

## Supporting information

### Synthesis and characterization of carbazole dendronized coumarin derivatives as solution-processed non-doped emitters and hole-transporters for electroluminescent devices

*N. Prachumrak,<sup>a</sup> S. Potjanasopa,<sup>b</sup> R. Tarsang,<sup>b</sup> S. Namuangruk,<sup>c</sup> S. Jungsuttiwong,<sup>b</sup> T. Keawin,<sup>b</sup> T. Sudyoadsuk<sup>b</sup> and V. Promarak<sup>a,d,\*</sup>*

<sup>a</sup> School of Chemistry and Center of Excellence for Innovation in Chemistry, Institute of Science, Suranaree University of Technology, Muang District, Nakhon Ratchasima, 30000, Thailand

<sup>b</sup> Department of Chemistry, Faculty of Science, Ubon Ratchathani University, Ubon Ratchathani, 34190, Thailand

<sup>c</sup> National Nanotechnology Center, 130 Thailand Science Park, Klong Luang, Pathumthani 12120, Thailand

<sup>d</sup> PTT Group Frontier Research Center, PTT Public Company Limited, 555 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand

\*E-mail: [pvinich@sut.ac.th](mailto:pvinich@sut.ac.th); [pvinich@gmail.com](mailto:pvinich@gmail.com)

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## OLED EL spectra

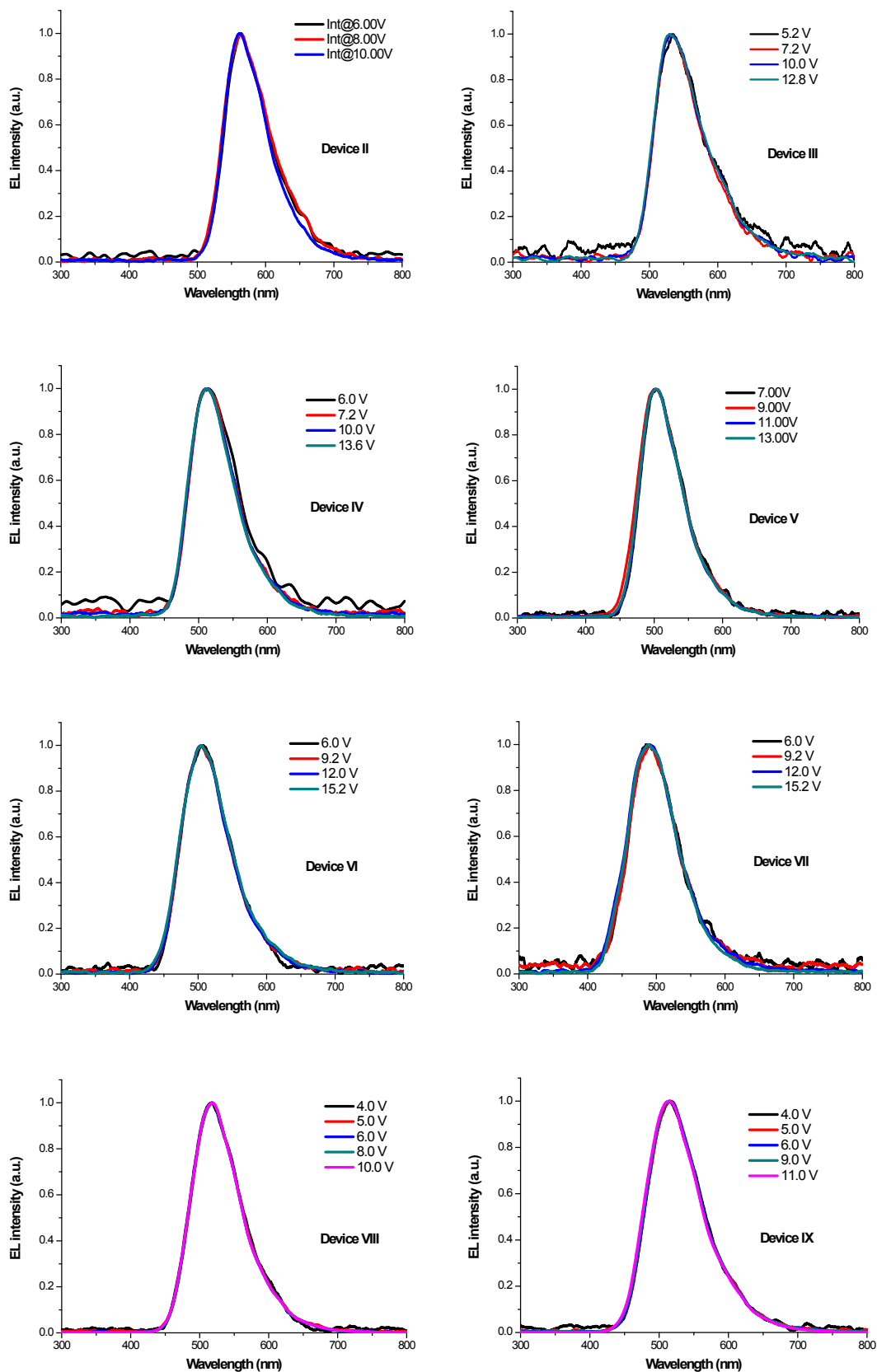
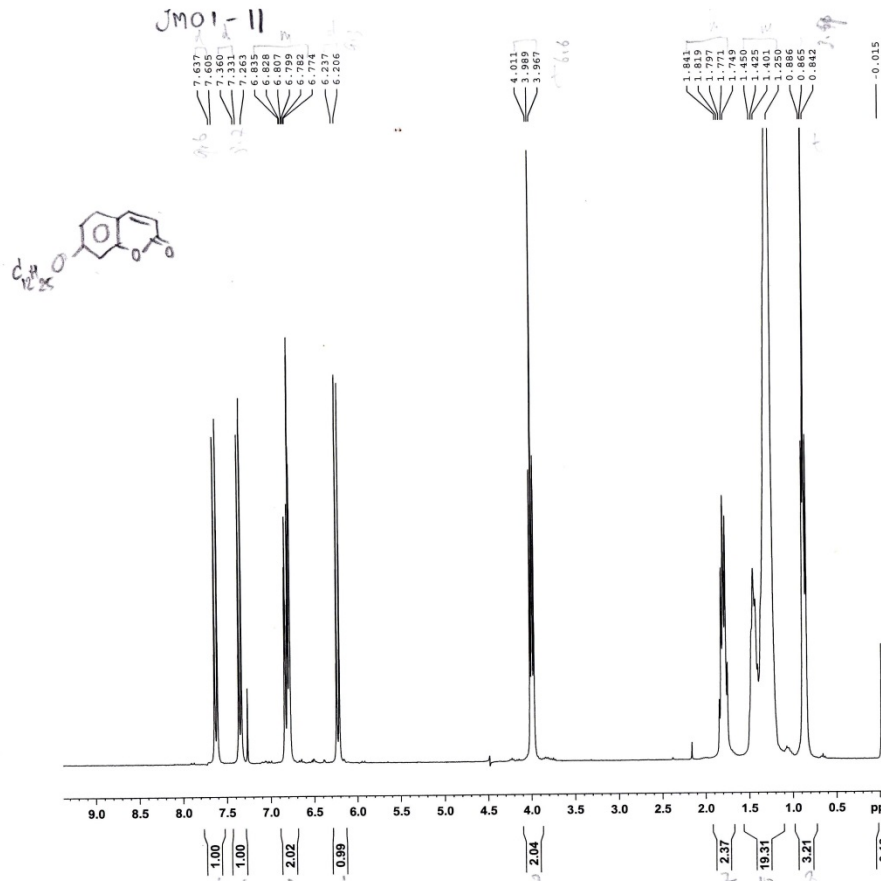


Figure S1. EL spectar of the OLEDs at different applied voltages.

**<sup>1</sup>H-NMR and <sup>13</sup>C-NMR spectra Compound 2**

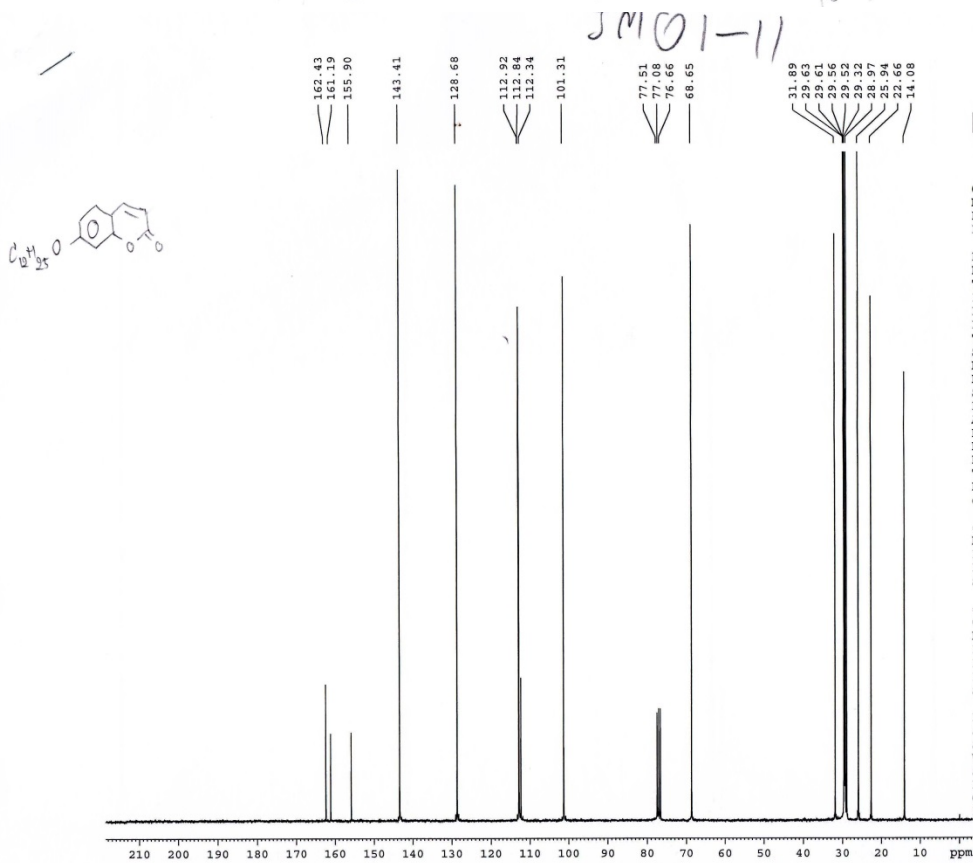


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 PULPROG zg  
 TD 32768  
 SOLVENT CDCl3  
 NS 1  
 DS 0  
 SWH 4496.403 Hz  
 FIDRES 0.137219 Hz  
 AQ 3.6438515 sec  
 RG 32  
 DW 111.200 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 1.00000000 sec

===== CHANNEL f1 =====  
 NUC1 1H  
 P1 16.50 usec  
 PL1 -6.00 dB  
 SFO1 300.1313506 MHz

F2 - Processing parameters  
 SI 16384  
 SF 300.1300053 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.00



Current Data Parameters  
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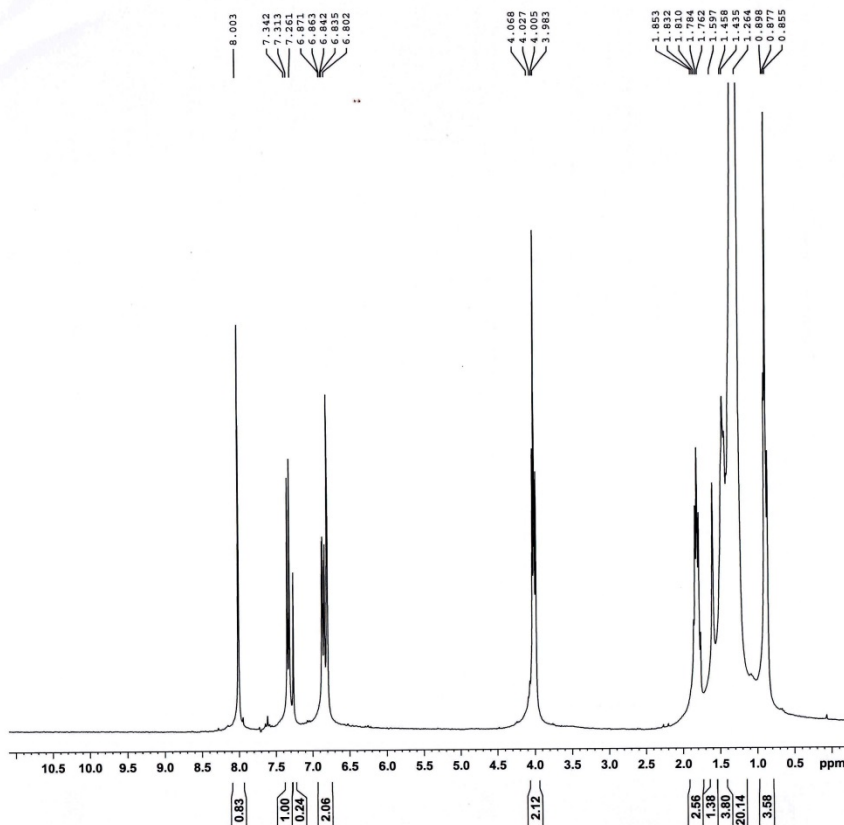
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 Time 19.24  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 2560  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 181  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.00000000 sec  
 d11 0.03000000 sec

===== CHANNEL f1 =====  
 NUC1 13C  
 P1 7.60 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

F2 - Processing parameters  
 SI 32768  
 SF 75.4677490 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40

Compound 3



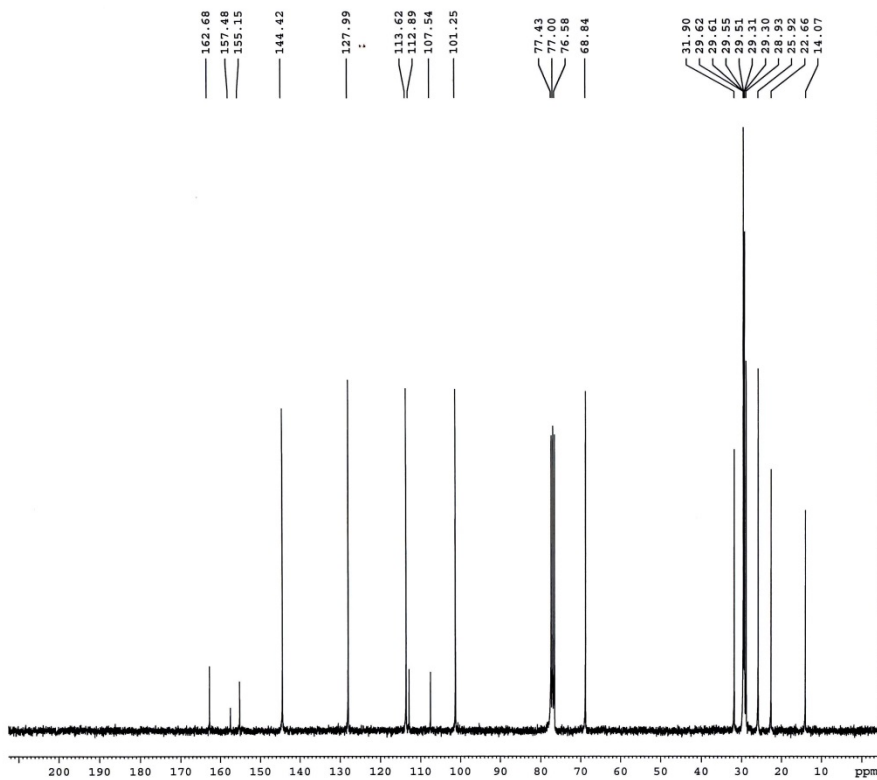
JM01-12

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 EXPNO 2320  
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 PROBHD 5 mm BBO BB-1H  
 PULPROG zg  
 TD 32768  
 SOLVENT CDCl3  
 NS 4  
 DS 0  
 SWH 4496.403 Hz  
 FIDRES 0.137219 Hz  
 AQ 3.6438515 sec  
 RG 128  
 DW 111.200 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 1.0000000 sec

===== CHANNEL f1 =====  
 NUC1 1H  
 P1 16.50 usec  
 PL1 -6.00 dB  
 SFO1 300.1313506 MHz

F2 - Processing parameters  
 SI 16384  
 SF 300.1300053 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40



JM01-12



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 EXPNO 2321  
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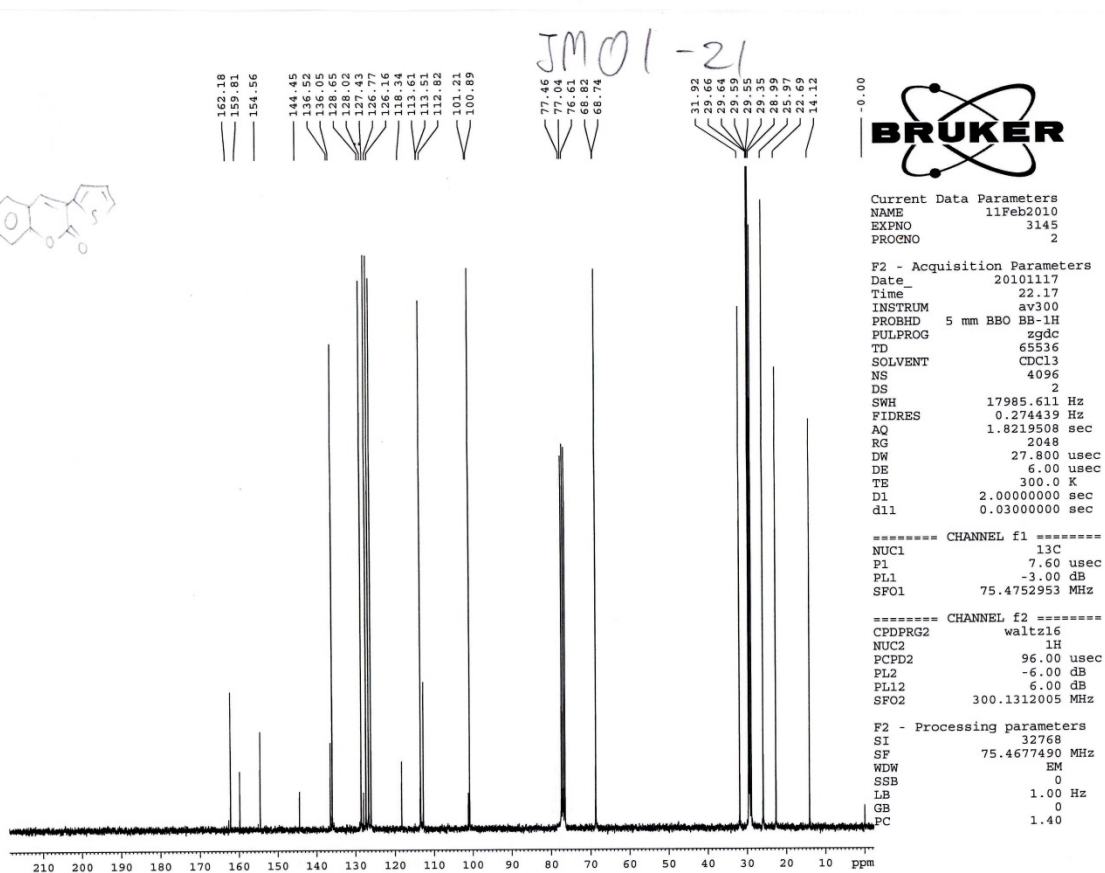
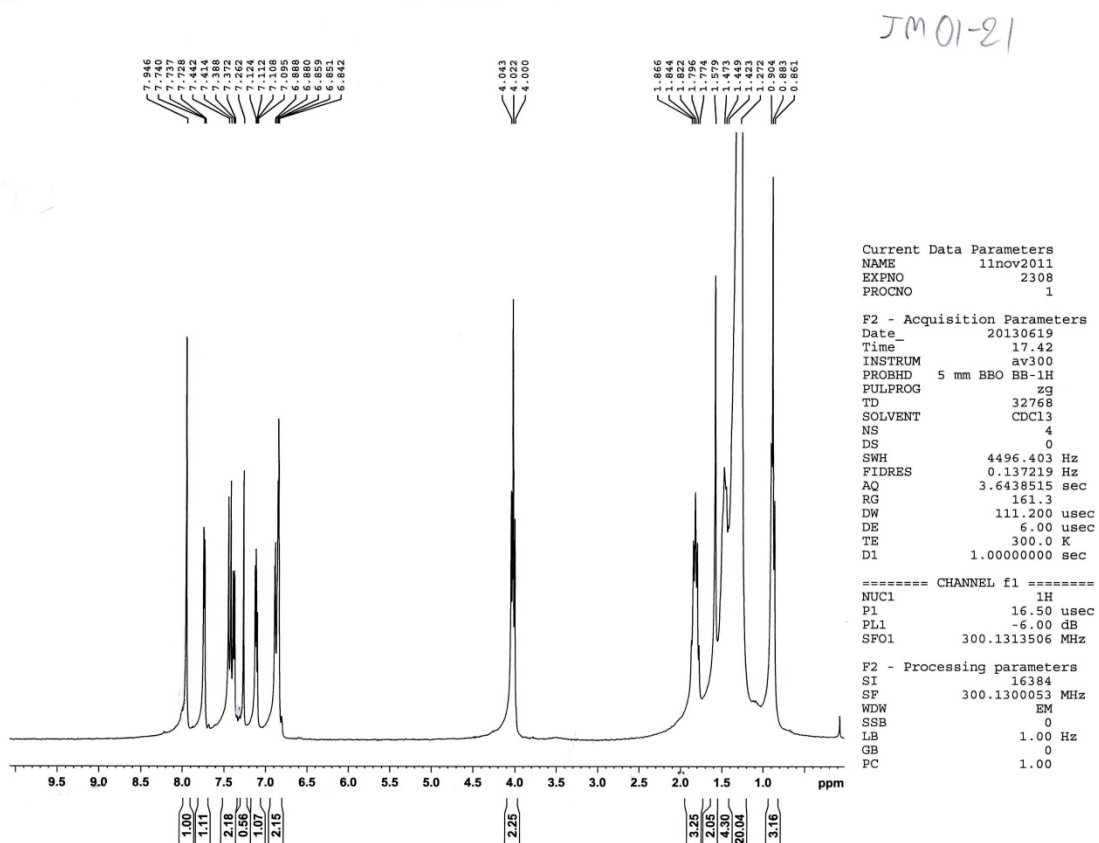
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 PROBHD 5 mm BBO BB-1H  
 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 5120  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 2298.8  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.0000000 sec  
 d11 0.0300000 sec

===== CHANNEL f1 =====  
 NUC1 13C  
 P1 8.00 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

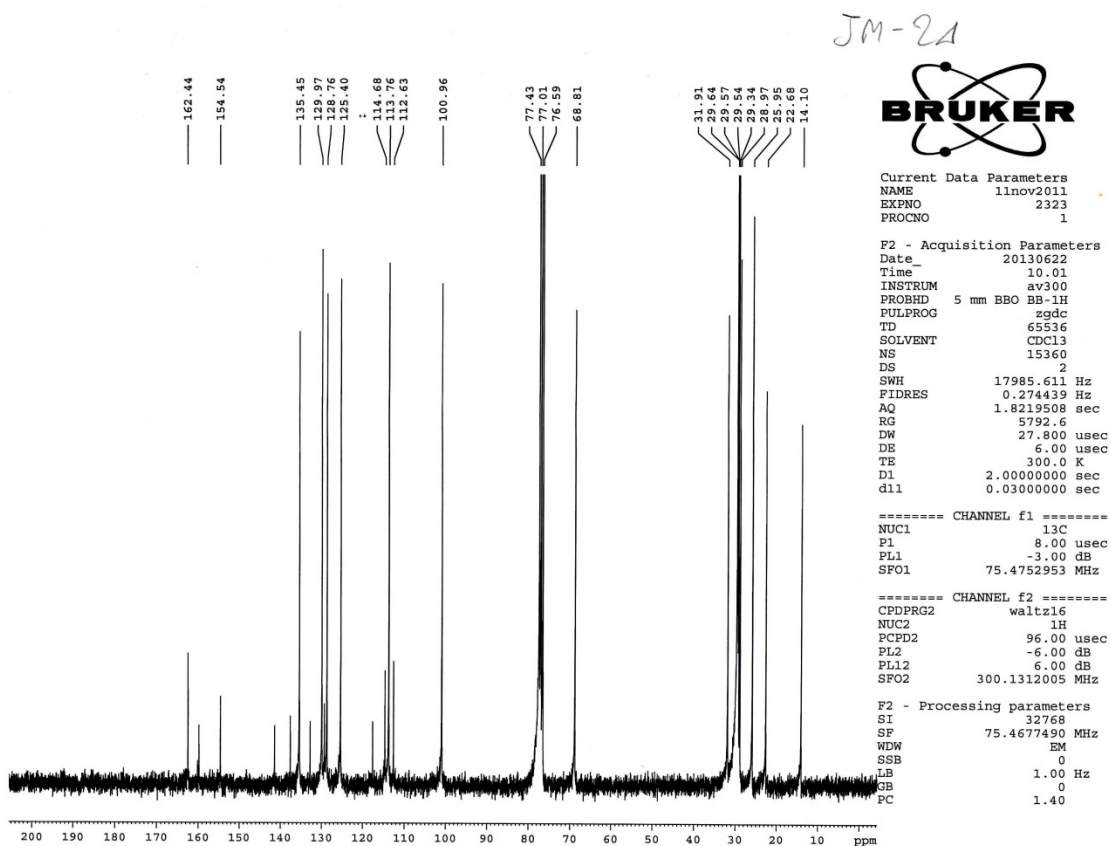
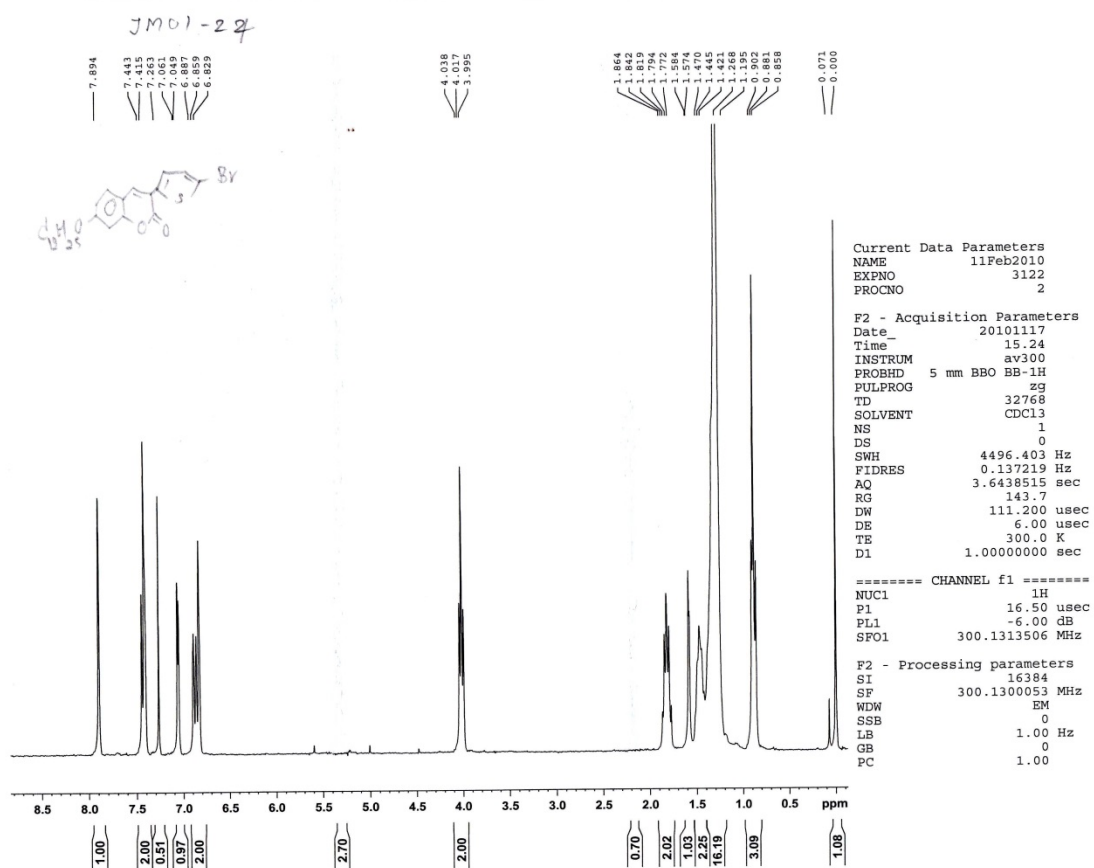
===== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

F2 - Processing parameters  
 SI 32768  
 SF 75.4677490 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40

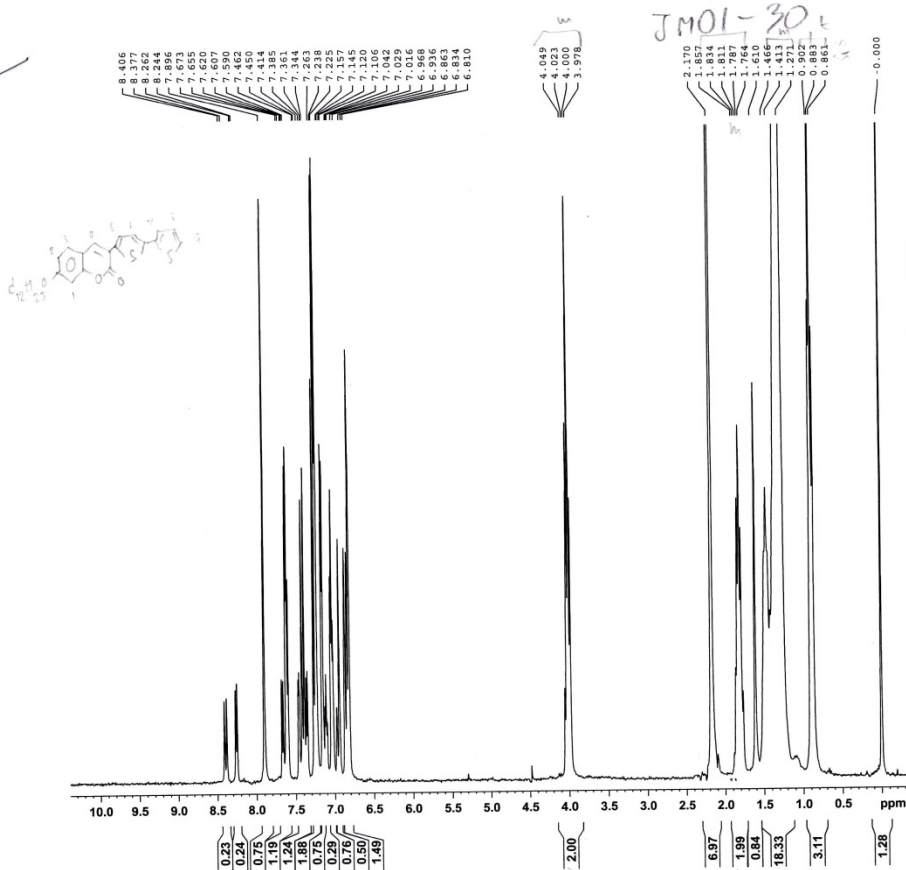
Compound 4



# Compound 5



Compound 6

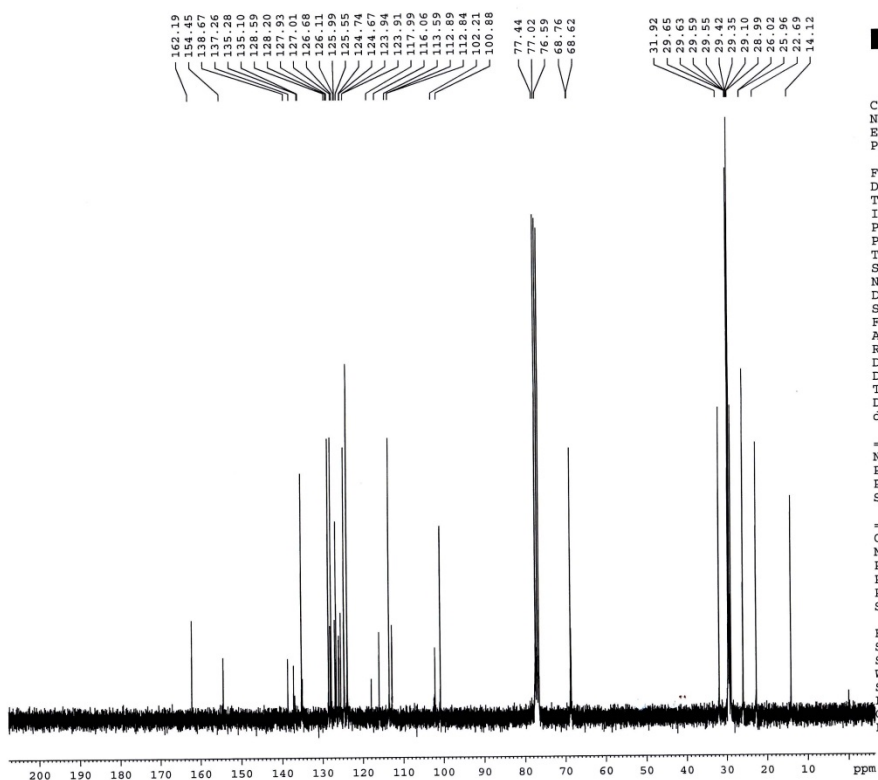


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 EXPNO 3186  
 PROCNO 2

F2 - Acquisition Parameters  
 Date\_ 20101118  
 Time\_ 17.15  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zg  
 TD 32768  
 SOLVENT CDCl3  
 NS 1  
 DS 0  
 SWH 4496.403 Hz  
 FIDRES 0.137219 Hz  
 AQ 3.6438515 sec  
 RG 143.7  
 DW 111.200 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 1.0000000 sec

===== CHANNEL f1 =====  
 NUC1 1H  
 P1 16.50 usec  
 PL1 -6.00 dB  
 SFO1 300.1313506 MHz

F2 - Processing parameters  
 SI 16384  
 SF 300.130053 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.00



Current Data Parameters  
 NAME Nov2010  
 EXPNO 330  
 PROCNO 1

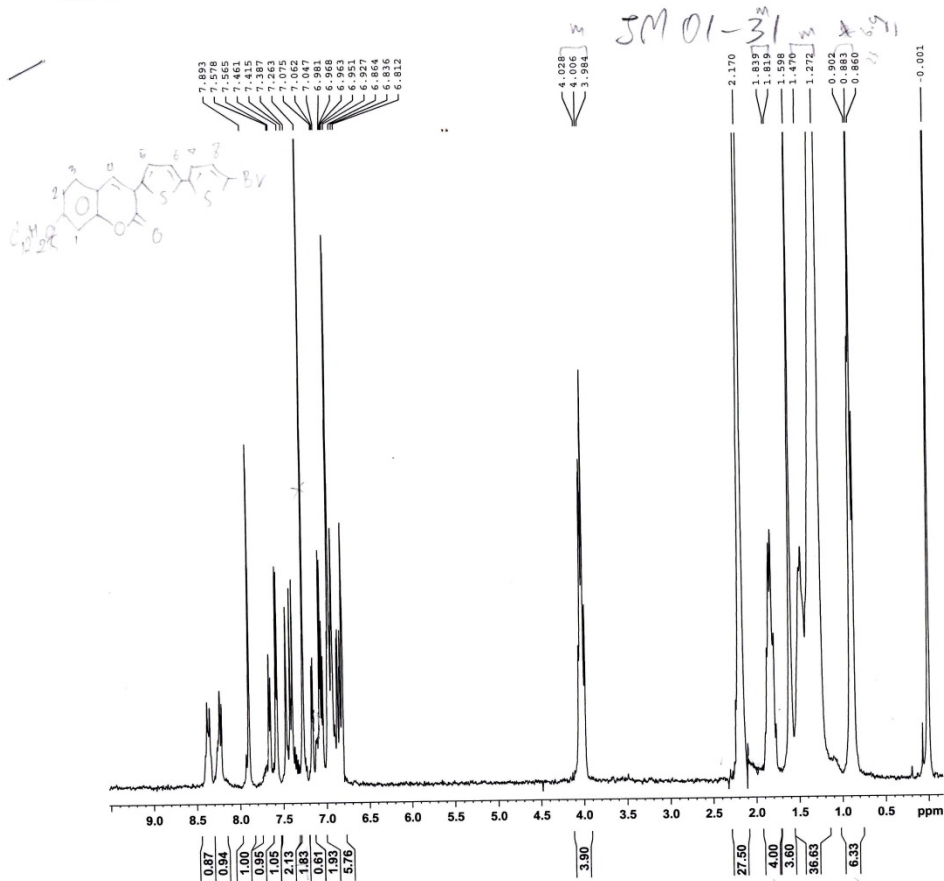
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 Date\_ 20101226  
 Time\_ 8.44  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 10752  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 4096  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.0000000 sec  
 d11 0.0300000 sec

===== CHANNEL f1 =====  
 NUC1 13C  
 P1 7.60 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

F2 - Processing parameters  
 SI 32768  
 SF 75.4677490 MHz  
 WDW NO  
 SSB 0  
 LB 0.00 Hz  
 GB 0  
 PC 1.40

# Compound 7

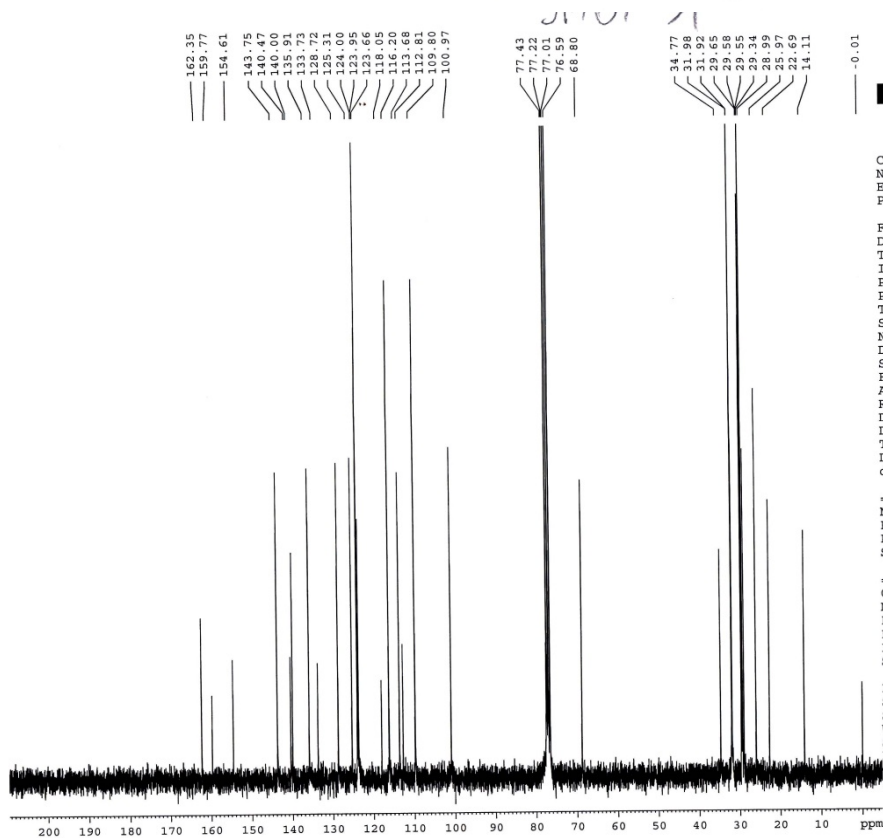


Current Data Parameters  
 NAME 11Feb2010  
 EXPNO 3184  
 PROCNO 2

F2 - Acquisition Parameters  
 Date\_ 20101118  
 Time 17.06  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 FULPROG zg  
 TD 32768  
 SOLVENT CDCl3  
 NS 1  
 DS 0  
 SWH 4496.403 Hz  
 FIDRES 0.137219 Hz  
 AQ 3.6438515 sec  
 RG 256  
 DW 111.200 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 1.00000000 sec

===== CHANNEL f1 =====  
 NUC1 1H  
 P1 16.50 usec  
 PL1 -6.00 dB  
 SFO1 300.1313506 MHz

F2 - Processing parameters  
 SI 16384  
 SF 300.1300053 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.00



Current Data Parameters  
 NAME 11Feb2010  
 EXPNO 2095  
 PROCNO 2

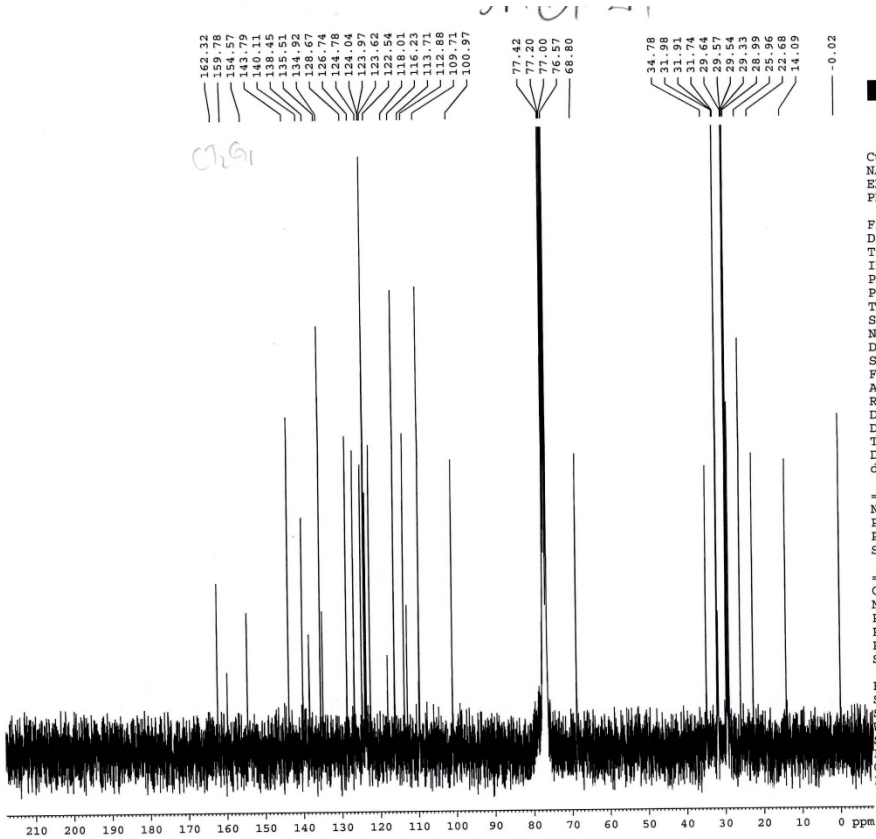
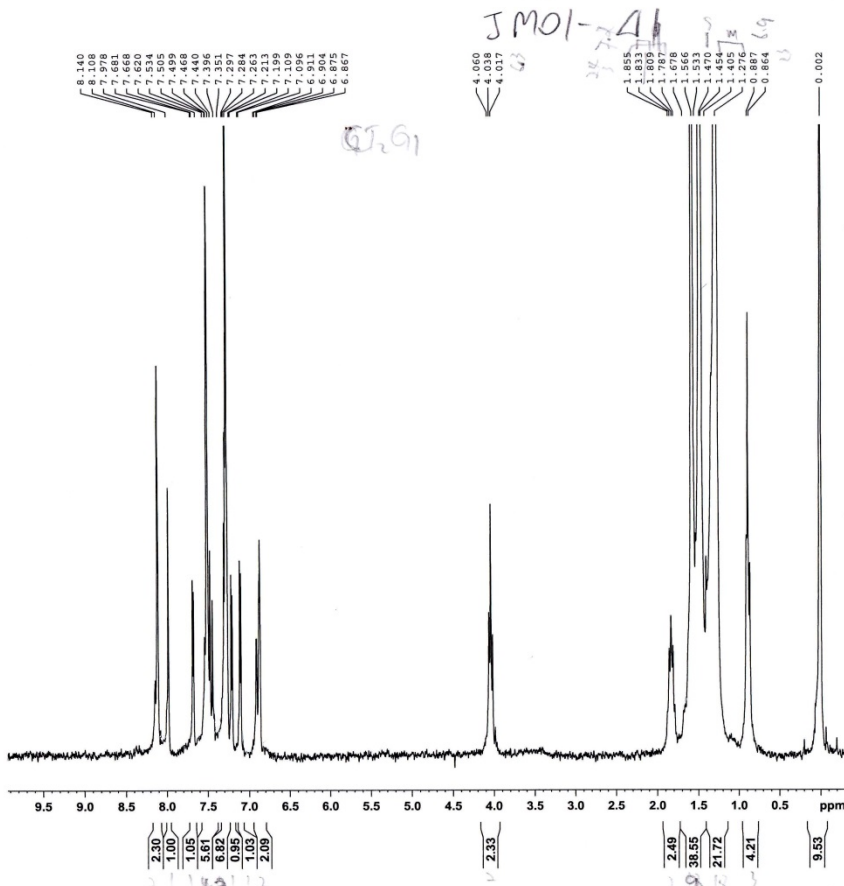
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 Date\_ 20100903  
 Time 20.16  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 FULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 3072  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 181  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.00000000 sec  
 d11 0.03000000 sec

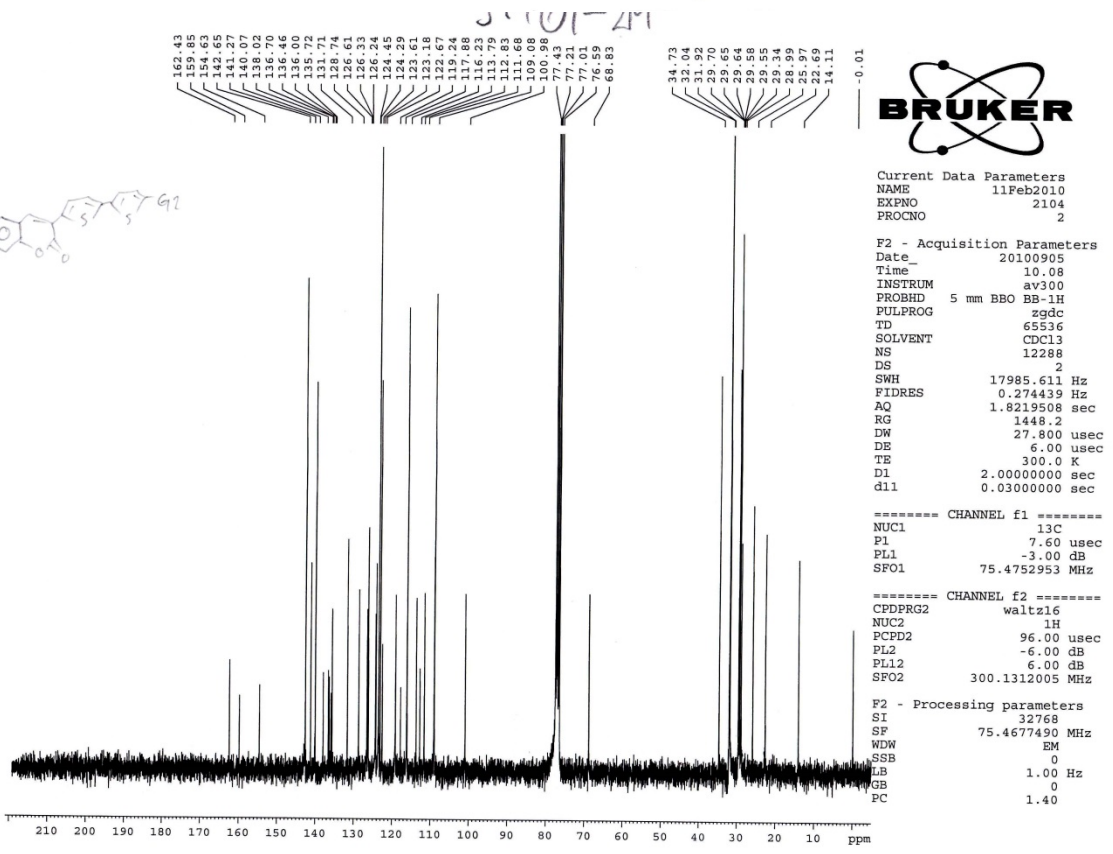
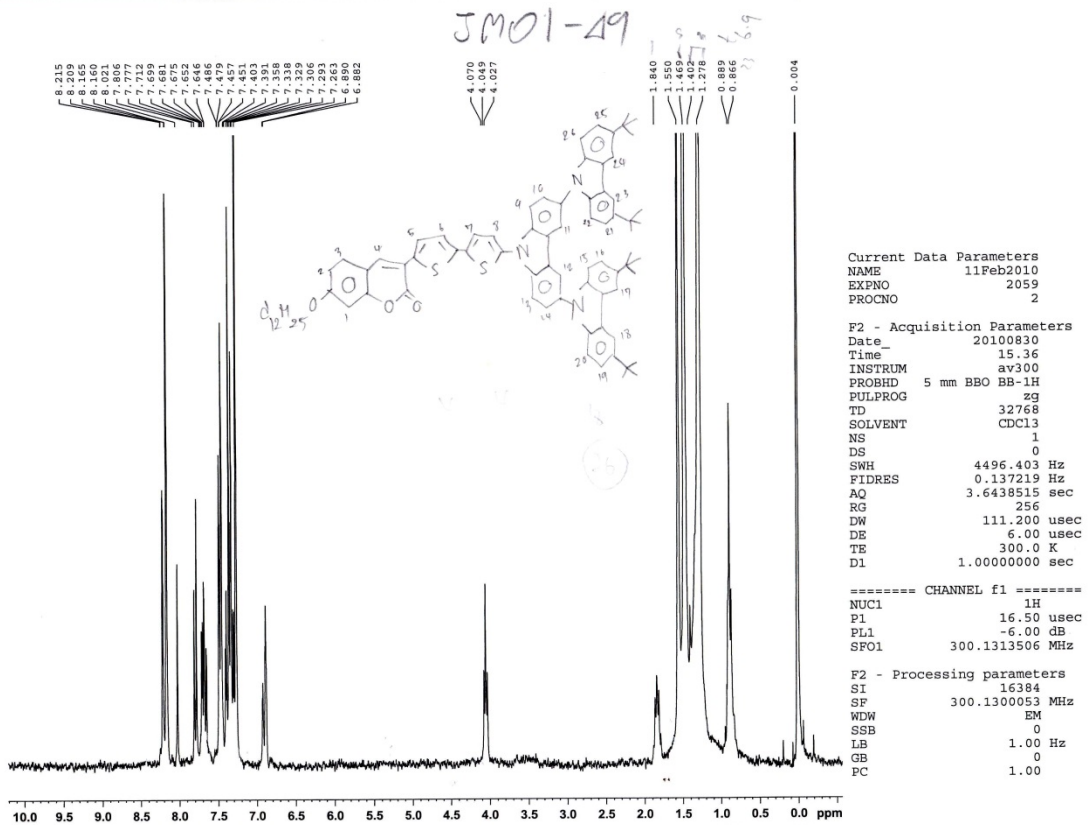
===== CHANNEL f1 =====  
 NUC1 13C  
 P1 7.60 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

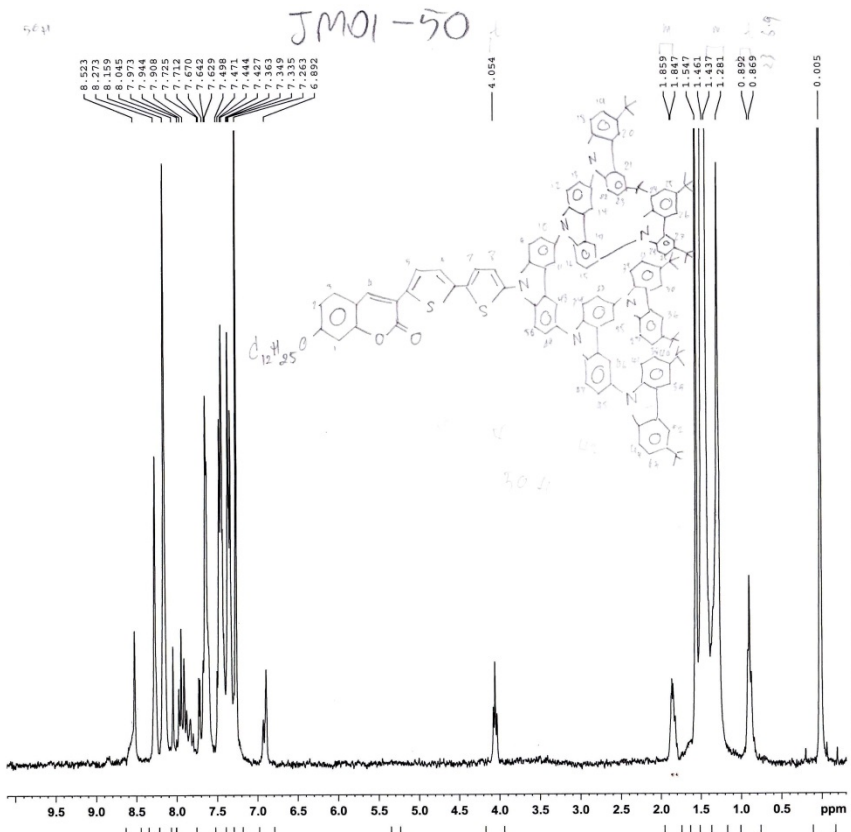
F2 - Processing parameters  
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 SF 75.4677490 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40







CT2G3

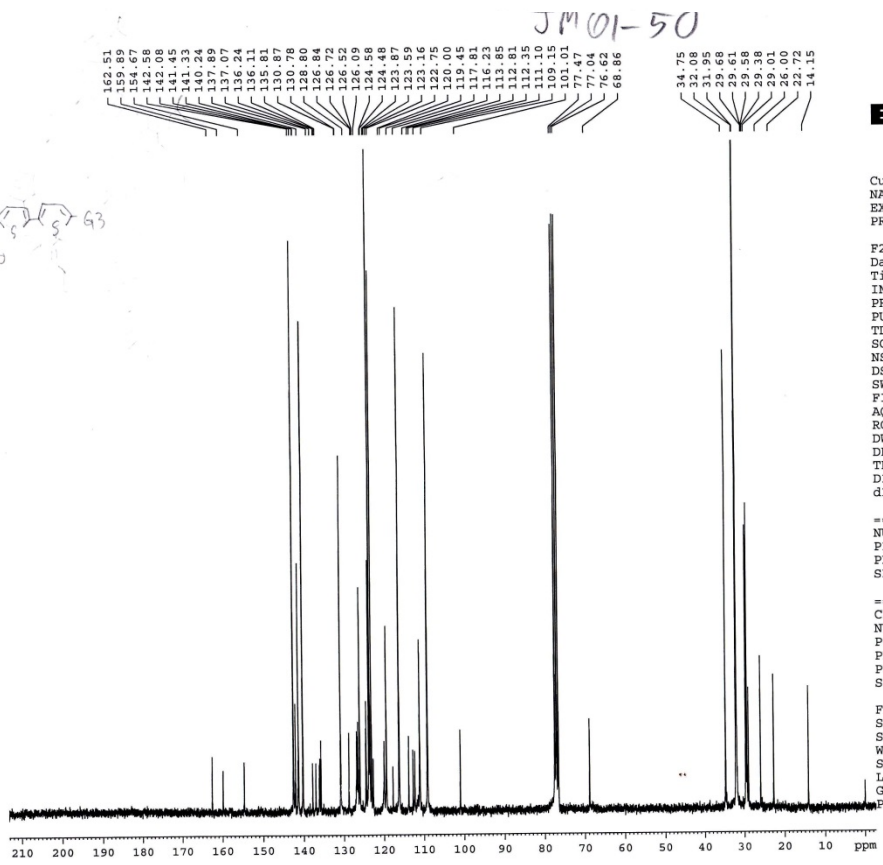


Current Data Parameters  
 NAME 11Feb2010  
 EXPNO 2058  
 PROCNO 2

F2 - Acquisition Parameters  
 Date\_ 20100830  
 Time 15.32  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zg  
 TD 32768  
 SOLVENT CDCl3  
 NS 1  
 DS 0  
 SWH 4496.403 Hz  
 FIDRES 0.137219 Hz  
 AQ 3.6438515 sec  
 RG 287.4  
 DW 111.200 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 1.00000000 sec

==== CHANNEL f1 =====  
 NUC1 1H  
 P1 16.50 usec  
 PL1 -6.00 dB  
 SFO1 300.1313506 MHz

F2 - Processing parameters  
 SI 16384  
 SF 300.1300053 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.00



**BRUKER**

Current Data Parameters  
 NAME 11Feb2010  
 EXPNO 2281  
 PROCNO 2

F2 - Acquisition Parameters  
 Date\_ 20100914  
 Time 8.42  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 12288  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 181  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.00000000 sec  
 d11 0.03000000 sec

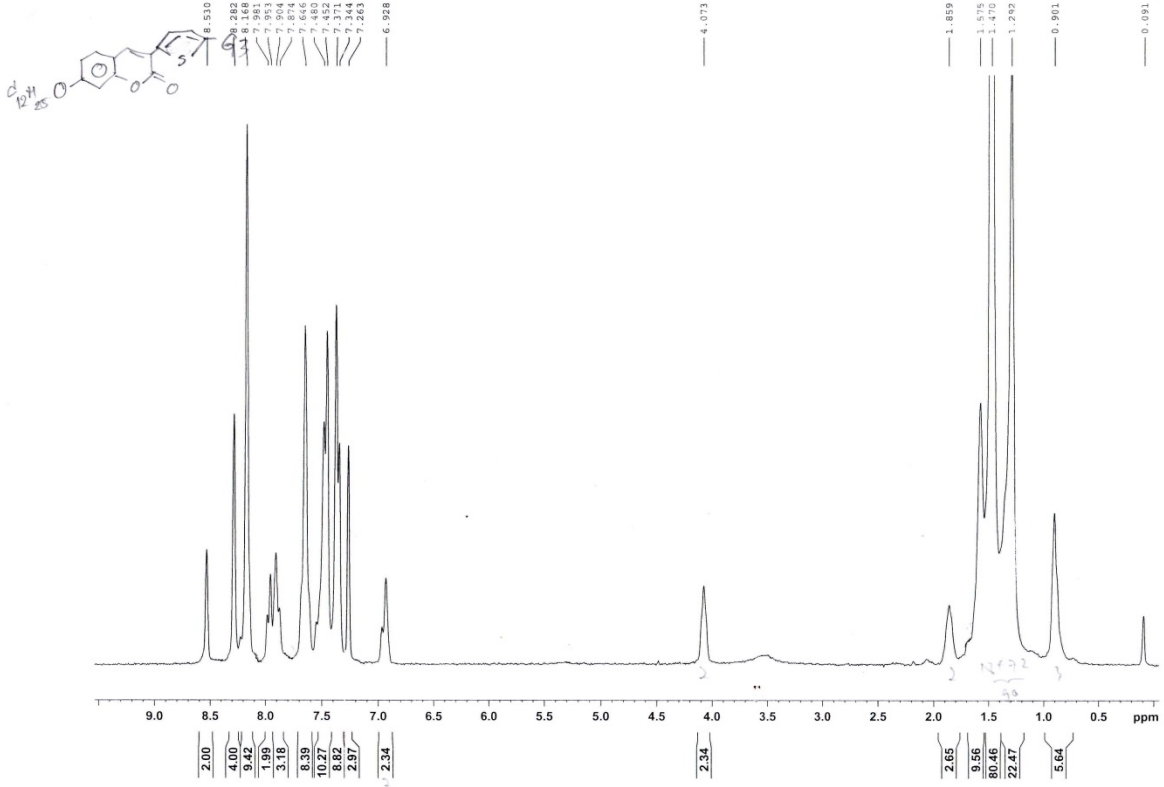
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 NUC1 13C  
 P1 7.60 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

==== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

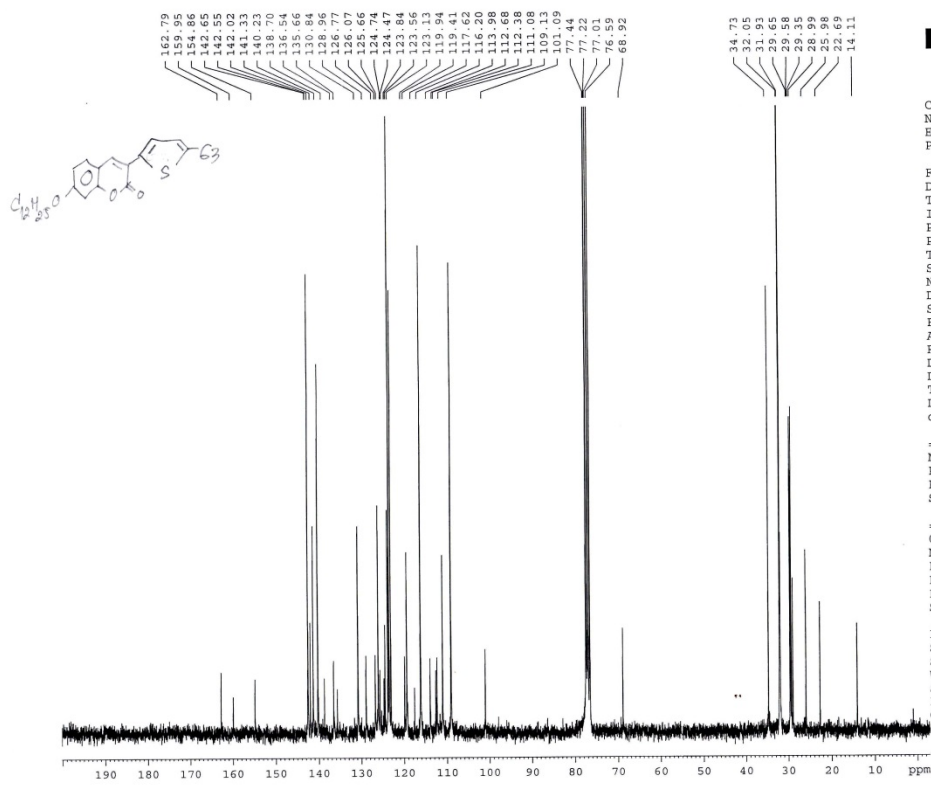
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 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40

CTG3

JM01-39 AT #



JM01-39



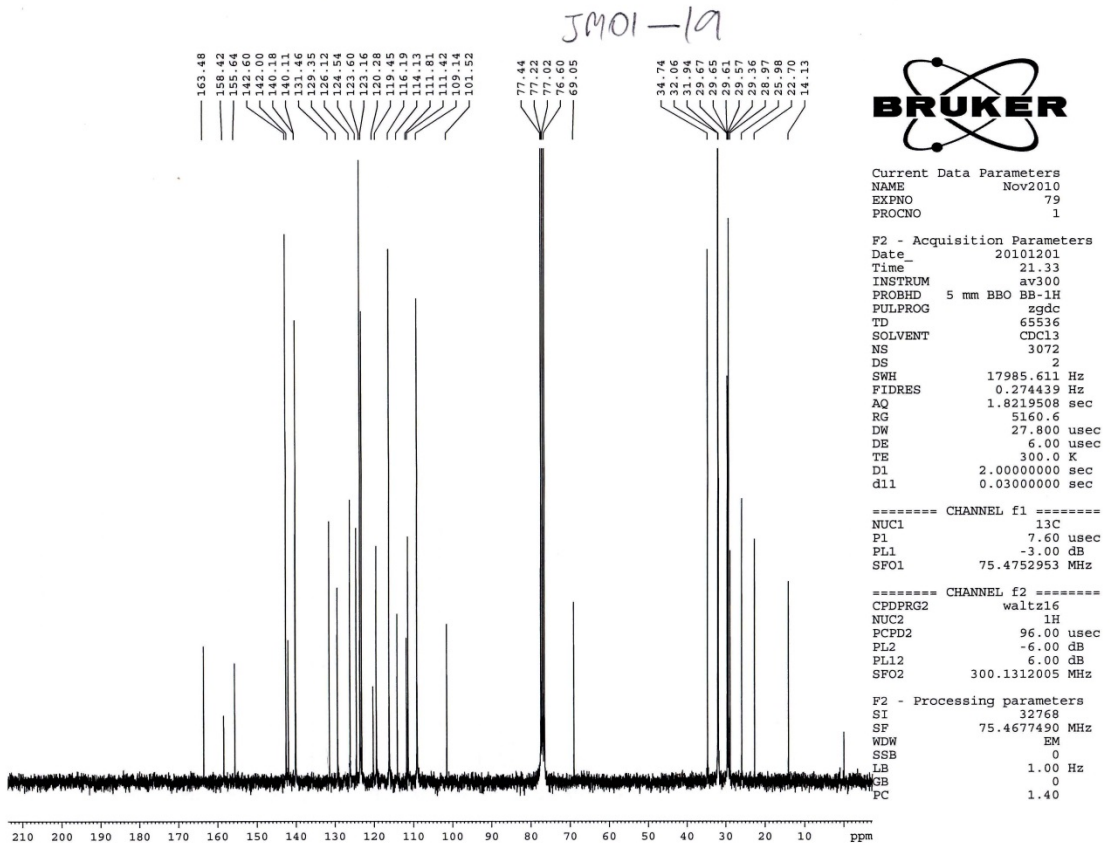
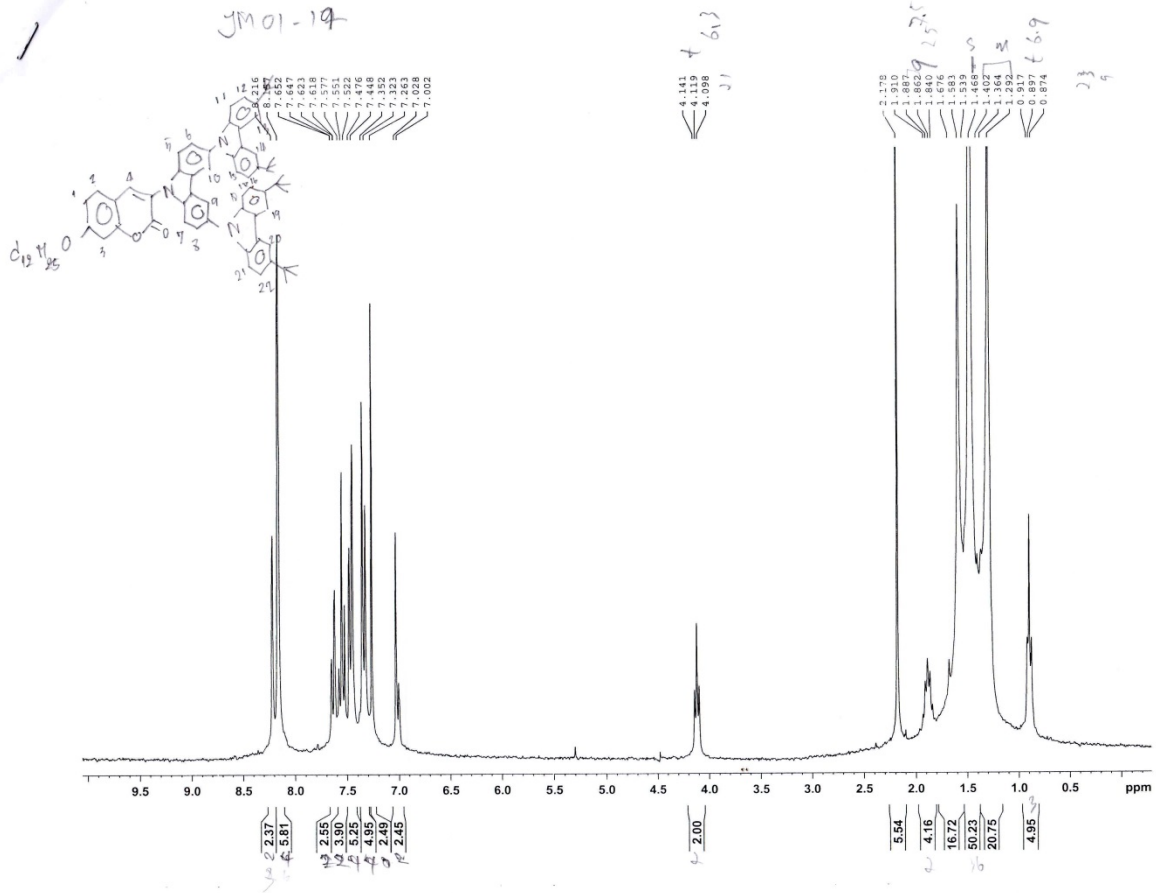
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 PROCNO 1

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 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 10240  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 181  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 2.0000000 sec  
 d11 0.0300000 sec

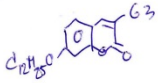
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 NUC1 13C  
 P1 7.40 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

==== CHANNEL f2 =====  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 100.00 usec  
 PL2 -6.00 dB  
 PL12 6.30 dB  
 SFO2 300.1312005 MHz

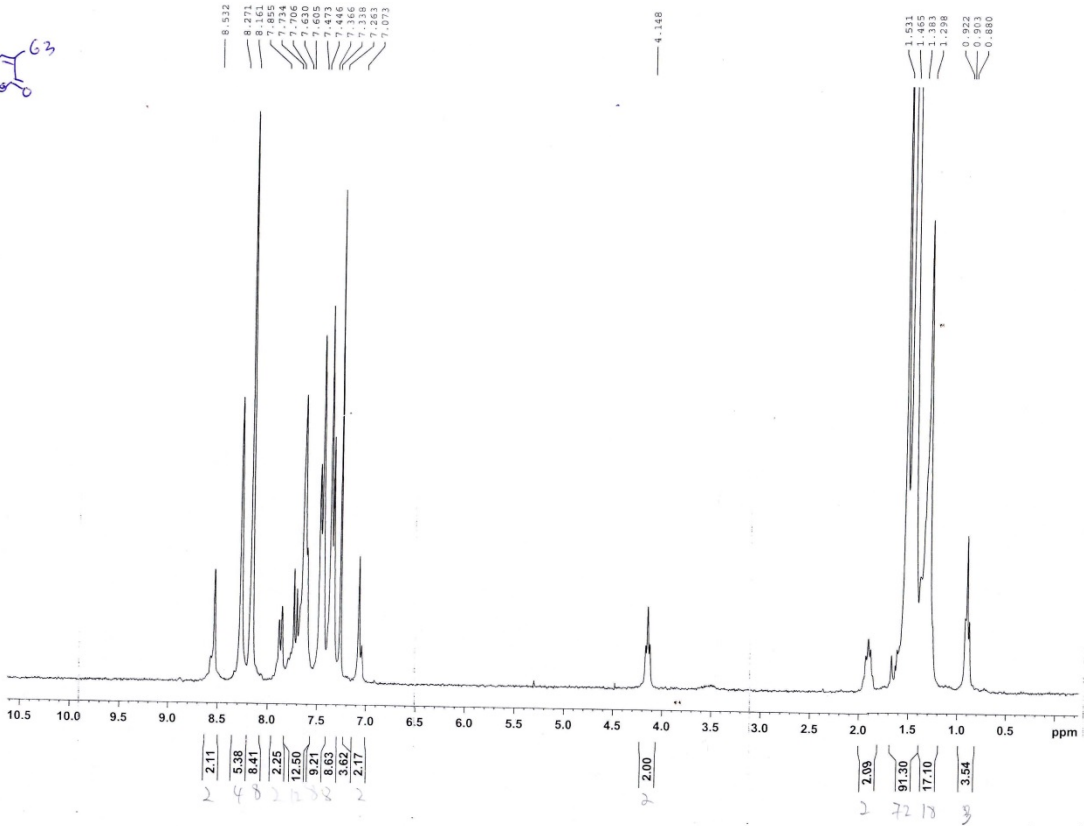
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 SF 75.4677490 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40



CG3



JM01-27 <163>



163.75, 158.58, 155.82, 142.85, 141.33, 140.93, 139.82, 130.60, 129.50, 126.60, 126.08, 123.83, 123.58, 123.14, 120.14, 119.93, 116.22, 114.33, 112.06, 111.72, 110.16, 101.61, 77.46, 77.03, 76.61, 69.15, 34.75, 32.07, 31.96, 31.84, 29.83, 29.59, 29.39, 28.99, 22.23, 14.16

66124 CG3



**Current Data Parameters**  
 NAME 11Feb2010  
 EXPNO 3641  
 PROCNO 2

**F2 - Acquisition Parameters**  
 Date 20140225  
 Time 9.11  
 INSTRUM av300  
 PROBHD 5 mm BBO BB-1H  
 PULPROG zgdc  
 TD 65536  
 SOLVENT CDCl3  
 NS 15360  
 DS 2  
 SWH 17985.611 Hz  
 FIDRES 0.274439 Hz  
 AQ 1.8219508 sec  
 RG 1625.5  
 DW 27.800 usec  
 DE 6.00 usec  
 TE 300.0 K  
 d1 2.0000000 sec  
 d11 0.0300000 sec

**CHANNEL f1**  
 NUC1 13C  
 P1 8.00 usec  
 PL1 -3.00 dB  
 SFO1 75.4752953 MHz

**CHANNEL f2**  
 CPDPRG2 waltz16  
 NUC2 1H  
 PCPD2 96.00 usec  
 PL2 -6.00 dB  
 PL12 6.00 dB  
 SFO2 300.1312005 MHz

**F2 - Processing parameters**  
 SI 32768  
 SF 75.4677490 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.40

