

Electronic Supplementary Information

Brønsted acidic ionic liquid-catalyzed tandem reaction: An efficient and sustainable approach towards regioselective synthesis and molecular docking studies of 4-hydroxycoumarin-substituted indoles bearing lower E-factors

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1. E-factor calculation:

For **4a**: $E = (0.353\text{g} - 0.300\text{g})/0.300\text{g} = 0.176$

For **4b**: $E = (0.367\text{g} - 0.301\text{g})/0.301\text{g} = 0.219$

For **4c**: $E = (0.383\text{g} - 0.283\text{g})/0.383\text{g} = 0.353$

For **4d**: $E = (0.431\text{g} - 0.345\text{g})/0.345\text{g} = 0.249$

For **4e**: $E = (0.387\text{g} - 0.279\text{g})/0.279\text{g} = 0.387$

For **4f**: $E = (0.381\text{g} - 0.297\text{g})/0.297\text{g} = 0.282$

For **4g**: $E = (0.397\text{g} - 0.345\text{g})/0.345\text{g} = 0.150$

For **4h**: $E = (0.413\text{g} - 0.372\text{g})/0.372\text{g} = 0.110$

For **4i**: $E = (0.443\text{g} - 0.310\text{g})/0.310\text{g} = 0.429$

For **4j**: $E = (0.402\text{g} - 0.317\text{g})/0.317\text{g} = 0.268$

For **4k**: $E = (0.397\text{g} - 0.349\text{g})/0.349\text{g} = 0.137$

For **4l**: $E = (0.459\text{g} - 0.385\text{g})/0.385\text{g} = 0.192$

For **4m**: $E = (0.477\text{g} - 0.430\text{g})/0.430\text{g} = 0.109$

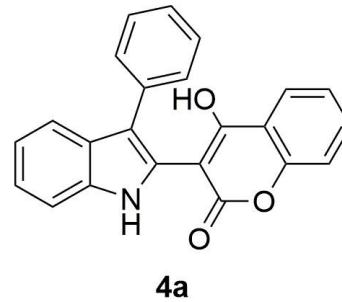
For **4n**: $E = (0.461\text{g} - 0.397\text{g})/0.397\text{g} = 0.161$

For **4o**: $E = (0.417\text{g} - 0.363\text{g})/0.363\text{g} = 0.148$

2. ^1H , and ^{13}C NMR spectra of synthesized compounds

1H of VBSAS-200/9P

8.818
7.801
7.798
7.788
7.781
7.778
7.567
7.563
7.546
7.528
7.524
7.443
7.436
7.433
7.424
7.359
7.338
7.330
7.309
7.298
7.278
7.259
7.239
7.226
7.213
7.213
7.194
7.161
7.143
7.124
7.092
7.073
7.055

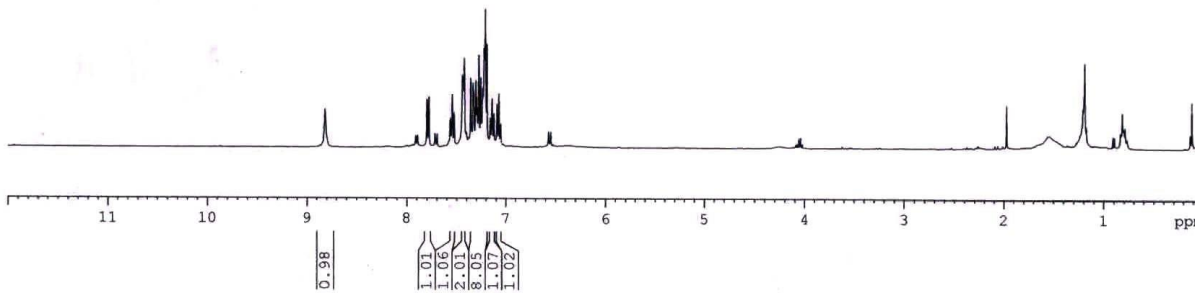


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EXPNO 84
PROCNO 1

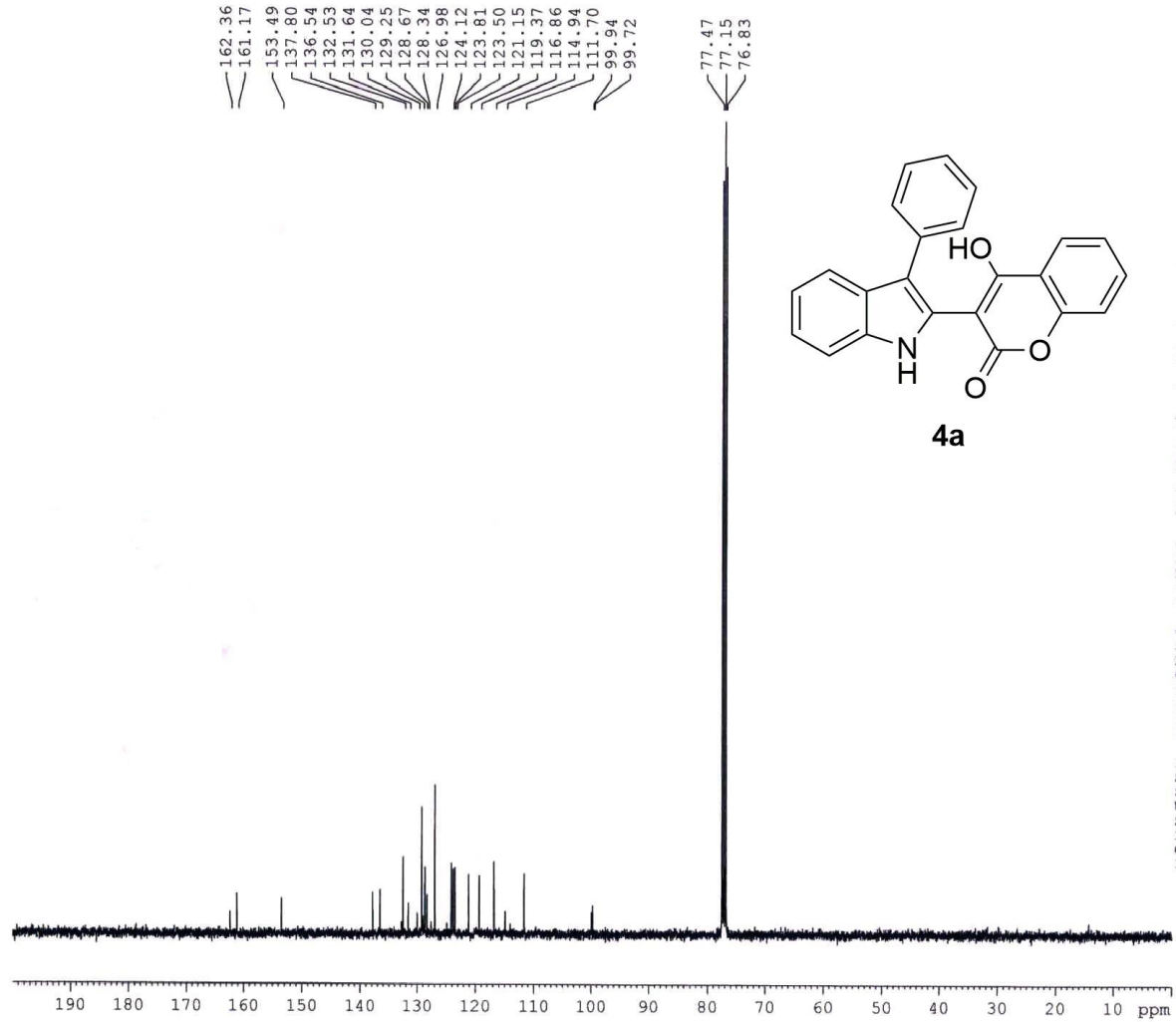
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FIDRES 0.250967 Hz
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RG 120.16
DW 60.800 usec
DE 6.50 usec
TE 295.1 K
D1 1.0000000 sec
TD0 1

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NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500350 MHz
WDW EM
SSB 0
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GB 0
PC 2.00



13C of VBSAS-200/9P



Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 85
PROCNO 1

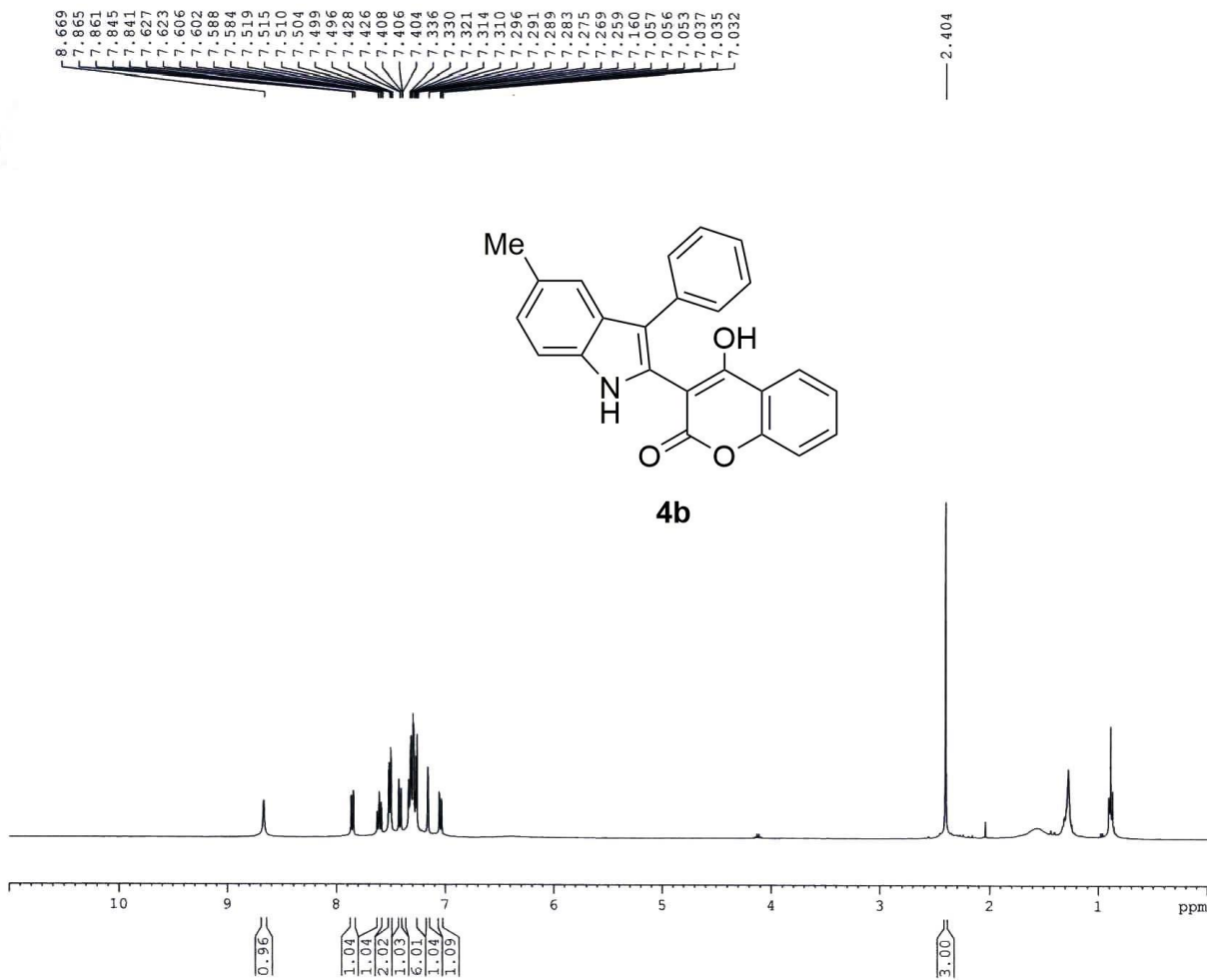
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PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 640
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 120.16
DW 20.800 usec
DE 6.50 usec
TE 295.6 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

===== CHANNEL f2 =====
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
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PC 1.40

1H of VBSS-T-52



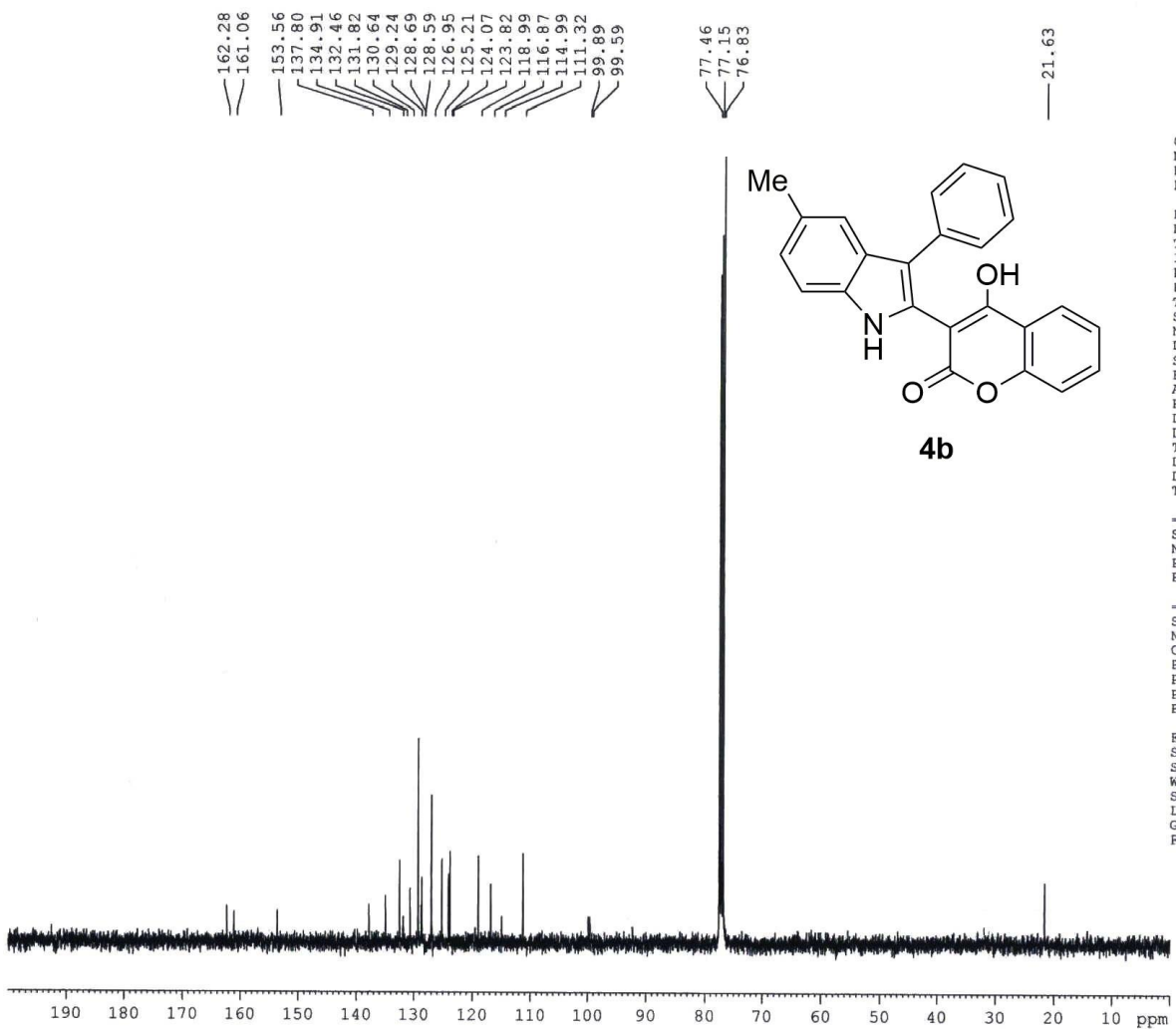
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PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 135.7
DW 60.800 usec
DE 6.50 usec
TE 303.2 K
D1 1.00000000 sec
TDO 1

===== CHANNEL f1 =====
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NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
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PC 2.00

13C of VBSS-T-52



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 277
PROCNO 1

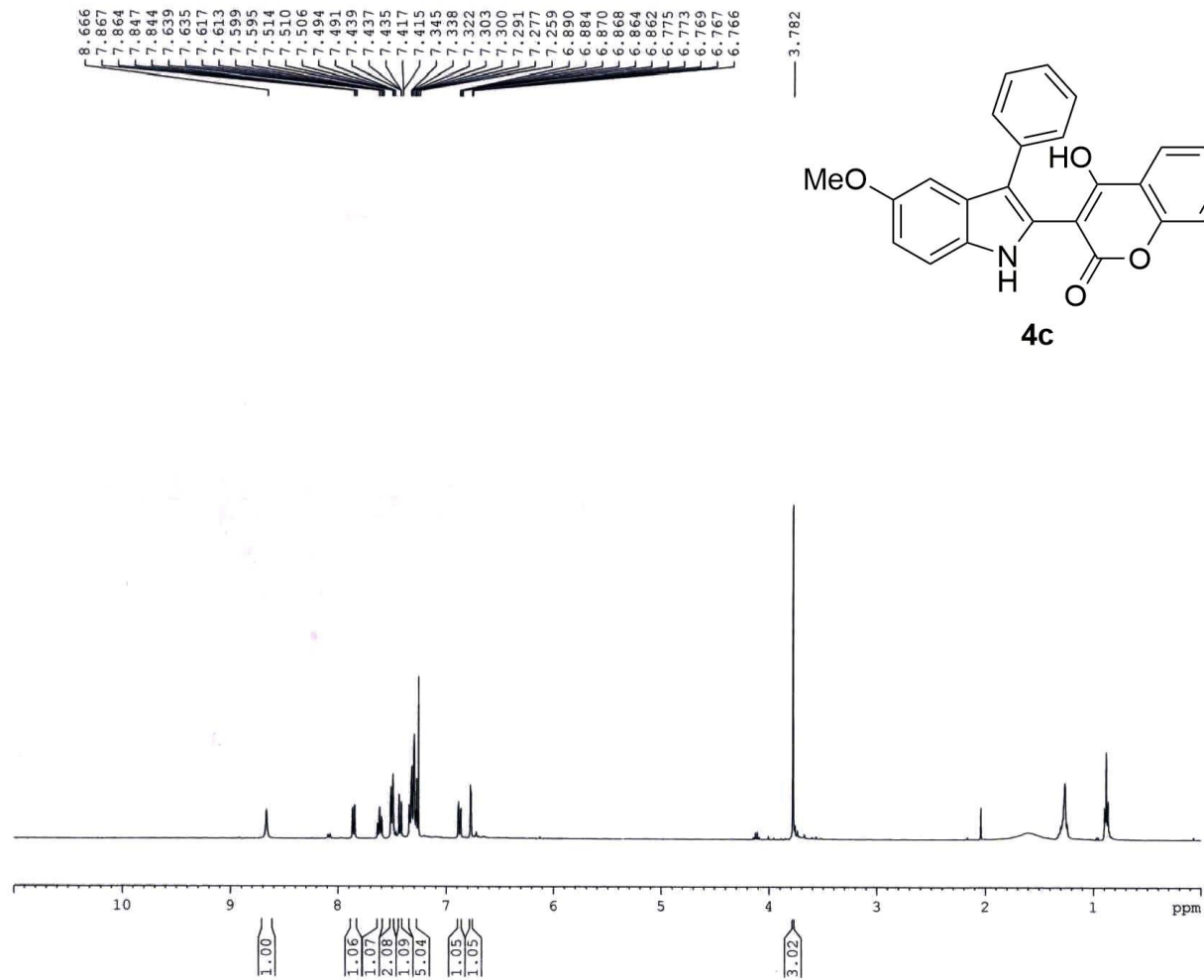
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TD 32768
SOLVENT CDCl3
NS 528
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 135.7
DW 20.800 usec
DE 6.50 usec
TE 303.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

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LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/8

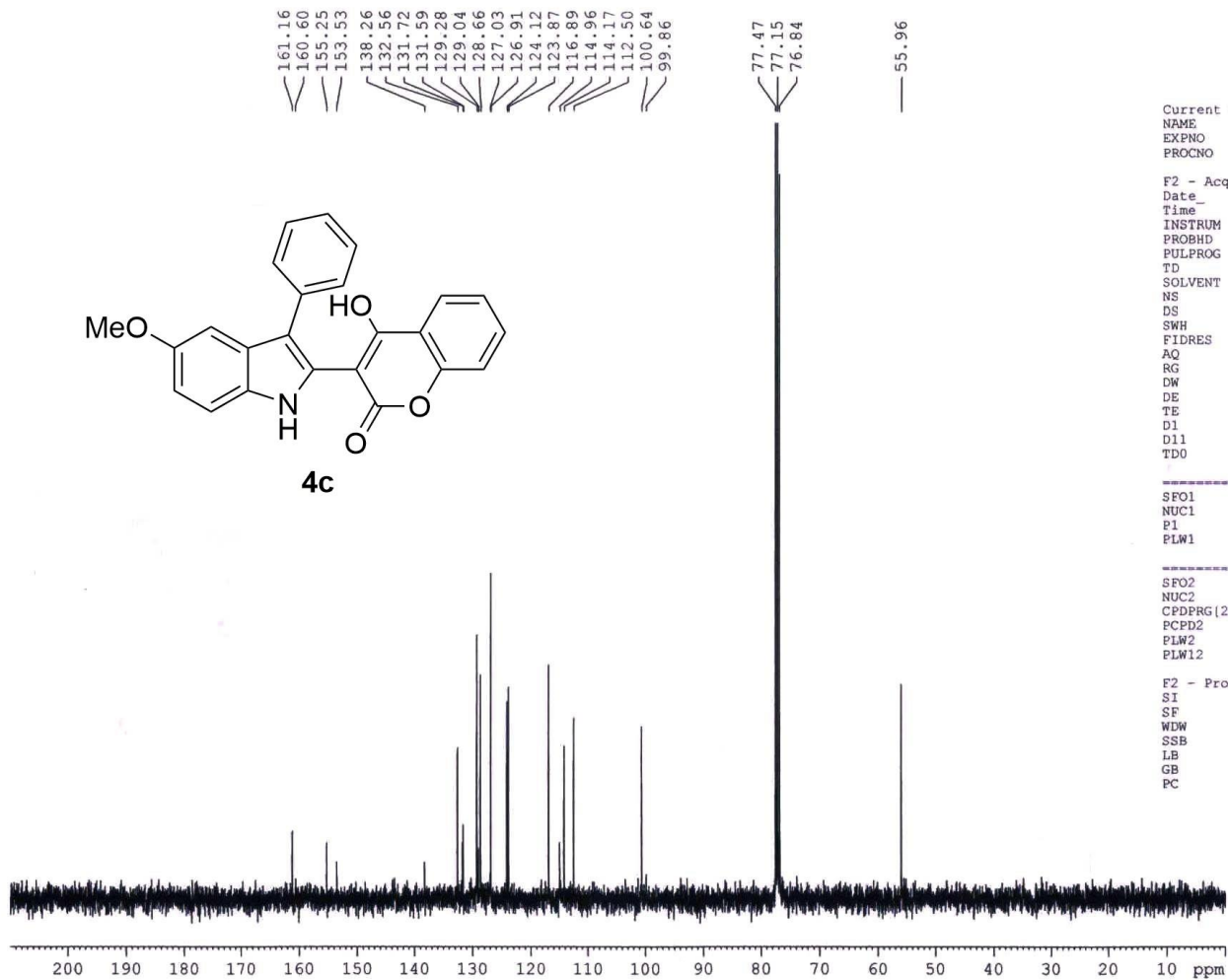


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NAME Dr. A MAJEE 2020
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PROCNO 1

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Time 15.37
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PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 186.42
DW 60.800 usec
DE 6.50 usec
TE 295.0 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
SF01 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
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LB 0.30 Hz
GB 0
PC 2.00



Current Data Parameters
 NAME Dr. A MAJEE 2020
 EXPNO 569
 PROCNO 1

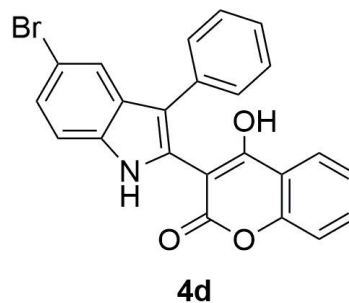
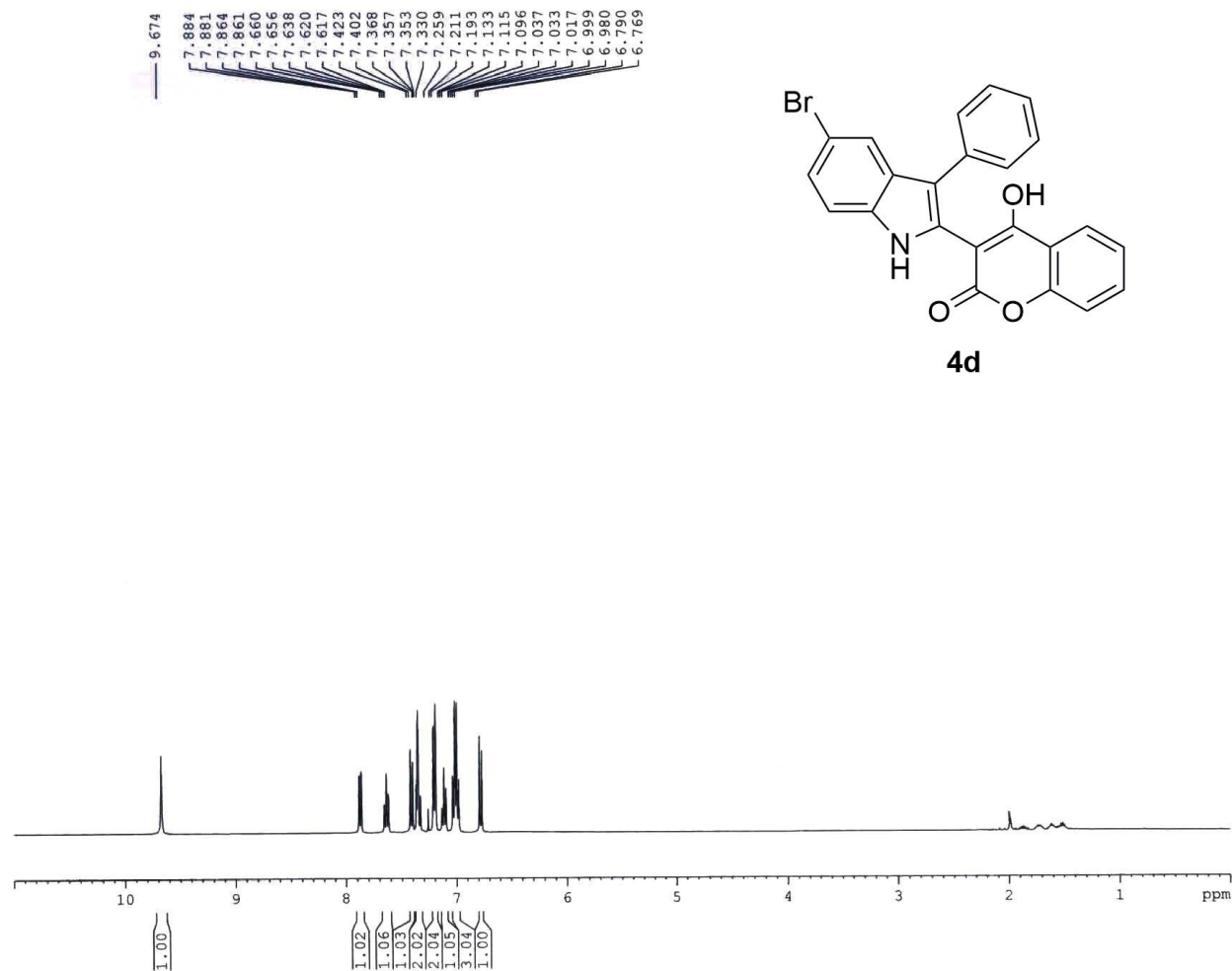
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 PULPROG zgdc
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 SOLVENT CDCl3
 NS 680
 DS 2
 SWH 24038.461 Hz
 FIDRES 0.733596 Hz
 AQ 0.6815744 sec
 RG 186.42
 DW 20.800 usec
 DE 6.50 usec
 TE 295.9 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TD0 1

----- CHANNEL f1 -----
 SFO1 100.6278588 MHz
 NUC1 13C
 P1 8.90 usec
 PLW1 54.00000000 W

----- CHANNEL f2 -----
 SFO2 400.1516006 MHz
 NUC2 1H
 CPDPRG[2] waltz16
 PCPD2 90.00 usec
 PLW2 12.00000000 W
 PLW12 0.32231000 W

F2 - Processing parameters
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 SF 100.6177844 MHz
 WDW EM
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 GB 0
 PC 1.00

1H of VBSAS-200/1



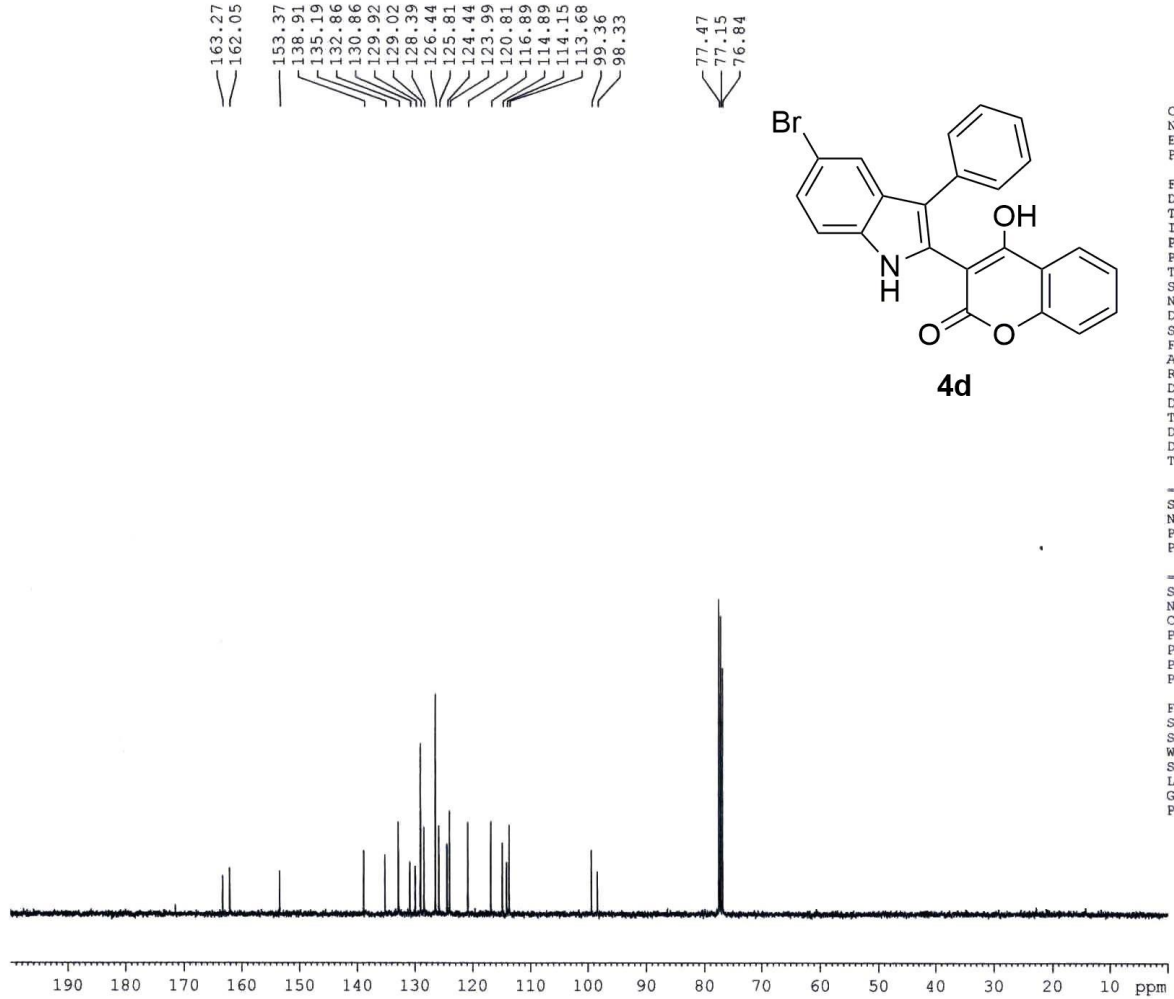
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EXPNO 534
PROCNO 1

F2 - Acquisition Parameters
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Time_ 15.36
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDC13
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 54.07
DW 60.800 usec
DE 6.50 usec
TE 297.6 K
D1 1.00000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200/1



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 535
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201129
Time_ 15.50
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 256
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 54.07
DW 20.800 usec
DE 6.50 usec
TE 297.8 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

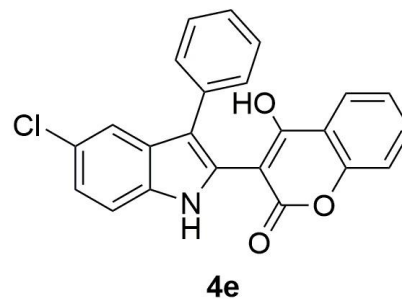
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SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.0000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 12.0000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6177873 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/4

9.118
7.867
7.864
7.847
7.844
7.660
7.657
7.639
7.621
7.617
7.453
7.430
7.425
7.416
7.406
7.362
7.342
7.323
7.290
7.286
7.239
7.247
7.241
7.233
7.230
7.220
7.188
7.166
7.087
7.082
7.065
7.060

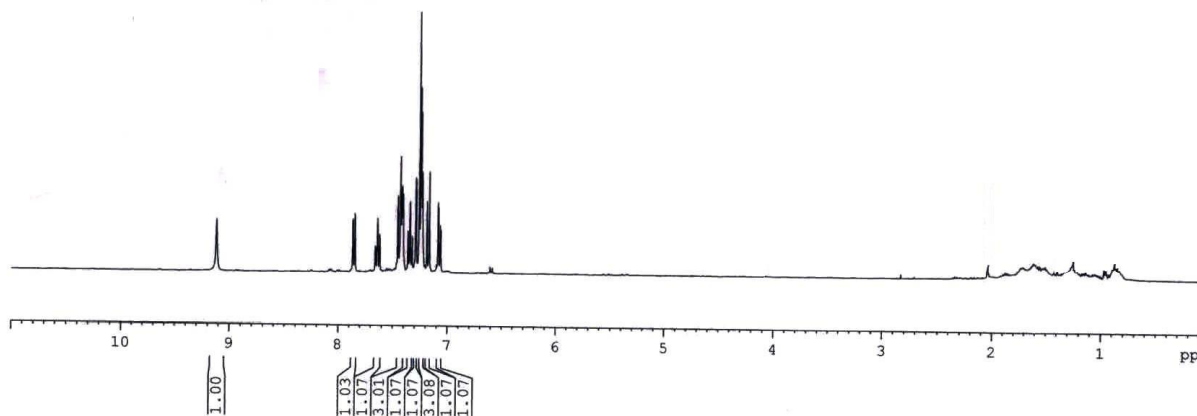


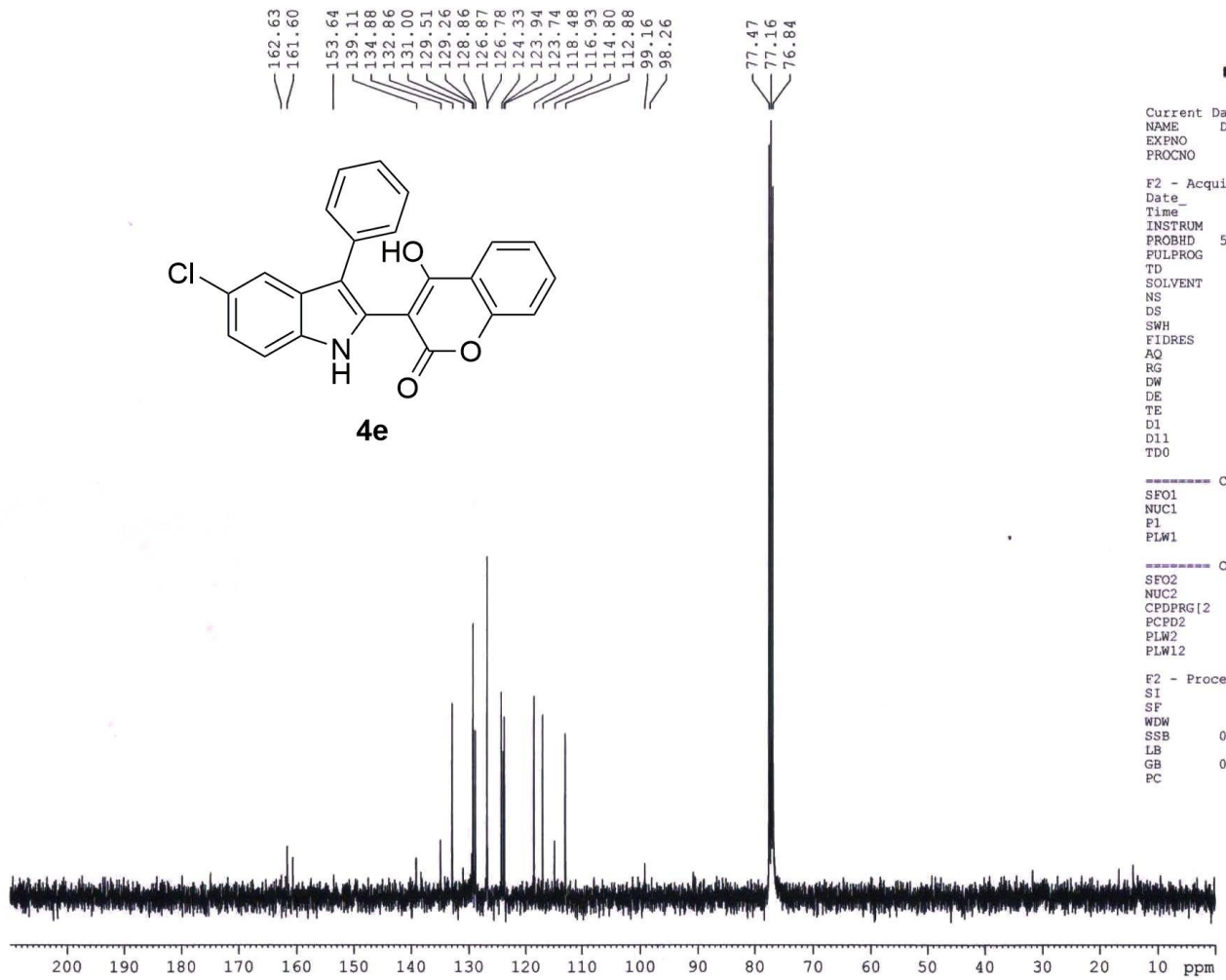
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NAME Dr. A MAJEE 2020
EXPNO 544
PROCNO 1

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Time_ 19.52
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PULPROG zg30
TD 32768
SOLVENT CDC13
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 186.42
DW 60.800 usec
DE 6.50 usec
TE 295.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00





Current Data Parameters
 NAME Dr. A MAJEE 2020
 EXPNO 545
 PROCNO 1

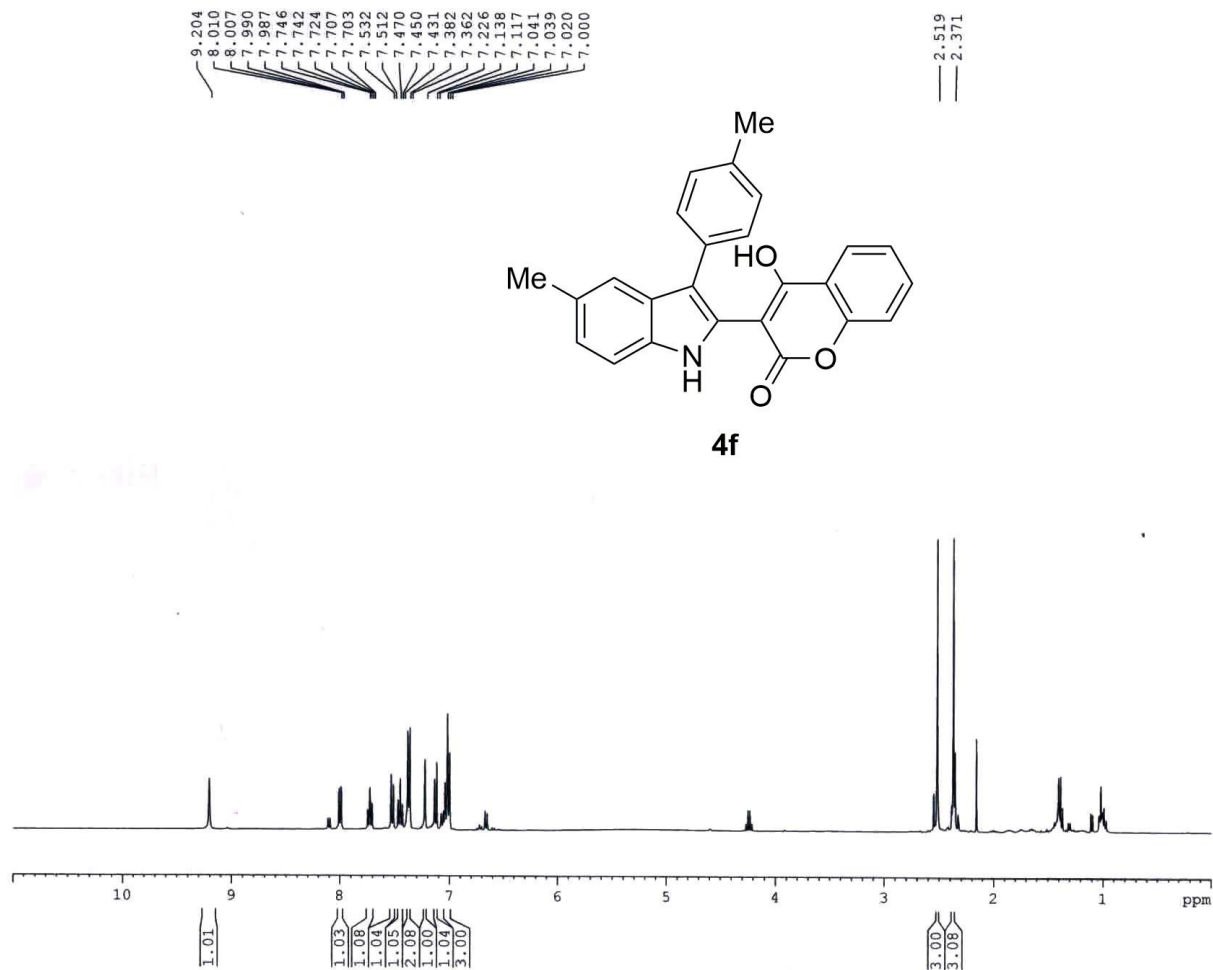
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 PULPROG zgpg
 TD 32768
 SOLVENT CDCl3
 NS 1024
 DS 2
 SWH 24038.461 Hz
 FIDRES 0.733596 Hz
 AQ 0.6815744 sec
 RG 186.42
 DW 20.800 usec
 DE 6.50 usec
 TE 296.1 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TDO 1

----- CHANNEL f1 -----
 SFO1 100.6278588 MHz
 NUC1 13C
 P1 8.90 usec
 PLW1 54.00000000 W

----- CHANNEL f2 -----
 SFO2 400.1516006 MHz
 NUC2 1H
 CPDPRG2 waltz16
 PCPD2 90.00 usec
 PLW2 12.00000000 W
 PLW12 0.32231000 W

F2 - Processing parameters
 SI 16384
 SF 100.6177842 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

1H of VBSAS-200



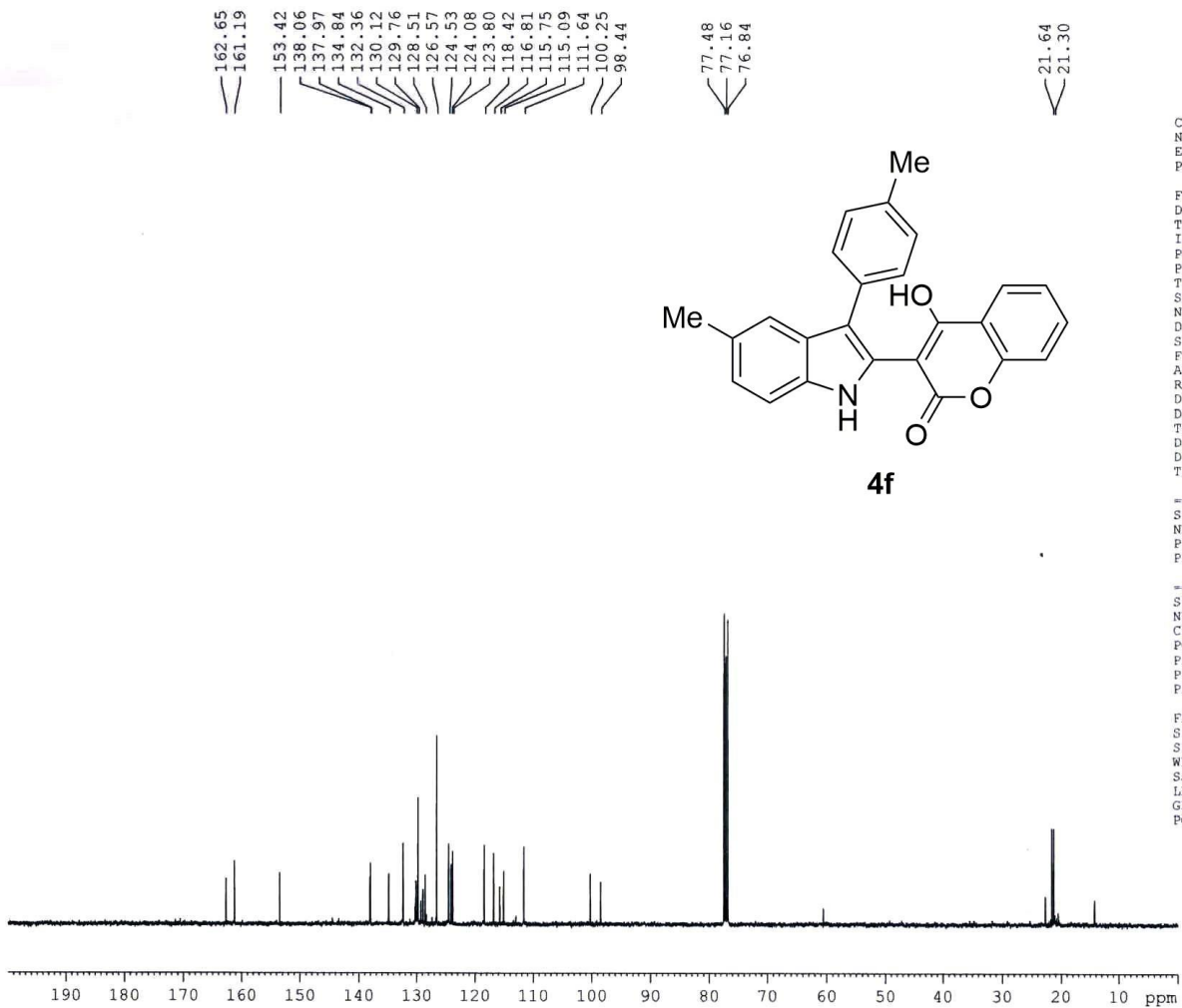
Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 532
PROCNO 1

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Time 15.00
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PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDC13
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 93.46
DW 60.800 usec
DE 6.50 usec
TE 298.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1499610 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 533
PROCNO 1

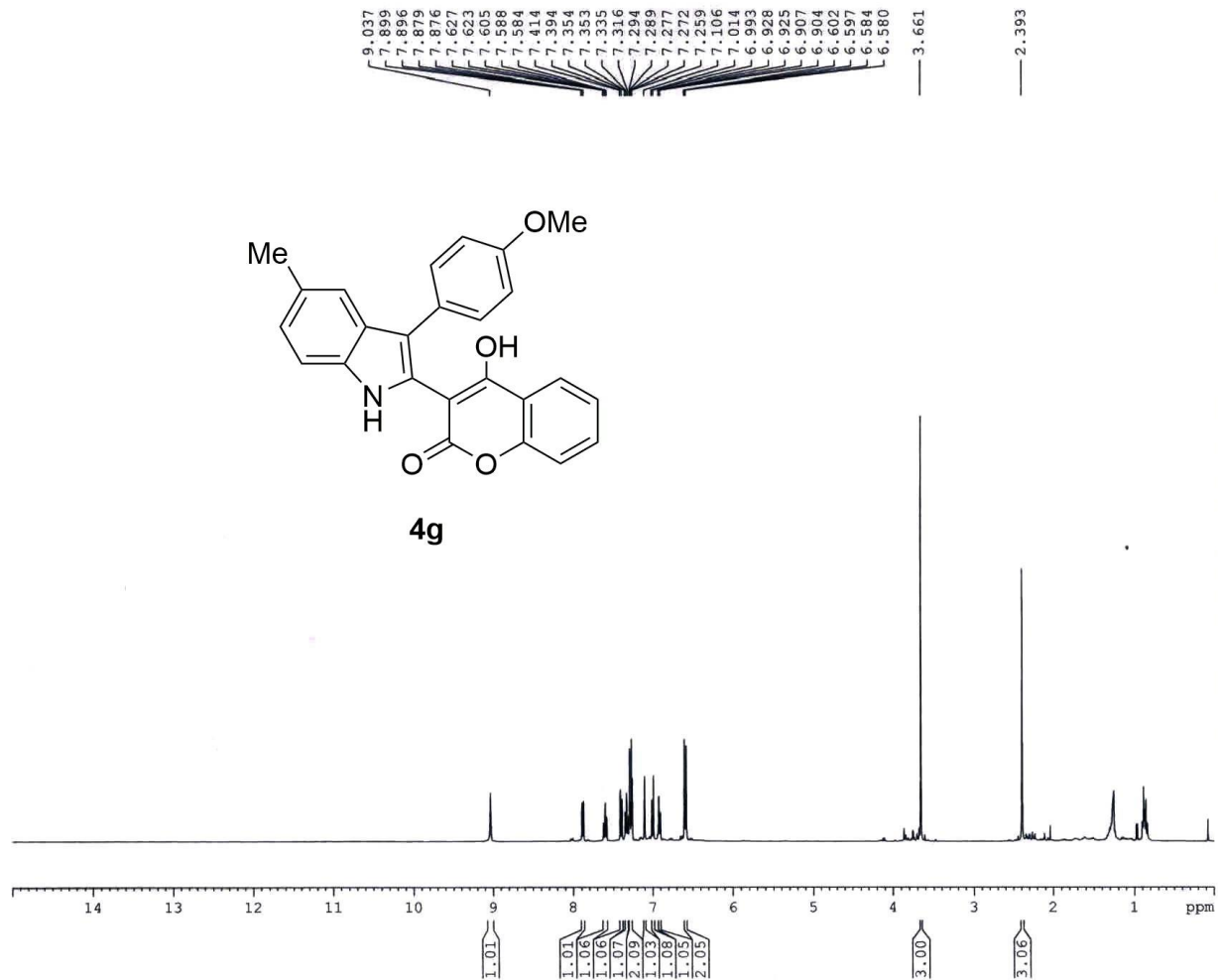
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Time 15.25
INSTRUM spect
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PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 512
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 93.46
DW 20.800 usec
DE 6.50 usec
TE 298.3 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

===== CHANNEL f2 =====
SFO2 400.1516006 MHz
NUC2 1H
CFDPRG12 waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6177873 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/12



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 603
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201230
Time 4.12
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 120.16
DW 60.800 usec
DE 6.50 usec
TE 295.9 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

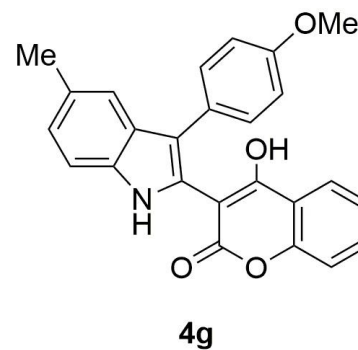
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162.62
161.13
159.53
153.42
137.92
134.78
132.39
130.15
128.51
128.08
124.43
124.32
124.12
123.81
118.38
116.83
115.07
114.51
111.58
100.25
97.93

77.47
77.15
76.83

55.21

21.67



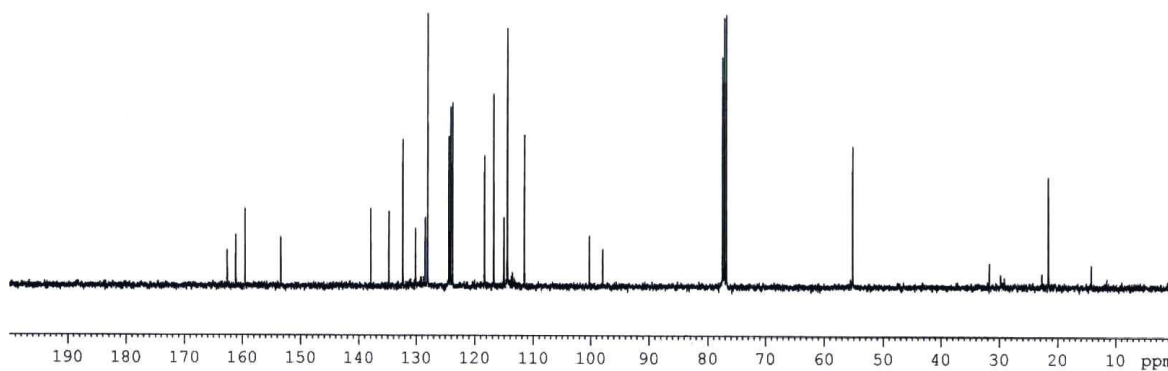
Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 604
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201230
Time 5.00
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PROBHD 5 mm PABBO BB/
PULPROG zgdc
TD 32768
SOLVENT CDCl3
NS 1024
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 120.16
DW 20.800 usec
DE 6.50 usec
TE 297.1 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

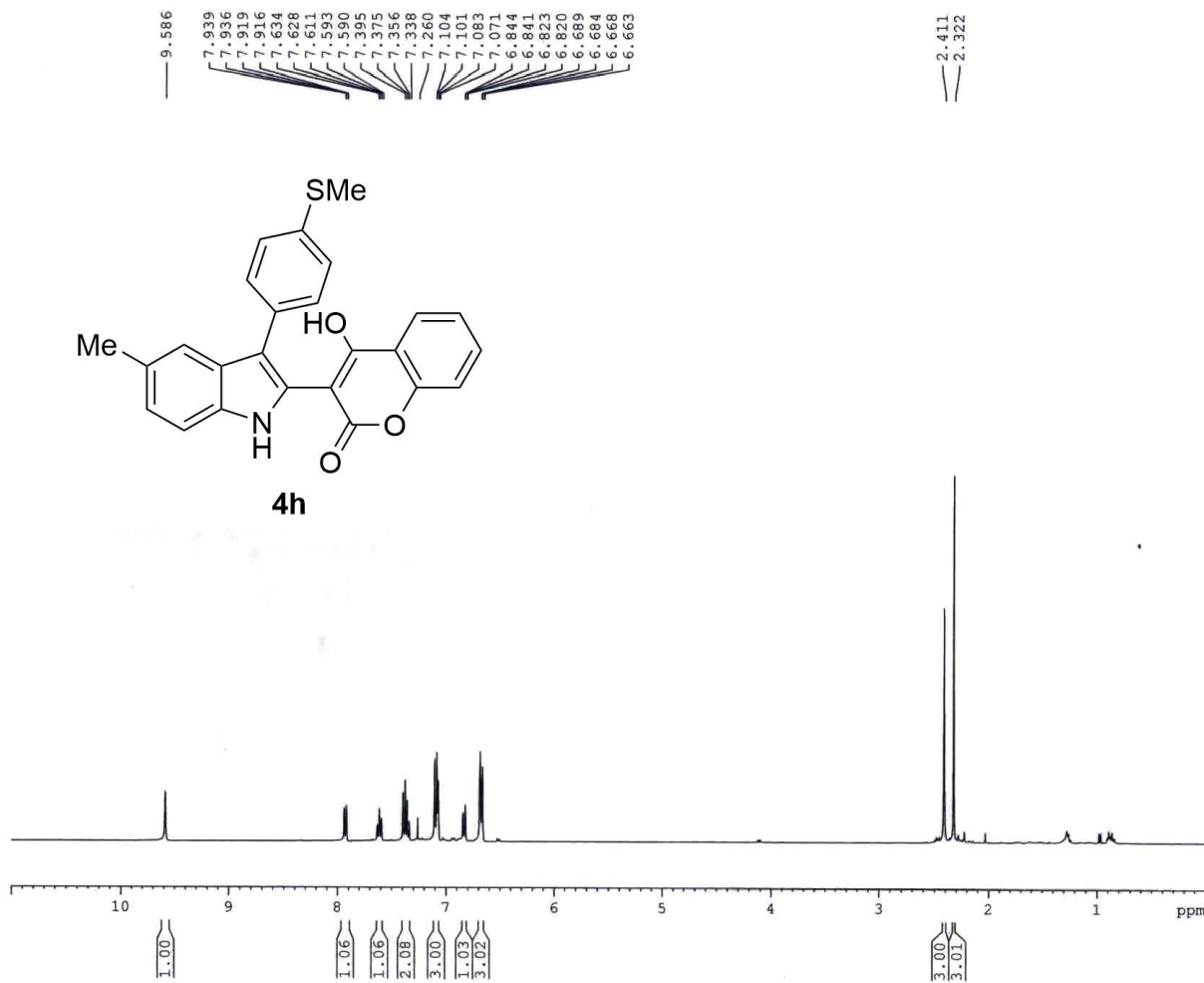
----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W

F2 - Processing parameters
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SF 100.6177858 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00



1H of VBSAS-200/13

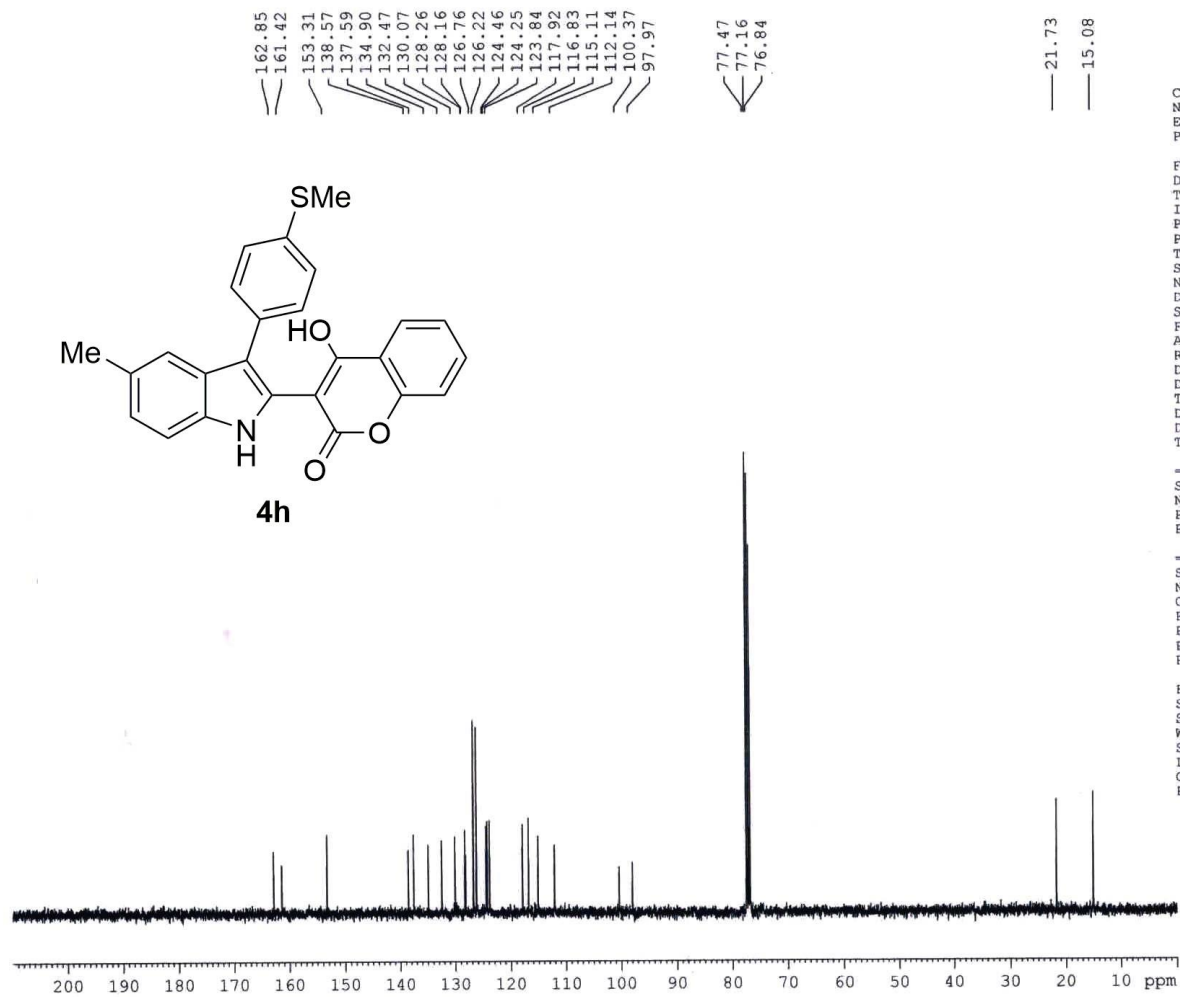


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 NAME Dr. A MAJEE 2021
 EXPNO 17
 PROCNO 1

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 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 8
 DS 1
 SWH 8223.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.9922944 sec
 RG 77.59
 DW 60.800 usec
 DE 6.50 usec
 TE 297.6 K
 D1 1.00000000 sec
 TDO 1

----- CHANNEL f1 -----
 SF01 400.1524711 MHz
 NUC1 1H
 P1 14.75 usec
 PLW1 12.00000000 W

F2 - Processing parameters
 SI 16384
 SF 400.1500087 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 2.00



Current Data Parameters
 NAME Dr. A MAJEE 2021
 EXPNO 18
 PROCNO 1

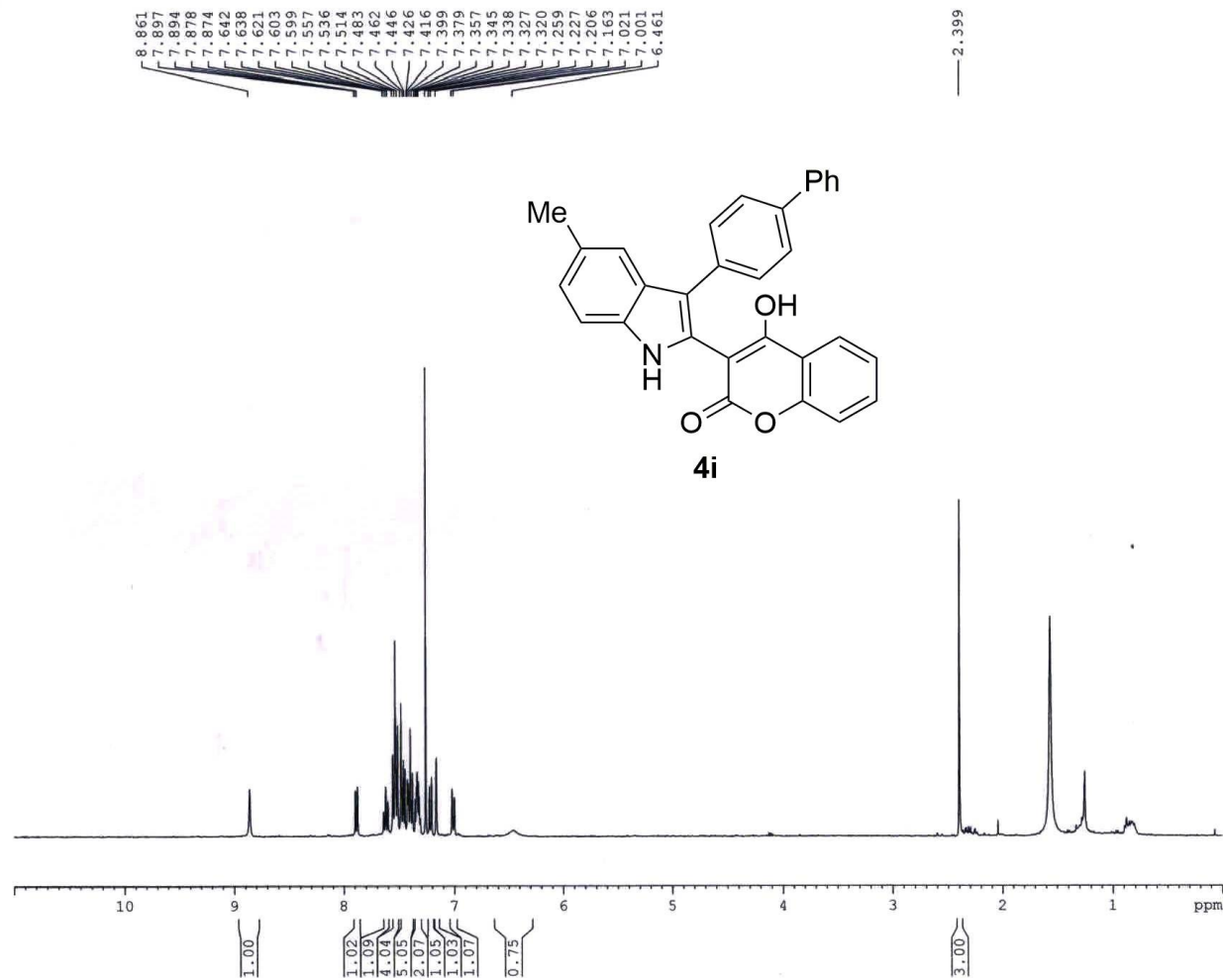
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 PULPROG zgpg30
 TD 32768
 SOLVENT CDCl3
 NS 160
 DS 2
 SWH 24038.461 Hz
 FIDRES 0.733596 Hz
 AQ 0.6815744 sec
 RG 77.59
 DW 20.800 usec
 DE 6.50 usec
 TE 298.1 K
 D1 2.0000000 sec
 D11 0.0300000 sec
 TDO 1

===== CHANNEL f1 =====
 SFO1 100.6278588 MHz
 NUC1 13C
 P1 8.90 usec
 PLW1 54.0000000 W

===== CHANNEL f2 =====
 SFO2 400.1516006 MHz
 NUC2 1H
 CPDPRG12 waltz16
 PCPD2 90.00 usec
 PLW2 12.0000000 W
 PLW12 0.32231000 W
 PLW13 0.16212000 W

F2 - Processing parameters
 SI 16384
 SF 100.6177872 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1H of VBSAS-200/6



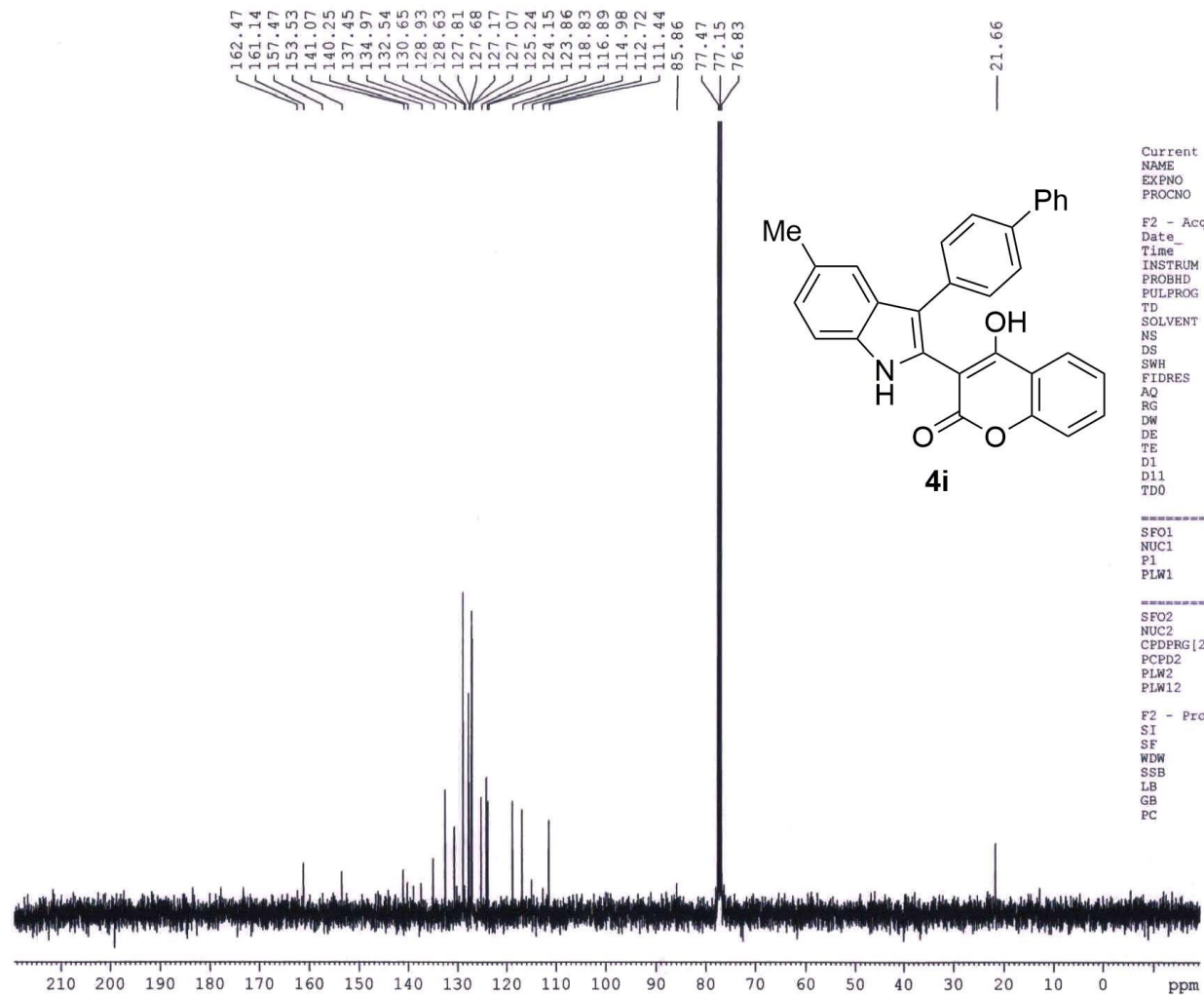
Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 558
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201214
Time_ 16.30
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 186.42
DW 60.800 usec
DE 6.50 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200/6



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 559
PROCNO 1

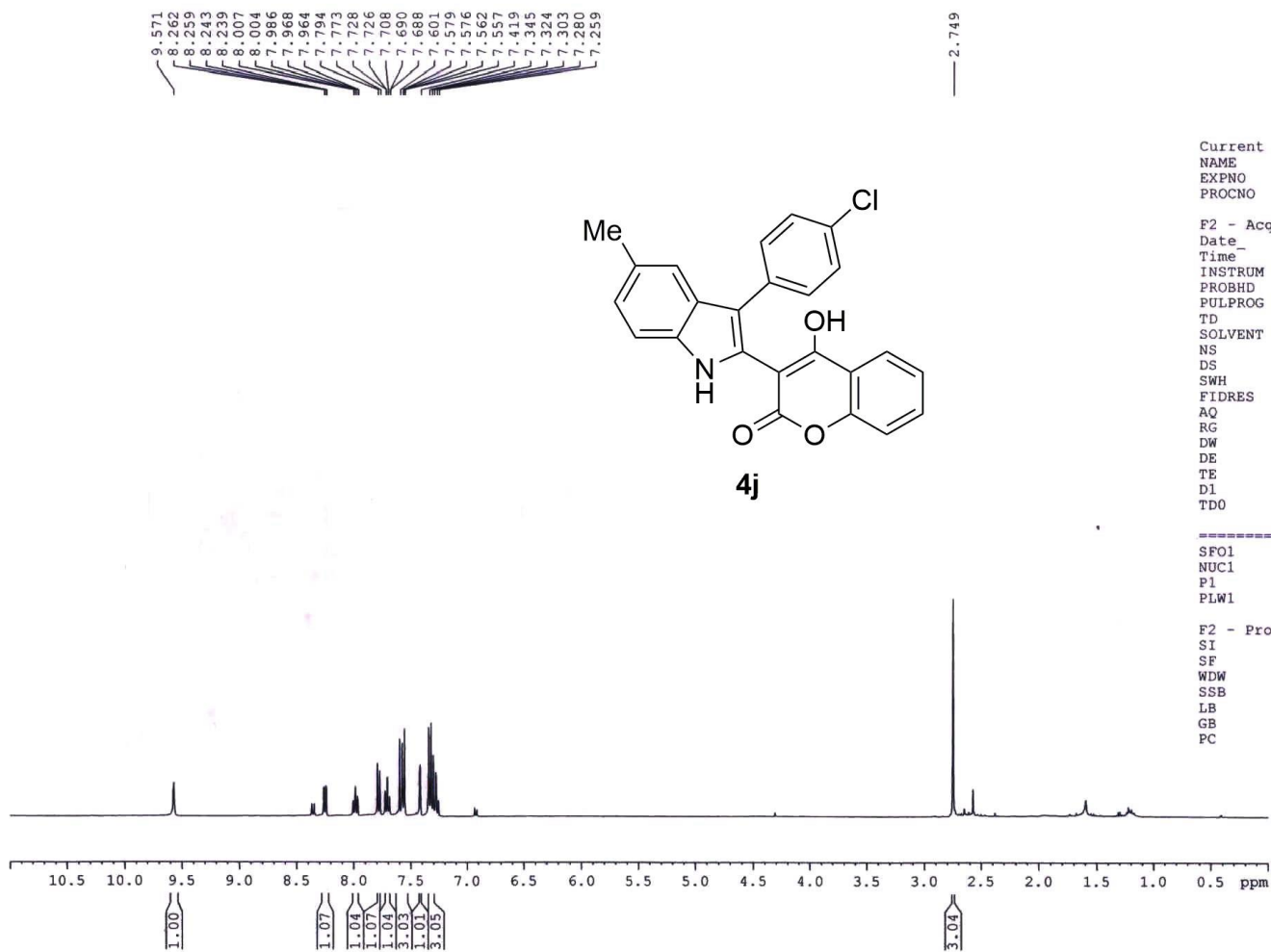
F2 - Acquisition Parameters
Date_ 20201214
Time 17.21
INSTRUM spect
PROBHD 5 mm FAPBO BB/
PULPROG zgdc
TD 32768
SOLVENT CDC13
NS 1024
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 186.42
DW 20.800 usec
DE 6.50 usec
TE 296.5 K
D1 2.0000000 sec
D11 0.0300000 sec
TDO 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.0000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 12.0000000 W
PLW12 0.32231000 W

F2 - Processing parameters
SI 16384
SF 100.6177844 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

1H of VBSAS-200/10



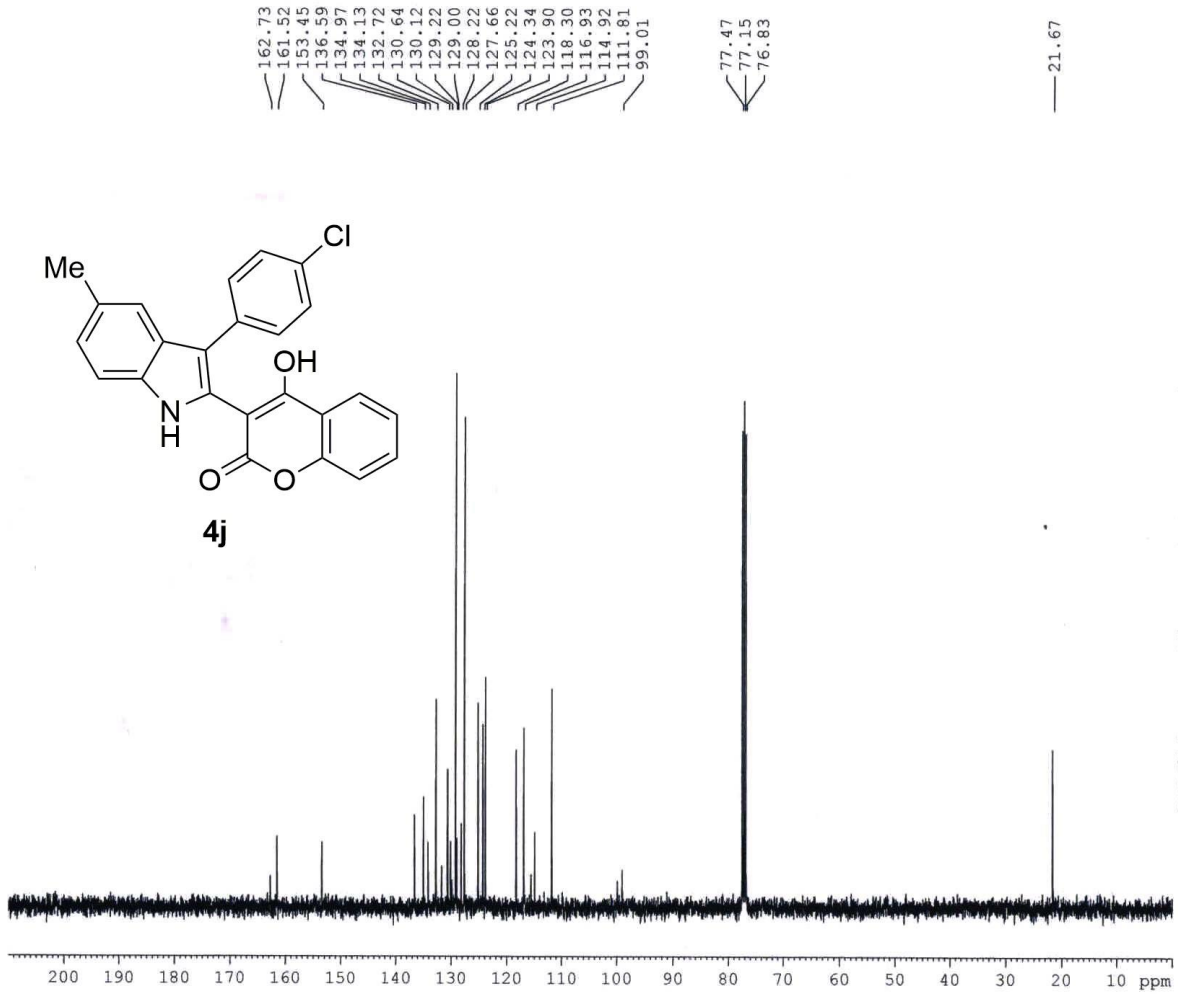
Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 580
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201223
Time 15.12
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 186.42
DW 60.800 usec
DE 6.50 usec
TE 295.4 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
SF01 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1498725 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200/10



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 581
PROCNO 1

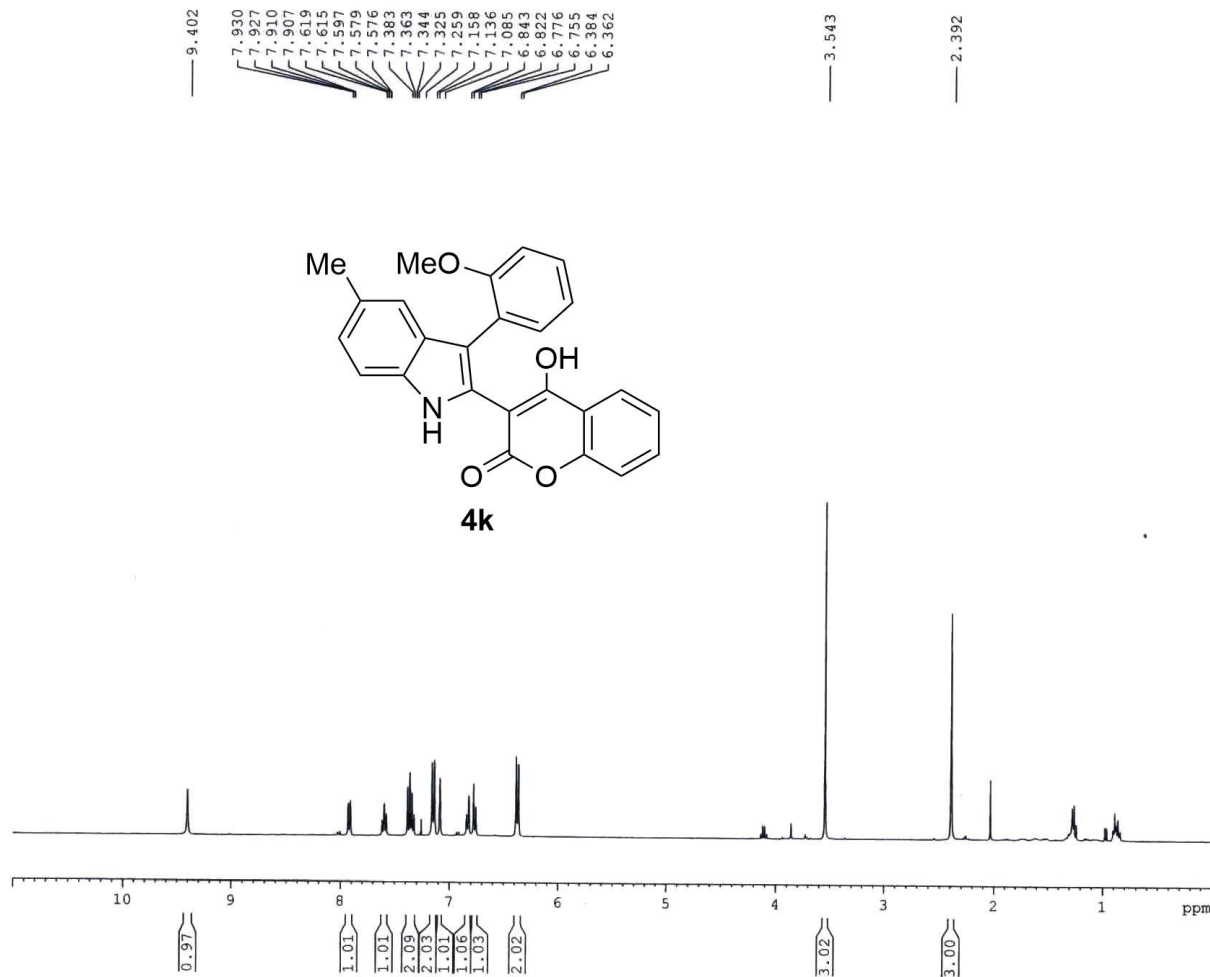
F2 - Acquisition Parameters
Date_ 20201223
Time 15.44
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgdc
TD 32768
SOLVENT CDCl3
NS 640
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 186.42
DW 20.800 usec
DE 6.50 usec
TE 296.3 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.0000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 12.0000000 W
PLW12 0.32231000 W

F2 - Processing parameters
SI 16384
SF 100.6177843 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

1H of VBSAS-200/2



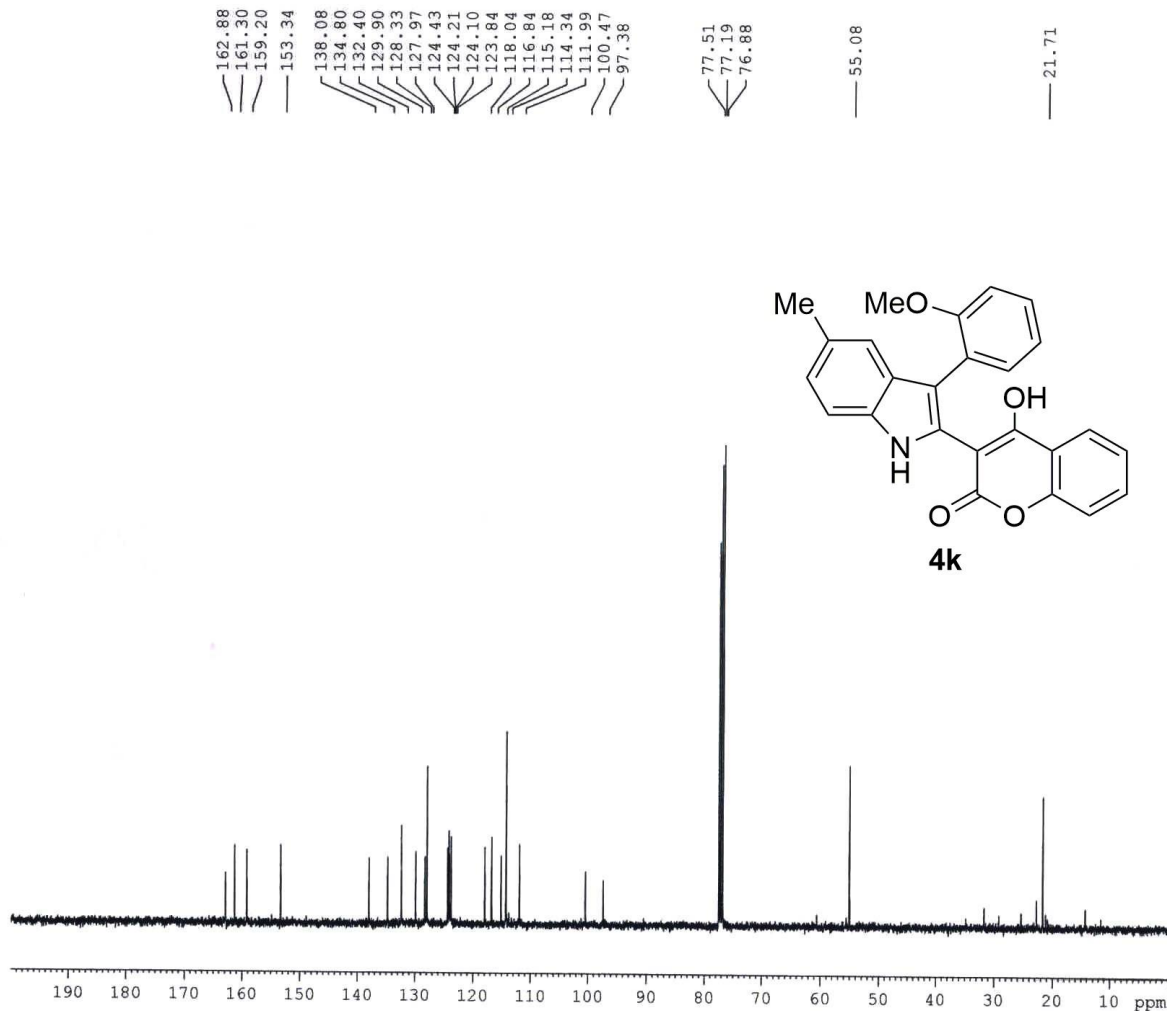
Current Data Parameters
 NAME Dr. A MAJEE 2020
 EXPNO 546
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20201207
 Time_ 20.28
 INSTRUM spect
 PROBHD 5 mm PABBO BB/
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 8
 DS 1
 SWH 8223.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.9922944 sec
 RG 77.59
 DW 60.800 usec
 DE 6.50 usec
 TE 295.6 K
 D1 1.00000000 sec
 TDO 1

===== CHANNEL f1 =====
 SF01 400.1524711 MHz
 NUC1 1H
 P1 14.75 usec
 PLW1 12.00000000 W

F2 - Processing parameters
 SI 16384
 SF 400.1500091 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 2.00

13C of VBSAS-200/2



Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 547
PROCNO 1

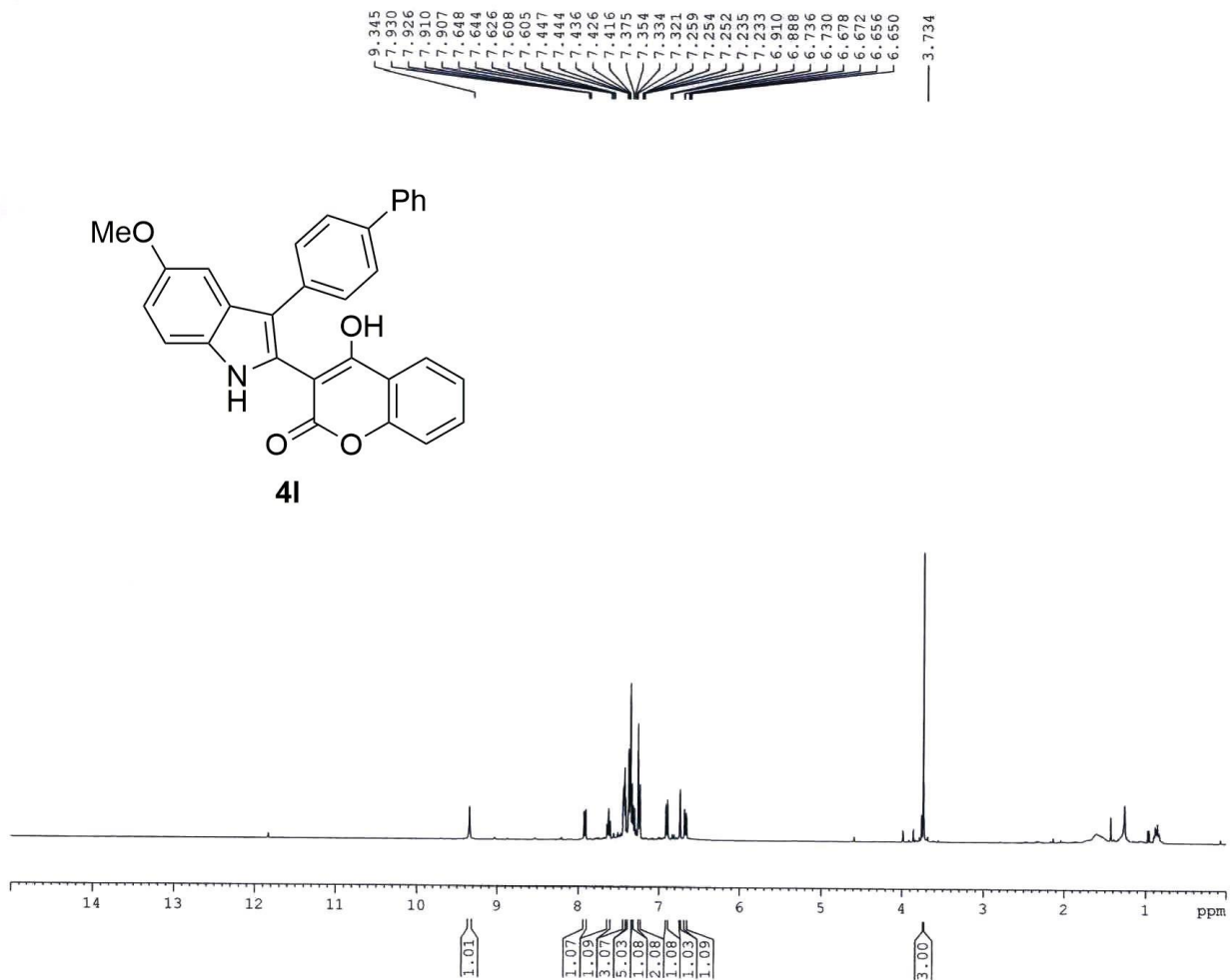
F2 - Acquisition Parameters
Date_ 20201207
Time 20.45
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 256
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 77.59
DW 20.800 usec
DE 6.50 usec
TE 296.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6177887 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/7



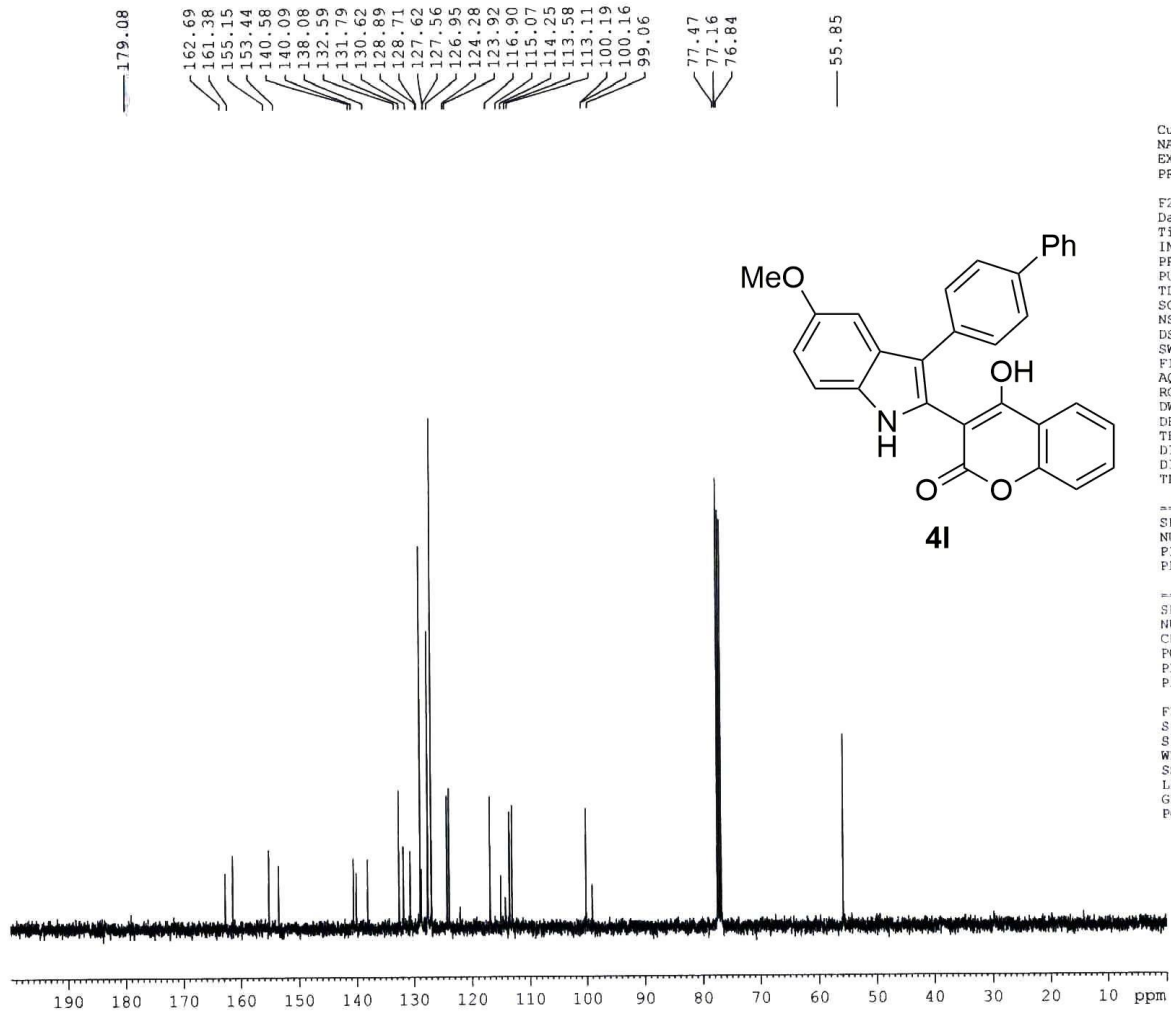
Current Data Parameters
NAME Dr. A MAJEE 2020
EXPNO 601
PROCNO 1

F2 - Acquisition Parameters
Date_ 20201230
Time 3.28
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDC13
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 168.31
DW 60.800 usec
DE 6.50 usec
TE 295.9 K
D1 1.0000000 sec
TD0 1

===== CHANNEL f1 =====
SF01 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200/7



Current Data Parameters
 NAME Dr. A MAJEE 2020
 EXPNO 602
 PROCNO 1

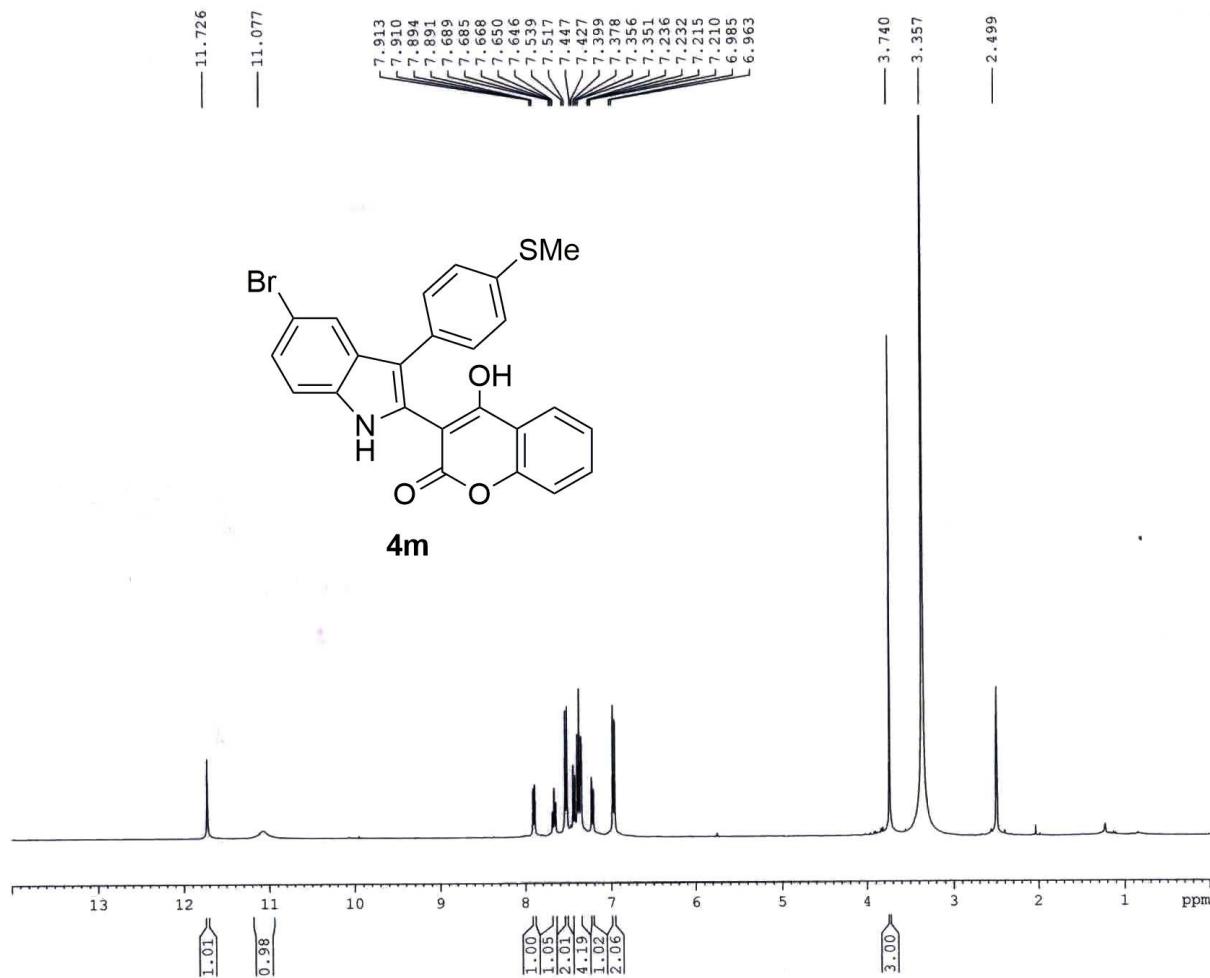
F2 - Acquisition Parameters
 Date_ 20201230
 Time_ 4.00
 INSTRUM spect
 PROBHD 5 mm PABBO BB/
 PULPROG zgdc
 TD 32768
 SOLVENT CDCl3
 NS 640
 DS 2
 SWH 24038.461 Hz
 FIDRES 0.733596 Hz
 AQ 0.6815744 sec
 RG 168.31
 DW 20.800 usec
 DE 6.50 usec
 TE 296.8 K
 D1 2.0000000 sec
 D11 0.0300000 sec
 TD0 1

===== CHANNEL f1 =====
 SFO1 100.6278588 MHz
 NUC1 13C
 P1 8.90 usec
 PLW1 54.0000000 W

===== CHANNEL f2 =====
 SFO2 400.1516006 MHz
 NUC2 1H
 CPDPRG12 waltz16
 PCPD2 90.00 usec
 PLW2 12.0000000 W
 PLW12 0.32231000 W

F2 - Processing parameters
 SI 16384
 SF 100.6177844 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 EC 1.00

¹H of VBSAS-200/15-PD



Current Data Parameters
 NAME Dr. A MAJEE 2021
 EXPNO 31
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20210113
 Time 14.22
 INSTRUM spect
 PROBHD 5 mm PABBO BB/
 PULPROG zg30
 TD 32768
 SOLVENT DMSO
 NS 8
 DS 1
 SWH 8223.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.9922944 sec
 RG 87.66
 DW 60.800 usec
 DE 6.50 usec
 TE 296.1 K
 D1 1.00000000 sec
 TD0 1

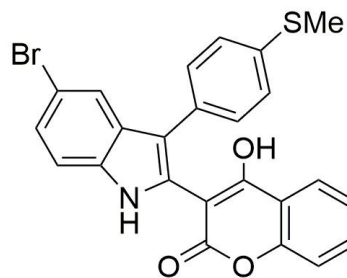
----- CHANNEL f1 -----
 SF01 400.1524711 MHz
 NUC1 1H
 P1 14.75 usec
 PLW1 12.00000000 W

F2 - Processing parameters
 SI 16384
 SF 400.1500021 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 2.00

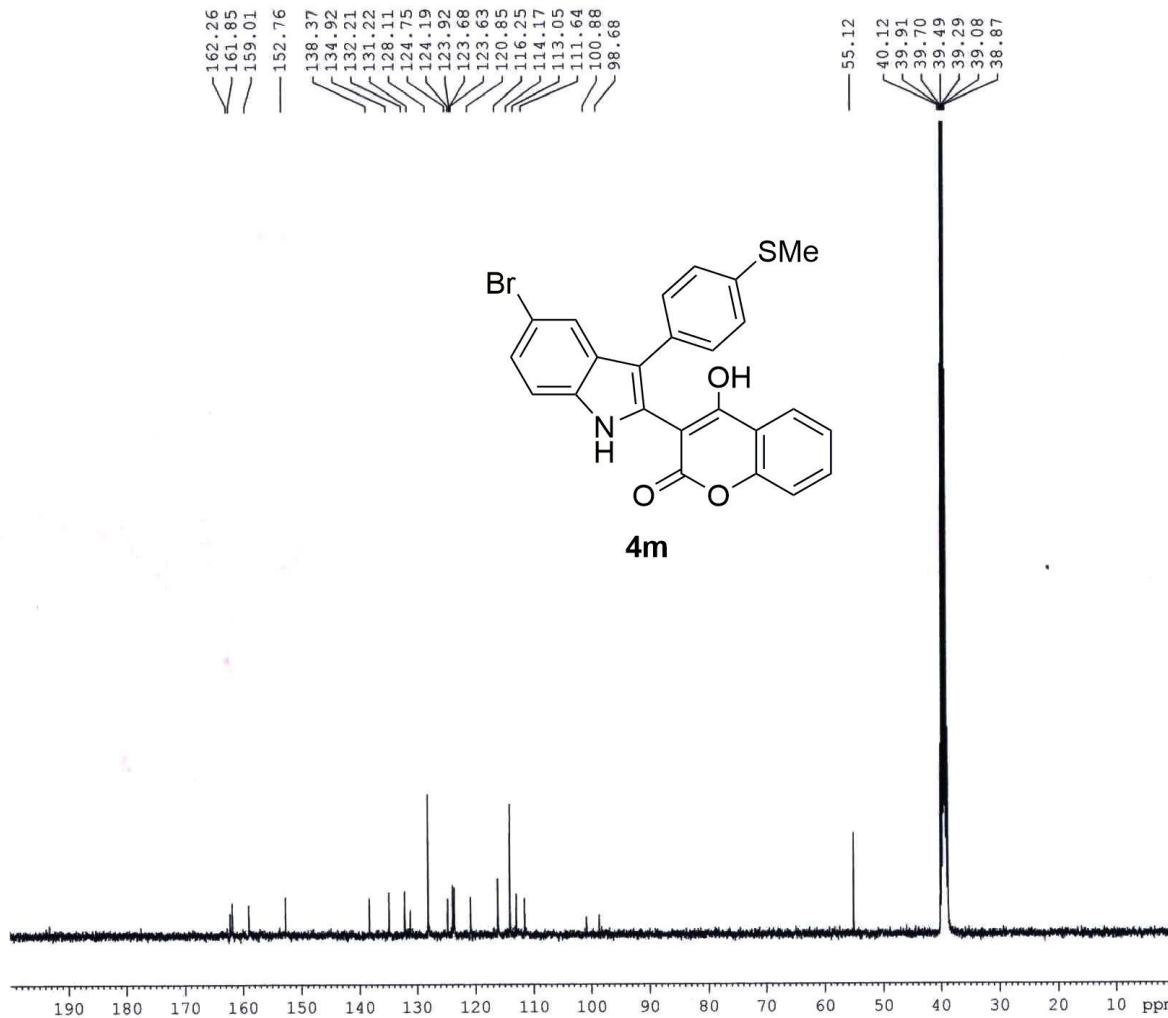
13C of VBSAS-200/15PD

162.26
161.85
159.01
152.76
138.37
134.92
132.21
131.22
128.11
124.75
124.19
123.92
123.68
123.63
120.85
116.25
114.17
113.05
111.64
100.88
98.68

55.12
40.12
39.91
39.70
39.49
39.29
39.08
38.87



4m



Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 32
PROCNO 1

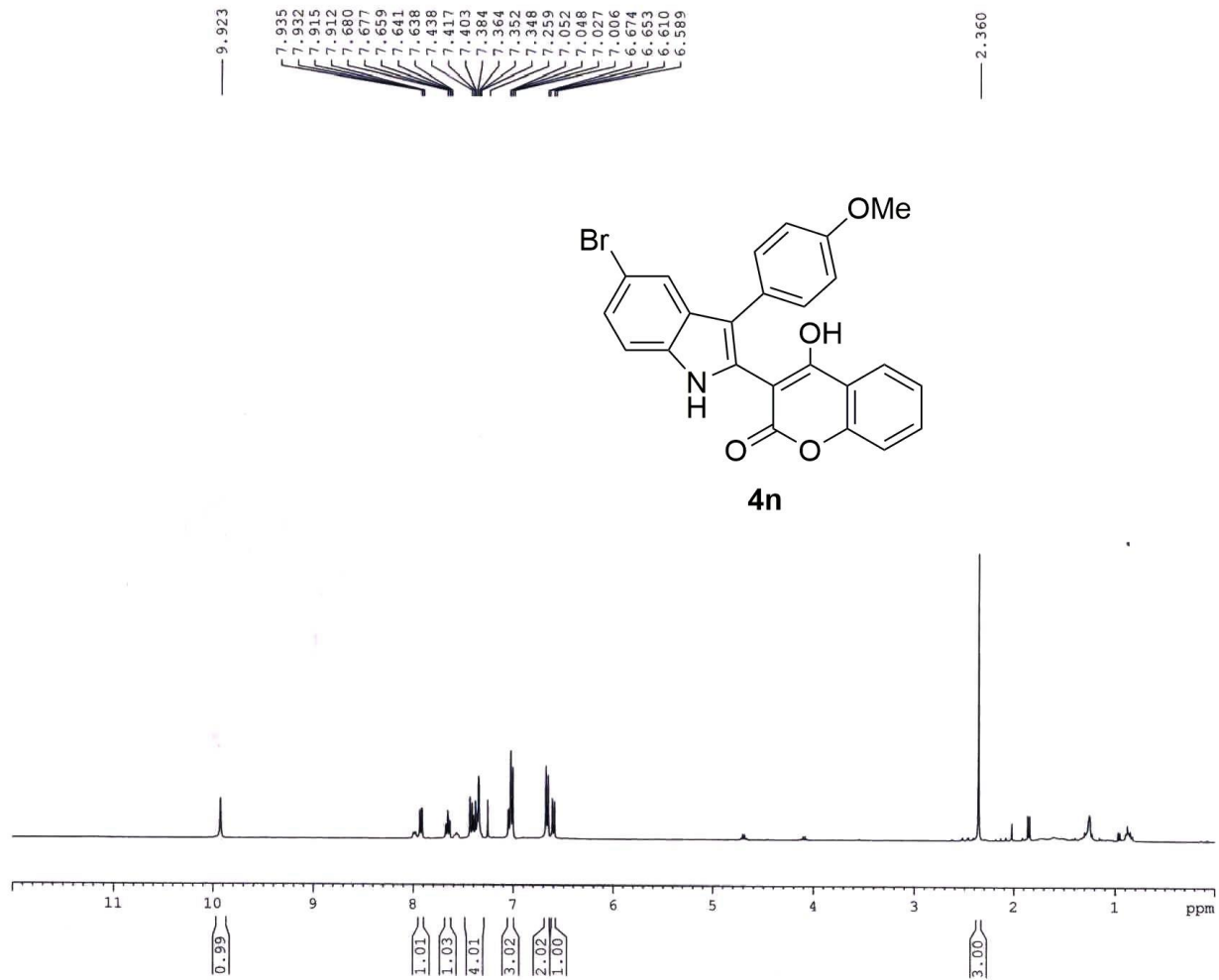
F2 - Acquisition Parameters
Date_ 20210113
Time 15.11
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 87.66
DW 20.800 usec
DE 6.50 usec
TE 295.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.00000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 90.00 usec
PLW2 12.00000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6178440 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/18



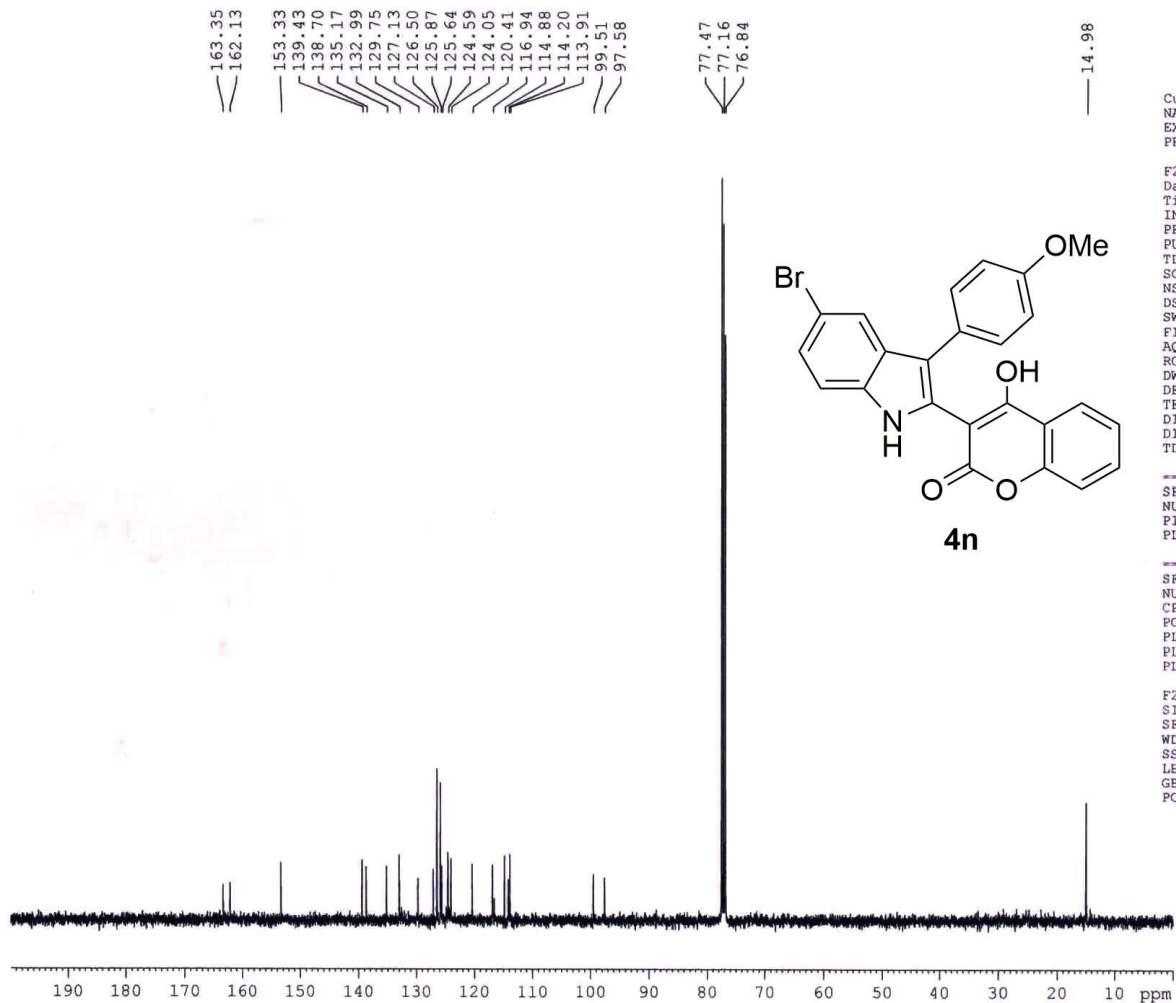
Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 82
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210209
Time 18.00
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 120.16
DW 60.800 usec
DE 6.50 usec
TE 295.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500092 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

13C of VBSAS-200/18



Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 83
PROCNO 1

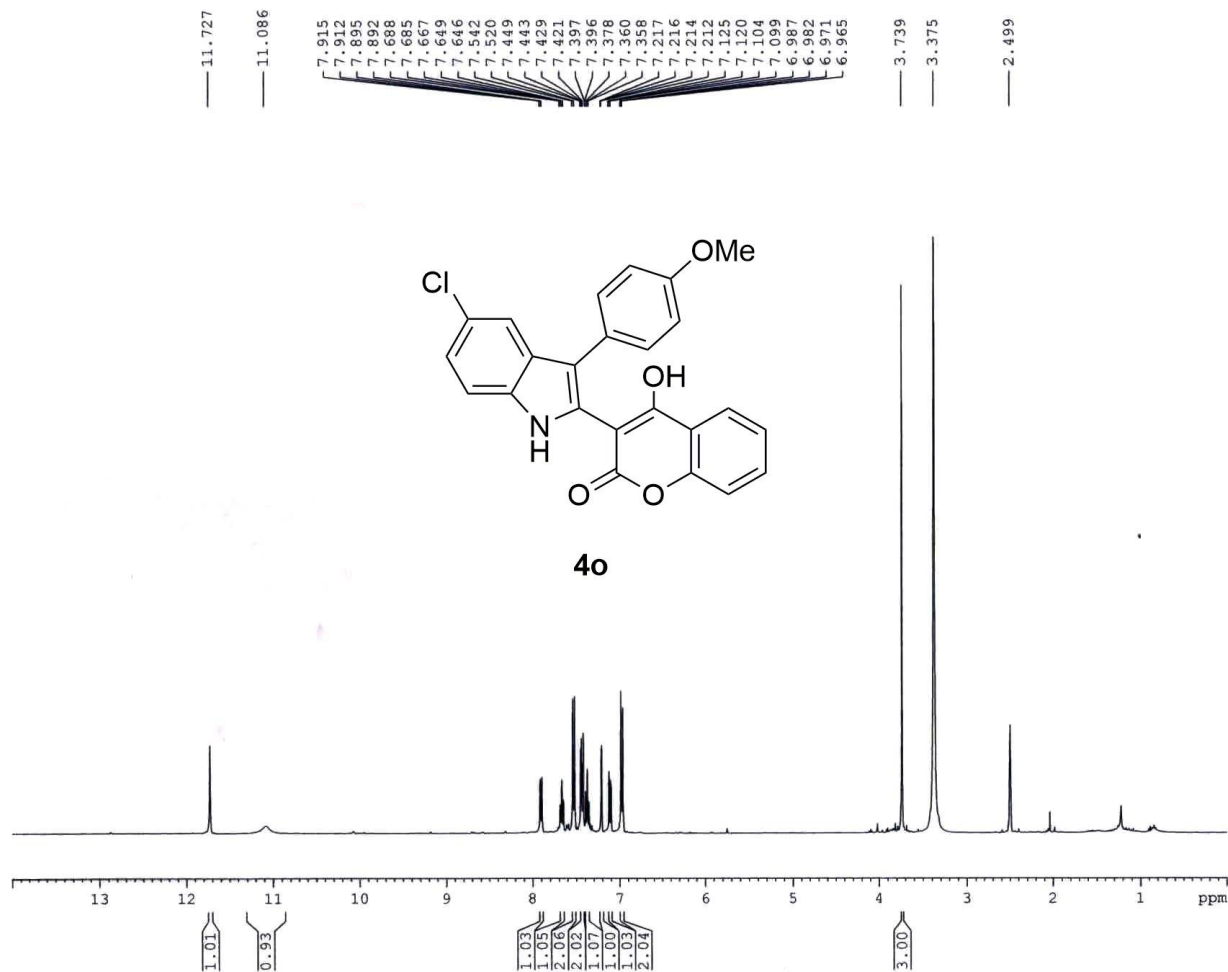
F2 - Acquisition Parameters
Date_ 20210209
Time 18.17
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 320
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6815744 sec
RG 120.16
DW 20.800 usec
DE 6.50 usec
TE 295.5 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.0000000 W

----- CHANNEL f2 -----
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 12.0000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6177858 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1H of VBSAS-200/16-D



Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 33
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210113
Time_ 16.27
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 32768
SOLVENT DMSO
NS 8
DS 1
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9922944 sec
RG 87.66
DW 60.800 usec
DE 6.50 usec
TE 294.1 K
D1 1.00000000 sec
TDO 1

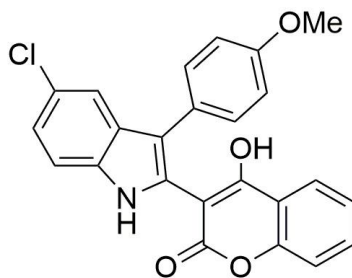
===== CHANNEL f1 =====
SFO1 400.1524711 MHz
NUC1 1H
P1 14.75 usec
PLW1 12.00000000 W

F2 - Processing parameters
SI 16384
SF 400.1500016 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 2.00

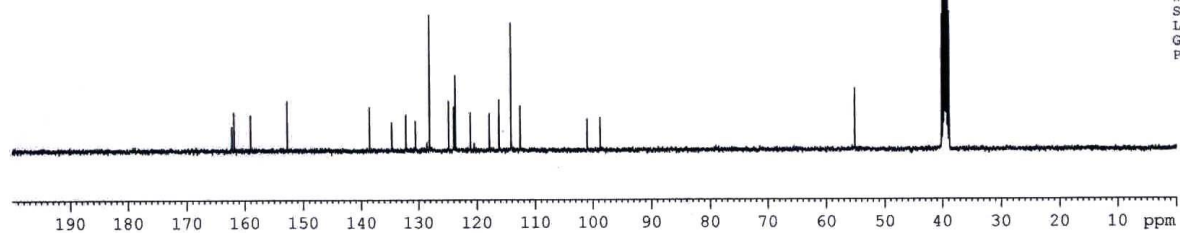
13C of VBSAS-200/16-D

162.24
161.86
159.02
152.76
138.58
134.69
132.22
130.55
128.59
128.11
124.81
123.94
123.70
121.11
117.87
116.26
116.22
114.18
112.59
100.98
98.72

55.13
40.11
39.90
39.70
39.49
39.28
39.07
38.86



4o



Current Data Parameters
NAME Dr. A MAJEE 2021
EXPNO 34
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210113
Time_ 17.16
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 2
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 0.6615744 sec
RG 87.66
DW 20.800 usec
DE 6.50 usec
TE 294.1 K
D1 2.0000000 sec
D11 0.0300000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6278588 MHz
NUC1 13C
P1 8.90 usec
PLW1 54.0000000 W

===== CHANNEL f2 =====
SFO2 400.1516006 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 90.00 usec
PLW2 12.0000000 W
PLW12 0.32231000 W
PLW13 0.16212000 W

F2 - Processing parameters
SI 16384
SF 100.6178425 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40