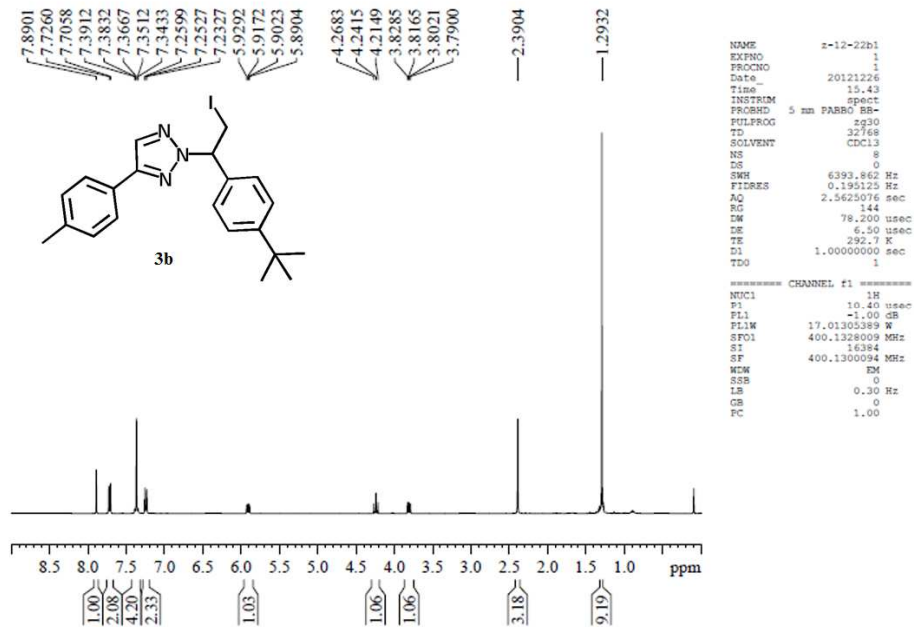
```

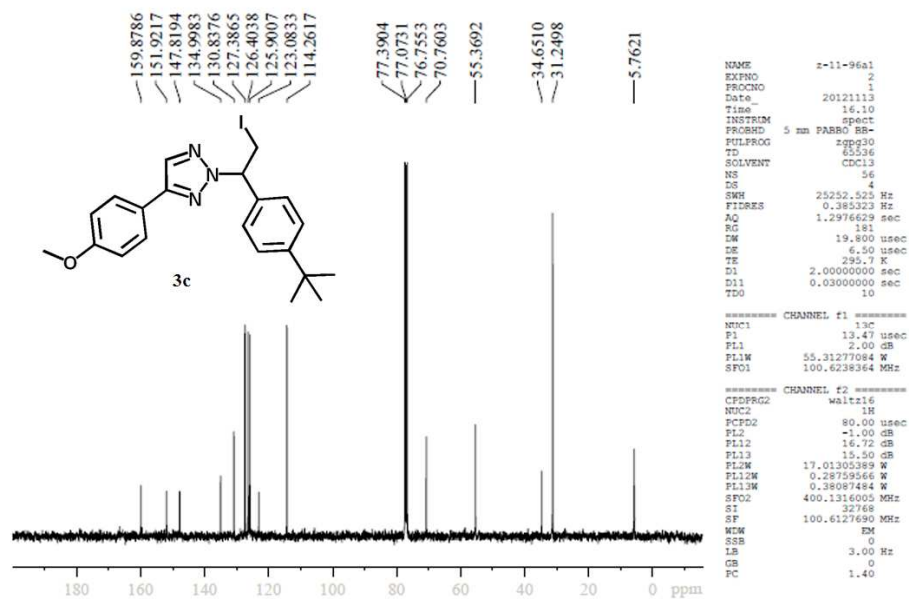
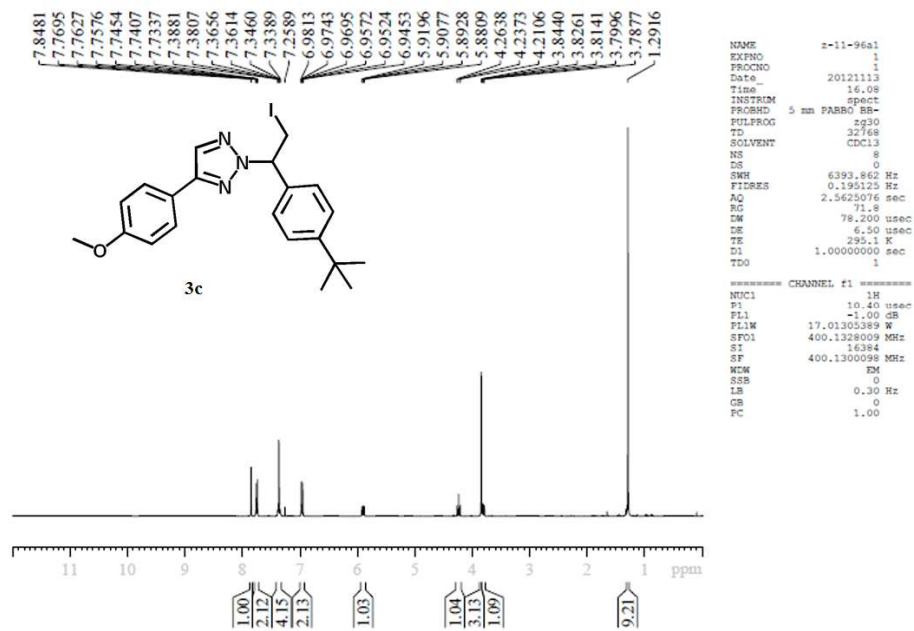


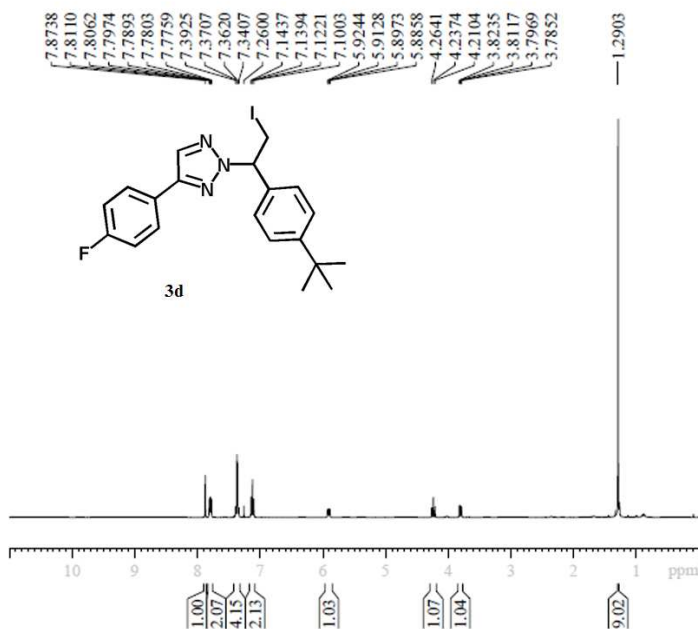
```

NAME      z-11-38F1
EXPNO     2
PROCNO    1
Date_     20120912
Time      16.04
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   CDCl3
NS         24
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         295.7 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759466 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```



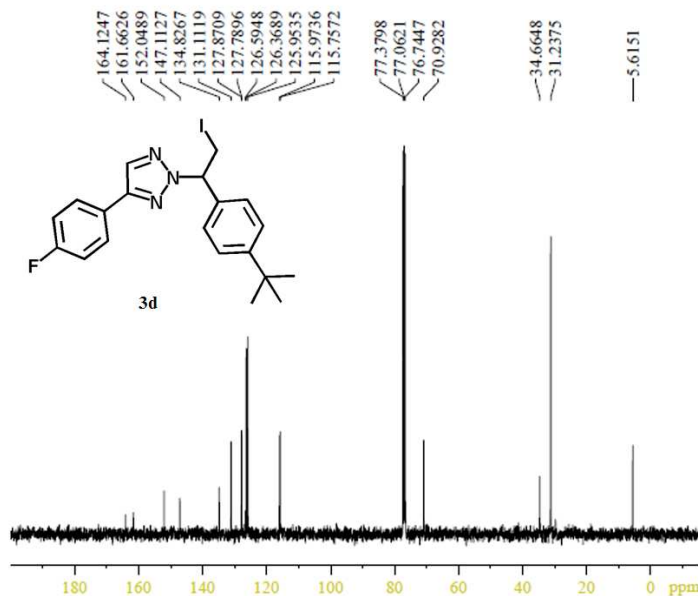




```

NAME      z-12-23a1
EXPNO     1
PROCNO    1
Date_     20121226
Time      15:51
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         144
EW         78.200 usec
DE         6.50 usec
TE         293.1 K
D1         1.00000000 sec
D10        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300094 MHz
WDW         EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

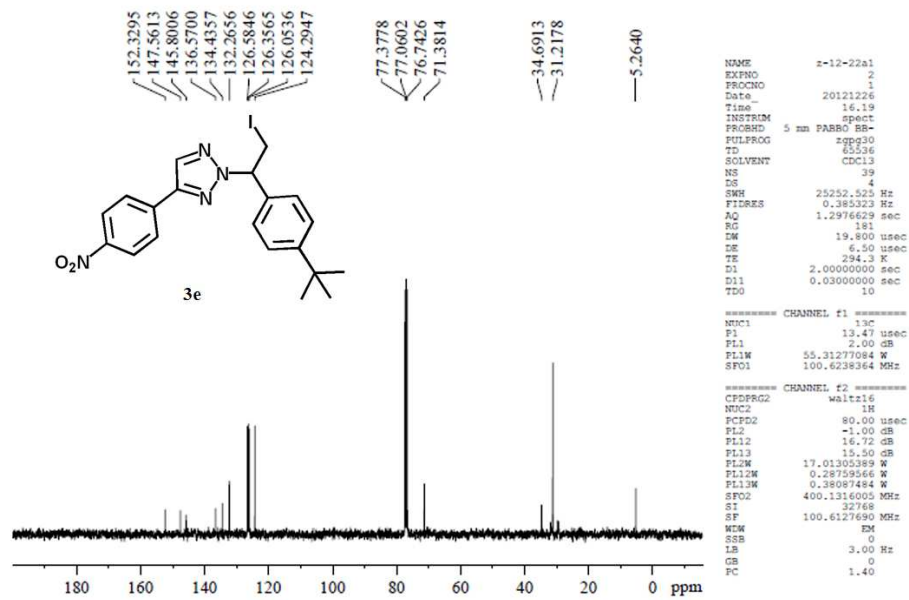
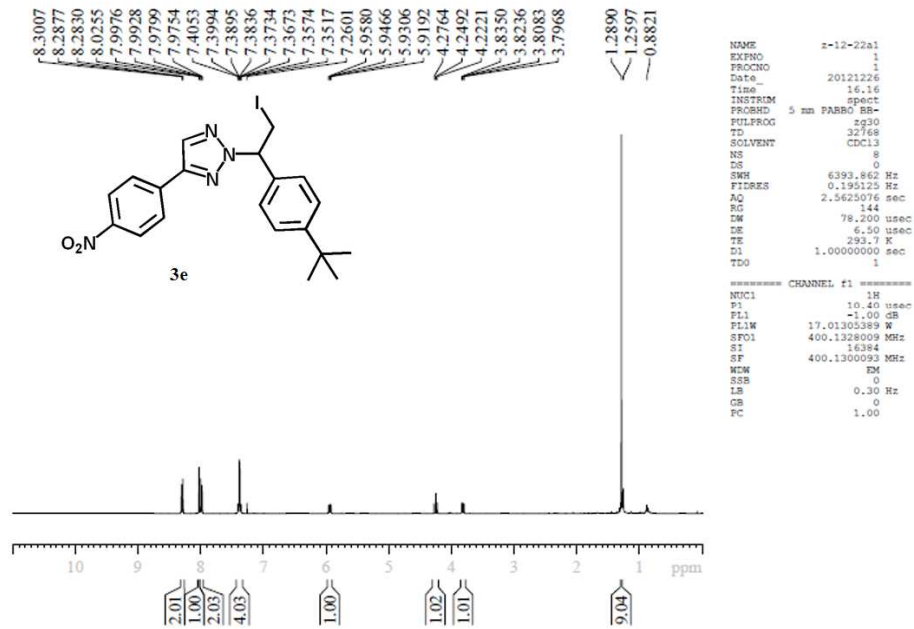
```

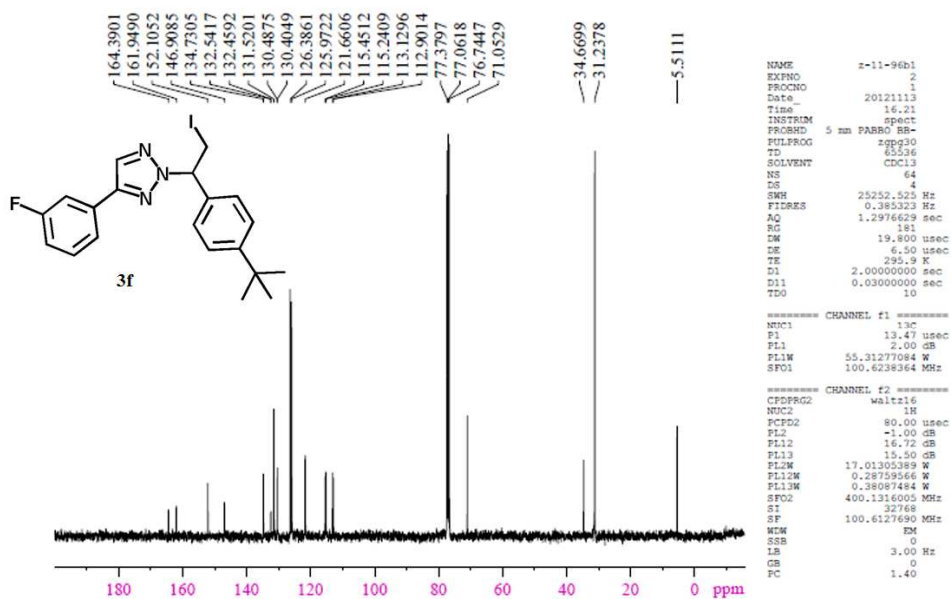
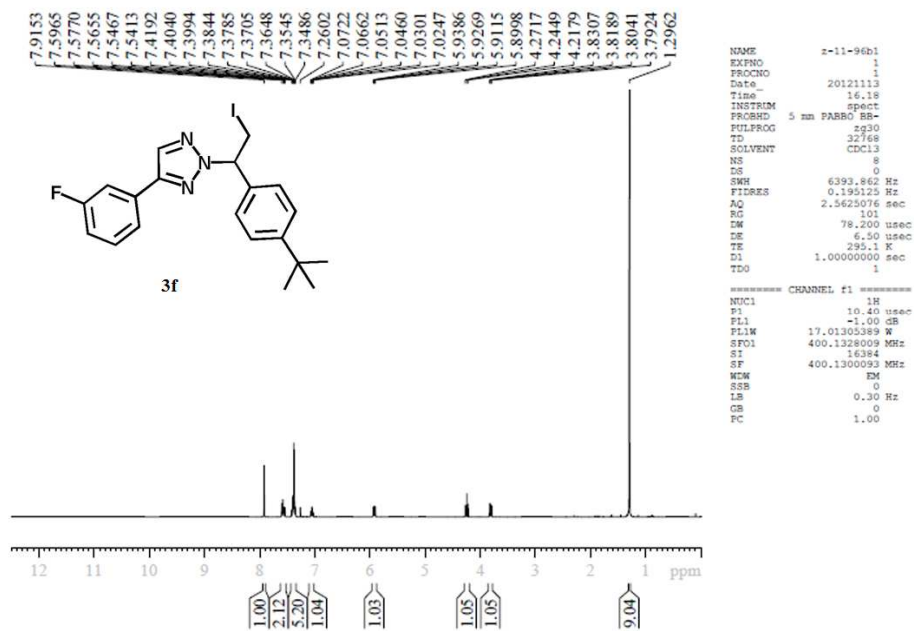


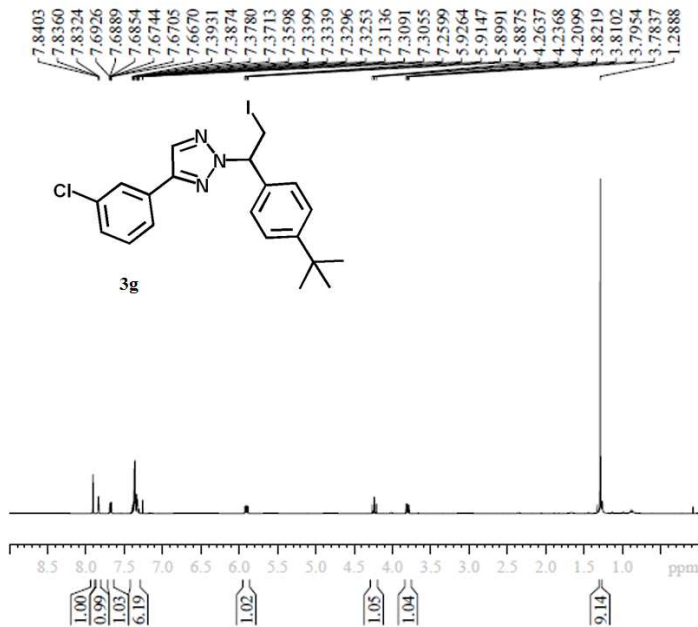
```

NAME      z-12-23a1
EXPNO     2
PROCNO    1
Date_     20121226
Time      15:53
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         45
DS         4
SWH        25252.525 Hz
FIDRES     0.385523 Hz
AQ         1.2976629 sec
RG         181
EW         19.800 usec
DE         6.50 usec
TE         294.0 K
D1         2.00000000 sec
D11        0.03000000 sec
D10        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL2W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127650 MHz
WDW         EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```





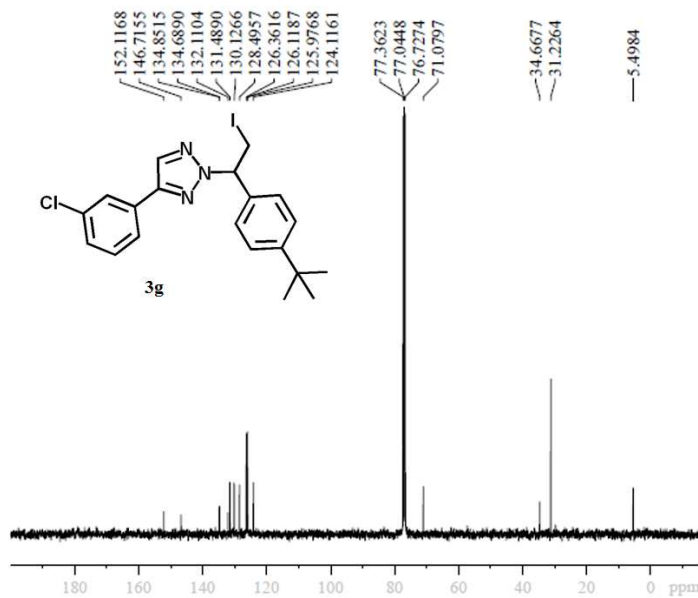


```

NAME      z-12-23b1
EXPNO     1
PROCNO    1
Date_     20121226
Time      16.00
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
FIDRES    0.195125 Hz
AQ         2.5625076 sec
RG         144
EW         78.200 usec
DE         6.50 usec
TE         293.4 K
D1         1.00000000 sec
TDO        1

===== CHANNEL f1 =====
NUC1      1H
P1        10.40 usec
PL1       -1.00 dB
PL1W      17.01305389 W
SFO1      400.1328009 MHz
SI        16384
SF        400.1300094 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

```



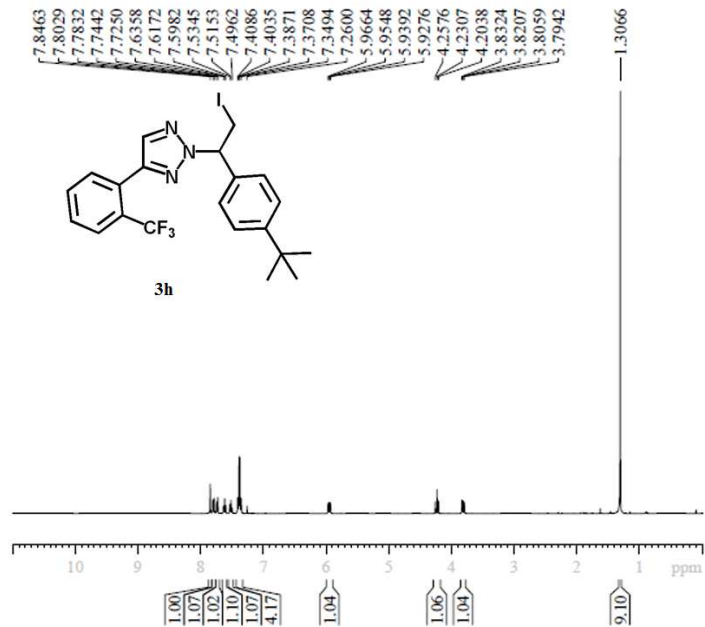
```

NAME      z-12-23b1
EXPNO     2
PROCNO    1
Date_     20121226
Time      16.02
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
FIDRES    0.385523 Hz
AQ         1.2976629 sec
RG         181
EW         19.800 usec
DE         6.50 usec
TE         294.0 K
D1         2.00000000 sec
D11        0.03000000 sec
TDO        10

===== CHANNEL f1 =====
NUC1      13C
P1        13.47 usec
PL1       2.00 dB
PL1W      55.31277084 W
SFO1      100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     80.00 usec
PL2       -1.00 dB
PL12      16.72 dB
PL13      15.50 dB
PL2W      17.01305389 W
PL12W     0.28759566 W
PL13W     0.38087484 W
SFO2      400.1316005 MHz
SI        32768
SF        100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

```

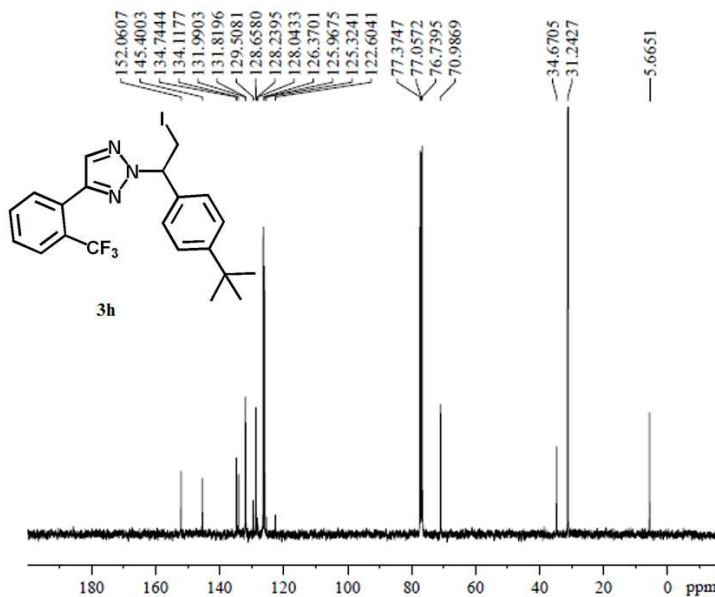



```

NAME      z-11-93c1
EXPNO     1
PROCNO    1
Date_     20121108
Time      16.19
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         32768
SOLVENT    CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         90.5
DM         78.200 usec
DE         6.50 usec
TE         295.4 K
D1         1.00000000 sec
D11        1
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300094 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

```



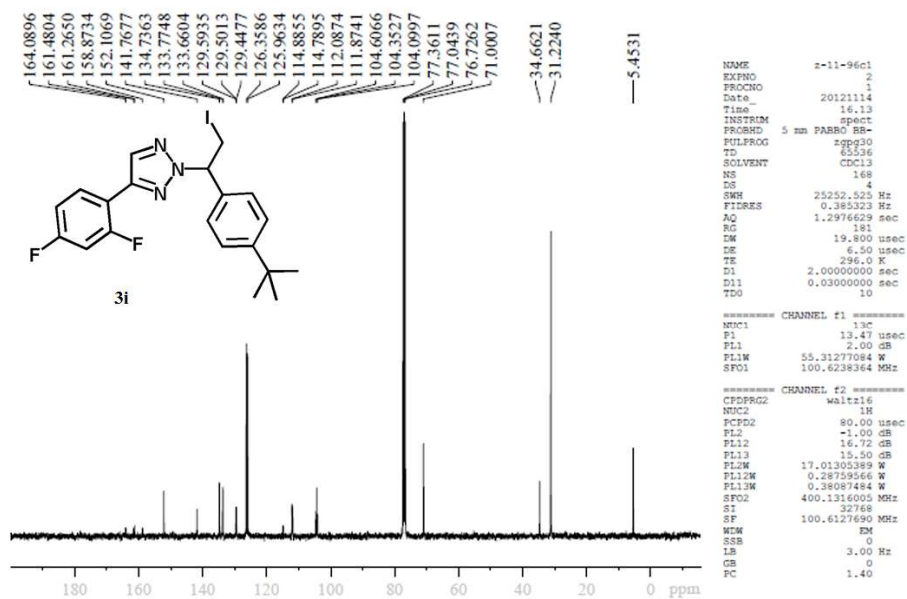
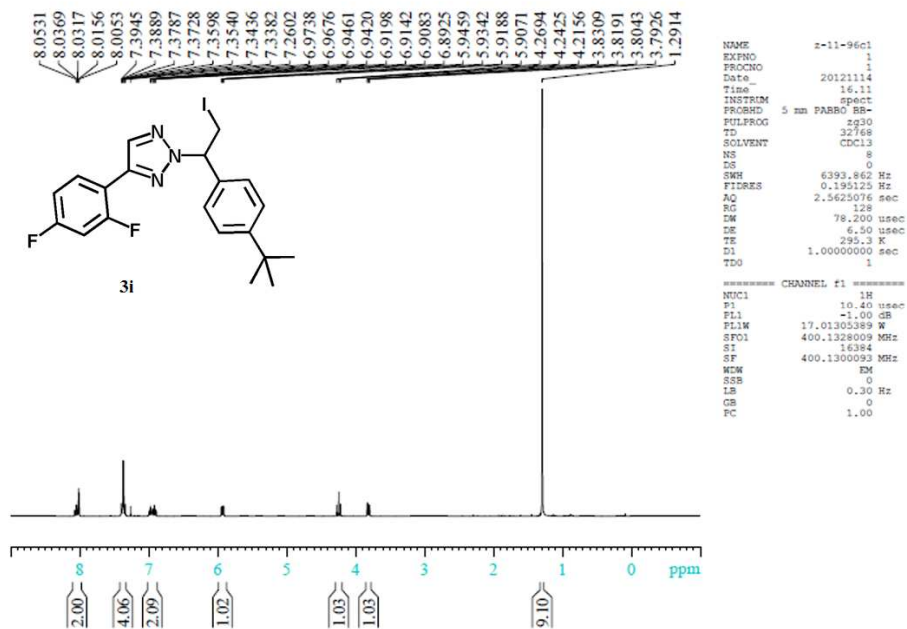
```

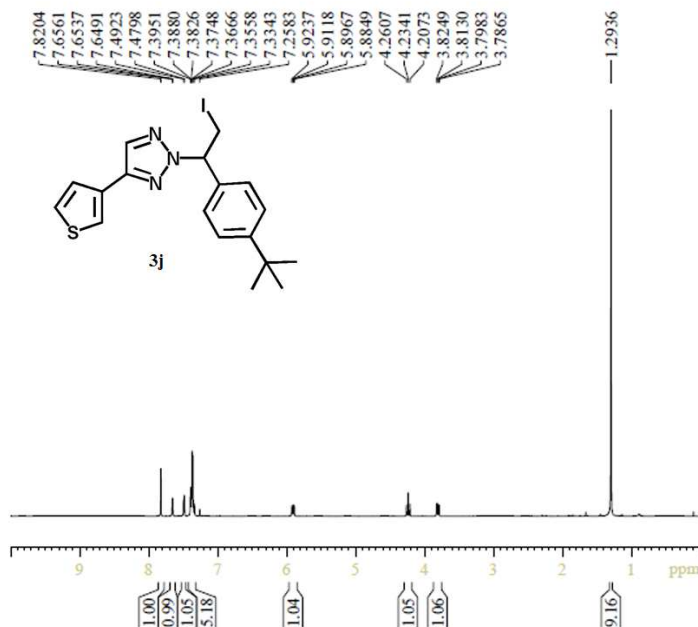
NAME      z-11-93c1
EXPNO     1
PROCNO    1
Date_     20121108
Time      16.19
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         65536
SOLVENT    CDCl3
NS         80
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         295.8 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10

===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL2W       16.72 dB
PL12       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759466 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

```

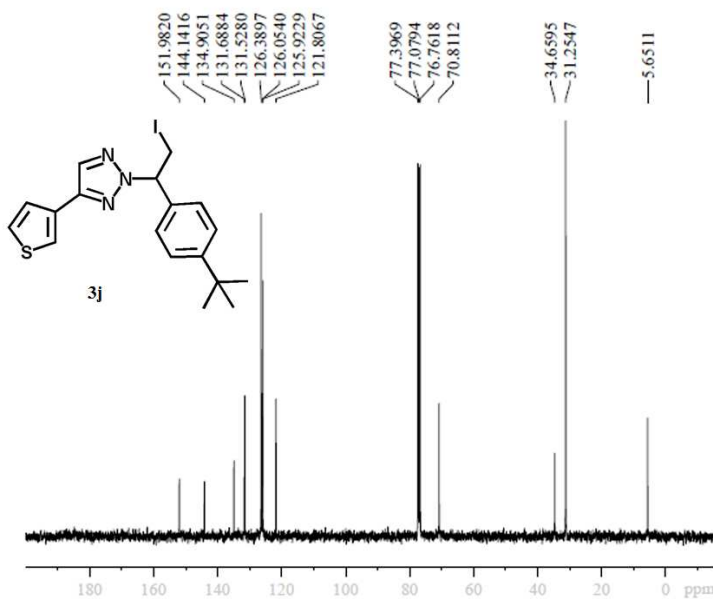





```

NAME      z-11-93b1
EXPNO     1
PROCNO    1
Date_     20121108
Time      16.06
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         101
DM         78.200 usec
DE         6.50 usec
TE         295.5 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16364
SF         400.1300100 MHz
WDW        EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

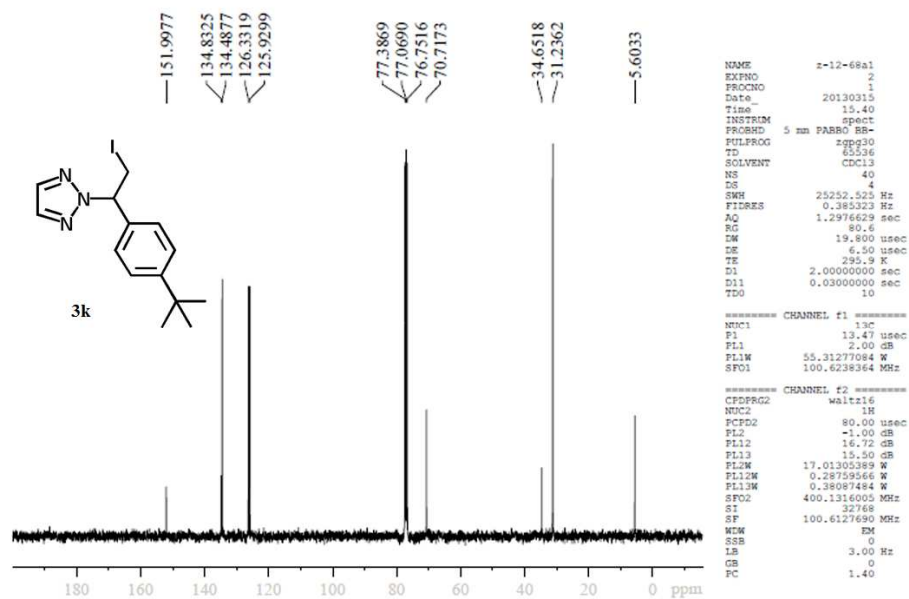
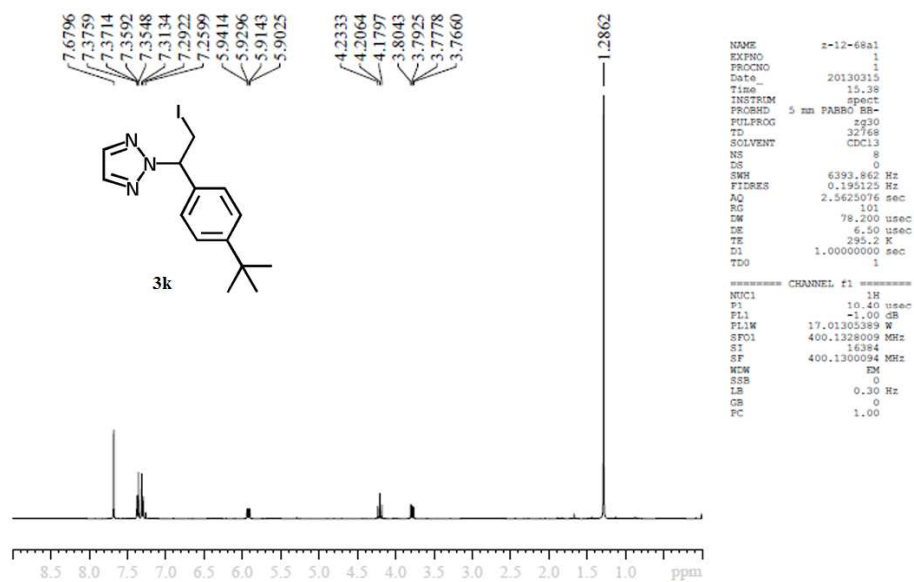
```

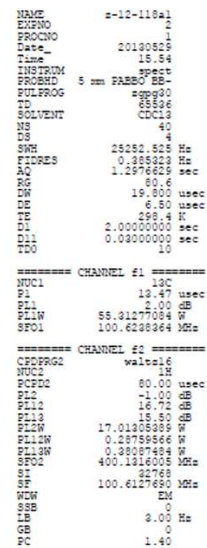
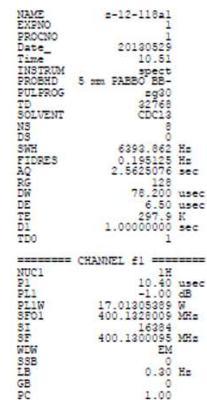


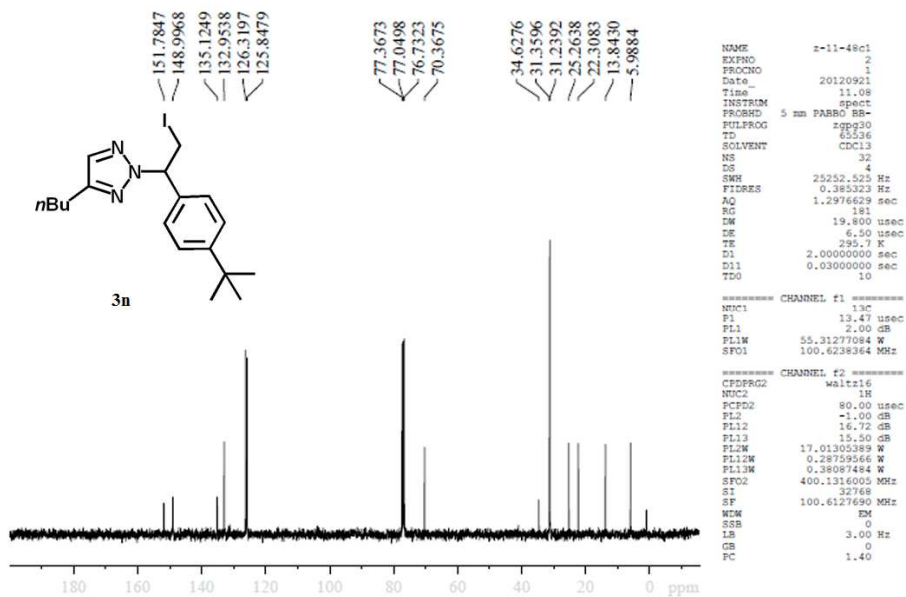
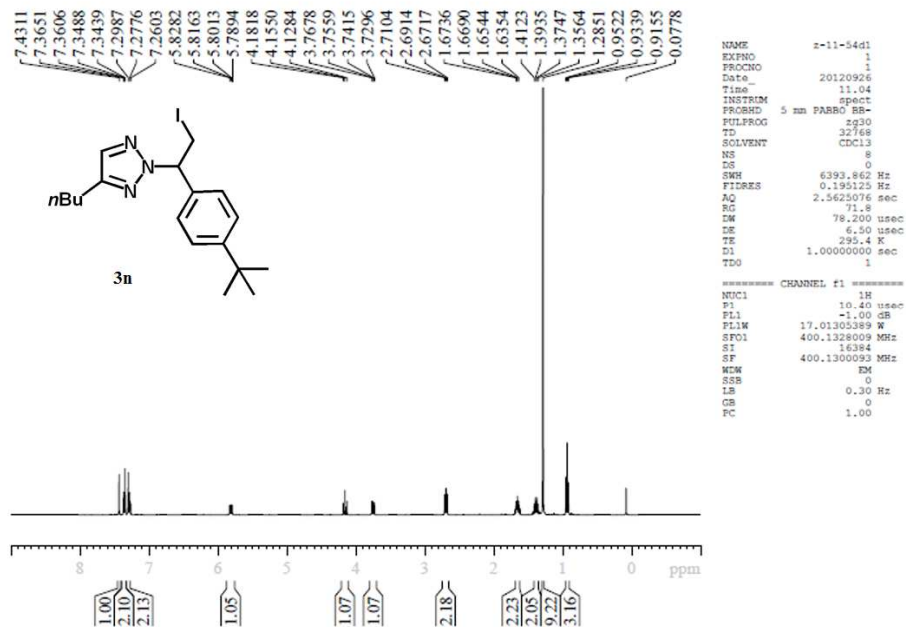
```

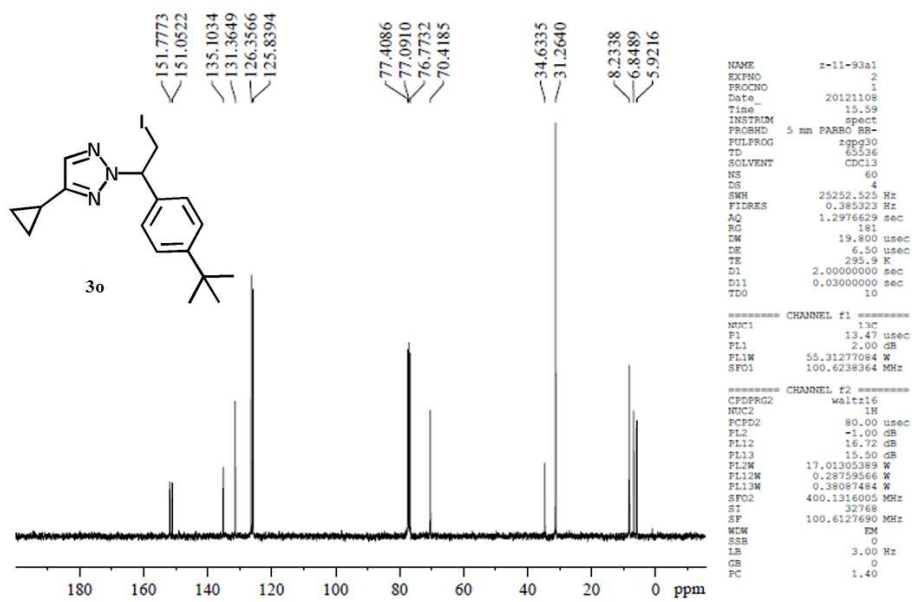
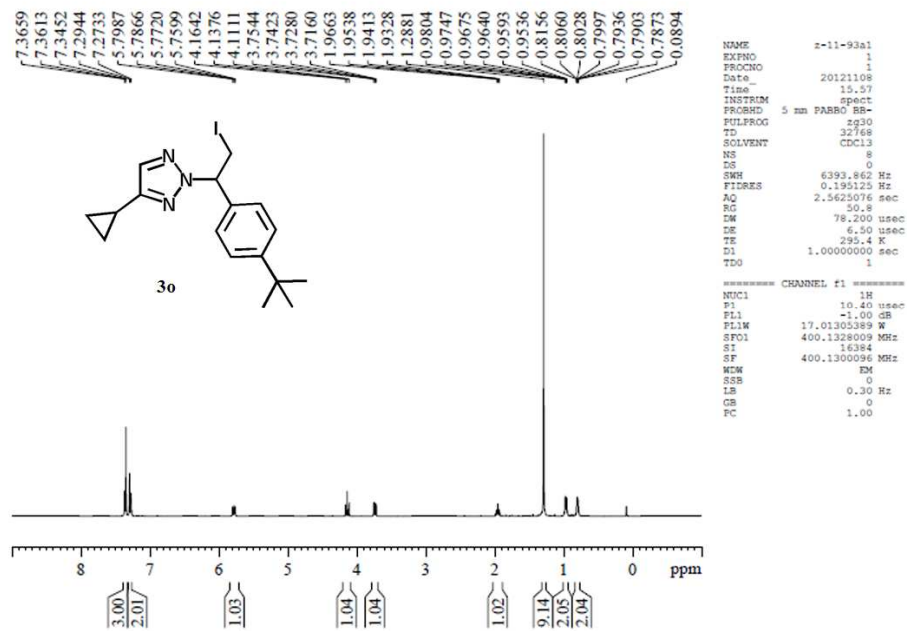
NAME      z-11-93b1
EXPNO     2
PROCNO    1
Date_     20121108
Time      16.09
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         60
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         296.1 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2       -1.00 dB
PL12      16.72 dB
PL13      15.50 dB
PL1W      17.01305389 W
PL12W     0.28759466 W
PL13W     0.38087484 W
SFO2      400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

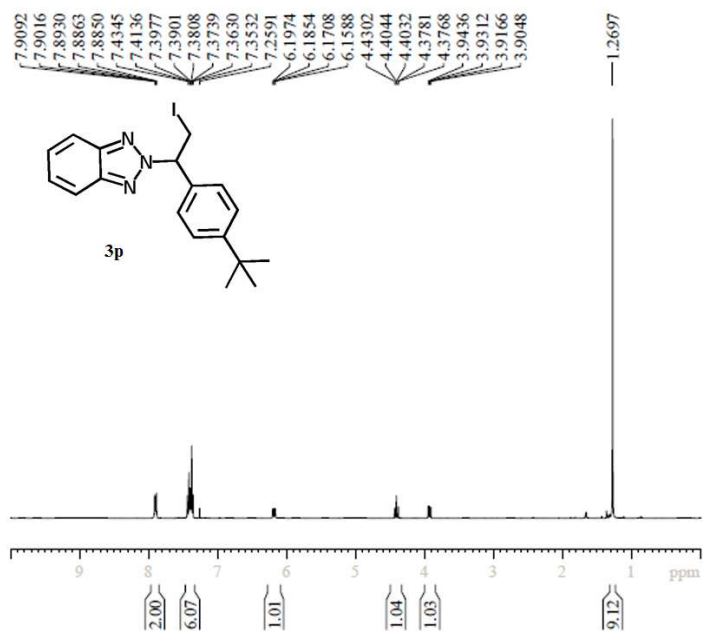
```









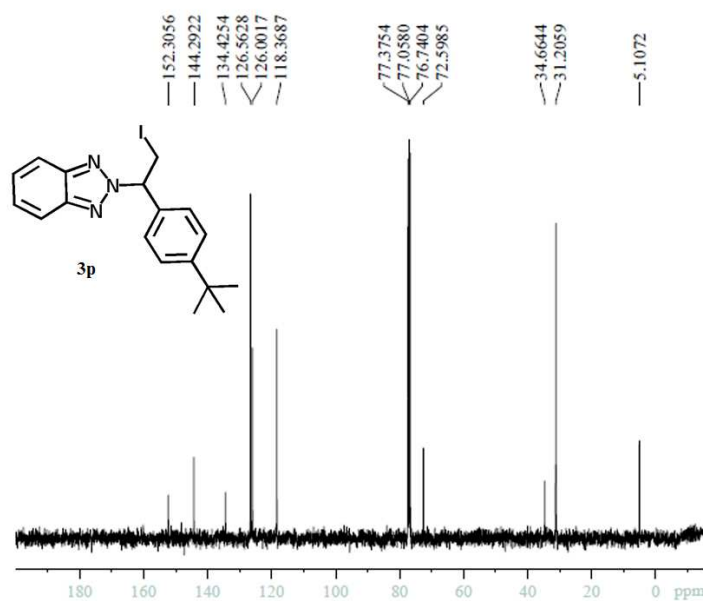


```

NAME      z-11-53b1
EXPNO     1
PROCNO    1
Date_     20120925
Time      16:11
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         90.5
DM         78.200 usec
DE         6.50 usec
TE         295.1 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300099 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

```



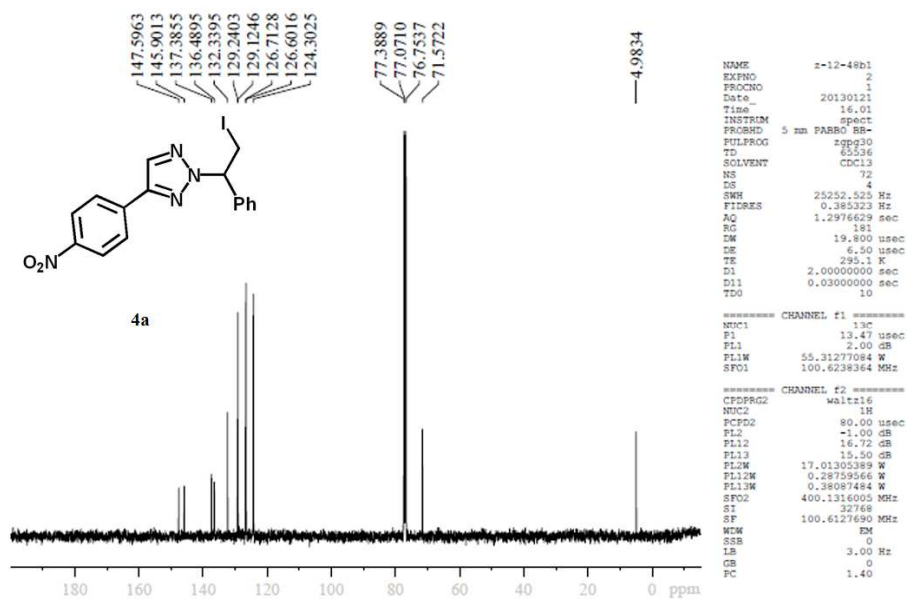
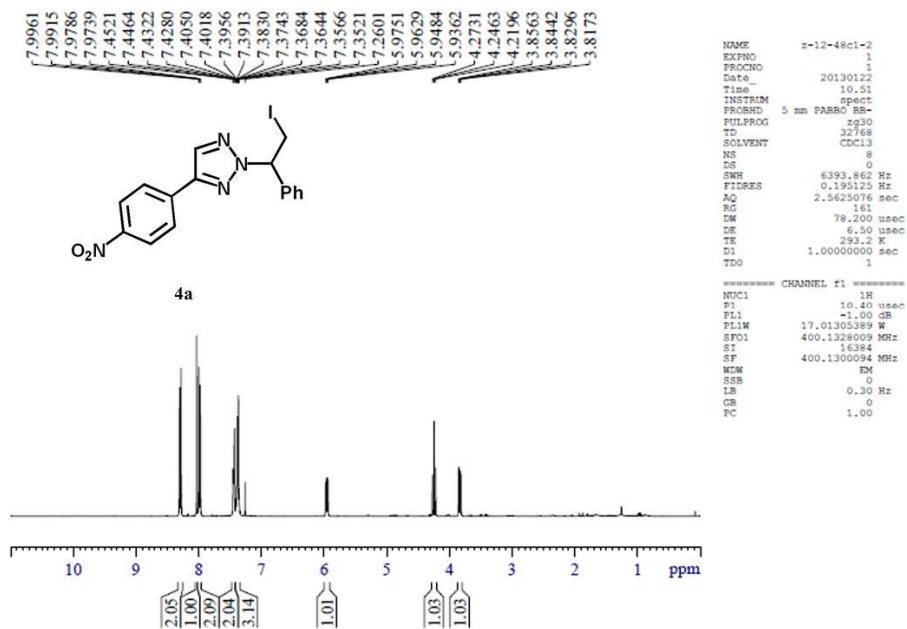
```

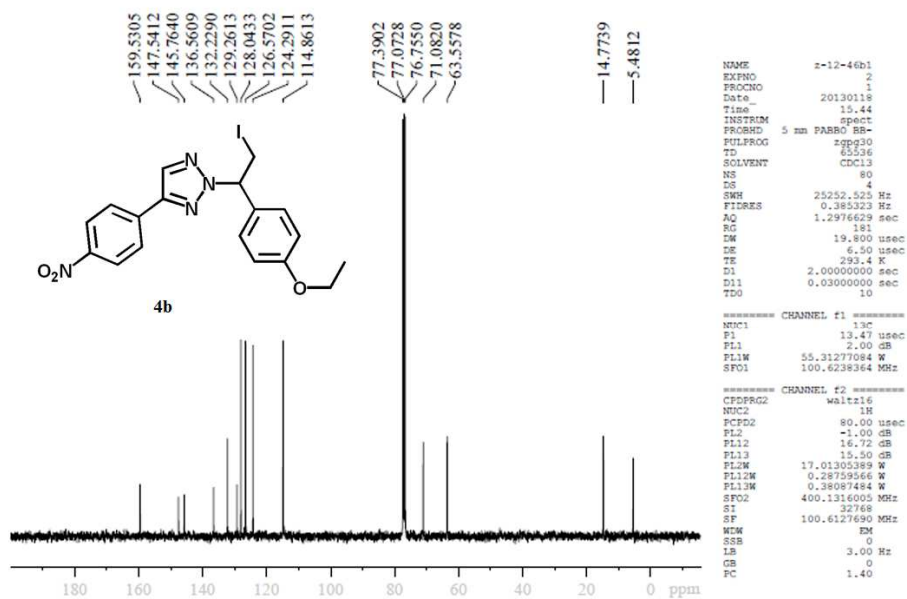
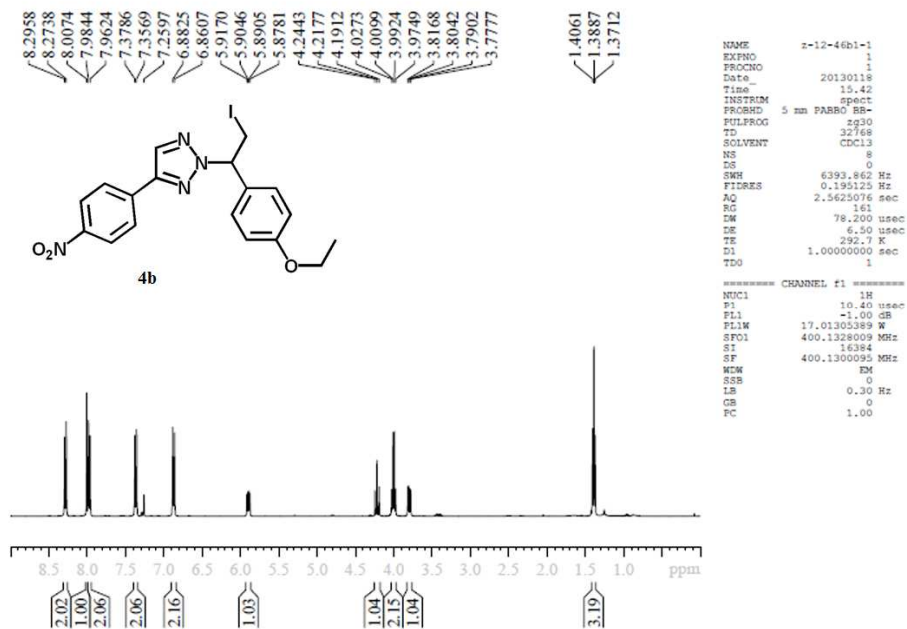
NAME      z-11-53b1
EXPNO     2
PROCNO    1
Date_     20120925
Time      16:14
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         26
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         295.8 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10

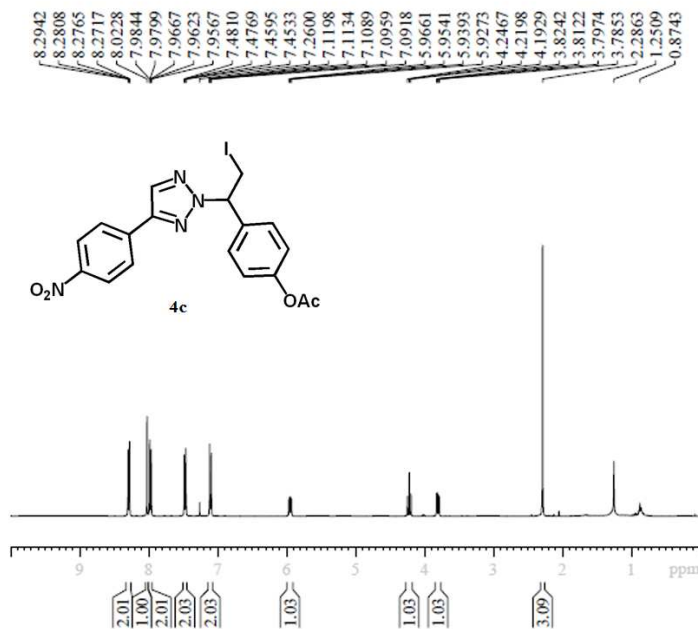
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

```



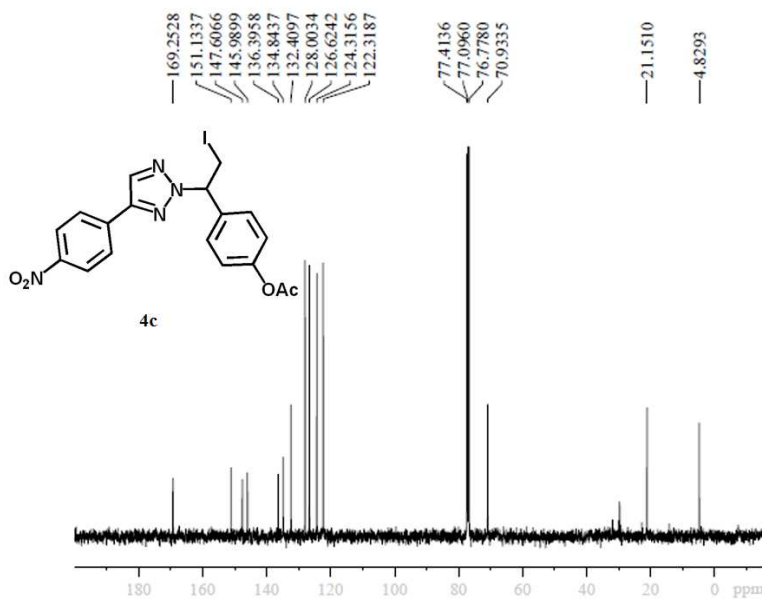




```

NAME      z-12-35b1
EXPNO     1
PROCNO    1
Date_     20130107
Time      16.08
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         32768
SOLVENT    CDCl3
NS         8
DS         0
SWH         6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         114
DM         78.200 usec
DE         6.50 usec
TE         292.2 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300093 MHz
WDW         EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

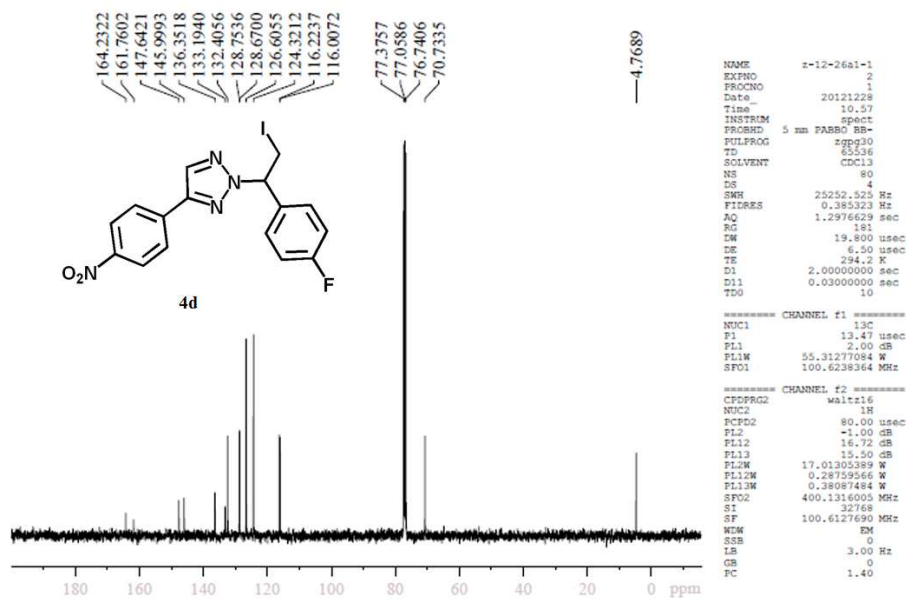
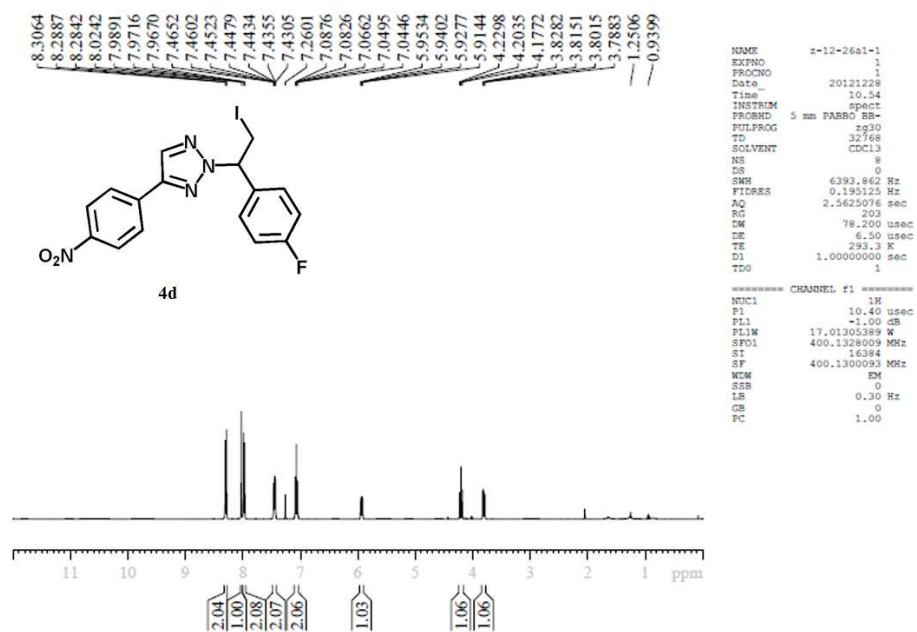
```

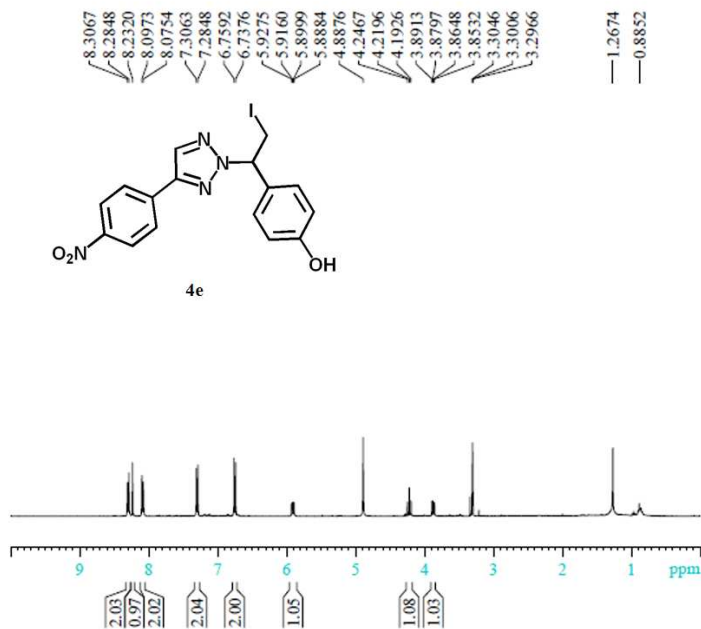


```

NAME      z-12-35b1
EXPNO     2
PROCNO    1
Date_     20130107
Time      16.12
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         65536
SOLVENT    CDCl3
NS         48
DS         4
SWH         25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         293.4 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759466 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW         EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```

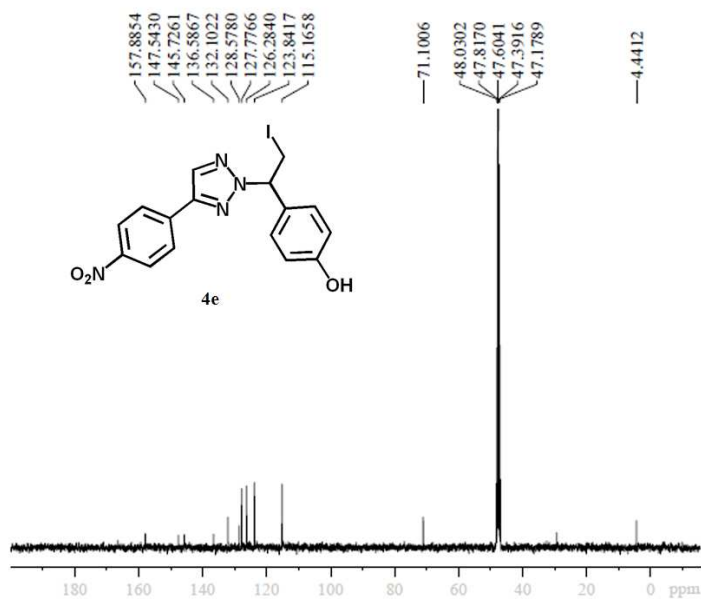




```

NAME      z-12-35c1-1
EXPNO     1
PROCNO    1
Date_     20130108
Time      16.09
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        32768
SOLVENT   MeOD
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         228
DM         78.200 usec
DE         6.50 usec
TE         293.8 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300111 MHz
WDW         EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

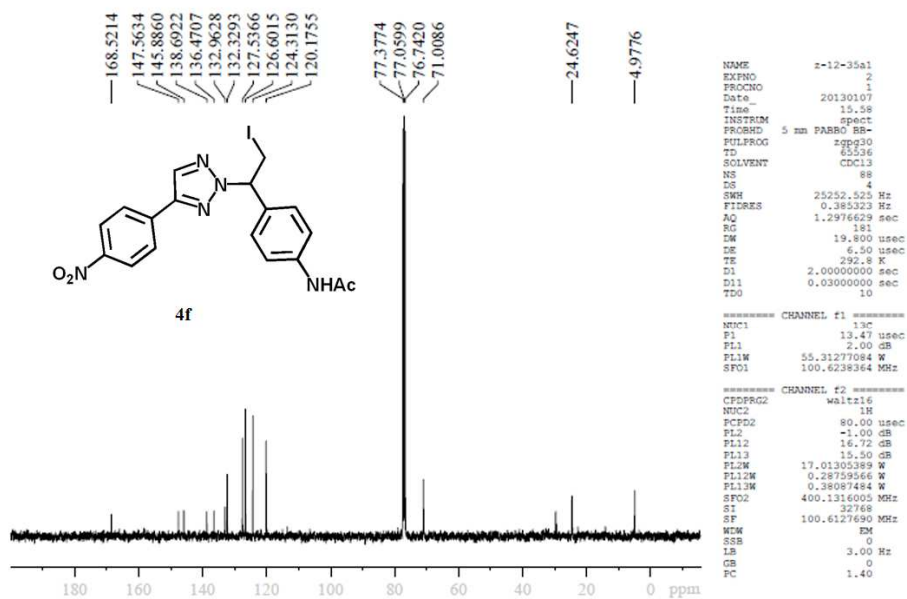
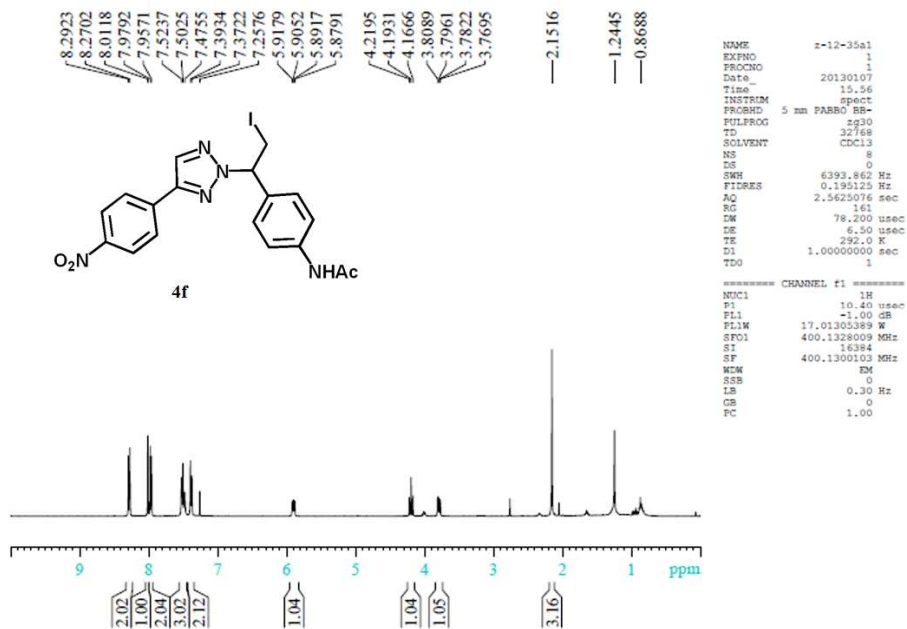
```

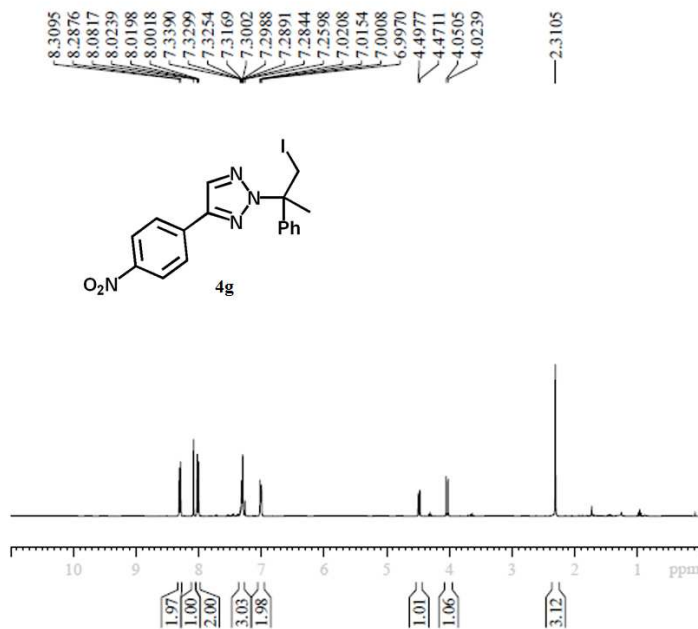


```

NAME      z-12-35c1-1
EXPNO     2
PROCNO    1
Date_     20130108
Time      16.11
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   MeOD
NS         152
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         294.3 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759466 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW         EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```

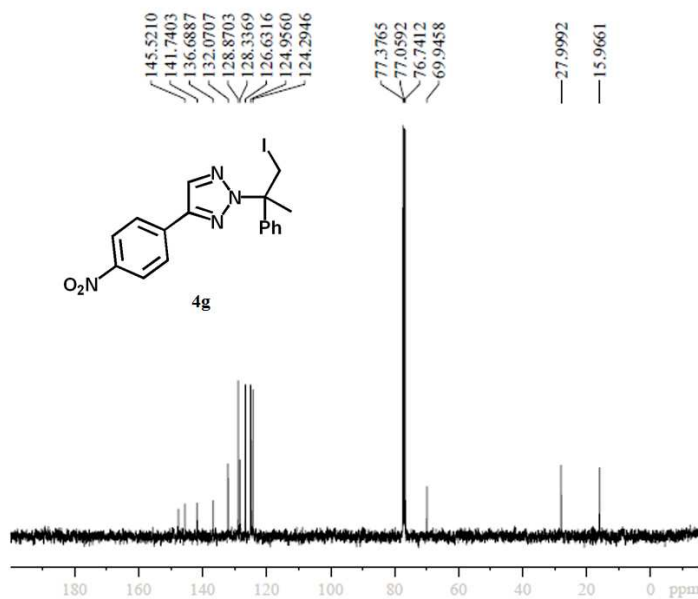




```

NAME      z-12-48b1-2
EXPNO     1
PROCNO    1
Date_     20130122
Time      10.56
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         32768
SOLVENT    CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         161
DM         78.200 usec
DE         6.50 usec
TE         293.1 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300095 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

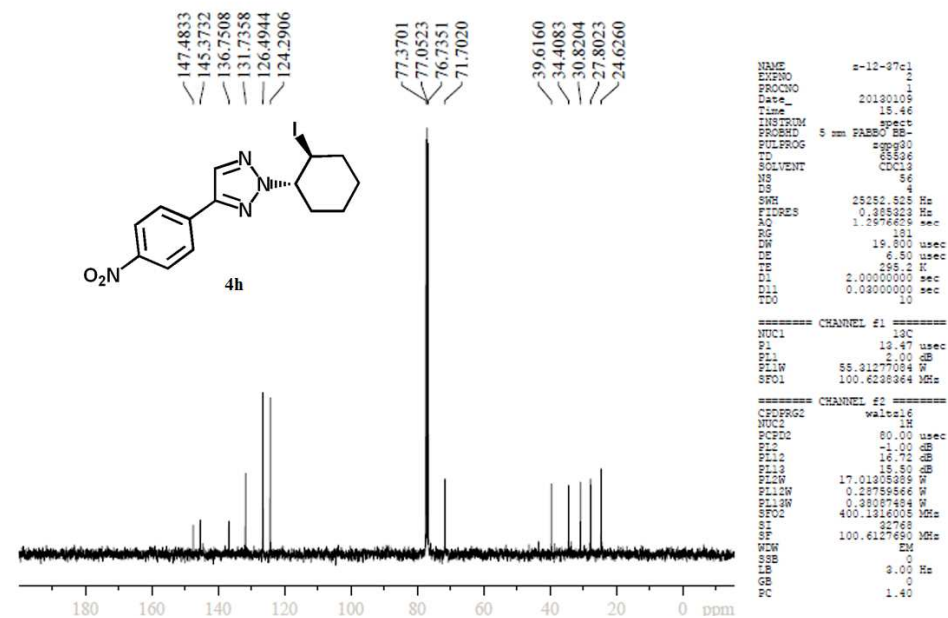
```

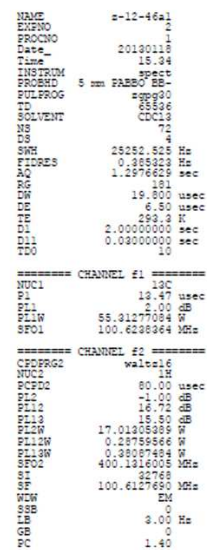
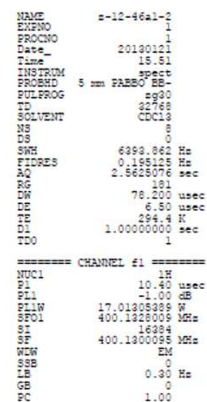


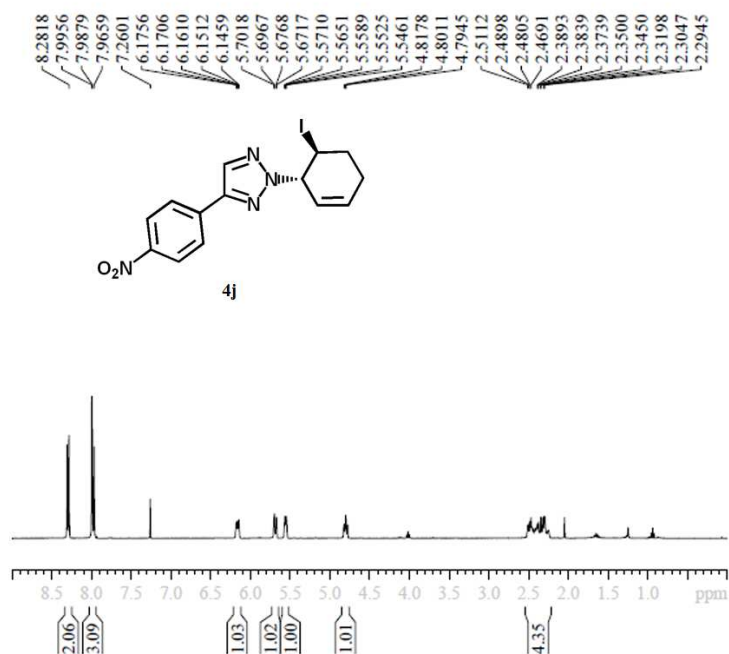
```

NAME      z-12-48b1-1
EXPNO     2
PROCNO    1
Date_     20130121
Time      14.13
INSTRUM    spect
PROBHD     5 mm PARBO BB-
PULPROG    zgpg30
TD         65536
SOLVENT    CDCl3
NS         40
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         295.0 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

```



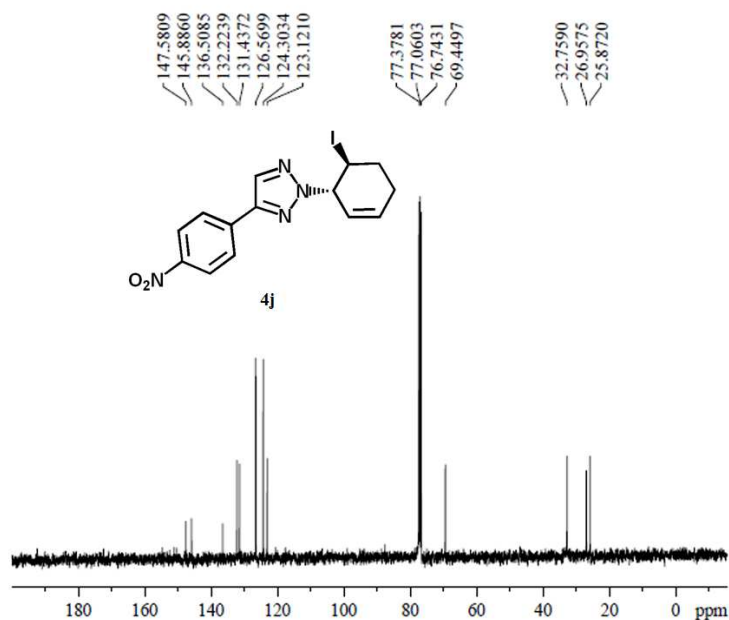




```

NAME      z-12-37d1-1
EXPNO     1
PROCNO    1
Date_     20130117
Time      23.06
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
AQ        0.0000000
SOLVENT   CDCl3
NS         48
DS         4
SWH        6999.862 Hz
FIDRES     0.198128 Hz
AQ         0.6628076 sec
RG         75
RG2        257
RG3        6.50
RG4        6.50
RG5        6.50
RG6        6.50
RG7        6.50
RG8        6.50
RG9        6.50
RG10       6.50
RG11       6.50
RG12       6.50
RG13       6.50
RG14       6.50
RG15       6.50
RG16       6.50
RG17       6.50
RG18       6.50
RG19       6.50
RG20       6.50
RG21       6.50
RG22       6.50
RG23       6.50
RG24       6.50
RG25       6.50
RG26       6.50
RG27       6.50
RG28       6.50
RG29       6.50
RG30       6.50
RG31       6.50
RG32       6.50
RG33       6.50
RG34       6.50
RG35       6.50
RG36       6.50
RG37       6.50
RG38       6.50
RG39       6.50
RG40       6.50
RG41       6.50
RG42       6.50
RG43       6.50
RG44       6.50
RG45       6.50
RG46       6.50
RG47       6.50
RG48       6.50
RG49       6.50
RG50       6.50
RG51       6.50
RG52       6.50
RG53       6.50
RG54       6.50
RG55       6.50
RG56       6.50
RG57       6.50
RG58       6.50
RG59       6.50
RG60       6.50
RG61       6.50
RG62       6.50
RG63       6.50
RG64       6.50
RG65       6.50
RG66       6.50
RG67       6.50
RG68       6.50
RG69       6.50
RG70       6.50
RG71       6.50
RG72       6.50
RG73       6.50
RG74       6.50
RG75       6.50
RG76       6.50
RG77       6.50
RG78       6.50
RG79       6.50
RG80       6.50
RG81       6.50
RG82       6.50
RG83       6.50
RG84       6.50
RG85       6.50
RG86       6.50
RG87       6.50
RG88       6.50
RG89       6.50
RG90       6.50
RG91       6.50
RG92       6.50
RG93       6.50
RG94       6.50
RG95       6.50
RG96       6.50
RG97       6.50
RG98       6.50
RG99       6.50
RG100      6.50
RG101      6.50
RG102      6.50
RG103      6.50
RG104      6.50
RG105      6.50
RG106      6.50
RG107      6.50
RG108      6.50
RG109      6.50
RG110      6.50
RG111      6.50
RG112      6.50
RG113      6.50
RG114      6.50
RG115      6.50
RG116      6.50
RG117      6.50
RG118      6.50
RG119      6.50
RG120      6.50
RG121      6.50
RG122      6.50
RG123      6.50
RG124      6.50
RG125      6.50
RG126      6.50
RG127      6.50
RG128      6.50
RG129      6.50
RG130      6.50
RG131      6.50
RG132      6.50
RG133      6.50
RG134      6.50
RG135      6.50
RG136      6.50
RG137      6.50
RG138      6.50
RG139      6.50
RG140      6.50
RG141      6.50
RG142      6.50
RG143      6.50
RG144      6.50
RG145      6.50
RG146      6.50
RG147      6.50
RG148      6.50
RG149      6.50
RG150      6.50
RG151      6.50
RG152      6.50
RG153      6.50
RG154      6.50
RG155      6.50
RG156      6.50
RG157      6.50
RG158      6.50
RG159      6.50
RG160      6.50
RG161      6.50
RG162      6.50
RG163      6.50
RG164      6.50
RG165      6.50
RG166      6.50
RG167      6.50
RG168      6.50
RG169      6.50
RG170      6.50
RG171      6.50
RG172      6.50
RG173      6.50
RG174      6.50
RG175      6.50
RG176      6.50
RG177      6.50
RG178      6.50
RG179      6.50
RG180      6.50
RG181      6.50
RG182      6.50
RG183      6.50
RG184      6.50
RG185      6.50
RG186      6.50
RG187      6.50
RG188      6.50
RG189      6.50
RG190      6.50
RG191      6.50
RG192      6.50
RG193      6.50
RG194      6.50
RG195      6.50
RG196      6.50
RG197      6.50
RG198      6.50
RG199      6.50
RG200      6.50
RG201      6.50
RG202      6.50
RG203      6.50
RG204      6.50
RG205      6.50
RG206      6.50
RG207      6.50
RG208      6.50
RG209      6.50
RG210      6.50
RG211      6.50
RG212      6.50
RG213      6.50
RG214      6.50
RG215      6.50
RG216      6.50
RG217      6.50
RG218      6.50
RG219      6.50
RG220      6.50
RG221      6.50
RG222      6.50
RG223      6.50
RG224      6.50
RG225      6.50
RG226      6.50
RG227      6.50
RG228      6.50
RG229      6.50
RG230      6.50
RG231      6.50
RG232      6.50
RG233      6.50
RG234      6.50
RG235      6.50
RG236      6.50
RG237      6.50
RG238      6.50
RG239      6.50
RG240      6.50
RG241      6.50
RG242      6.50
RG243      6.50
RG244      6.50
RG245      6.50
RG246      6.50
RG247      6.50
RG248      6.50
RG249      6.50
RG250      6.50
RG251      6.50
RG252      6.50
RG253      6.50
RG254      6.50
RG255      6.50
RG256      6.50
RG257      6.50
RG258      6.50
RG259      6.50
RG260      6.50
RG261      6.50
RG262      6.50
RG263      6.50
RG264      6.50
RG265      6.50
RG266      6.50
RG267      6.50
RG268      6.50
RG269      6.50
RG270      6.50
RG271      6.50
RG272      6.50
RG273      6.50
RG274      6.50
RG275      6.50
RG276      6.50
RG277      6.50
RG278      6.50
RG279      6.50
RG280      6.50
RG281      6.50
RG282      6.50
RG283      6.50
RG284      6.50
RG285      6.50
RG286      6.50
RG287      6.50
RG288      6.50
RG289      6.50
RG290      6.50
RG291      6.50
RG292      6.50
RG293      6.50
RG294      6.50
RG295      6.50
RG296      6.50
RG297      6.50
RG298      6.50
RG299      6.50
RG300      6.50
RG301      6.50
RG302      6.50
RG303      6.50
RG304      6.50
RG305      6.50
RG306      6.50
RG307      6.50
RG308      6.50
RG309      6.50
RG310      6.50
RG311      6.50
RG312      6.50
RG313      6.50
RG314      6.50
RG315      6.50
RG316      6.50
RG317      6.50
RG318      6.50
RG319      6.50
RG320      6.50
RG321      6.50
RG322      6.50
RG323      6.50
RG324      6.50
RG325      6.50
RG326      6.50
RG327      6.50
RG328      6.50
RG329      6.50
RG330      6.50
RG331      6.50
RG332      6.50
RG333      6.50
RG334      6.50
RG335      6.50
RG336      6.50
RG337      6.50
RG338      6.50
RG339      6.50
RG340      6.50
RG341      6.50
RG342      6.50
RG343      6.50
RG344      6.50
RG345      6.50
RG346      6.50
RG347      6.50
RG348      6.50
RG349      6.50
RG350      6.50
RG351      6.50
RG352      6.50
RG353      6.50
RG354      6.50
RG355      6.50
RG356      6.50
RG357      6.50
RG358      6.50
RG359      6.50
RG360      6.50
RG361      6.50
RG362      6.50
RG363      6.50
RG364      6.50
RG365      6.50
RG366      6.50
RG367      6.50
RG368      6.50
RG369      6.50
RG370      6.50
RG371      6.50
RG372      6.50
RG373      6.50
RG374      6.50
RG375      6.50
RG376      6.50
RG377      6.50
RG378      6.50
RG379      6.50
RG380      6.50
RG381      6.50
RG382      6.50
RG383      6.50
RG384      6.50
RG385      6.50
RG386      6.50
RG387      6.50
RG388      6.50
RG389      6.50
RG390      6.50
RG391      6.50
RG392      6.50
RG393      6.50
RG394      6.50
RG395      6.50
RG396      6.50
RG397      6.50
RG398      6.50
RG399      6.50
RG400      6.50
RG401      6.50
RG402      6.50
RG403      6.50
RG404      6.50
RG405      6.50
RG406      6.50
RG407      6.50
RG408      6.50
RG409      6.50
RG410      6.50
RG411      6.50
RG412      6.50
RG413      6.50
RG414      6.50
RG415      6.50
RG416      6.50
RG417      6.50
RG418      6.50
RG419      6.50
RG420      6.50
RG421      6.50
RG422      6.50
RG423      6.50
RG424      6.50
RG425      6.50
RG426      6.50
RG427      6.50
RG428      6.50
RG429      6.50
RG430      6.50
RG431      6.50
RG432      6.50
RG433      6.50
RG434      6.50
RG435      6.50
RG436      6.50
RG437      6.50
RG438      6.50
RG439      6.50
RG440      6.50
RG441      6.50
RG442      6.50
RG443      6.50
RG444      6.50
RG445      6.50
RG446      6.50
RG447      6.50
RG448      6.50
RG449      6.50
RG450      6.50
RG451      6.50
RG452      6.50
RG453      6.50
RG454      6.50
RG455      6.50
RG456      6.50
RG457      6.50
RG458      6.50
RG459      6.50
RG460      6.50
RG461      6.50
RG462      6.50
RG463      6.50
RG464      6.50
RG465      6.50
RG466      6.50
RG467      6.50
RG468      6.50
RG469      6.50
RG470      6.50
RG471      6.50
RG472      6.50
RG473      6.50
RG474      6.50
RG475      6.50
RG476      6.50
RG477      6.50
RG478      6.50
RG479      6.50
RG480      6.50
RG481      6.50
RG482      6.50
RG483      6.50
RG484      6.50
RG485      6.50
RG486      6.50
RG487      6.50
RG488      6.50
RG489      6.50
RG490      6.50
RG491      6.50
RG492      6.50
RG493      6.50
RG494      6.50
RG495      6.50
RG496      6.50
RG497      6.50
RG498      6.50
RG499      6.50
RG500      6.50
RG501      6.50
RG502      6.50
RG503      6.50
RG504      6.50
RG505      6.50
RG506      6.50
RG507      6.50
RG508      6.50
RG509      6.50
RG510      6.50
RG511      6.50
RG512      6.50
RG513      6.50
RG514      6.50
RG515      6.50
RG516      6.50
RG517      6.50
RG518      6.50
RG519      6.50
RG520      6.50
RG521      6.50
RG522      6.50
RG523      6.50
RG524      6.50
RG525      6.50
RG526      6.50
RG527      6.50
RG528      6.50
RG529      6.50
RG530      6.50
RG531      6.50
RG532      6.50
RG533      6.50
RG534      6.50
RG535      6.50
RG536      6.50
RG537      6.50
RG538      6.50
RG539      6.50
RG540      6.50
RG541      6.50
RG542      6.50
RG543      6.50
RG544      6.50
RG545      6.50
RG546      6.50
RG547      6.50
RG548      6.50
RG549      6.50
RG550      6.50
RG551      6.50
RG552      6.50
RG553      6.50
RG554      6.50
RG555      6.50
RG556      6.50
RG557      6.50
RG558      6.50
RG559      6.50
RG560      6.50
RG561      6.50
RG562      6.50
RG563      6.50
RG564      6.50
RG565      6.50
RG566      6.50
RG567      6.50
RG568      6.50
RG569      6.50
RG570      6.50
RG571      6.50
RG572      6.50
RG573      6.50
RG574      6.50
RG575      6.50
RG576      6.50
RG577      6.50
RG578      6.50
RG579      6.50
RG580      6.50
RG581      6.50
RG582      6.50
RG583      6.50
RG584      6.50
RG585      6.50
RG586      6.50
RG587      6.50
RG588      6.50
RG589      6.50
RG590      6.50
RG591      6.50
RG592      6.50
RG593      6.50
RG594      6.50
RG595      6.50
RG596      6.50
RG597      6.50
RG598      6.50
RG599      6.50
RG600      6.50
RG601      6.50
RG602      6.50
RG603      6.50
RG604      6.50
RG605      6.50
RG606      6.50
RG607      6.50
RG608      6.50
RG609      6.50
RG610      6.50
RG611      6.50
RG612      6.50
RG613      6.50
RG614      6.50
RG615      6.50
RG616      6.50
RG617      6.50
RG618      6.50
RG619      6.50
RG620      6.50
RG621      6.50
RG622      6.50
RG623      6.50
RG624      6.50
RG625      6.50
RG626      6.50
RG627      6.50
RG628      6.50
RG629      6.50
RG630      6.50
RG631      6.50
RG632      6.50
RG633      6.50
RG634      6.50
RG635      6.50
RG636      6.50
RG637      6.50
RG638      6.50
RG639      6.50
RG640      6.50
RG641      6.50
RG642      6.50
RG643      6.50
RG644      6.50
RG645      6.50
RG646      6.50
RG647      6.50
RG648      6.50
RG649      6.50
RG650      6.50
RG651      6.50
RG652      6.50
RG653      6.50
RG654      6.50
RG655      6.50
RG656      6.50
RG657      6.50
RG658      6.50
RG659      6.50
RG660      6.50
RG661      6.50
RG662      6.50
RG663      6.50
RG664      6.50
RG665      6.50
RG666      6.50
RG667      6.50
RG668      6.50
RG669      6.50
RG670      6.50
RG671      6.50
RG672      6.50
RG673      6.50
RG674      6.50
RG675      6.50
RG676      6.50
RG677      6.50
RG678      6.50
RG679      6.50
RG680      6.50
RG681      6.50
RG682      6.50
RG683      6.50
RG684      6.50
RG685      6.50
RG686      6.50
RG687      6.50
RG688      6.50
RG689      6.50
RG690      6.50
RG691      6.50
RG692      6.50
RG693      6.50
RG694      6.50
RG695      6.50
RG696      6.50
RG697      6.50
RG698      6.50
RG699      6.50
RG700      6.50
RG701      6.50
RG702      6.50
RG703      6.50
RG704      6.50
RG705      6.50
RG706      6.50
RG707      6.50
RG708      6.50
RG709      6.50
RG710      6.50
RG711      6.50
RG712      6.50
RG713      6.50
RG714      6.50
RG715      6.50
RG716      6.50
RG717      6.50
RG718      6.50
RG719      6.50
RG720      6.50
RG721      6.50
RG722      6.50
RG723      6.50
RG724      6.50
RG725      6.50
RG726      6.50
RG727      6.50
RG728      6.50
RG729      6.50
RG730      6.50
RG731      6.50
RG732      6.50
RG733      6.50
RG734      6.50
RG735      6.50
RG736      6.50
RG737      6.50
RG738      6.50
RG739      6.50
RG740      6.50
RG741      6.50
RG742      6.50
RG743      6.50
RG744      6.50
RG745      6.50
RG746      6.50
RG747      6.50
RG748      6.50
RG749      6.50
RG750      6.50
RG751      6.50
RG752      6.50
RG753      6.50
RG754      6.50
RG755      6.50
RG756      6.50
RG757      6.50
RG758      6.50
RG759      6.50
RG760      6.50
RG761      6.50
RG762      6.50
RG763      6.50
RG764      6.50
RG765      6.50
RG766      6.50
RG767      6.50
RG768      6.50
RG769      6.50
RG770      6.50
RG771      6.50
RG772      6.50
RG773      6.50
RG774      6.50
RG775      6.50
RG776      6.50
RG777      6.50
RG778      6.50
RG779      6.50
RG780      6.50
RG781      6.50
RG782      6.50
RG783      6.50
RG784      6.50
RG785      6.50
RG786      6.50
RG787      6.50
RG788      6.50
RG789      6.50
RG790      6.50
RG791      6.50
RG792      6.50
RG793      6.50
RG794      6.50
RG795      6.50
RG796      6.50
RG797      6.50
RG798      6.50
RG799      6.50
RG800      6.50
RG801      6.50
RG802      6.50
RG803      6.50
RG804      6.50
RG805      6.50
RG806      6.50
RG807      6.50
RG808      6.50
RG809      6.50
RG810      6.50
RG811      6.50
RG812      6.50
RG813      6.50
RG814      6.50
RG815      6.50
RG816      6.50
RG817      6.50
RG818      6.50
RG819      6.50
RG820      6.50
RG821      6.50
RG822      6.50
RG823      6.50
RG824      6.50
RG825      6.50
RG826      6.50
RG827      6.50
RG828      6.50
RG829      6.50
RG830      6.50
RG831      6.50
RG832      6.50
RG833      6.50
RG834      6.50
RG835      6.50
RG836      6.50
RG837      6.50
RG838      6.50
RG839      6.50
RG840      6.50
RG841      6.50
RG842      6.50
RG843      6.50
RG844      6.50
RG845      6.50
RG846      6.50
RG847      6.50
RG848      6.50
RG849      6.50
RG850      6.50
RG851      6.50
RG852      6.50
RG853      6.50
RG854      6.50
RG855      6.50
RG856      6.50
RG857      6.50
RG858      6.50
RG859      6.50
RG860      6.50
RG861      6.50
RG862      6.50
RG863      6.50
RG864      6.50
RG865      6.50
RG866      6.50
RG867      6.50
RG868      6.50
RG869      6.50
RG870      6.50
RG871      6.50
RG872      6.50
RG873      6.50
RG874      6.50
RG875      6.50
RG876      6.50
RG877      6.50
RG878      6.50
RG879      6.50
RG880      6.50
RG881      6.50
RG882      6.50
RG883      6.50
RG884      6.50
RG885      6.50
RG886      6.50
RG887      6.50
RG888      6.50
RG889      6.50
RG890      6.50
RG891      6.50
RG892      6.50
RG893      6.50
RG894      6.50
RG895      6.50
RG896      6.50
RG897      6.50
RG898      6.50
RG899      6.50
RG900      6.50
RG901      6.50
RG902      6.50
RG903      6.50
RG904      6.50
RG905      6.50
RG906      6.50
RG907      6.50
RG908      6.50
RG909      6.50
RG910      6.50
RG911      6.50
RG912      6.50
RG913      6.50
RG914      6.50
RG915      6.50
RG916      6.50
RG917      6.50
RG918      6.50
RG919      6.50
RG920      6.50
RG921      6.50
RG922      6.50
RG923      6.50
RG924      6.50
RG925      6.50
RG926      6.50
RG927      6.50
RG928      6.50
RG929      6.50
RG930      6.50
RG931      6.50
RG932      6.50
RG933      6.50
RG934      6.50
RG935      6.50
RG936      6.50
RG937      6.50
RG938      6.50
RG939      6.50
RG940      6.50
RG941      6.50
RG942      6.50
RG943      6.50
RG944      6.50
RG945      6.50
RG946      6.50
RG947      6.50
RG948      6.50
RG949      6.50
RG950      6.50
RG951      6.50
RG952      6.50
RG953      6.50
RG954      6.50
RG955      6.50
RG956      6.50
RG957      6.50
RG958      6.50
RG959      6.50
RG960      6.50
RG961      6.50
RG962      6.50
RG963      6.50
RG964      6.50
RG965      6.50
RG966      6.50
RG967      6.50
RG968      6.50
RG969      6.50
RG970      6.50
RG971      6.50
RG972      6.50
RG973      6.50
RG974      6.50
RG975      6.50
RG976      6.50
RG977      6.50
RG978      6.50
RG979      6.50
RG980      6.50
RG981      6.50
RG982      6.50
RG983      6.50
RG984      6.50
RG985      6.50
RG986      6.50
RG987      6.50
RG988      6.50
RG989      6.50
RG990      6.50
RG991      6.50
RG992      6.50
RG993      6.50
RG994      6.50
RG995      6.50
RG996      6.50
RG997      6.50
RG998      6.50
RG999      6.50
RG1000     6.50

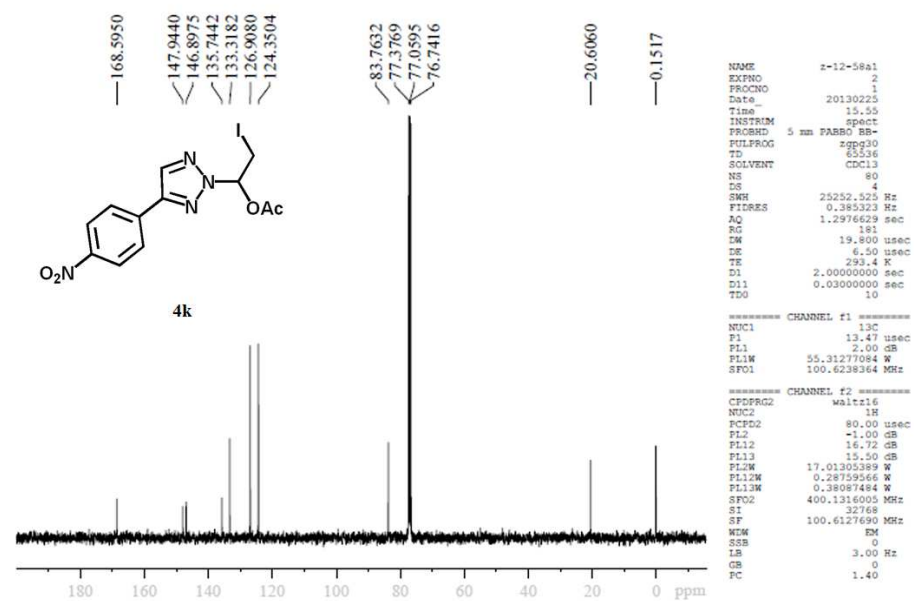
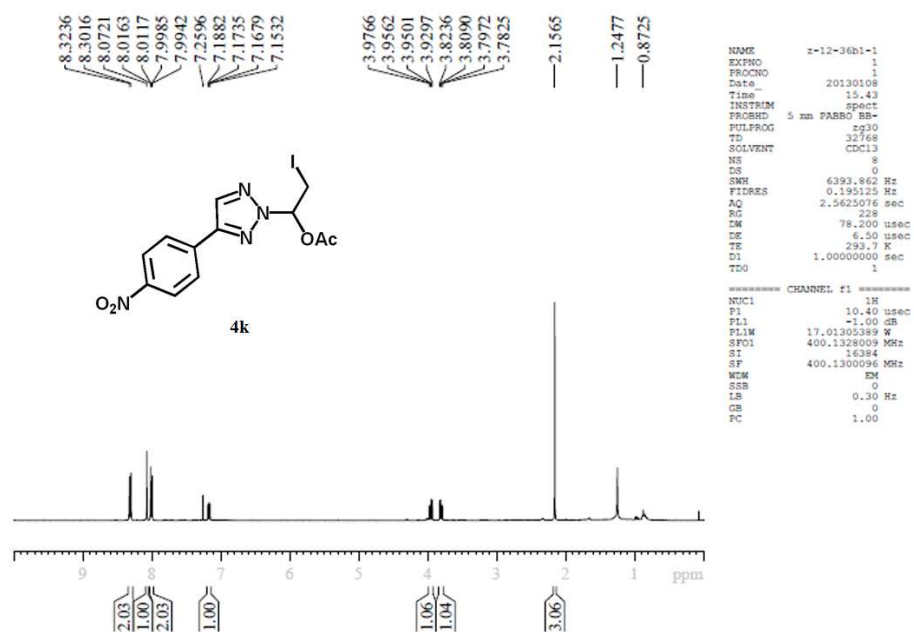
```

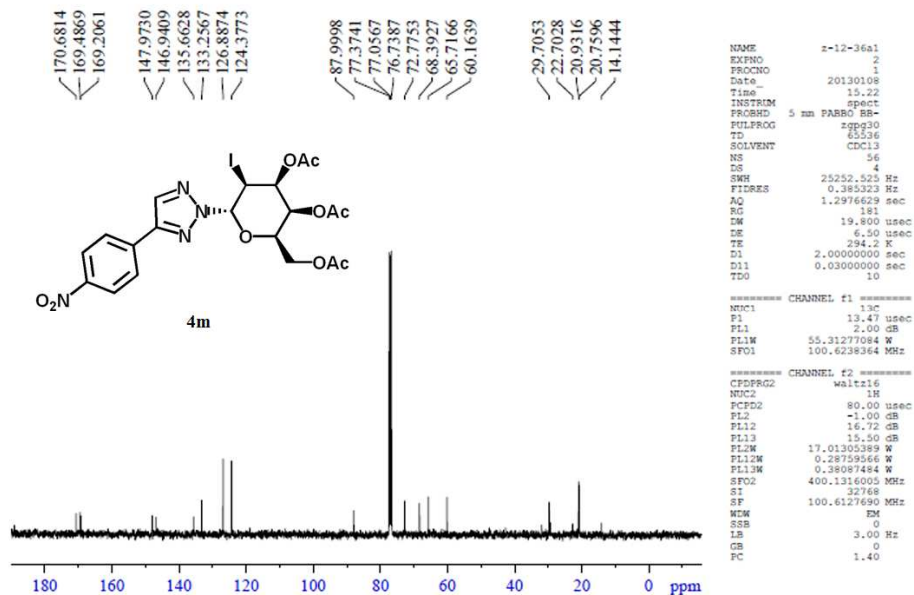
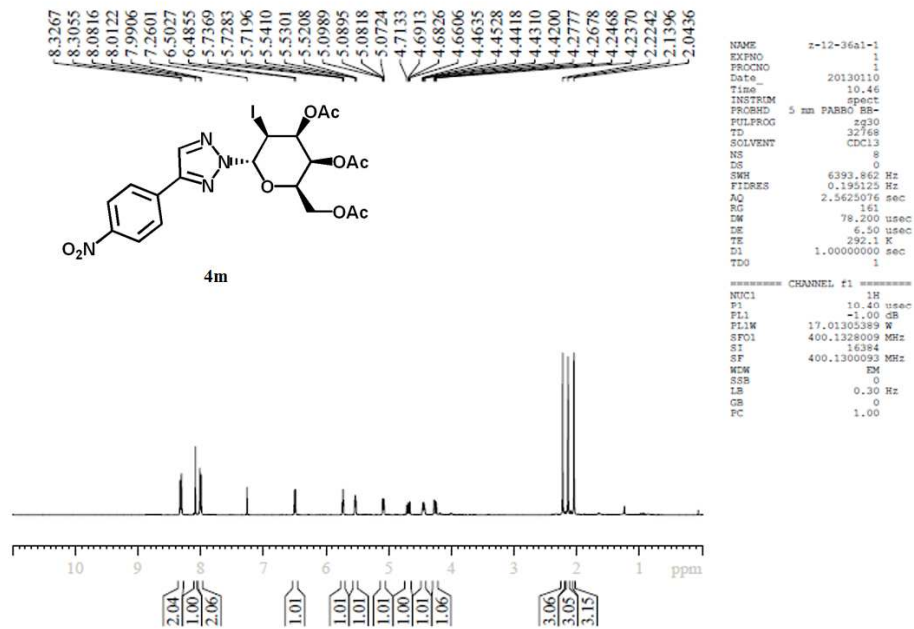


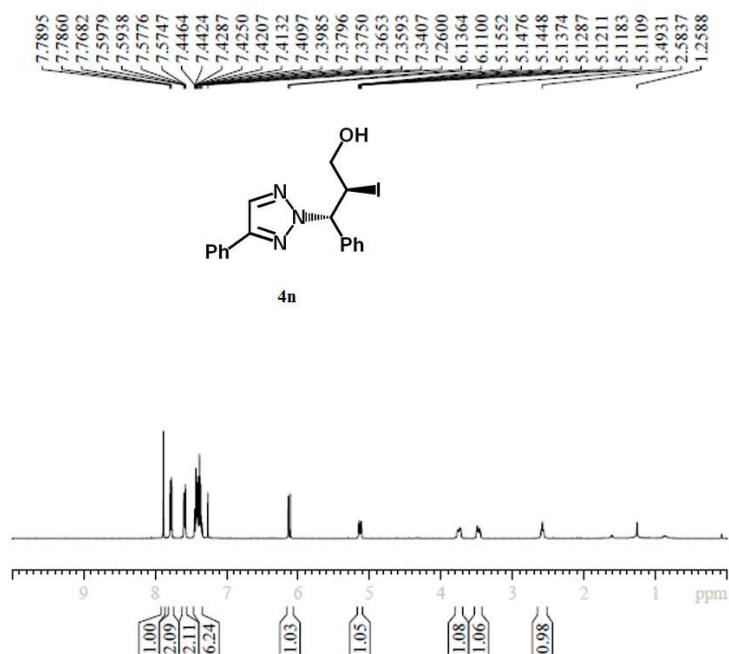
```

NAME      z-12-37d1
EXPNO     1
PROCNO    1
Date_     20130108
Time      18.27
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
AQ        0.0000000
SOLVENT   CDCl3
NS         48
DS         4
SWH        25250.826 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
RG2        19.800
RG3        6.50
RG4        6.50
RG5        6.50
RG6        6.50
RG7        6.50
RG8        6.50
RG9        6.50
RG10       6.50
RG11       6.50
RG12       6.50
RG13       6.50
RG14       6.50
RG15       6.50
RG16       6.50
RG17       6.50
RG18       6.50
RG19       6.50
RG20       6.50
RG21       6.50
RG22       6.50
RG23       6.50
RG24       6.50

```



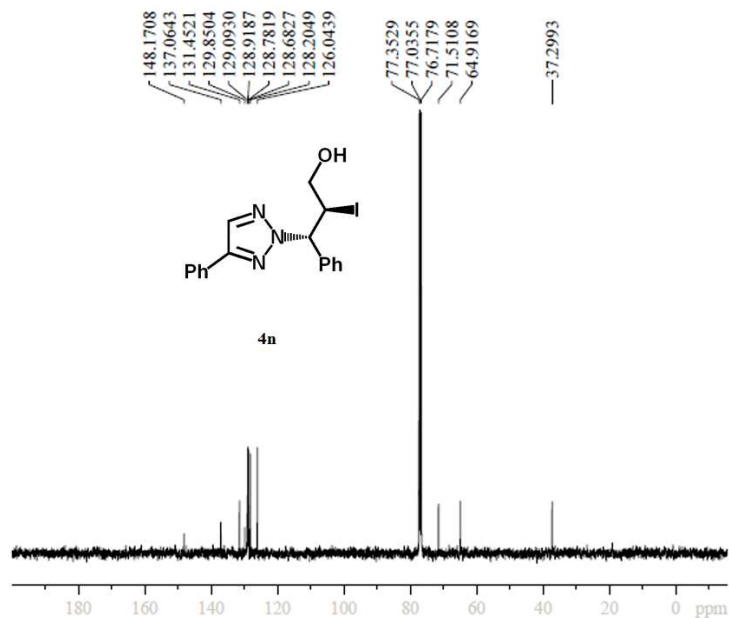




```

NAME      s-12-29a2
EXPNO     1
PROCNO    1
Date_     20121230
Time      10.46
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   CDCl3
NS         100
DS         4
SWH        25950.862 Hz
FIDRES     0.198123 Hz
AQ         0.6628076 sec
RG          321
WDW         EM
SSB         0
GB          0
PC          1.00
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL12       17.01308899 W
PL13       400.1328009 MHz
SFO1       400.1328009 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       13C
PCPD2      80.00 usec
PL2         -1.00 dB
PL12       16.71 dB
PL13       18.80 dB
PL14       17.01308899 W
PL15       0.28788866 W
PL16       0.3807484 W
SFO2       400.1316005 MHz
SFO3       100.6127690 MHz
WDW         EM
SSB         0
GB          0
PC          1.40

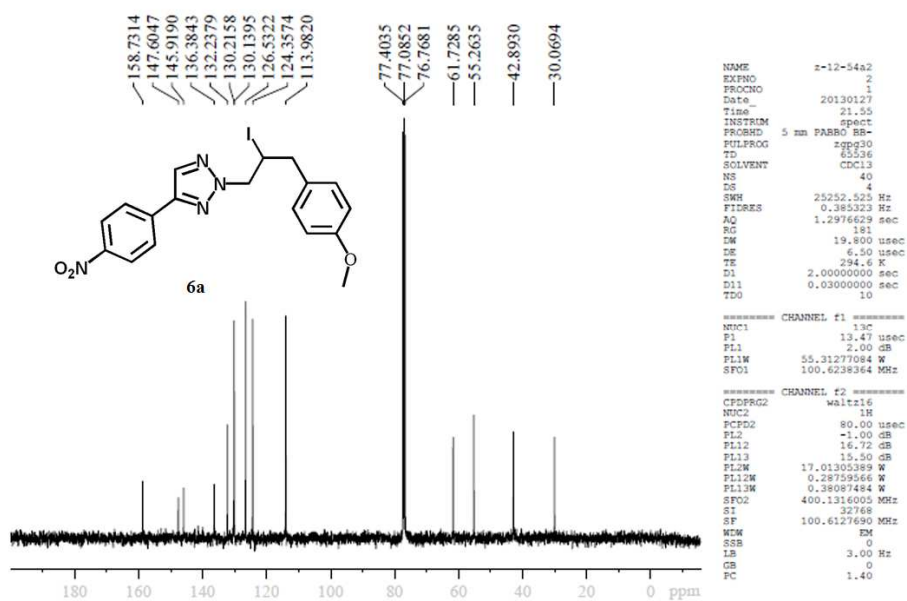
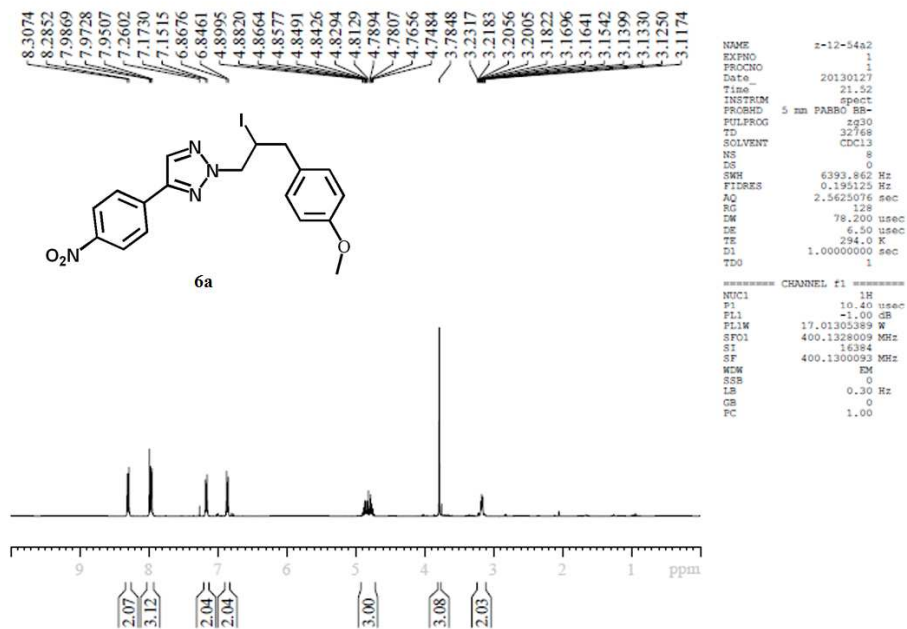
```

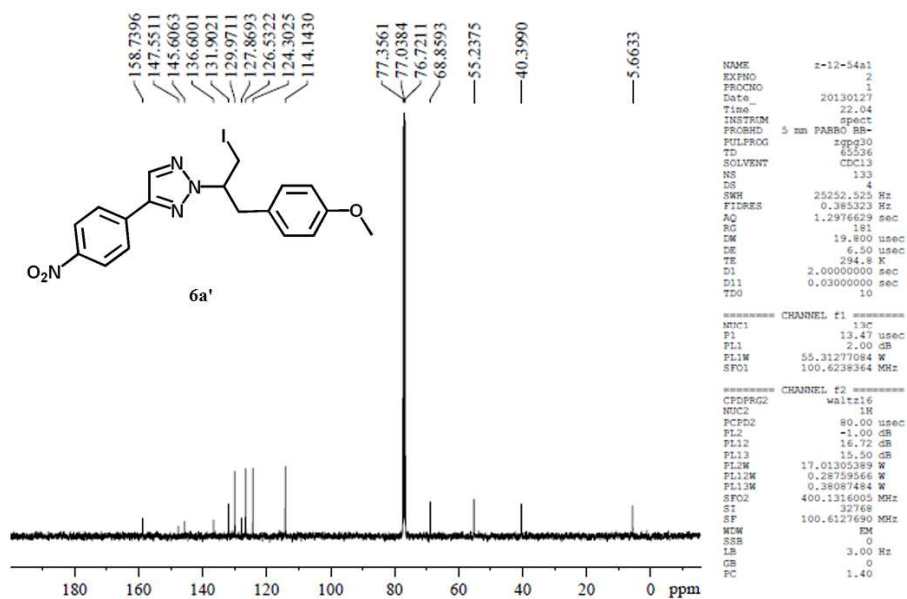
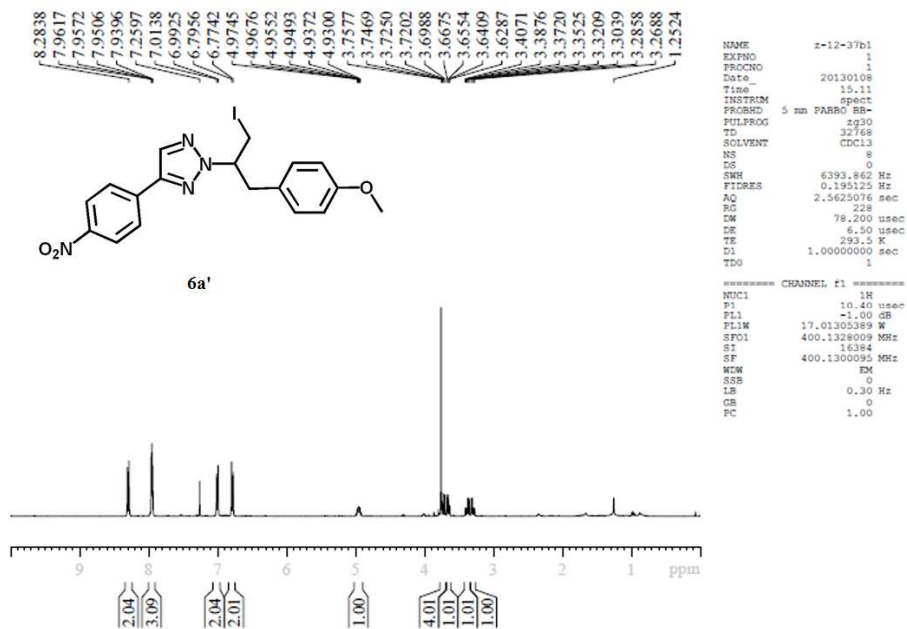


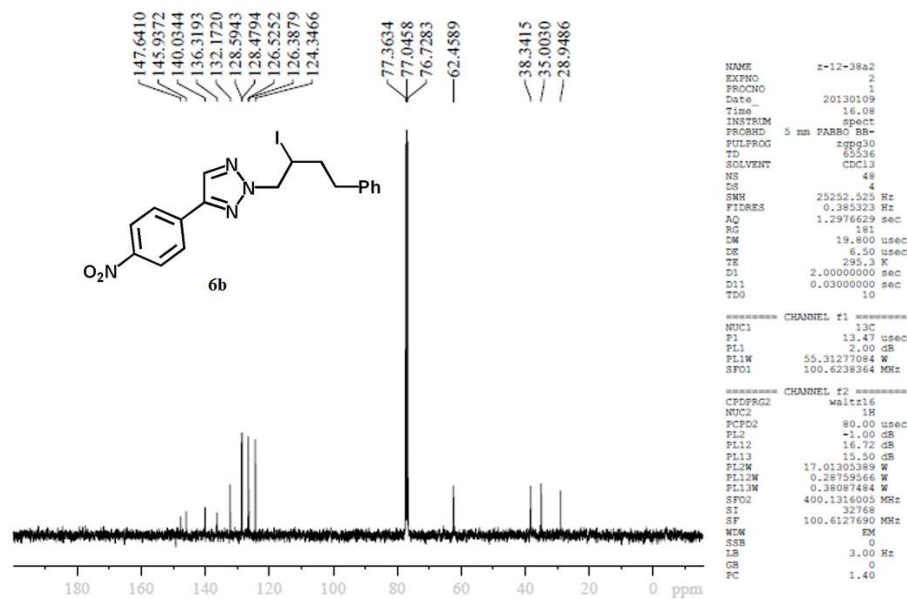
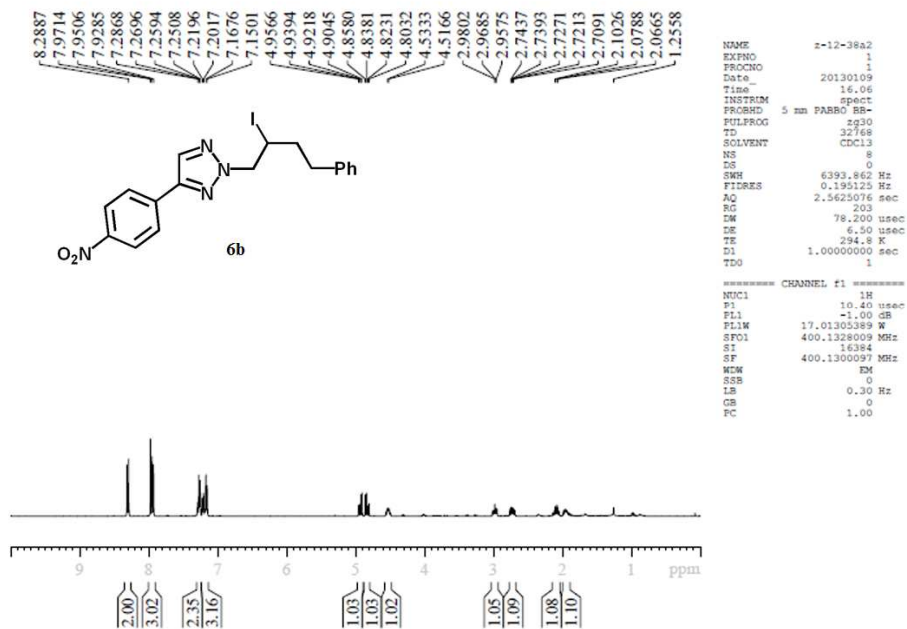
```

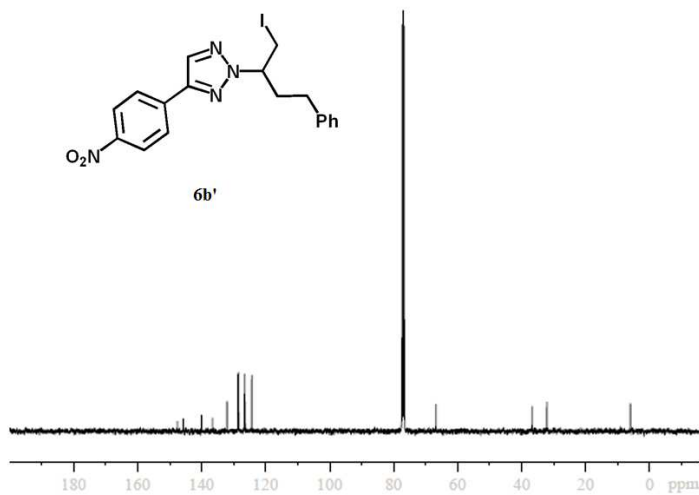
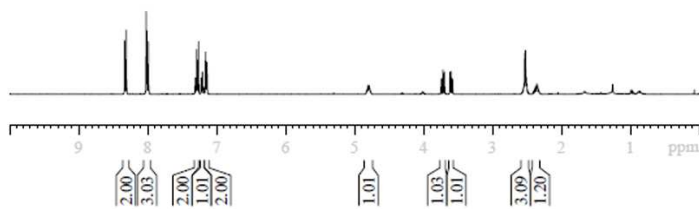
NAME      s-12-29a2
EXPNO     1
PROCNO    1
Date_     20121230
Time      10.46
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   CDCl3
NS         100
DS         4
SWH        25950.862 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG          321
WDW         EM
SSB         0
GB          0
PC          1.00
===== CHANNEL f1 =====
NUC1       13C
P1         10.47 usec
PL1        -1.00 dB
PL12       55.31277084 W
PL13       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2      80.00 usec
PL2         -1.00 dB
PL12       16.71 dB
PL13       18.80 dB
PL14       17.01308899 W
PL15       0.28788866 W
PL16       0.3807484 W
SFO2       400.1316005 MHz
SFO3       100.6127690 MHz
WDW         EM
SSB         0
GB          0
PC          1.40

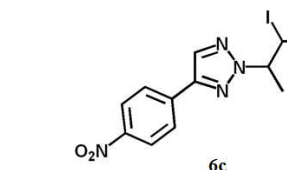
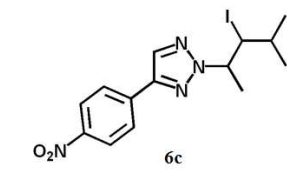
```

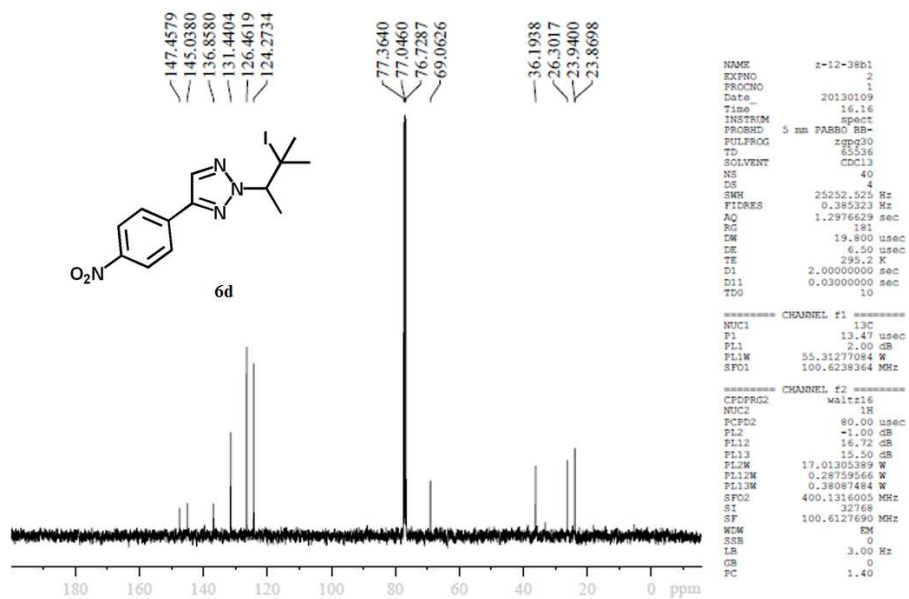
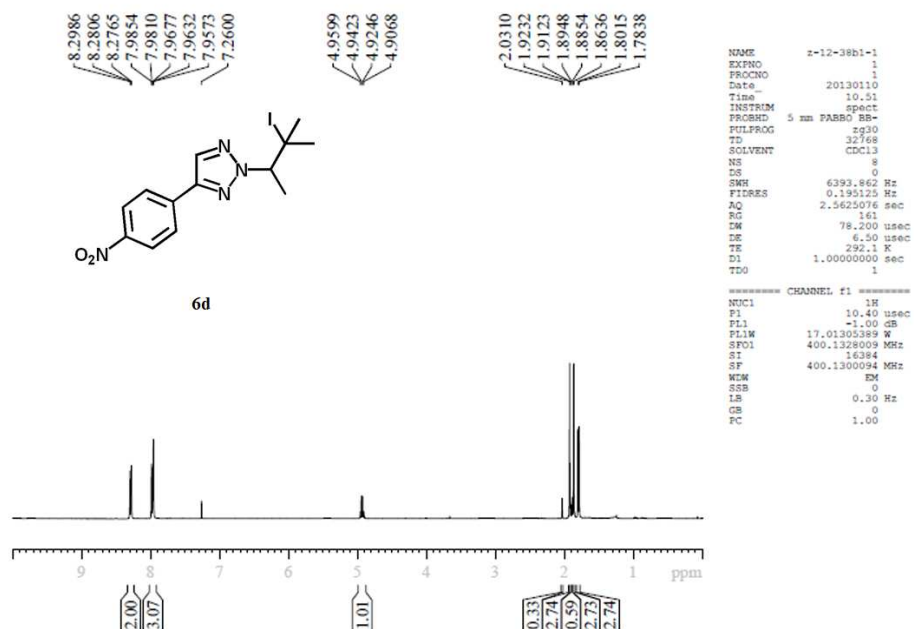


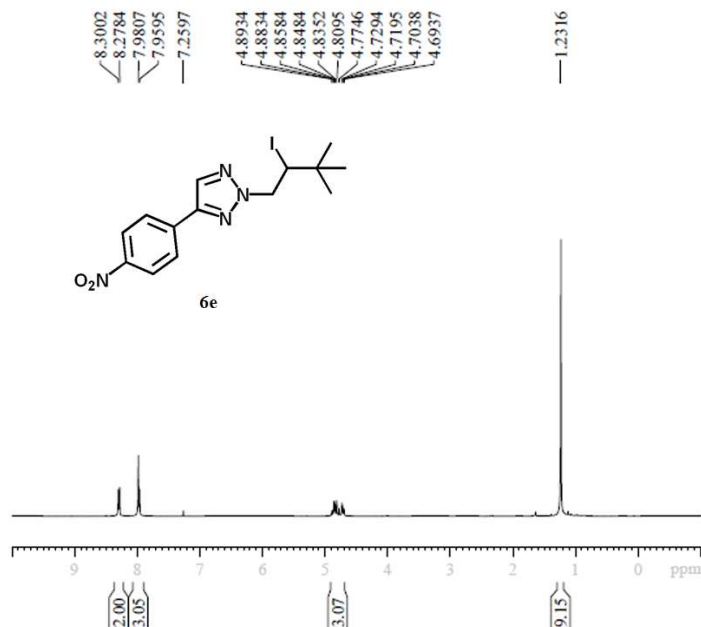








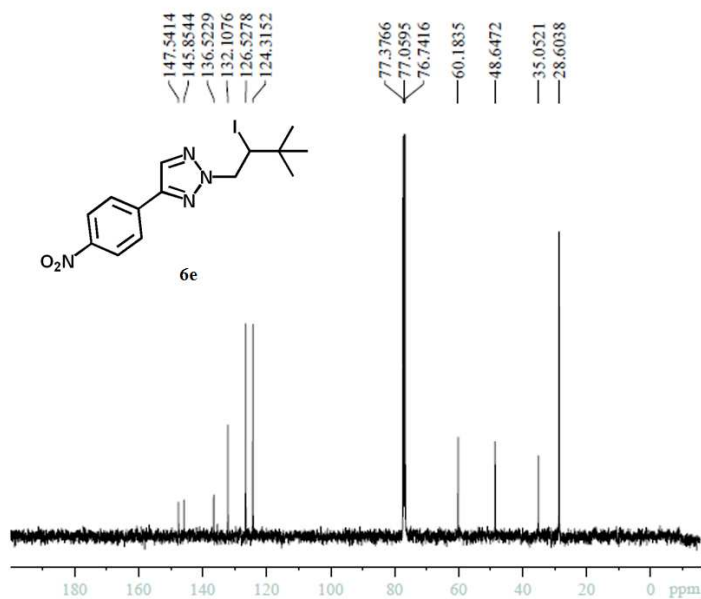




```

NAME      z-12-57a1
EXPNO     1
PROCNO    1
Date_     20130128
Time      10.43
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         144
DM         78.200 usec
DE         6.50 usec
TE         293.0 K
D1         1.00000000 sec
TD0        1
===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300095 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00

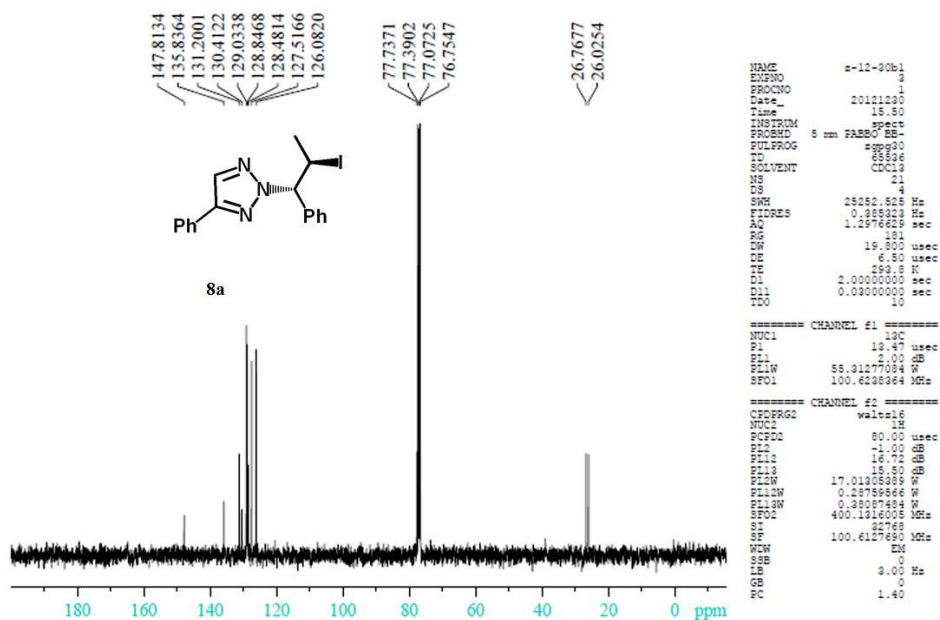
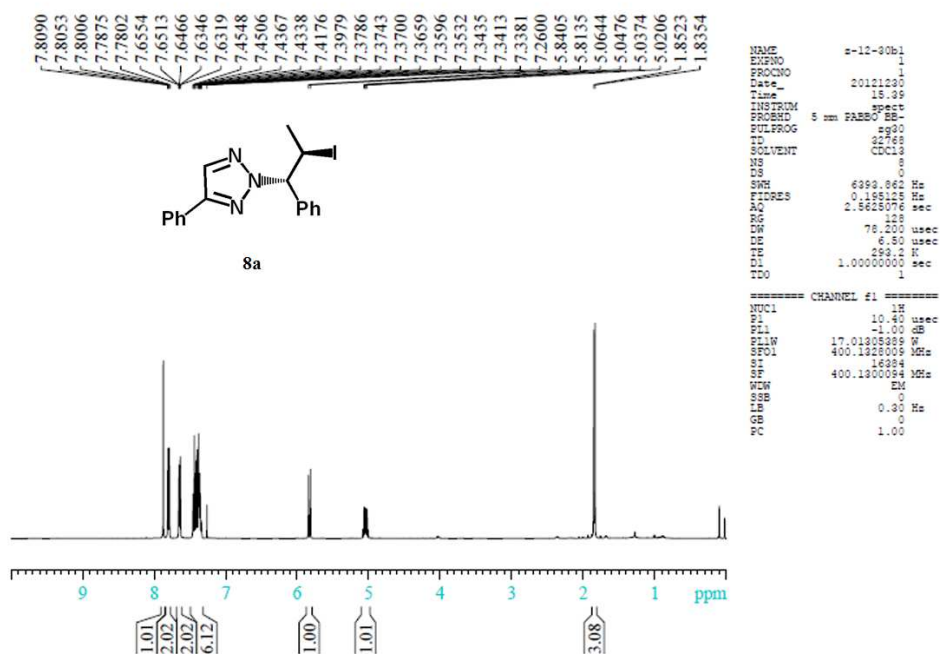
```

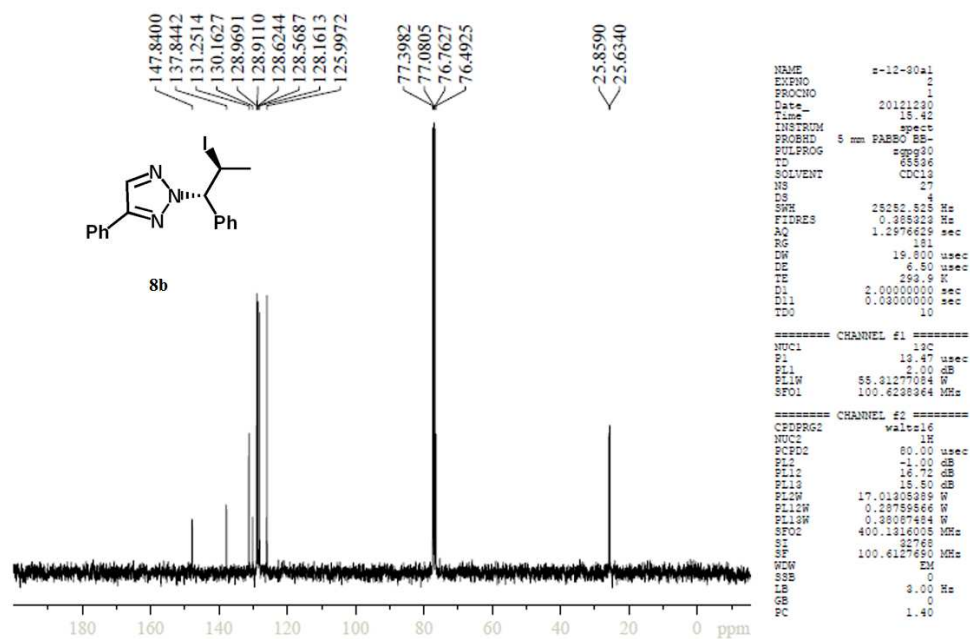
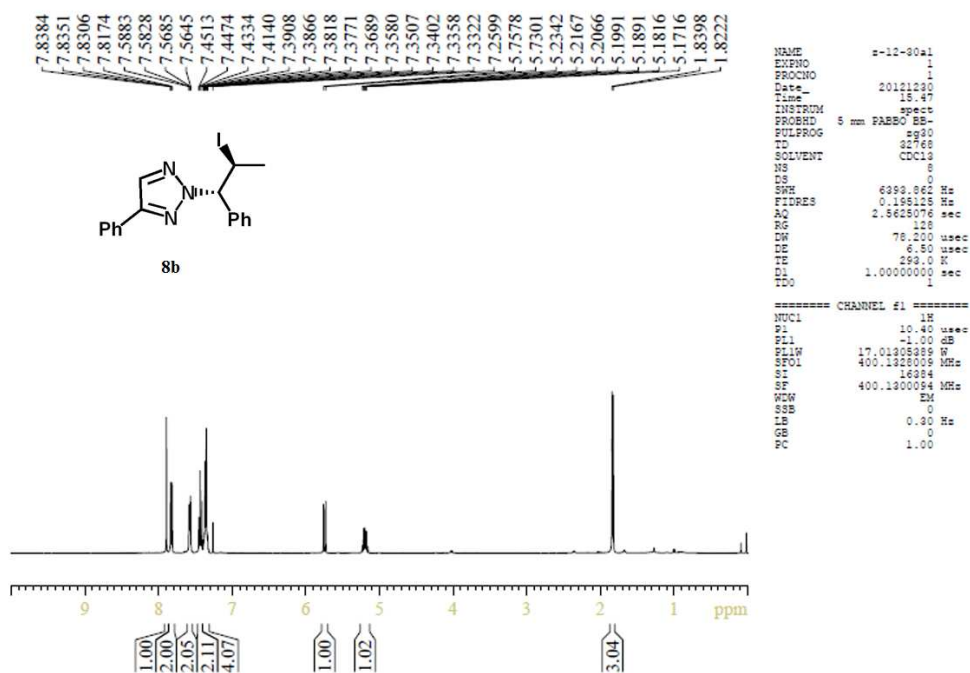


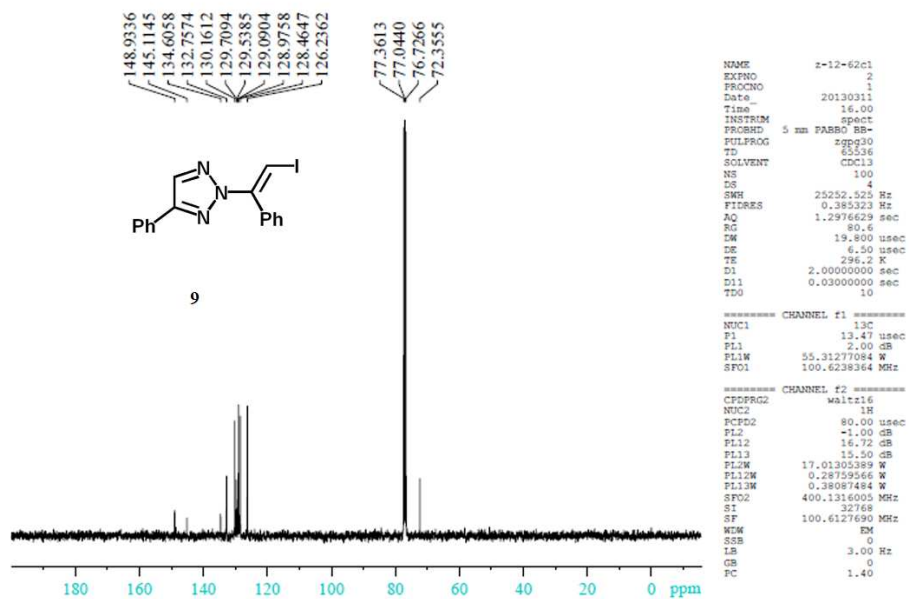
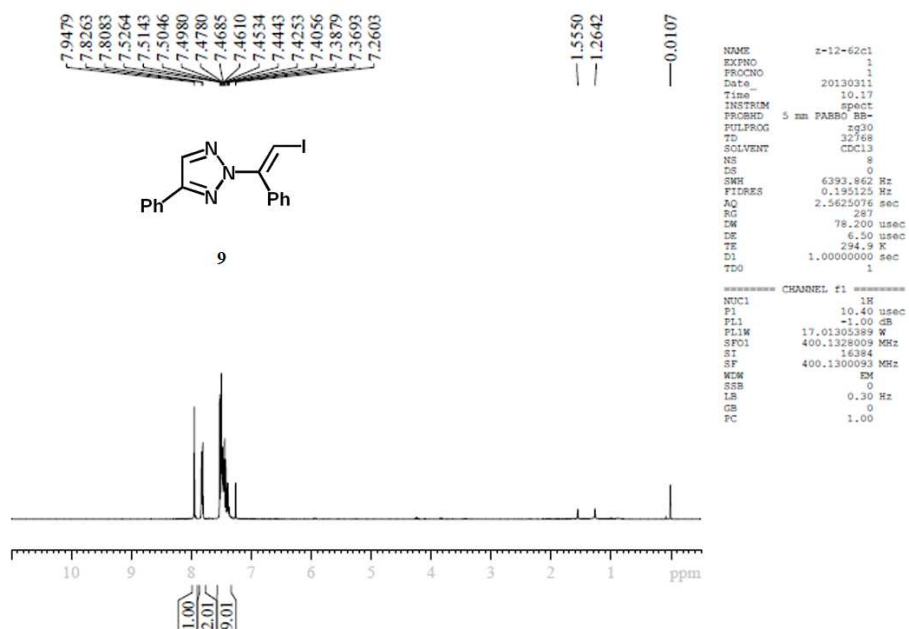
```

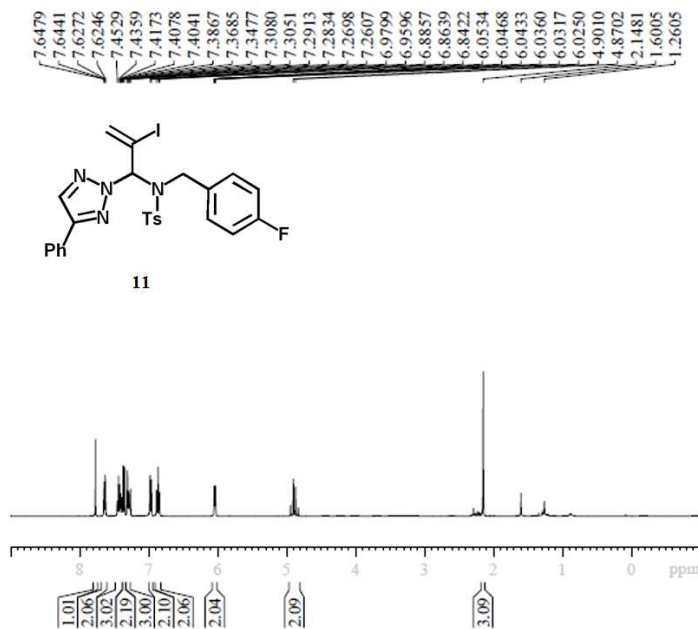
NAME      z-12-57a1
EXPNO     2
PROCNO    1
Date_     20130128
Time      10.45
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         64
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         181
DM         19.800 usec
DE         6.50 usec
TE         293.6 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB        0
LB         3.00 Hz
GB         0
PC         1.40

```







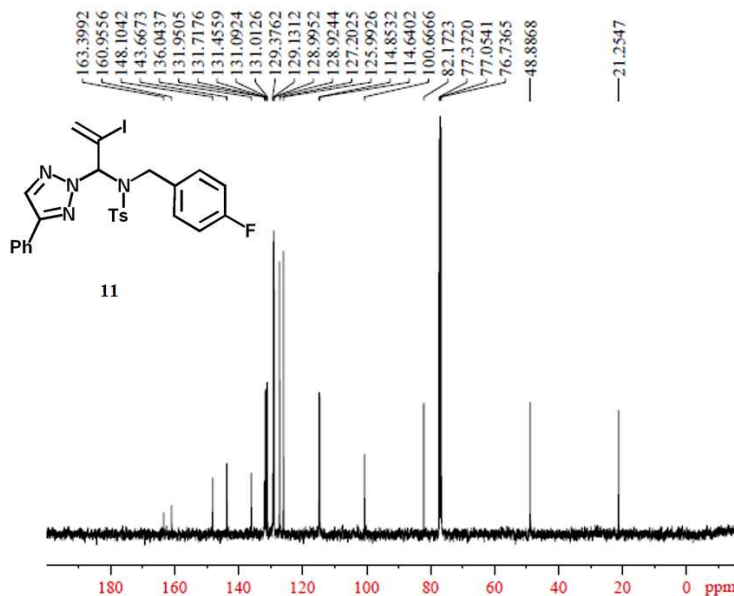


```

NAME      z-11-52d1
EXPNO     1
PROCNO    1
Date_     20120925
Time      11.01
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
FIDRES    0.195125 Hz
AQ         2.5625076 sec
RG         101
EW         78.200 usec
DE         6.50 usec
TE         294.8 K
D1         1.00000000 sec
TDO        1

===== CHANNEL f1 =====
NUC1      1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300091 MHz
WDW         EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

```



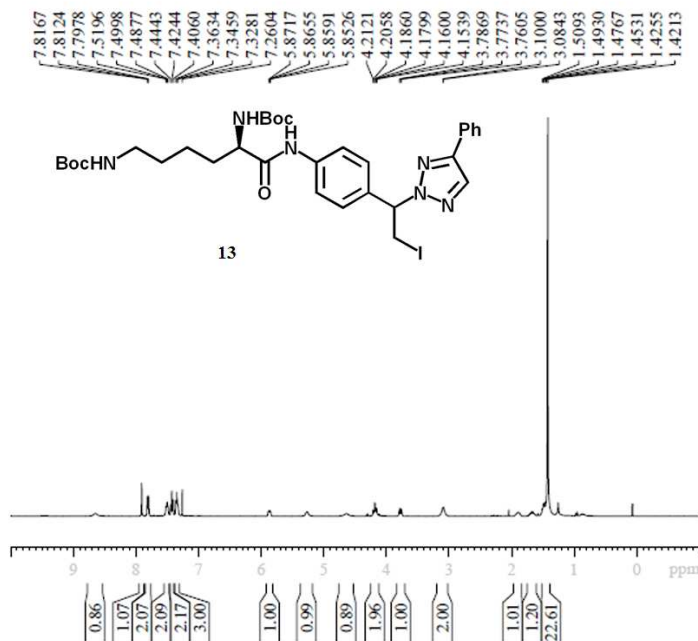
```

NAME      z-11-52d0
EXPNO     2
PROCNO    1
Date_     20130426
Time      15.21
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
FIDRES    0.385523 Hz
AQ         1.2976629 sec
RG         80.6
EW         19.800 usec
DE         6.50 usec
TE         296.6 K
D1         2.00000000 sec
D11        0.03000000 sec
TDO        10

===== CHANNEL f1 =====
NUC1      13C
P1         13.47 usec
PL1         2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL2W       17.01305389 W
PL12W      0.28759566 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW         EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```

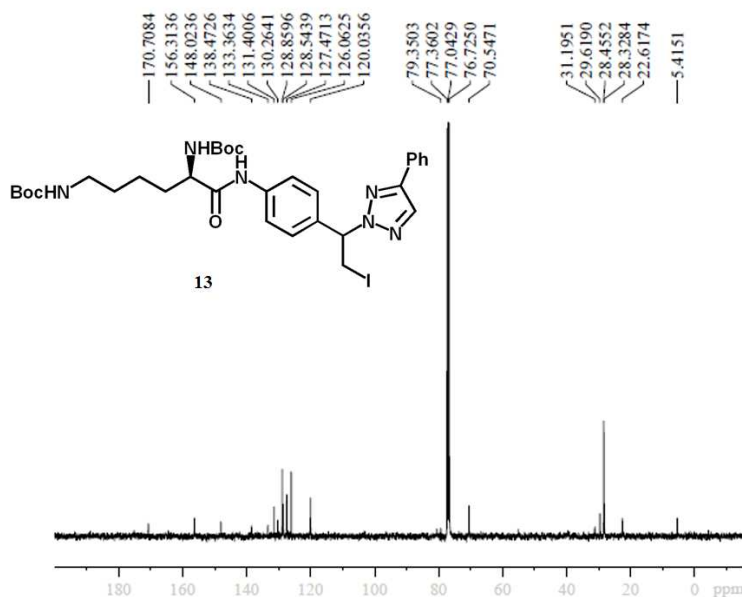



```

NAME      z-12-6a1-1
EXPNO     1
PROCNO    1
Date_     20121230
Time      10.58
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         161
DM         78.200 usec
DE         6.50 usec
TE         294.6 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
SI         16384
SF         400.1300092 MHz
WDW        EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

```



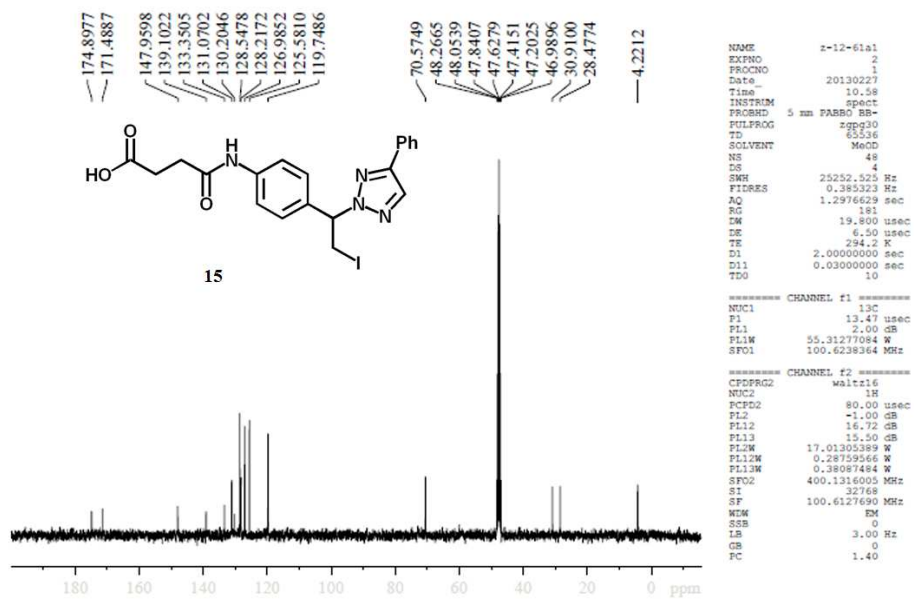
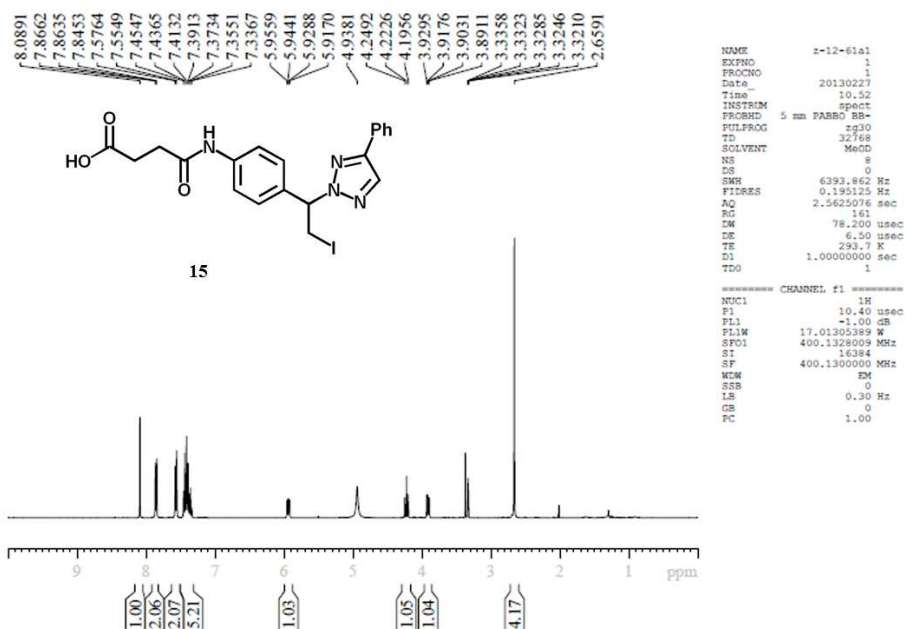
```

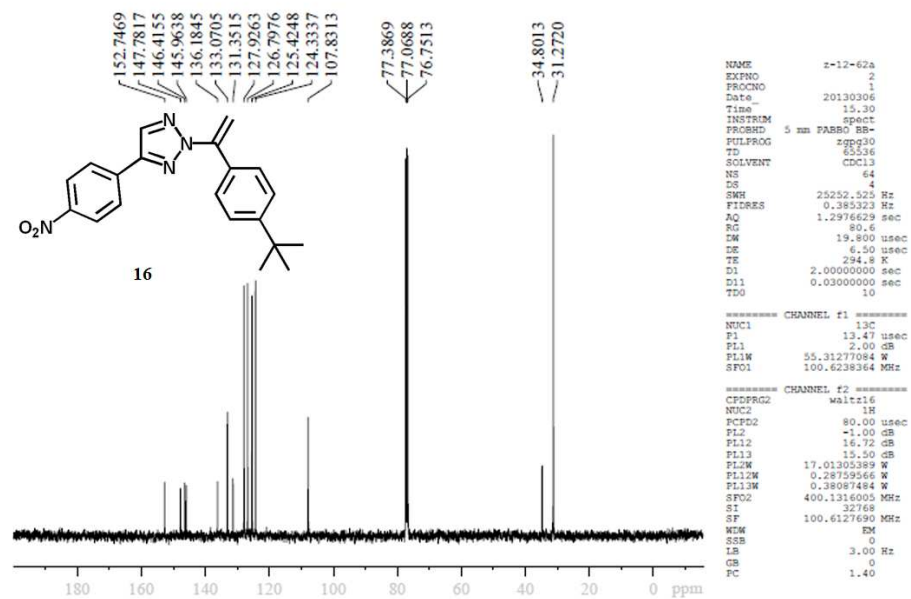
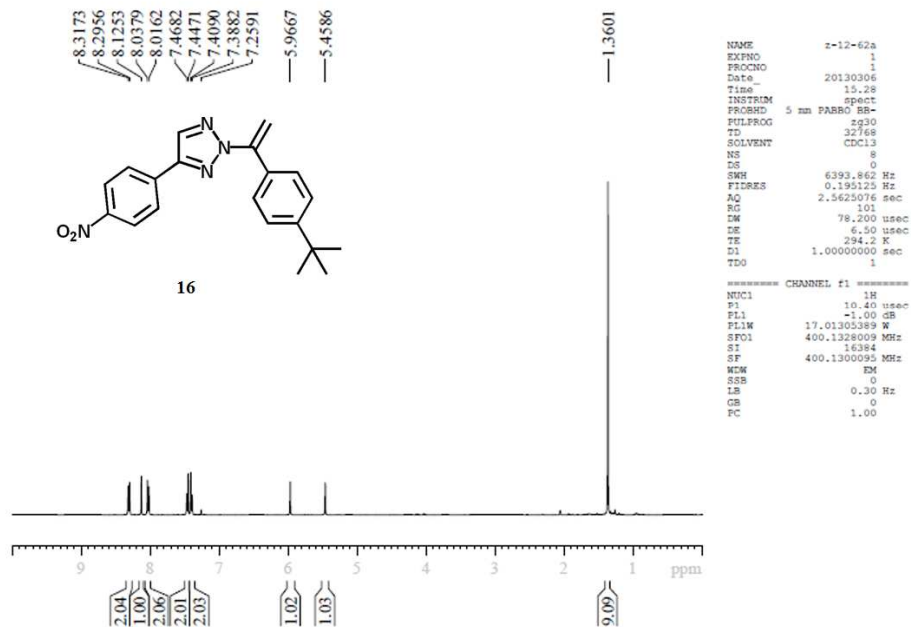
NAME      z-12-6a1-1
EXPNO     2
PROCNO    1
Date_     20121230
Time      11.00
INSTRUM   spect
PROBHD    5 mm PARBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         220
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         161
DM         19.800 usec
DE         6.50 usec
TE         295.7 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10

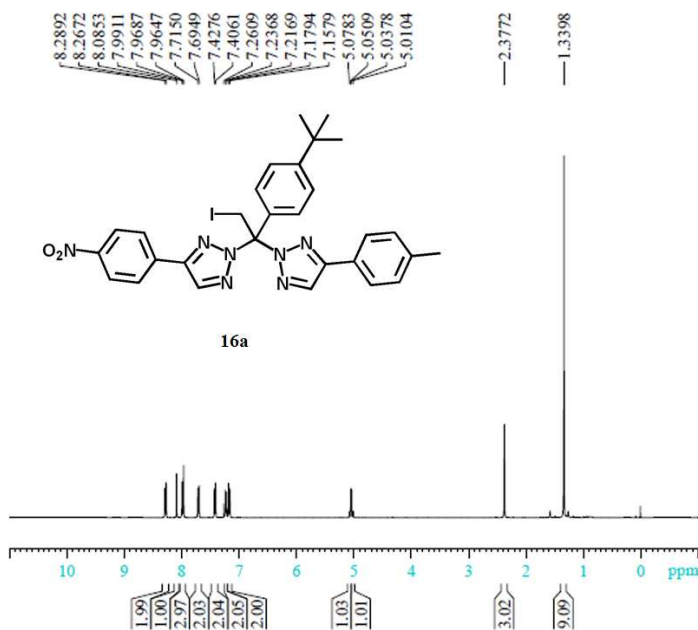
===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2     80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759466 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
SI         32768
SF         100.6127690 MHz
WDW        EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```



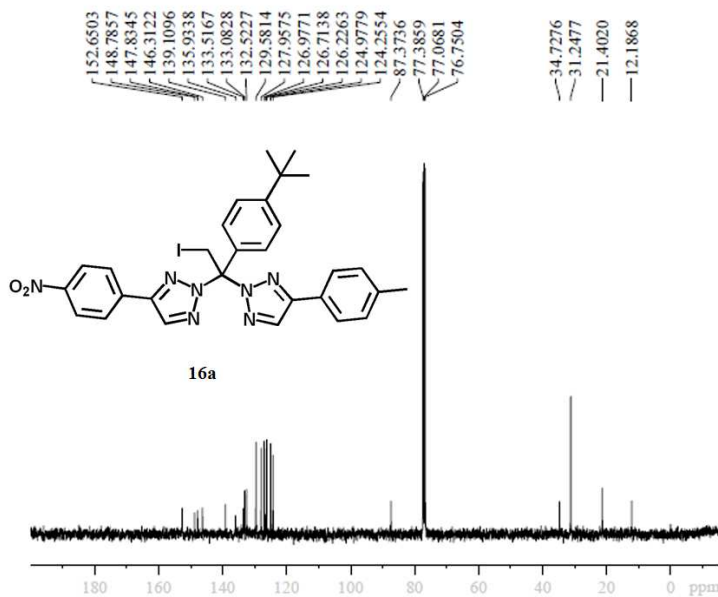


```

NAME      z-12-7981-1
EXPNO     1
PROCNO    1
Date_     20130326
Time      15.34
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD         32768
SOLVENT   CDCl3
NS         8
DS         0
SWH        6393.862 Hz
FIDRES     0.195125 Hz
AQ         2.5625076 sec
RG         144
DM         78.200 usec
DE         6.50 usec
TE         293.3 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         10.40 usec
PL1        -1.00 dB
PL1W       17.01305389 W
SFO1       400.1328009 MHz
ST         16384
SF         400.1300091 MHz
WEN        EM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

```



```

NAME      z-12-7981-1
EXPNO     2
PROCNO    1
Date_     20130326
Time      15.36
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCl3
NS         32
DS         4
SWH        25252.525 Hz
FIDRES     0.385323 Hz
AQ         1.2976629 sec
RG         80.6
DM         19.800 usec
DE         6.50 usec
TE         293.7 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0        10

===== CHANNEL f1 =====
NUC1       13C
P1         13.47 usec
PL1        2.00 dB
PL1W       55.31277084 W
SFO1       100.6238364 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2       1H
PCPD2      80.00 usec
PL2        -1.00 dB
PL12       16.72 dB
PL13       15.50 dB
PL1W       17.01305389 W
PL12W      0.28759866 W
PL13W      0.38087484 W
SFO2       400.1316005 MHz
ST         32768
SF         100.6127690 MHz
WEN        EM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

```

