

Supplementary Data

Excimer-monomer Switch: A Reaction-Based Approach for Selective Detection of Fluoride

Qiao Song, Angela Bamesberger, Lingyun Yang, Haley Houtwed, Haishi Cao*

Department of Chemistry, University of Nebraska at Kearney, Kearney NE 68849, USA

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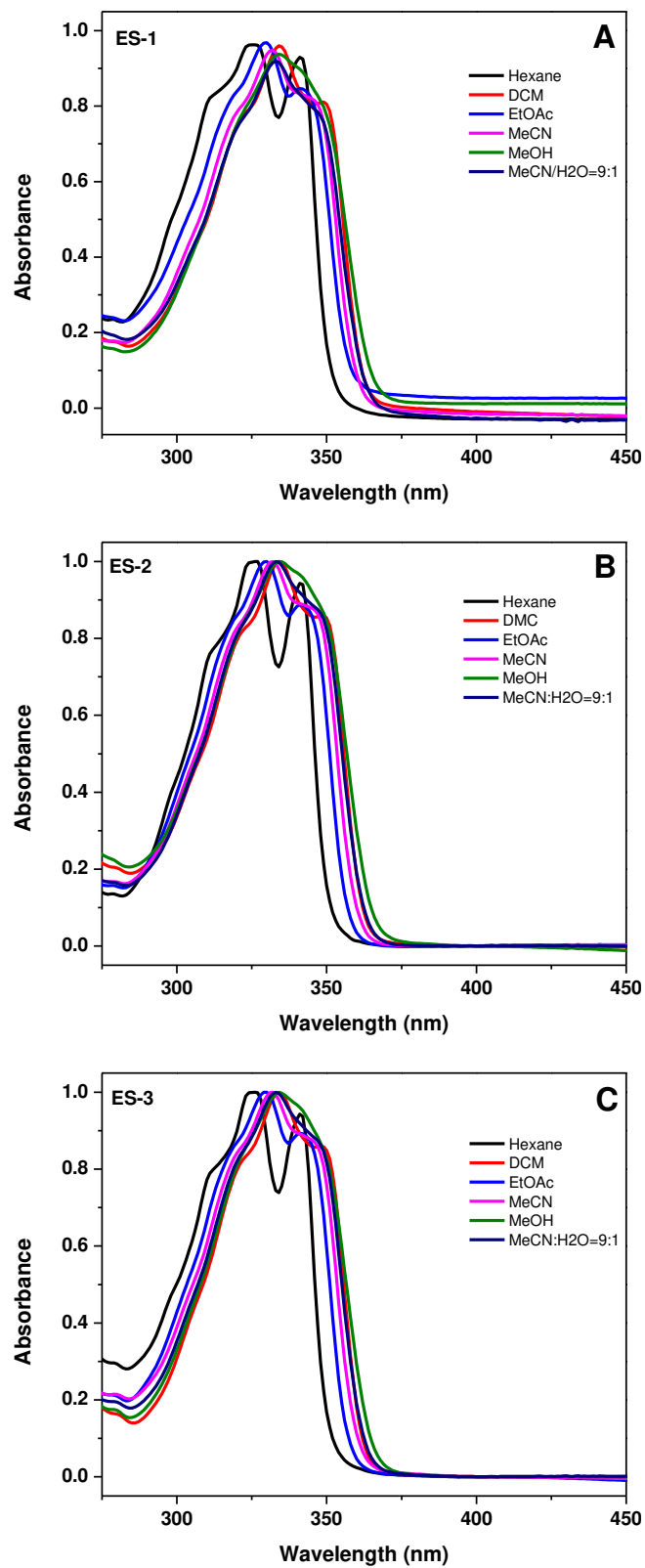


Figure S1: The absorption spectra of ES-1, ES-2 and ES-3 in exane, dichloromathane (DCM), ethyl acetate (EtOAc), acetonitrile (MeCN), methanol (MeOH), and acetonitrile/H₂O (9:1).

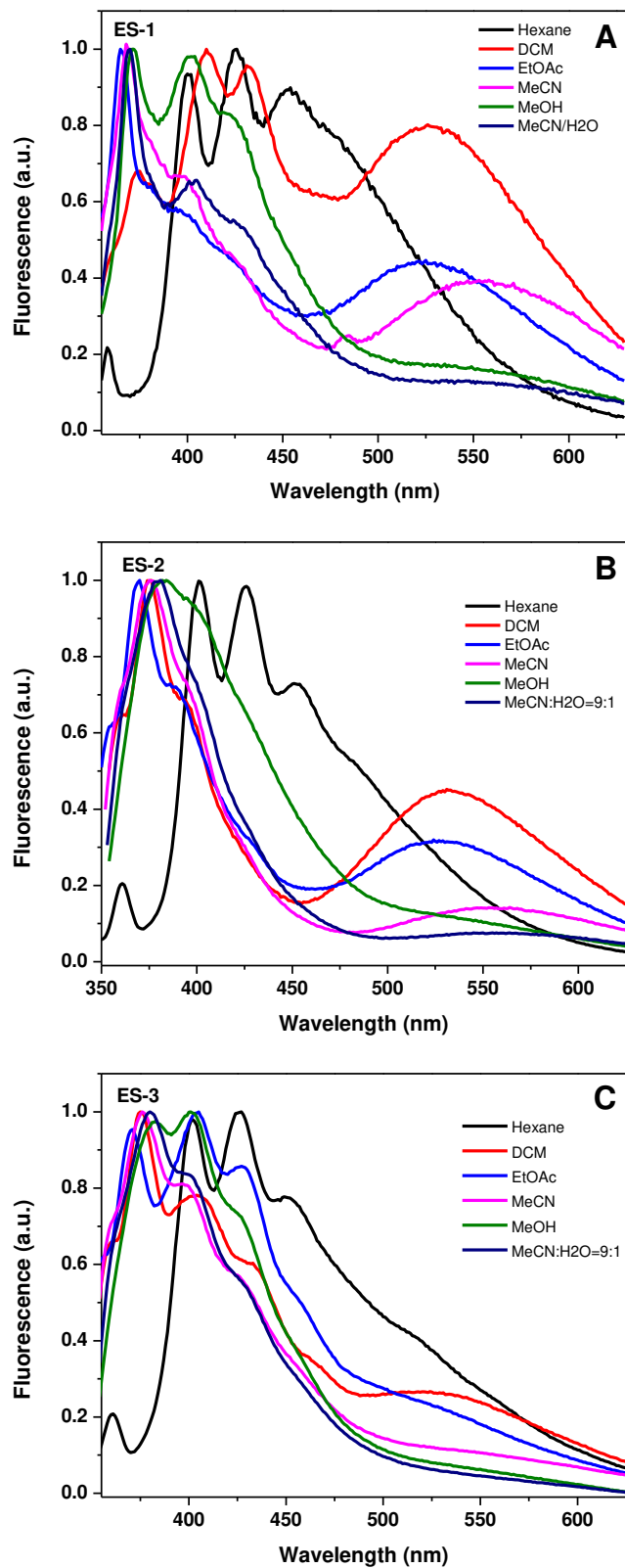


Figure S2: The emission spectra of ES-1, ES-2 and ES-3 in hexane, dichloromethane (DCM), ethyl acetate (EtOAc), acetonitrile (MeCN), methanol (MeOH), and acetonitrile/H₂O (9:1).

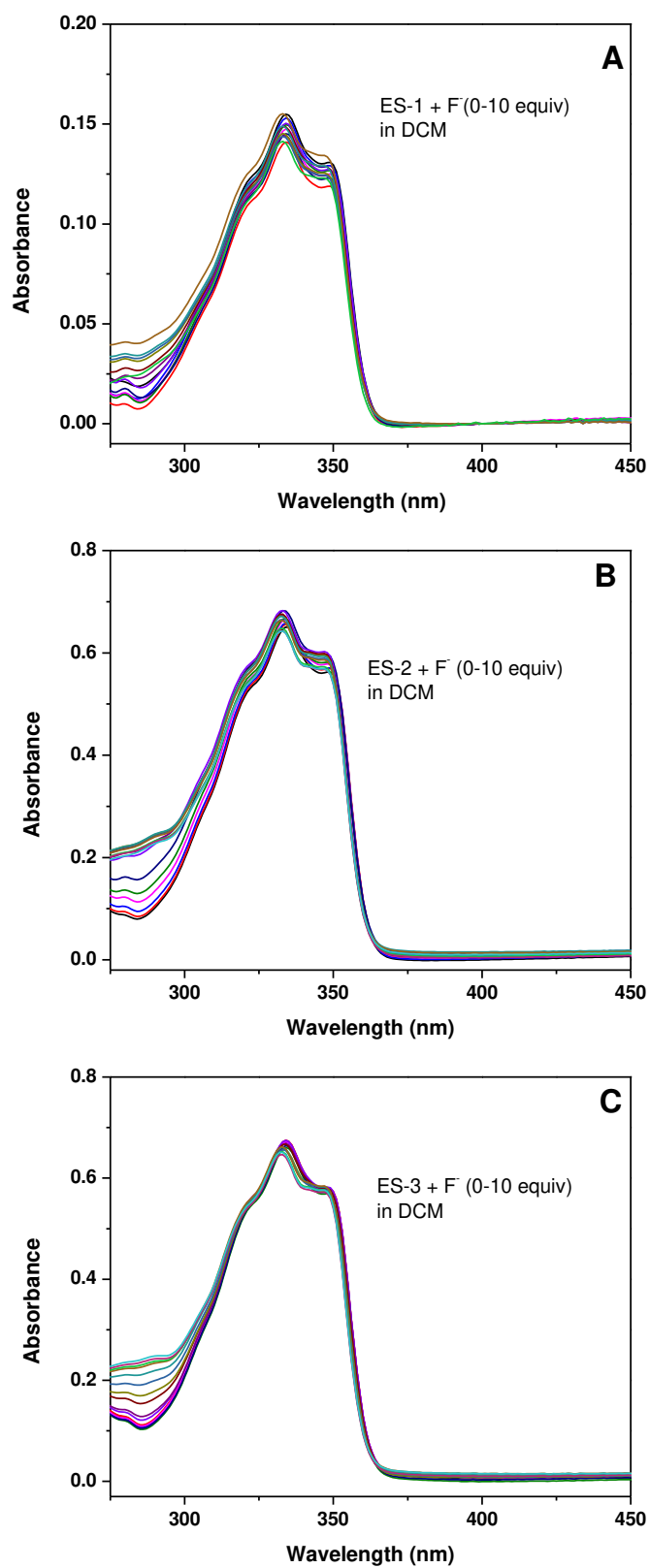


Figure S3: The absorption spectra of ES-1, ES-2 and ES-3 (5.0×10^{-5} M) did not show significant change in the presence of 0-10 equiv F⁻ (TBAF) in the DCM.



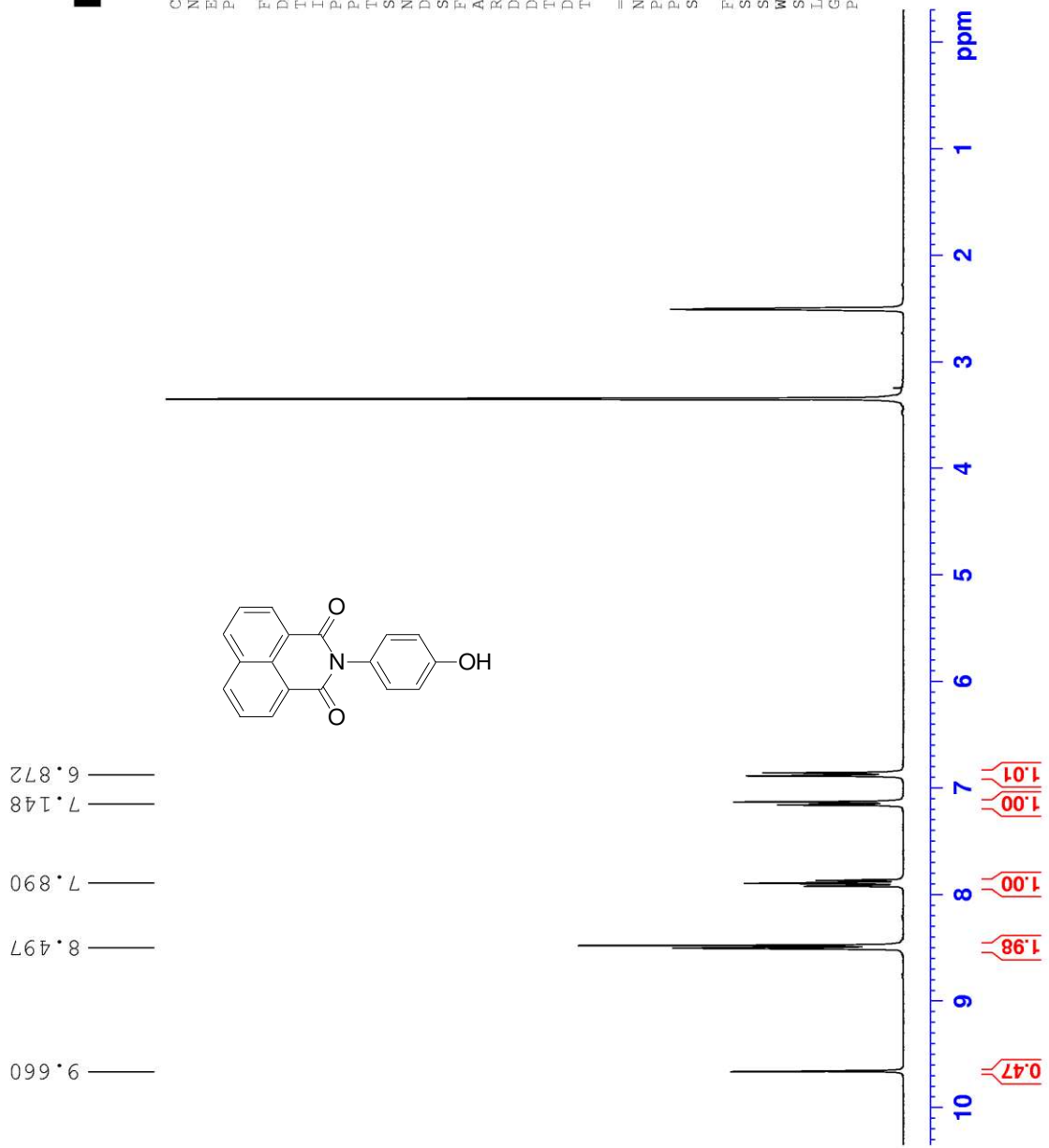
Current Data Parameters
NAME 07-29-13
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters

Date_ 20130729
Time 15.45
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 512
DW 81.000 usec
DE 6.00 usec
TE 296.6 K
D1 1.00000000 sec
TD0 1

=====
CHANNEL f1
=====

NUC1 1H
P1 10.00 usec
PL1 -1.50 dB
SF01 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





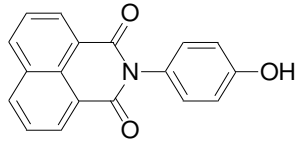
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NAME 07-29-13
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
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Time 16.24
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
ID 65536
SOLVENT CDCl3
NS 300
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 3251
DW 27.800 usec
DE 6.00 usec
TE 297.1 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

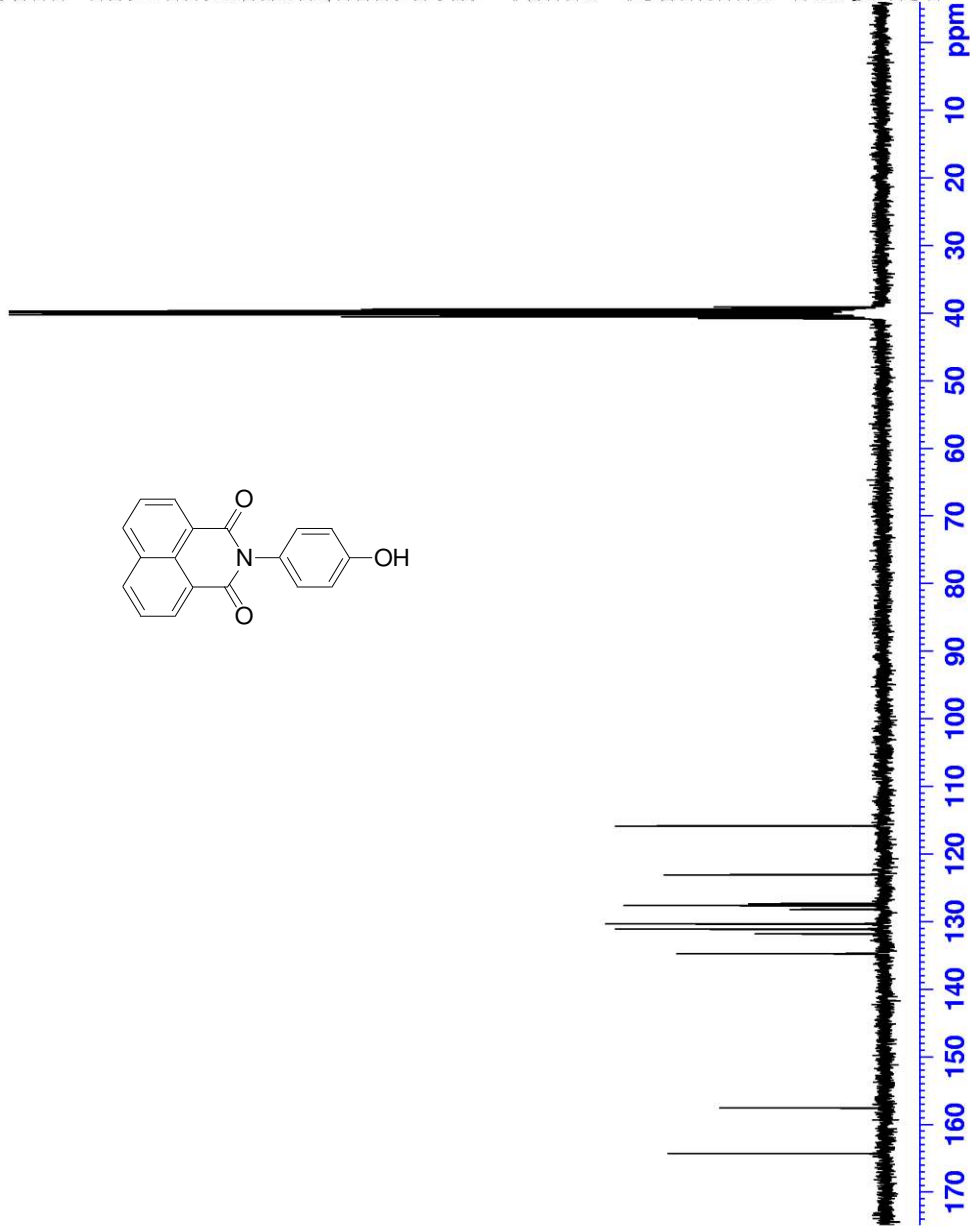
==== CHANNEL f1 =====
NUC1 13C
P1 8.50 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

==== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -1.50 dB
PL12 18.50 dB
PL13 20.00 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 1.00



164.31
157.60
134.89
131.87
131.17
130.40
128.24
127.67
127.37
123.11
115.92



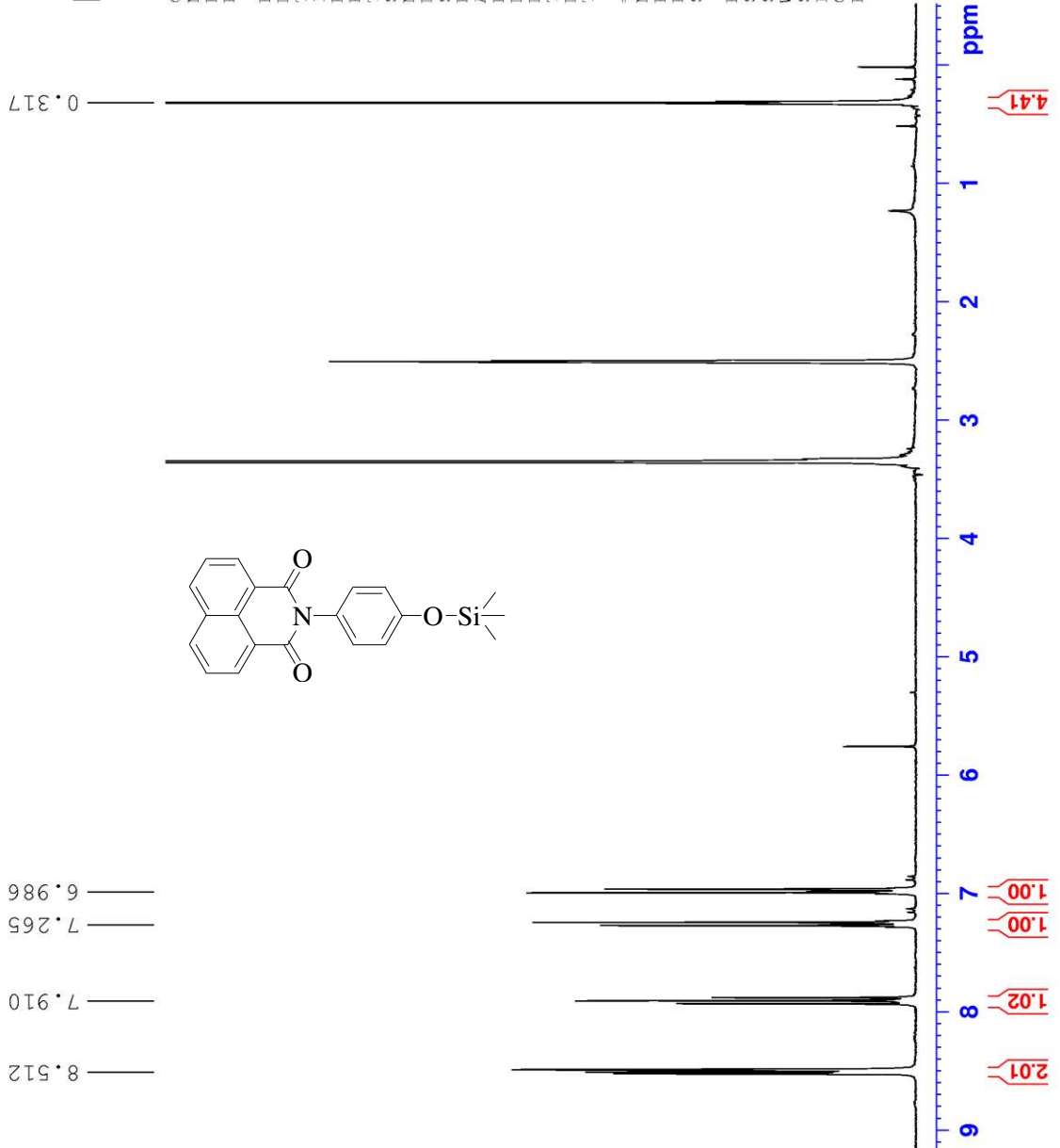


Current Data Parameters
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EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
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Time_ 15.34
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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 406.4
DW 81.000 usec
DE 6.00 usec
TE 296.5 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 1H
P1 10.00 usec
PL1 -1.50 dB
SFO1 300.1318534 MHz

F2 - Processing parameters
SI 32768
SF 300.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
NAME 08-08-2013
EXPNO 10
PROCNO 1

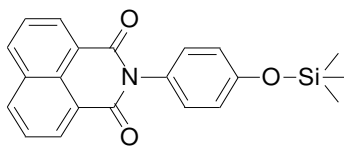
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PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1200
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 8192
DW 27.800 usec
DE 6.00 usec
TE 294.8 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

==== CHANNEL f1 =====
NUC1 13C
P1 8.50 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

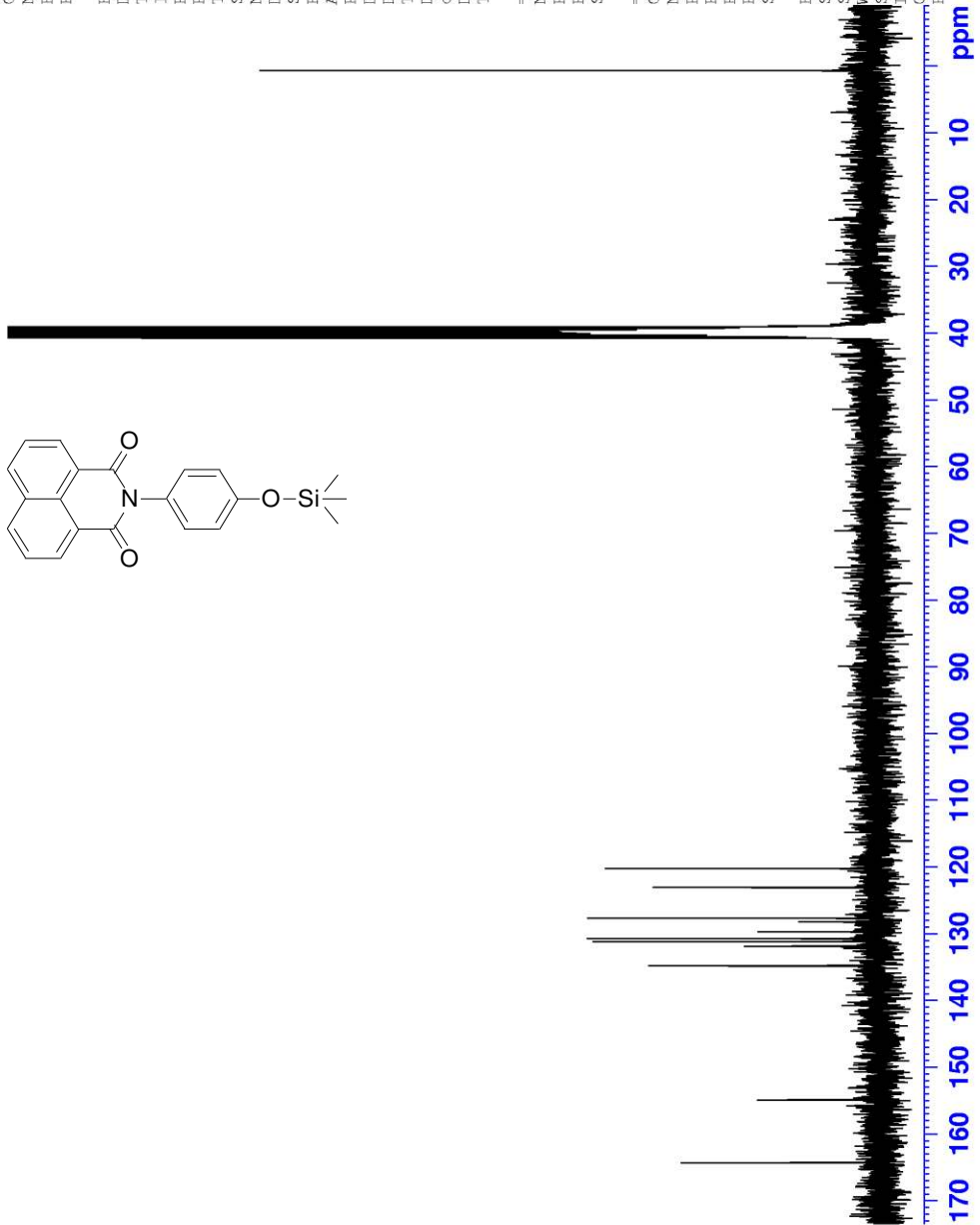
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CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -1.50 dB
PL12 18.50 dB
PL13 20.00 dB
SFO2 300.1312005 MHz

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

0.68



164.40
154.93
134.88
131.96
131.18
130.70
129.68
128.33
127.78
123.12
120.20



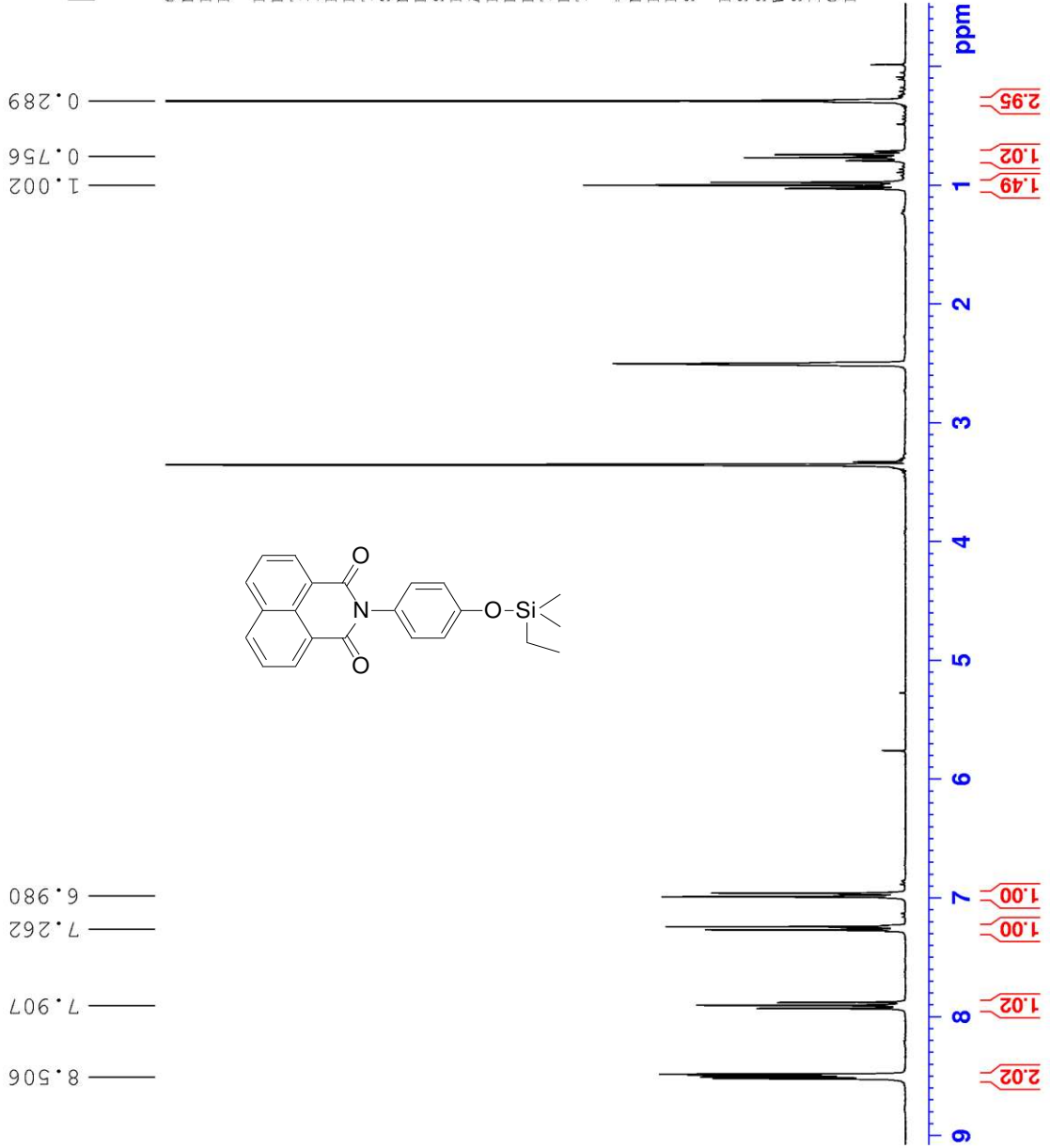


Current Data Parameters
NAME 08-07-2013
EXPNO 4
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130807
Time 16.18
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 287.4
DW 81.000 usec
DE 6.00 usec
TE 294.5 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 1H
P1 10.00 usec
PL1 -1.50 dB
SF01 300.1318534 MHz

F2 - Processing parameters
SI 32768
SF 300.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
NAME 08-07-2013
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130807
Time 16.54
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 300
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 9195.2
DE 27.800 usec
TE 295.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

=====
CHANNEL f1
=====

NUC1 13C
P1 8.50 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

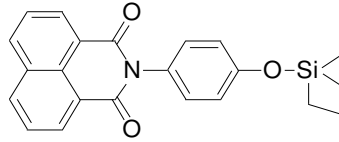
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CHANNEL f2
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CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -1.50 dB
PL12 18.50 dB
PL13 20.00 dB
SFO2 300.1312005 MHz

F2 - Processing parameters
SI 32768
SF 75.4674634 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

12.11
10.78
2.36

168.01
158.80
138.58
135.63
134.91
134.51
133.45
131.99
131.43
126.79
123.99



170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

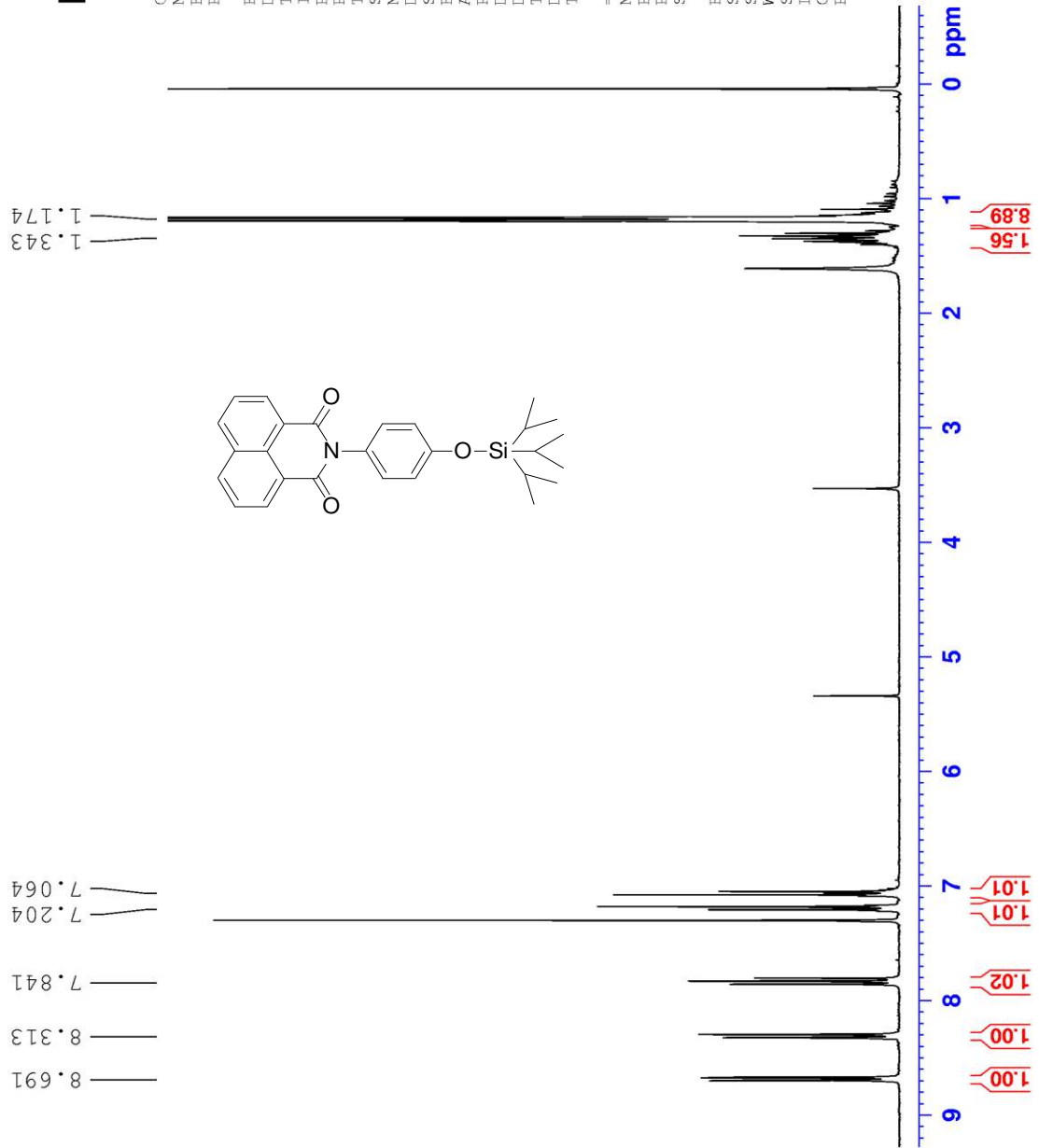


Current Data Parameters
NAME 08-08-2013
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130808
Time 16.12
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 322.5
DW 81.000 usec
DE 6.00 usec
TE 294.5 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 1H
P1 10.00 usec
PL1 -1.50 dB
SF01 300.1318534 MHz

F2 - Processing parameters
SI 32768
SF 300.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40





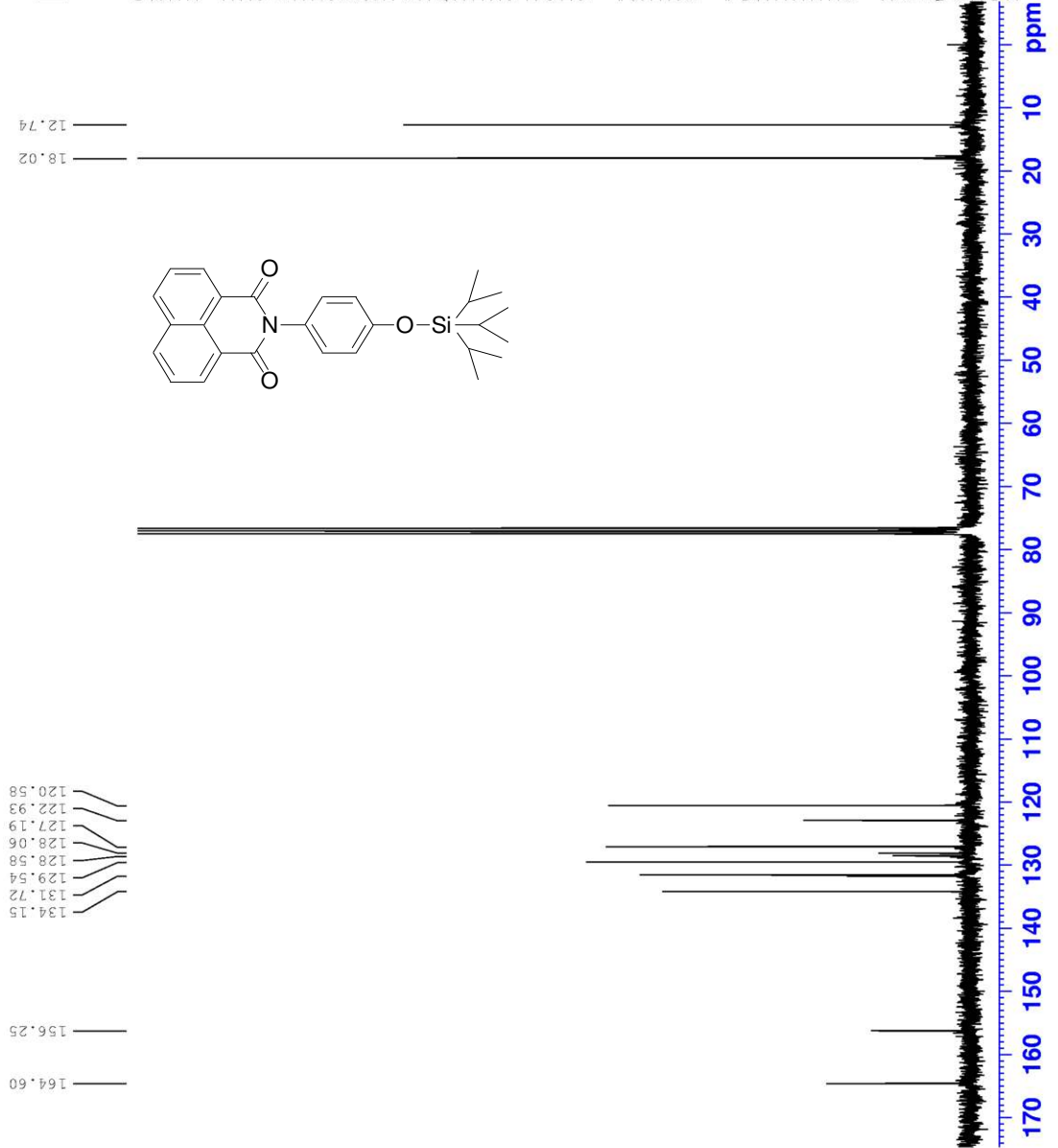
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NAME 08-08-2013
EXPNO 20
PROCNO 1

F2 - Acquisition Parameters
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Time_ 17.02
INSTRUM spect
PROBHD 5 mm BBO BB-IH
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 330
DS 4
SWH 17985.611 Hz
FIDRES 0.277439 Hz
AQ 1.8219508 sec
RG 5160.6
DW 27.800 usec
DE 6.00 usec
TE 295.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

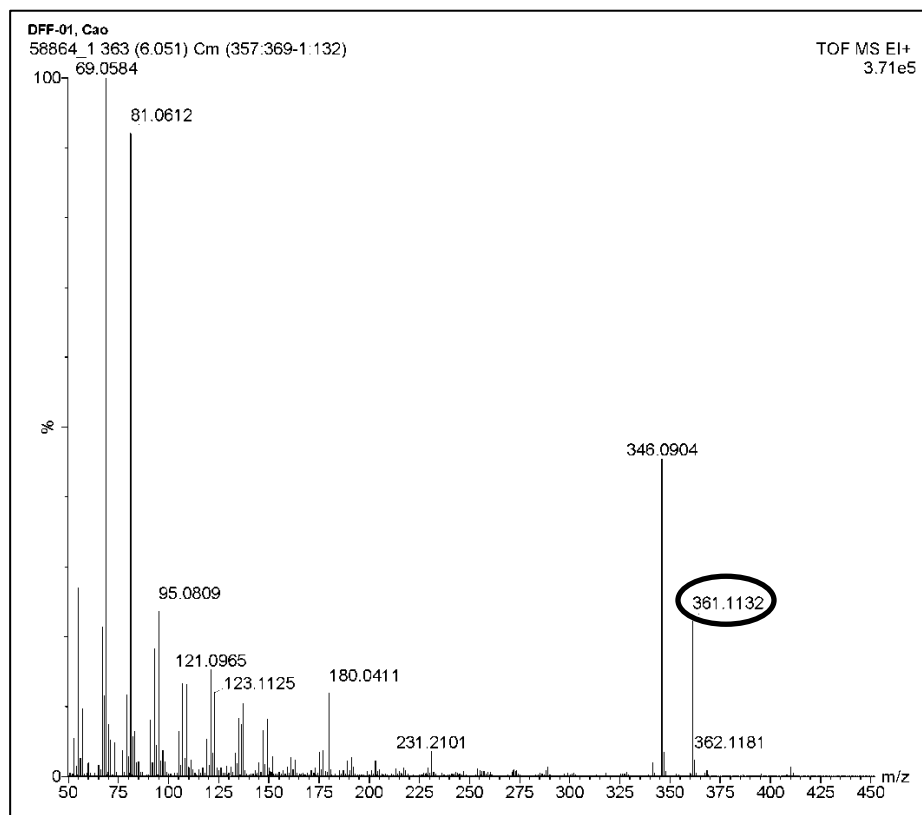
==== CHANNEL f1 =====
NUC1 13C
P1 8.50 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

==== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -1.50 dB
PL12 18.50 dB
PL13 20.00 dB
SFO2 300.1312005 MHz

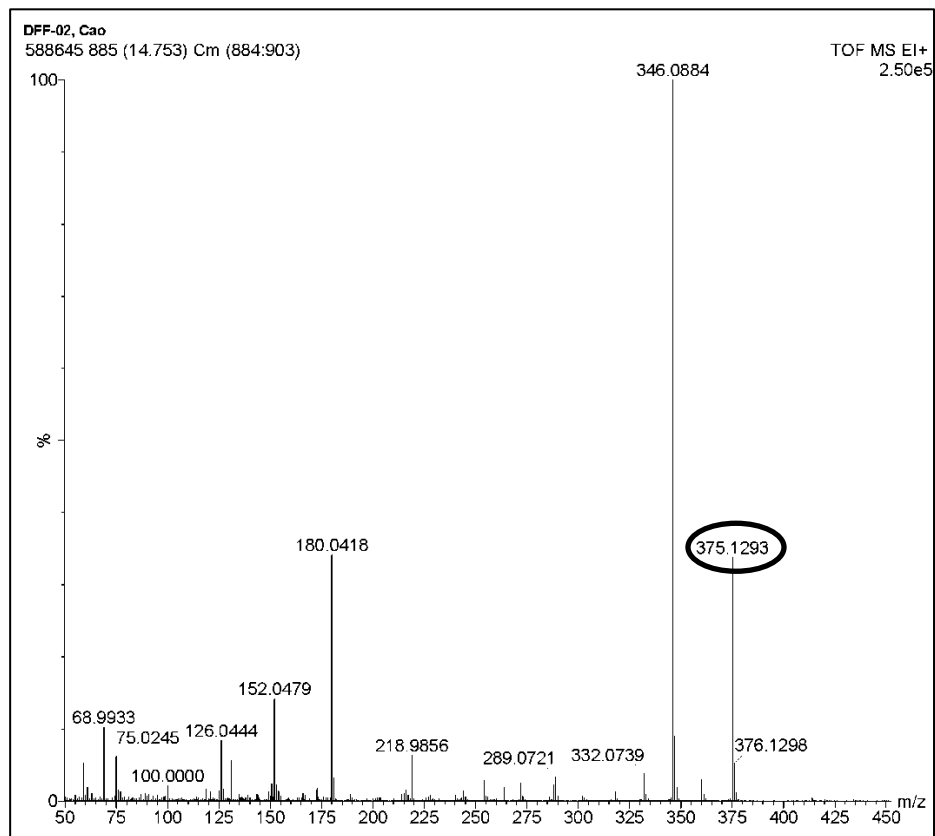
F2 - Processing parameters
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00



HRMS ES-1



HRMS ES-2



HRMS ES-3

