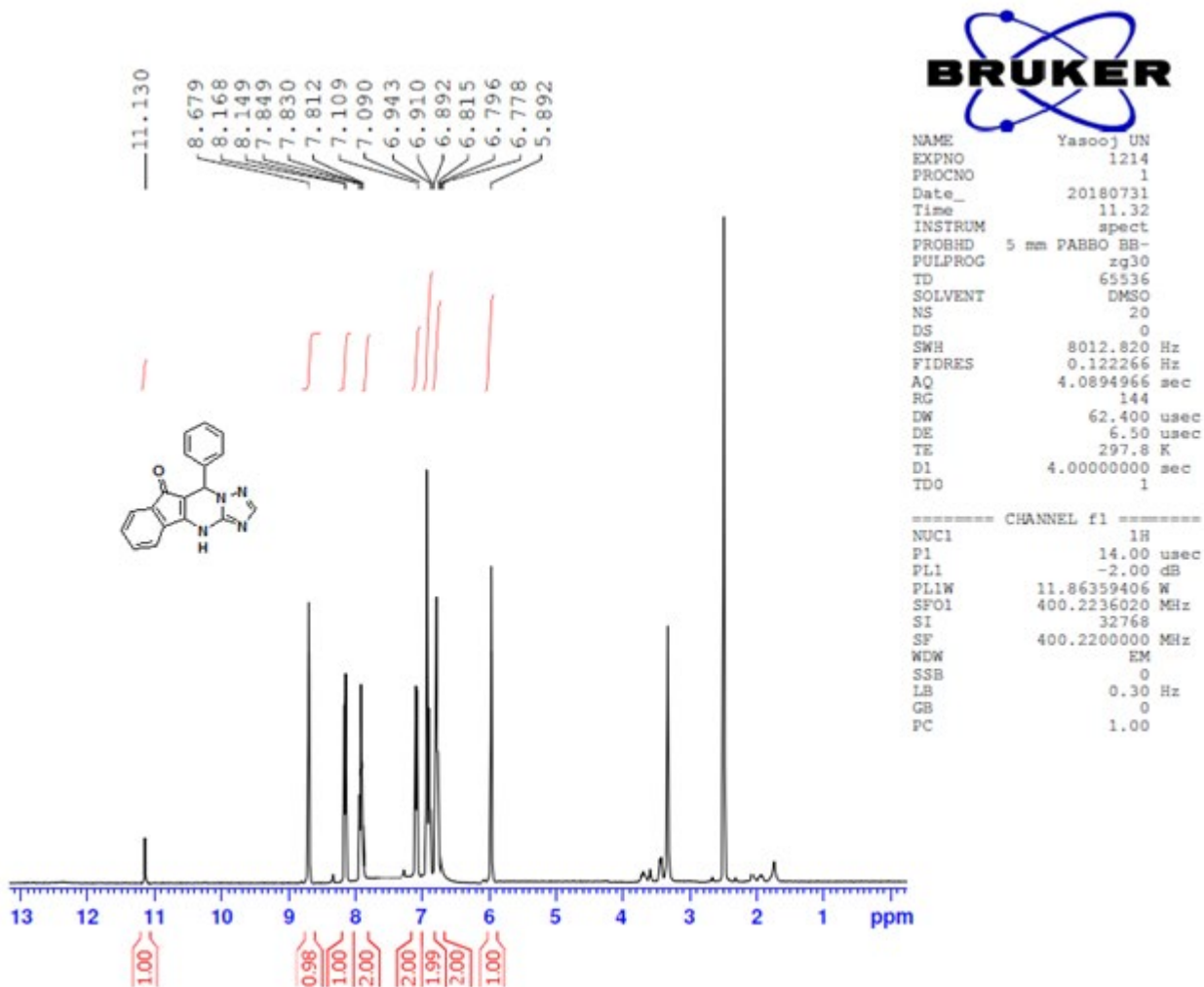


Supporting Information

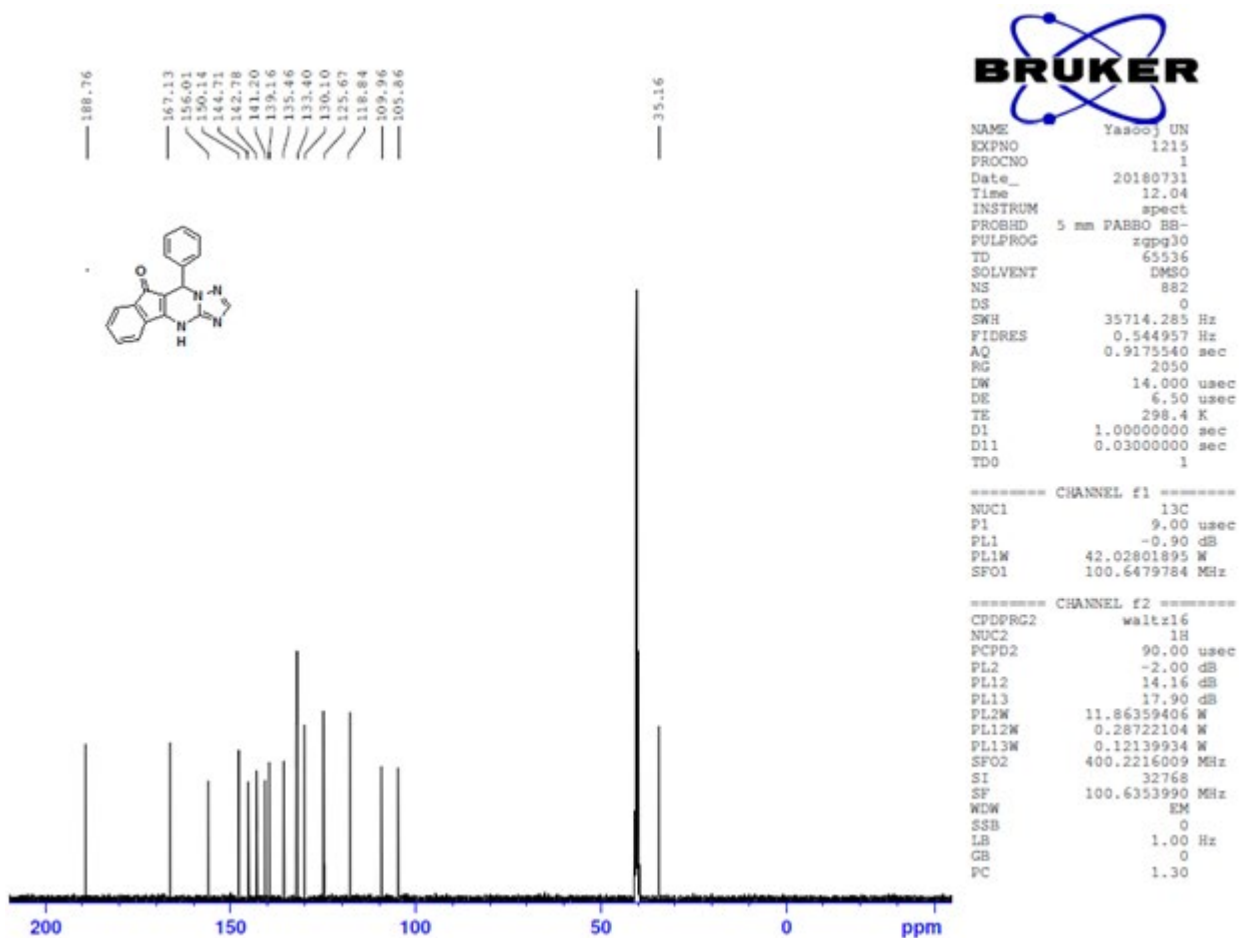
Synthesis and characterization of thiophene-derived palladium (II) complex immobilized on FSM-16 and its application in the novel synthesis of 7-(aryl)-7,12-dihydro-6*H*-indeno [1,2,4]triazolo[1,5-*a*]pyrimidine-6-one derivatives

Azar Jahanbakhshi, Mahnaz Farahi*, Bahador Karami and Iman Sedighimehr

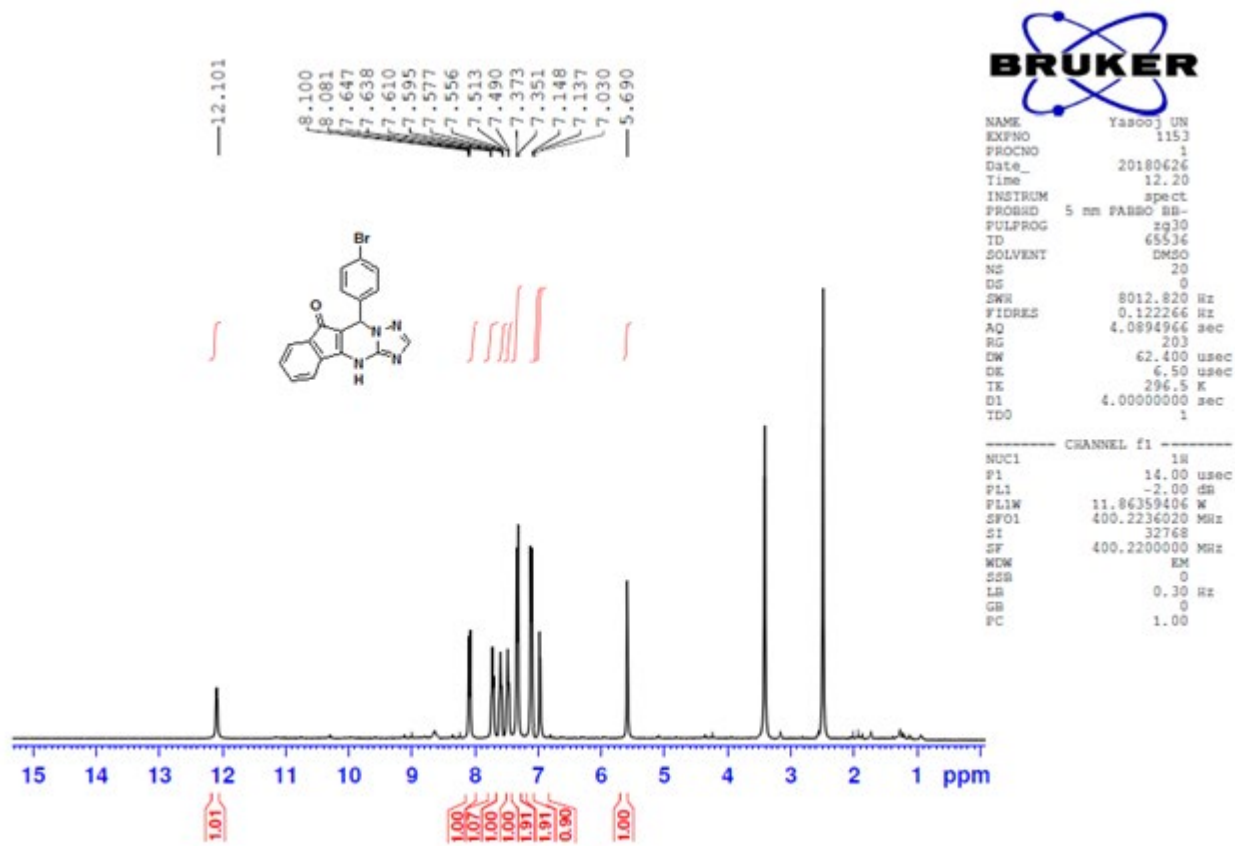
¹H NMR Spectra of Compound 5a



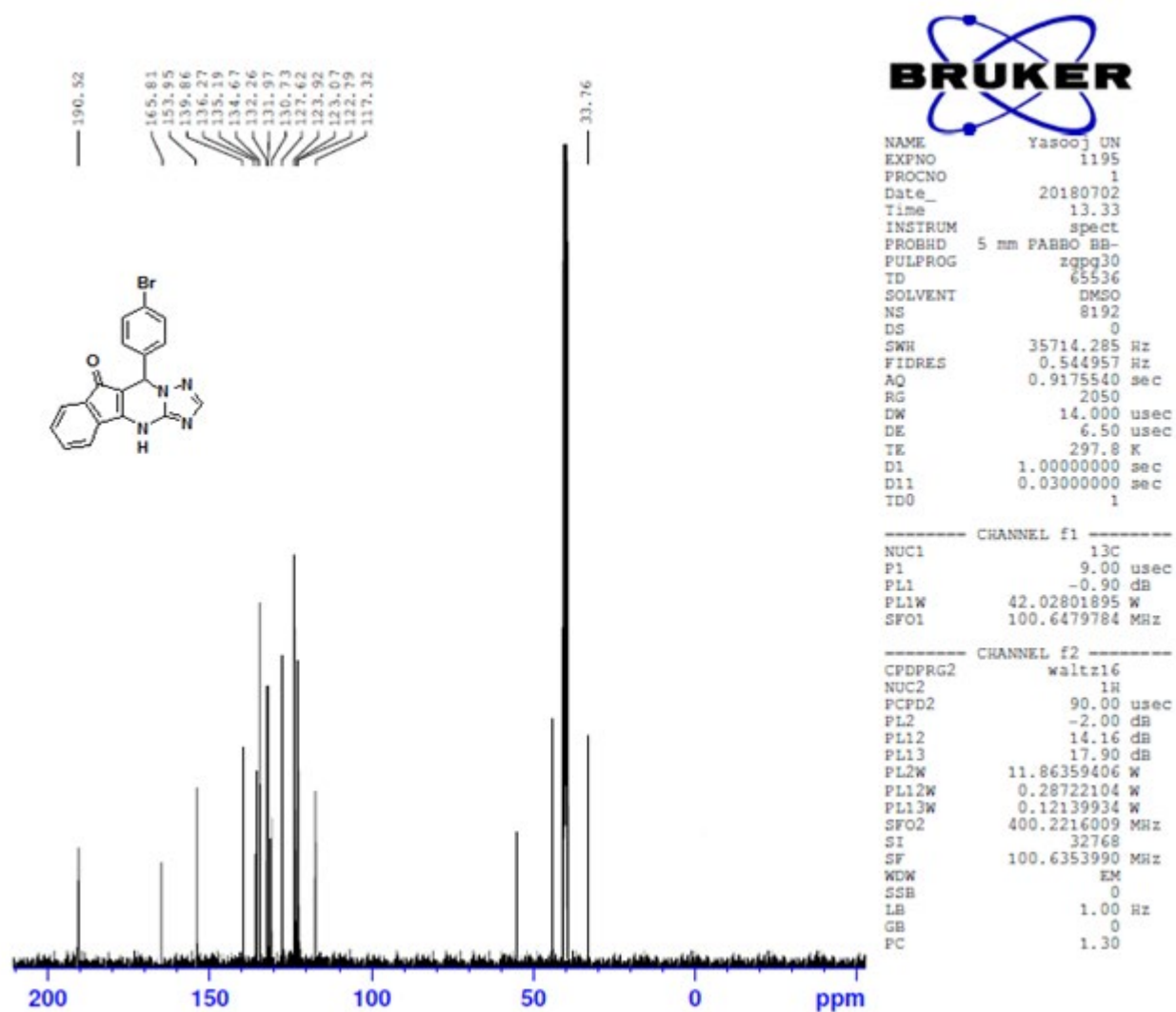
¹³C NMR Spectra of Compound 5a



¹H NMR Spectra of Compound 5b



¹³C NMR Spectra of Compound **5b**

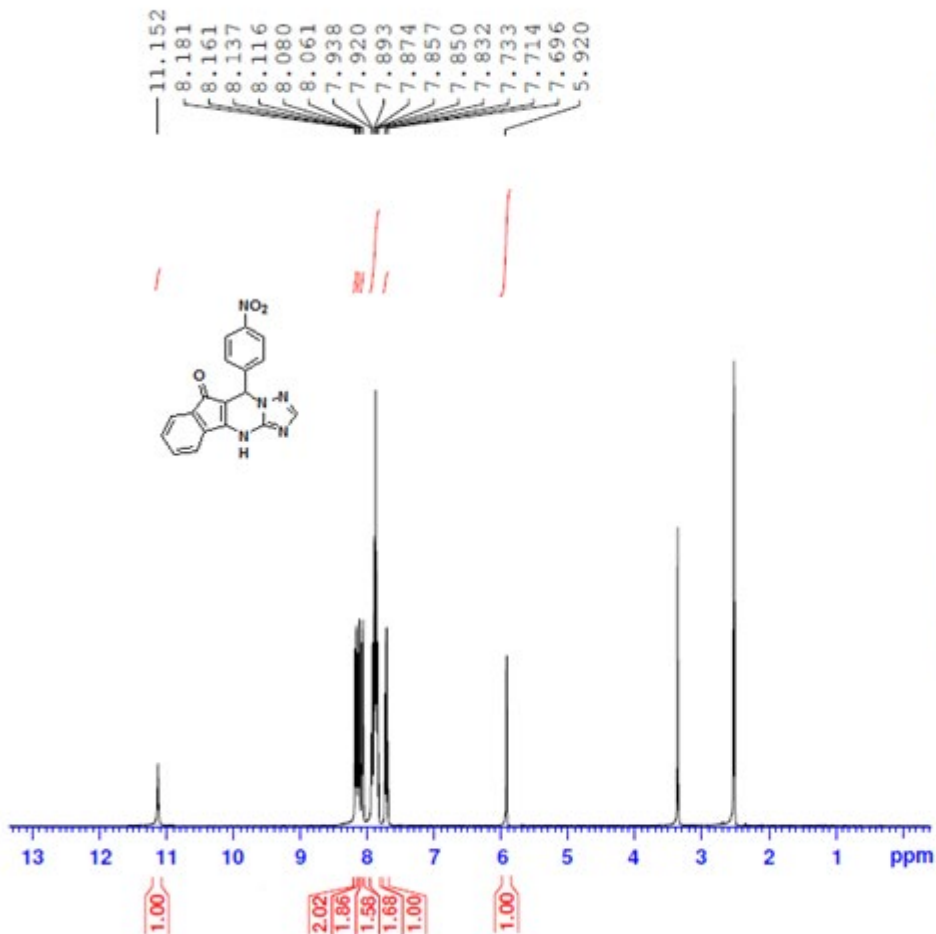


¹H NMR Spectra of Compound 5d

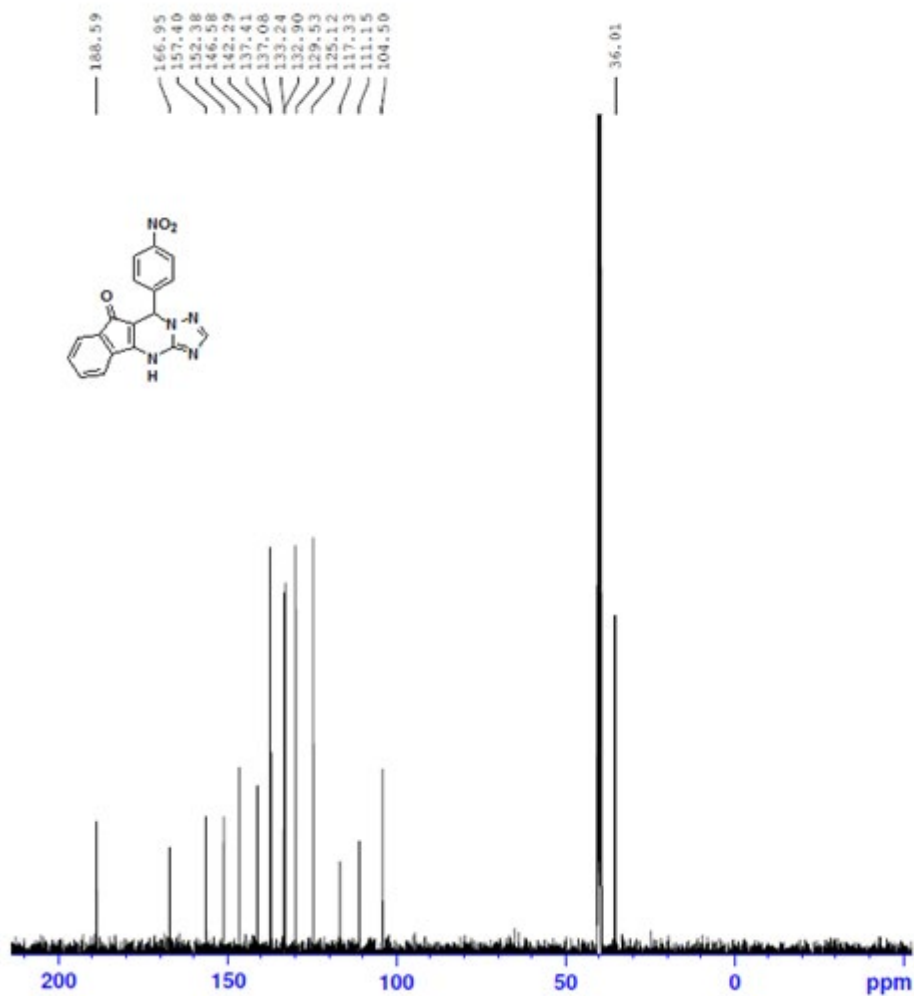


NAME Yasooj UN
EXPNO 1395
PROCNO 1
Date_ 20180626
Time 11.06
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 20
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894966 sec
RG 203
DW 62.400 usec
DE 6.50 usec
TE 296.4 K
D1 4.0000000 sec
TDO 1

----- CHANNEL f1 -----
NUC1 1H
P1 14.00 usec
PL1 -2.00 dB
PL1W 11.86359406 W
SFO1 400.2236020 MHz
SI 32768
SF 400.2200000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



¹³C NMR Spectra of Compound **5d**



```

NAME      Yaseoj UN
EXPNO     1396
PROCNO    1
Date_     20180629
Time      11.59
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD         65536
SOLVENT   DMSO
NS         342
DS         0
SWH       35714.285 Hz
FIDRES    0.544957 Hz
AQ         0.9175540 sec
RG         2050
DW         14.000 usec
DE         6.50 usec
TE         296.8 K
D1         1.00000000 sec
D11        0.03000000 sec
TDO        1
    
```

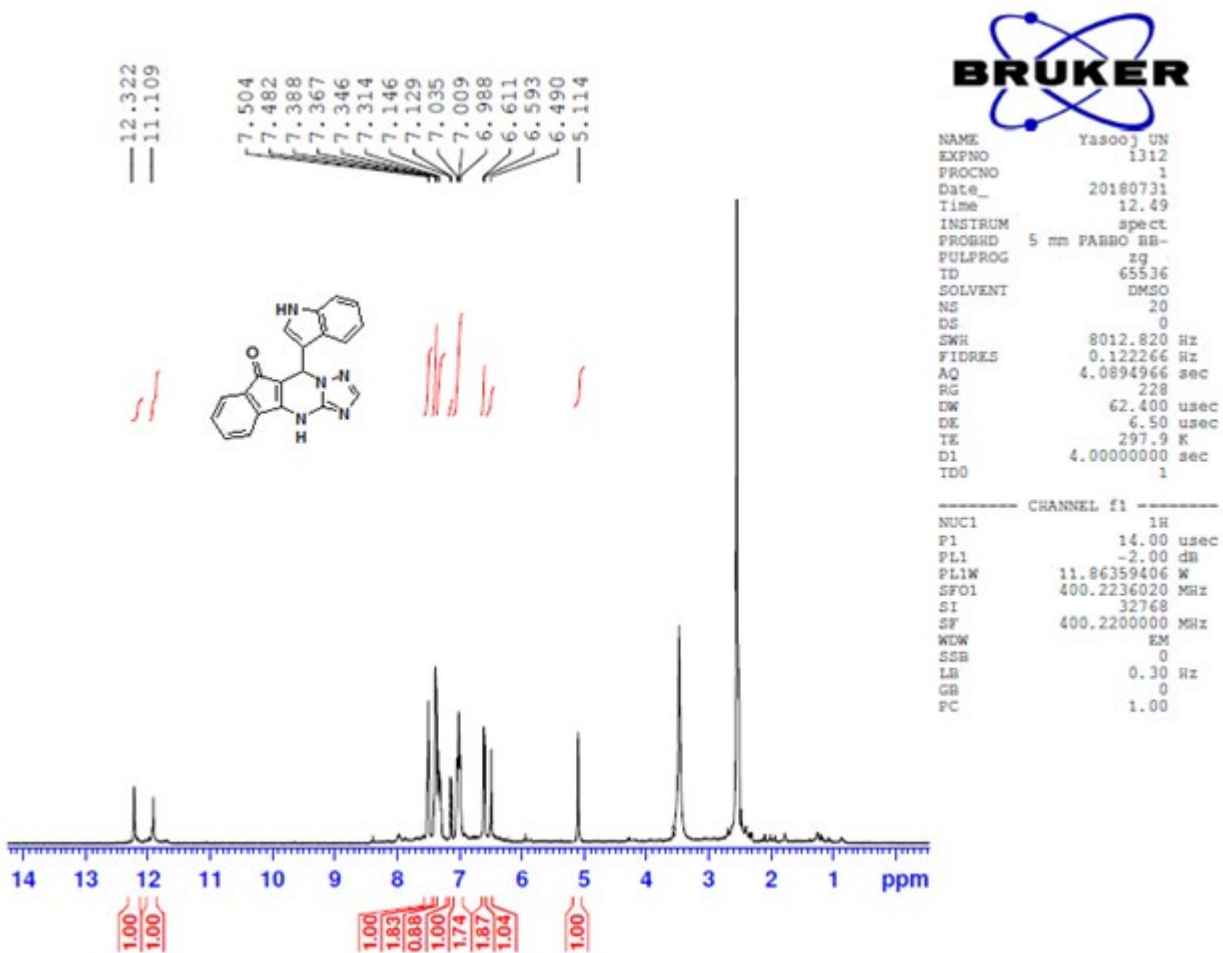
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----- CHANNEL f1 -----
NUC1      13C
P1         9.00 usec
PL1        -0.90 dB
PL1W      42.02801895 W
SFO1      100.6479784 MHz
    
```

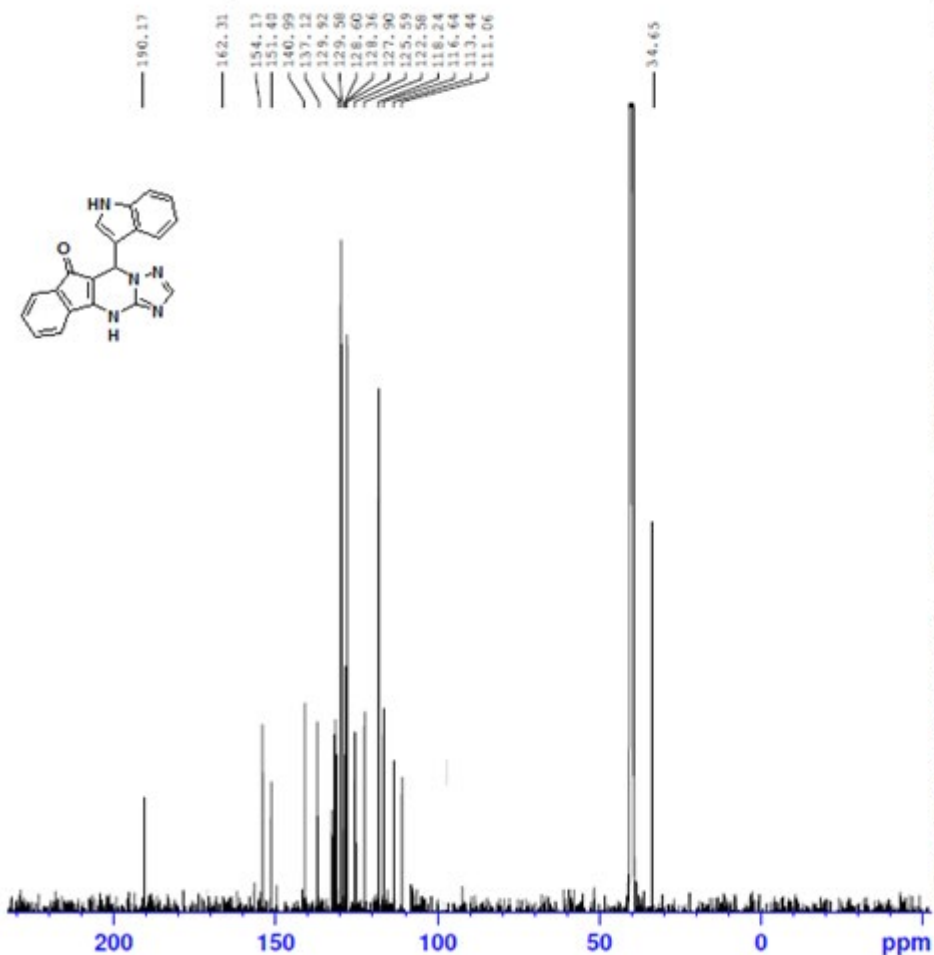
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----- CHANNEL f2 -----
CPDPRG2   waltz16
NUC2       1H
PCPD2     90.00 usec
PL2        -2.00 dB
PL12       14.16 dB
PL13       17.90 dB
PL2W      11.86359406 W
PL12W     0.28722104 W
PL13W     0.12139934 W
SFO2      400.2216009 MHz
SI         32768
SF         100.6353990 MHz
WDW        EM
SSB         0
LB          1.00 Hz
GB          0
PC          1.40
    
```

¹H NMR Spectra of Compound 5e



¹³C NMR Spectra of Compound 5e



```

NAME      Yssooj UN
EXPNO     1332
PROCNO    1
Date_     20180807
Time      10.09
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   DMSO
NS        4151
DS        0
SWH       35714.285 Hz
FIDRES    0.544957 Hz
AQ        0.9175540 sec
RG        2050
DW        14.000 usec
DE        6.50 usec
TE        298.2 K
D1        1.00000000 sec
D11       0.03000000 sec
TD0       1
    
```

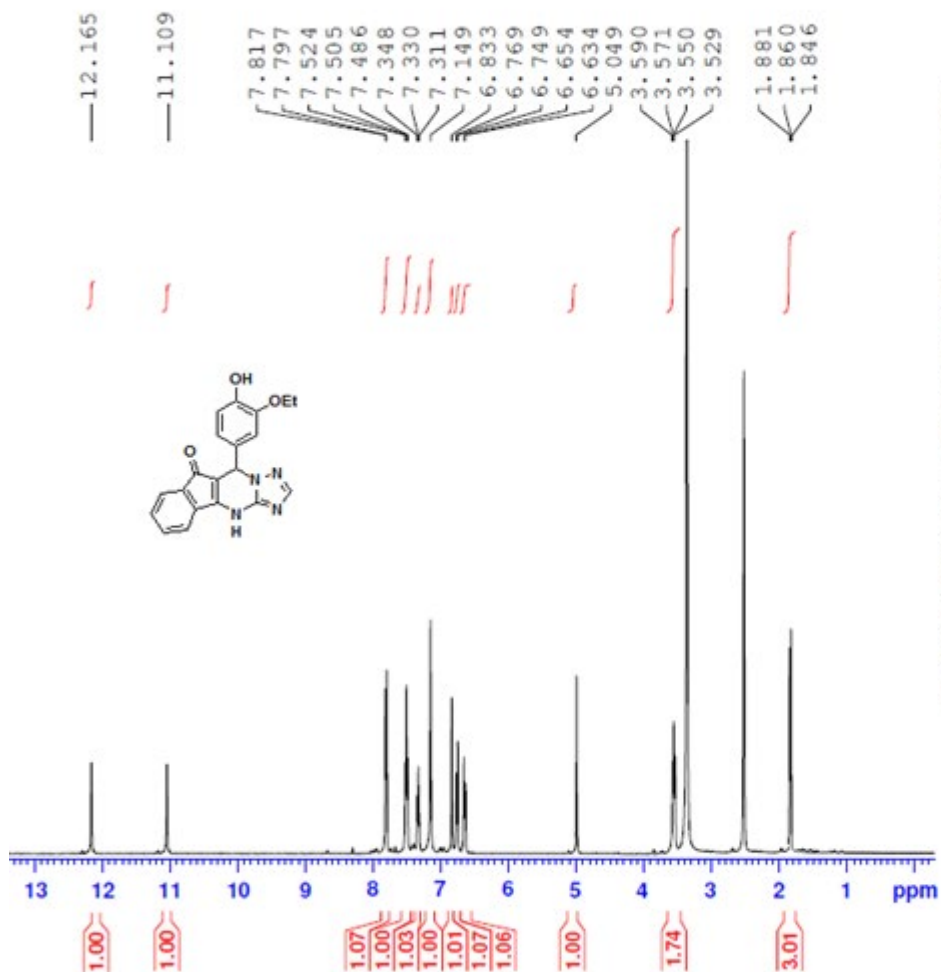
```

----- CHANNEL f1 -----
NUC1      13C
P1        9.00 usec
PL1       -0.90 dB
PL1W     42.02801895 W
SFO1     100.6479784 MHz
    
```

```

----- CHANNEL f2 -----
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL2       -2.00 dB
PL12     14.16 dB
PL13     17.90 dB
PL2W     11.86359406 W
PL12W    0.28722104 W
PL13W    0.12139934 W
SFO2     400.2216009 MHz
SI        32768
SF        100.6353990 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.30
    
```

¹H NMR Spectra of Compound 5h



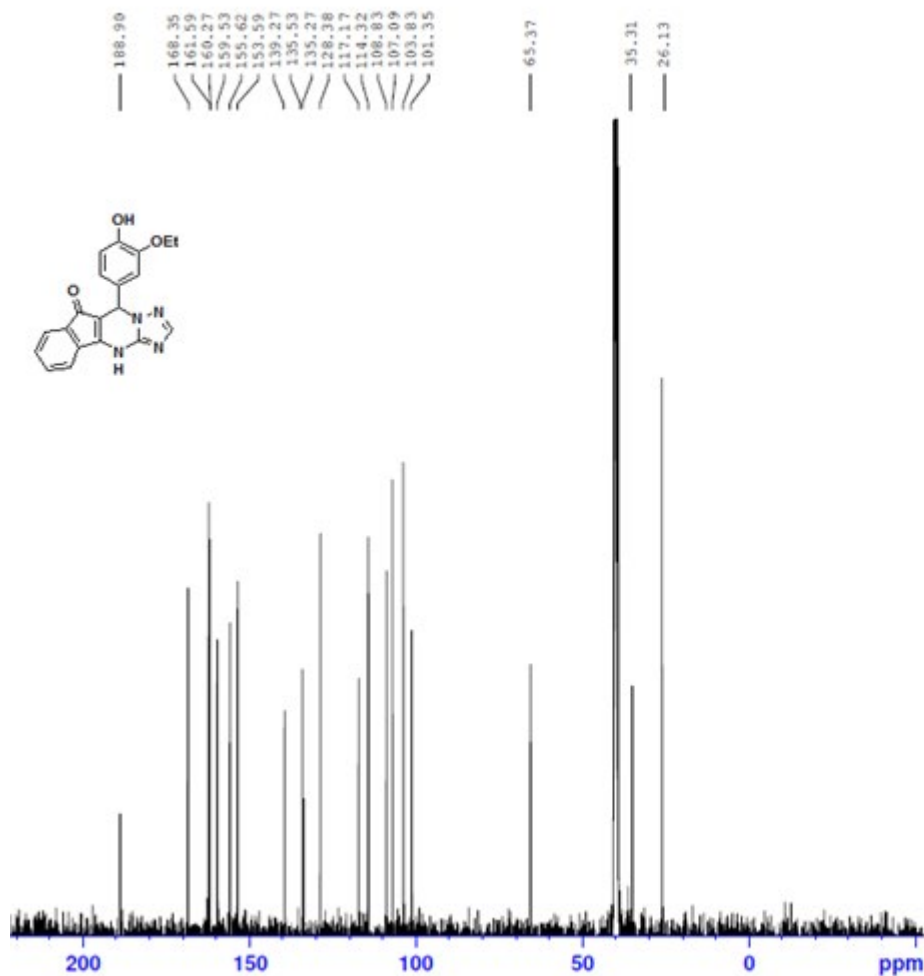
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NAME      Yasooj UN
EXPNO    1196
PROCNO   1
Date_    20180618
Time     11.31
INSTRUM  spect
PROBHD   5 mm PABBO BB-
PULPROG  zg30
TD       65536
SOLVENT  DMSO
NS       20
DS       0
SWH      8012.820 Hz
FIDRES   0.122266 Hz
AQ       4.0894966 sec
RG       161
DW       62.400 usec
DE       6.50 usec
TE       298.3 K
D1       4.00000000 sec
TD0      1
    
```

```

===== CHANNEL f1 =====
NUC1     1H
P1       14.00 usec
PL1      -2.00 dB
PL1W     11.86359406 W
SF01     400.2236020 MHz
SI       32768
SF       400.2200000 MHz
WDW      EM
SSB      0
LB       0.30 Hz
GB       0
PC       1.00
    
```

¹³C NMR Spectra of Compound 5h



```

NAME      Yasooj UN
EXPNO     1197
PROCNO    1
Date_     20180622
Time      7.44
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zgpg30
TD        65536
SOLVENT   DMSO
NS        555
DS        0
SWH       35714.285 Hz
FIDRES    0.544957 Hz
AQ        0.9175540 sec
RG        2050
DW        14.000 usec
DE        6.50 usec
TE        294.2 K
D1        1.00000000 sec
D11       0.03000000 sec
TD0       1
    
```

```

===== CHANNEL f1 =====
NUC1      13C
P1        9.00 usec
PL1       -0.90 dB
PL1W      42.02801895 W
SFO1      100.6479784 MHz
    
```

```

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL2       -2.00 dB
PL12      14.16 dB
PL13      17.90 dB
PL2W      11.86359406 W
PL12W     0.28722104 W
PL13W     0.12139934 W
SFO2      400.2216009 MHz
SI        32768
SF        100.6353990 MHz
NDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
    
```