

BF₃·Et₂O-Mediated Intramolecular Cyclization of Unsaturated Amides: Convenient Synthesis of Dihydroquinolin-2-one-BF₂ Complexes†

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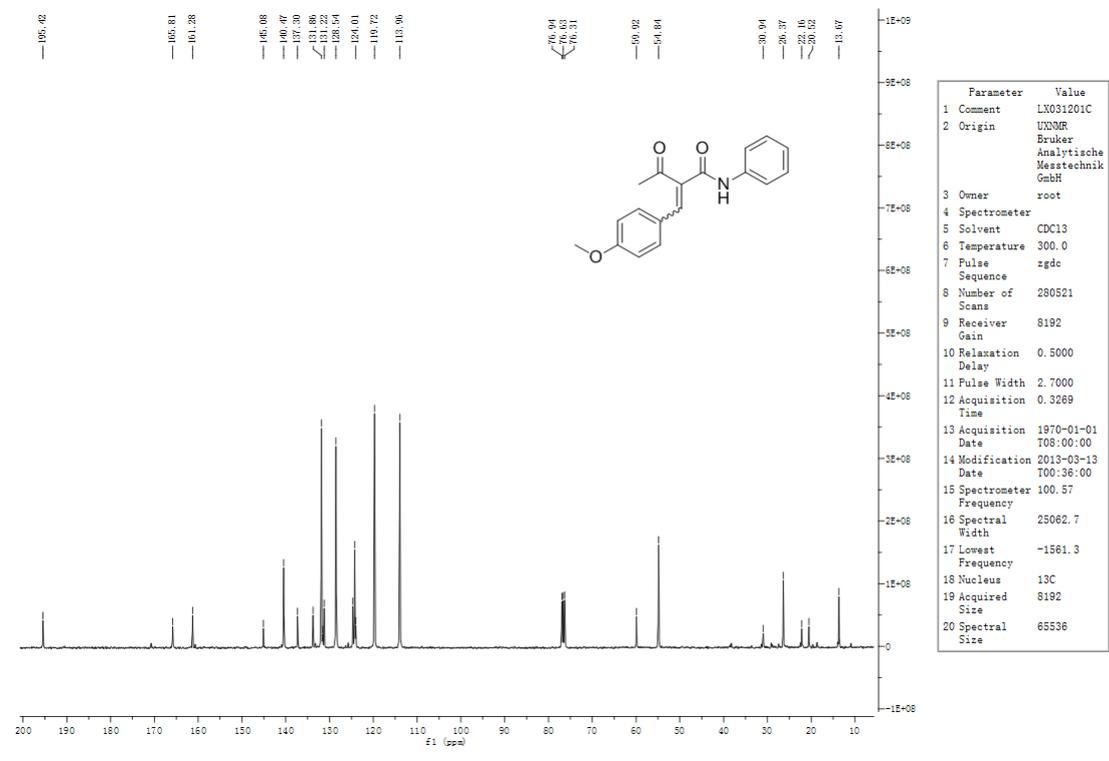
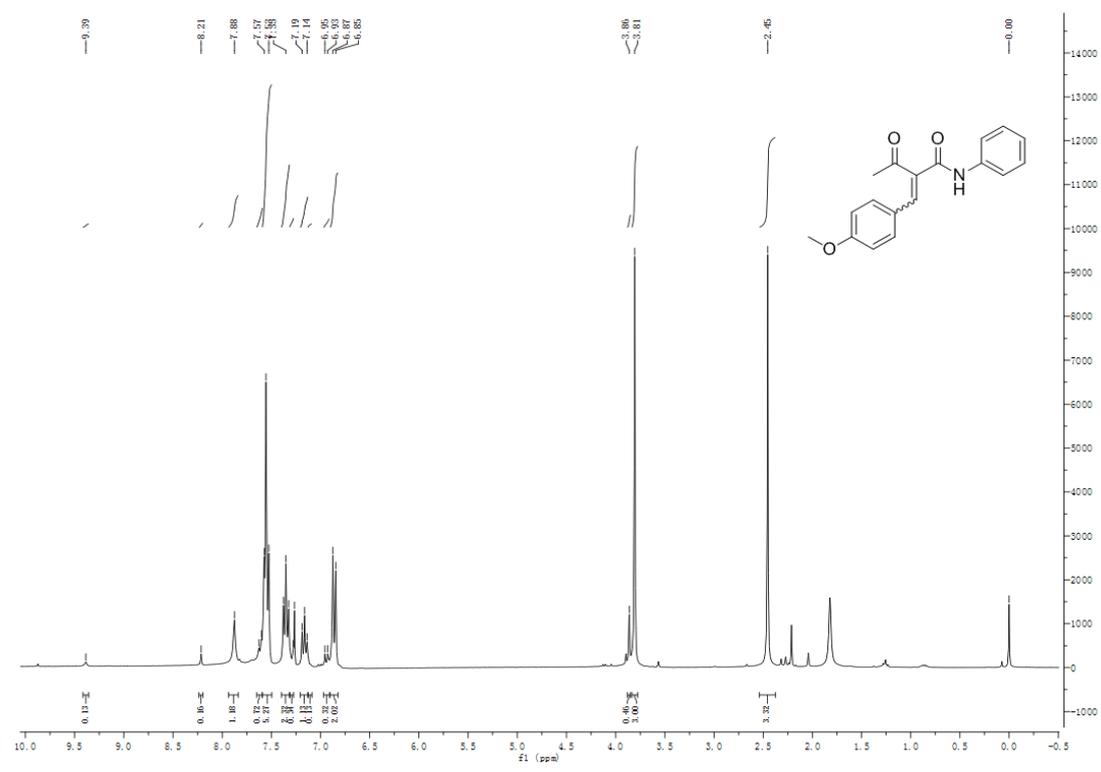
Electronic Supplementary Information

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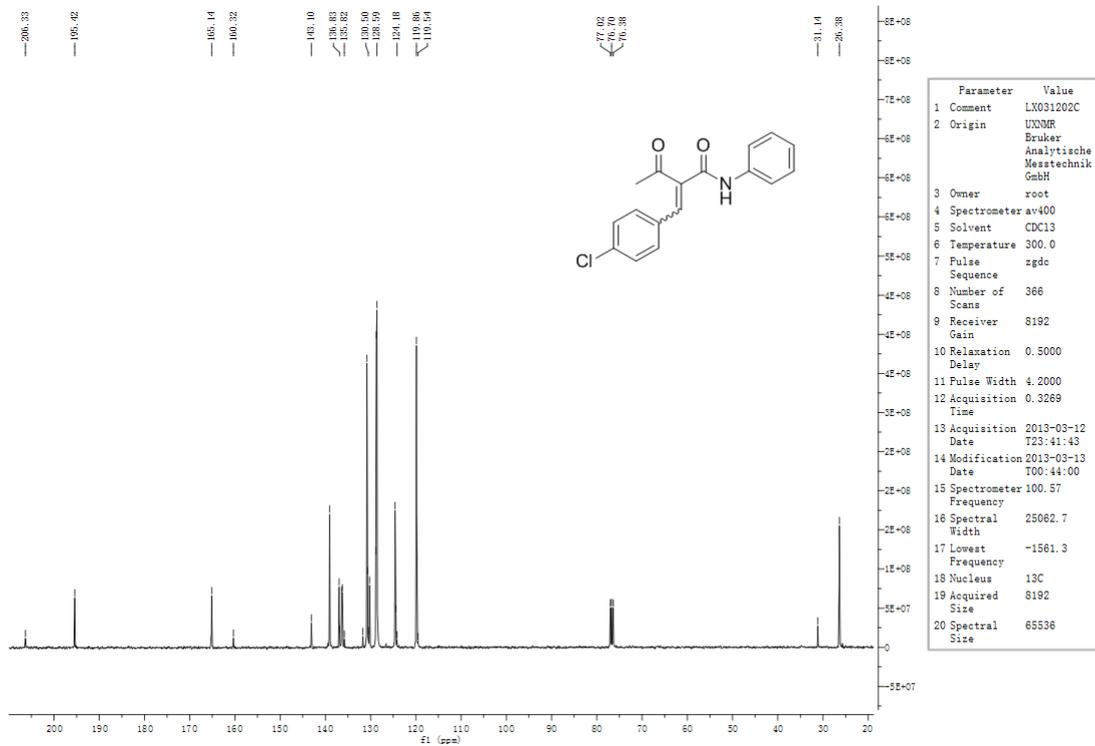
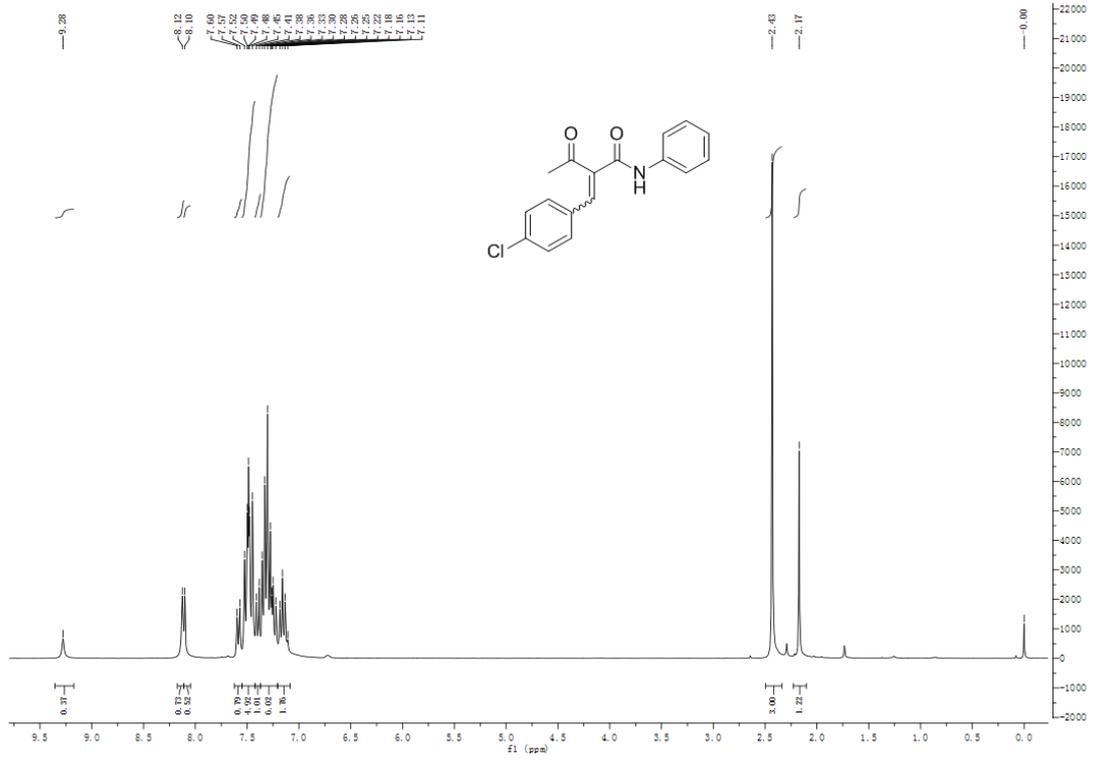
Copies of NMR spectra of compounds **1-3** and **5**.....S2-S24

Copies of NMR spectra of compounds 1-3 and 5

11

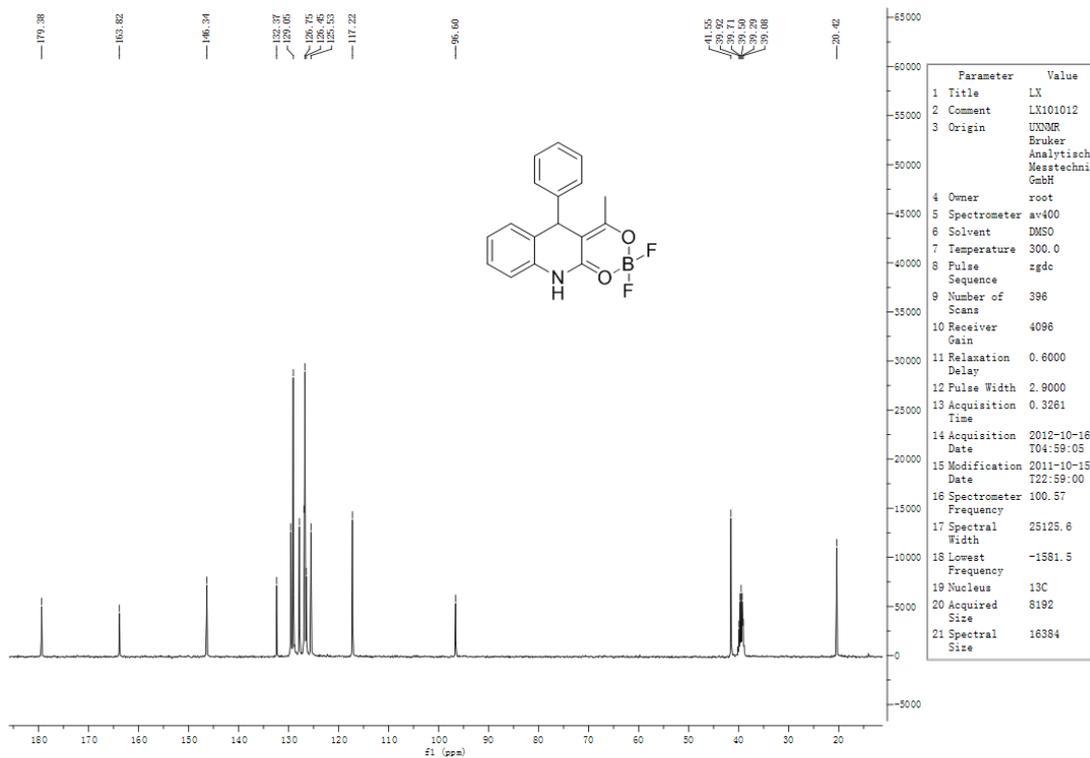
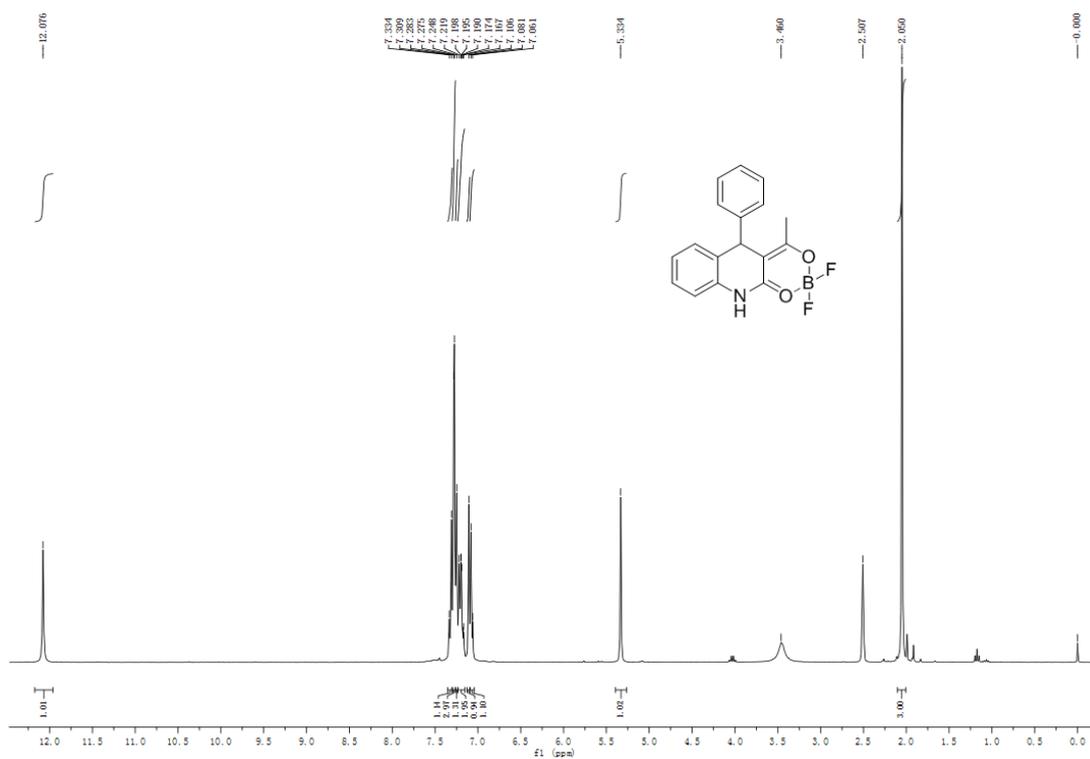


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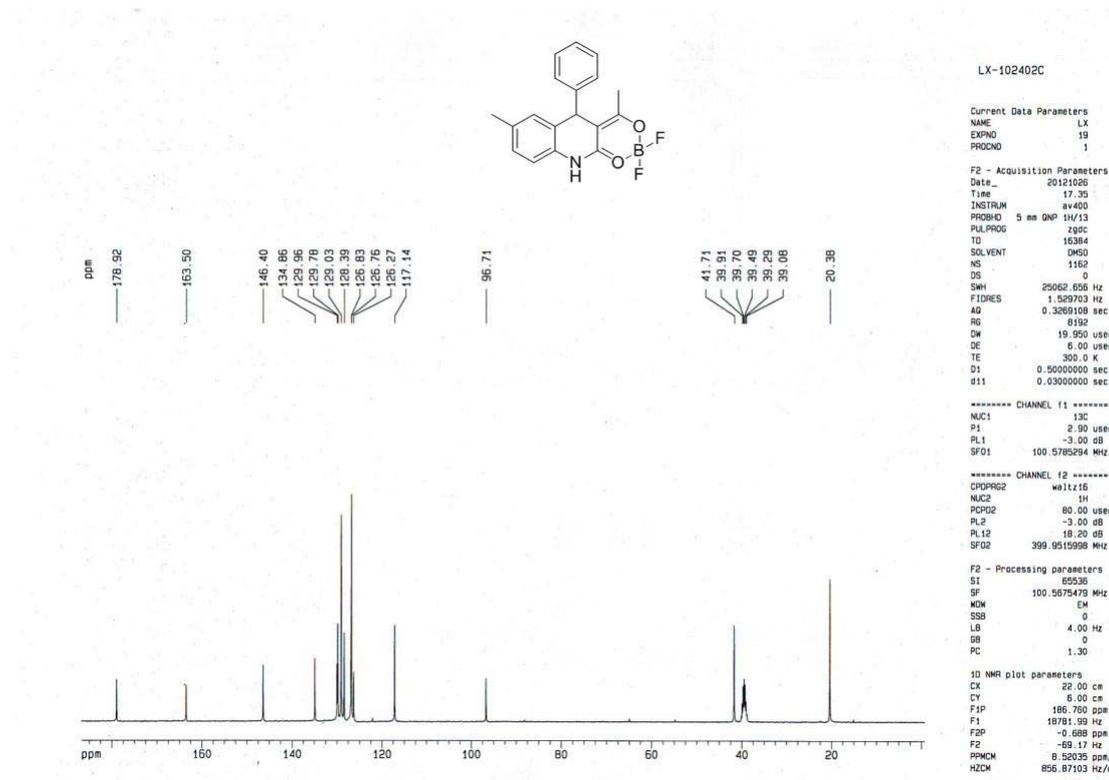
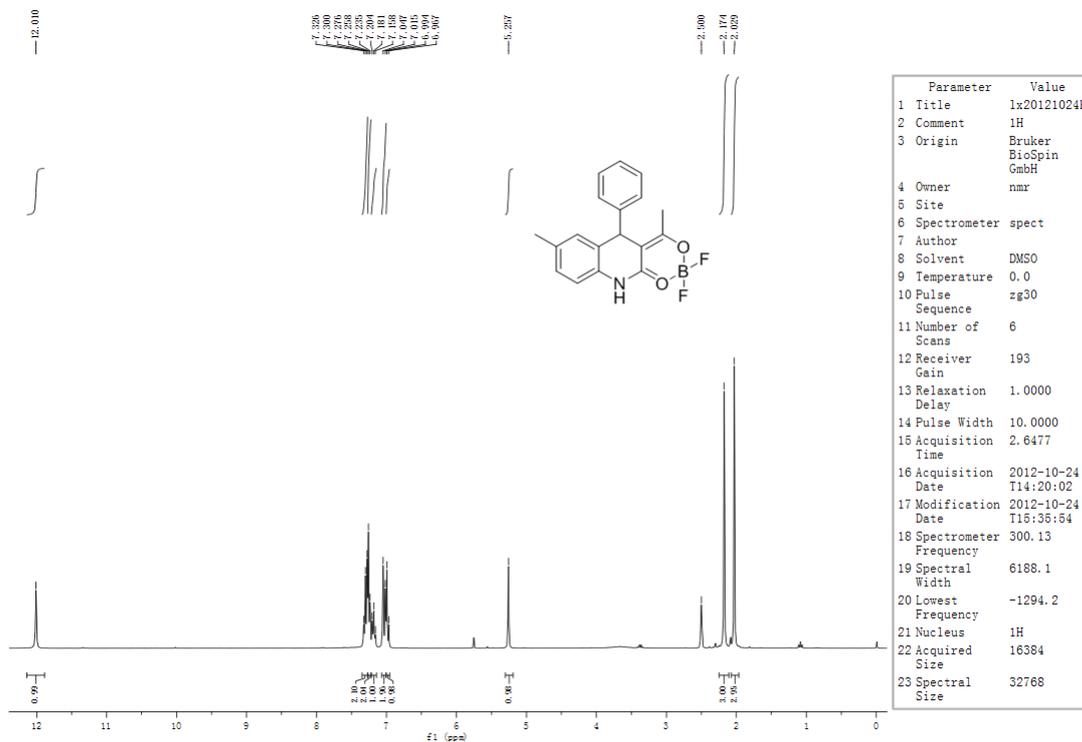
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7 Pulse Sequence	zgdc
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9 Receiver Gain	8192
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11 Pulse Width	4.2000
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14 Modification Date	2013-03-13
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18 Nucleus	13C
19 Acquired Size	8192
20 Spectral Size	65536

2a

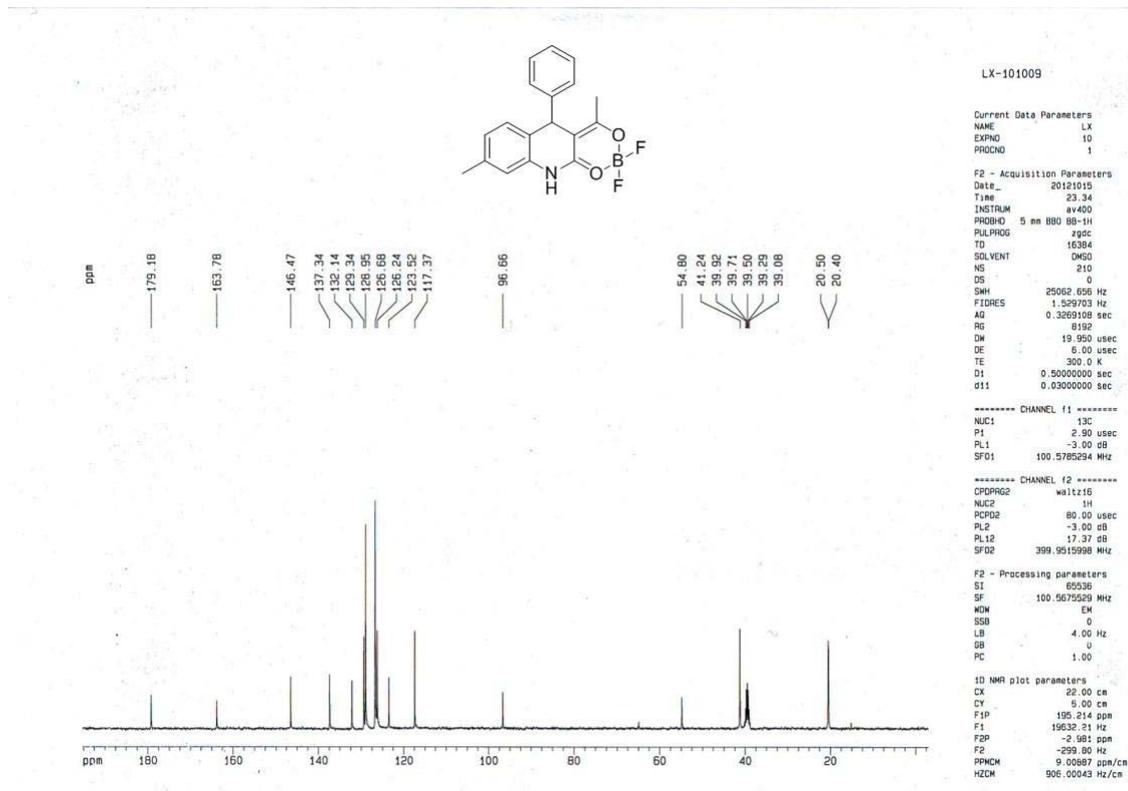
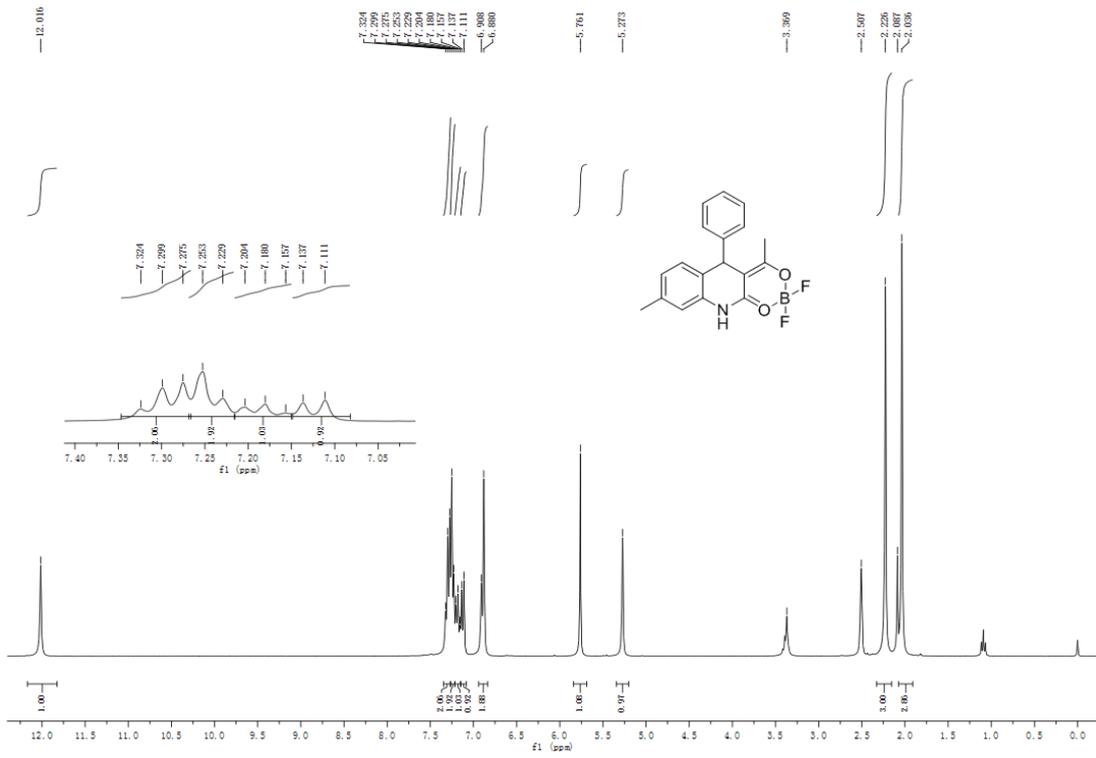


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11 Relaxation Delay	0.6000
12 Pulse Width	2.9000
13 Acquisition Time	0.3261
14 Acquisition Date	2012-10-16 T04:59:05
15 Modification Date	2011-10-15 T22:59:00
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19 Nucleus	13C
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21 Spectral Size	16384

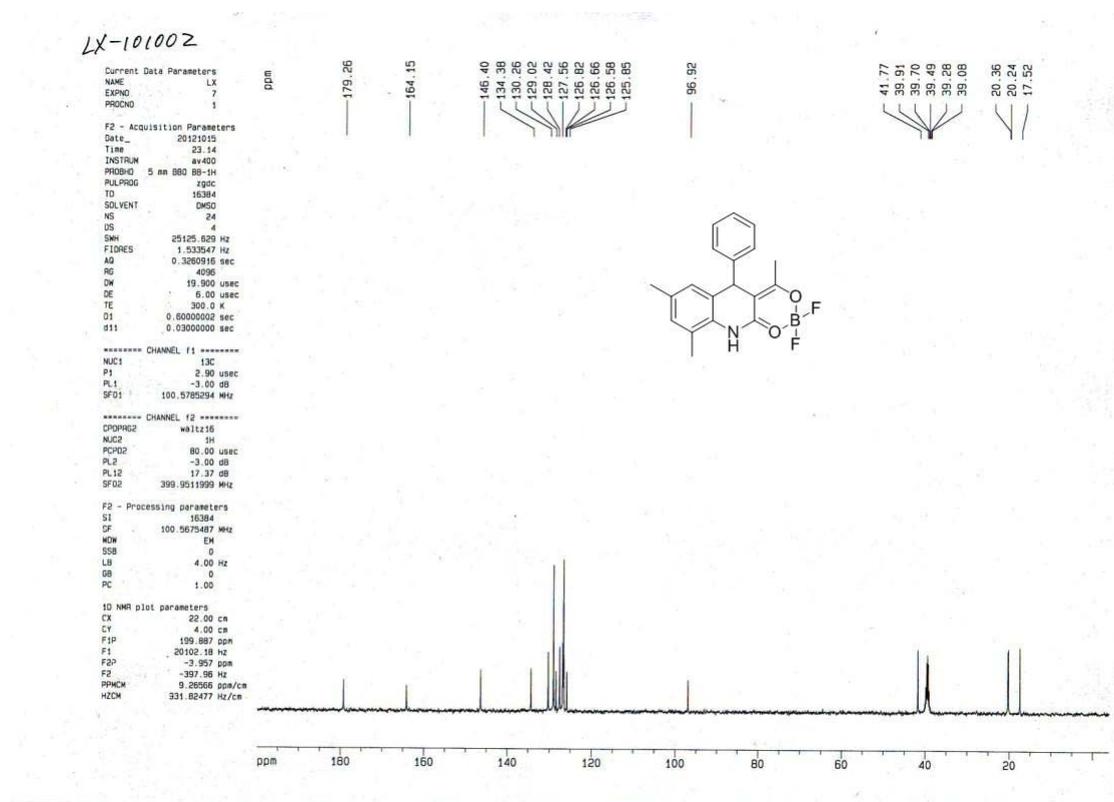
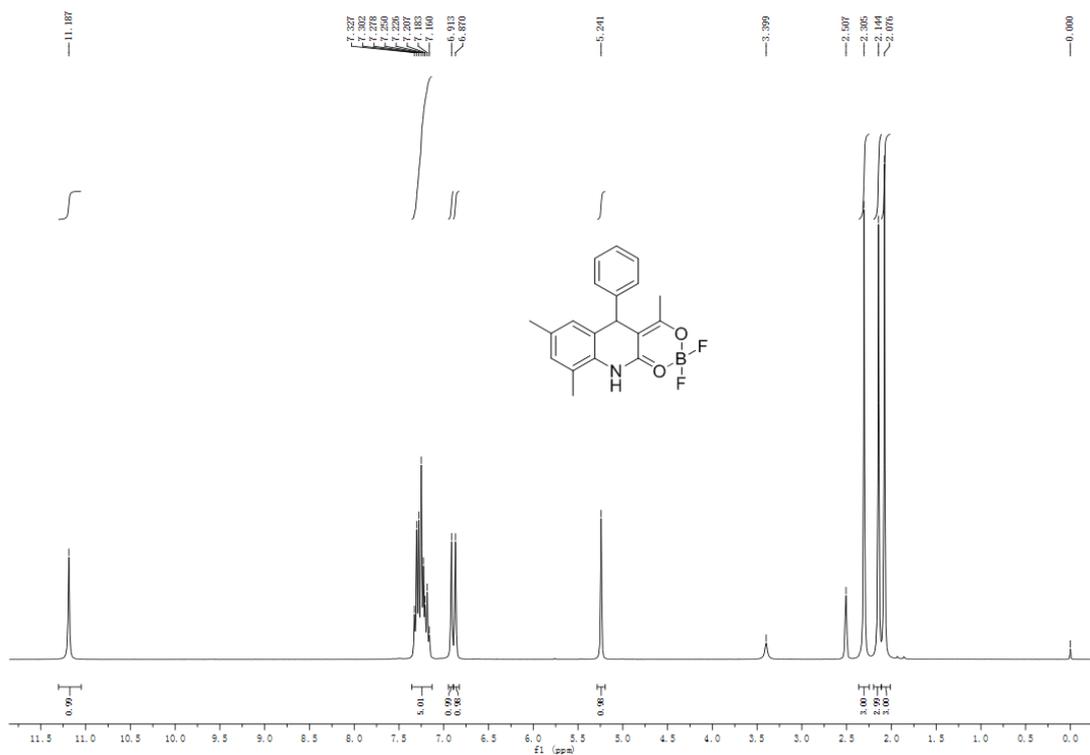
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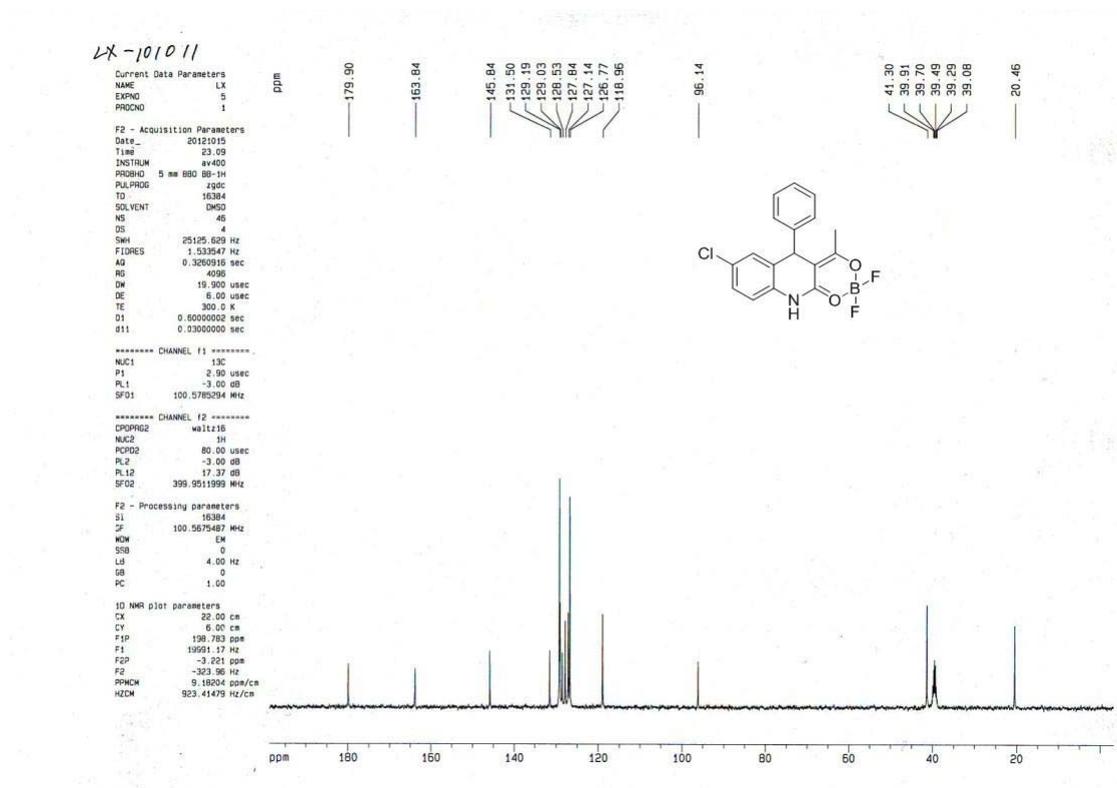
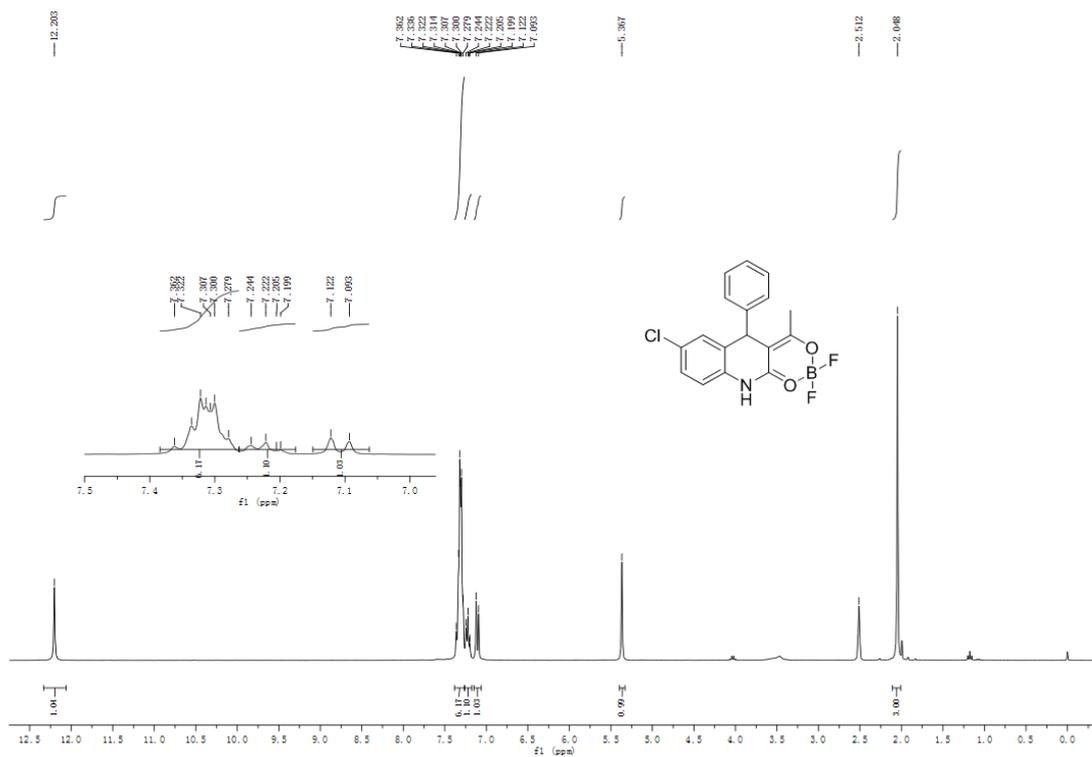
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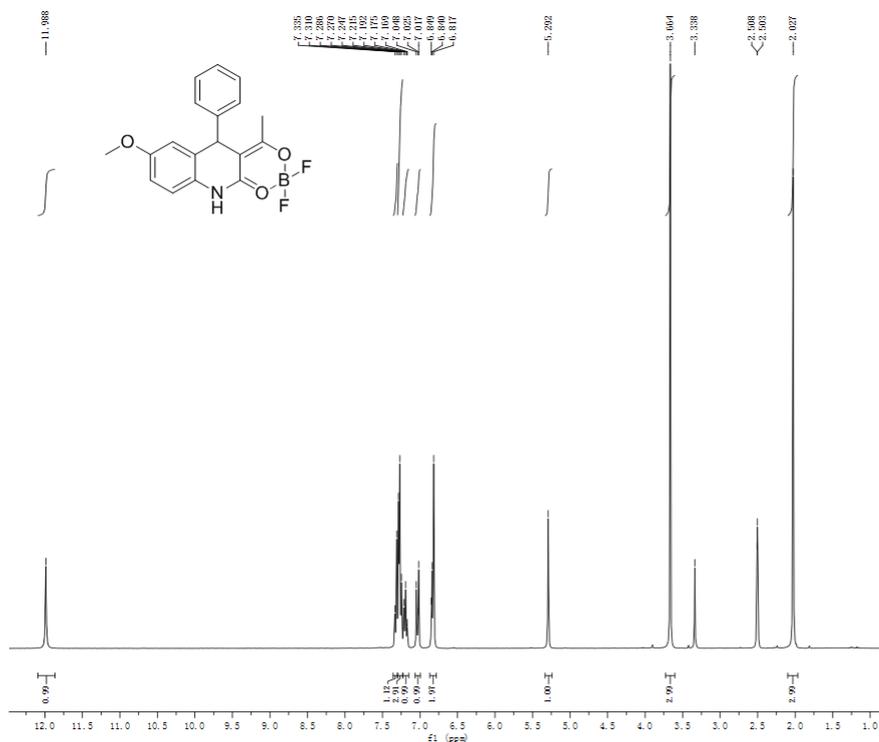
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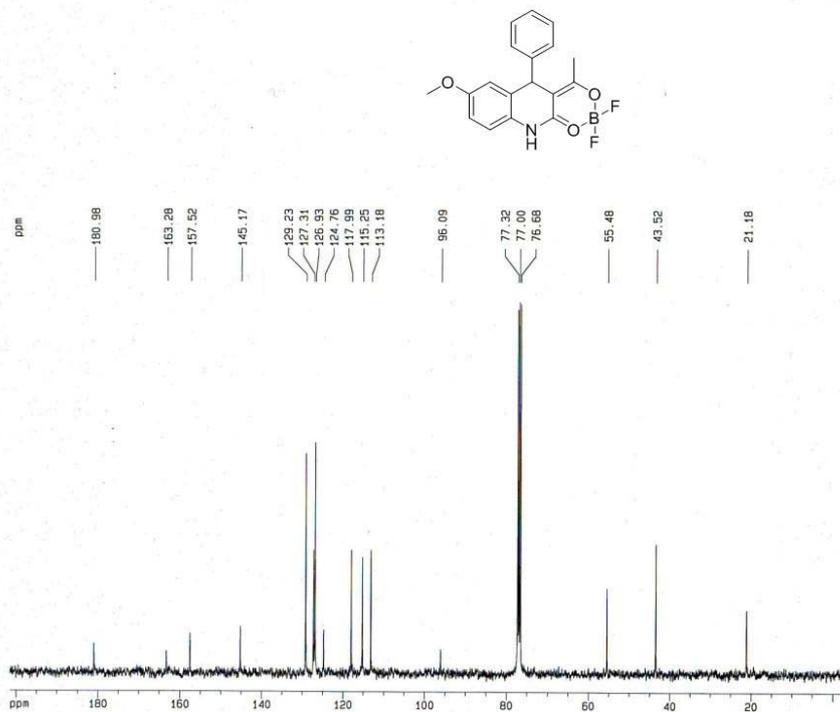
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2g



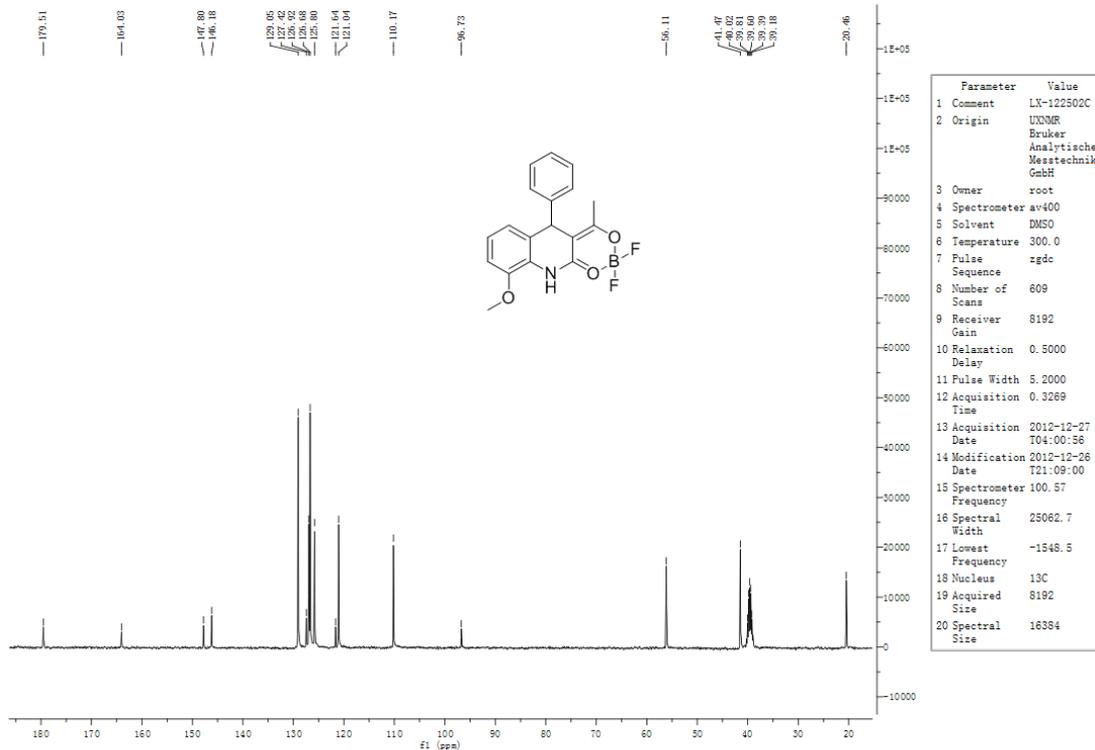
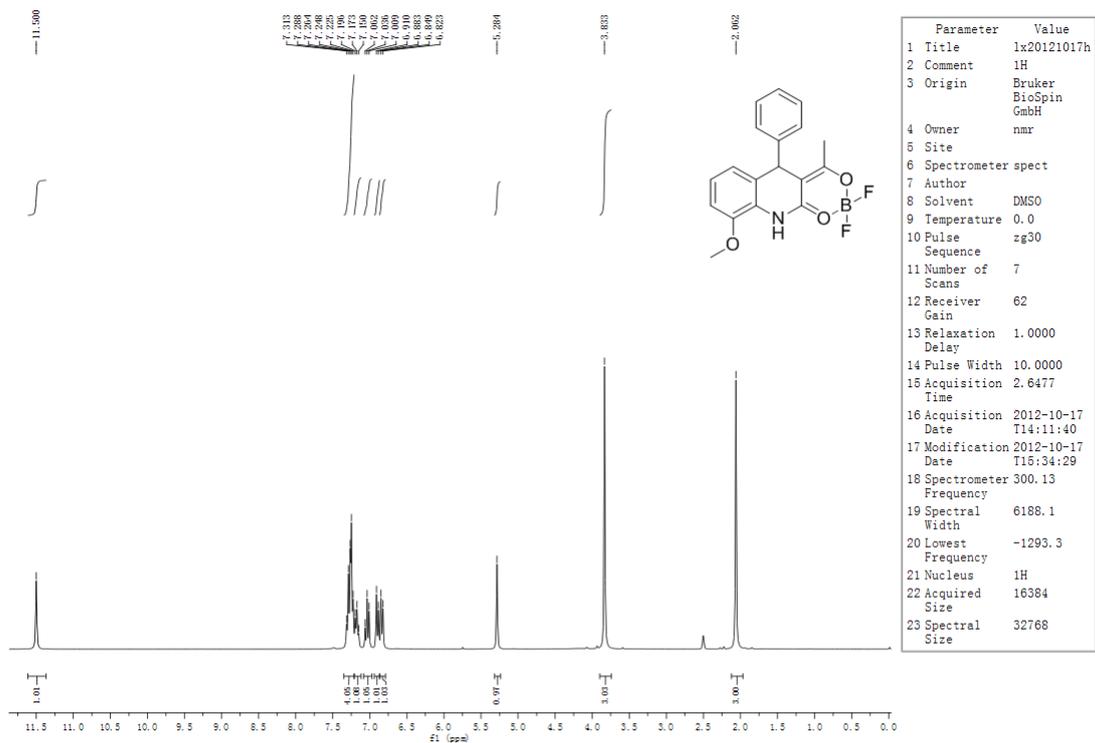
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4 Owner	nmr
5 Site	
6 Spectrometer	spect
7 Author	
8 Solvent	DMSO
9 Temperature	0.0
10 Pulse	zg30
Sequence	
11 Number of Scans	9
12 Receiver Gain	193
13 Relaxation Delay	1.0000
14 Pulse Width	10.0000
15 Acquisition Time	2.6477
16 Acquisition Date	2012-08-22 14:48:28
17 Modification Date	2012-08-22 16:28:57
18 Spectrometer Frequency	300.13
19 Spectral Width	6188.1
20 Lowest Frequency	-1293.3
21 Nucleus	1H
22 Acquired Size	16384
23 Spectral Size	32768

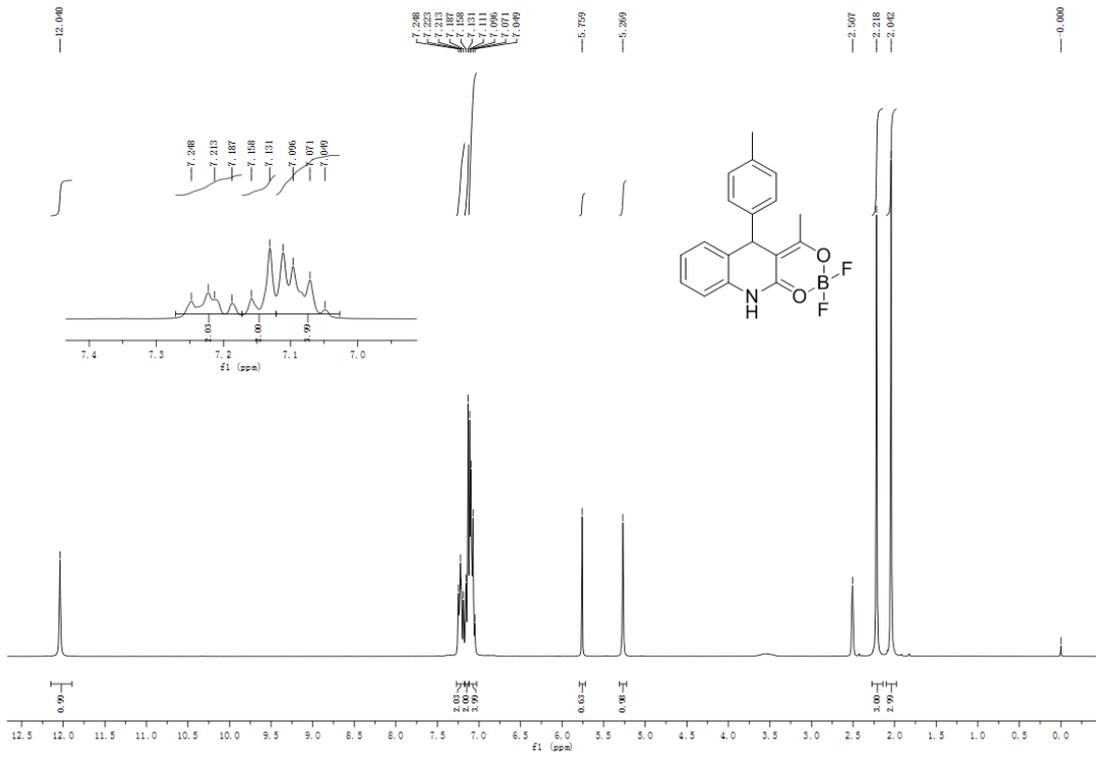


LX-082101C

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PULPROG	zgpg
TD	16384
SOLVENT	DMSO
NS	4463
DS	0
SWH	25062.656 Hz
FIDRES	1.529703 Hz
AQ	0.3269108 sec
RG	8192
DW	19.950 usec
DE	6.00 usec
TE	300.0 K
D1	0.50000000 sec
d11	0.03000000 sec
***** CHANNEL f1 *****	
NUC1	13C
P1	2.70 usec
PL1	-3.00 dB
SFO1	100.6261254 MHz
***** CHANNEL f2 *****	
CPDPRG2	waltz16
NUC2	1H
PCPD2	80.00 usec
PL2	-3.00 dB
PL12	18.20 dB
SFO2	399.9515998 MHz
F2 - Processing parameters	
SI	65536
SF	100.626110 MHz
WDW	EM
SSB	0
LB	4.00 Hz
GB	0
PC	0.30
ID NMR plot parameters	
CX	22.00 cm
CY	10.00 cm
F1P	201.587 ppm
F1	20267.04 Hz
F2P	-2.271 ppm
F2	-228.38 Hz
FREQM	9.25353 ppm/cm
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2h





LX-101003

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EXPNO 9
PROCNO 1

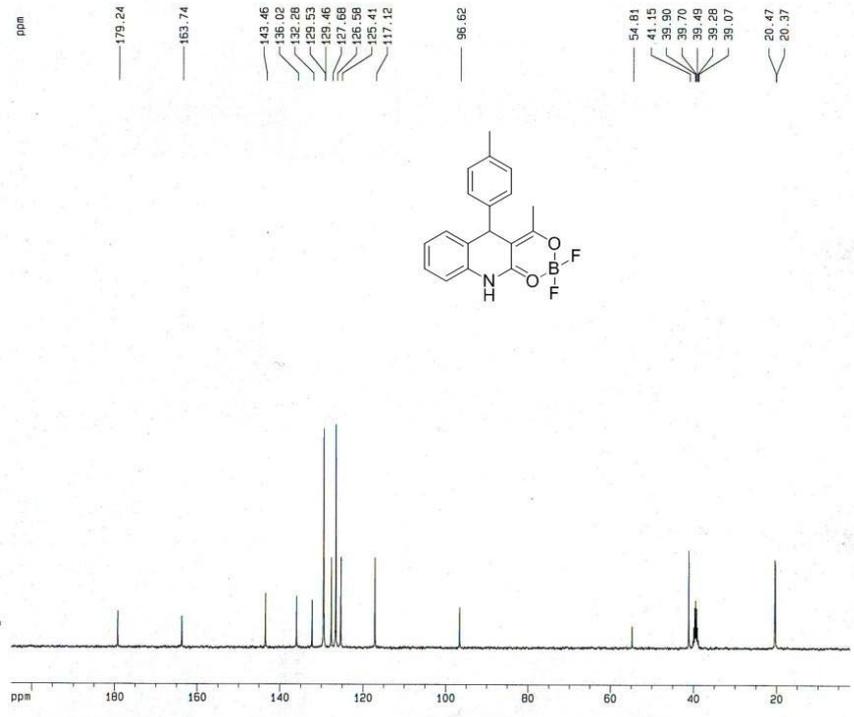
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Time 23.04
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TD 65536
SOLVENT DMSO
NS 118
DS 4
SMH 25125.629 Hz
FIDRES 1.533947 Hz
AQ 0.3262916 sec
RG 4096
DW 19.900 usec
DE 6.00 usec
TE 300.0 K
D1 0.6000002 sec
g11 0.0300000 sec

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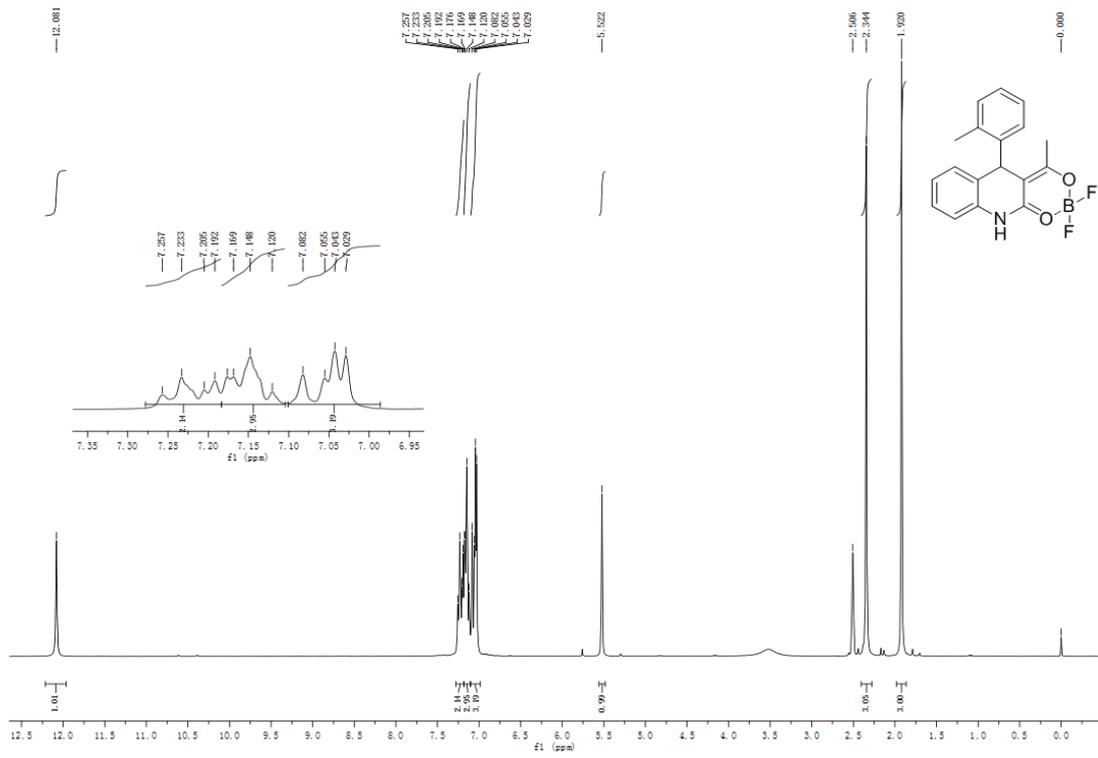
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CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -3.00 dB
PL12 17.37 dB
SFO2 399.9611959 MHz

F2 - Processing parameters
SI 16384
SF 100.6261195 MHz
WDW EM
SSB 0
LB 4.00 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 22.00 cm
CY 6.00 cm
F1P 204.993 ppm
F1 20615.63 Hz
F2P 2.252 ppm
F2 226.50 Hz
PPH2 9.21946 ppm/cm
KCM 926.77869 Hz/cm
    
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2j



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Current Data Parameters
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PROCNO       1

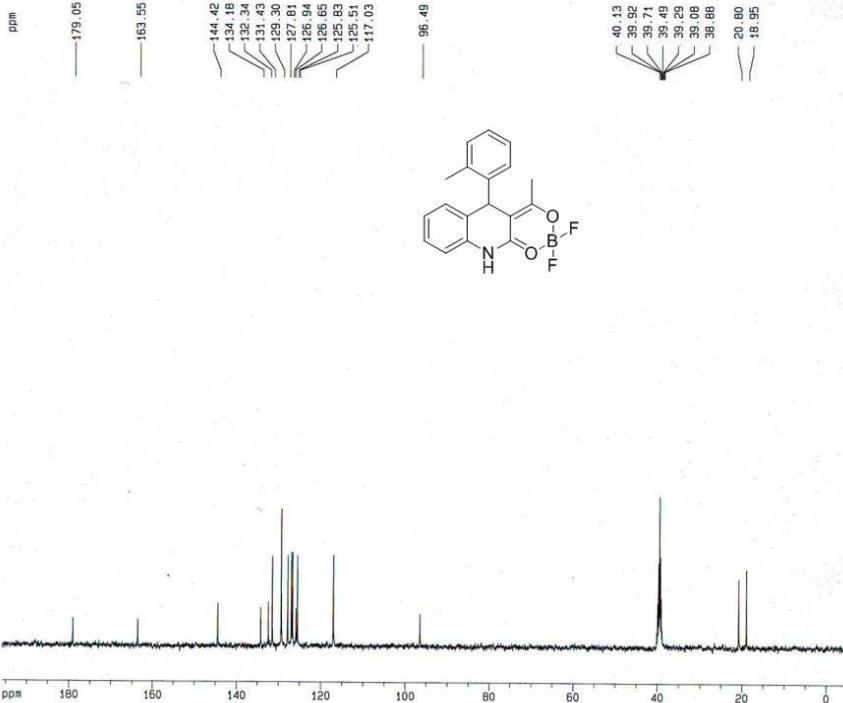
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Time         23.12
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TD           65536
SOLVENT      DMSO
NS           73
DS           4
SWH          25125.829 Hz
FIDRES       1.533947 Hz
AQ           0.3860916 sec
RG           4096
DM           19.900 usec
DE           6.00 usec
TE           300.2 K
D1           0.50000002 sec
d11          0.03000000 sec

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NUC1         13C
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PL1          -3.00 dB
SFO1        100.6251994 MHz

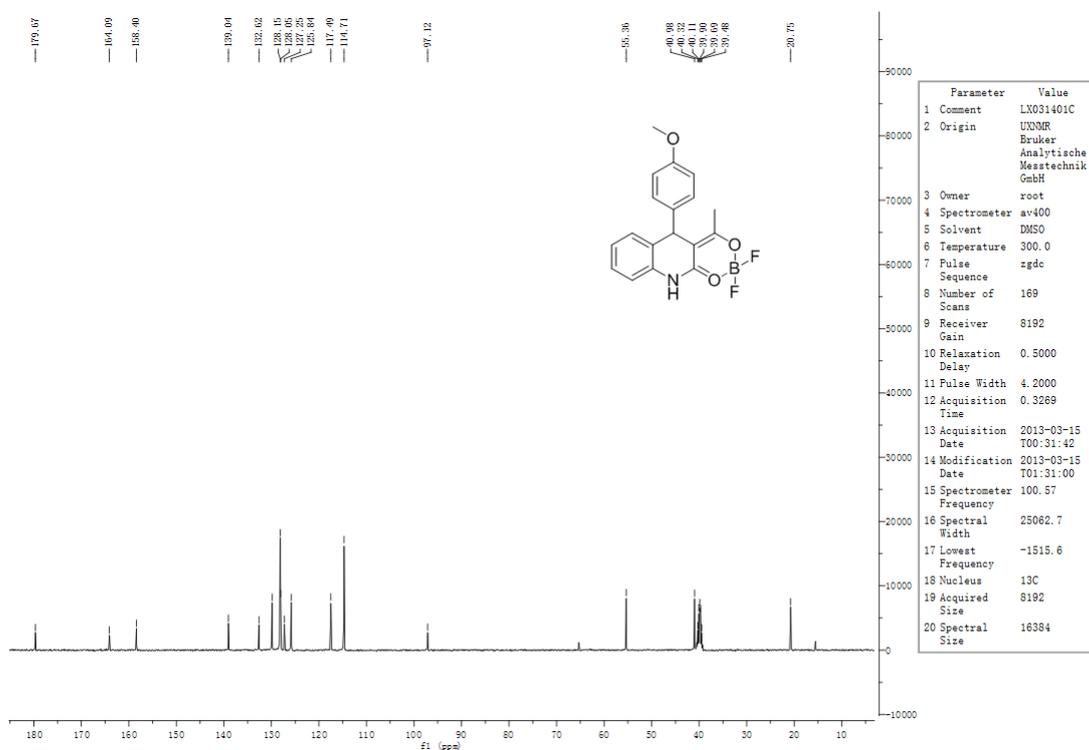
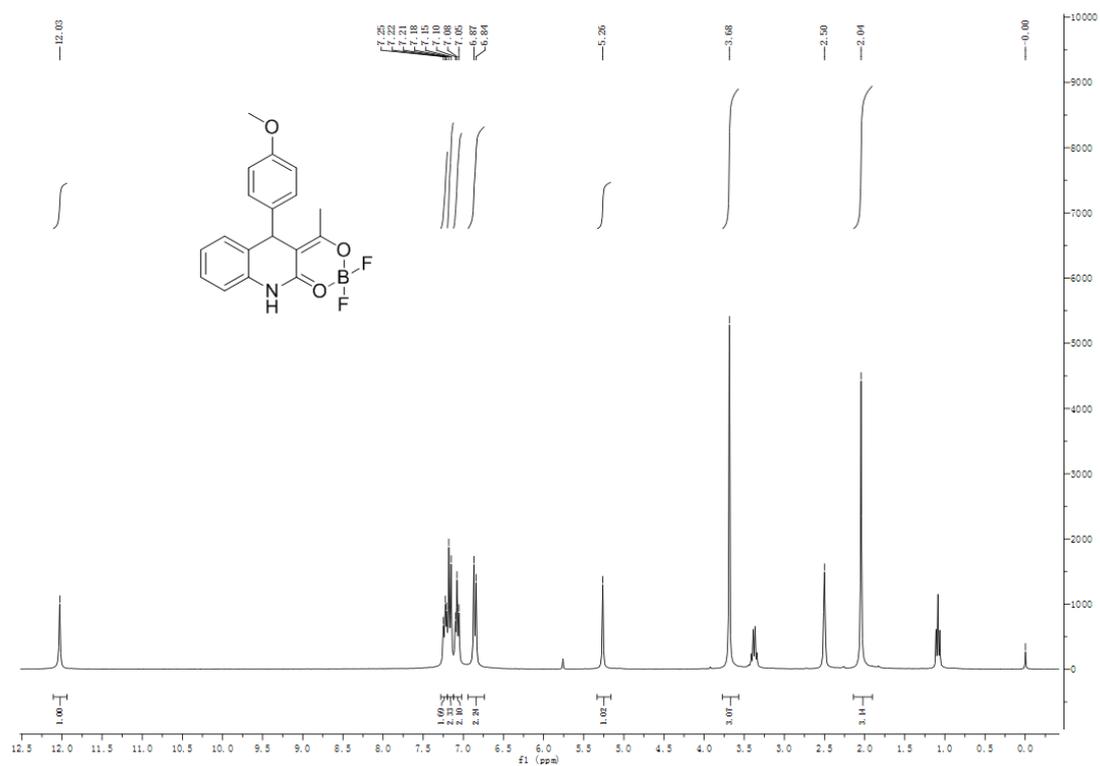
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NUC2         1H
PCPD2        80.00 usec
PL2          -3.00 dB
PL12         17.37 dB
SFO2        399.9511999 MHz

F2 - Processing parameters
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WDW          EM
SSB          0
LB           4.00 Hz
GB           0
PC           1.00

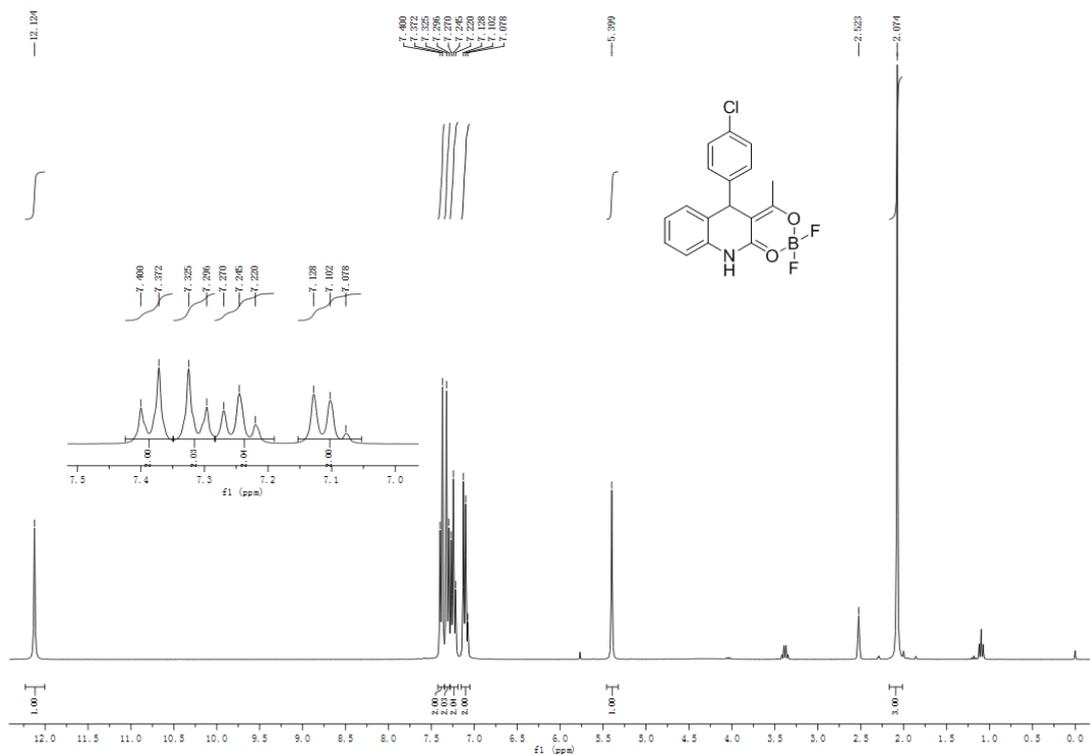
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CY           4.00 cm
F1P         19899.07 Hz
F2P         -3.989 ppm
F2          -401.03 Hz
FPMCW       9.08168 ppm/cn
HZCM        913.32275 Hz/cn
  
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2k



Parameter	Value
1 Comment	LX031401C
2 Origin	UNMR Bruker Analytische Messtechnik GmbH
3 Owner	root
4 Spectrometer	av400
5 Solvent	DMSO
6 Temperature	300.0
7 Pulse Sequence	zgdc
8 Number of Scans	169
9 Receiver Gain	8192
10 Relaxation Delay	0.5000
11 Pulse Width	4.2000
12 Acquisition Time	0.3289
13 Acquisition Date	2013-03-15 T00:31:42
14 Modification Date	2013-03-15 T01:31:00
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16 Spectral Width	25082.7
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18 Nucleus	13C
19 Acquired Size	8192
20 Spectral Size	16384



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 PROCNO 1

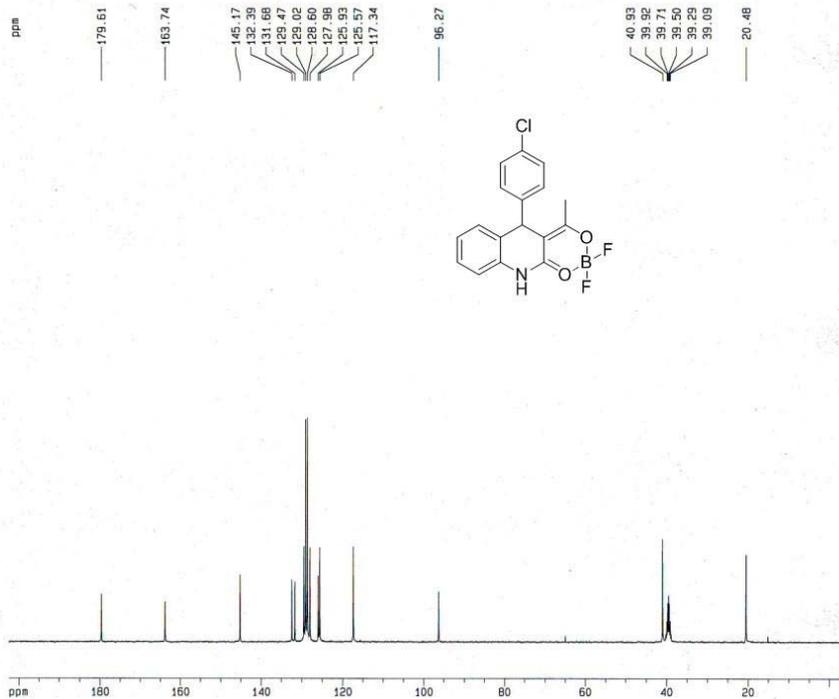
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 Time 23.07
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 TD 16384
 SOLVENT DMSO
 NS 427
 DS 4
 SWH 25125.620 Hz
 FIDRES 1.532547 Hz
 AQ 0.326916 sec
 RG 4096
 DW 19.500 usec
 DE 6.00 usec
 TE 300.0 K
 D1 0.6000002 sec
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 PL1 -3.00 dB
 SFO1 100.5785294 MHz

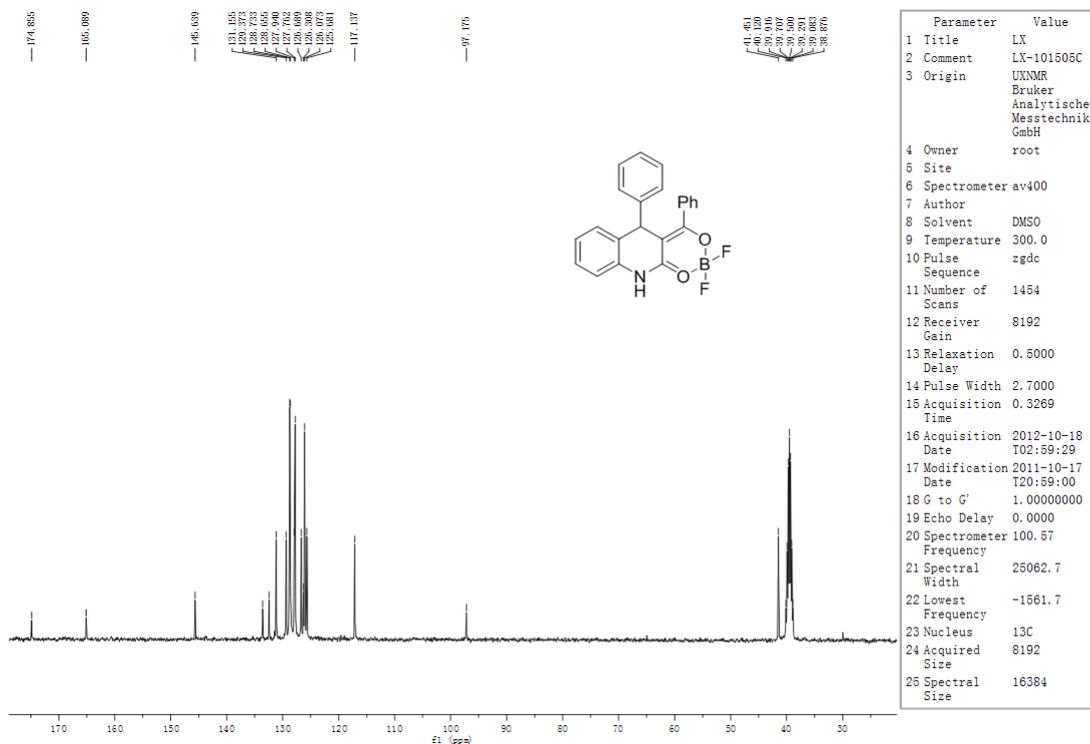
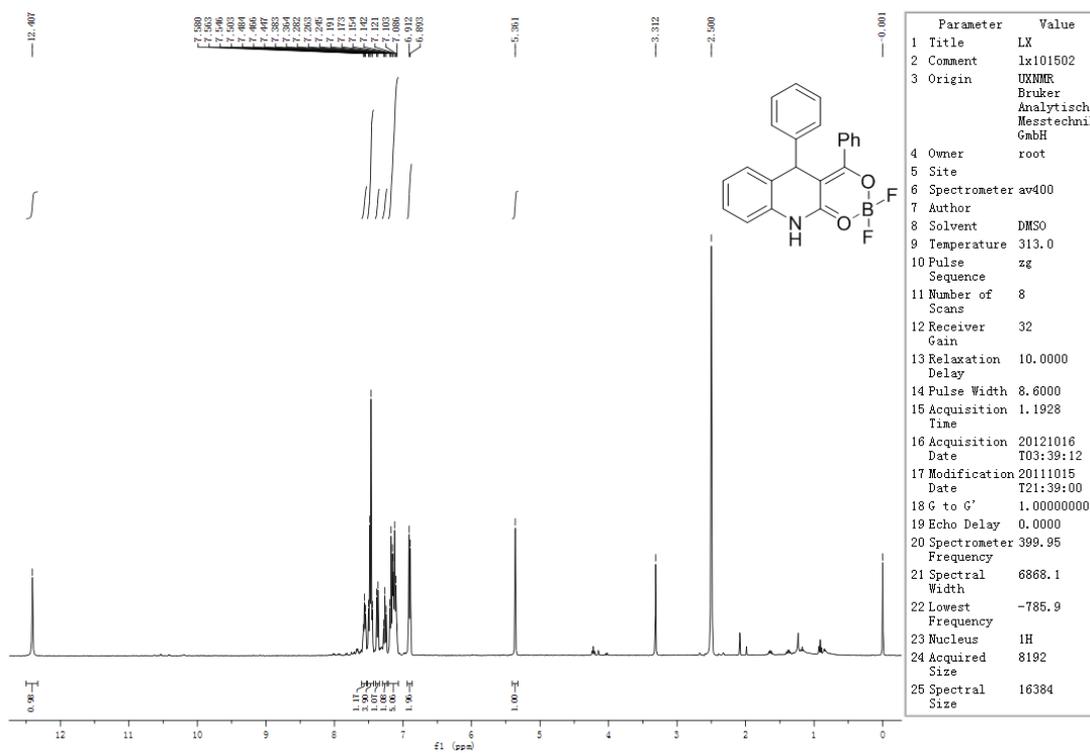
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 NUC2 1H
 PCPD2 80.00 usec
 PL2 -3.00 dB
 PL12 17.37 dB
 SFO2 399.9511939 MHz

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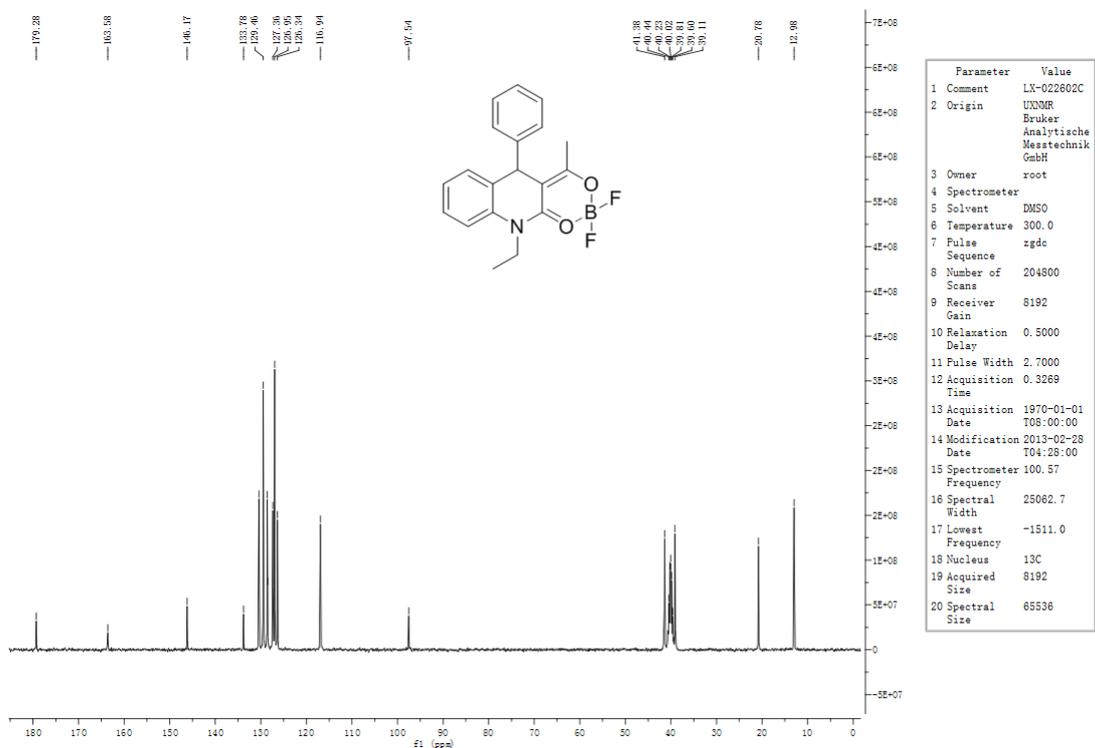
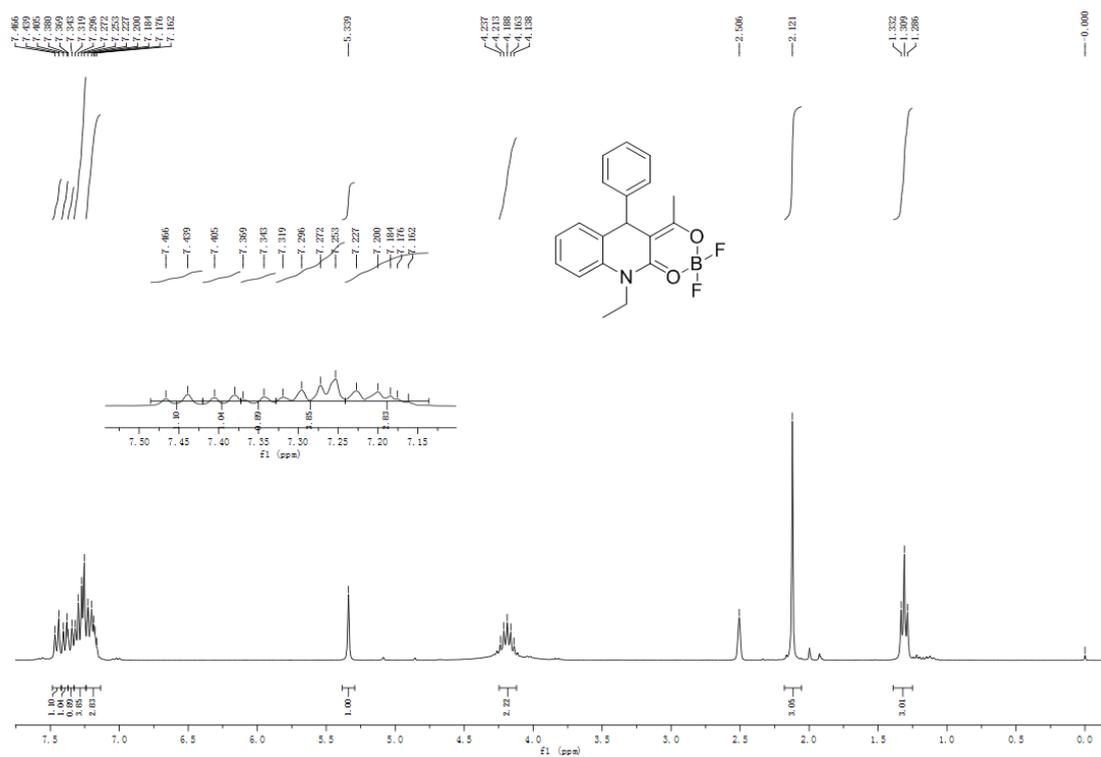
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 F2 -285.42 Hz
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 HZCM 398.55273 Hz/cm



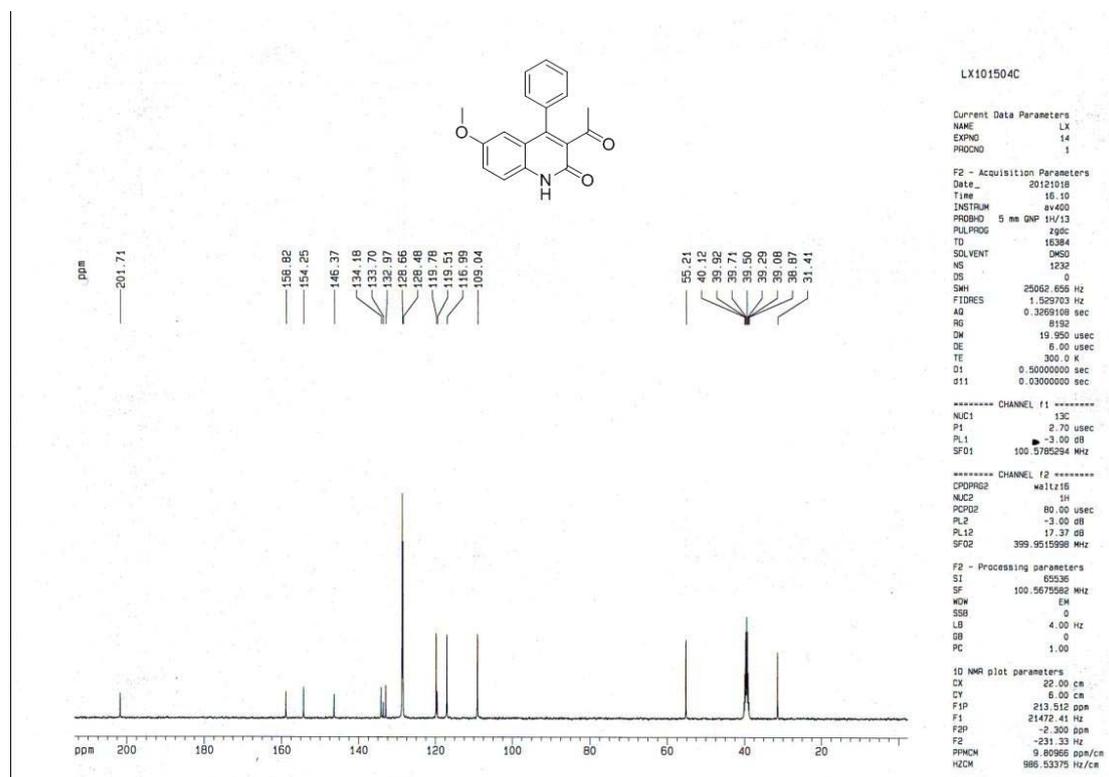
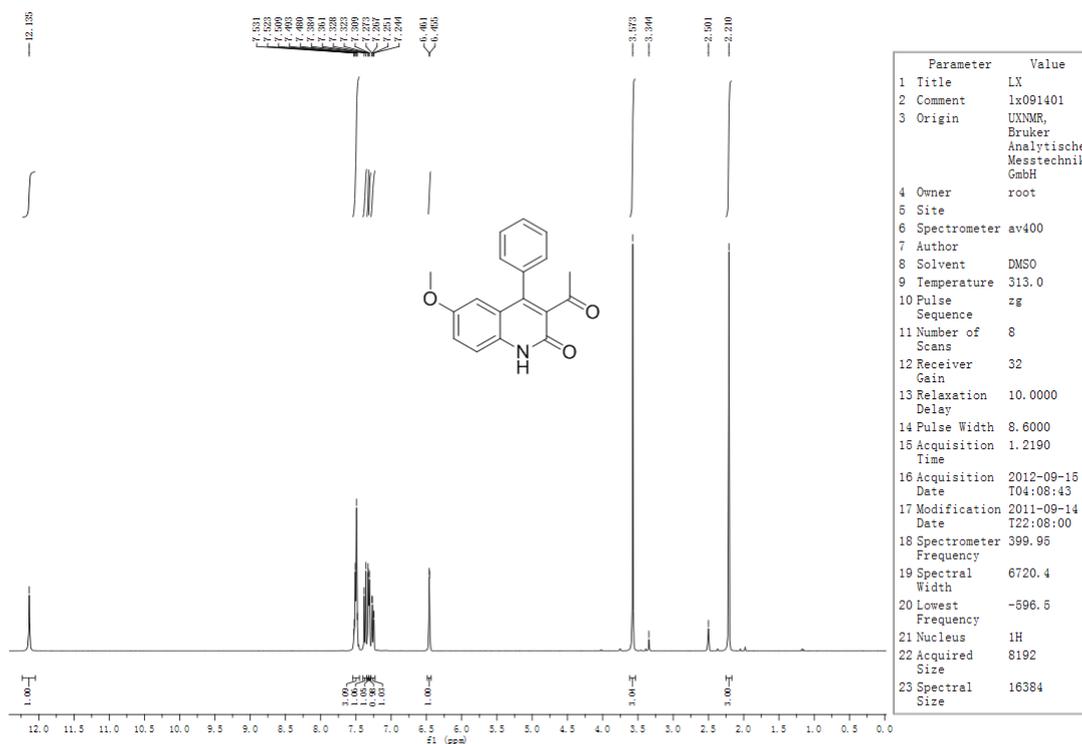
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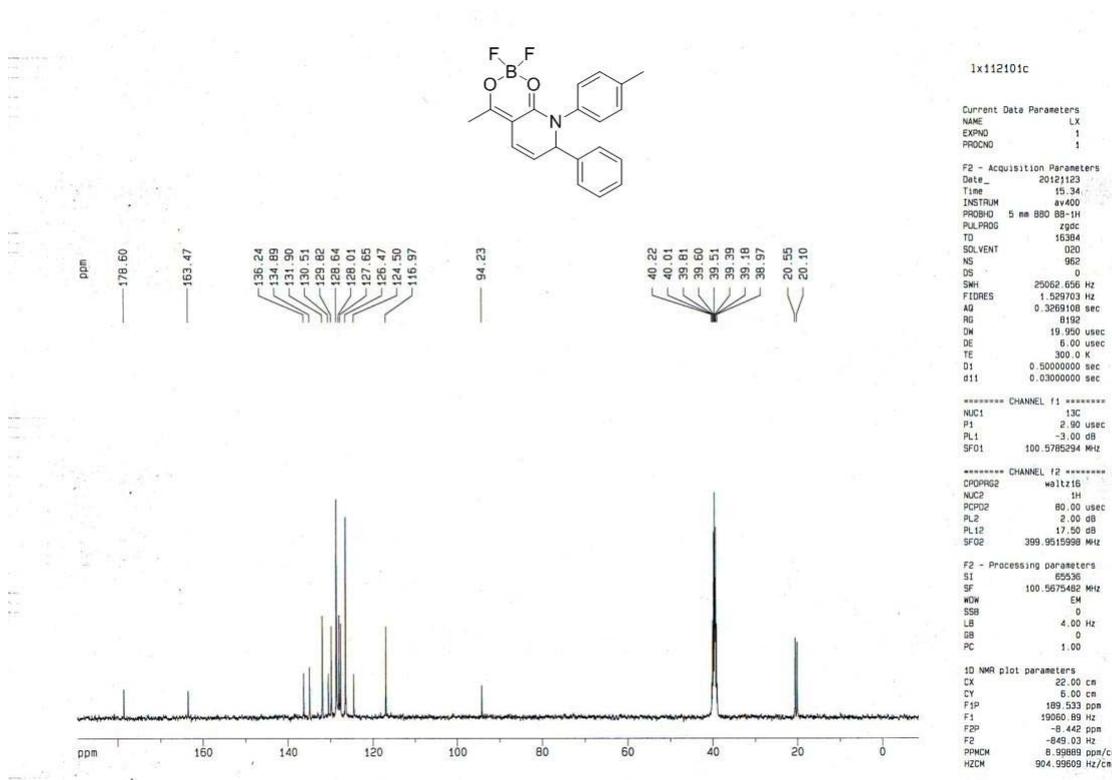
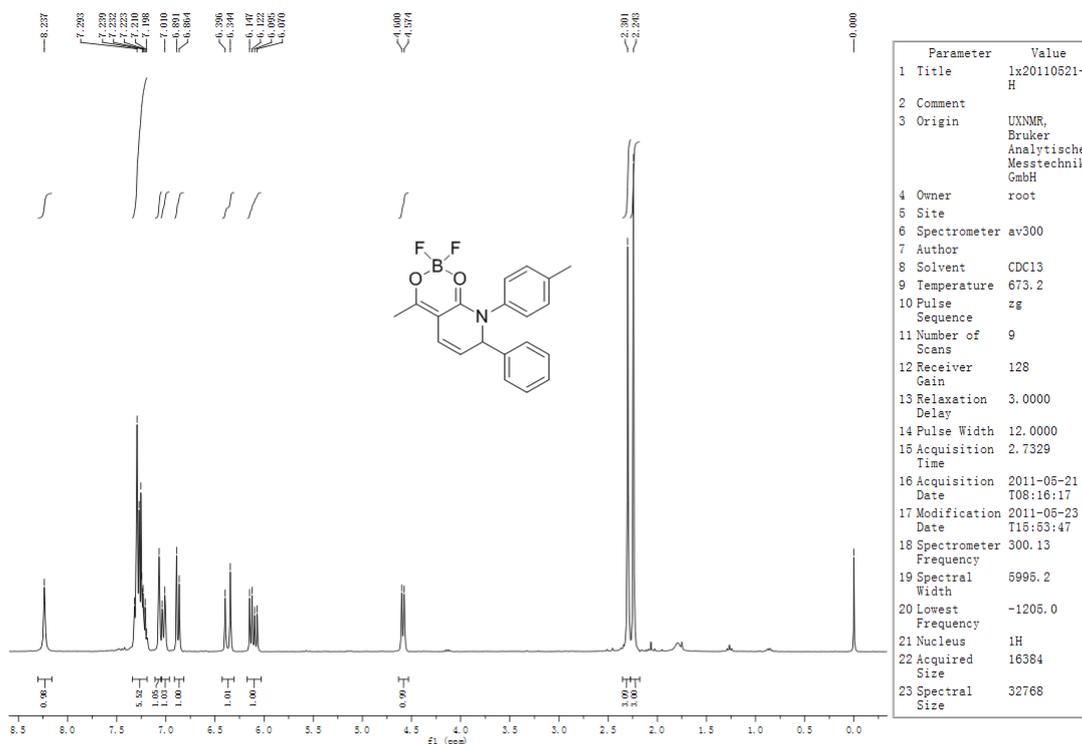
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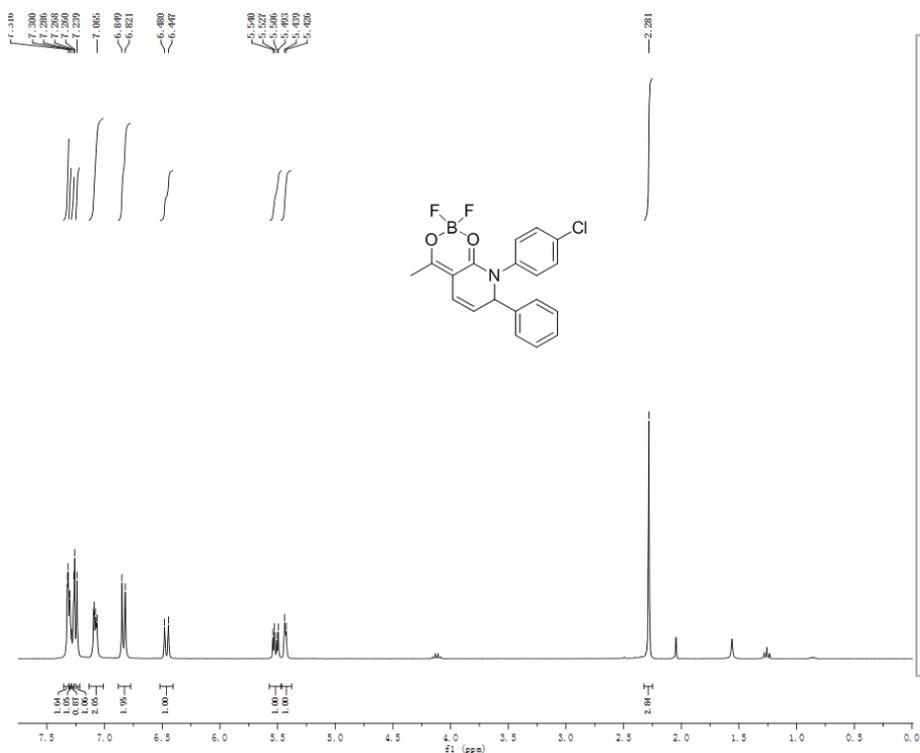
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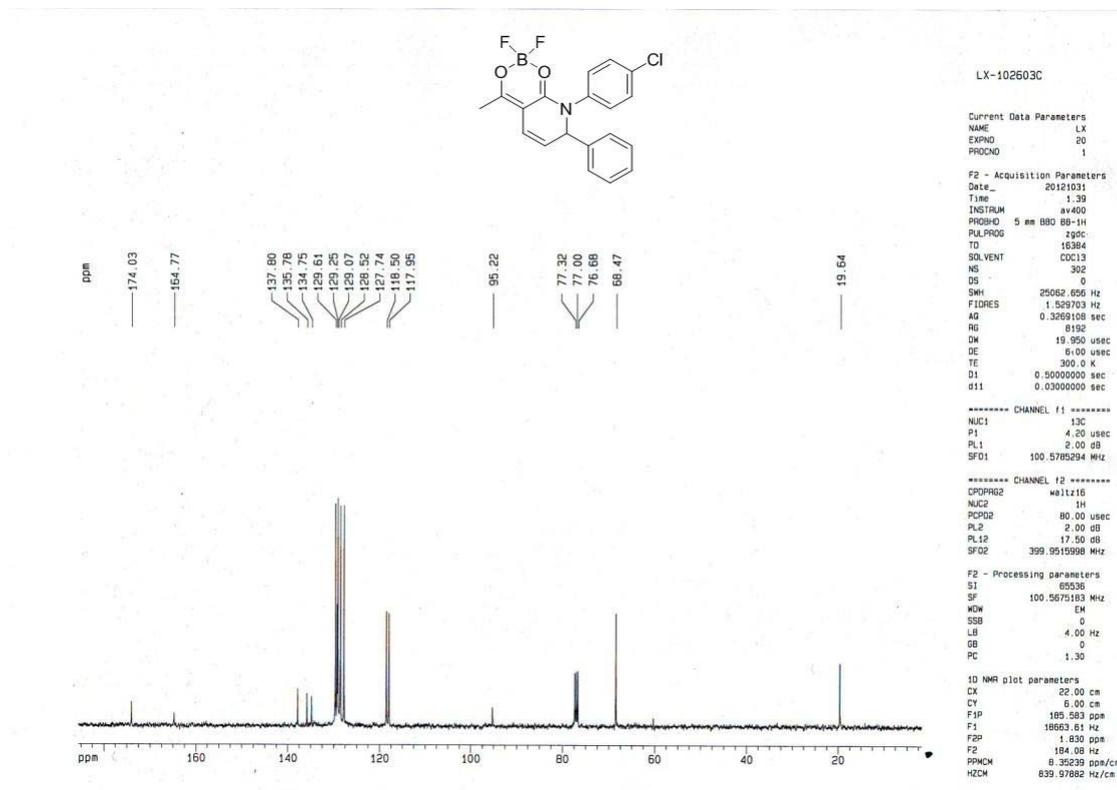
5a



5b



Parameter	Value
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4 Owner	nmr
5 Site	
6 Spectrometer	spect
7 Author	
8 Solvent	CDC13
9 Temperature	0.0
10 Pulse Sequence	zg30
11 Number of Scans	10
12 Receiver Gain	193
13 Relaxation Delay	1.0000
14 Pulse Width	10.0000
15 Acquisition Time	2.6477
16 Acquisition Date	2012-10-31 13:03:03
17 Modification Date	2012-10-31 13:20
18 Spectrometer Frequency	300.13
19 Spectral Width	6188.1
20 Lowest Frequency	-1299.3
21 Nucleus	1H
22 Acquired Size	16384
23 Spectral Size	32768



LX-102603C

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EXPNO 20
PROCNO 1

F2 - Acquisition Parameters

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PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 302
DS 0
SWH 25062.656 Hz
FIDRES 1.529703 Hz
AQ 0.3269108 sec
RG 8192
DM 19.950 usec
DE 0.00 usec
TE 300.0 K
D1 0.5000000 sec
dS1 0.03000000 sec

***** CHANNEL f1 *****

NUC1 13C
P1 4.20 usec
PL1 2.00 dB
SFO1 100.6261200 MHz

***** CHANNEL f2 *****

CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 2.00 dB
PL12 17.50 dB
SFO2 399.9915998 MHz

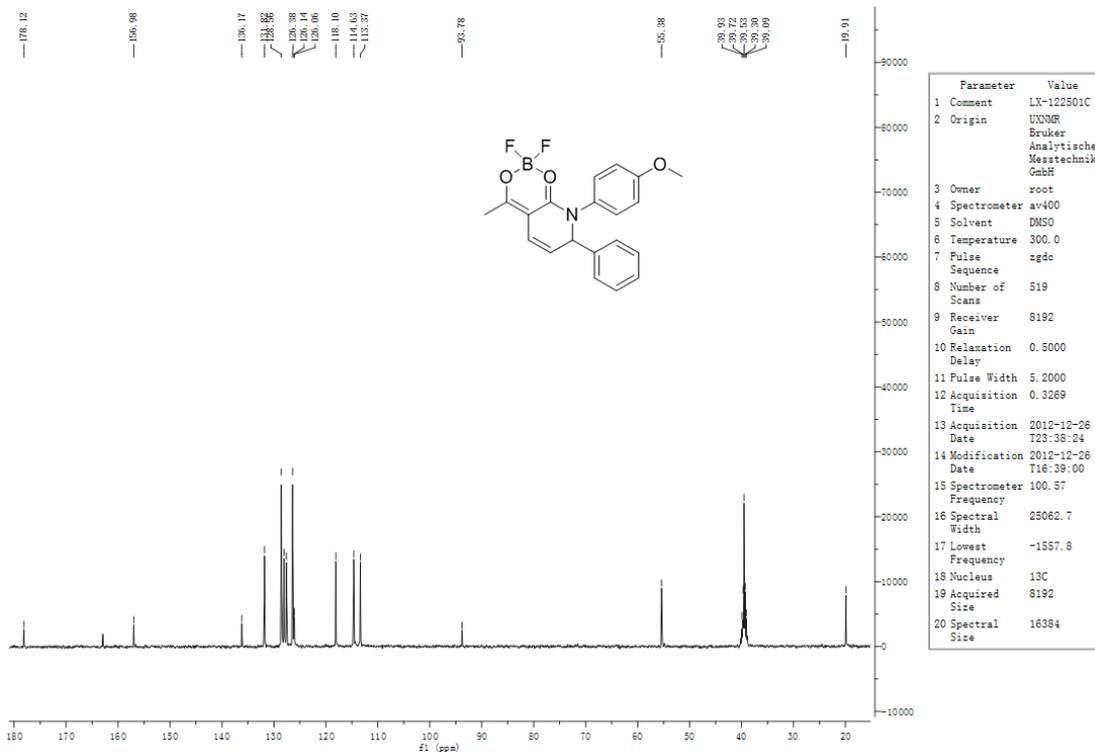
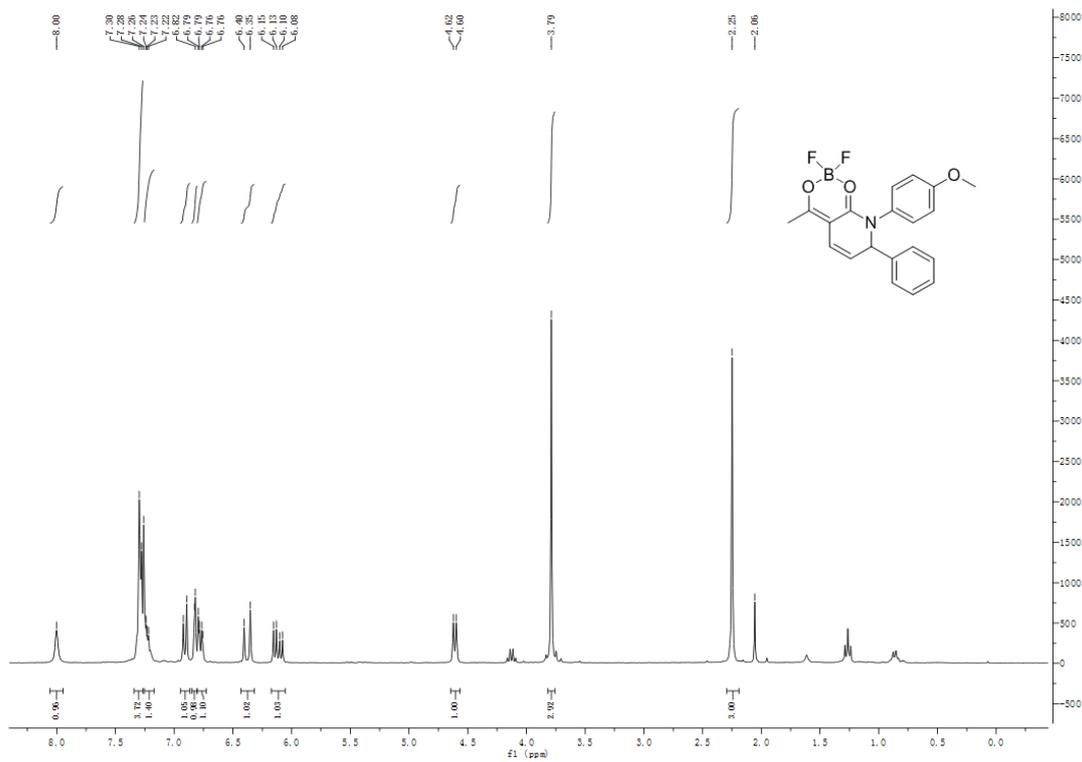
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LB 4.00 Hz
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PC 1.30

ID NMR plot parameters

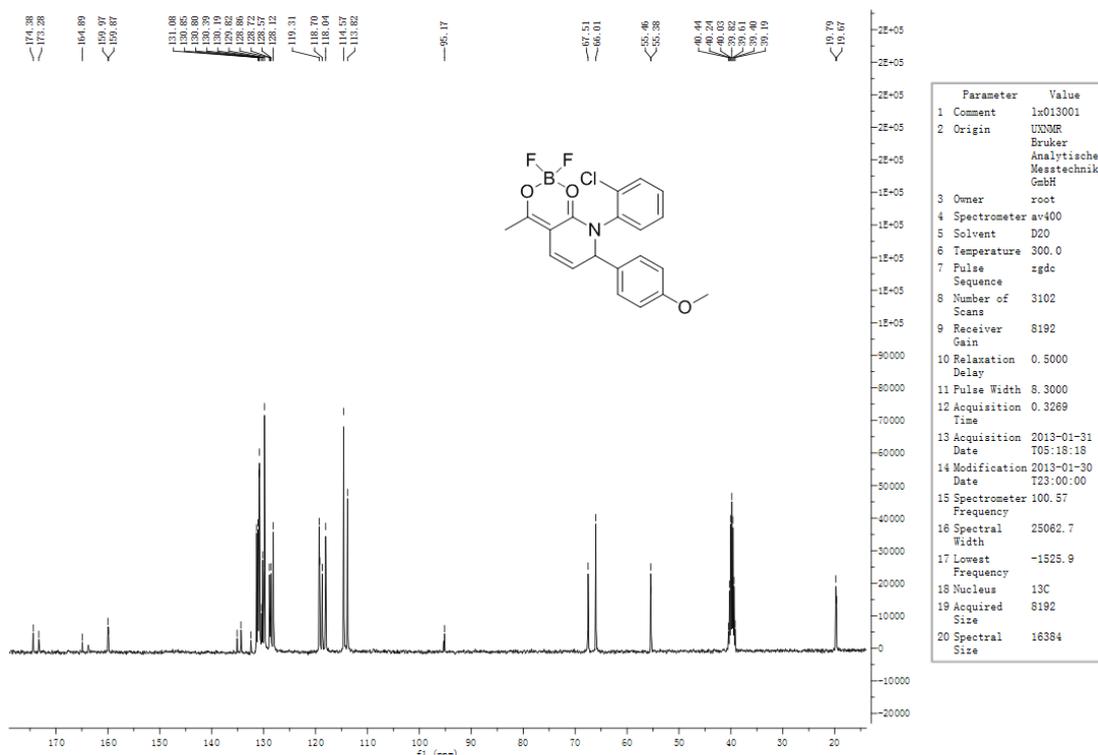
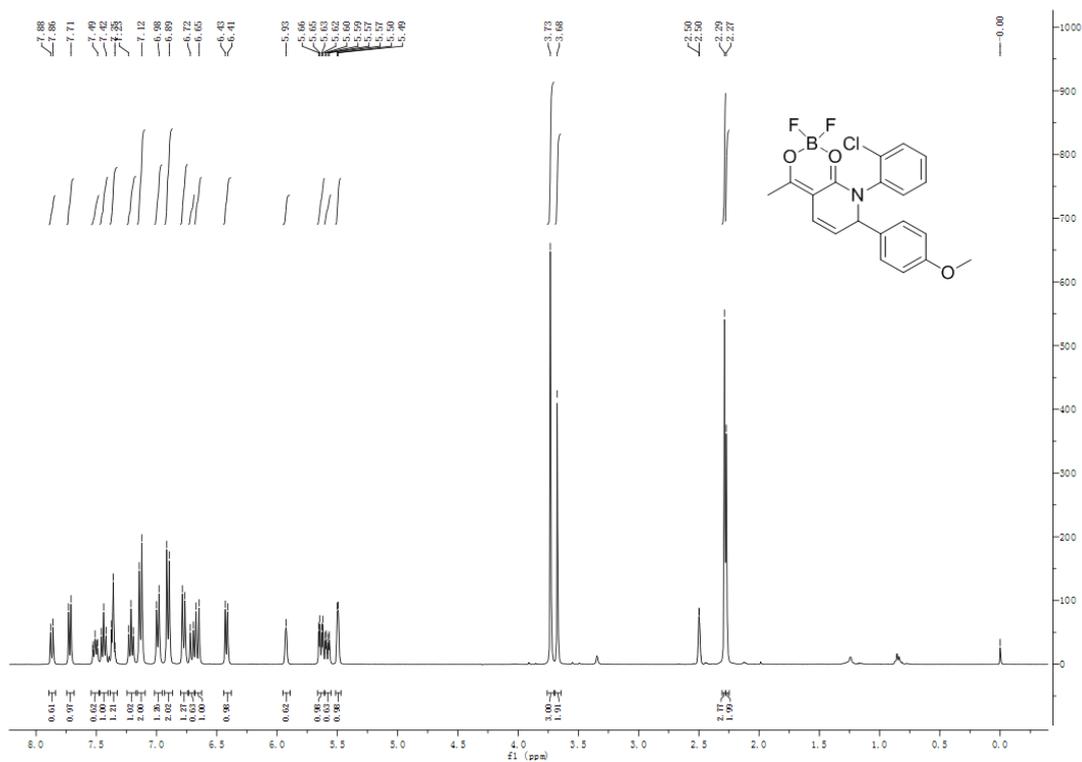
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F1 18663.81 Hz
F2P 184.08 Hz
F2 18500.00 Hz
PPMCM 8.35239 ppm/cm
HZCM 839.97882 Hz/cm

5c

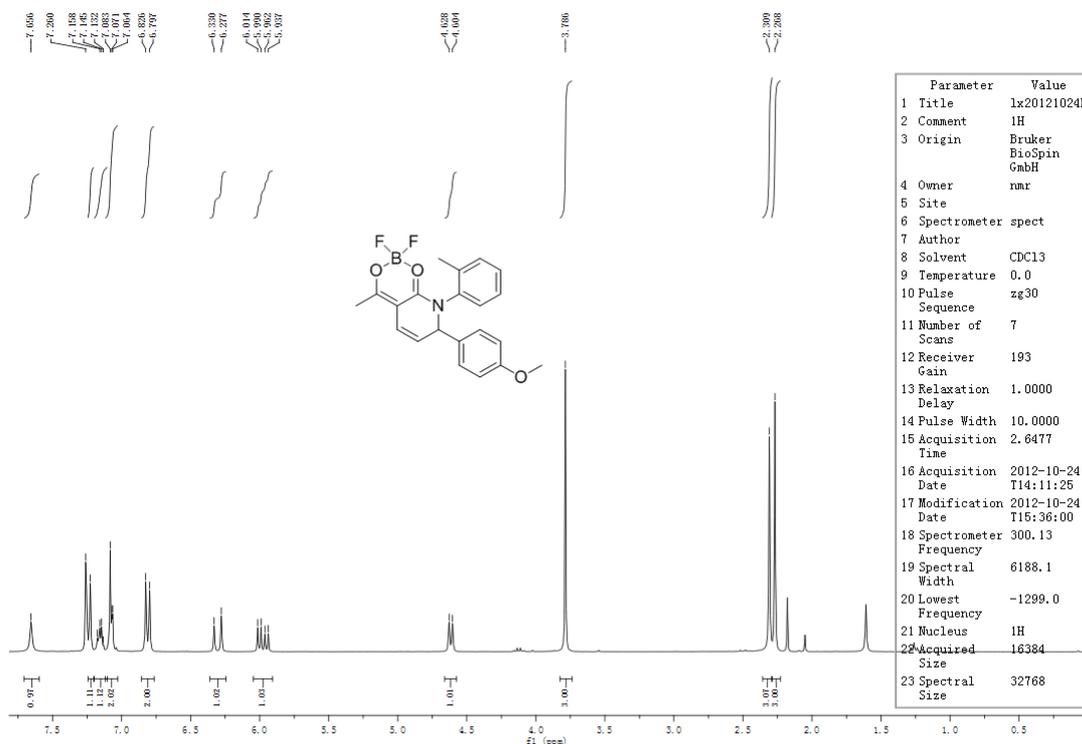


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	Analytische
	Messtechnik
	GmbH
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7 Pulse Sequence	zgdc
8 Number of Scans	519
9 Receiver Gain	8192
10 Relaxation Delay	0.5000
11 Pulse Width	5.2000
12 Acquisition Time	0.3289
13 Acquisition Date	2012-12-26
	T23:38:24
14 Modification Date	2012-12-26
	T16:39:00
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19 Acquired Size	8192
20 Spectral Size	16384

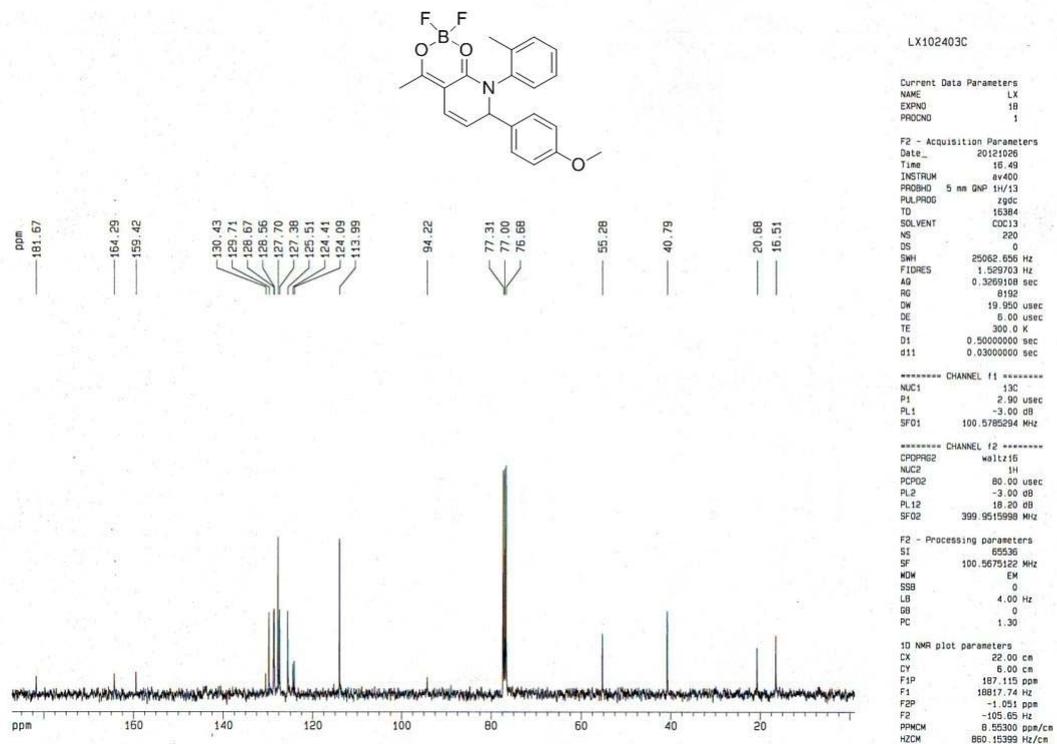
5d



5e



Parameter	Value
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2 Comment	1H
3 Origin	Bruker BioSpin GmbH
4 Owner	nmr
5 Site	
6 Spectrometer	spect
7 Author	
8 Solvent	CDC13
9 Temperature	0.0
10 Pulse Sequence	zg30
11 Number of Scans	7
12 Receiver Gain	193
13 Relaxation Delay	1.0000
14 Pulse Width	10.0000
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16 Acquisition Date	2012-10-24 T14:11:25
17 Modification Date	2012-10-24 T15:36:00
18 Spectrometer Frequency	300.13
19 Spectral Width	6188.1
20 Lowest Frequency	-1299.0
21 Nucleus	1H
22 Acquired Size	16384
23 Spectral Size	32768



LX102403C

Current Data Parameters

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PROCNO	1

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TD	16384
SOLVENT	CDCl3
NS	220
DS	0
SWH	25062.656 Hz
FIDRES	1.529703 Hz
AQ	0.3269108 sec
RG	8192
DW	19.950 usec
DE	6.00 usec
TE	300.0 K
D1	0.50000000 sec
d11	0.03000000 sec

***** CHANNEL f1 *****

NUC1	13C
PL1	2.90 usec
PL12	-3.00 dB
SFO1	100.5785294 MHz

***** CHANNEL f2 *****

CPDPRG2	waltz16
NUC2	1H
PL2	80.00 usec
PL2	-3.00 dB
PL12	18.20 dB
SFO2	399.9515998 MHz

F2 - Processing parameters

SI	65536
SF	100.5675122 MHz
WDW	EK
SSB	0
LB	4.00 Hz
GB	0
PC	1.30

1D NMR plot parameters

CK	22.00 cm
CY	6.00 cm
F1P	187.115 ppm
F1	18817.74 Hz
F2P	-1.051 ppm
F2	-105.65 Hz
PRMCM	8.55300 ppm/cm
HZCM	860.15399 Hz/cm

5f

