

Supporting Information

Diastereoselective synthesis of highly functionalized polycyclic benzosultams via tandem cyclisations of cyclic *N*-sulfonylimines with in situ generated Huisgen 1,4-dipoles

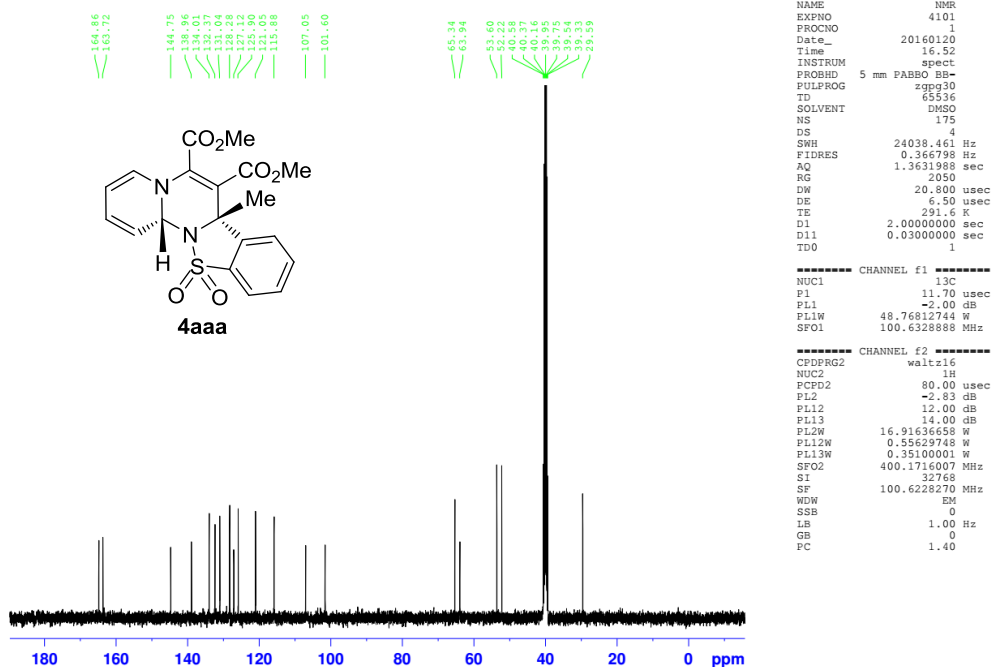
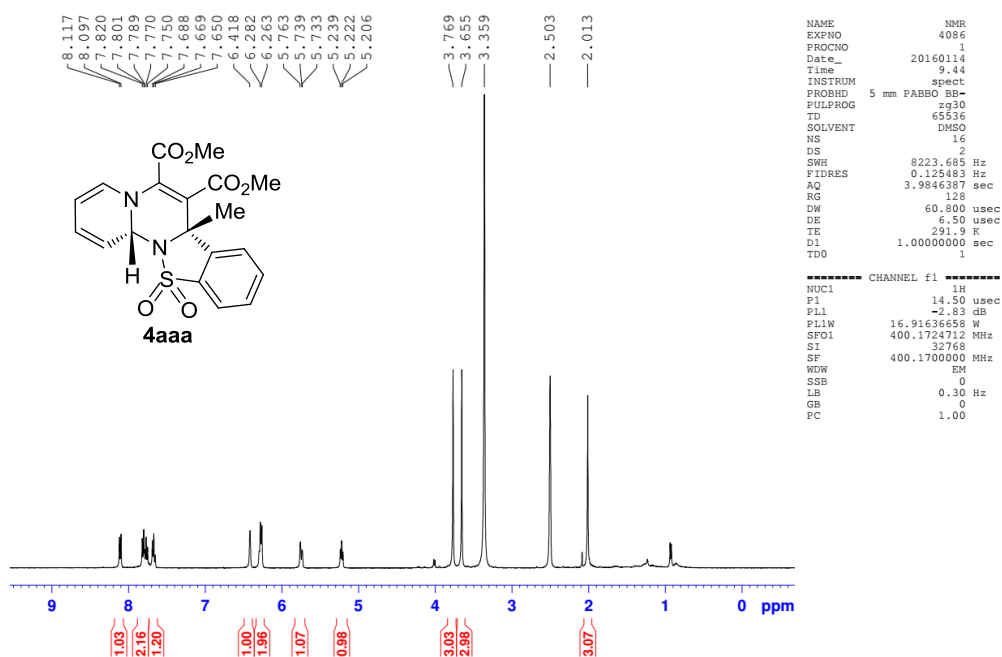
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Zhao Yang, Yu-Di Zhao, Yue-Yang Liu

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P.R. China; *Phone*: 86-10-6739-6211; *Fax*: 86-10-6739-6211; *Email*: hwzhao@bjut.edu.cn

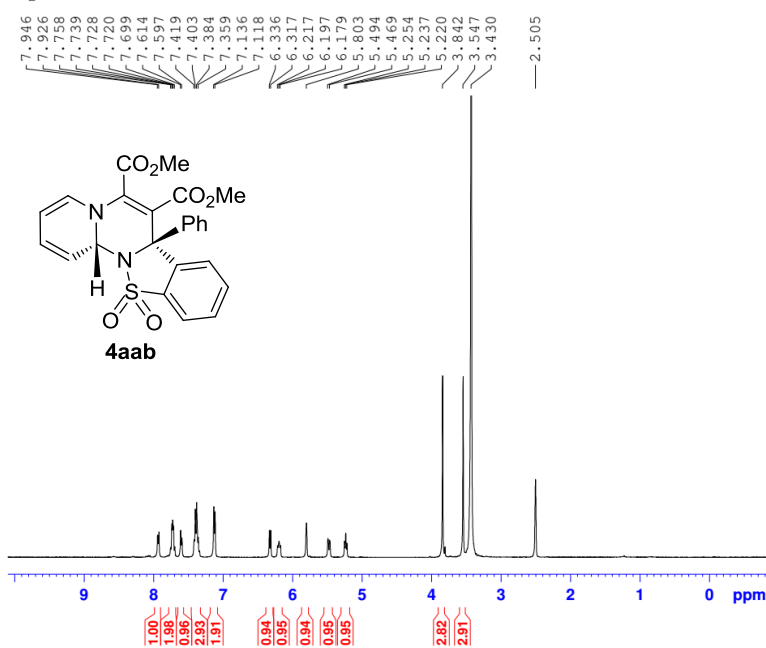
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1. ¹H and ¹³C NMR spectra



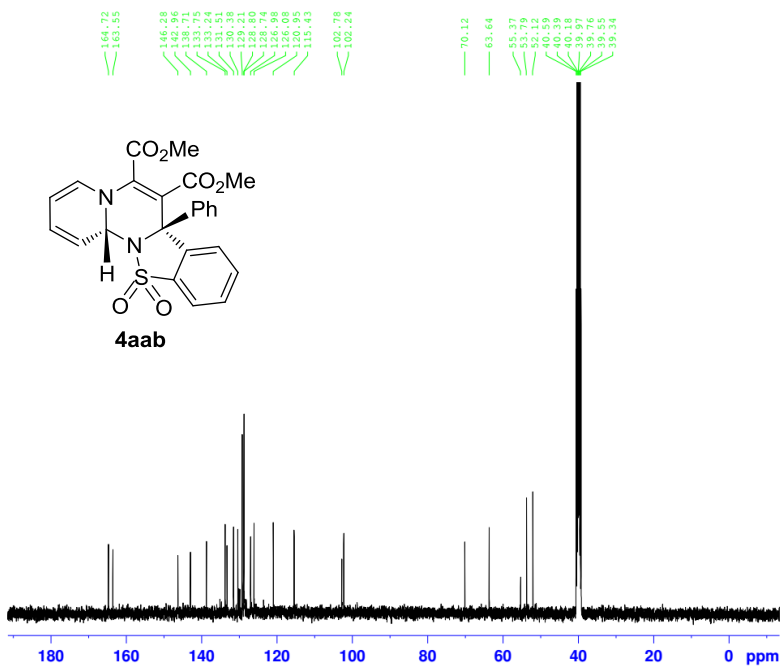
CXQ-IV-P8-1



```

NAME          NMR
EXPNO         3676
PROCNO        1
Date_         20151113
Time          10.18
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD             65536
SOLVENT       DMSO
NS             12
DS             2
SWH            8223.695 Hz
FIDRES        0.125493 Hz
AQ             3.9846387 sec
RG             128
DW             60.800 usec
DE             6.50 usec
TE             291.6 K
D1             1.00000000 sec
TD0            1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SFO1          400.1721712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
FC            1.00
  
```

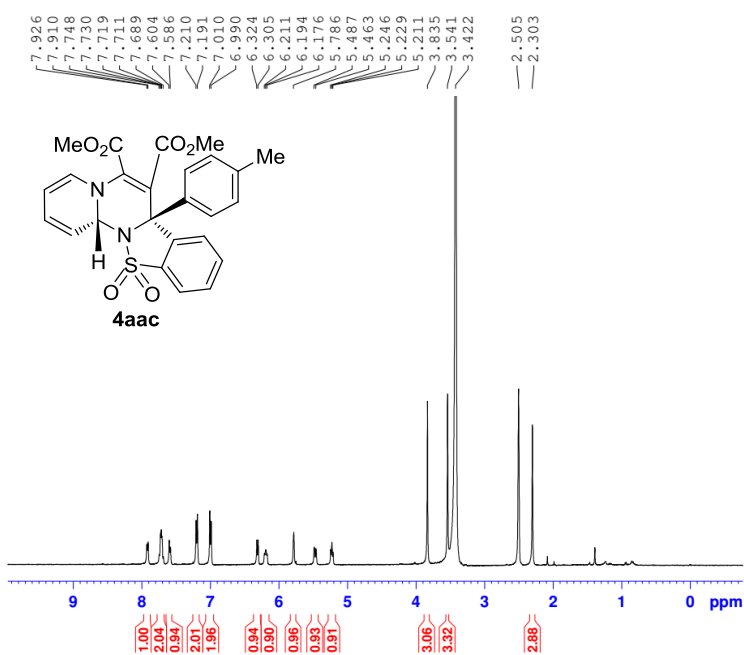


```

NAME          NMR
EXPNO         4043
PROCNO        1
Date_         20151230
Time          16.46
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD             65536
SOLVENT       DMSO
NS             1024
DS             4
SWH            24038.461 Hz
FIDRES        0.366798 Hz
AQ             1.3631988 sec
RG             2050
DW             20.800 usec
DE             6.50 usec
TE             292.5 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0            1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.91636658 W
PL12W         0.55623748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

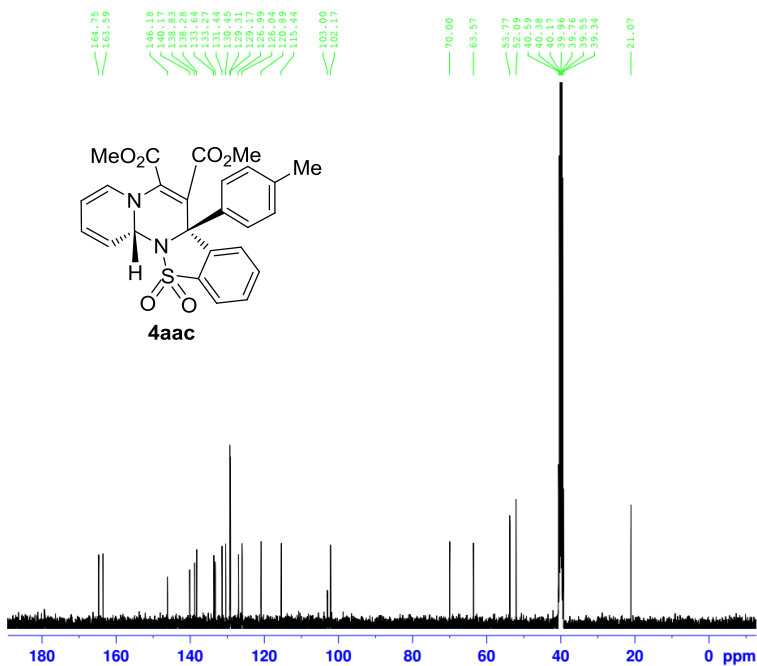


```

NAME          NMR
EXPNO         3718
PROCNO        1
Date_         20151120
Time          8.55
INSTRUM       spect
PROBHD        5 mm FAPBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            6
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            291.1 K
D1            1.00000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SF01          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

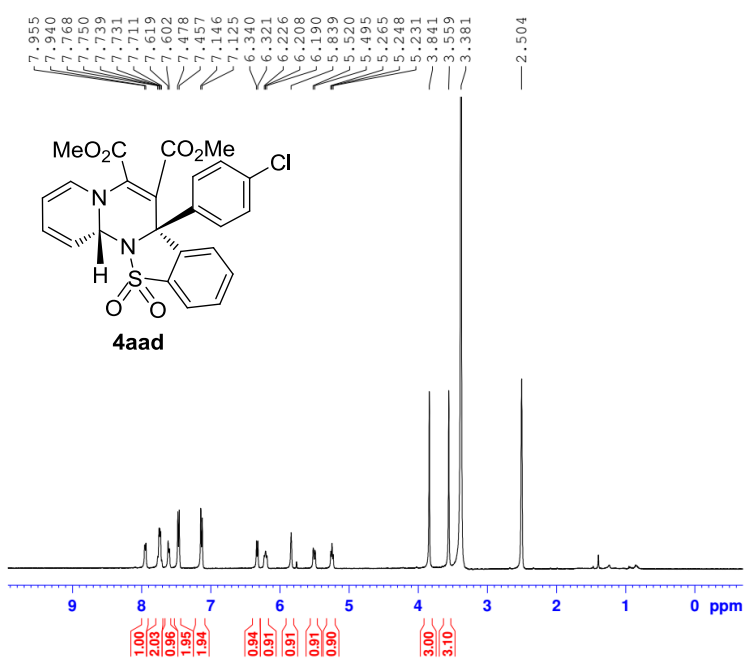
NAME          NMR
EXPNO         4060
PROCNO        1
Date_         20160105
Time          13.19
INSTRUM       spect
PROBHD        5 mm FAPBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            4
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SF01          100.6328888 MHz
  
```

```

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.91636658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SF02          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

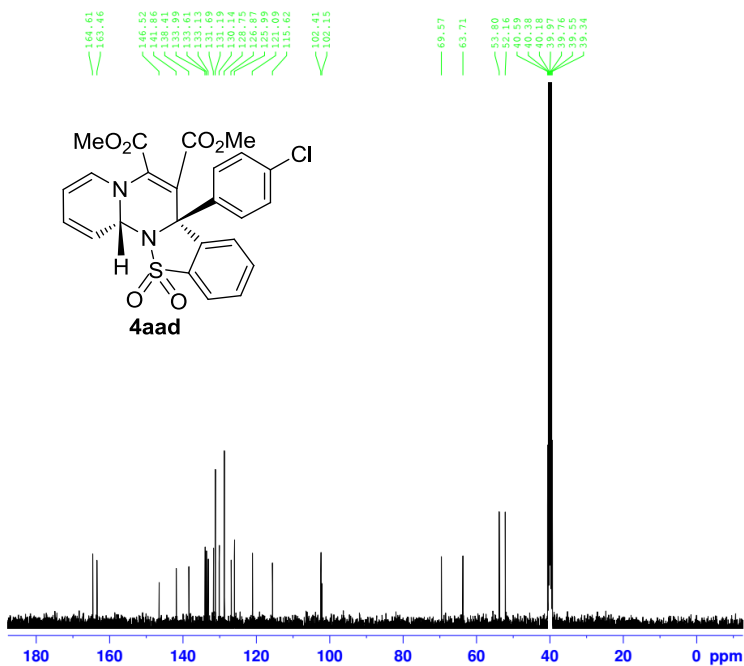


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EXPNO         3719
PROCNO        1
Date_         20151120
Time          8.59
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            6
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            291.1 K
D1            1.00000000 sec
D11           1
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.9163658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
FC            1.00
  
```



```

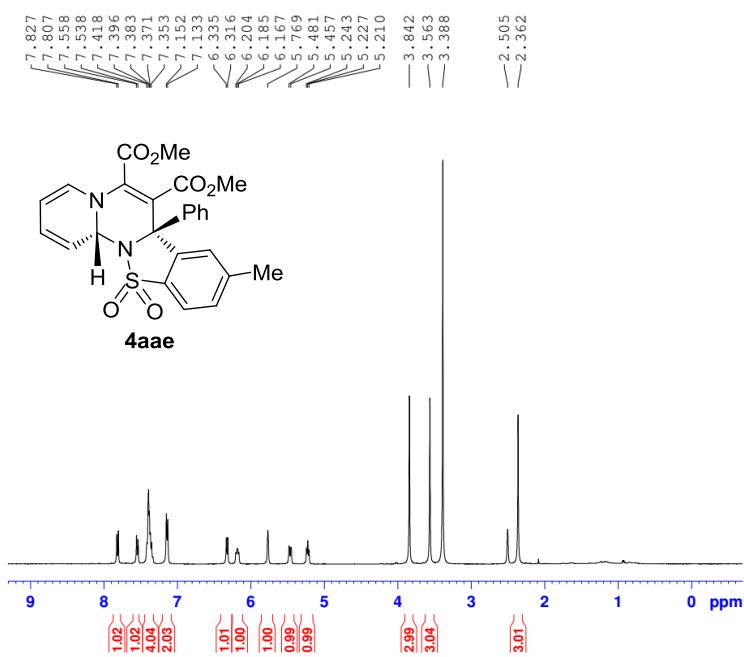
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EXPNO         4059
PROCNO        1
Date_         20160105
Time          13.29
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            141
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz
  
```

```

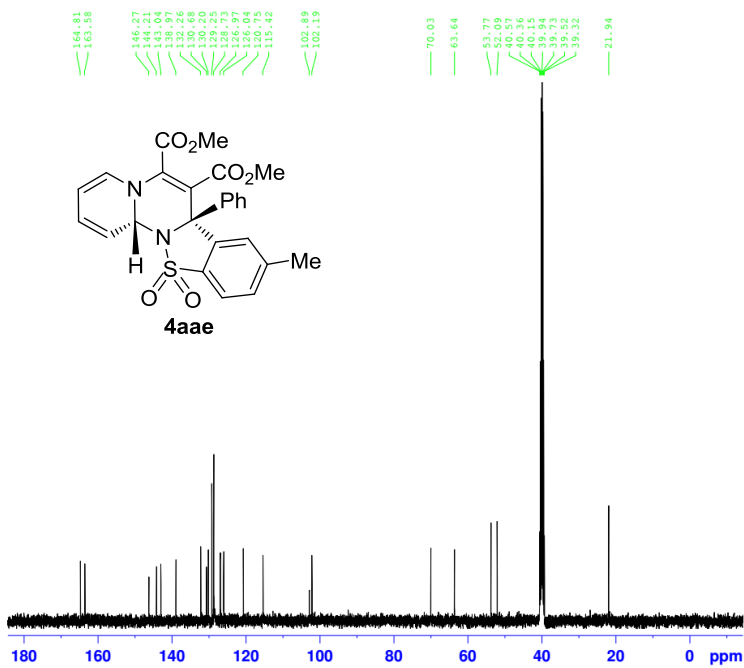
----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.9163658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
FC            1.40
  
```



```

NAME          NMR
EXPNO         4000
PROCNO        1
Date_         20151223
Time          10.23
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES       0.125483 Hz
AQ           3.9846387 sec
RG           128
DW           60.800 usec
DE           6.50 usec
TE           292.8 K
D1           1.00000000 sec
D11          1
TDO          1

----- CHANNEL f1 -----
NUC1          1H
P1           14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI           32768
SF           400.1700000 MHz
WDW          EM
SSB          0
LB           0.30 Hz
GB           0
PC           1.00
  
```

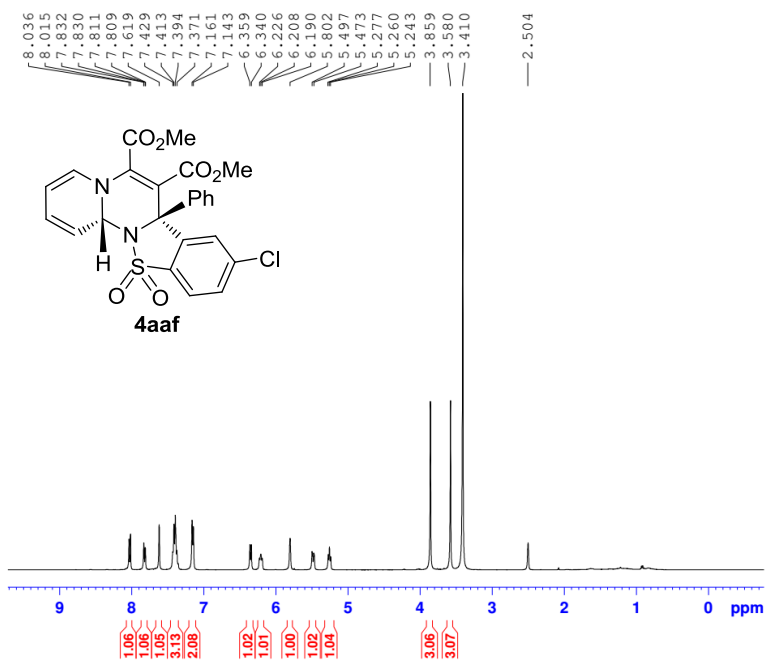


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NAME          NMR
EXPNO         4001
PROCNO        1
Date_         20151223
Time          10.28
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            91
DS            4
SWH           24038.461 Hz
FIDRES       0.366798 Hz
AQ           1.3631988 sec
RG           2850
DW           20.800 usec
DE           6.50 usec
TE           293.3 K
D1           2.00000000 sec
D11          0.03000000 sec
TDO          1

----- CHANNEL f1 -----
NUC1          13C
P1           11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL12W        16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI           32768
SF           100.6228270 MHz
WDW          EM
SSB          0
LB           1.00 Hz
GB           0
PC           1.40
  
```

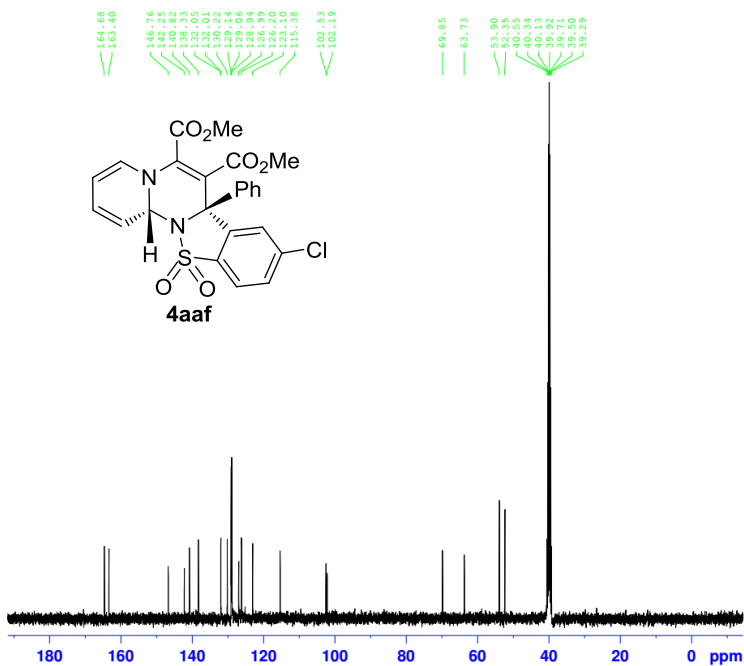


```

NAME          NMR
EXPNO         4003
PROCNO        1
Date_         20151223
Time         10.42
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            5
DS            2
SWH           8223.605 Hz
FIDRES       0.125483 Hz
AQ           3.9846387 sec
RG            114
DW           60.800 usec
DE            6.50 usec
TE            293.2 K
D1           1.00000000 sec
D11
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

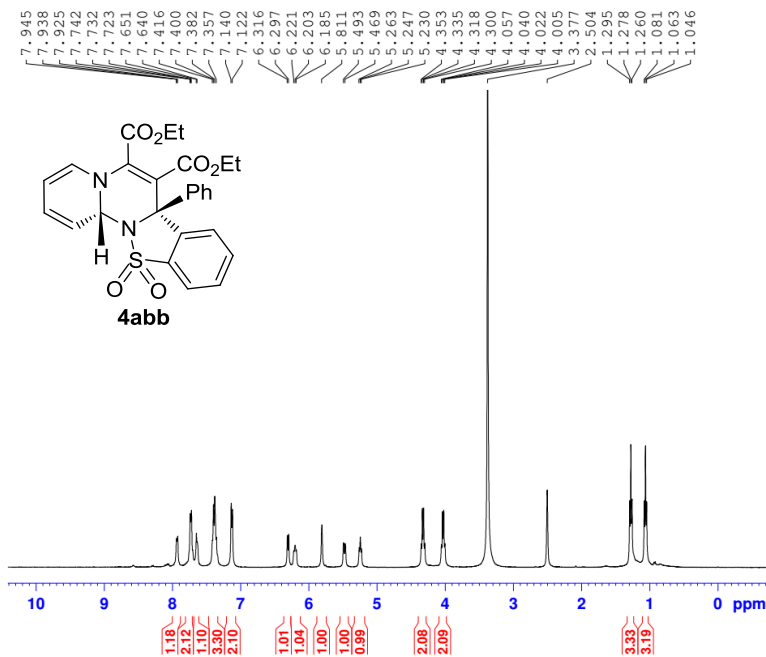
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EXPNO         4002
PROCNO        1
Date_         20151223
Time         10.38
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            4
DS            4
SWH           24038.461 Hz
FIDRES       0.366798 Hz
AQ           1.3631988 sec
RG            2050
DW           20.800 usec
DE            6.50 usec
TE            293.5 K
D1           2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
  
```

```

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

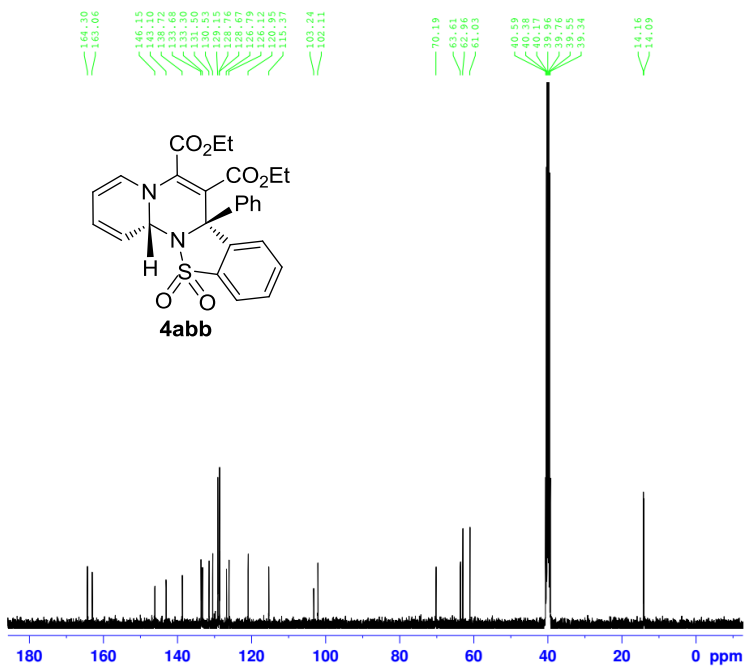


```

NAME          NMR
EXPNO         3848
PROCNO        1
Date_         20151214
Time          9.32
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            7
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            294.8 K
D1            1.00000000 sec
D11           1
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



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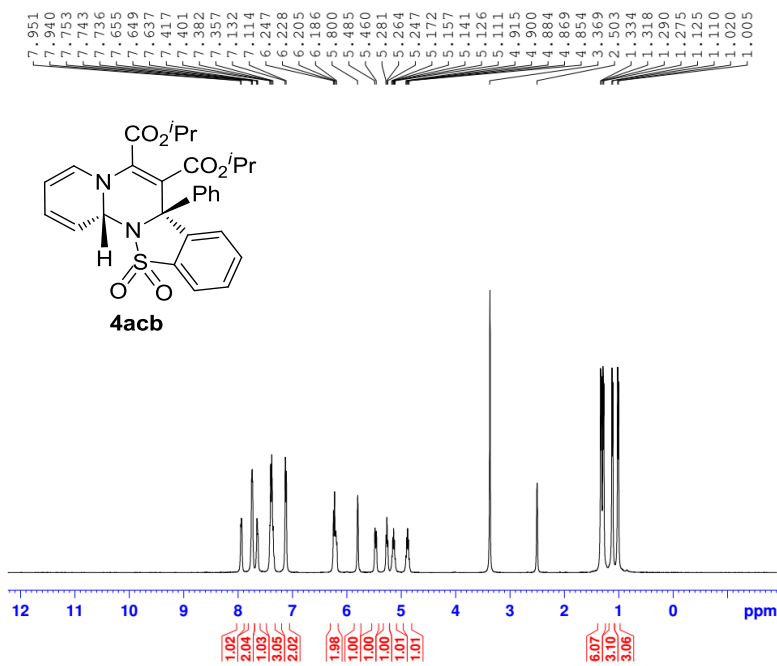
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EXPNO         3849
PROCNO        1
Date_         20151214
Time          9.36
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            4
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            294.9 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
  
```

```

----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.55100001 W
SFO2         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

```

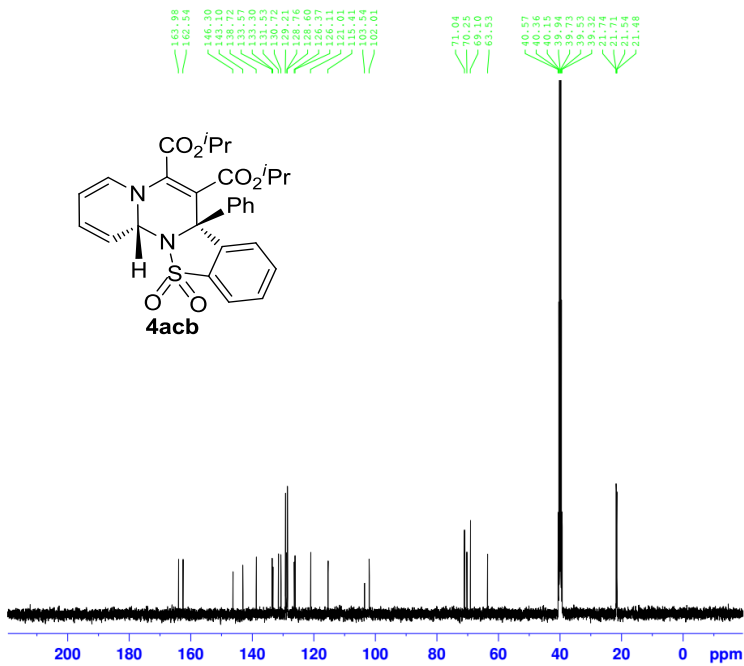
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EXPNO         4078
PROCNO        1
Date_         20160111
Time          12.12
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES       0.125483 Hz
AQ           3.9846387 sec
RG            128
DW           60.800 usec
DE           6.50 usec
TE           288.7 K
D1           1.0000000 sec
TD0          1

```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.9163658 W
SF01         400.1724712 MHz
SI           32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB           0.30 Hz
GB           0
PC           1.00

```



```

NAME          NMR
EXPNO         4079
PROCNO        1
Date_         20160111
Time          12.15
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            140
DS            4
SWH           24038.461 Hz
FIDRES       0.366798 Hz
AQ           1.3631988 sec
RG            2050
DW           20.800 usec
DE           6.50 usec
TE           288.6 K
D1           2.0000000 sec
D11          0.0300000 sec
TD0          1

```

```

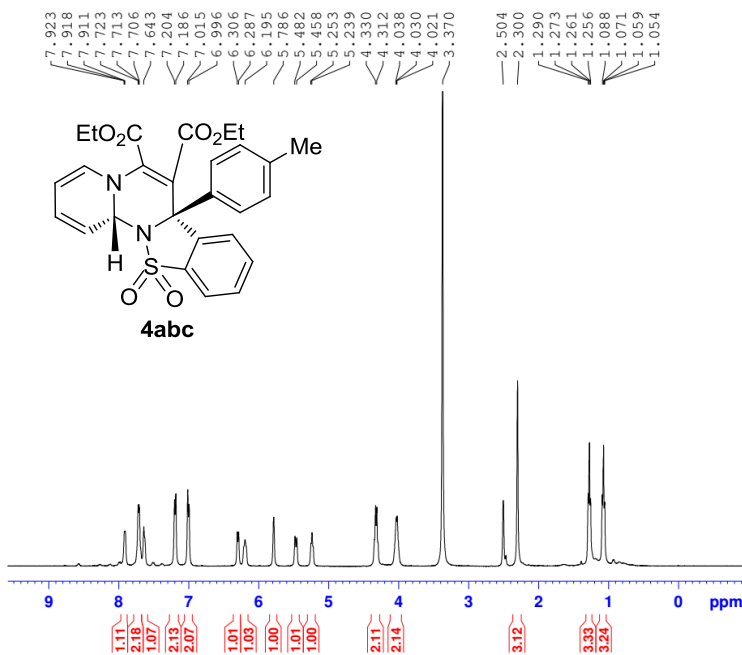
----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SF01         100.6328888 MHz

```

```

----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL12W        16.9163658 W
PL13W        0.55629748 W
PL13W        0.35100001 W
SF02         400.1716007 MHz
SI           32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB           1.00 Hz
GB           0
PC           1.40

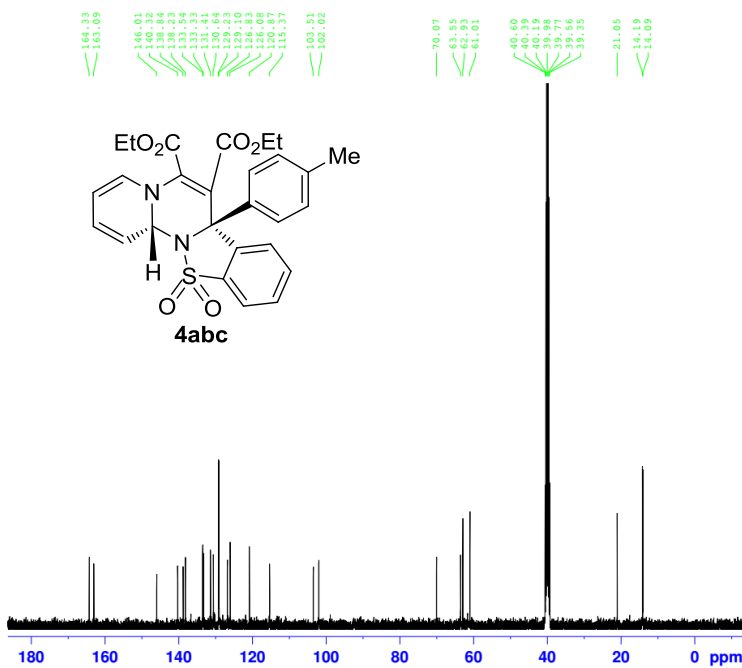
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```

NAME          NMR
EXPNO         3851
PROCNO        1
Date_         20151214
Time         10.05
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            4
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            295.0 K
D1            1.0000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.9163658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```

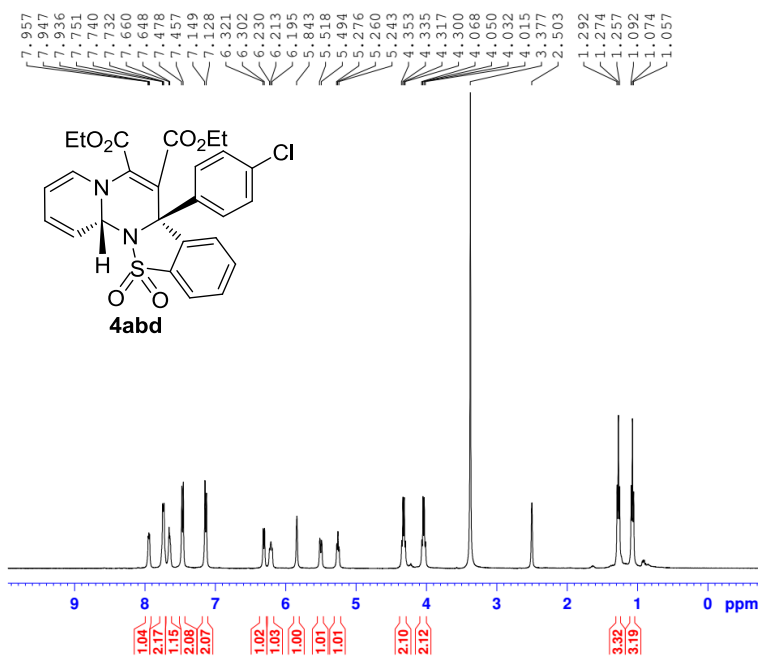


```

NAME          NMR
EXPNO         3850
PROCNO        1
Date_         20151214
Time         9.53
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            4
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            295.5 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL1W          16.9163658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

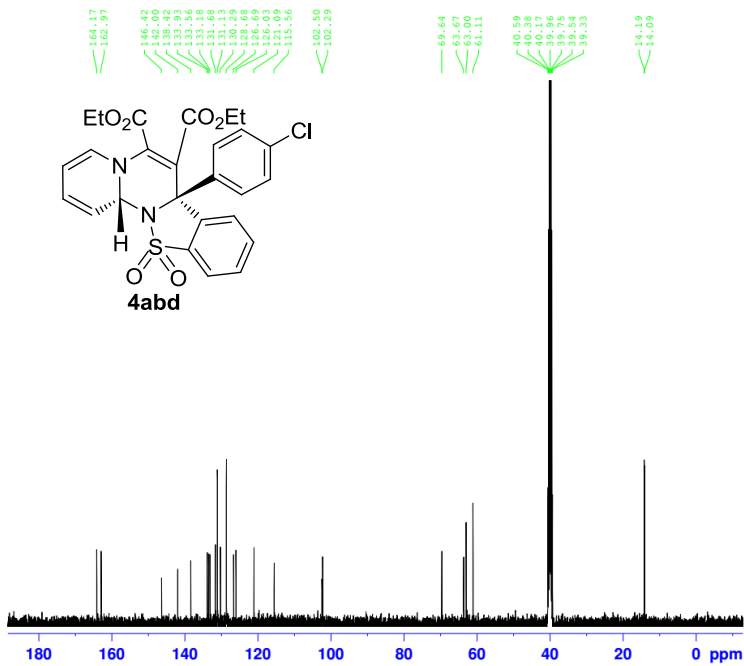


```

NAME          NMR
EXPNO         3978
PROCNO        1
Date_         20151217
Time          11.30
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            7
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            144
DW            60.800 usec
DE            6.50 usec
TE            292.4 K
D1            1.00000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SF01          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

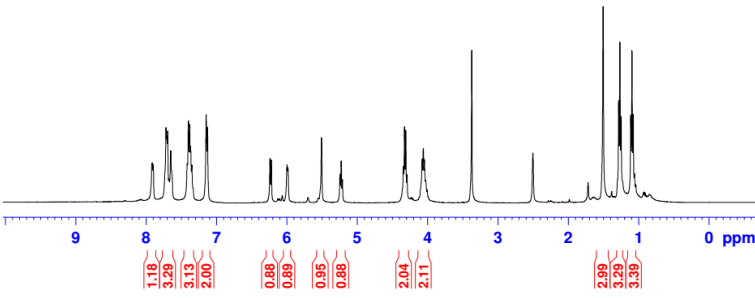
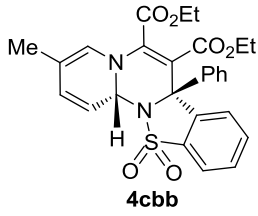
NAME          NMR
EXPNO         4075
PROCNO        1
Date_         20160107
Time          18.37
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            77
DS            4
SWH           24039.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SF01          100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.91636658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SF02          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

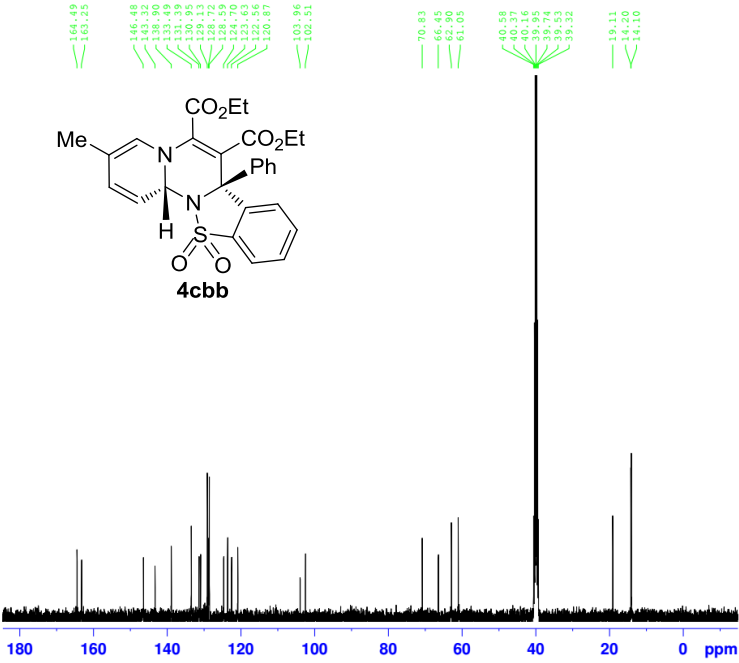
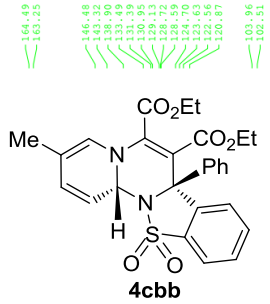
7.917
7.910
7.897
7.717
7.707
7.697
7.680
7.653
7.417
7.401
7.383
7.370
7.353
7.149
7.131
6.242
6.223
6.001
5.987
5.509
5.247
5.230
5.213
4.346
4.330
4.312
4.294
4.078
4.063
4.048
4.029
4.008
3.374
2.505
1.507
1.286
1.268
1.251
1.114
1.097
1.079



```

NAME          NMR
EXPNO         4056
PROCNO        1
Date_         20160105
Time          9.22
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            114
DW            60.800 usec
DE            6.50 usec
TE            673.2 K
D1            1.00000000 sec
D11           1
TDO           1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI           32768
SF           400.1700000 MHz
WDW          EM
SSB          0
LB           0.30 Hz
GB           0
PC           1.00
  
```

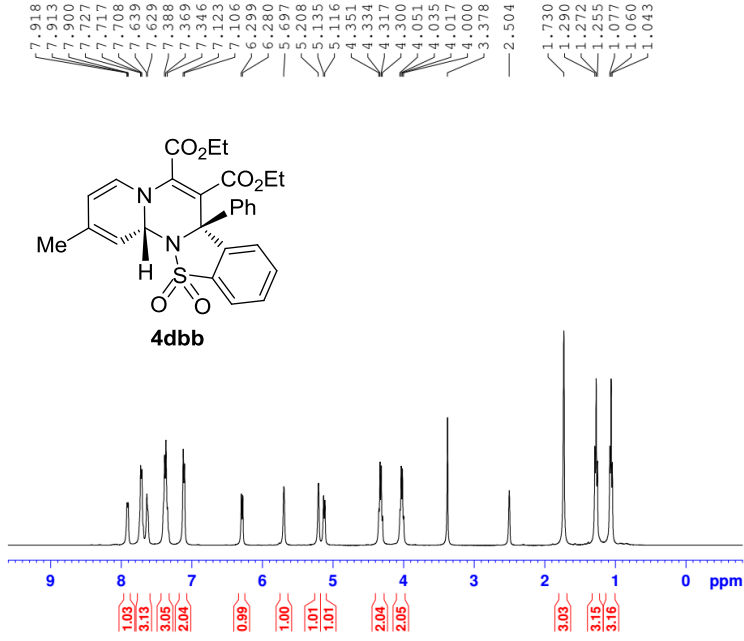


```

NAME          NMR
EXPNO         4055
PROCNO        1
Date_         20160105
Time          9.17
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            64
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            1620
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           1
TDO           1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz

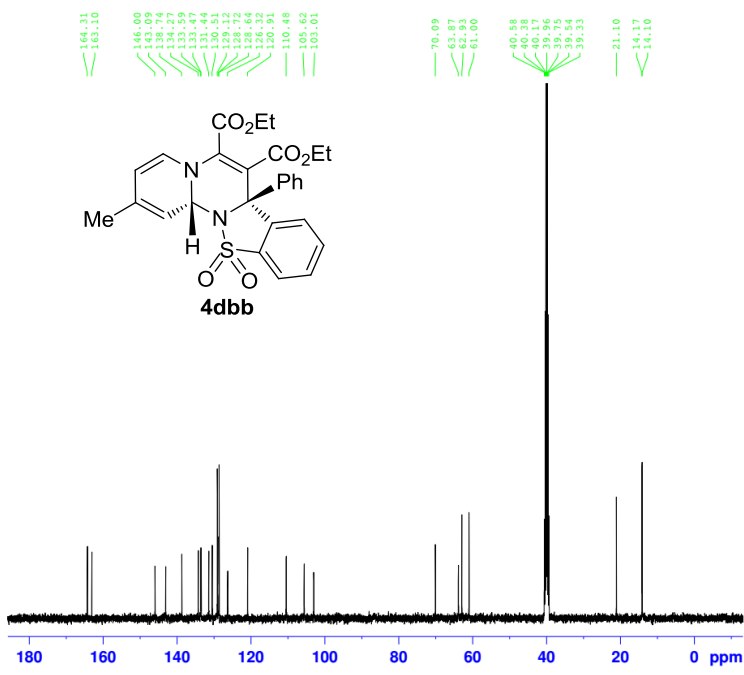
----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI           32768
SF           100.6228270 MHz
WDW          EM
SSB          0
LB           1.00 Hz
GB           0
PC           1.40
  
```



```

NAME          NMR
EXPNO         4081
PROCNO        1
Date_         20160111
Time          13.11
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            114
DW            60.800 usec
DE            6.50 usec
TE            288.7 K
D1            1.00000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636558 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00

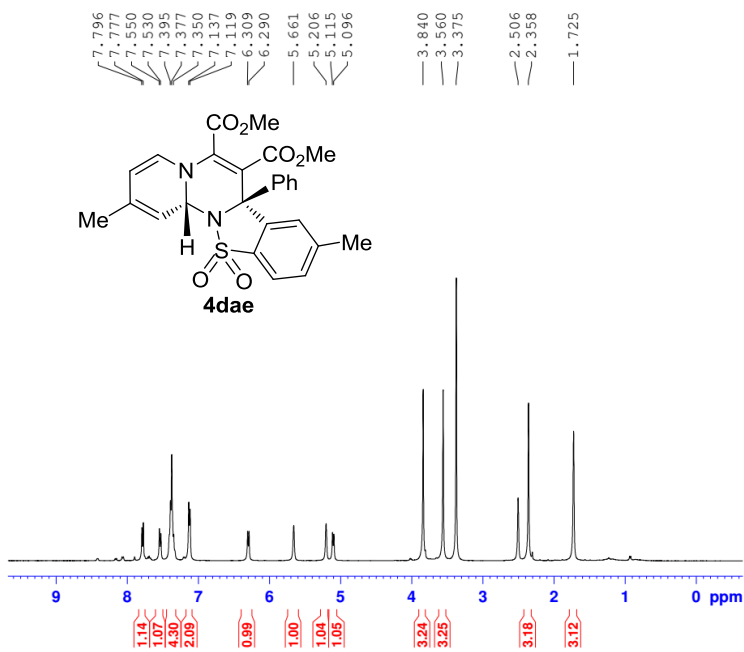
```



```

NAME          NMR
EXPNO         4080
PROCNO        1
Date_         20160111
Time          12.26
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            256
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            289.4 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz
----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.91636558 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40

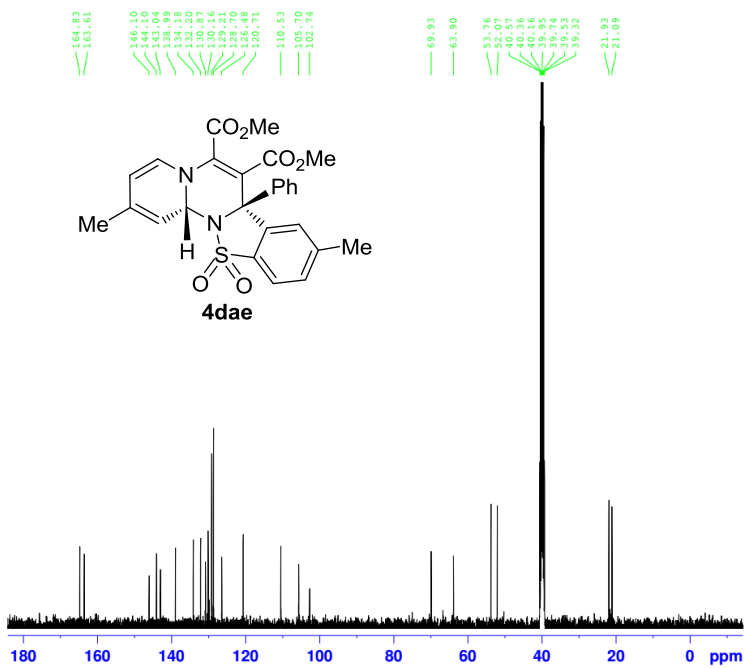
```



```

NAME          NMR
EXPNO         4090
PROCNO        1
Date_         20160114
Time         14.48
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            3
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            144
DW            60.800 usec
DE            6.50 usec
TE            291.3 K
D1            1.0000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00

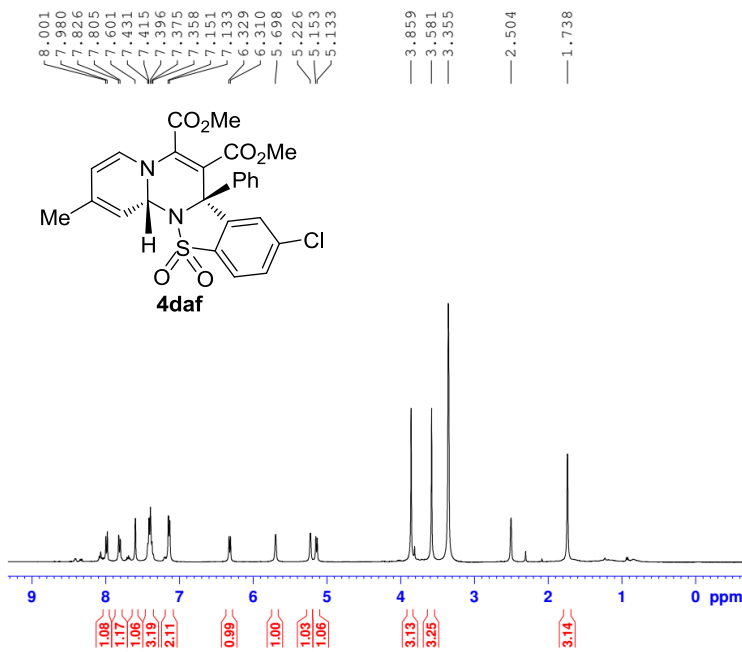
```



```

NAME          NMR
EXPNO         4091
PROCNO        1
Date_         20160114
Time         14.54
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            4
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            291.8 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz
----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2        80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL1W          16.91636658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1715007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40

```

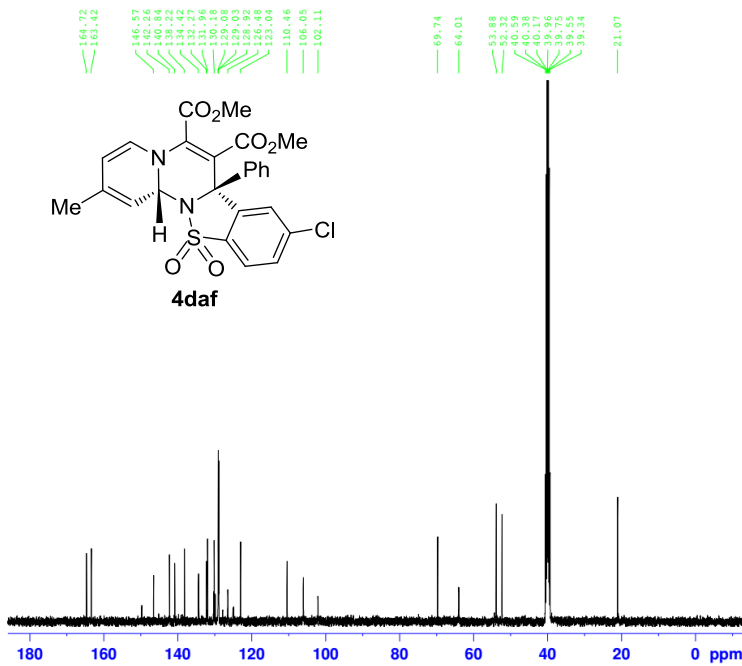


```

NAME          NMR
EXPNO         4004
PROCNO        1
Date_         20151223
Time          10.47
INSTRUM       spect
PROBHD        5 mm FABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            114
DW            60.800 usec
DE            6.50 usec
TE            293.3 K
D1            1.0000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.53 dB
PL1W          16.91636658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

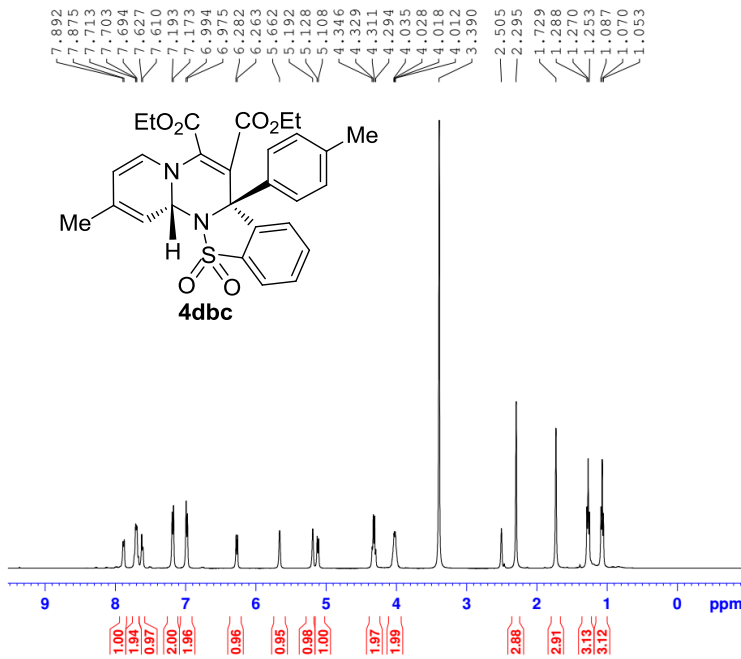
NAME          NMR
EXPNO         4005
PROCNO        1
Date_         20151223
Time          10.50
INSTRUM       spect
PROBHD        5 mm FABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            473
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            293.3 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz
  
```

```

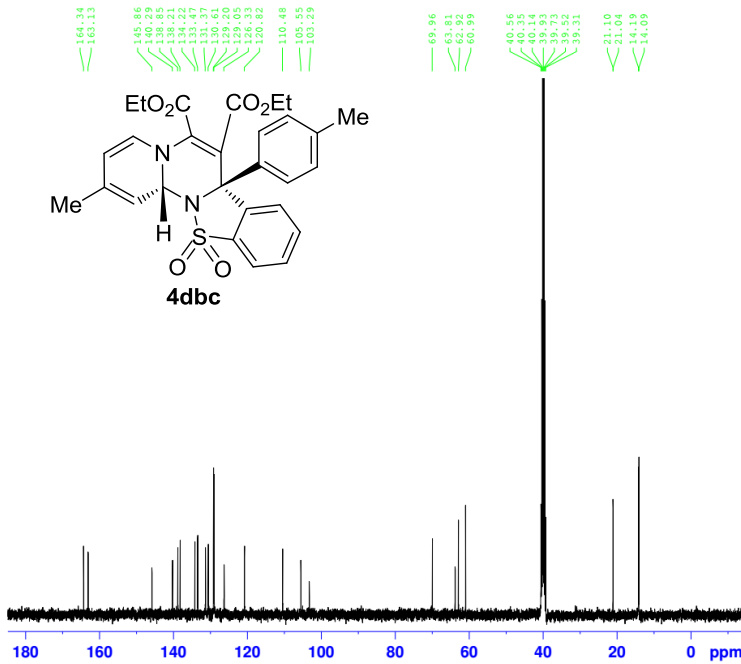
----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL12W         16.91636658 W
PL13W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```



```

NAME          NMR
EXPNO         3731
PROCNO        1
Date_         20151120
Time          12.14
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            4
SWH           8223.655 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            114
DW            60.800 usec
DE            6.50 usec
TE            292.0 K
D1            1.0000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636558 W
SF01          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00

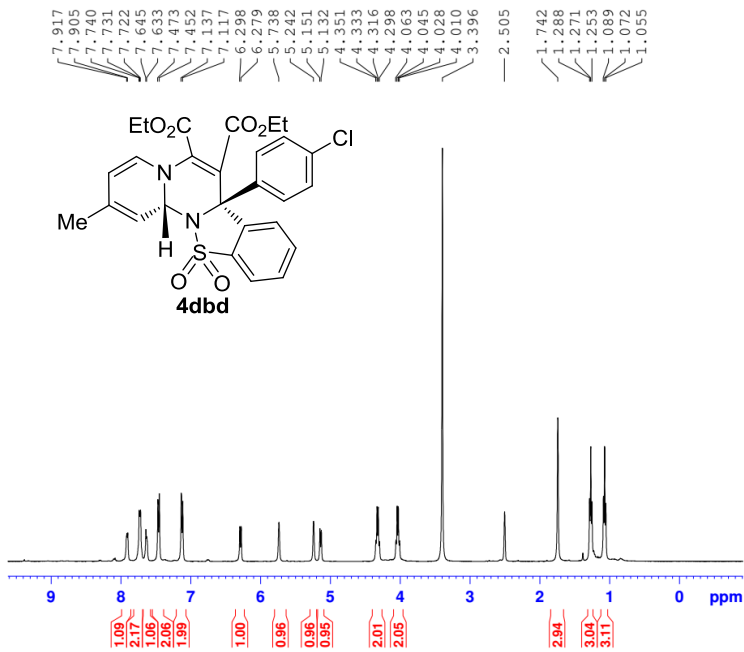
```



```

NAME          NMR
EXPNO         3730
PROCNO        1
Date_         20151120
Time          12.02
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            146
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            291.7 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SF01          100.6328888 MHz
----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL2W          16.91636558 W
SF02          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40

```

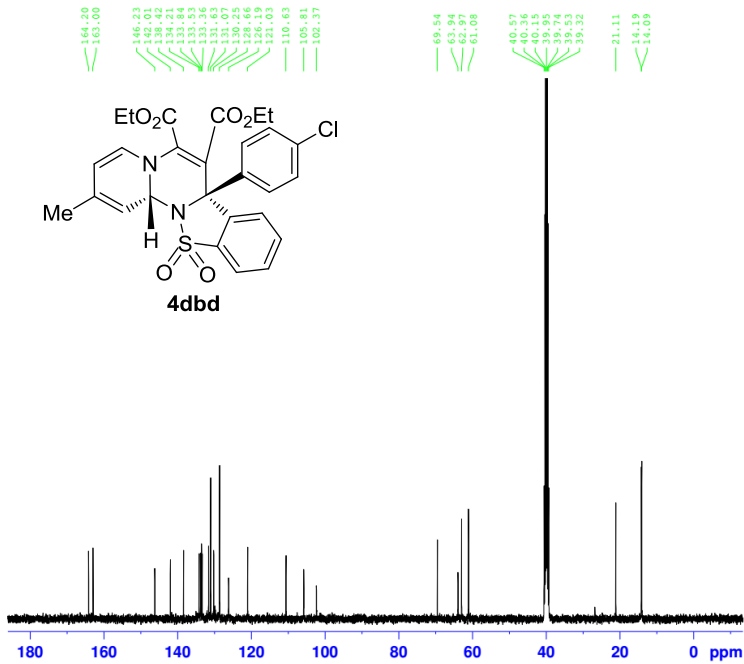
```

NAME          NMR
EXPNO         3741
PROCNO        1
Date_         20151123
Time          22.46
INSTRUM       spect
PROBHD        5 mm PABBO HS-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            14
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            290.5 K
D1            1.00000000 sec
TD0           1
  
```

----- CHANNEL f1 -----

```

NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW          EM
SSB          0
LB           0.30 Hz
GB           0
PC           1.00
  
```



```

NAME          NMR
EXPNO         3742
PROCNO        1
Date_         20151123
Time          22.48
INSTRUM       spect
PROBHD        5 mm PABBO HS-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            422
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            290.4 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

----- CHANNEL f1 -----

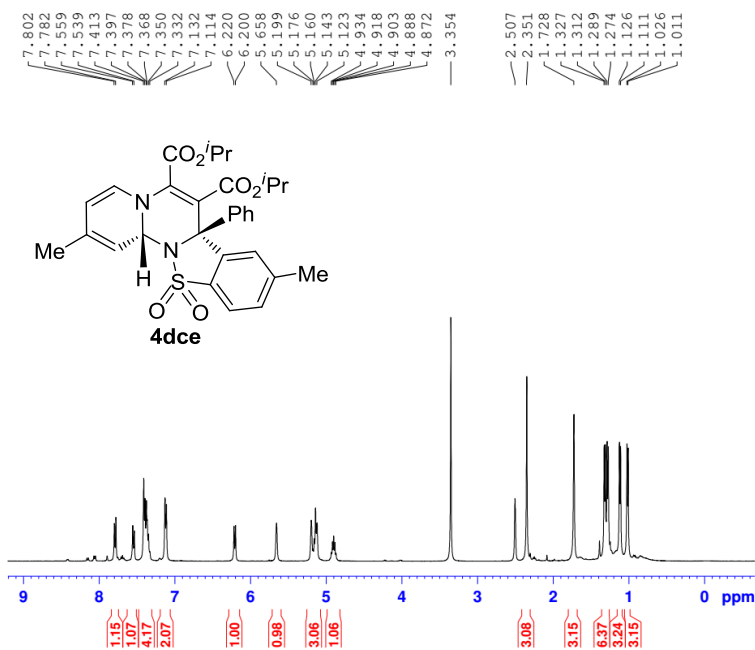
```

NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
  
```

----- CHANNEL f2 -----

```

CPCPD2       waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW          EM
SSB          0
LB           1.00 Hz
GB           0
PC           1.40
  
```



```

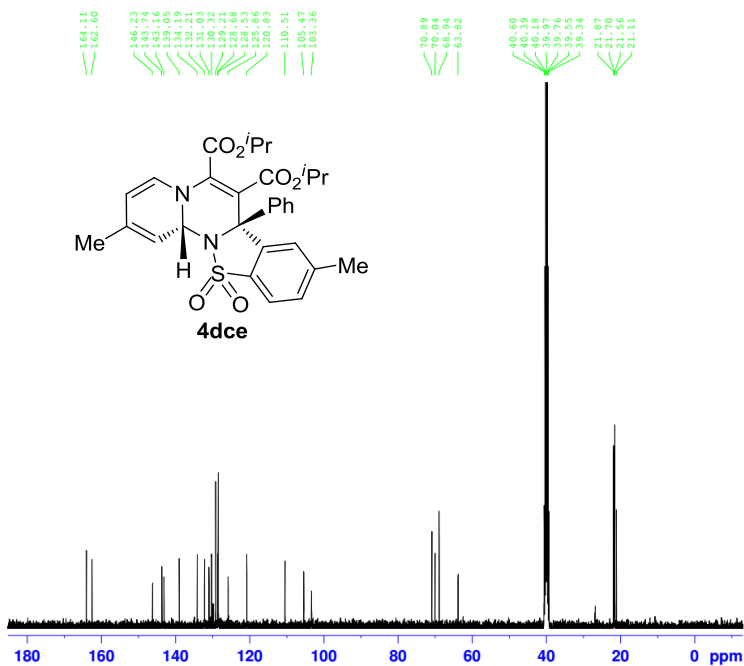
NAME          NMR
EXPNO         4041
PROCNO        1
Date_         20151230
Time          16.35
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            7
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            292.7 K
D1            1.0000000 sec
TD0           1

```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
FC            1.00

```



```

NAME          NMR
EXPNO         4040
PROCNO        1
Date_         20151230
Time          16.23
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            168
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            292.7 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1

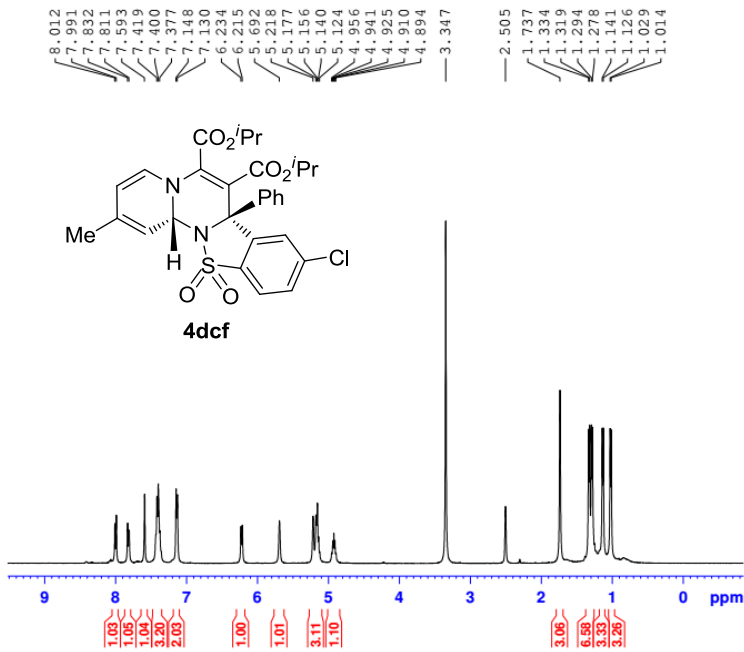
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2        80.00 usec
PL2           -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL1W          16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
FC            1.40

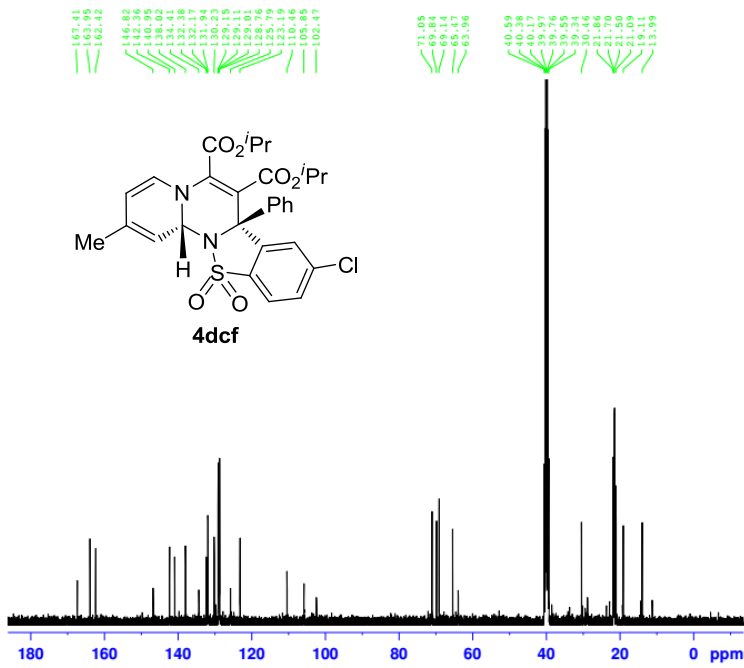
```



```

NAME          NMR
EXPNO         4037
PROCNO        1
Date_         20151230
Time          15.41
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            6
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            292.6 K
D1            1.0000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SF01         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```

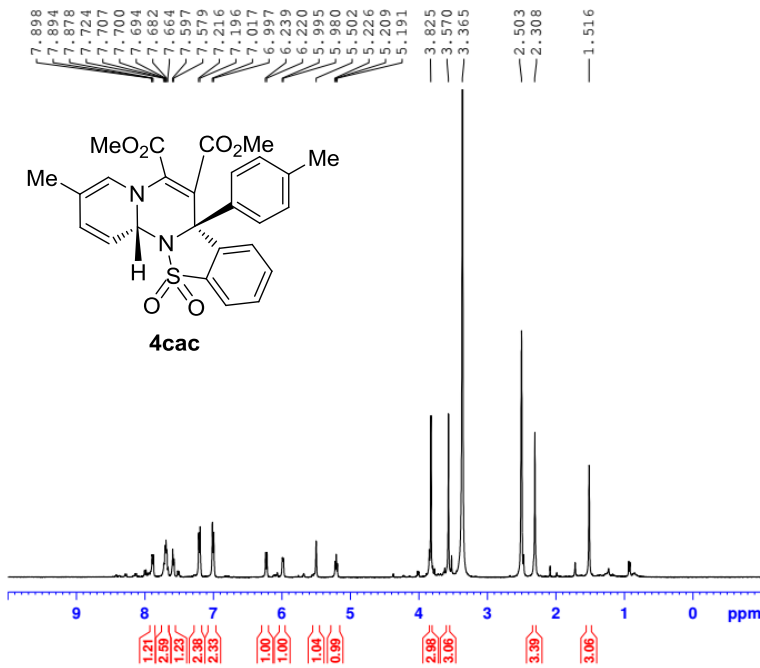


```

NAME          NMR
EXPNO         4100
PROCNO        1
Date_         20160120
Time          16.36
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            251
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            291.7 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SF01         100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL1W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SF02         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

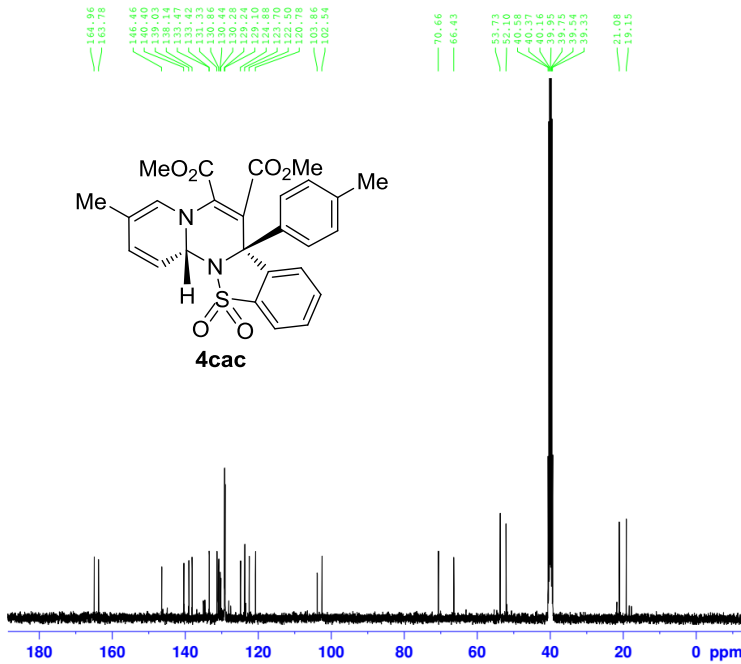


```

NAME          NMR
EXPNO         4085
PROCNO        1
Date_         20160114
Time          9.37
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            291.9 K
D1            1.00000000 sec
D11           1
D10           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

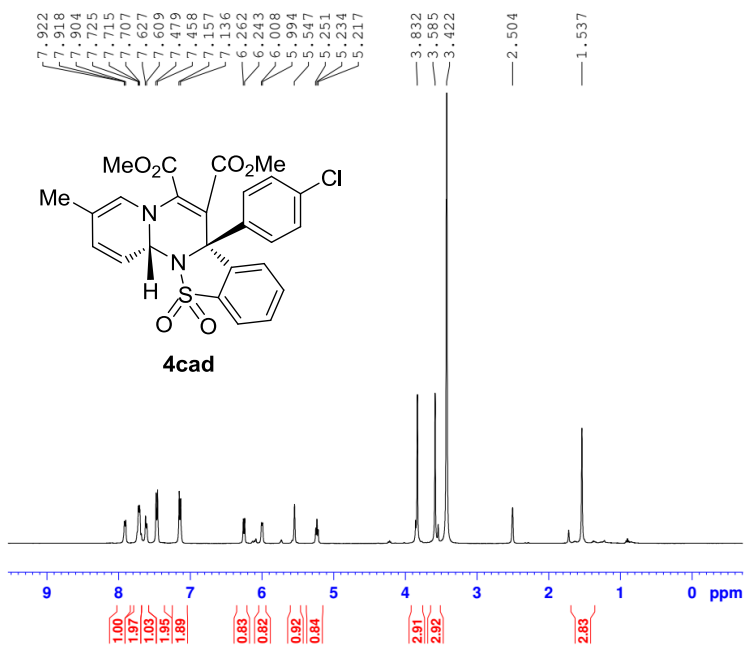
NAME          NMR
EXPNO         4097
PROCNO        1
Date_         20160115
Time          16.13
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            428
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            292.5 K
D1            2.00000000 sec
D11           0.03000000 sec
D10           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
  
```

```

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

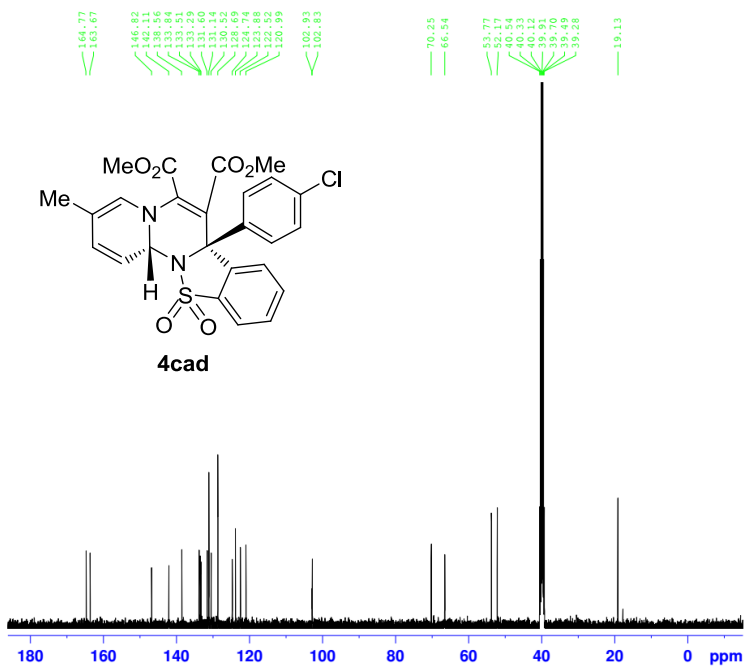


```

NAME          NMR
EXPNO         3803
PROCNO        1
Date_         20151208
Time         17.12
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            14
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            144
DW            60.800 usec
DE            6.50 usec
TE            291.8 K
D1            1.0000000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W          16.91636658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

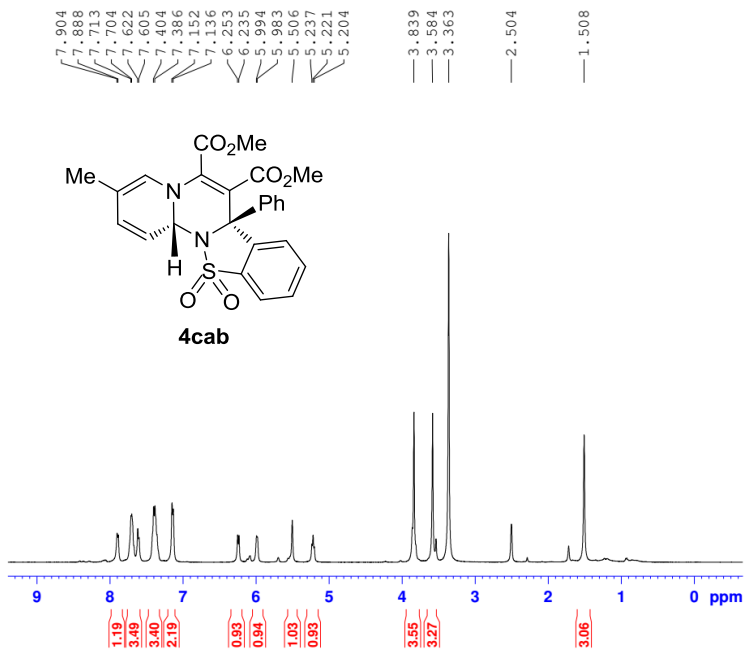
NAME          NMR
EXPNO         3804
PROCNO        1
Date_         20151208
Time         17.17
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            128
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            291.9 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W          48.76812744 W
SFO1          100.6328888 MHz
  
```

```

----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12          12.00 dB
PL13          14.00 dB
PL2W          16.91636658 W
PL12W         0.55629748 W
PL13W         0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

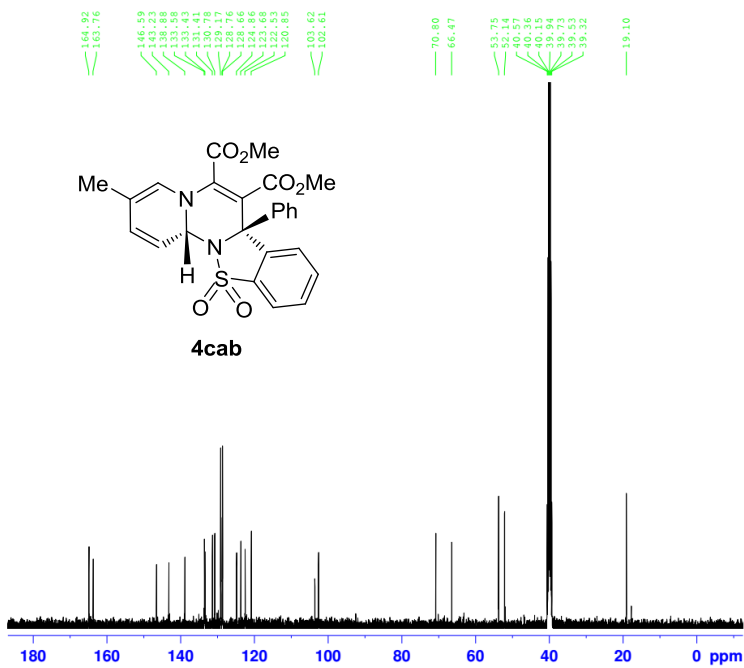


```

NAME          NMR
EXPNO         3979
PROCNO        1
Date_         20151217
Time          11.34
INSTRUM       spect
PROBHND       5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            6
DS            2
SWH           8223.665 Hz
FIDRES       0.125483 Hz
AQ           3.9846387 sec
RG           144
DW           60.800 usec
DE           6.50 usec
TE           293.0 K
D1           1.0000000 sec
D11          1
TD0          1
  
```

```

----- CHANNEL f1 -----
NUC1          1H
P1           14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI           32768
SF           400.1700000 MHz
WDW          EM
SSB          0
LB           0.30 Hz
GB           0
PC           1.00
  
```



```

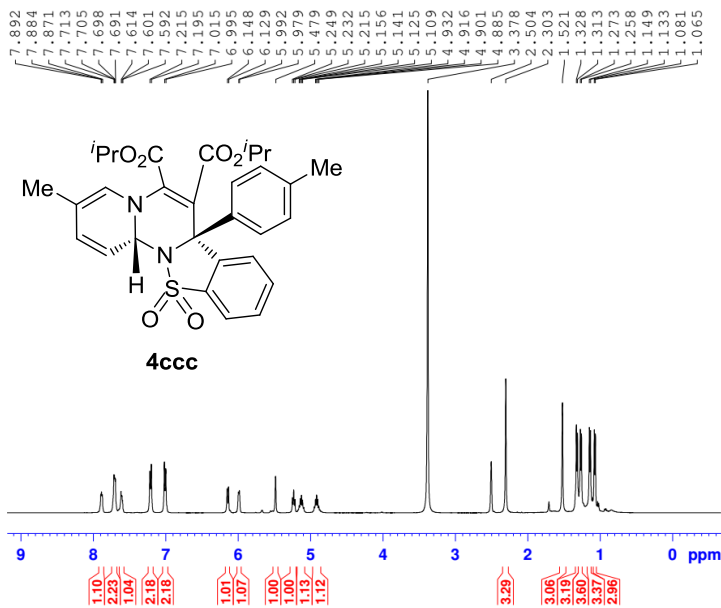
NAME          NMR
EXPNO         3980
PROCNO        1
Date_         20151217
Time          11.42
INSTRUM       spect
PROBHND       5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            125
DS            4
SWH           24038.461 Hz
FIDRES       0.366798 Hz
AQ           1.3631988 sec
RG           2050
DW           20.800 usec
DE           6.50 usec
TE           292.8 K
D1           2.0000000 sec
D11          0.0300000 sec
TD0          1
  
```

```

----- CHANNEL f1 -----
NUC1          13C
P1           11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
  
```

```

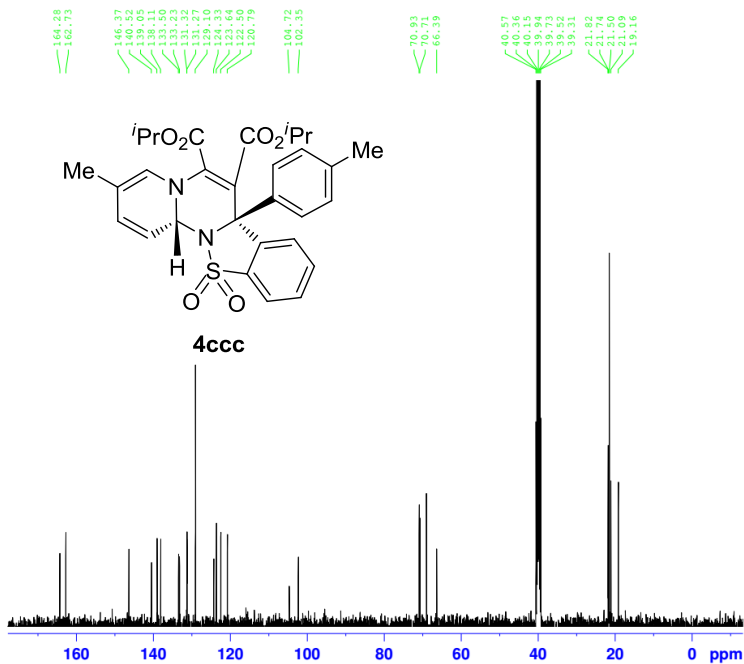
----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI           32768
SF           100.6228270 MHz
WDW          EM
SSB          0
LB           1.00 Hz
GB           0
PC           1.40
  
```



```

NAME          NMR
EXPNO         3969
PROCNO        1
Date_         20151215
Time         17.38
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            16
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            144
DW            60.800 usec
DE            6.50 usec
TE            293.3 K
D1            1.00000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1          -2.83 dB
PL1W         16.91636658 W
SF01         400.1724712 MHz
SI           32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
FC            1.00
  
```

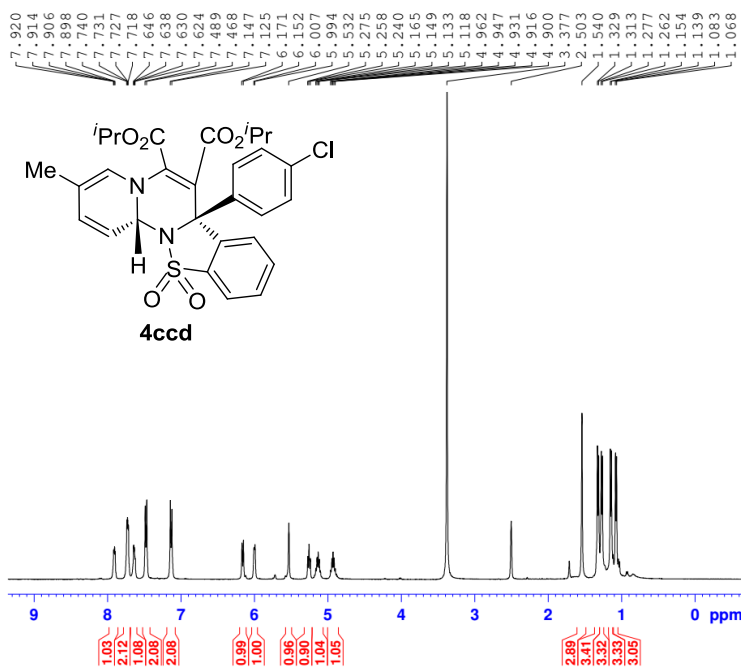


```

NAME          NMR
EXPNO         3968
PROCNO        1
Date_         20151215
Time         17.33
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            108
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            293.7 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1          -2.00 dB
PL1W         48.76812744 W
SF01         100.6328888 MHz

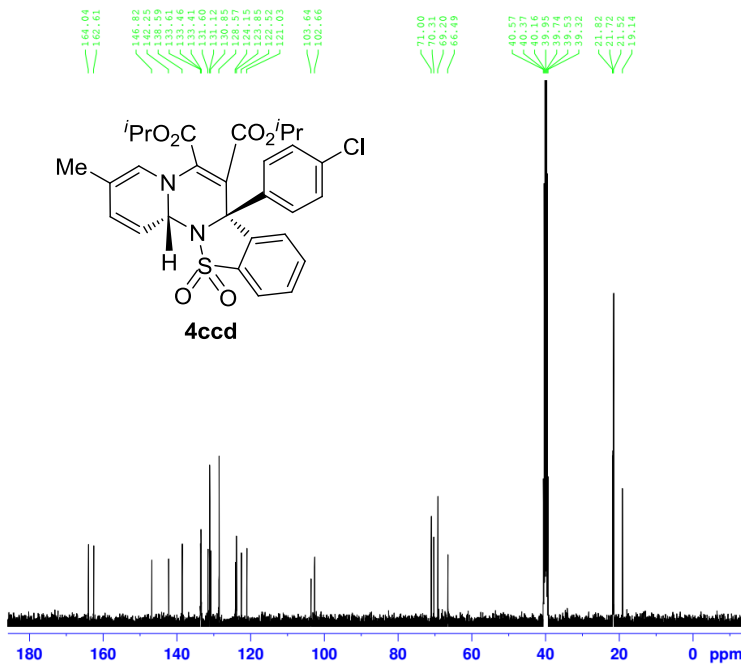
----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2          -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SF02         400.1716007 MHz
SI           32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
FC            1.40
  
```



```

NAME          NMR
EXPNO         3972
PROCNO        1
Date_         20151216
Time          10.05
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            2
DS            8
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            673.2 K
D1            1.00000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W         16.91636658 W
SF01         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```

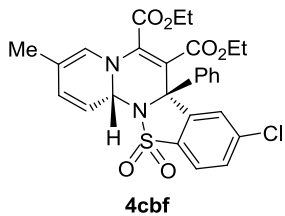
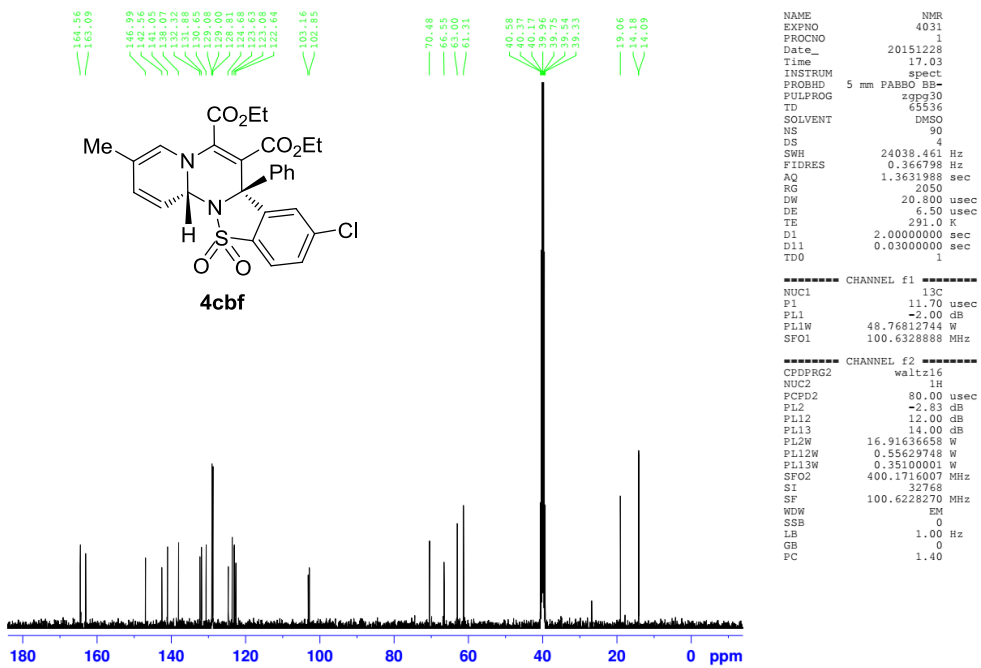
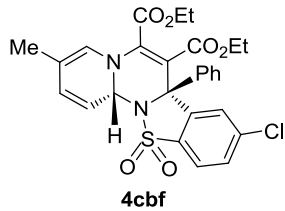
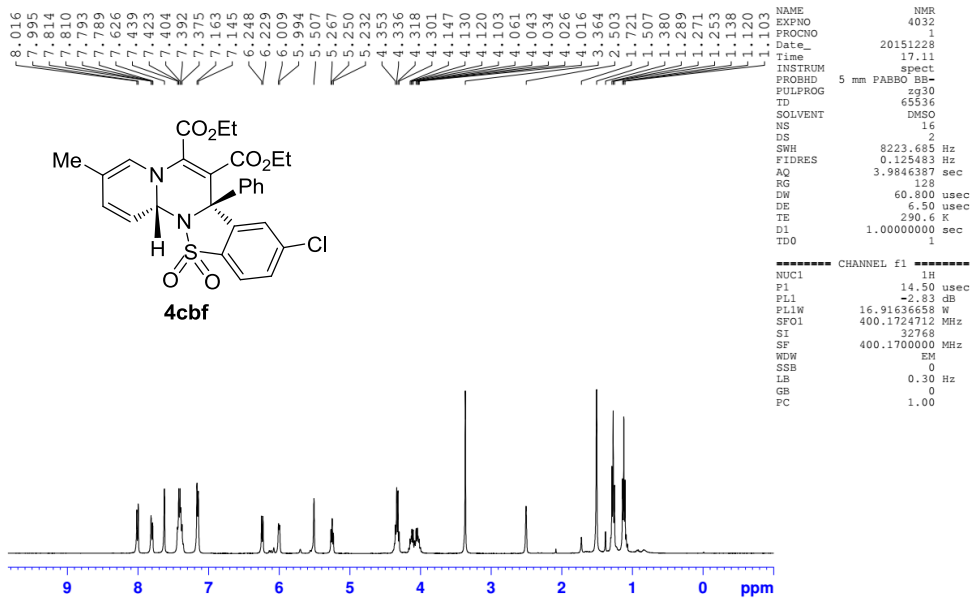


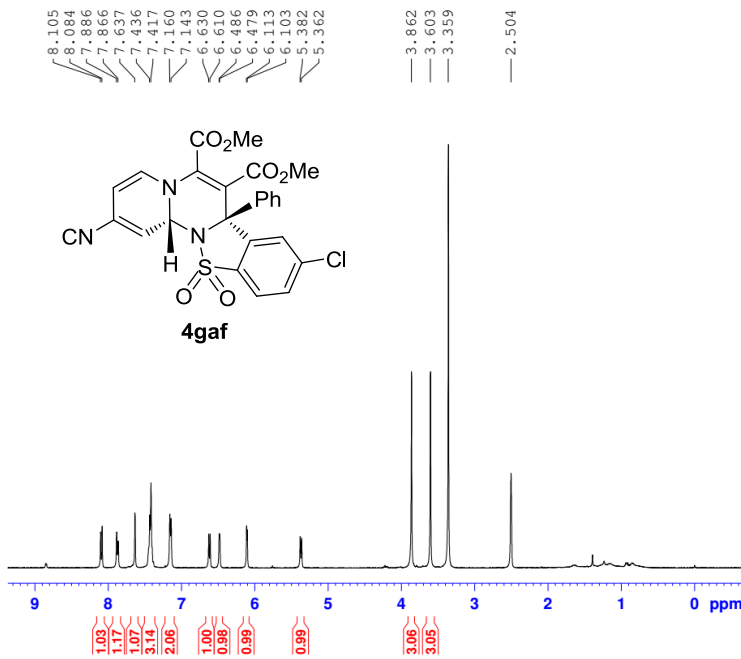
```

NAME          NMR
EXPNO         3973
PROCNO        1
Date_         20151216
Time          10.11
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            101
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W         48.76812744 W
SF01         100.6328888 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SF02         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```

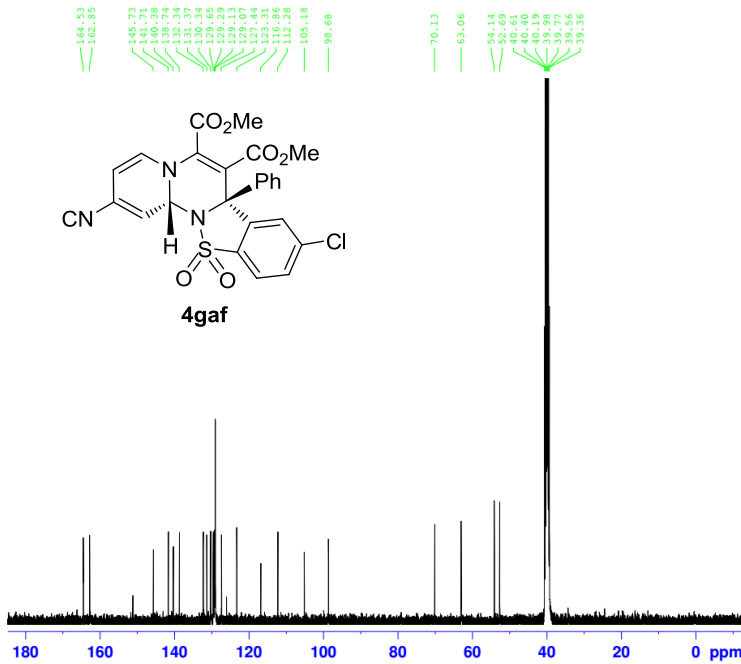


```

NAME          C1
EXPNO         4028
PROCNO        1
Date_         20151228
Time          16.45
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            4
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            290.4 K
D1            1.00000000 sec
TD0           1
  
```

```

===== CHANNEL f1 =====
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W         16.91636658 W
SFO1          400.1724712 MHz
SI            32768
SF            400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00
  
```



```

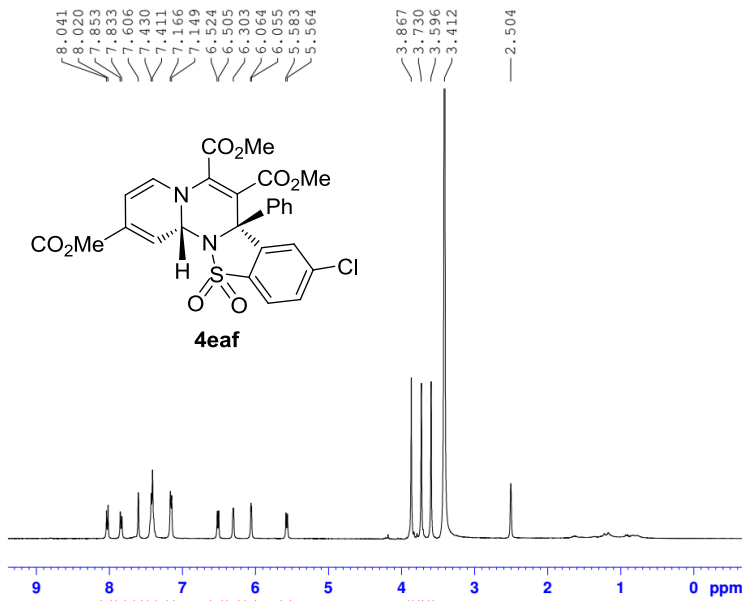
NAME          NMR
EXPNO         4053
PROCNO        1
Date_         20160104
Time          14.53
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            1024
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            1620
DW            20.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
  
```

```

===== CHANNEL f1 =====
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W         48.76812744 W
SFO1          100.6328888 MHz
  
```

```

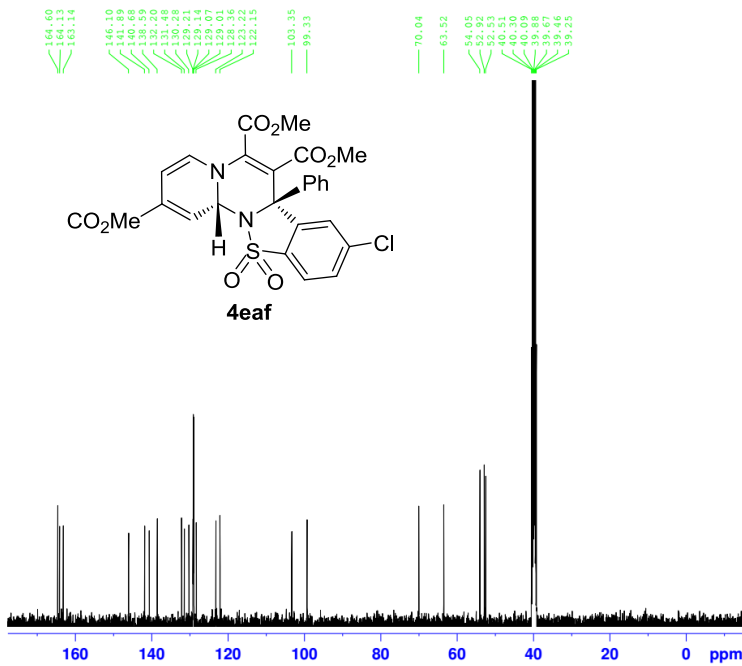
===== CHANNEL f2 =====
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2           -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2          400.1716007 MHz
SI            32768
SF            100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40
  
```



```

NAME          NMR
EXPNO         4033
PROCNO        1
Date_         20151228
Time          17.21
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zg30
TD            65536
SOLVENT       DMSO
NS            7
DS            2
SWH           8223.685 Hz
FIDRES        0.125483 Hz
AQ            3.9846387 sec
RG            128
DW            60.800 usec
DE            6.50 usec
TE            291.1 K
D1            1.00000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          1H
P1            14.50 usec
PL1           -2.83 dB
PL1W         16.91636658 W
SFO1         400.1724712 MHz
SI            32768
SF           400.1700000 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00

```



```

NAME          C1
EXPNO         4034
PROCNO        1
Date_         20151228
Time          17.23
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       DMSO
NS            160
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            2050
DW            20.800 usec
DE            6.50 usec
TE            290.8 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
----- CHANNEL f1 -----
NUC1          13C
P1            11.70 usec
PL1           -2.00 dB
PL1W         48.76812744 W
SFO1         100.6328888 MHz
----- CHANNEL f2 -----
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2           -2.83 dB
PL12         12.00 dB
PL13         14.00 dB
PL2W         16.91636658 W
PL12W        0.55629748 W
PL13W        0.35100001 W
SFO2         400.1716007 MHz
SI            32768
SF           100.6228270 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.40

```

2. X-Ray crystal data of compound 4aaf

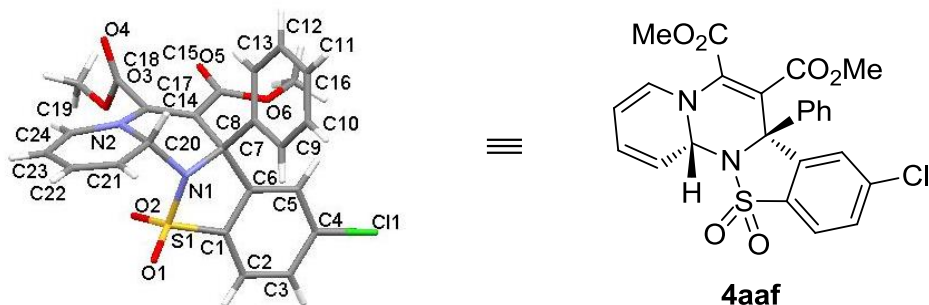


Figure 1. X-ray single crystal structure of 4aaf (with thermal ellipsoids shown at the 50% probability level)

Identification code	4aaf
Empirical formula	C ₂₄ H ₁₉ ClN ₂ O ₆ S
Formula weight	498.92
Temperature	113(2) K
Wavelength	0.71073 Å
Crystal system, space group	Monoclinic, P2(1)/n
Unit cell dimensions	a = 10.8270(17) Å alpha = 90 deg. b = 13.849(2) Å beta = 90.488(5) deg. c = 14.496(2) Å gamma = 90 deg.
Volume	2173.4(6) Å ³
Z, Calculated density	4, 1.525 Mg/m ³
Absorption coefficient	0.319 mm ⁻¹
F(000)	1032
Crystal size	0.20 x 0.18 x 0.12 mm
Theta range for data collection	3.17 to 27.55 deg.
Limiting indices	-14 ≤ h ≤ 14, -18 ≤ k ≤ 17, -18 ≤ l ≤ 18

Reflections collected / unique	27173 / 4955 [R(int) = 0.0198]
Completeness to theta = 27.55	98.9 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	0.9627 and 0.9390
Refinement method	Full-matrix least-squares on F ²
Data / restraints / parameters	4955 / 0 / 309
Goodness-of-fit on F ²	1.058
Final R indices [I > 2σ(I)]	R1 = 0.0278, wR2 = 0.0752
R indices (all data)	R1 = 0.0312, wR2 = 0.0770
Largest diff. peak and hole	0.430 and -0.384 e.Å ⁻³