

Gorlos-Phos for Palladium-Catalyzed Borylation of Aryl Chlorides

Pengbin Li, Chunling Fu, and Shengming Ma*

Laboratory of Molecular Recognition and Synthesis, Department of Chemistry,

Zhejiang University, Hangzhou 310027, Zhejiang, People's Republic of China

Fax: (+86) 21-6260-9305

E-mail: *masm@sioc.ac.cn*

¹ H NMR and ¹³ C NMR spectra of the products
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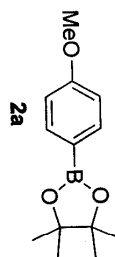
S2

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6.919
6.891

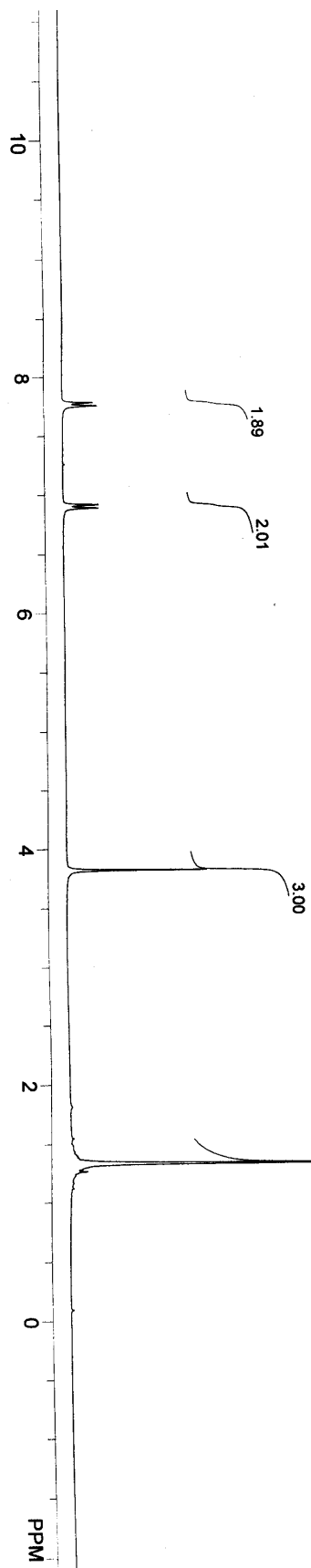
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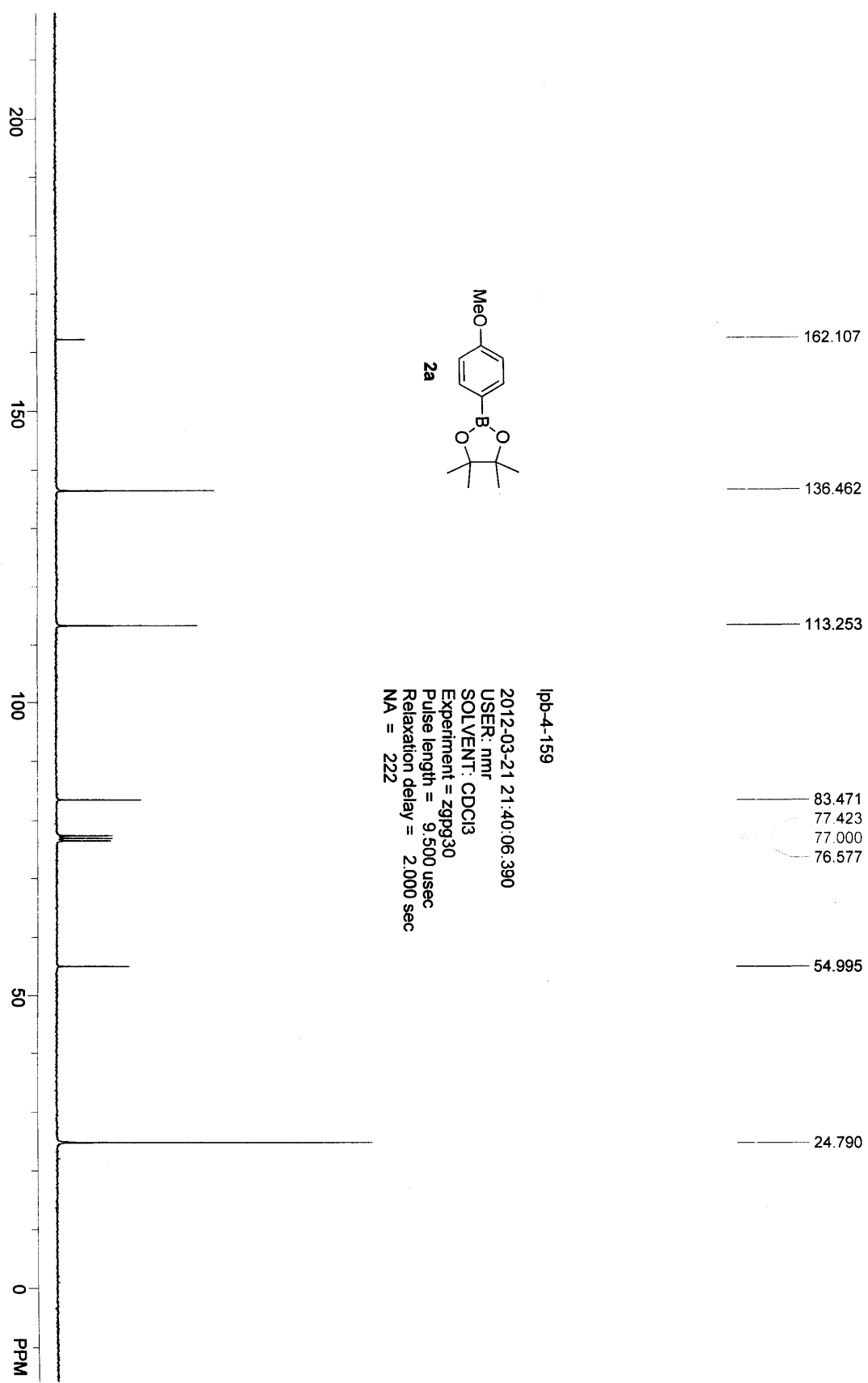
1.341

0.095



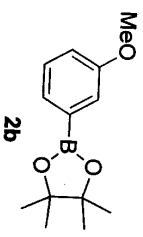
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SOLVENT: CDCl3
Experiment = zg30
Pulse length = 14.000 usec
Relaxation delay = 1.000 sec
NA = 8





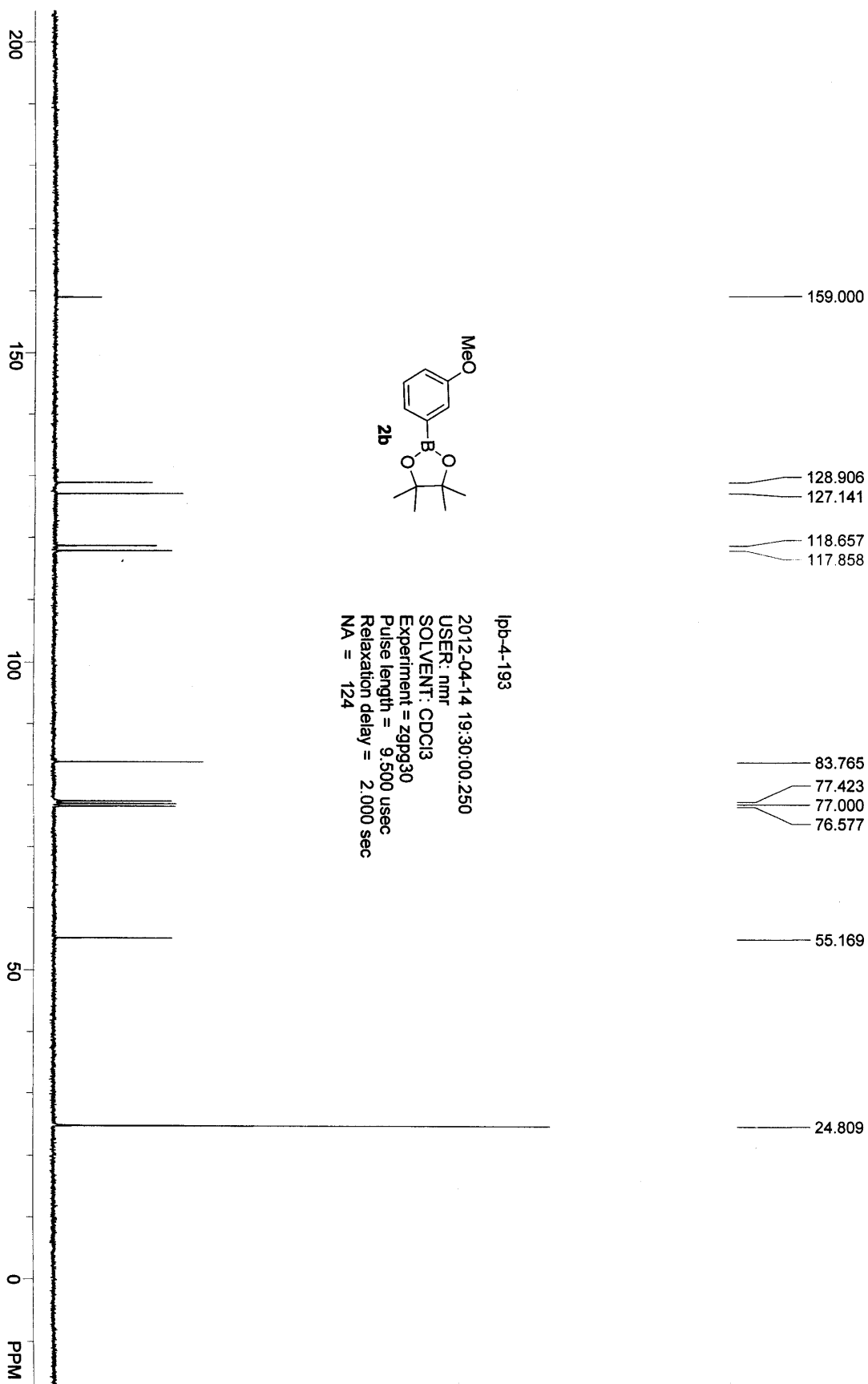
- 7.417
- 7.394
- 7.334
- 7.326
- 7.317
- 7.290
- 7.266
- 7.243
- 7.024
- 7.015
- 6.997
- 6.988

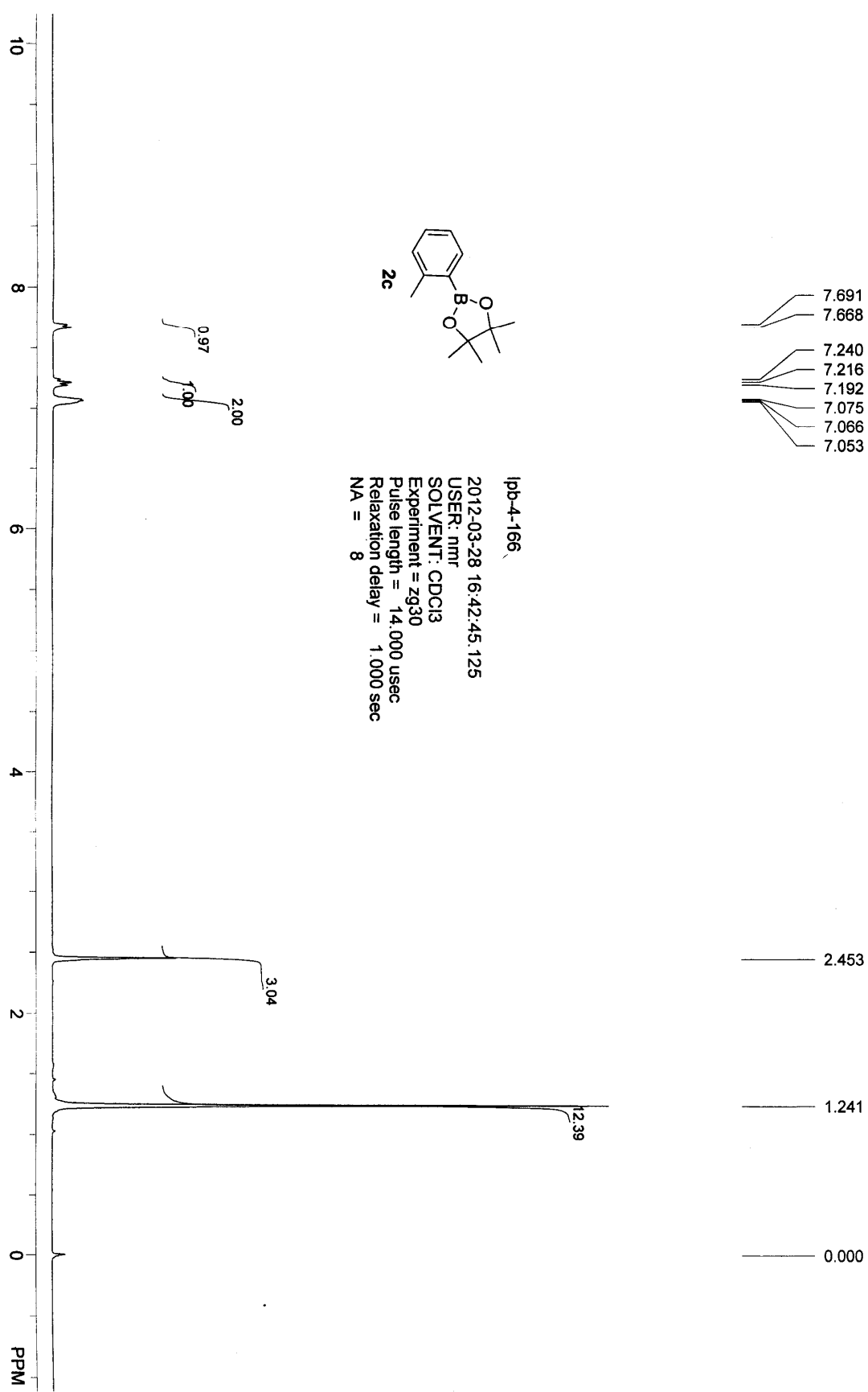
- 3.825
- 1.340
- 0.000



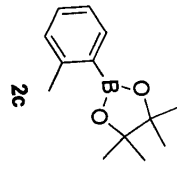
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 NA = 8







200
150
100
50
0 PPM

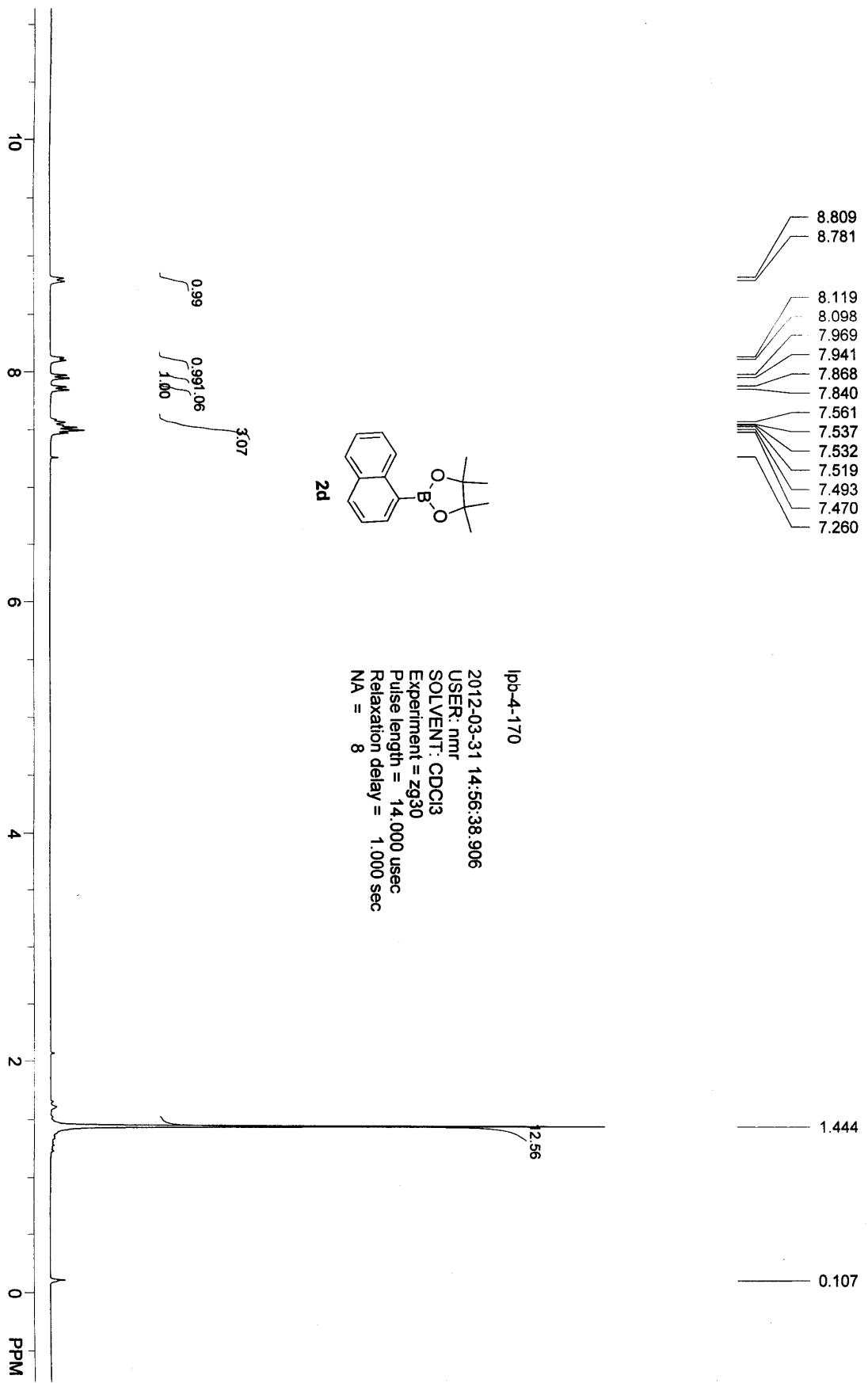


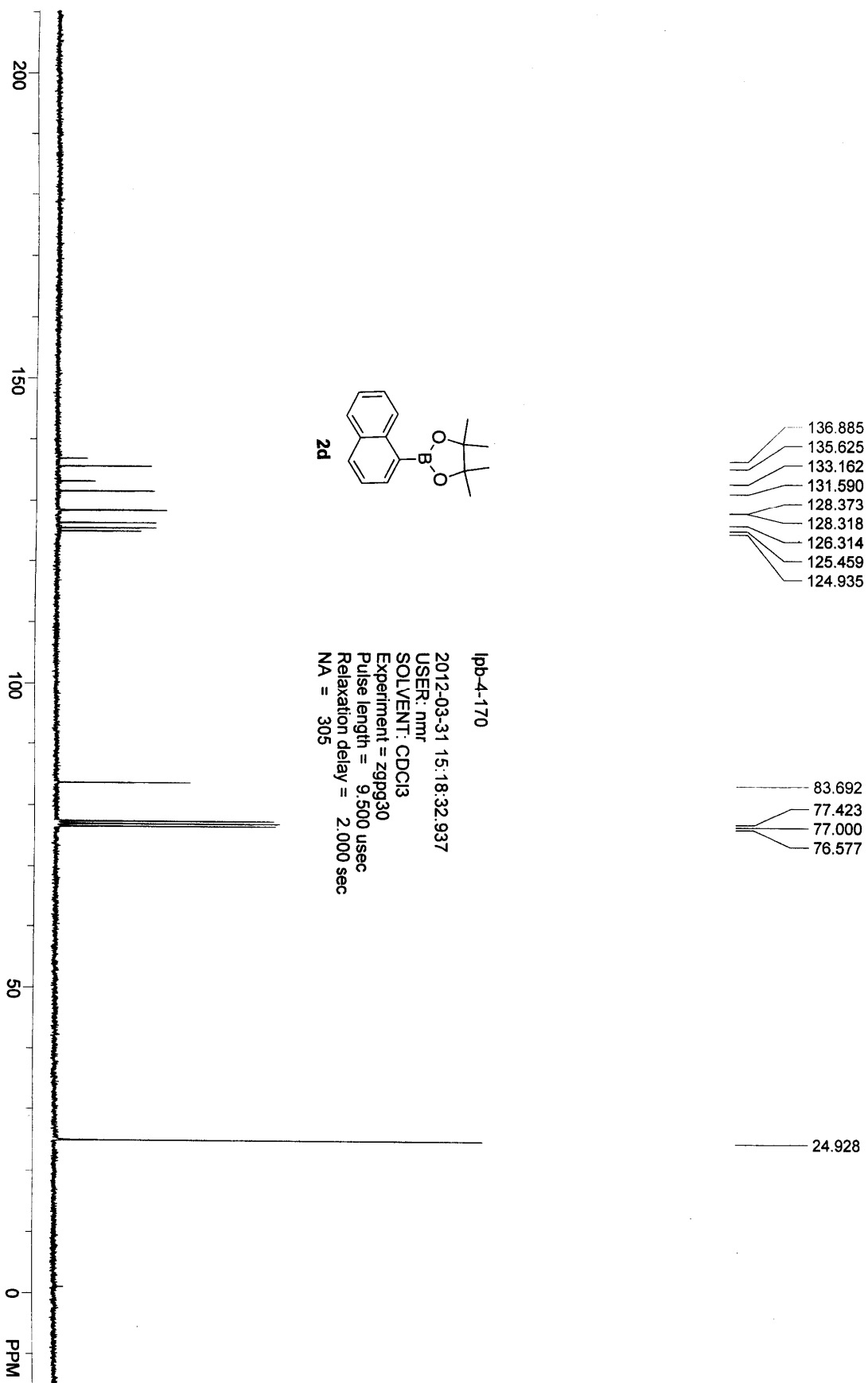
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NA = 87

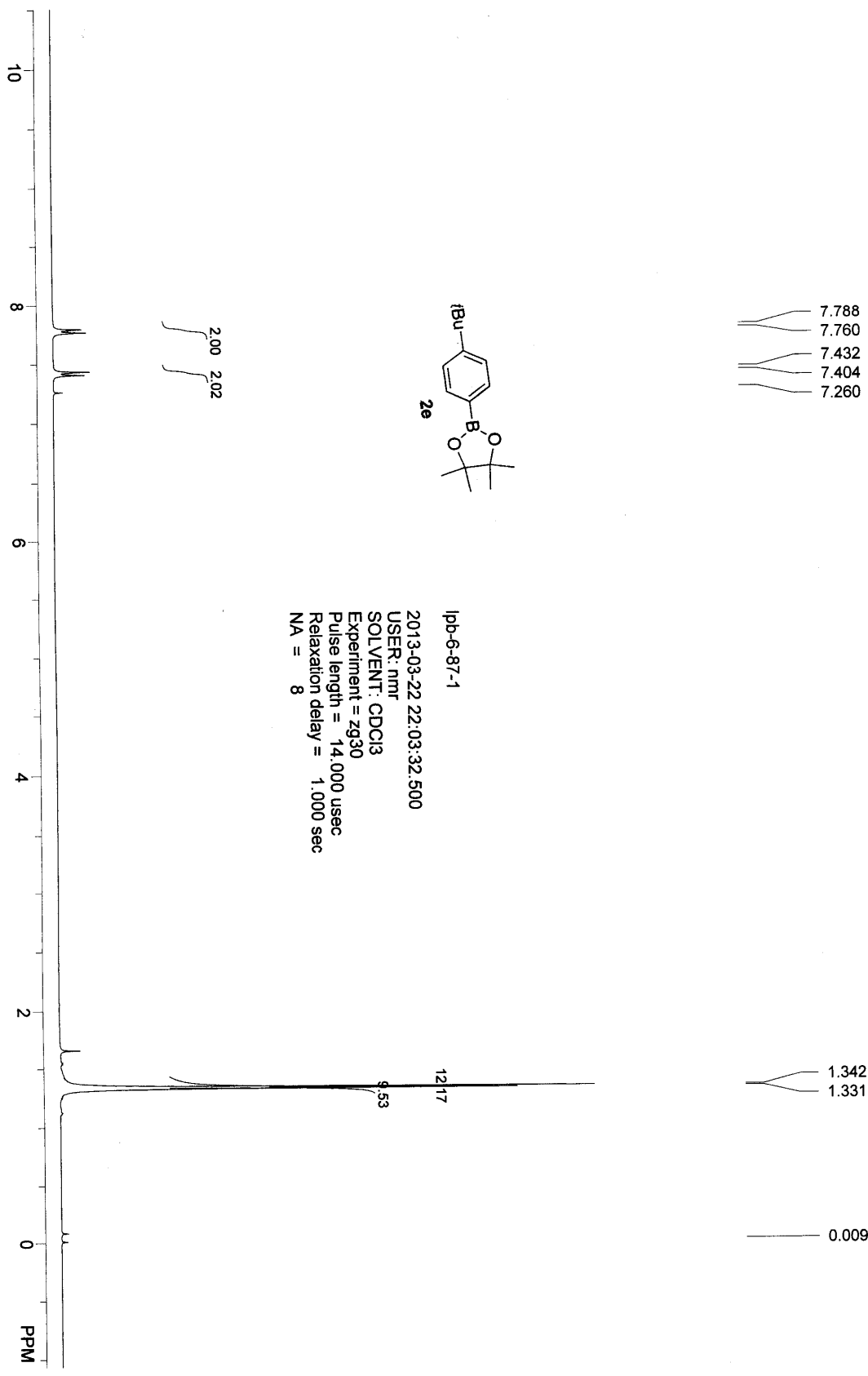
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135.843
130.760
129.739
124.665

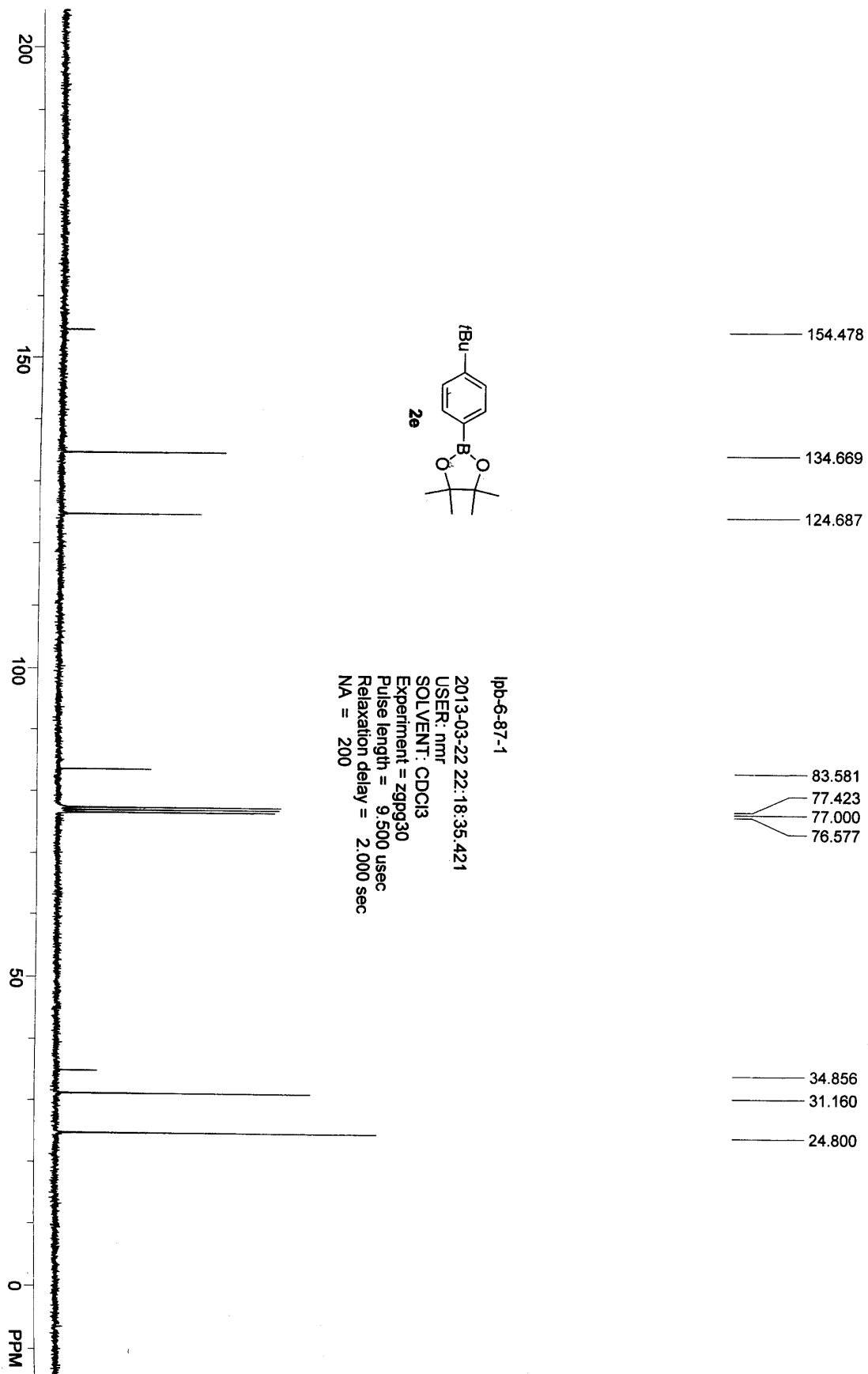
83.321
77.429
77.006
76.583

24.833
22.177

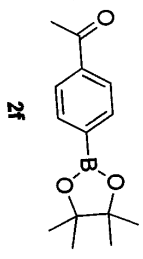






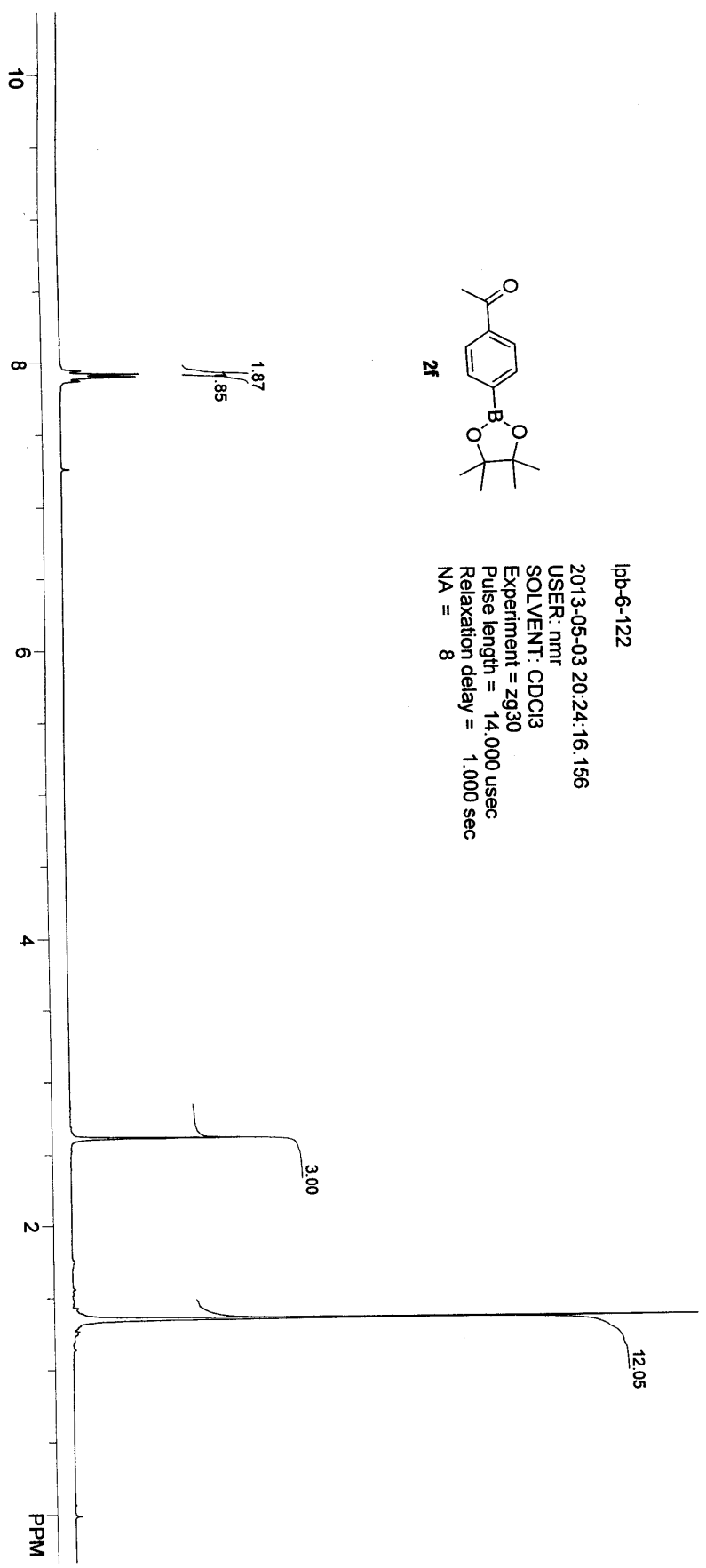


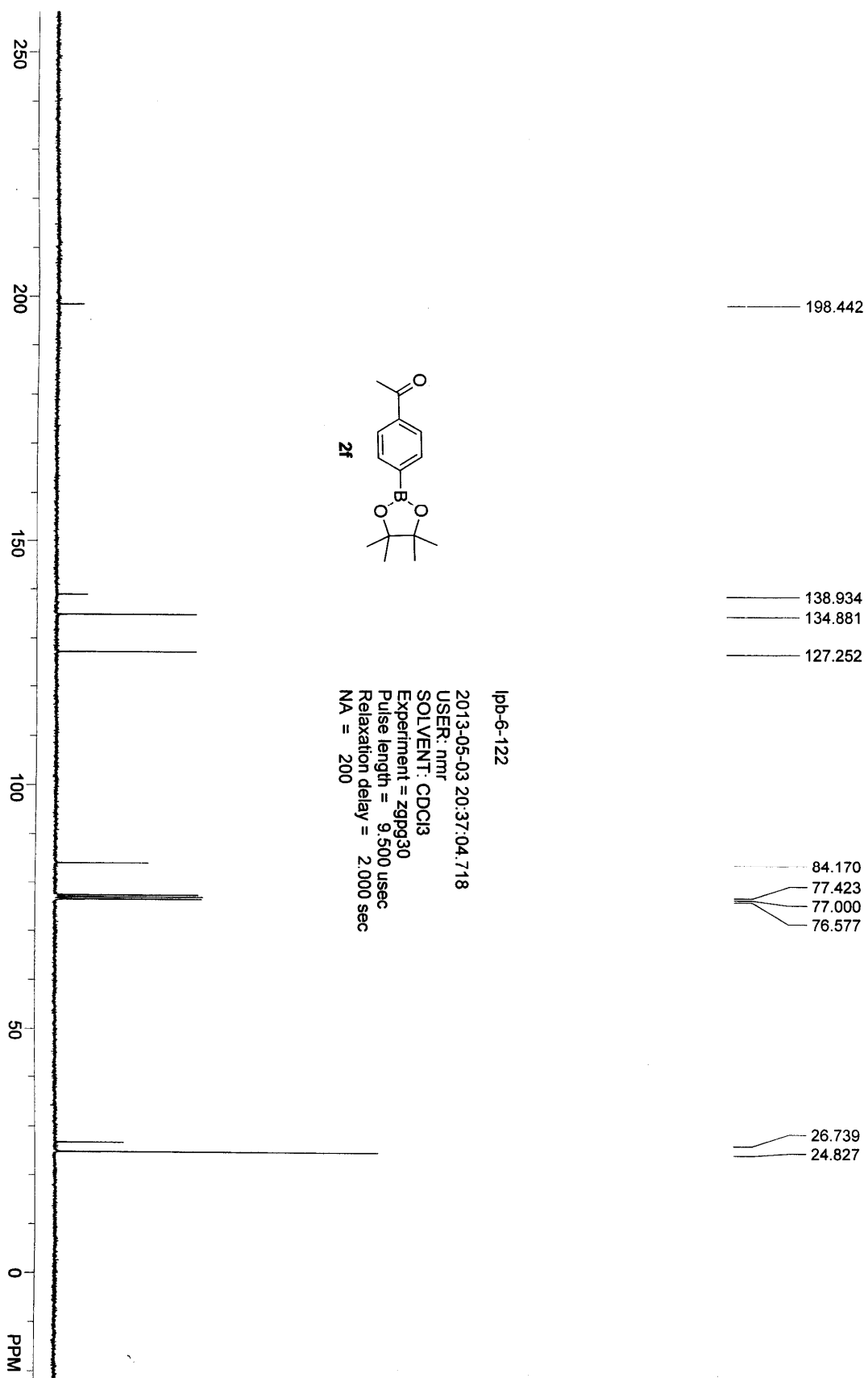
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7.914
7.896
7.870
7.260

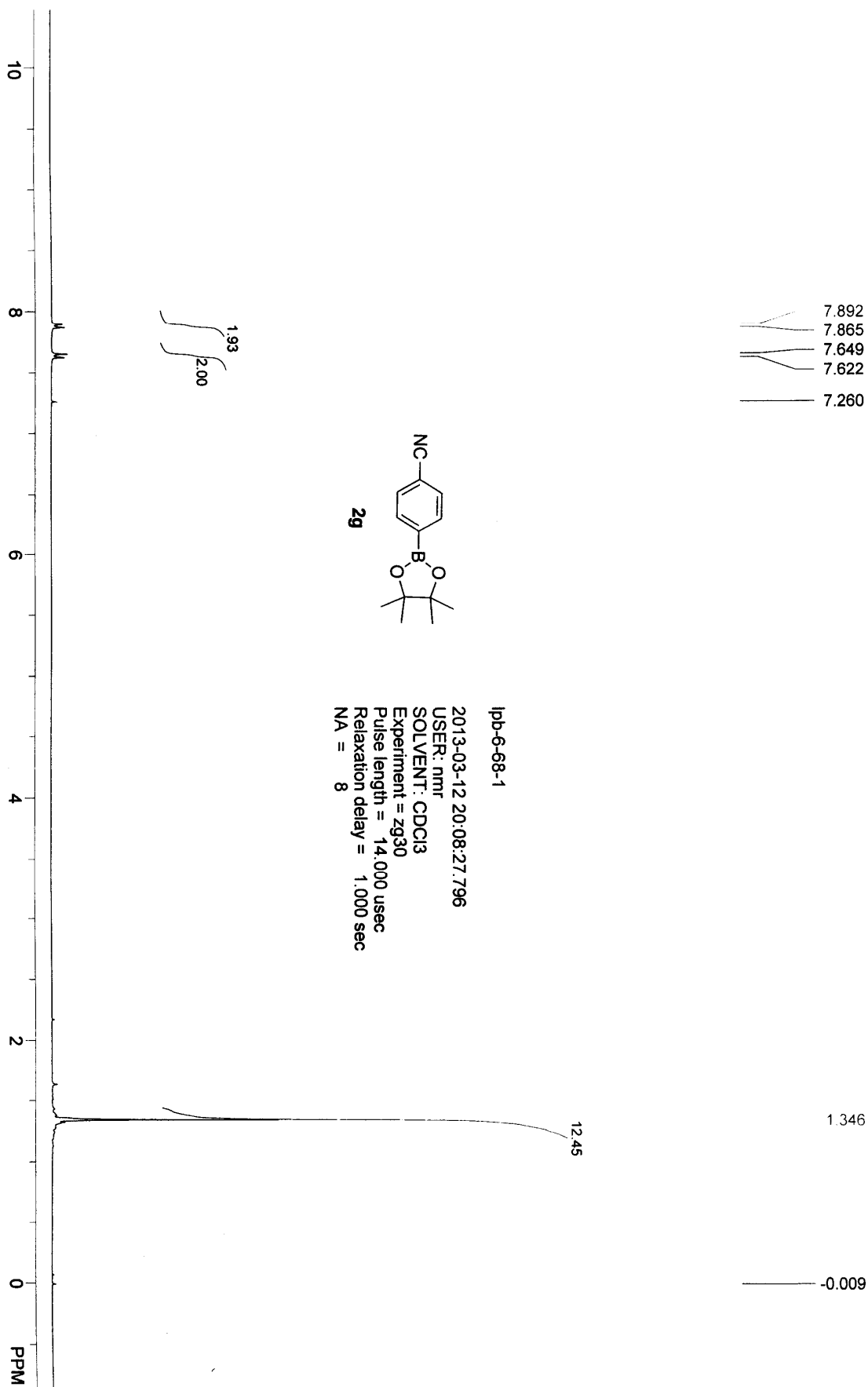


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NA = 8

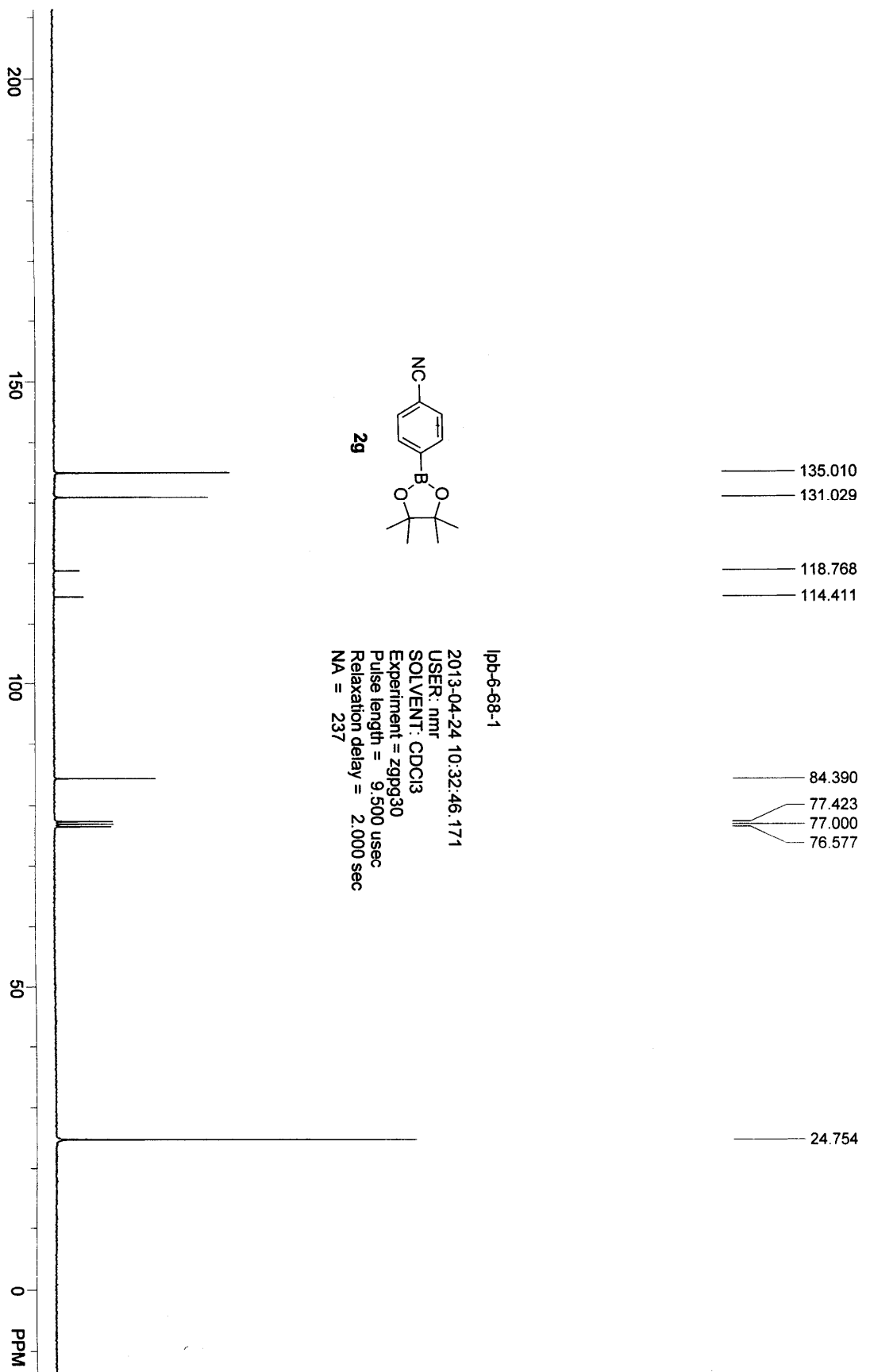
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1.349
-0.013

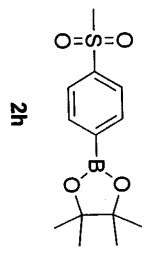
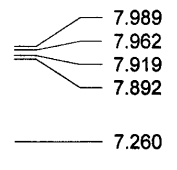




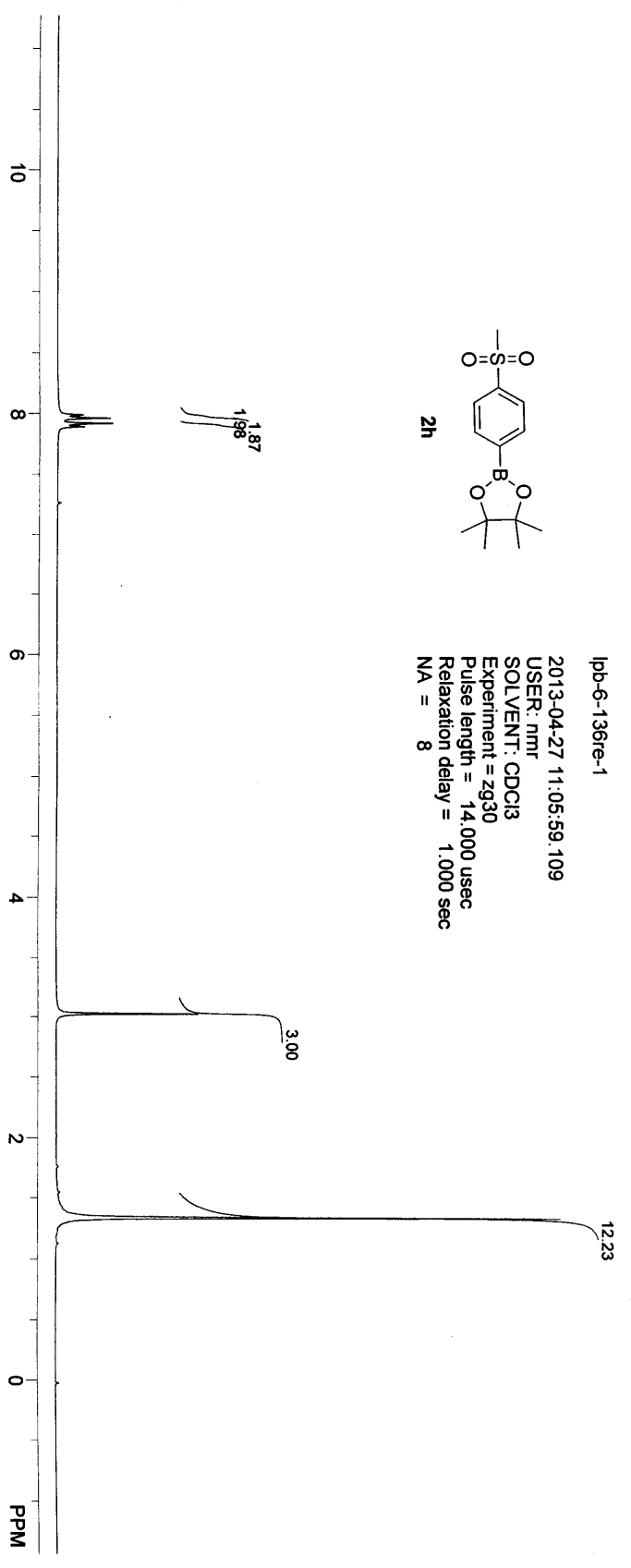
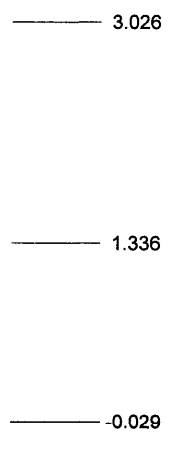


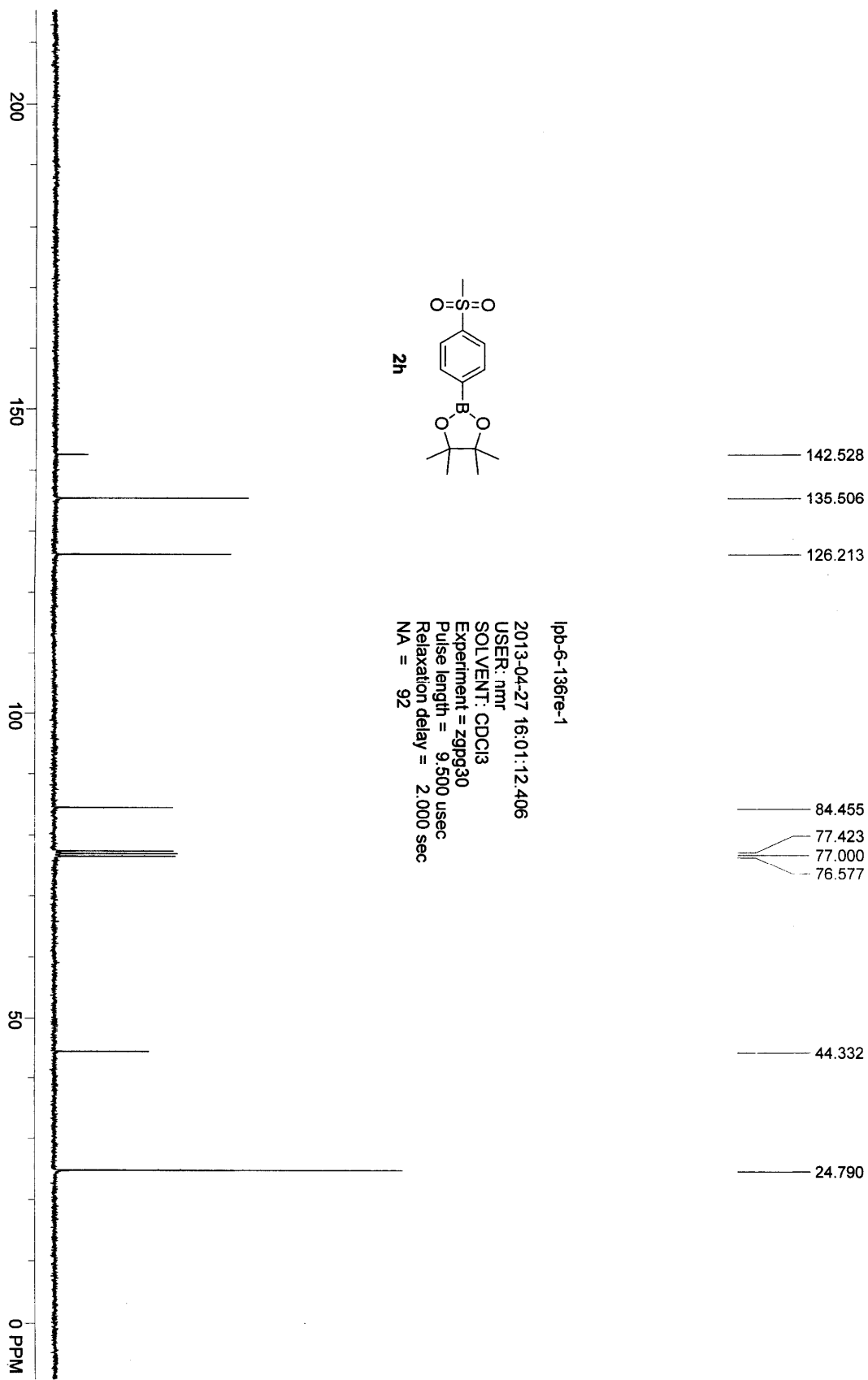
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 SOLVENT: CDCl3
 Experiment = zg30
 Pulse length = 14.000 usec
 Relaxation delay = 1.000 sec
 NA = 8



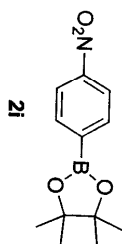


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Experiment = zg30
Pulse length = 14.000 usec
Relaxation delay = 1.000 sec
NA = 8



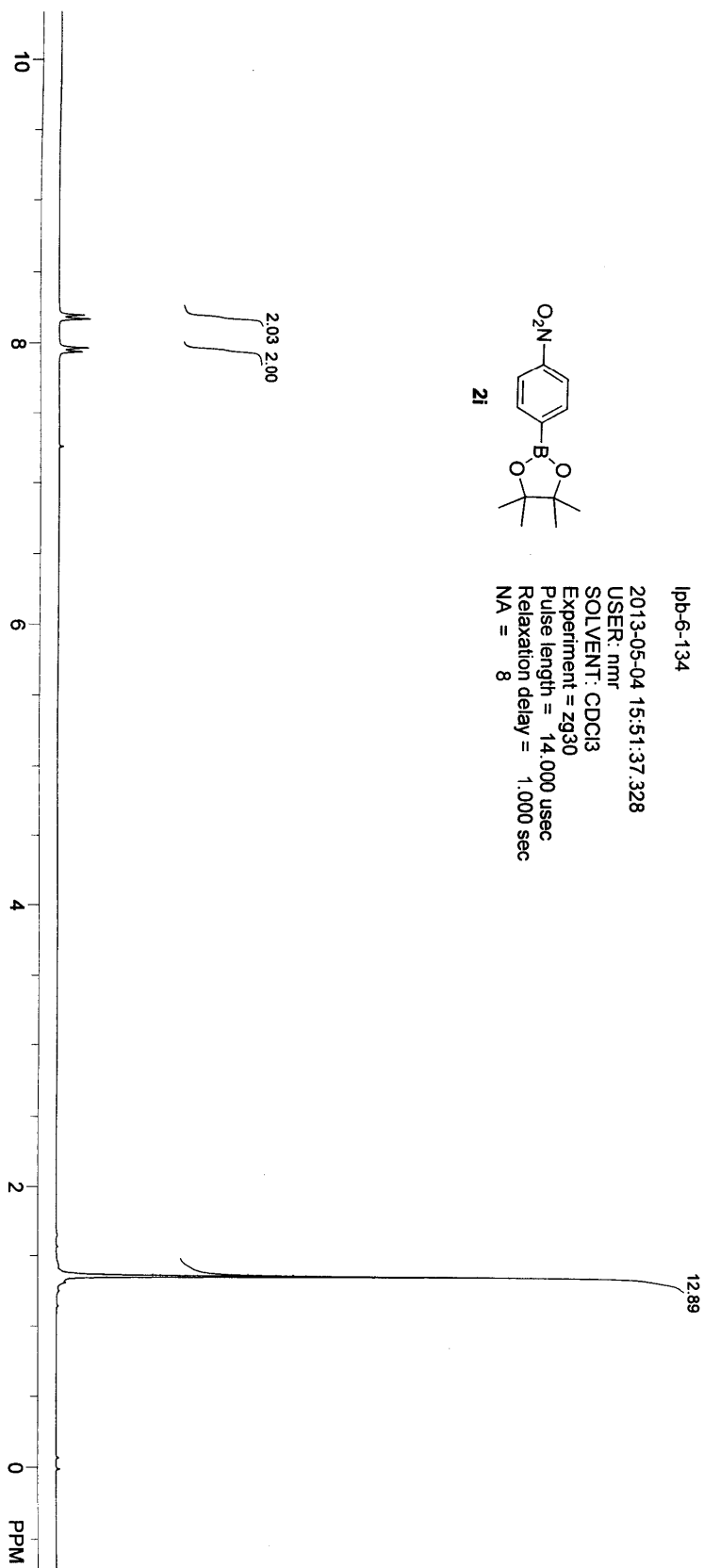


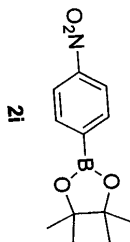
8.197
8.169
7.965
7.938
7.259



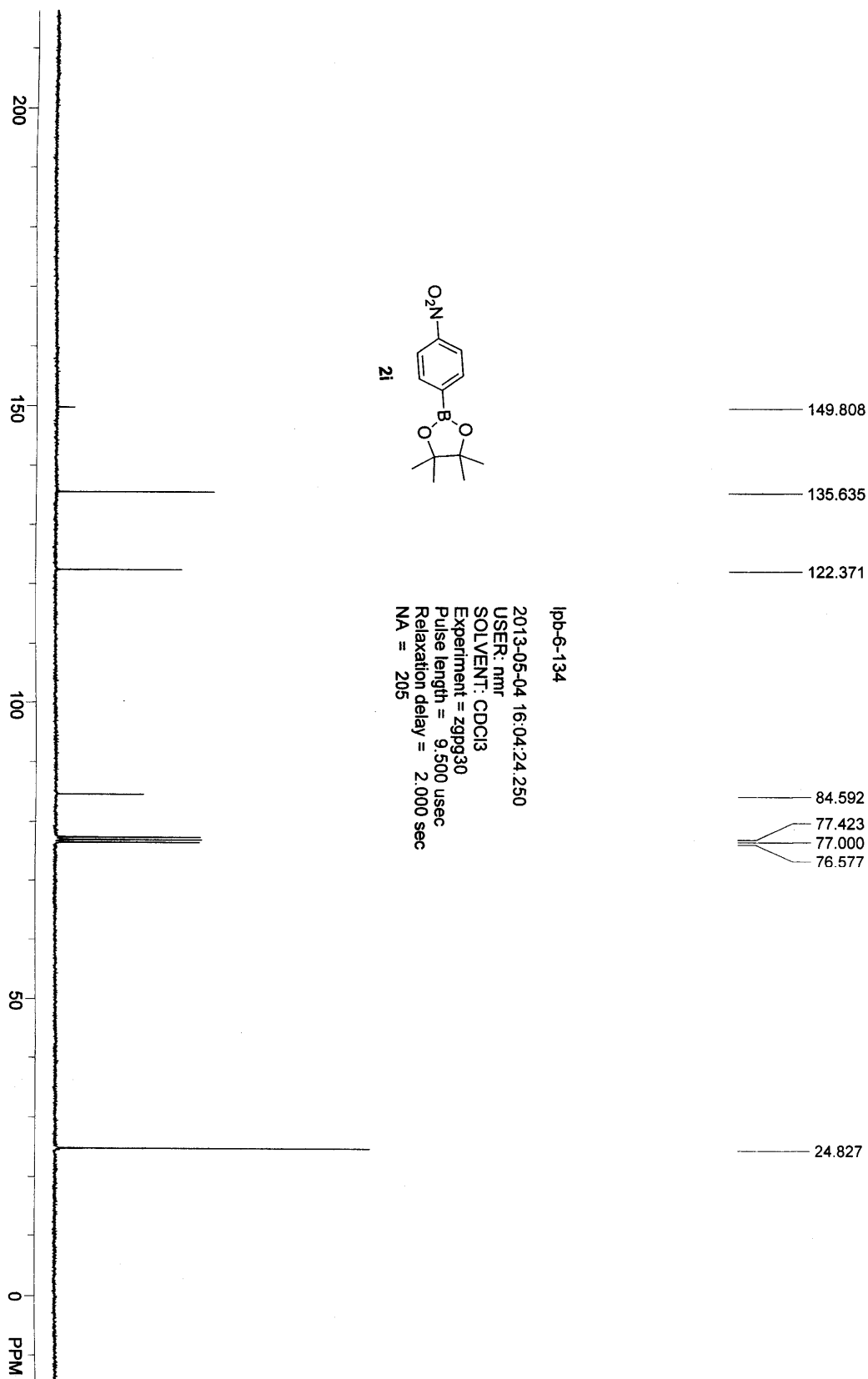
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USER: nmr
SOLVENT: CDCl3
Experiment = zq30
Pulse length = 14.000 usec
Relaxation delay = 1.000 sec
NA = 8

12.89
1.357
-0.012





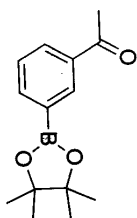
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SOLVENT: CDCl3
Experiment = z9pg30
Pulse length = 9.500 usec
Relaxation delay = 2.000 sec
NA = 205



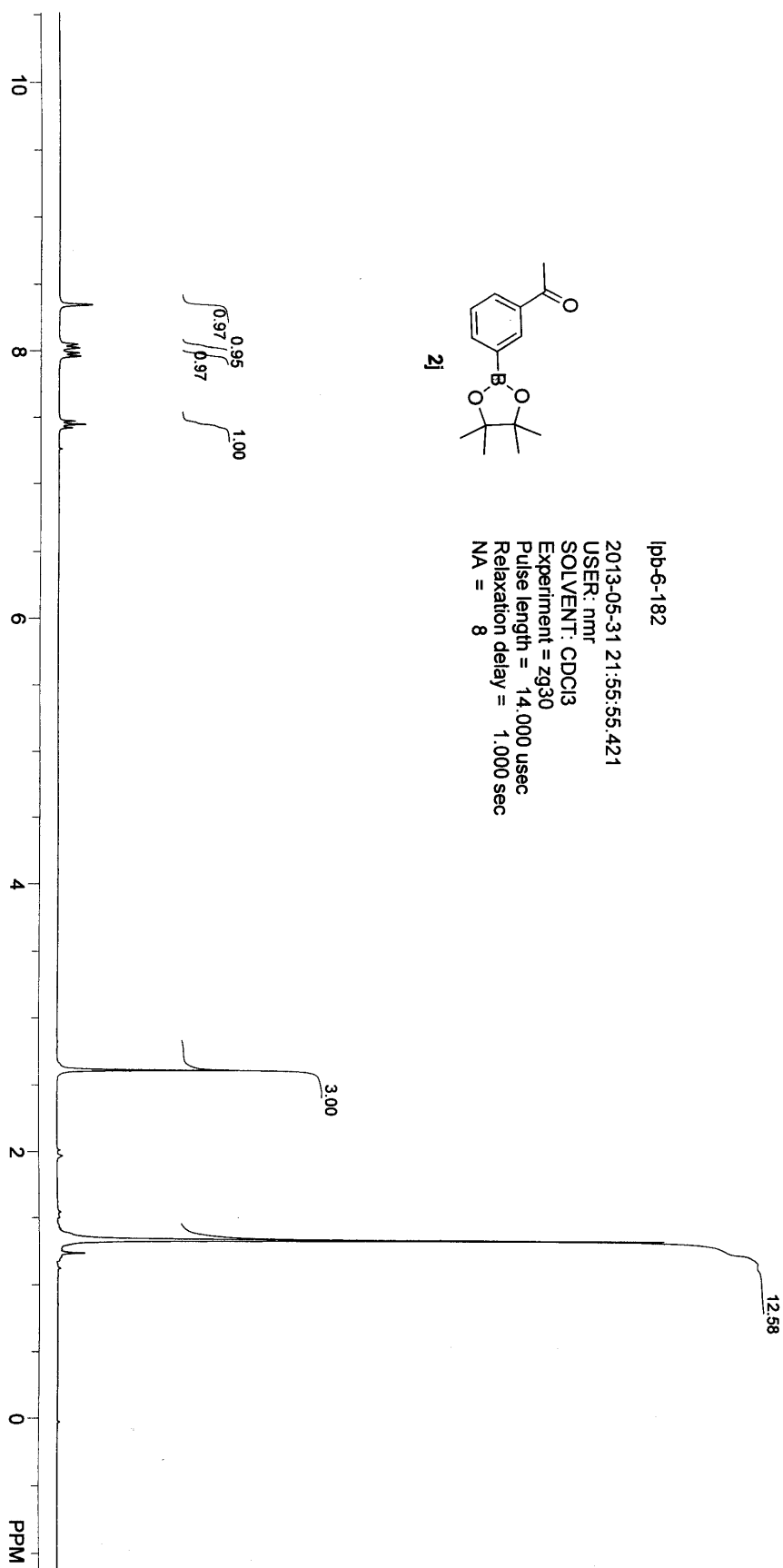
8.345
8.048
8.021
7.985
7.961
7.470
7.445
7.419
7.260

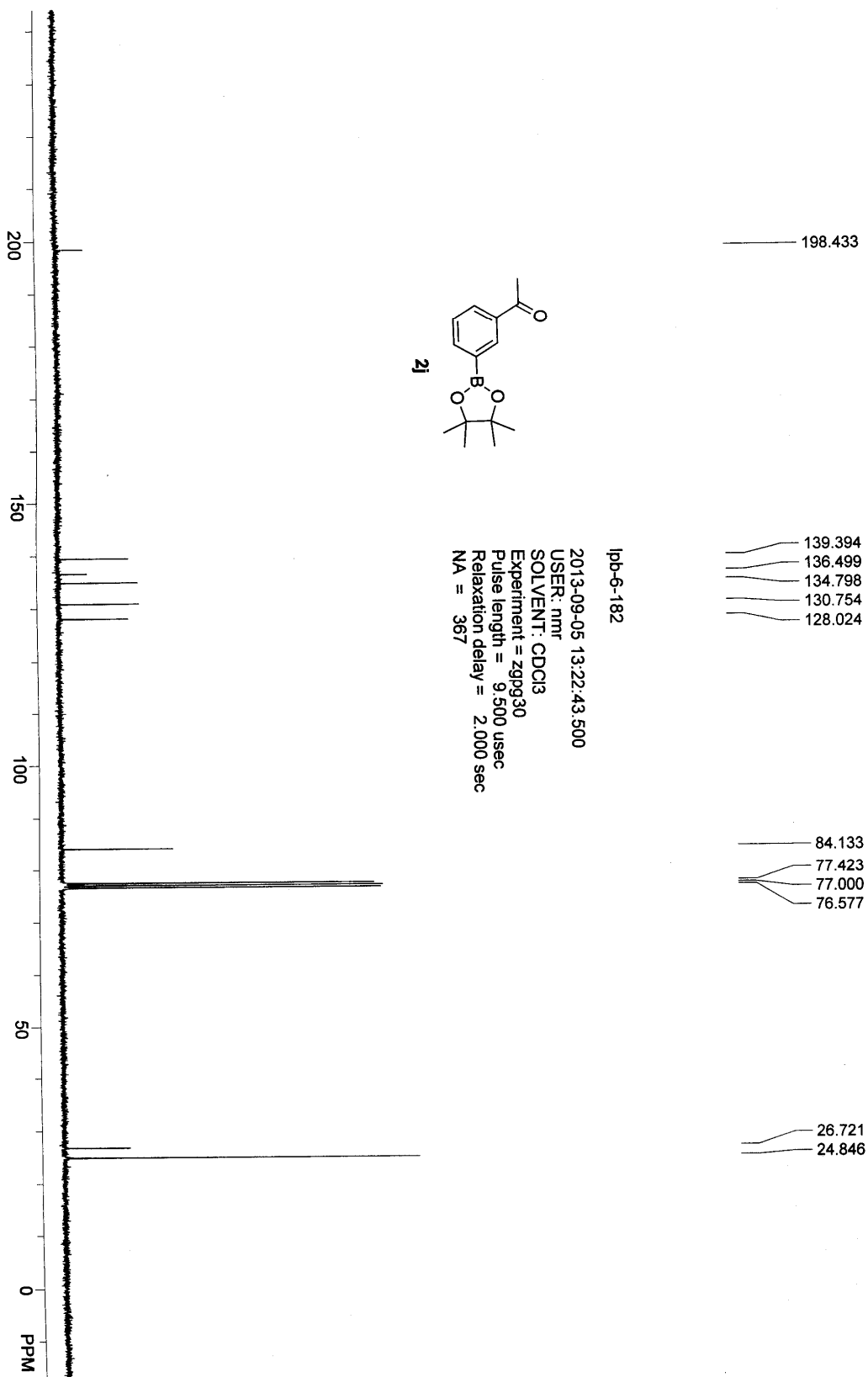
2.611

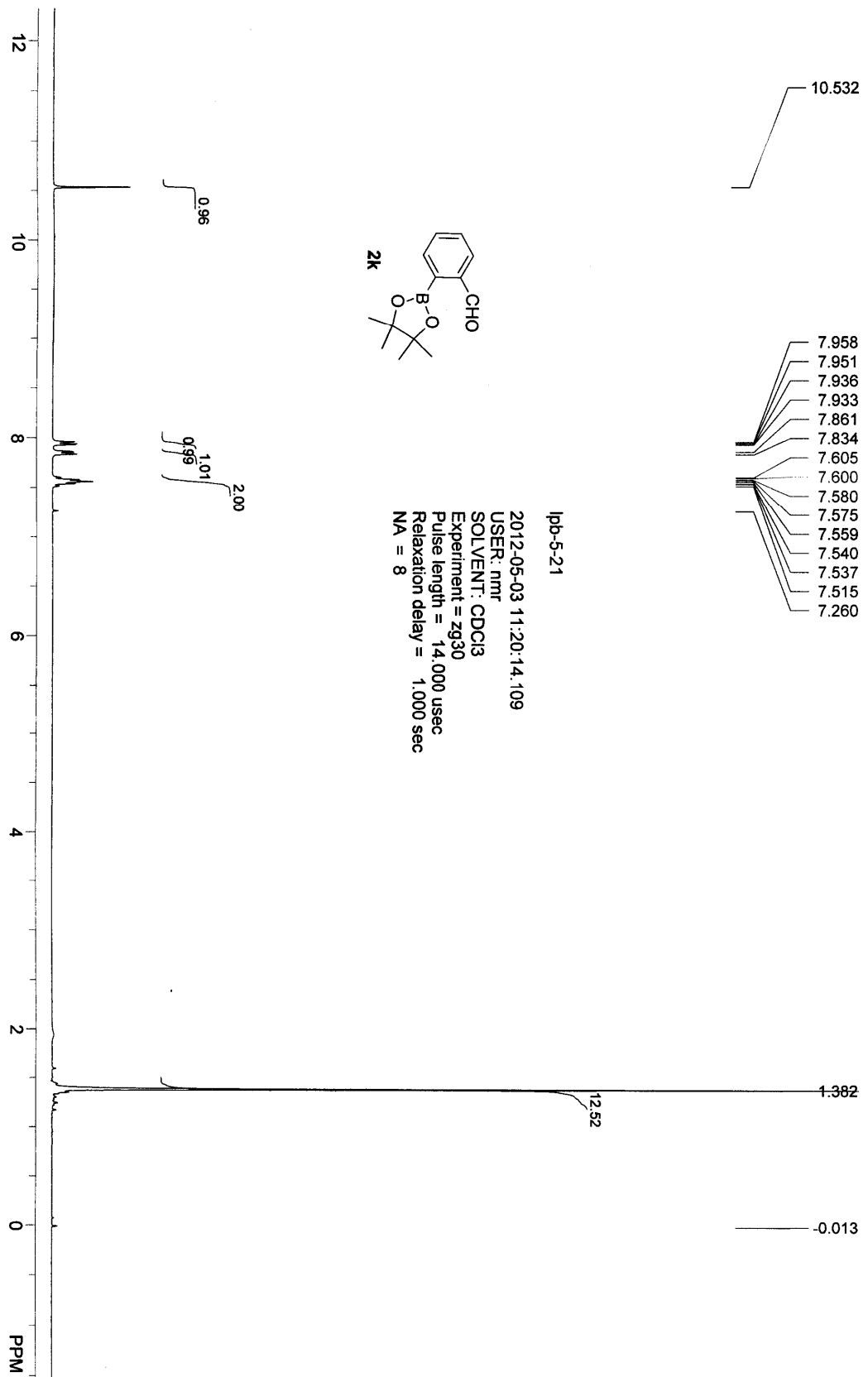
1.335

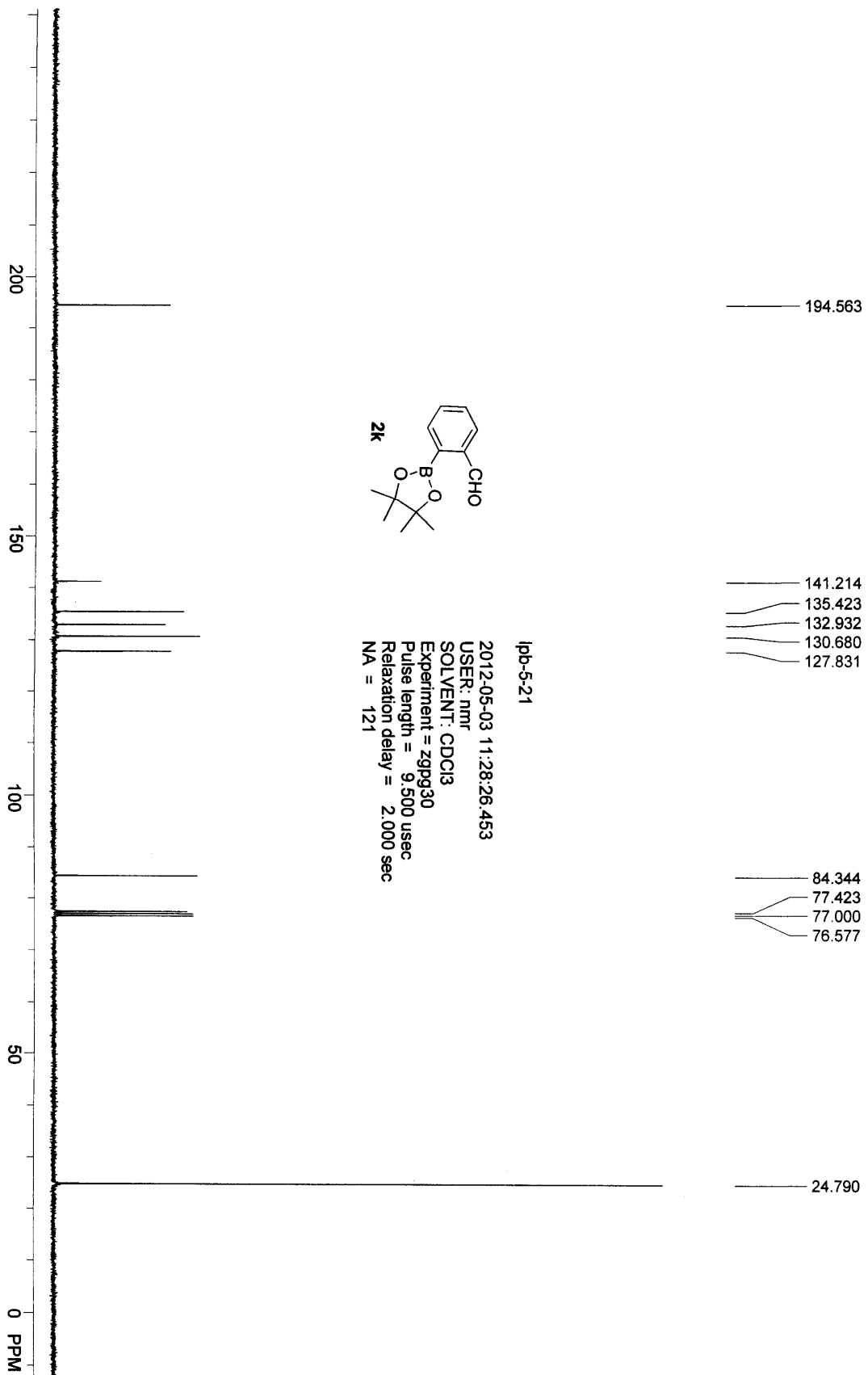


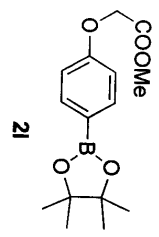
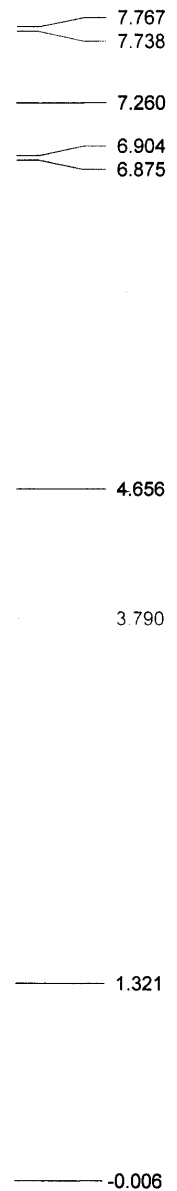
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Pulse length = 14.000 usec
Relaxation delay = 1.000 sec
NA = 8



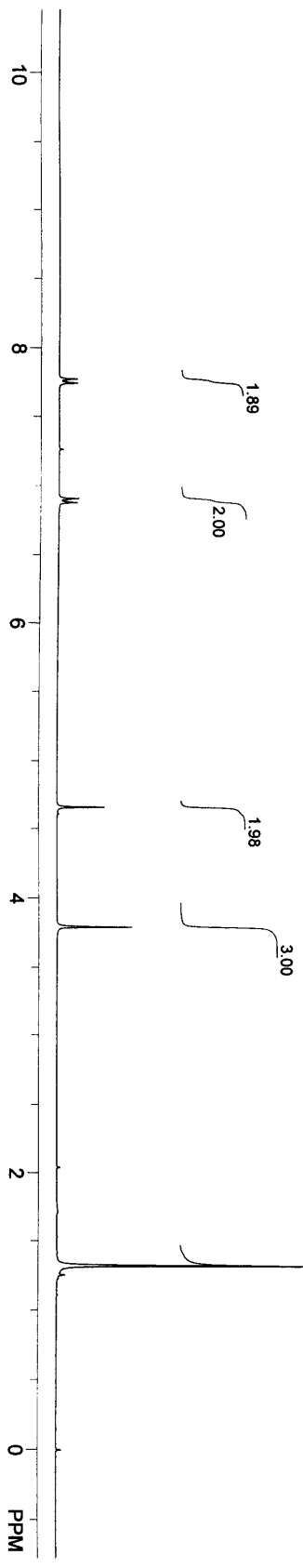


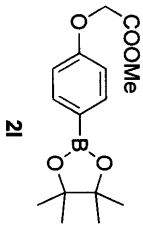
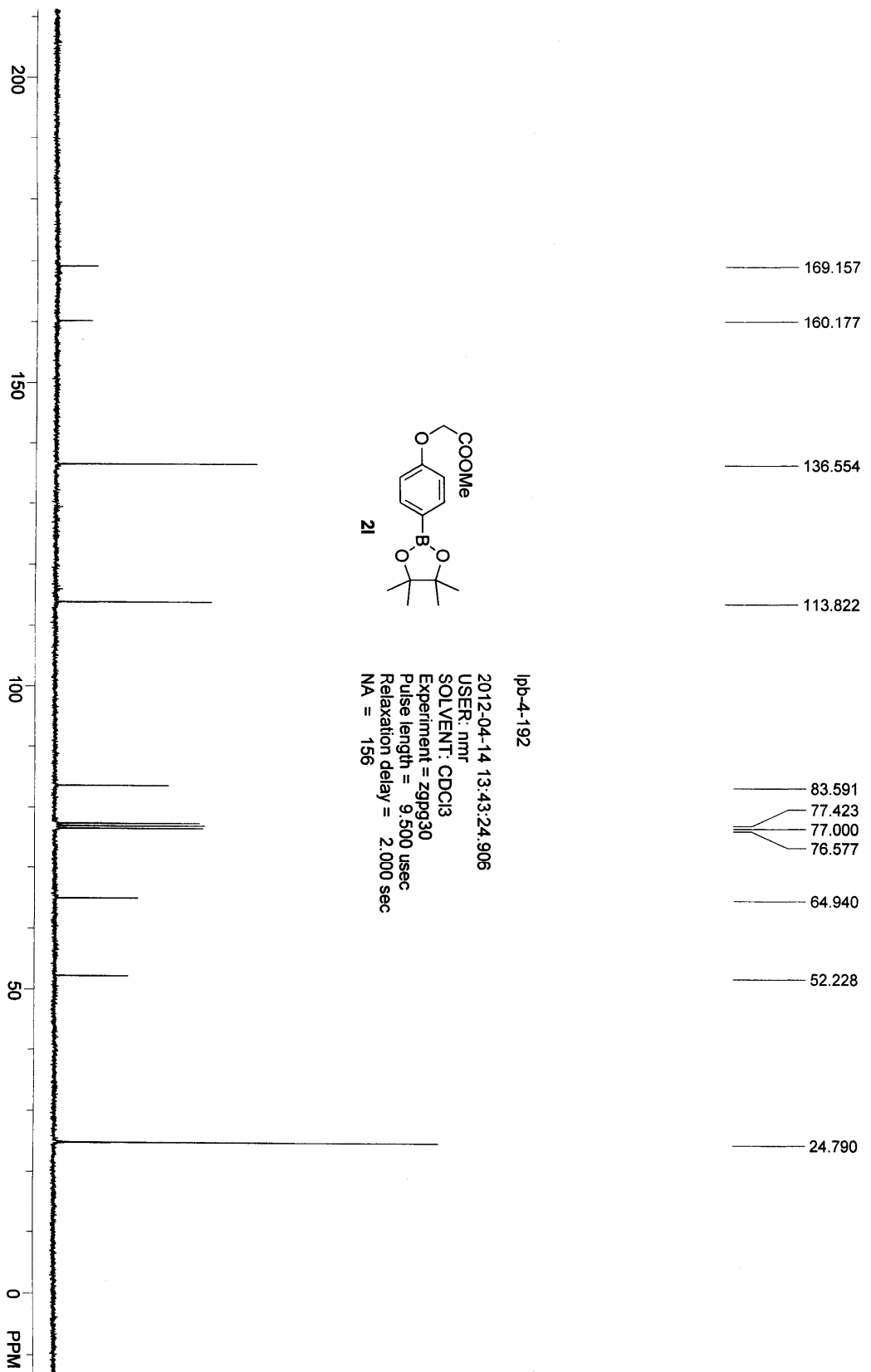






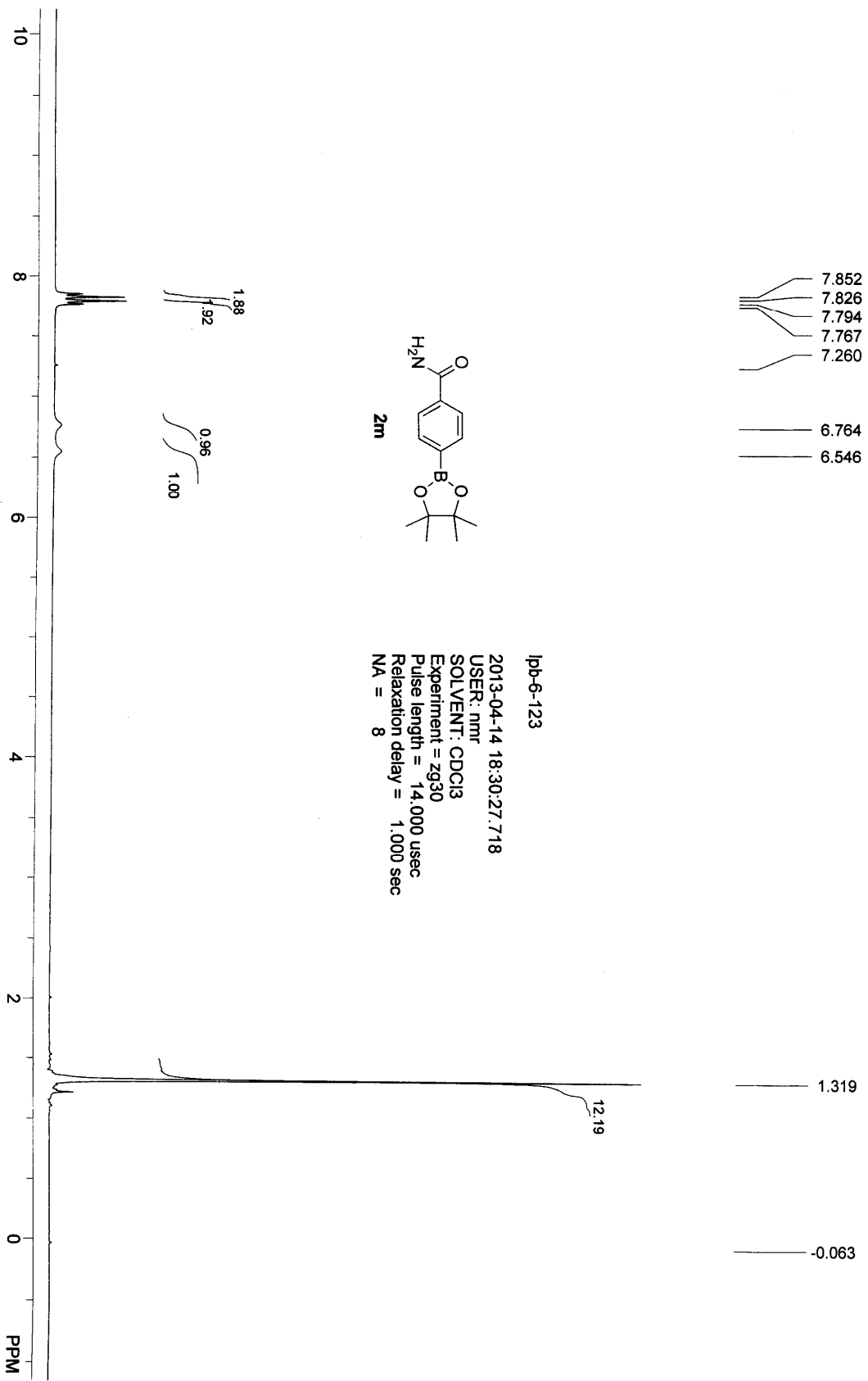
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 Experiment = zg30
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 Relaxation delay = 1.000 sec
 NA = 8

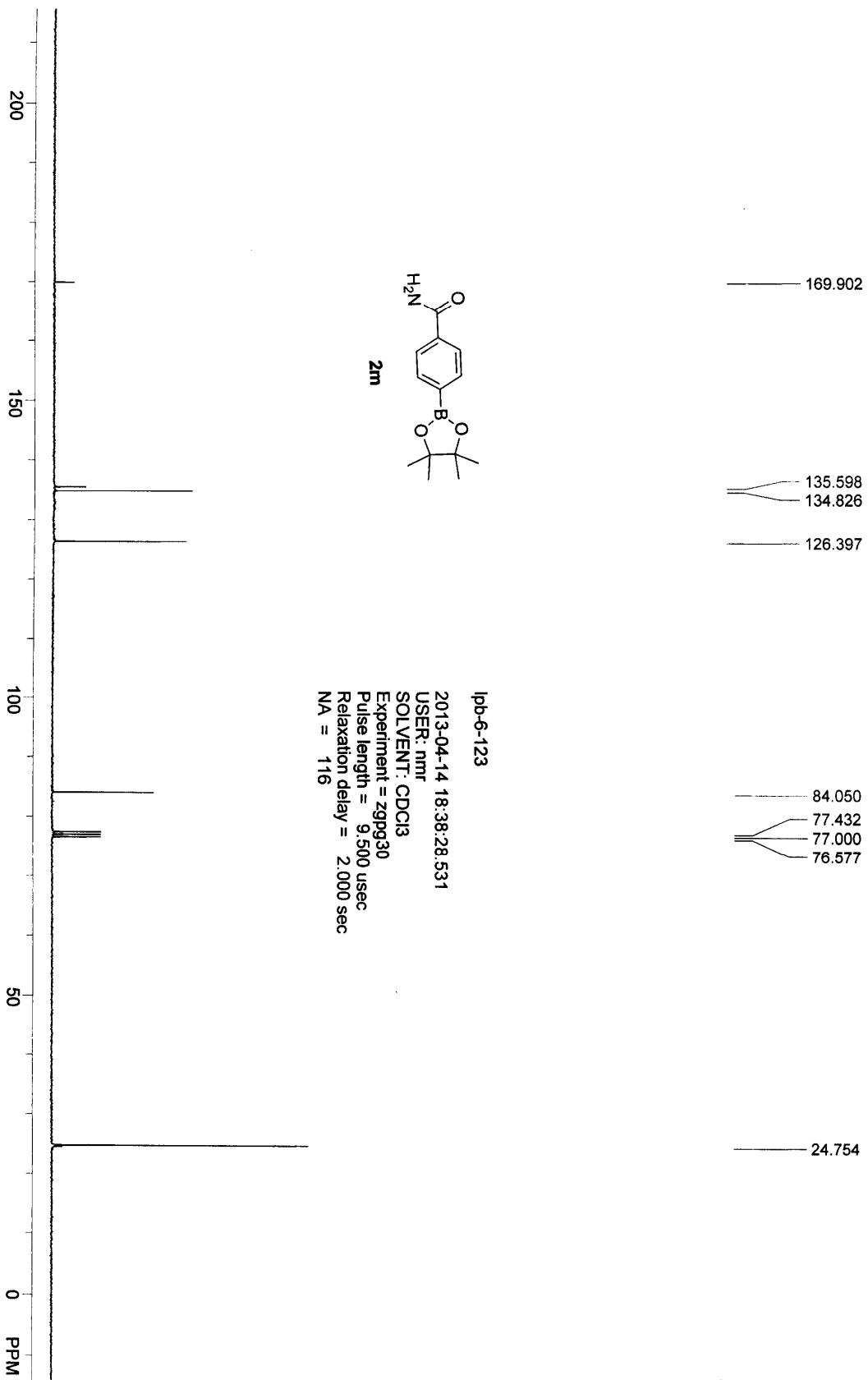




2012-04-14 13:43:24.906
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 SOLVENT: CDCl3
 Experiment = zgpg30
 Pulse length = 9.500 usec
 Relaxation delay = 2.000 sec
 NA = 156

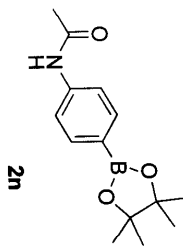
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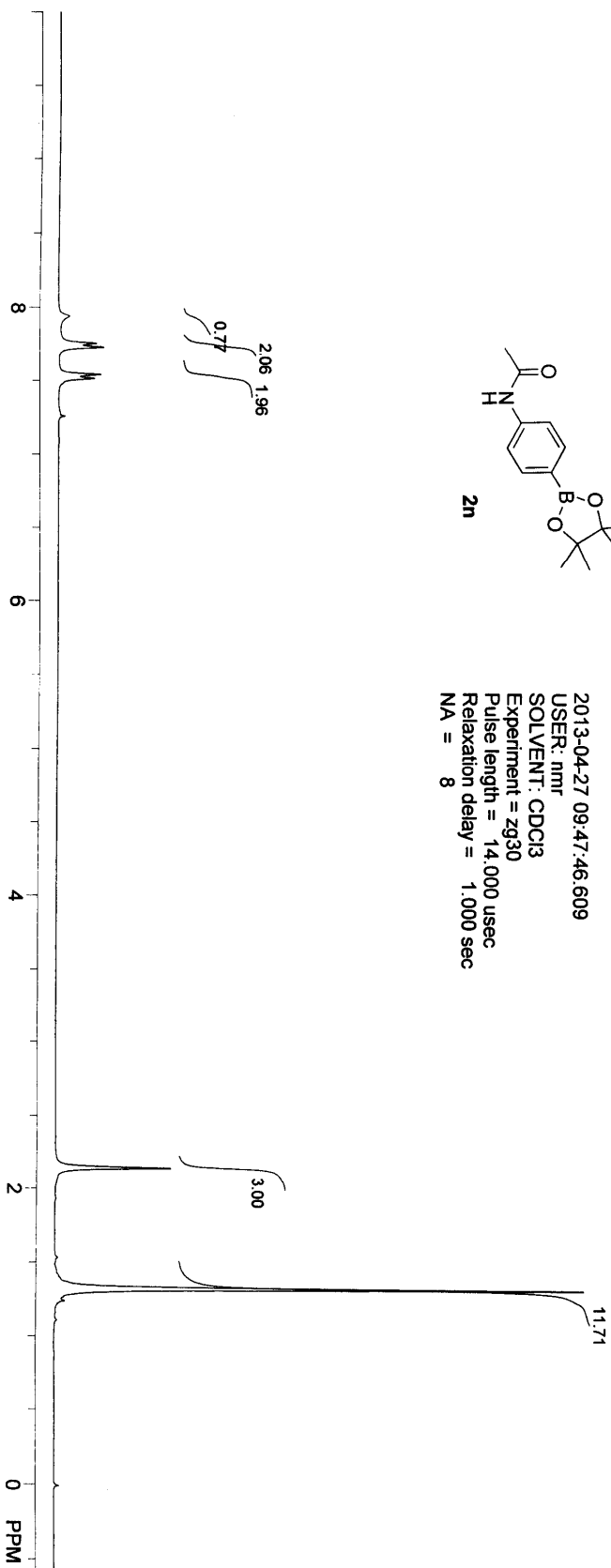
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 SOLVENT: CDCl3
 Experiment = zgpg30
 Pulse length = 9.500 usec
 Relaxation delay = 2.000 sec
 NA = 116

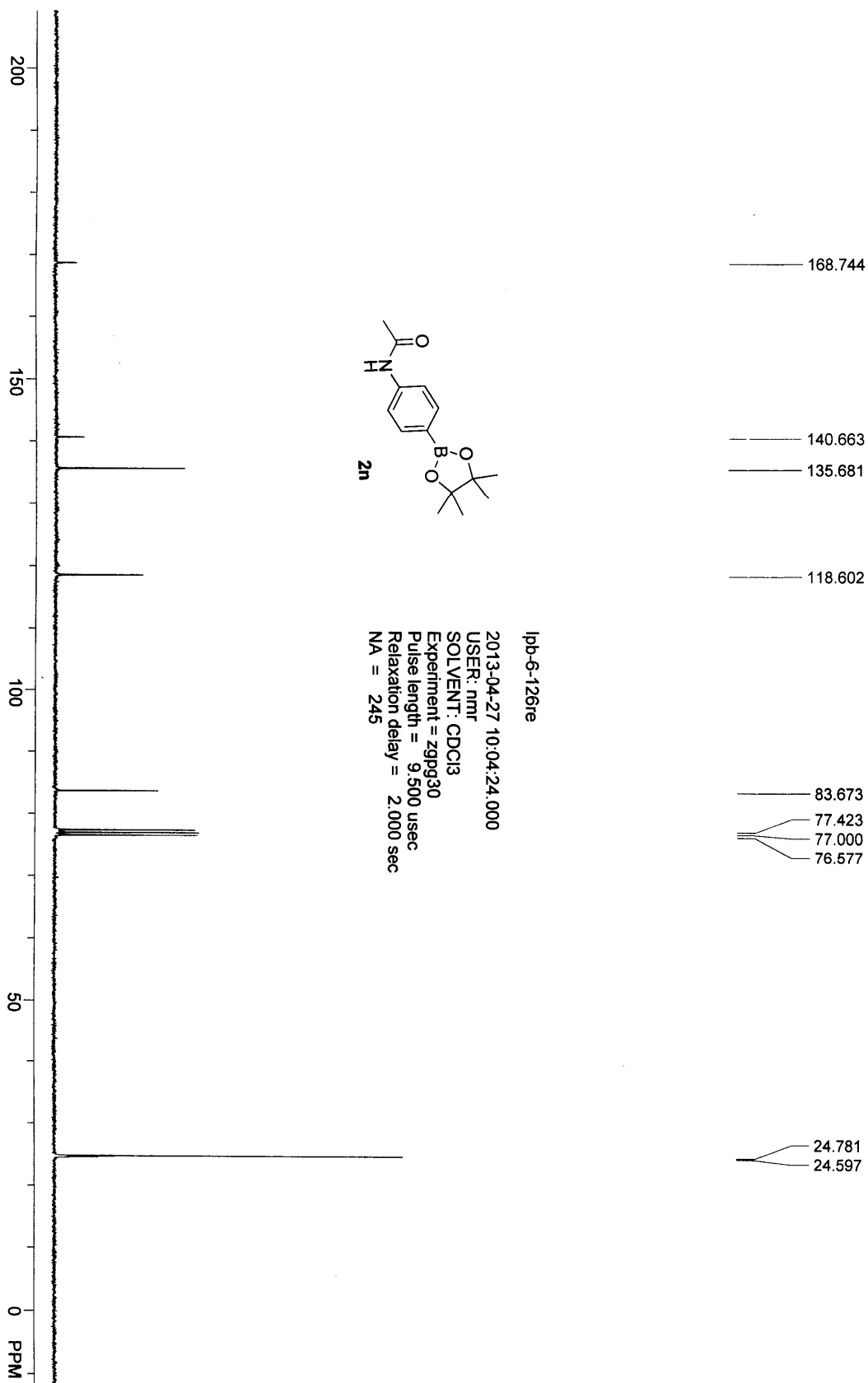
7.939
7.755
7.728
7.540
7.514
7.260

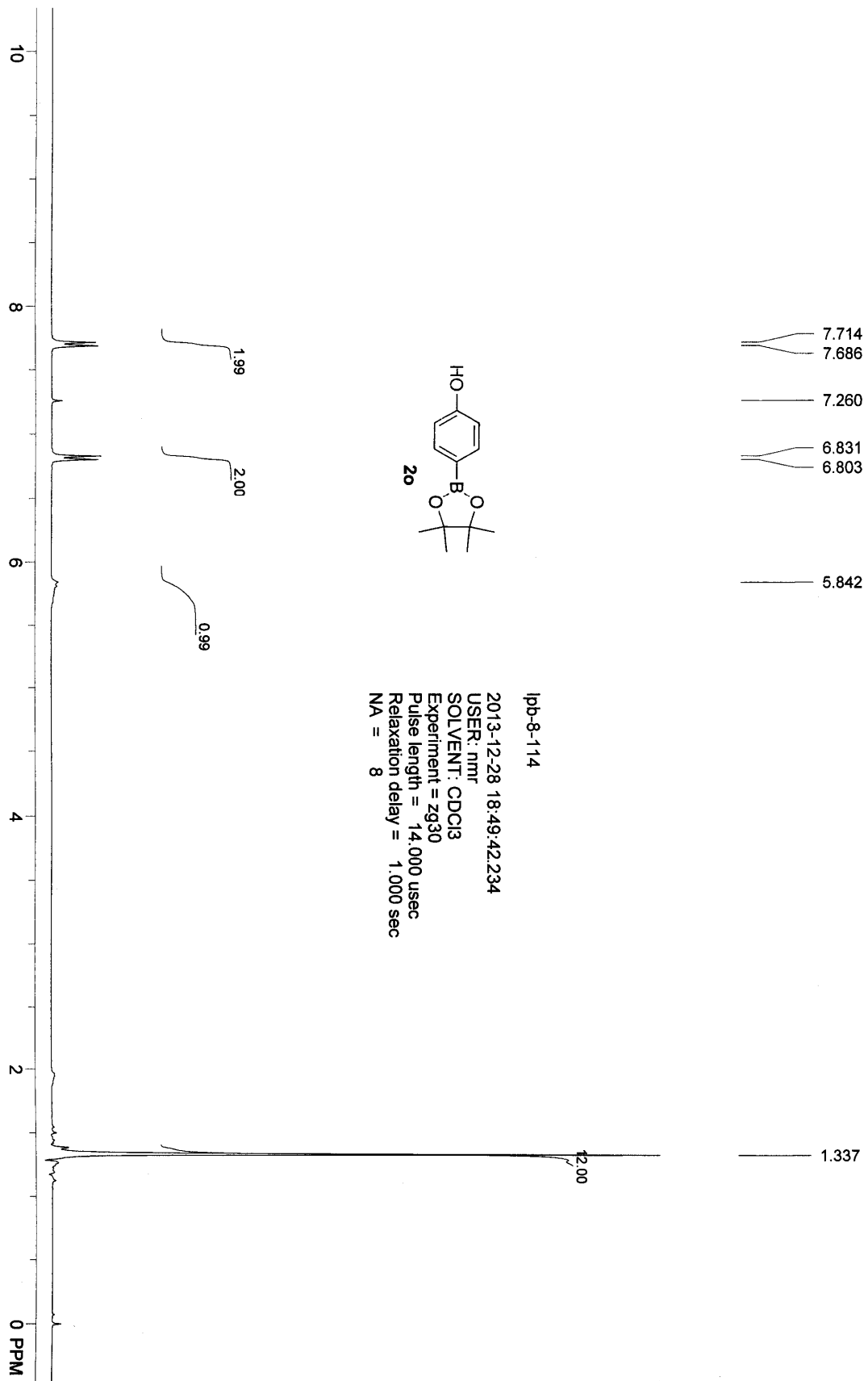


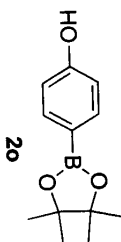
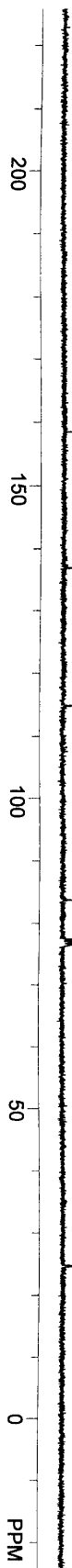
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USER: nmr
SOLVENT: CDCl3
Experiment = zq30
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Relaxation delay = 1.000 sec
NA = 8

2.145
1.322
-0.011









2013-12-28 19:04:20.640
 USER: nmr
 SOLVENT: CDCl3
 Experiment = zgpg30
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 Relaxation delay = 2.000 sec
 NA = 234

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158.485

136.756

114.861

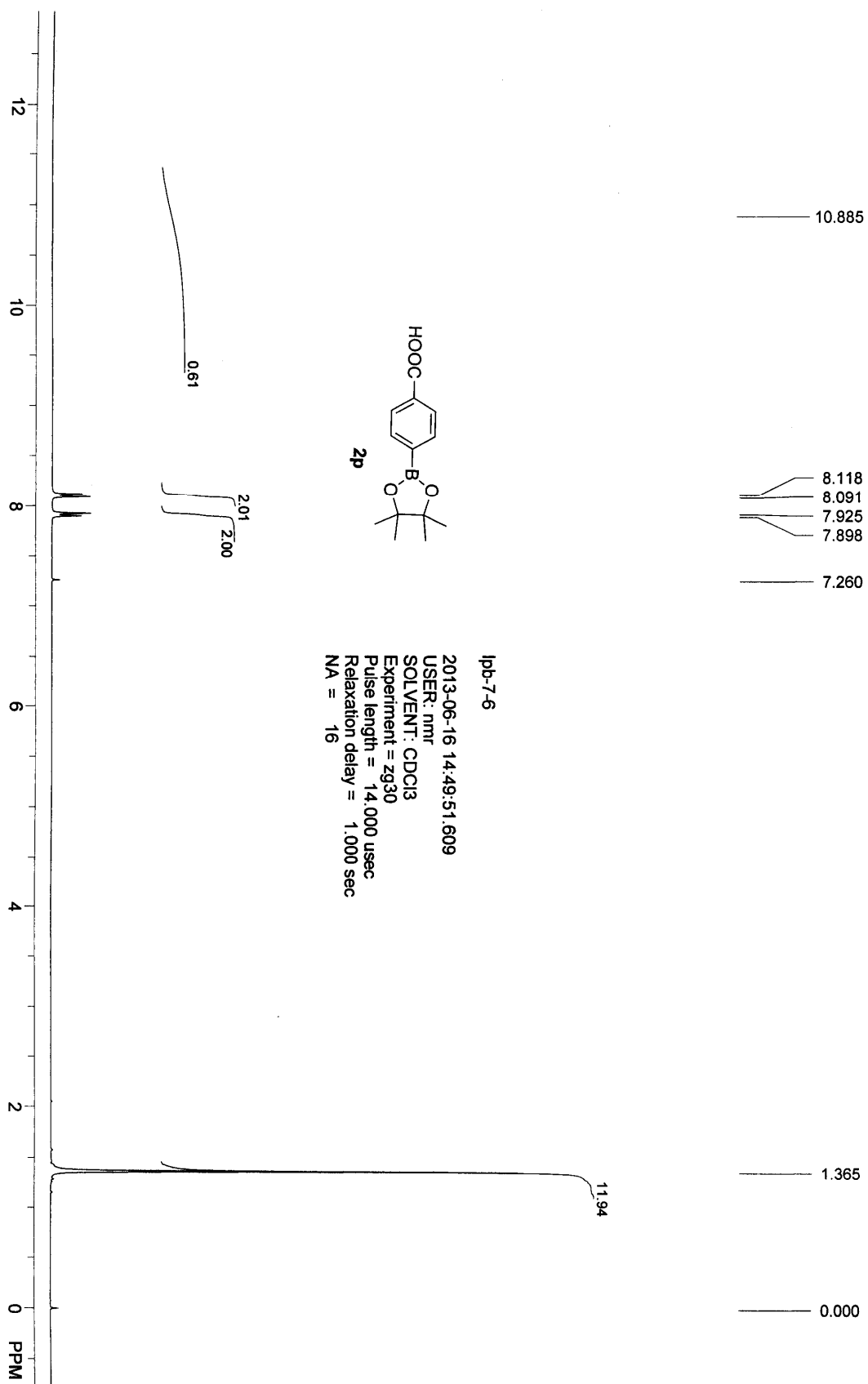
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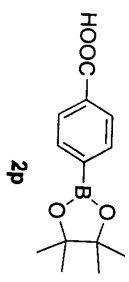
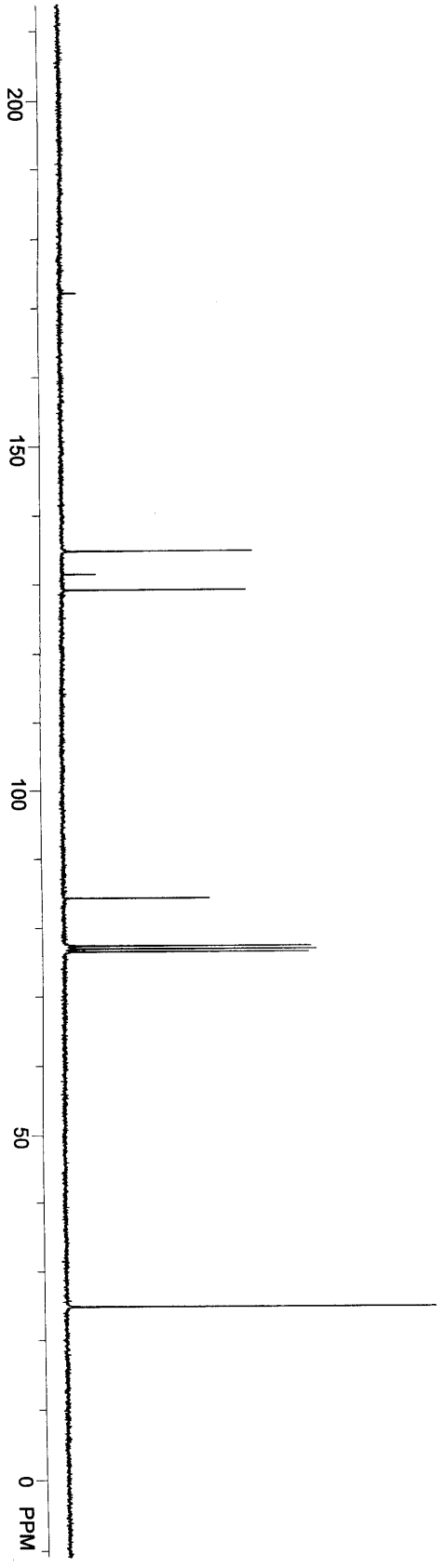
77.423

77.000

76.577

24.763





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 Experiment = zgpg30
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 NA = 438

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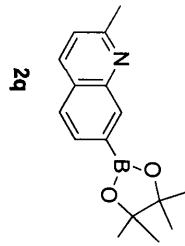
172.172

134.752
131.462
129.182

84.262
77.423
77.000
76.577

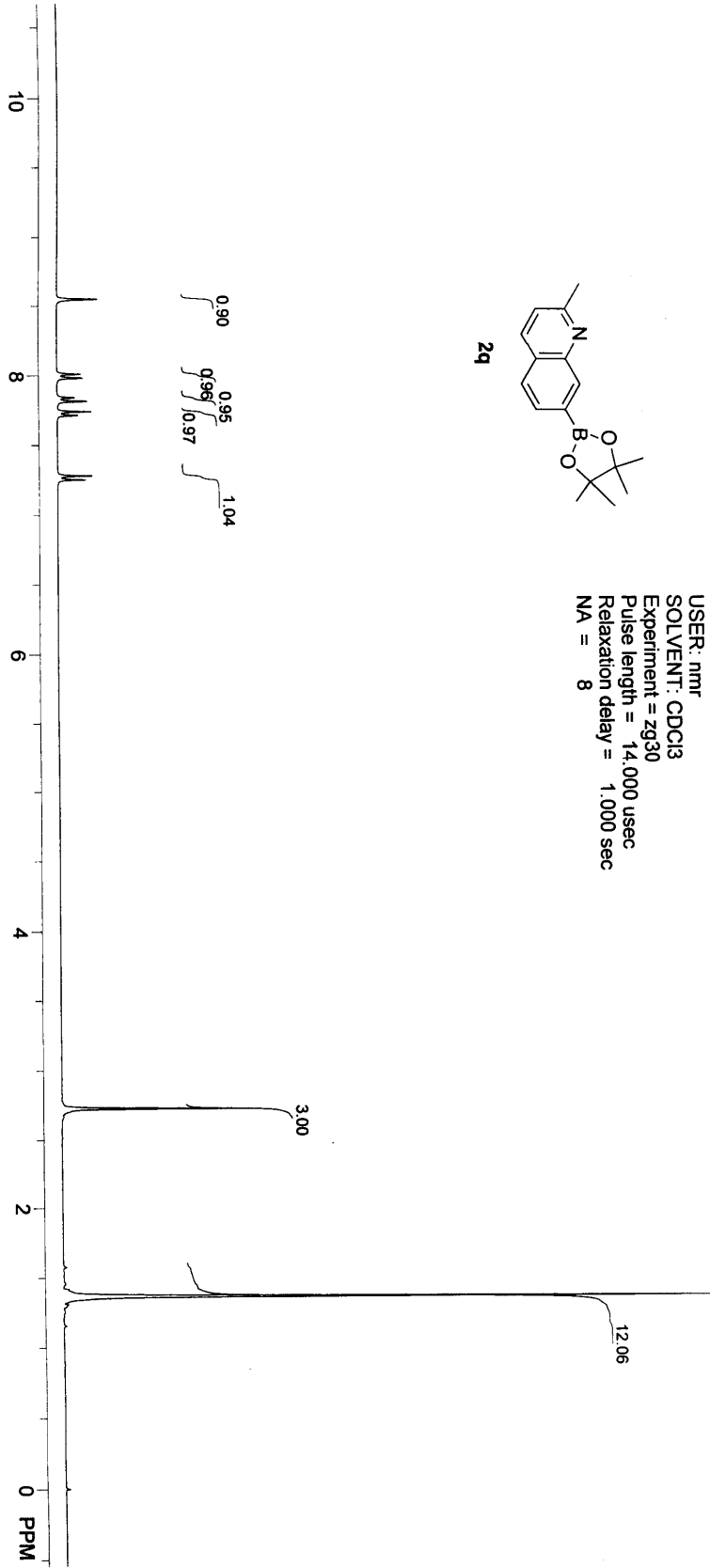
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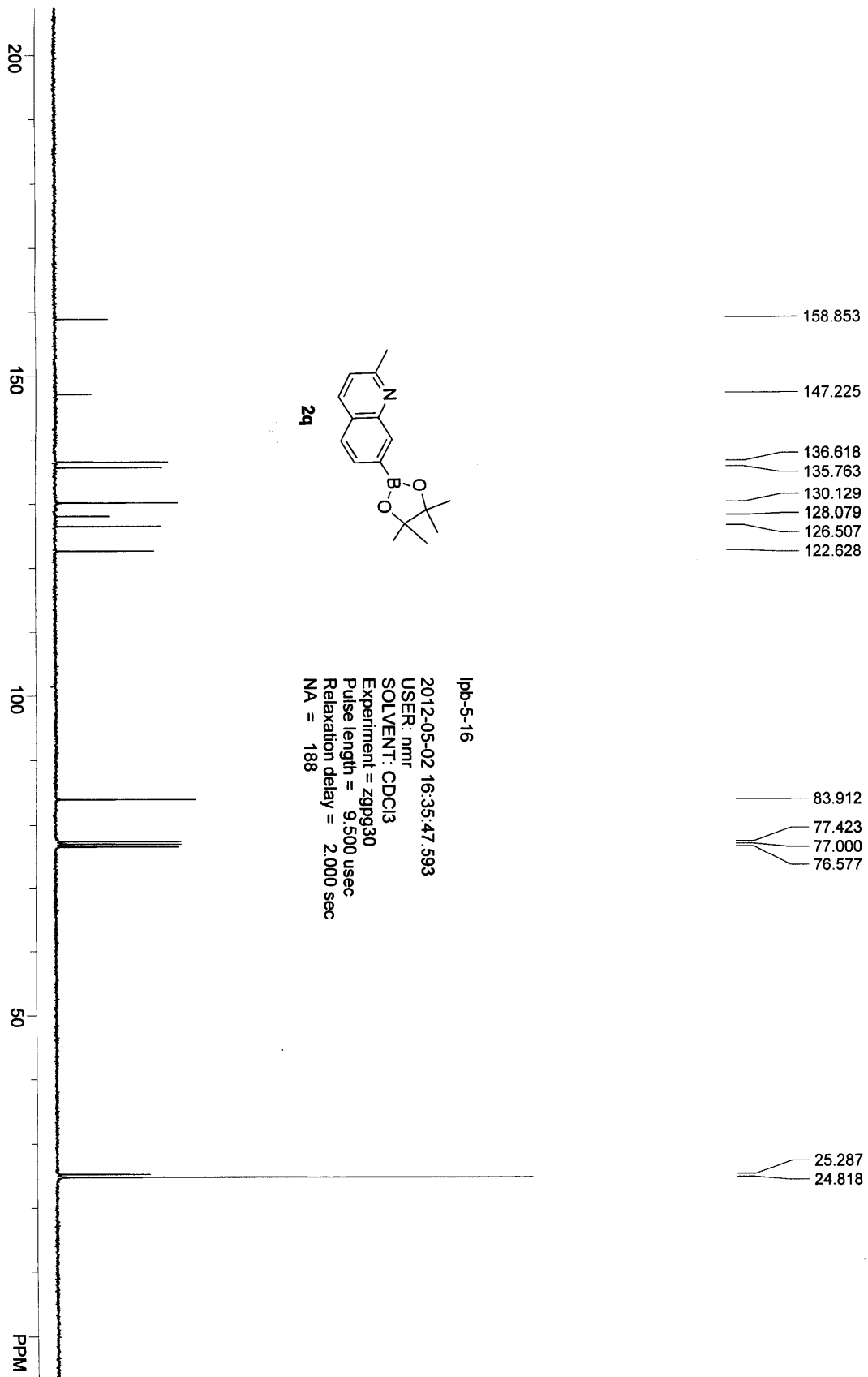
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8.008
7.981
7.843
7.816
7.741
7.714
7.278
7.249



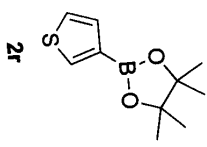
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SOLVENT: CDCl3
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Pulse length = 14.000 usec
Relaxation delay = 1.000 sec
NA = 8

2.731
1.367
-0.000





- 7.930
- 7.927
- 7.921
- 7.918
- 7.423
- 7.419
- 7.407
- 7.403
- 7.351
- 7.342
- 7.335
- 7.326
- 7.260

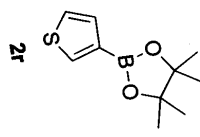


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 SOLVENT: CDCl3
 Experiment = zg30
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 Relaxation delay = 1.000 sec
 NA = 8

0.91 1.00
 14.02

- 1.337
- 0.074





136.434
131.995
125.303

83.627
77.423
77.000
76.577

24.790

lpb-7-113re
2013-09-26 16:34:19.218
USER: nmr
SOLVENT: CDCl3
Experiment: z9p930
Pulse length = 9.500 usec
Relaxation delay = 2.000 sec
NA = 301



7.260
7.144
7.120
7.094
6.972
6.948

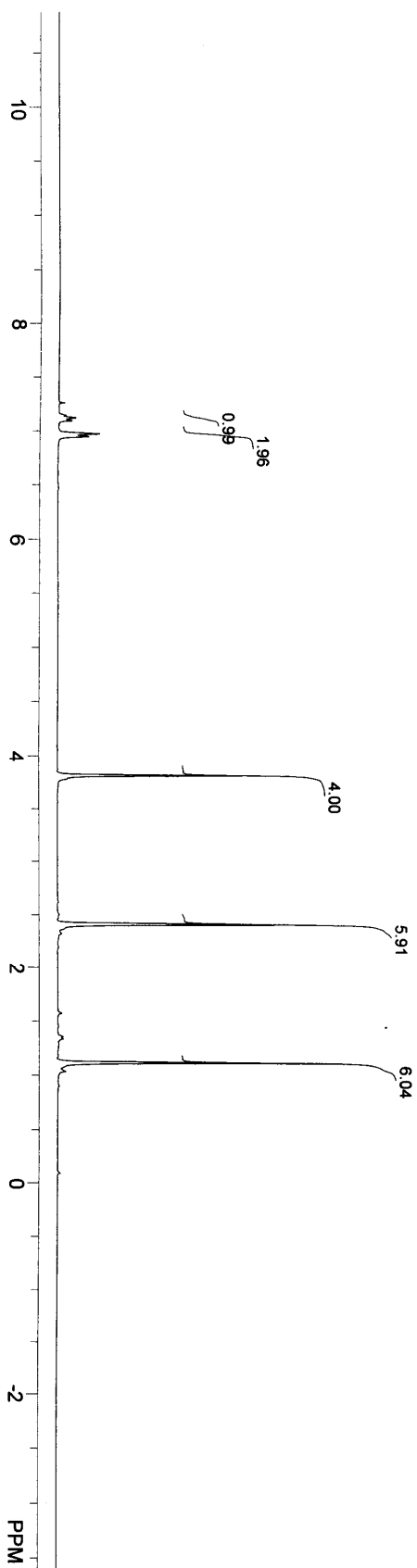
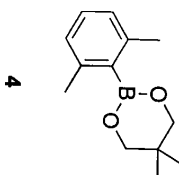
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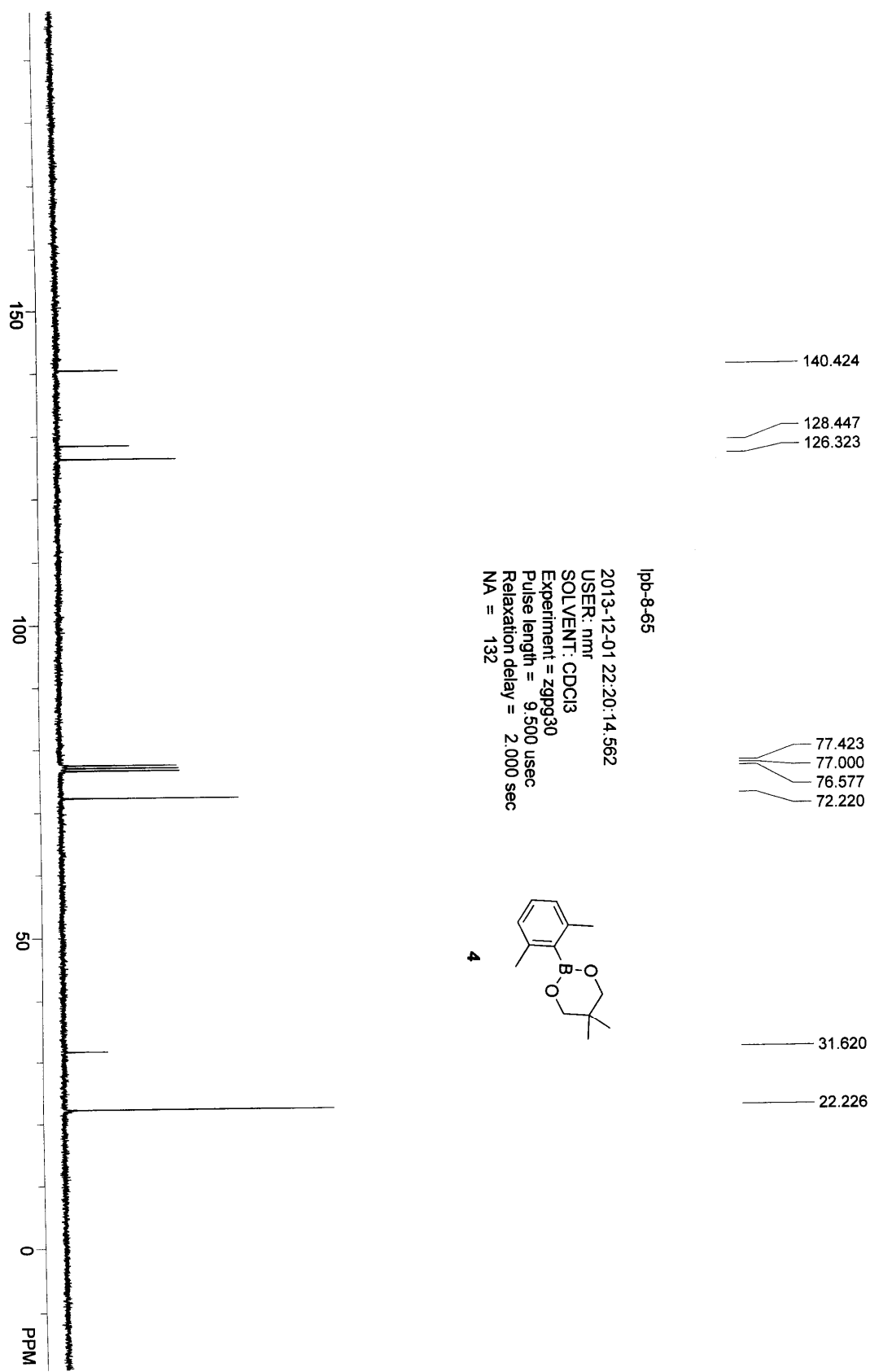
2.407

1.118

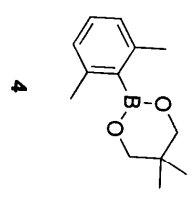
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Experiment = z930
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Relaxation delay = 1.000 sec
NA = 8

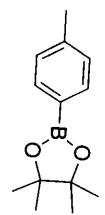




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SOLVENT: CDCl3
Experiment = zgpg30
Pulse length = 9.500 usec
Relaxation delay = 2.000 sec
NA = 132

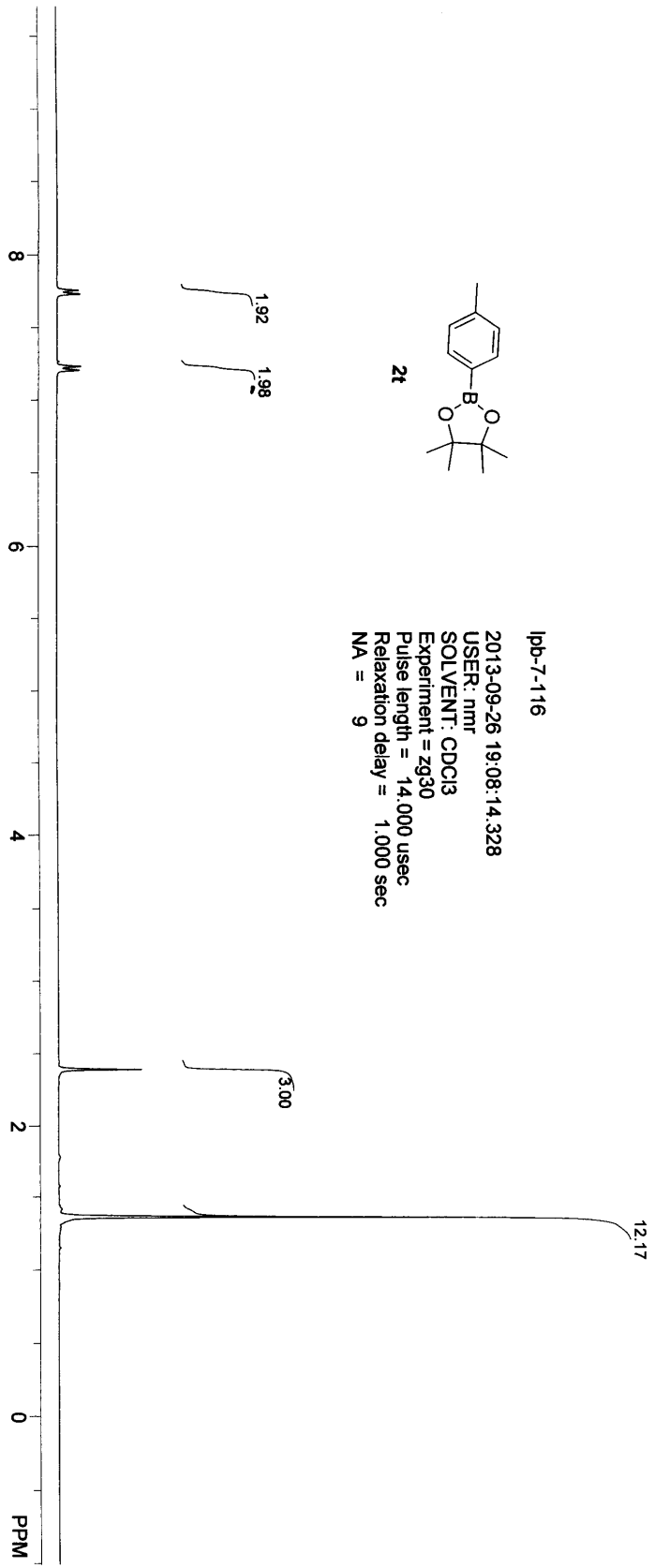


7.753
7.728
7.260
7.227
7.200

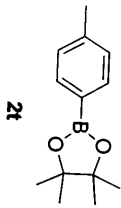


lpb-7-116
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USER: nmr
SOLVENT: CDCl3
Experiment = z930
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Relaxation delay = 1.000 sec
NA = 9

2.390
1.362



200
150
100
50
0 PPM

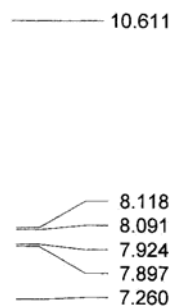


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2013-09-26 19:12:25 531
USER: nmr
SOLVENT: CDCl3
Experiment = zgpg30
Pulse length = 9.500 usec
Relaxation delay = 2.000 sec
NA = 56

- 141.334
- 134.780
- 128.474

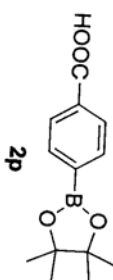
- 83.545
- 77.423
- 77.000
- 76.577

- 24.790
- 21.665

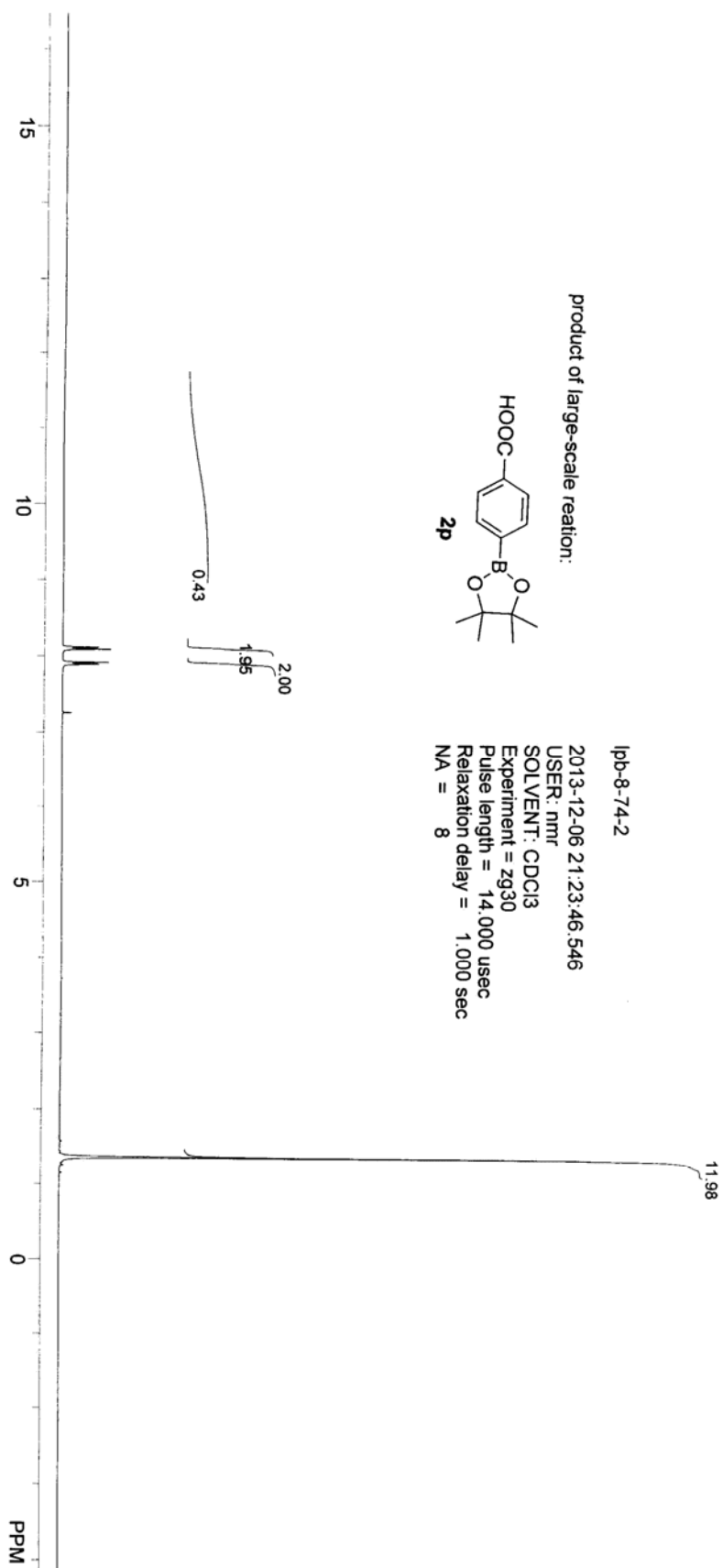


1.365

product of large-scale reaction:



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 SOLVENT: CDCl3
 Experiment = zg30
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 Relaxation delay = 1.000 sec
 NA = 8



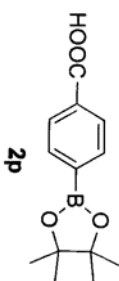
172.190

134.743
131.416
129.182

84.262
77.423
77.000
76.577

24.846

product of large-scale reaction:



ljb-8-74-2
2013-12-06 21:36:18.312
USER: nmr
SOLVENT: CDCl3
Experiment = zgpg30
Pulse length = 9.500 usec
Relaxation delay = 2.000 sec
NA = 188

