Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry.

Supporting Information

Synthesis of 2-Aminobenzophenones through Acylation of Anilines with α-Oxocarboxylic Acids Assisted by *tert*-Butyl Nitrite

Qianqian Wang,[a, b] Xinying Zhang,*[, a] and Xuesen Fan*[, a]

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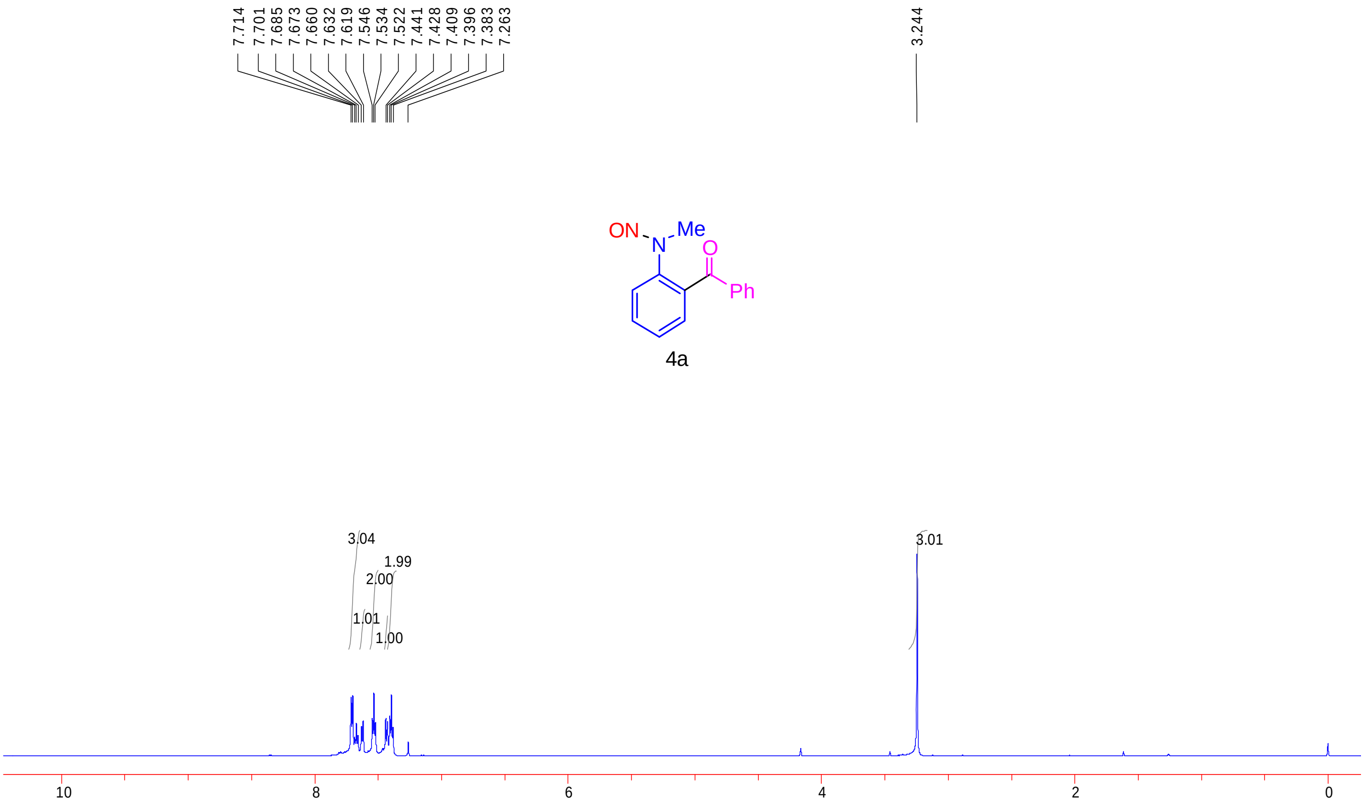
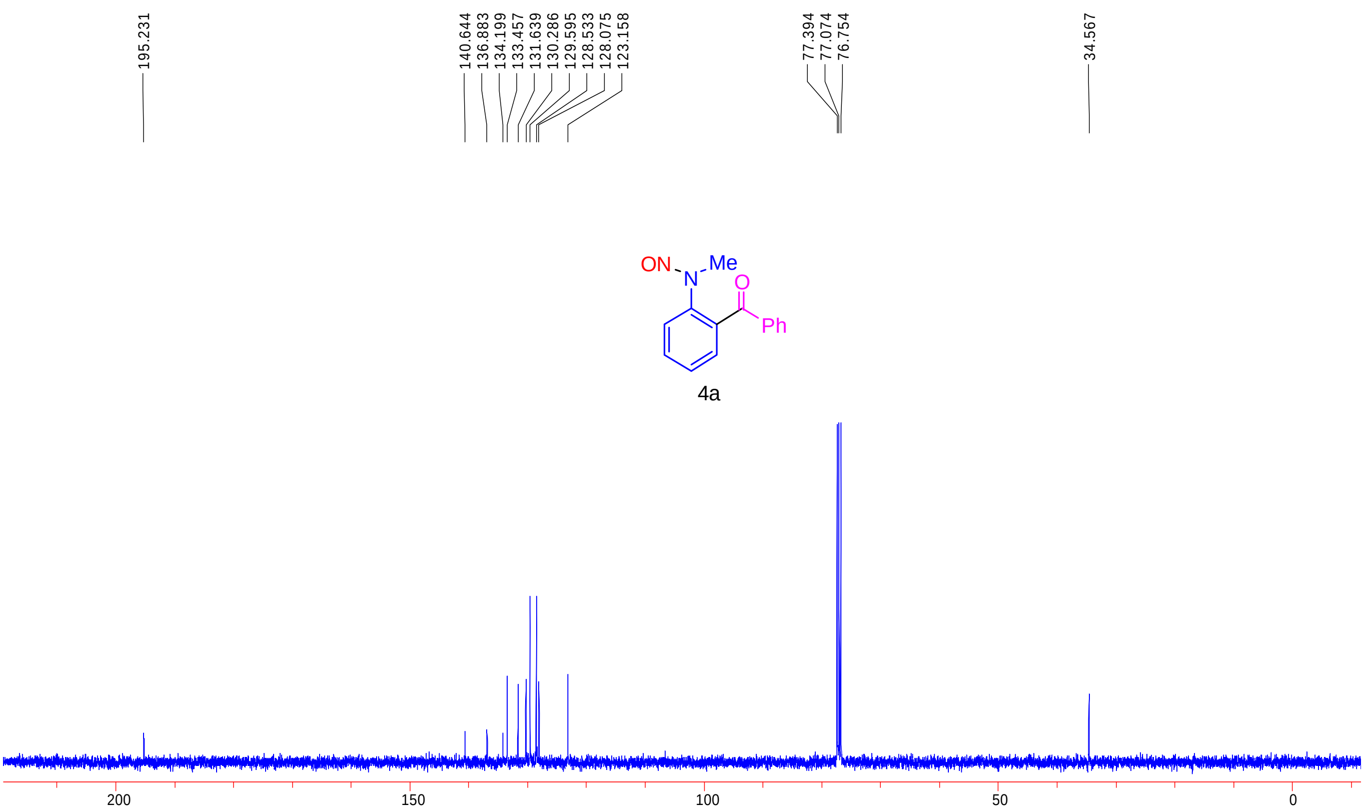
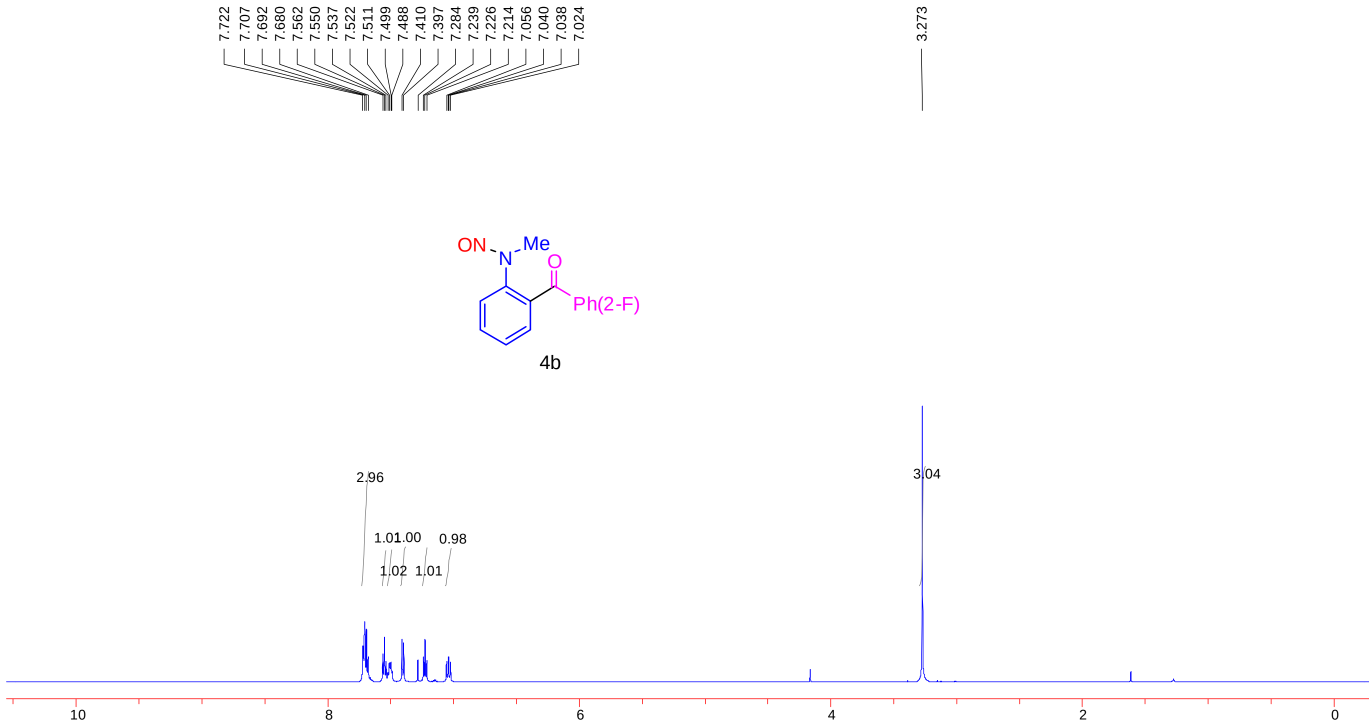
E-mail: xinyingzhang@htu.cn; xuesen.fan@htu.cn

I. Copies of ^{1}H and ^{13}C NMR spectra of **4a-4hh**



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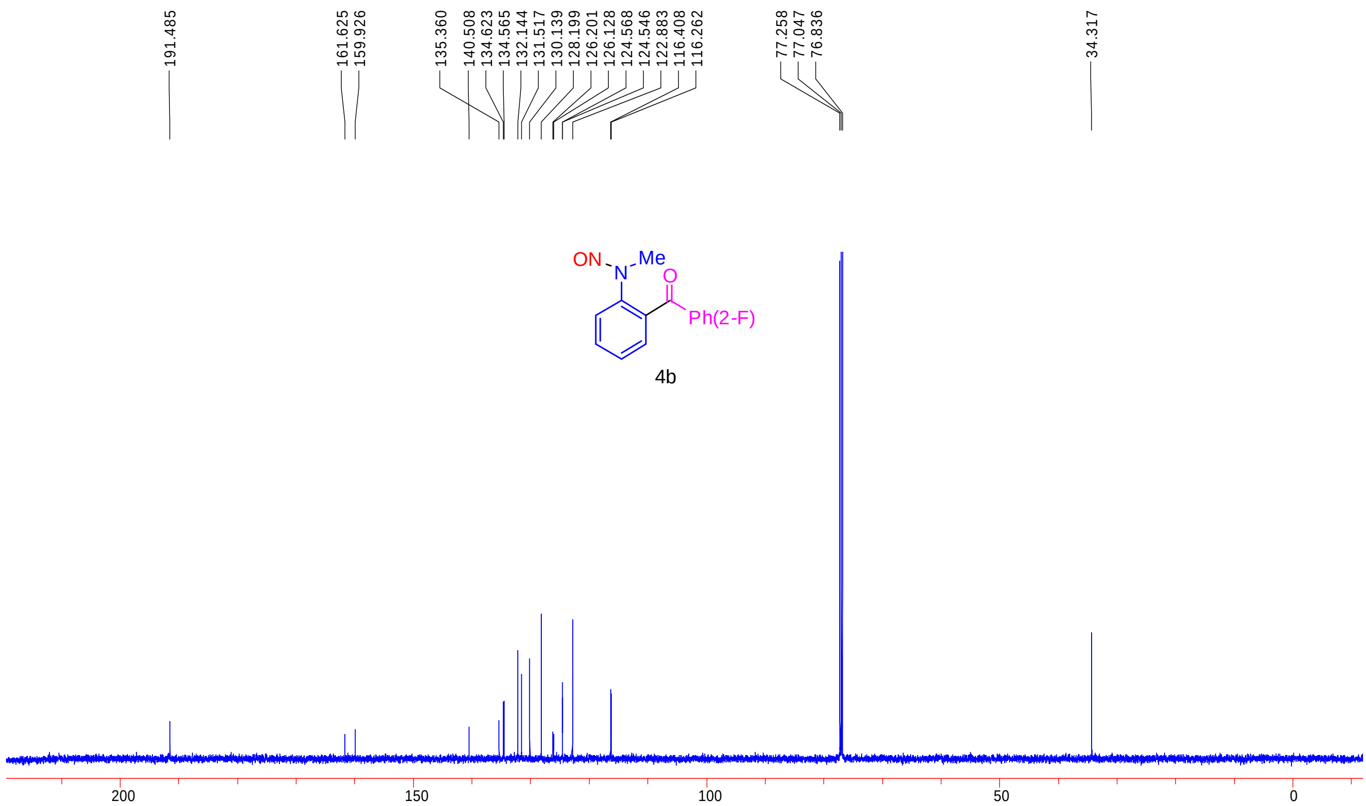
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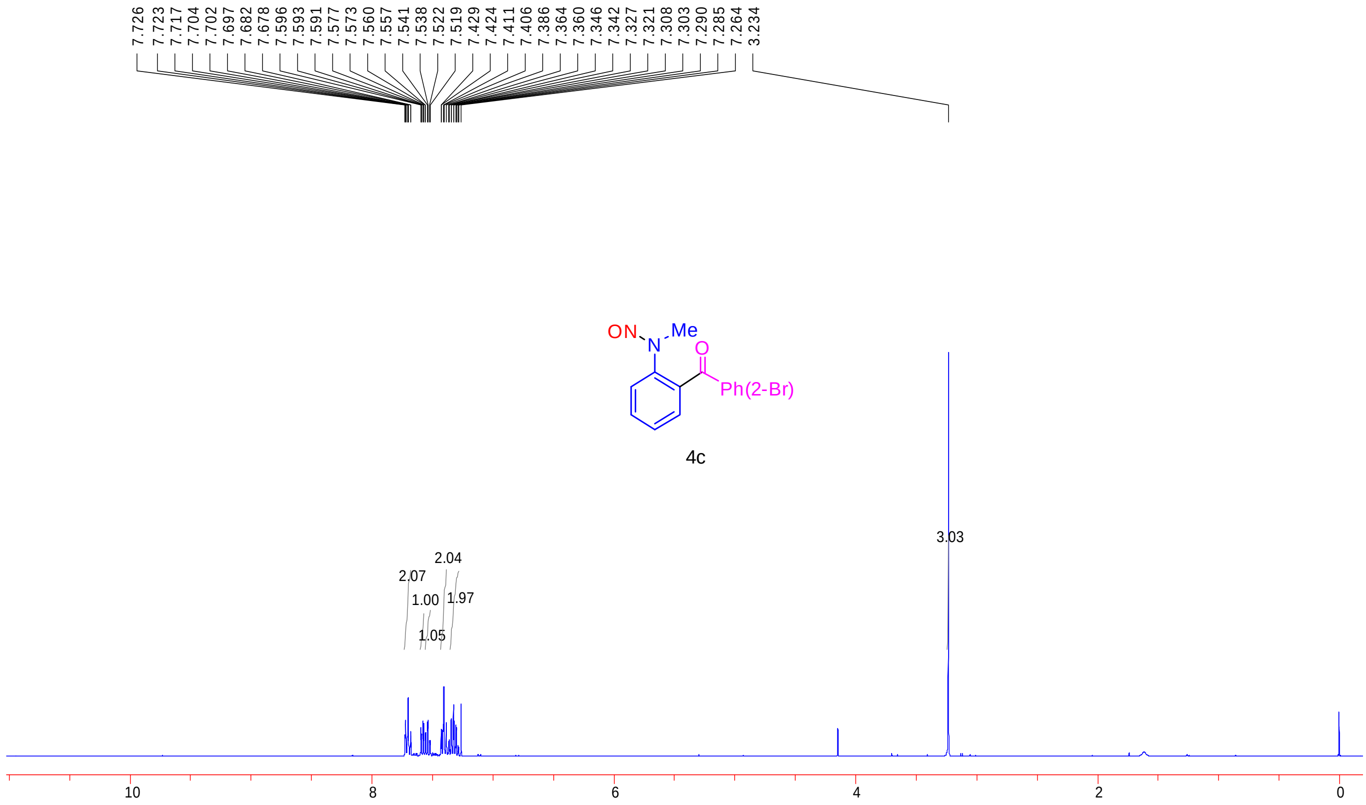
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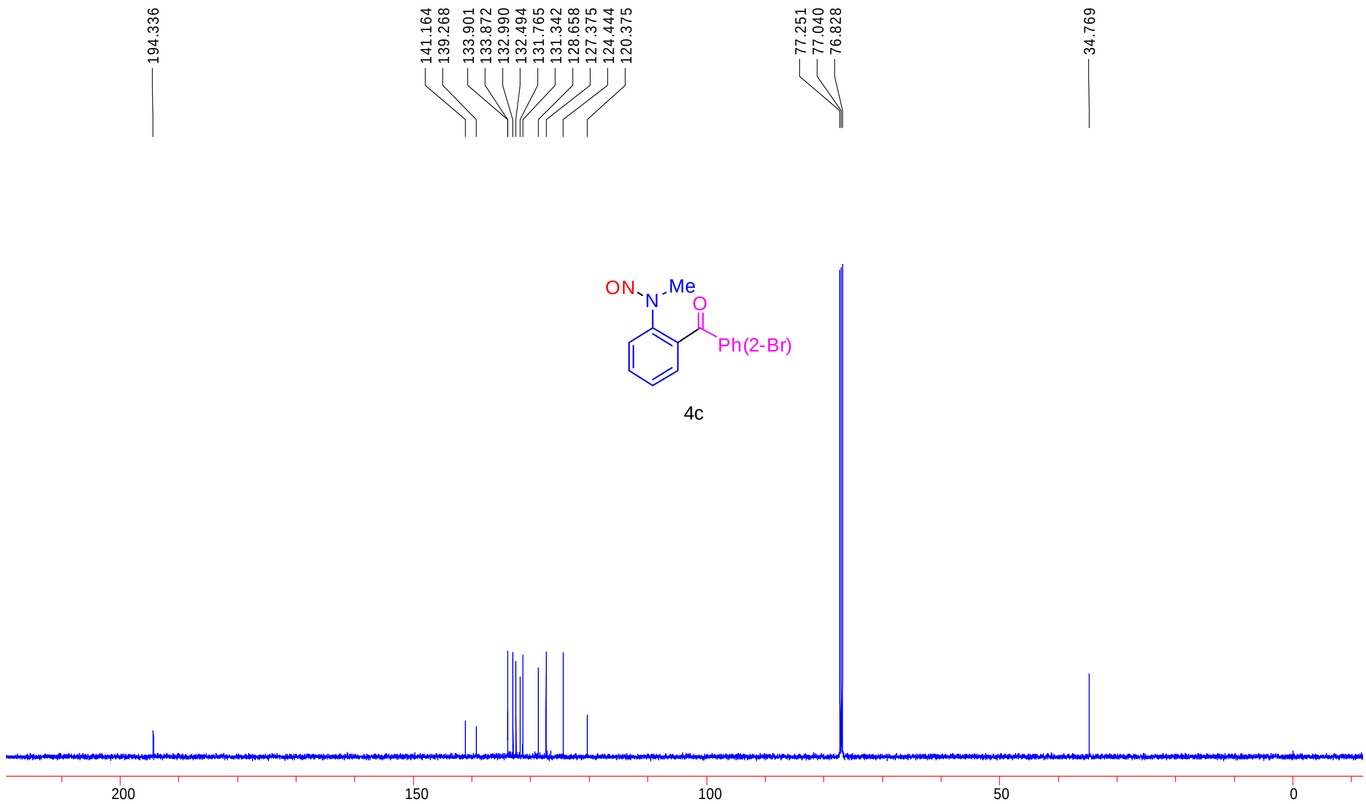
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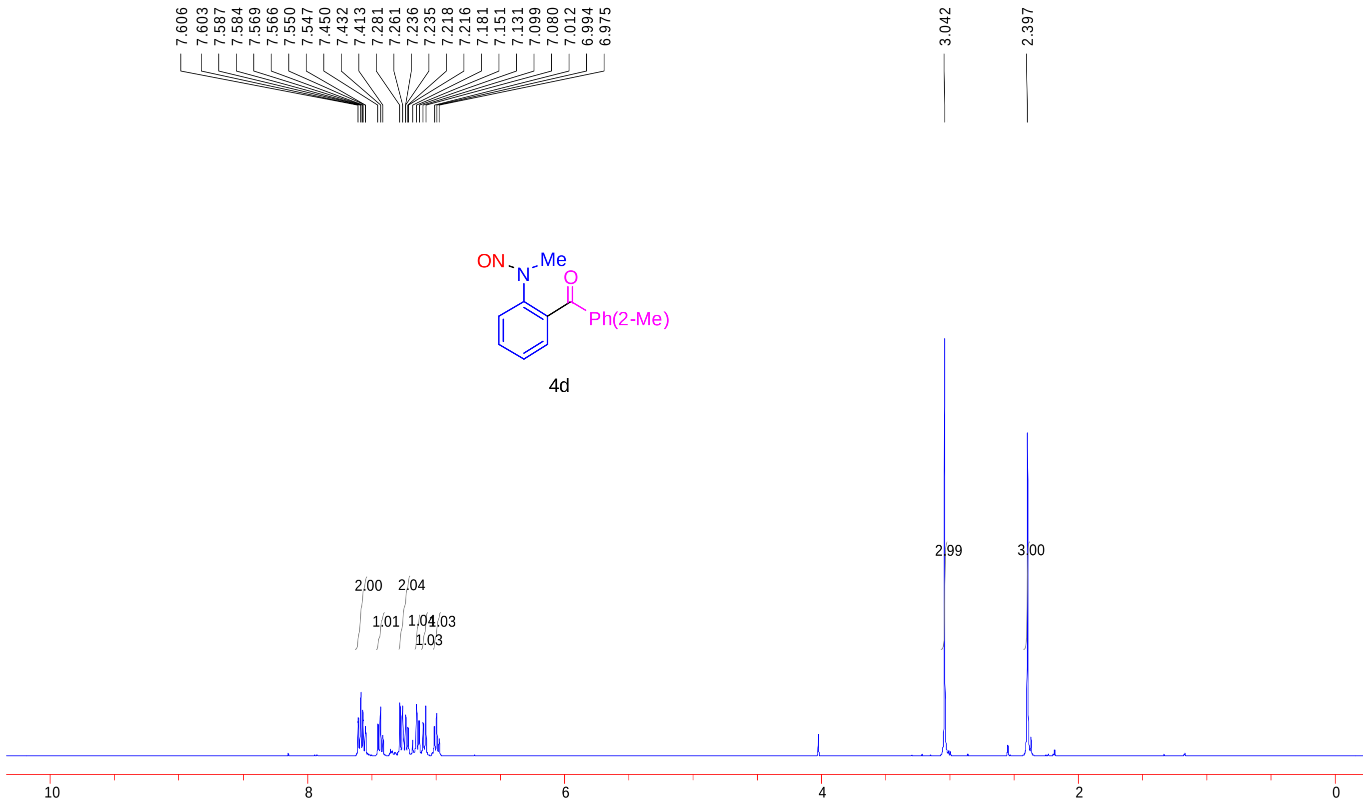
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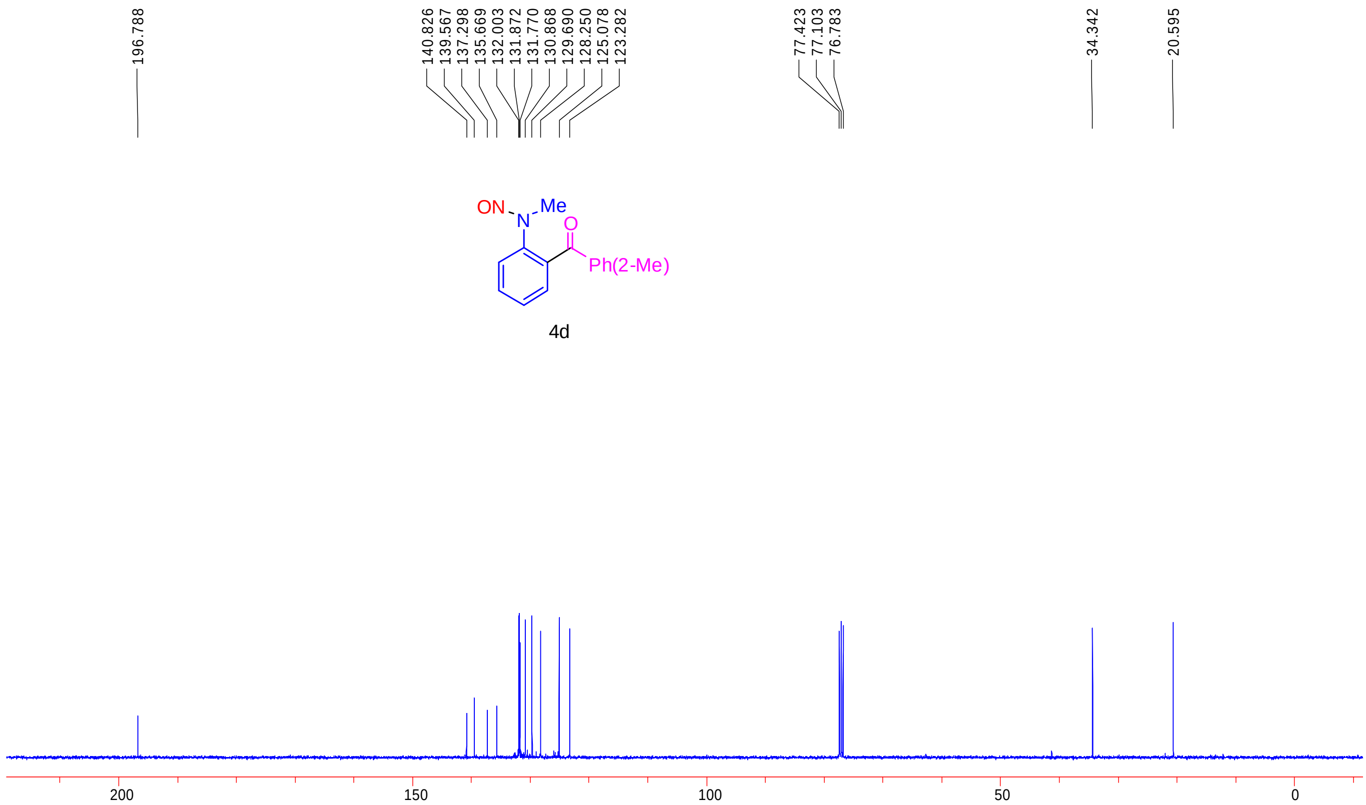
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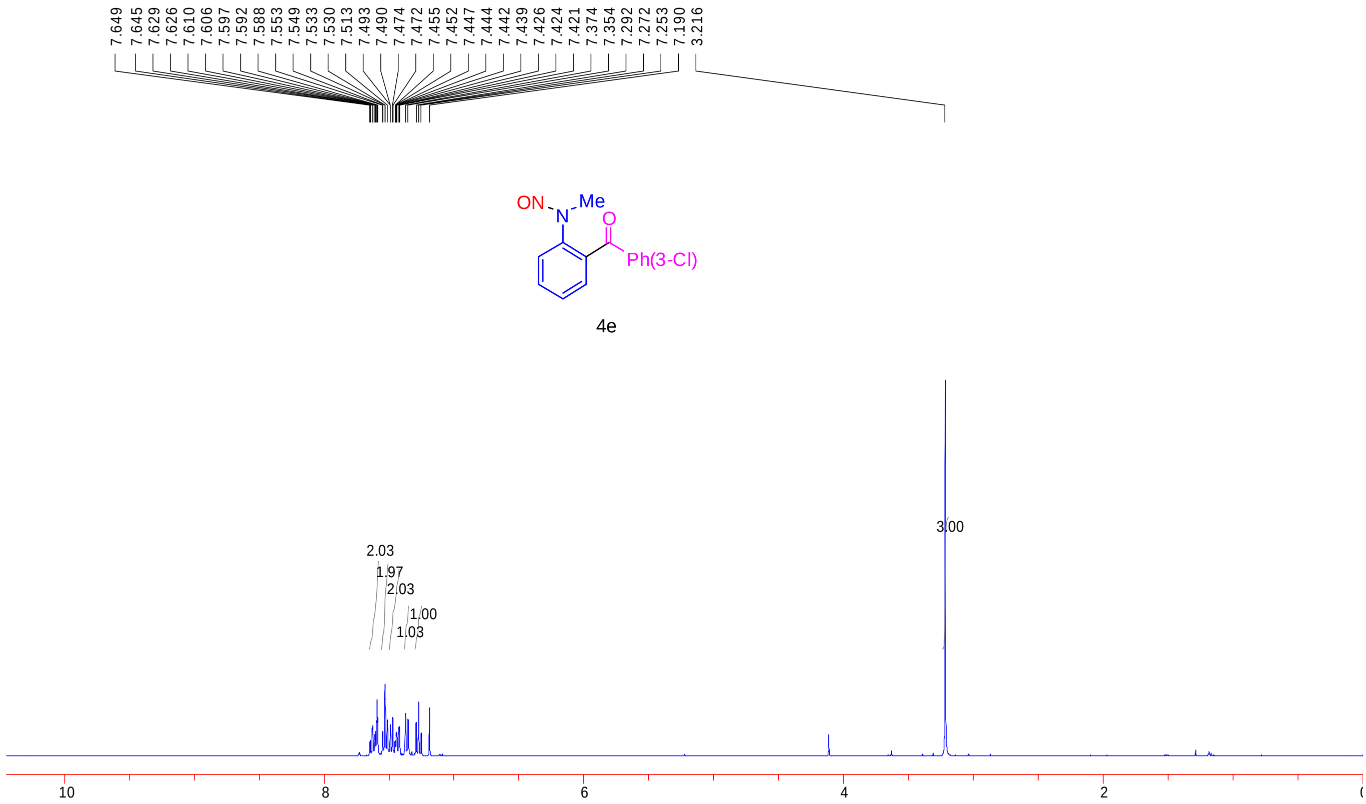
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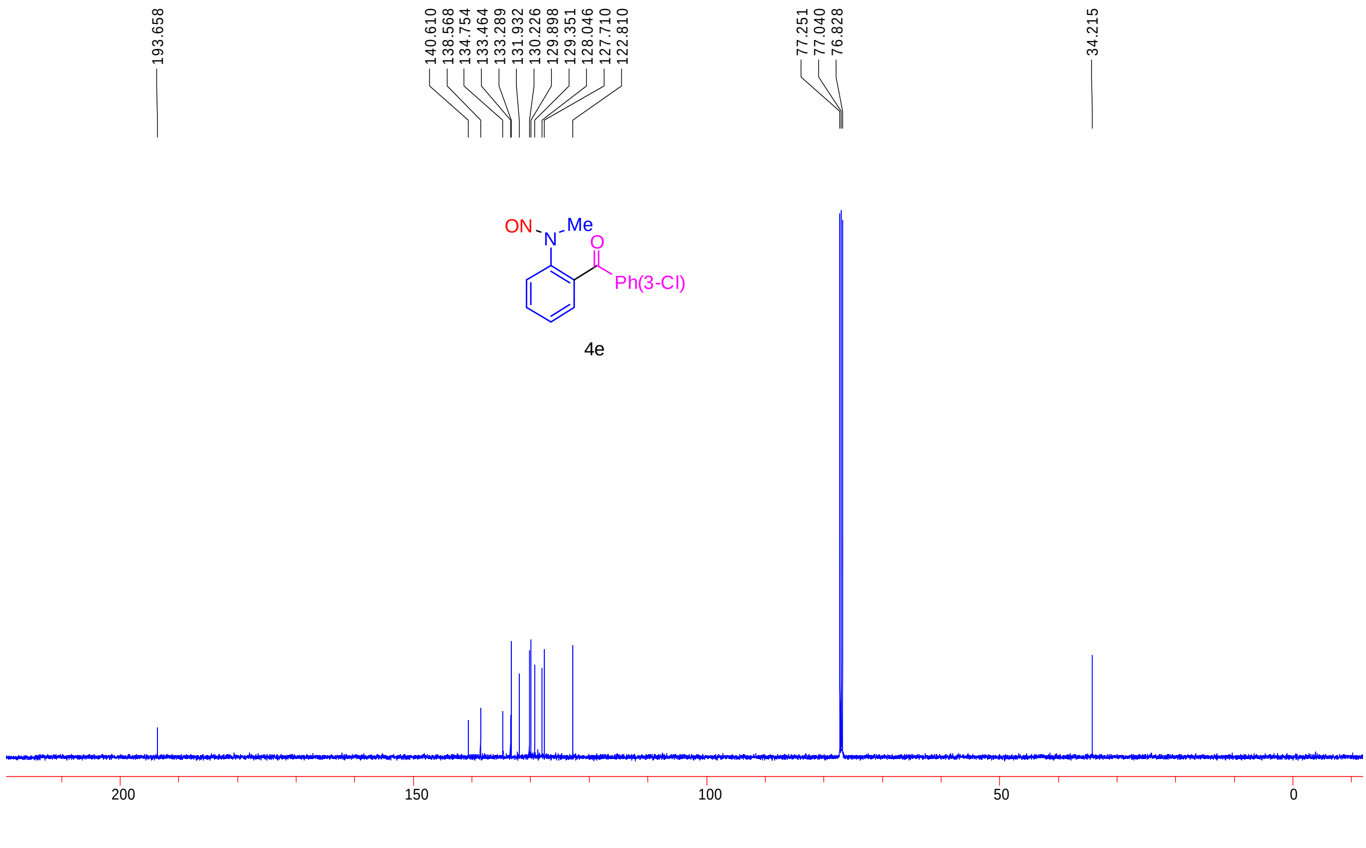
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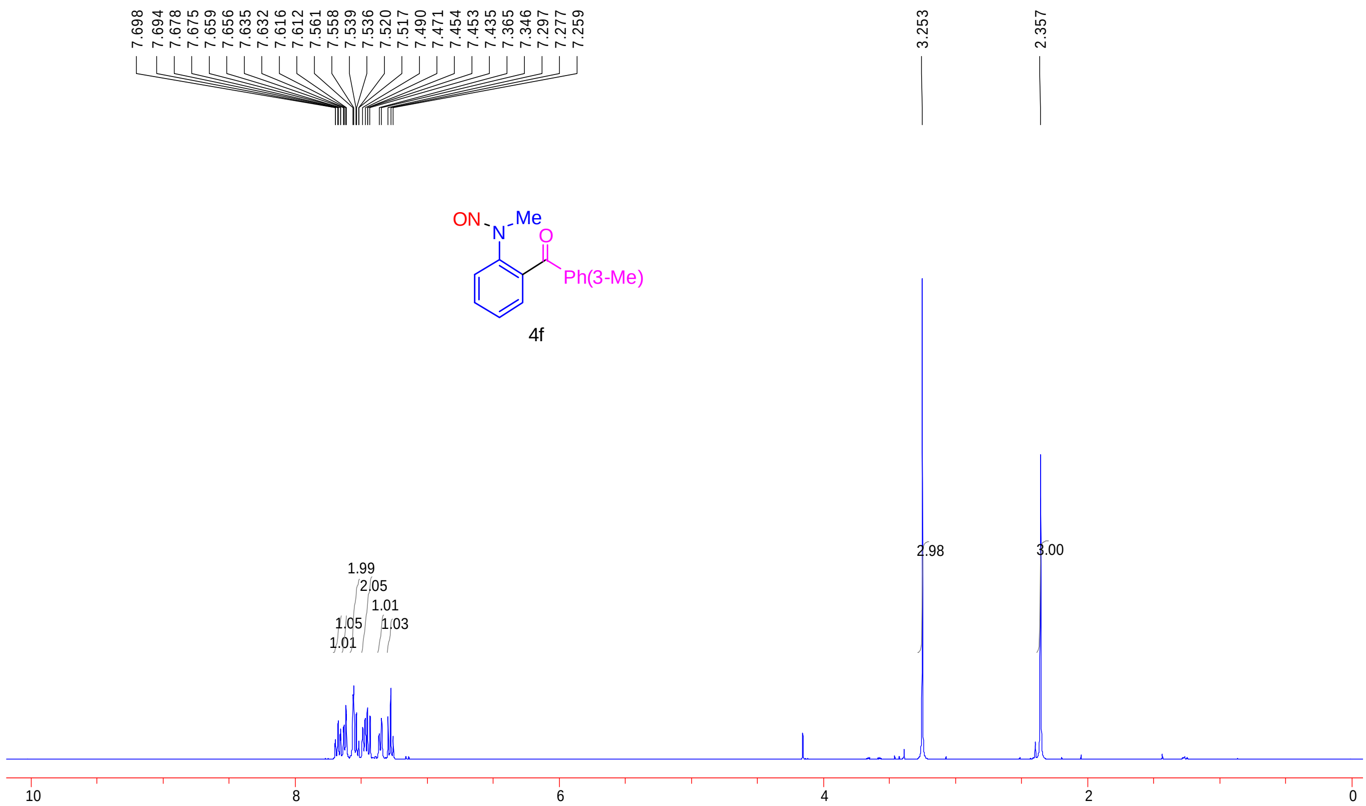
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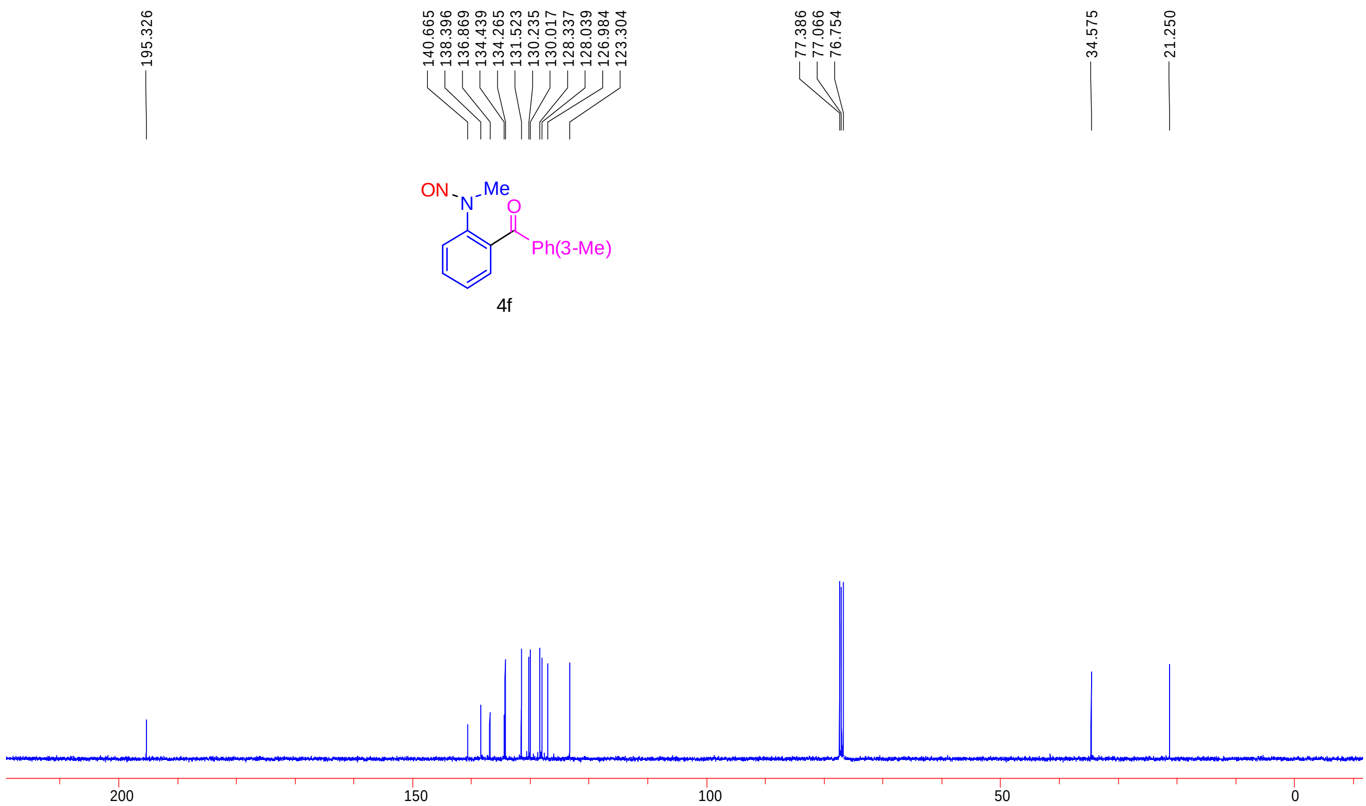
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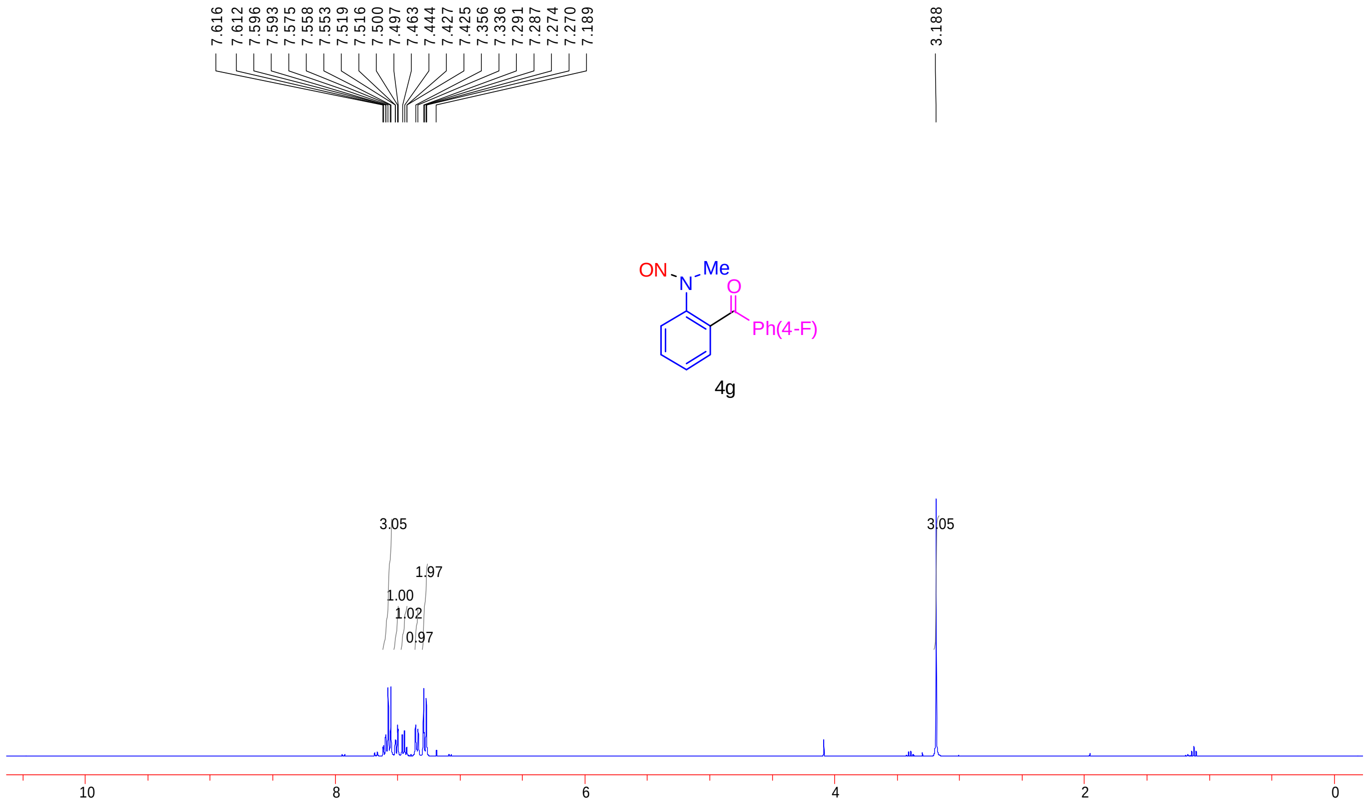
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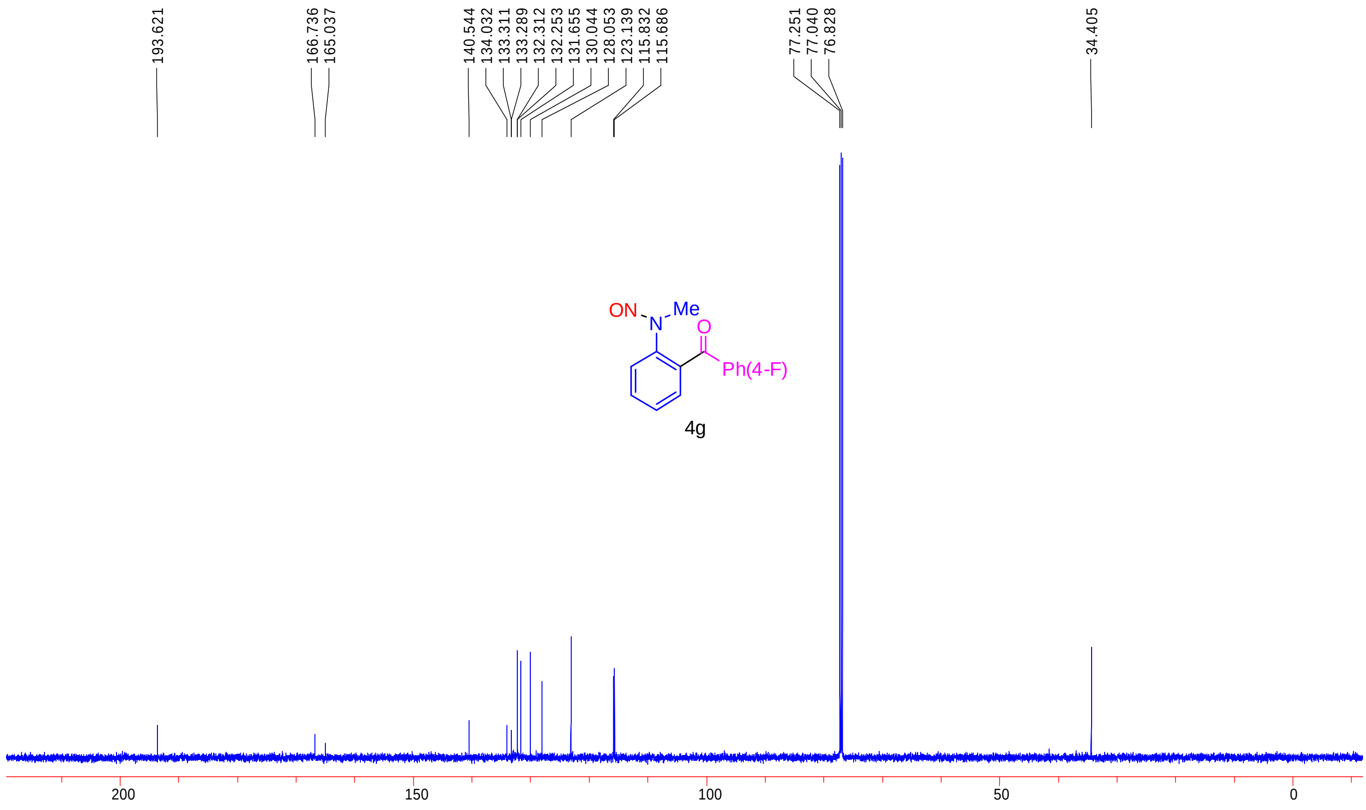
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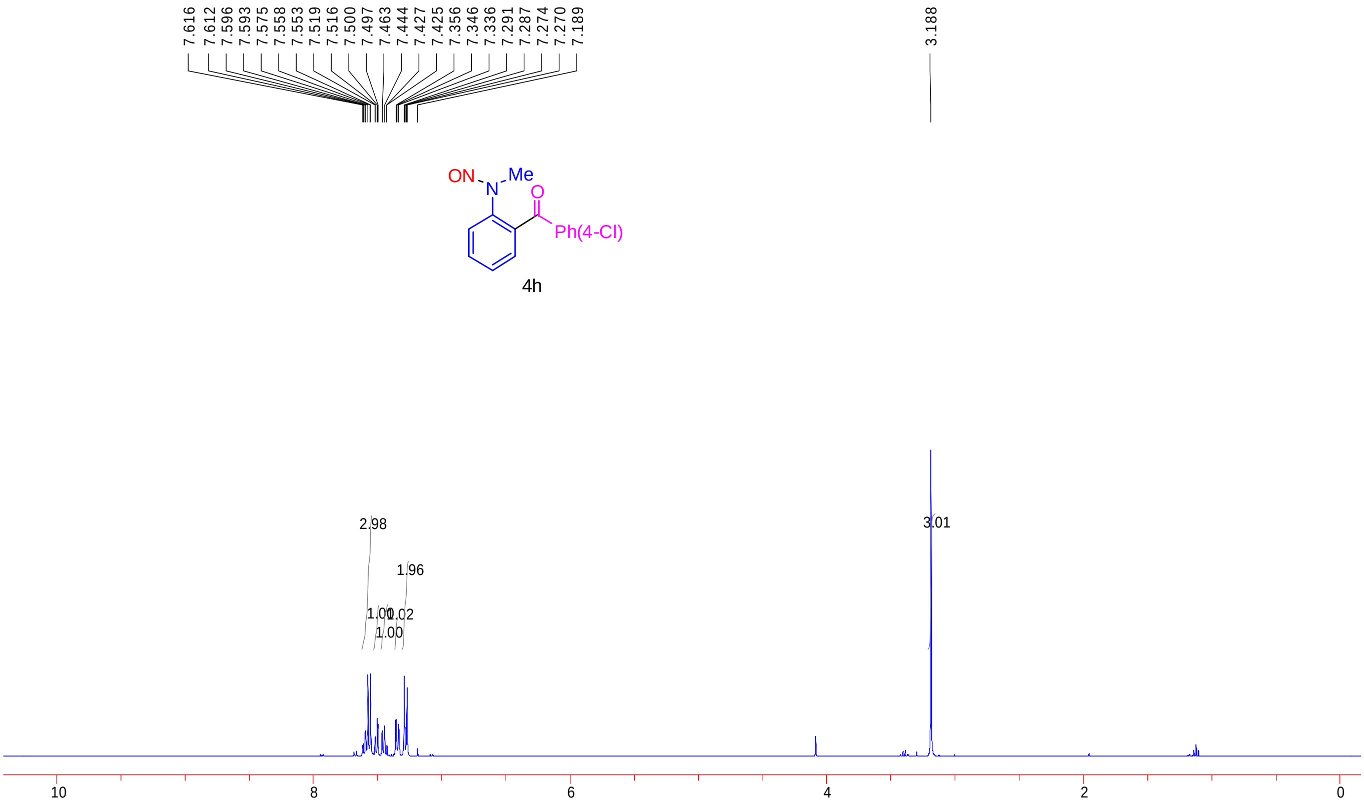
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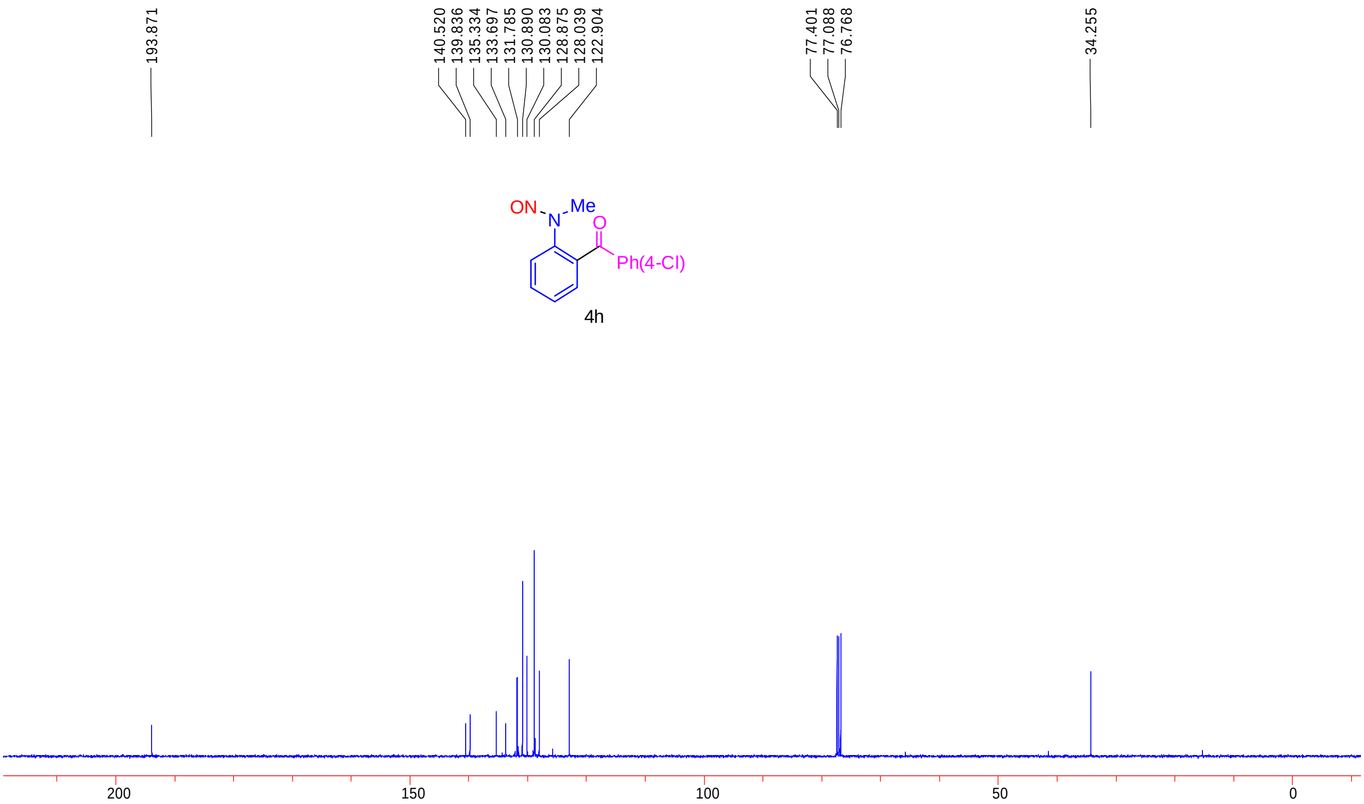
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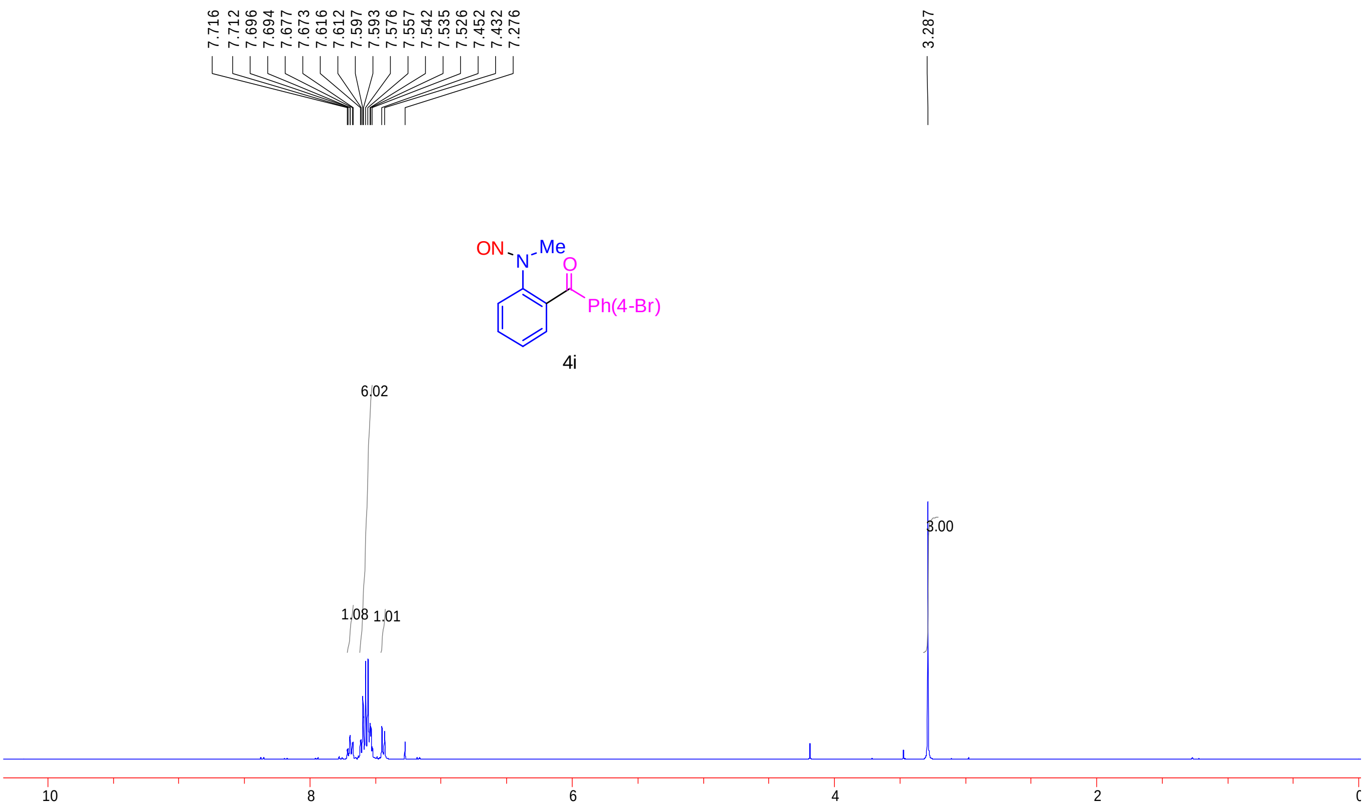

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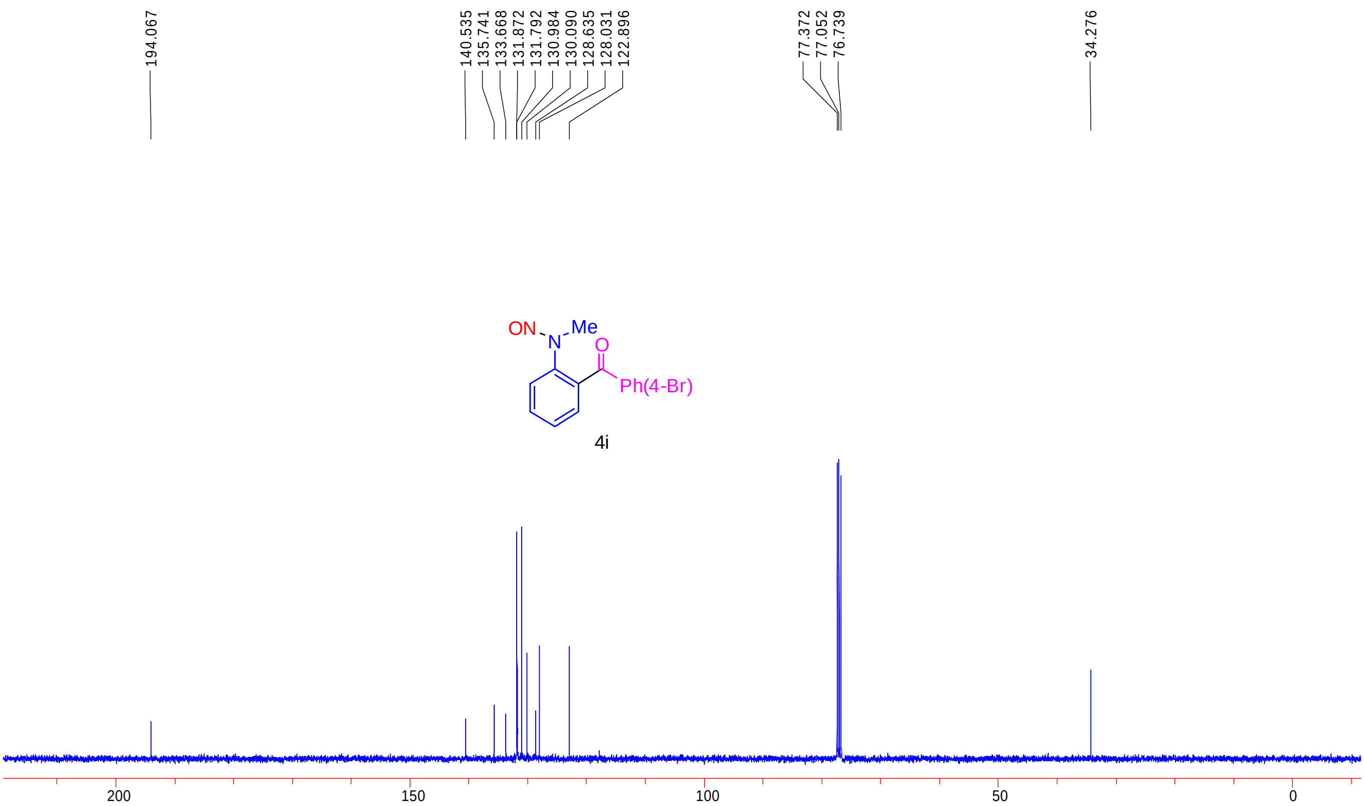

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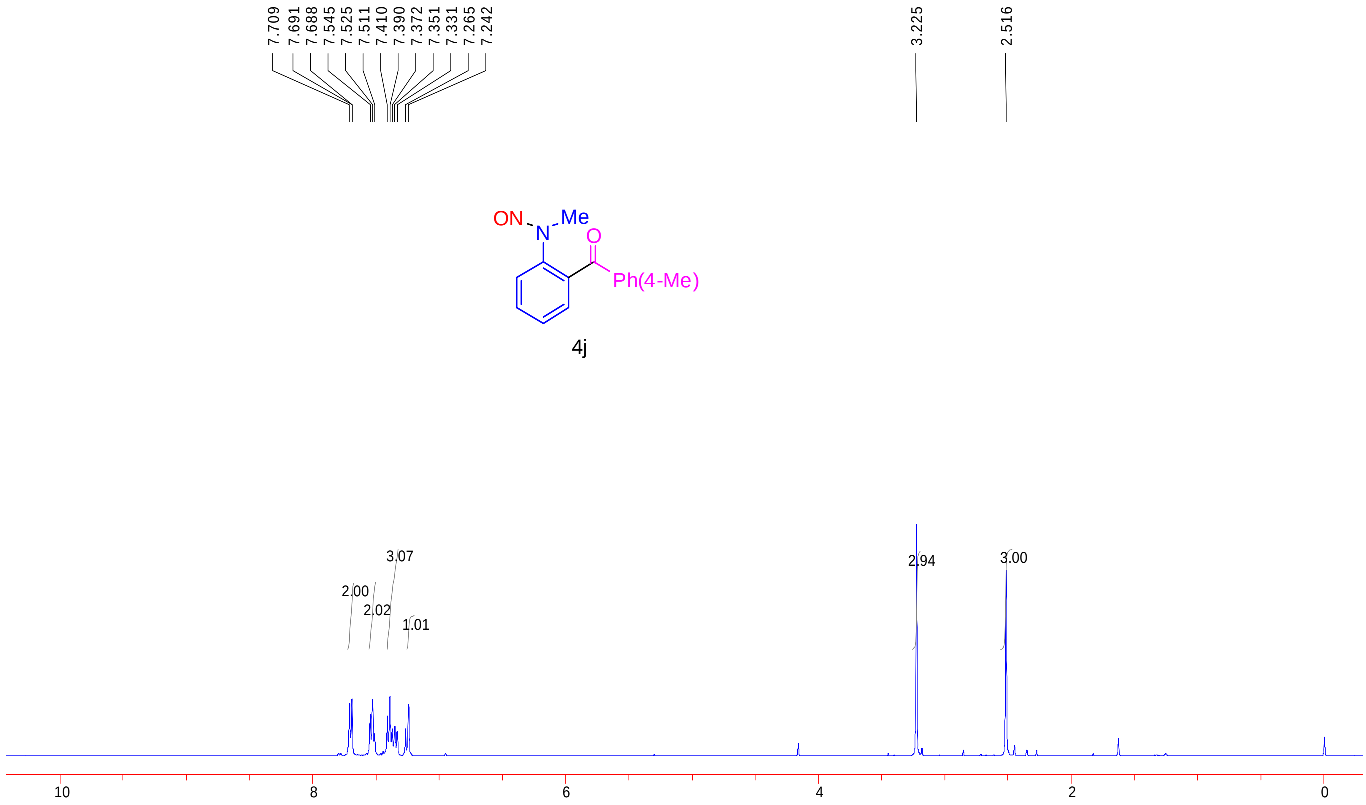
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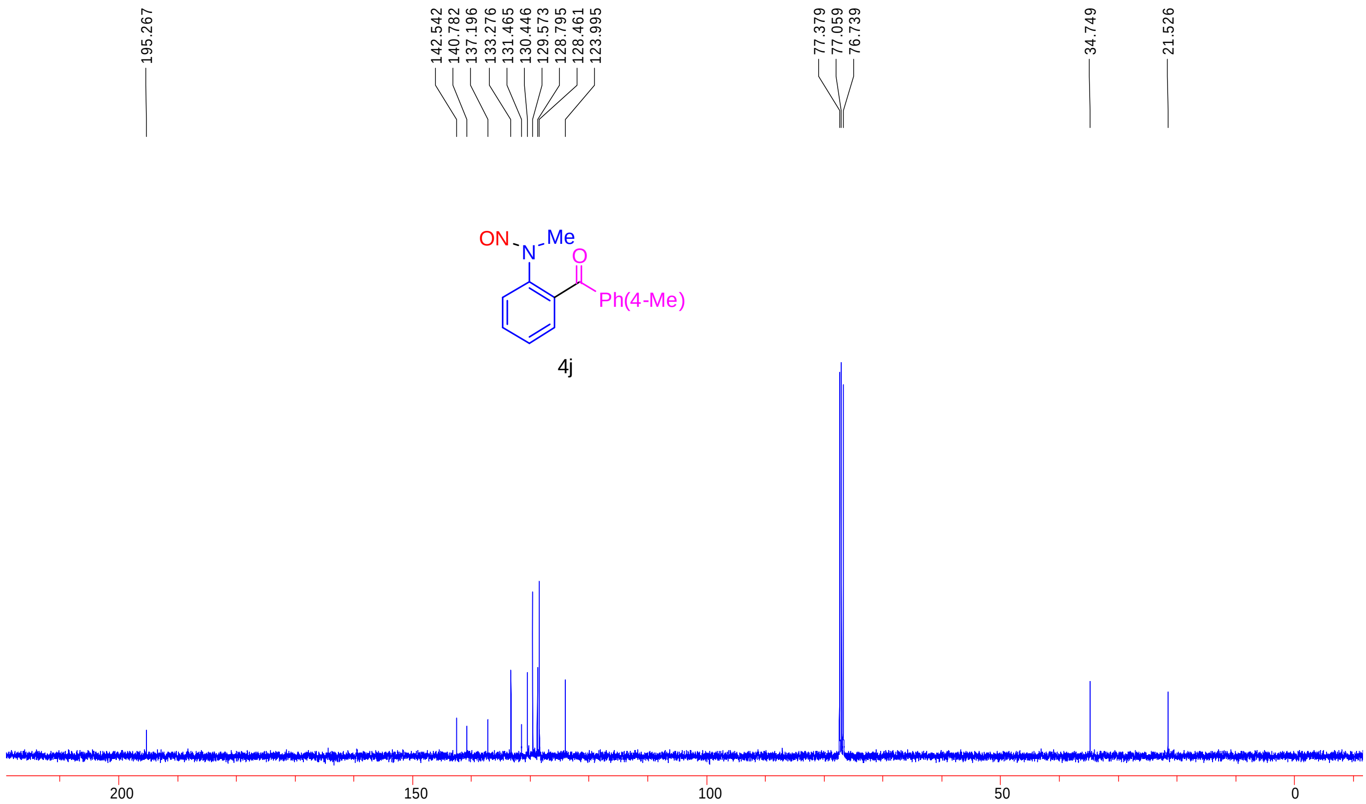
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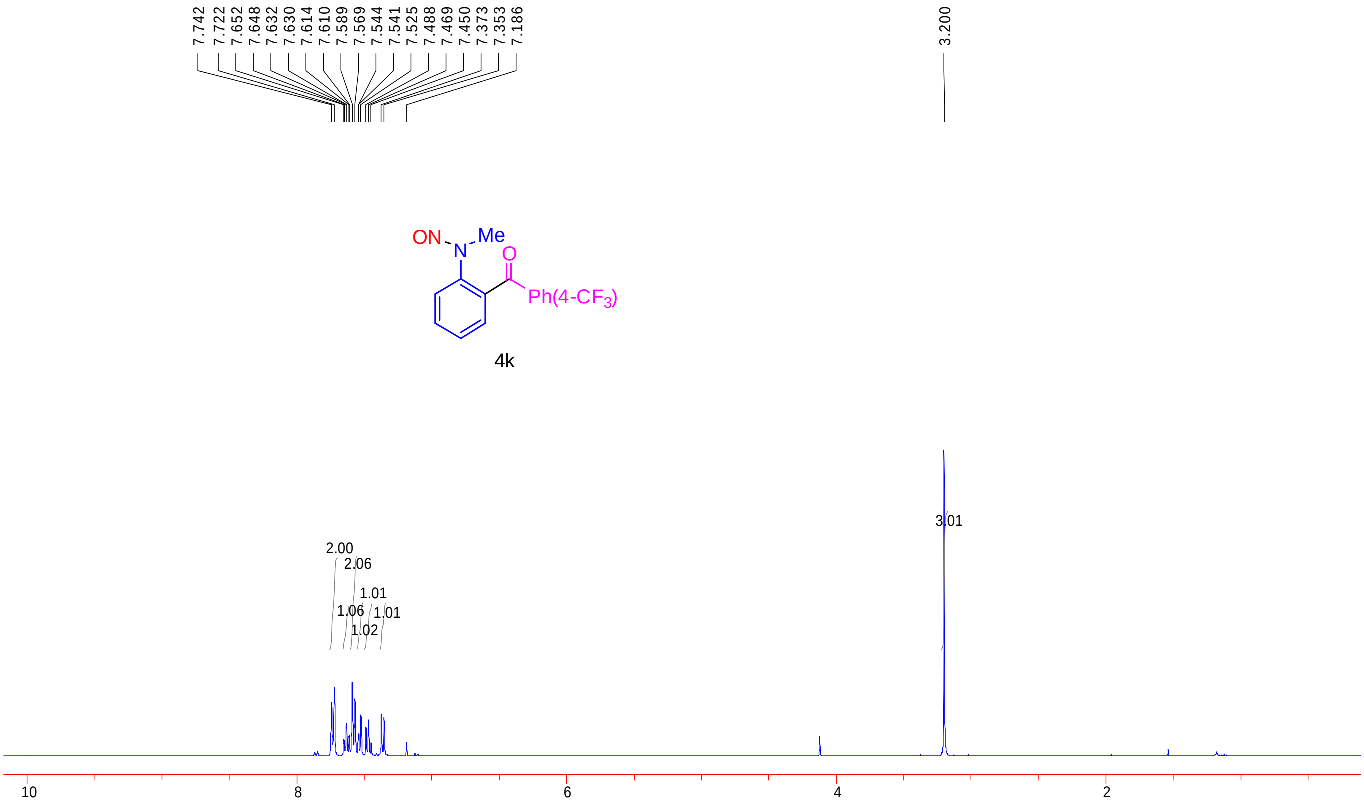
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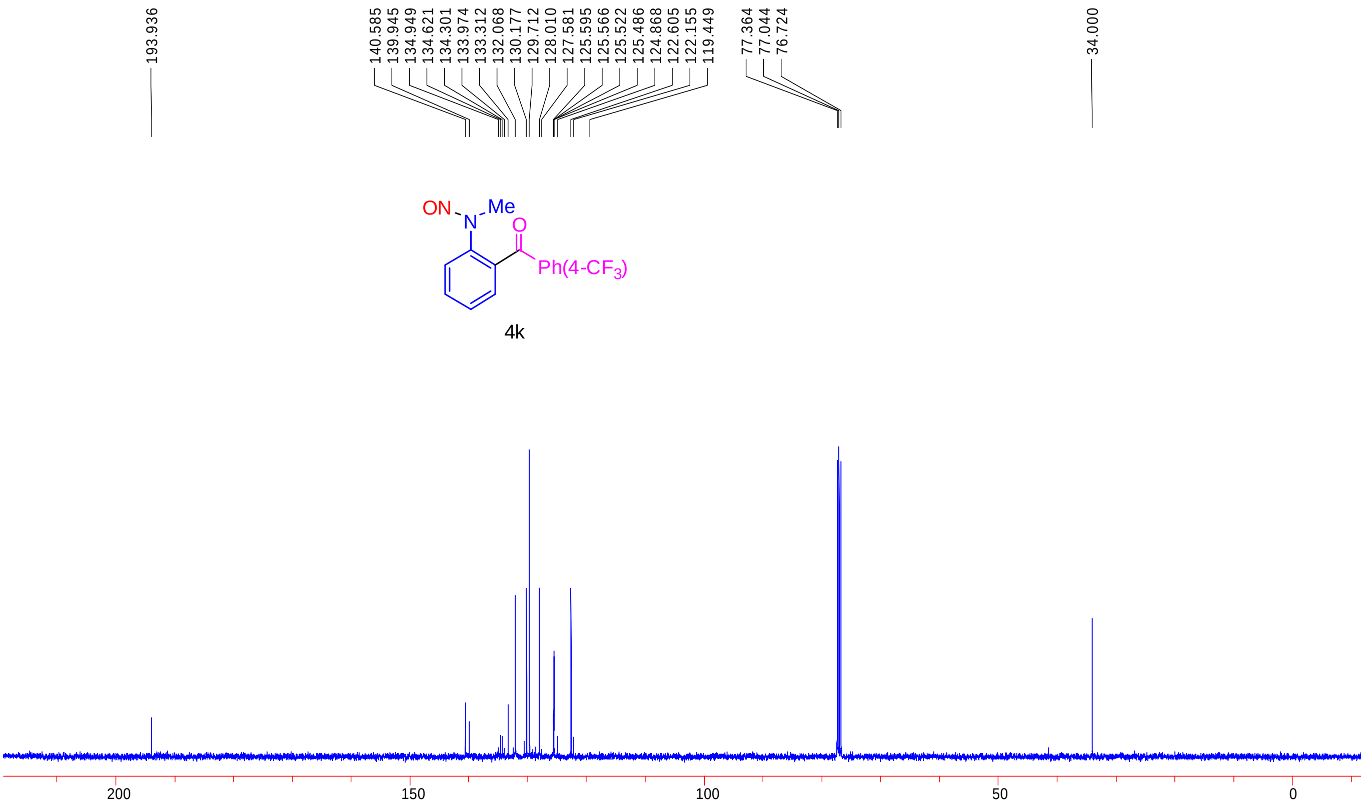
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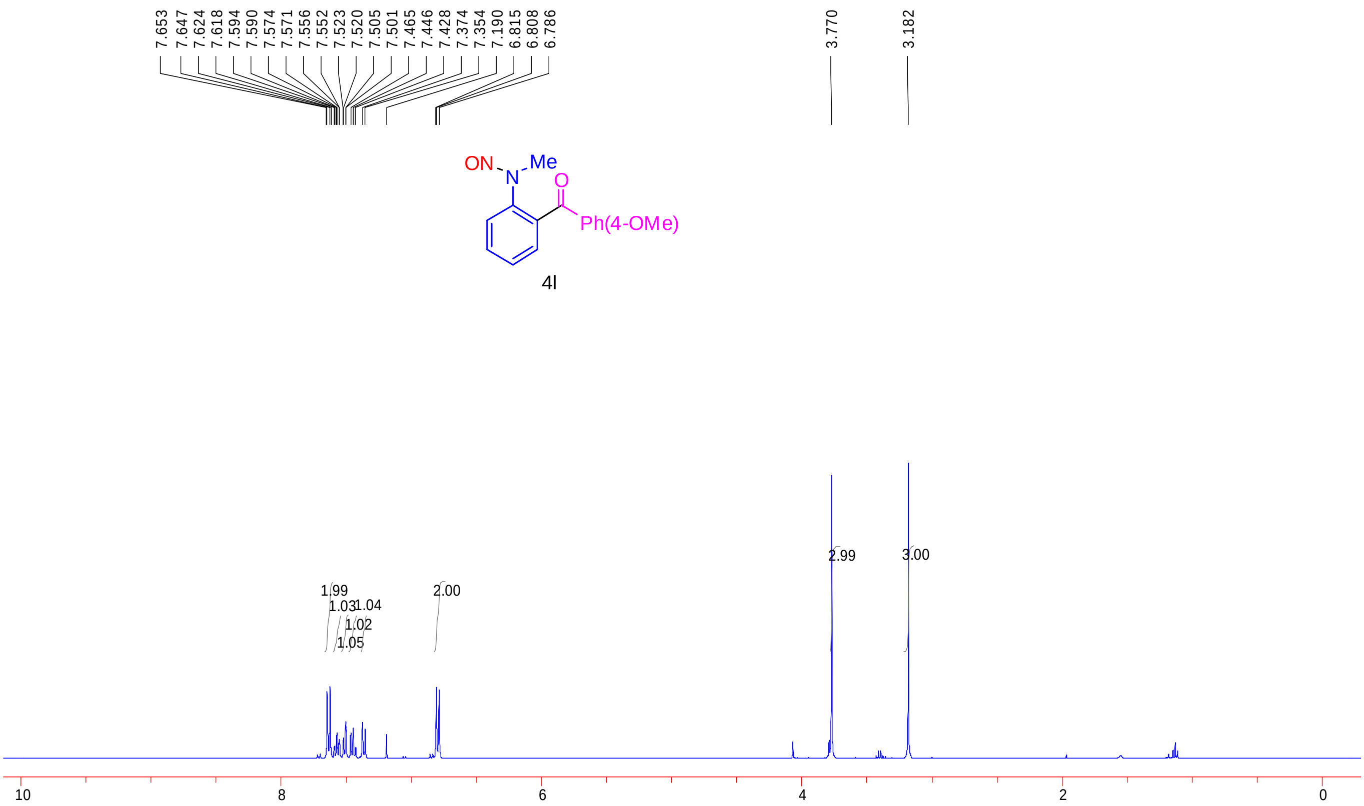

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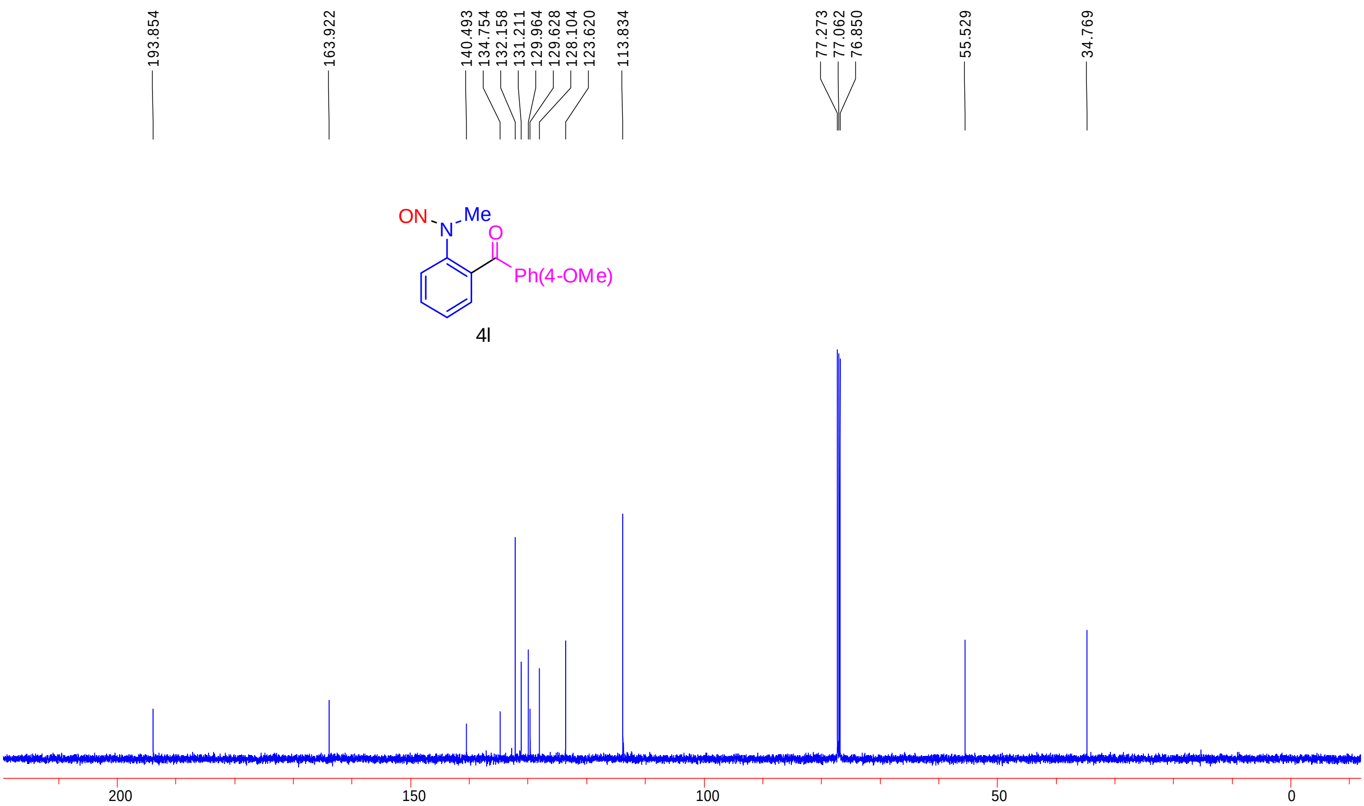

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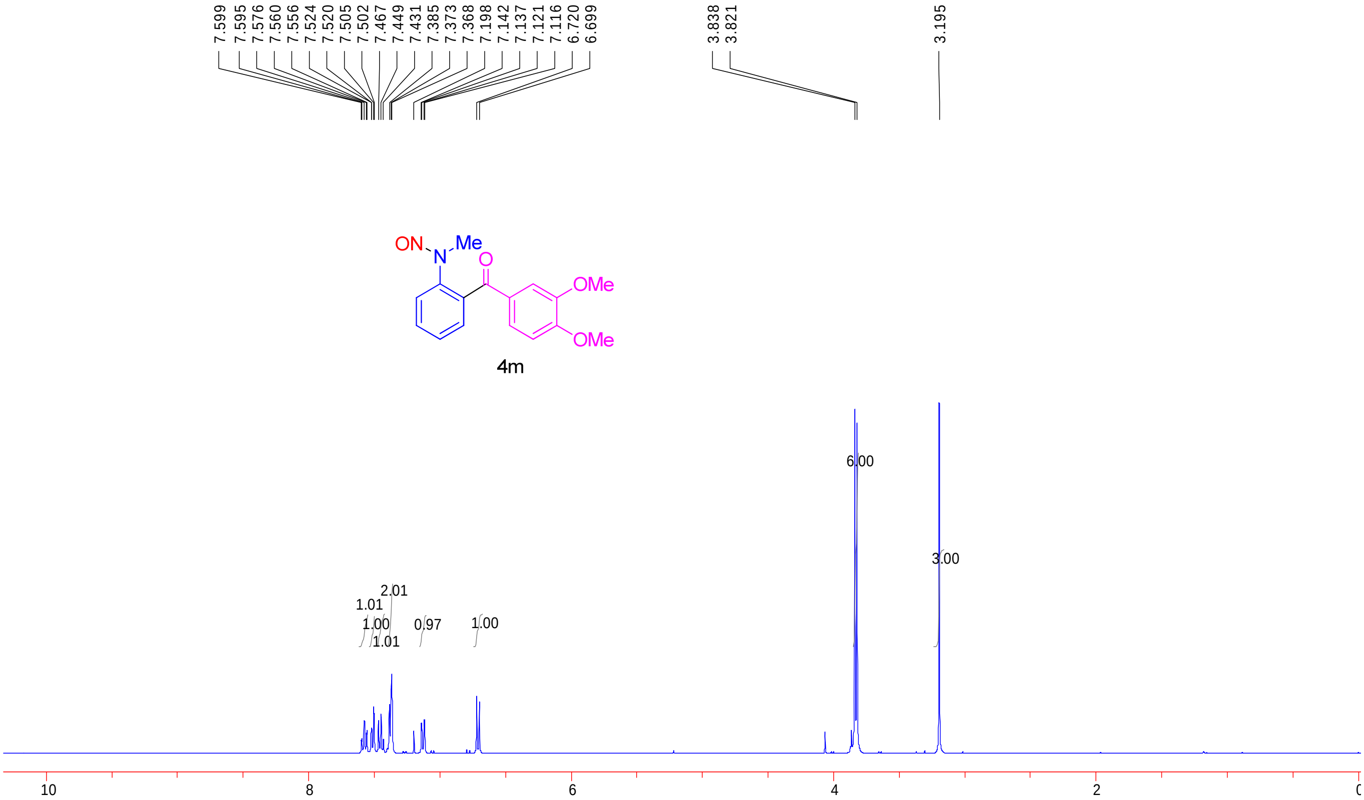
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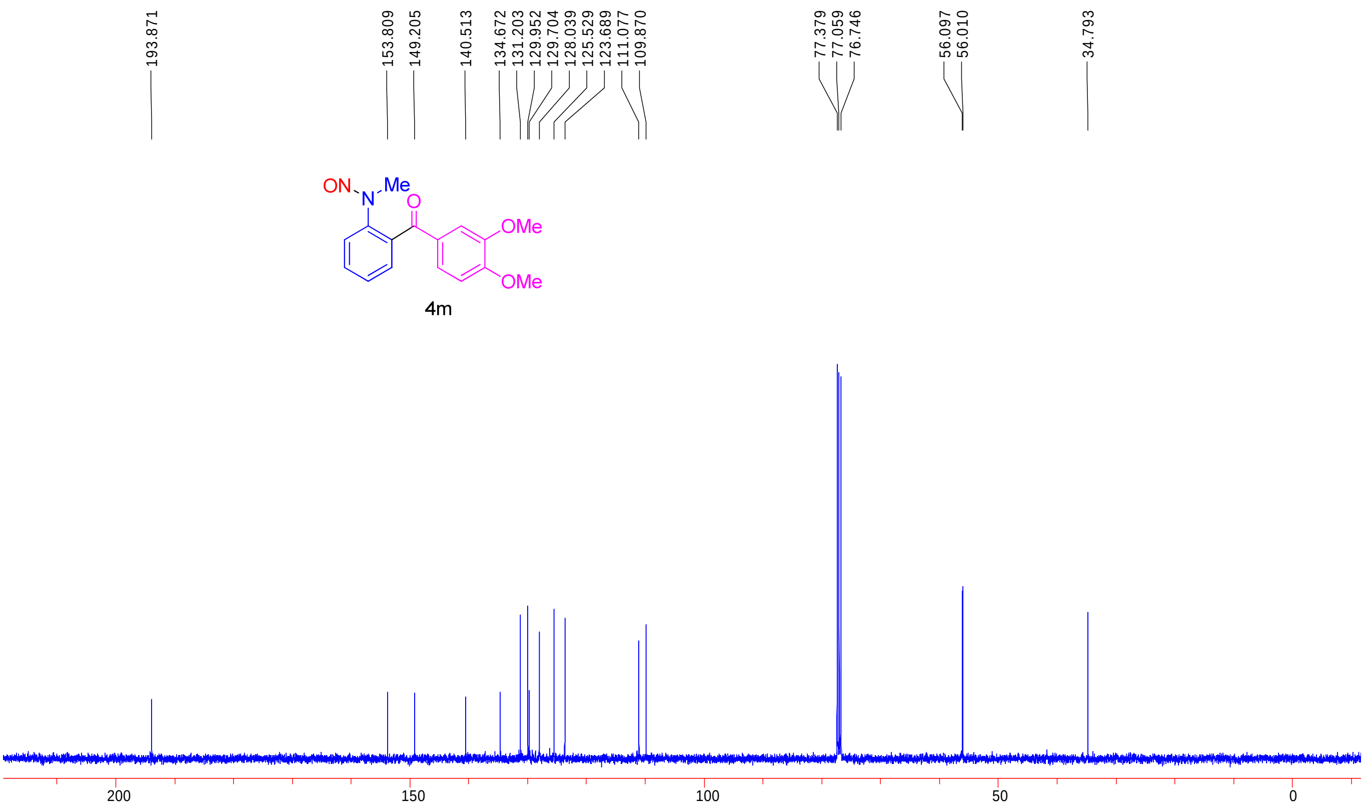
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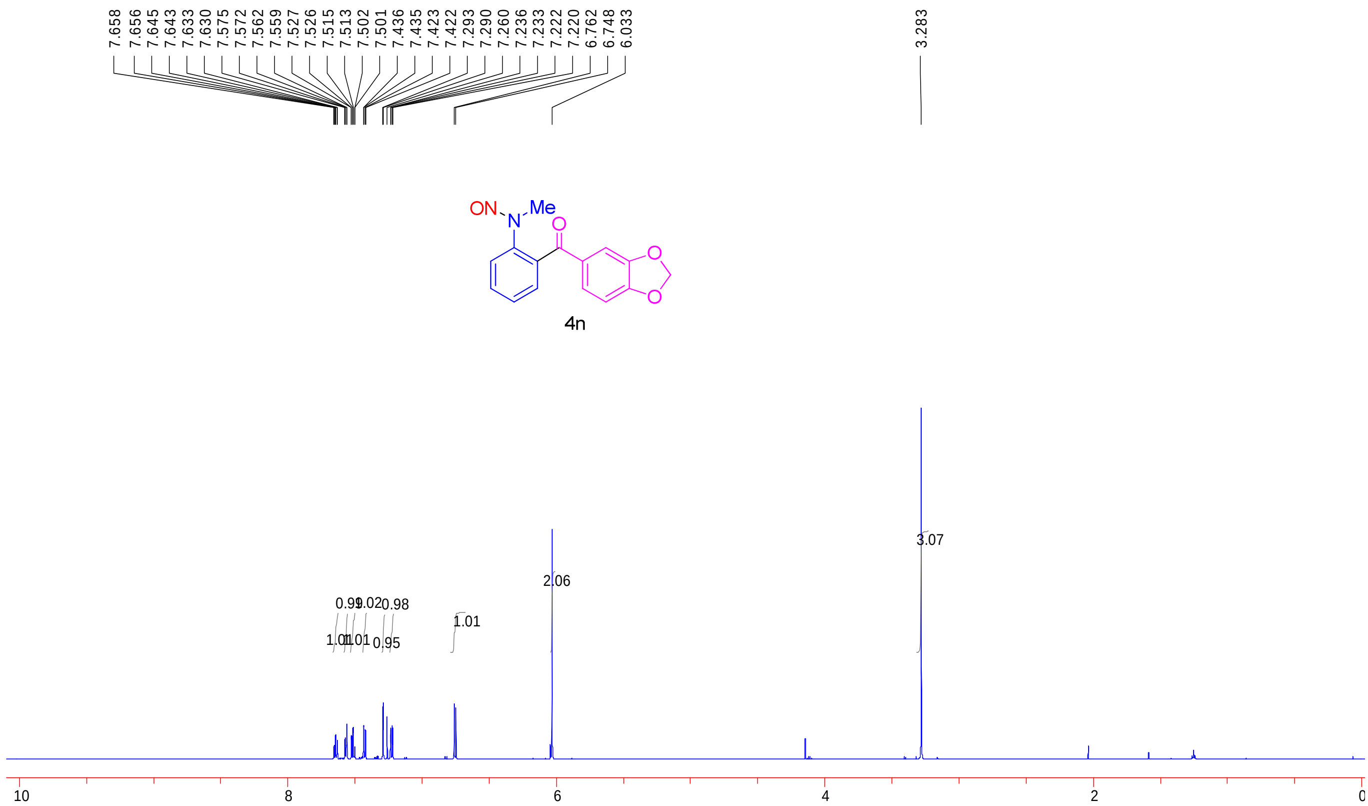
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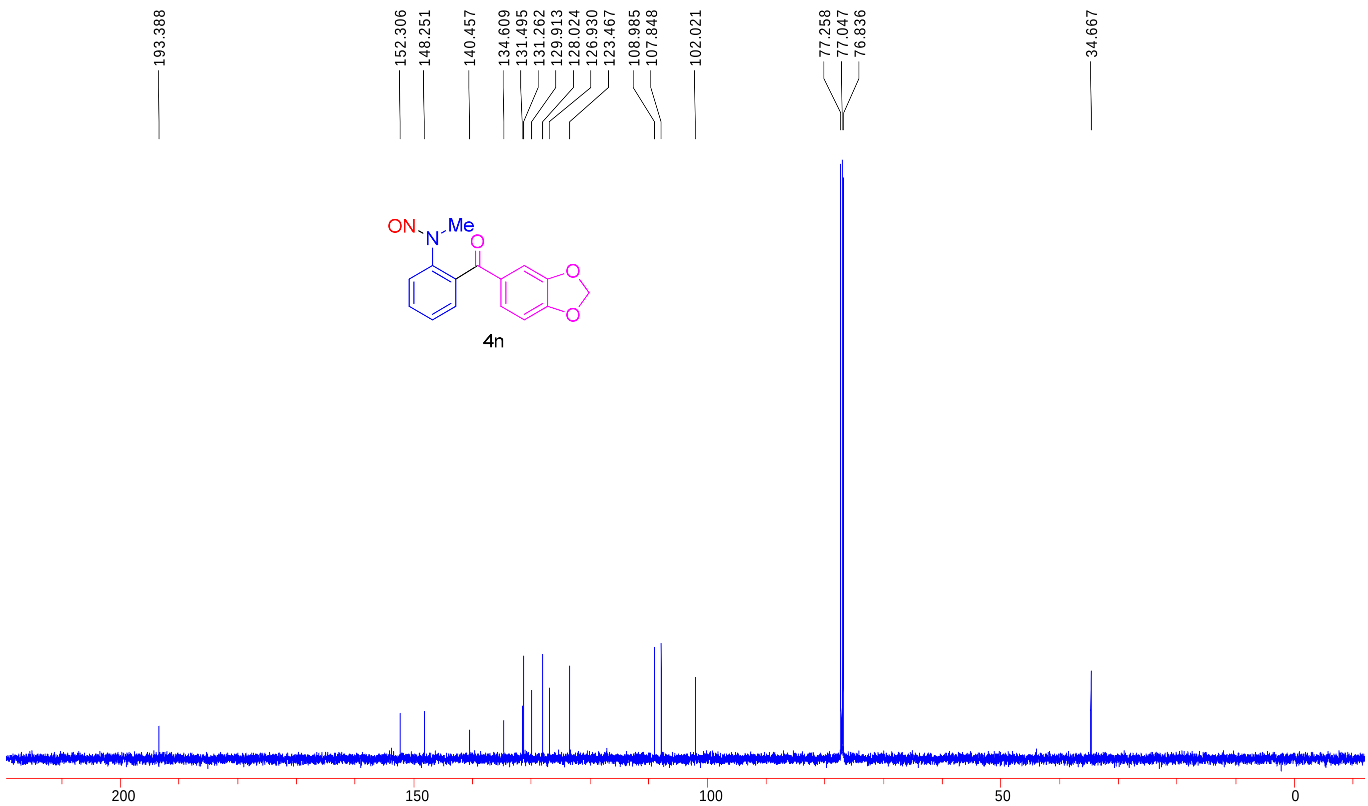
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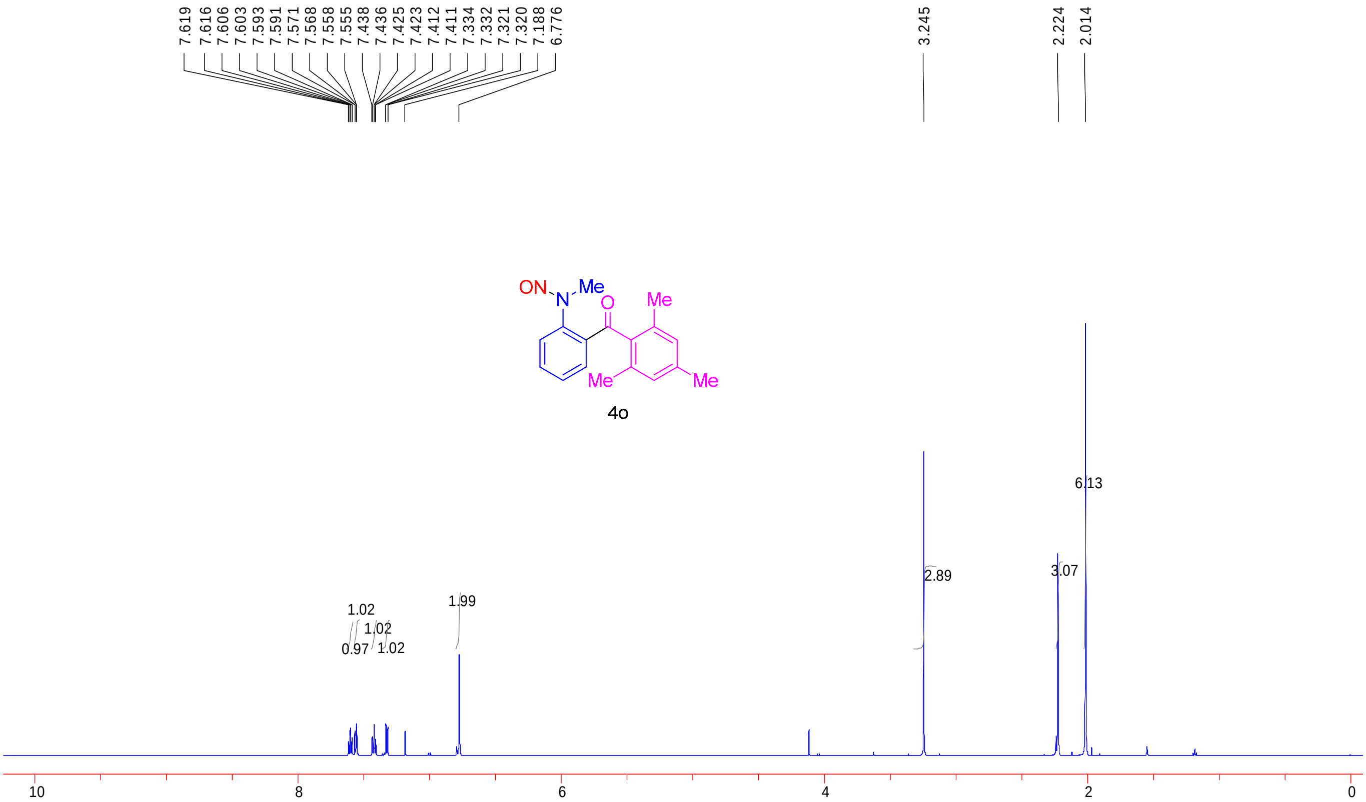
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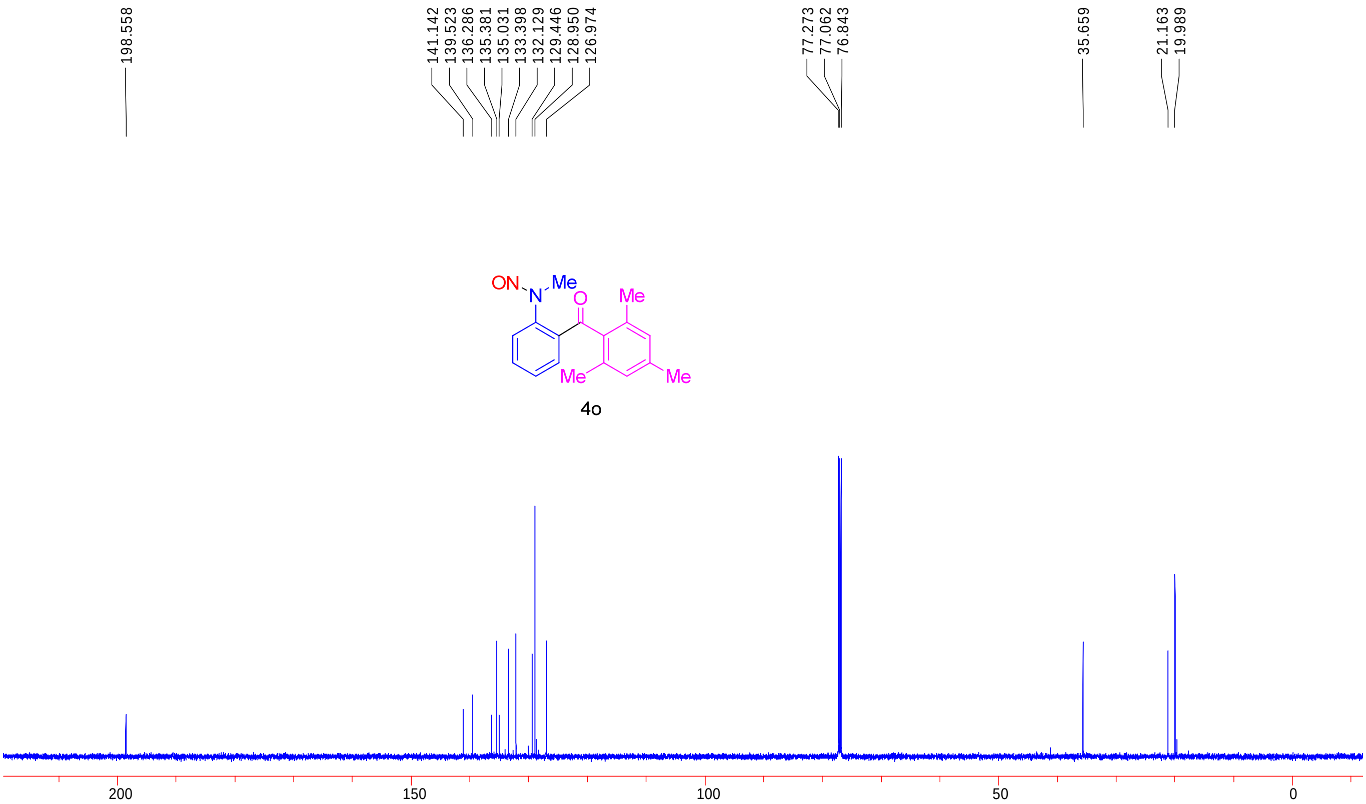
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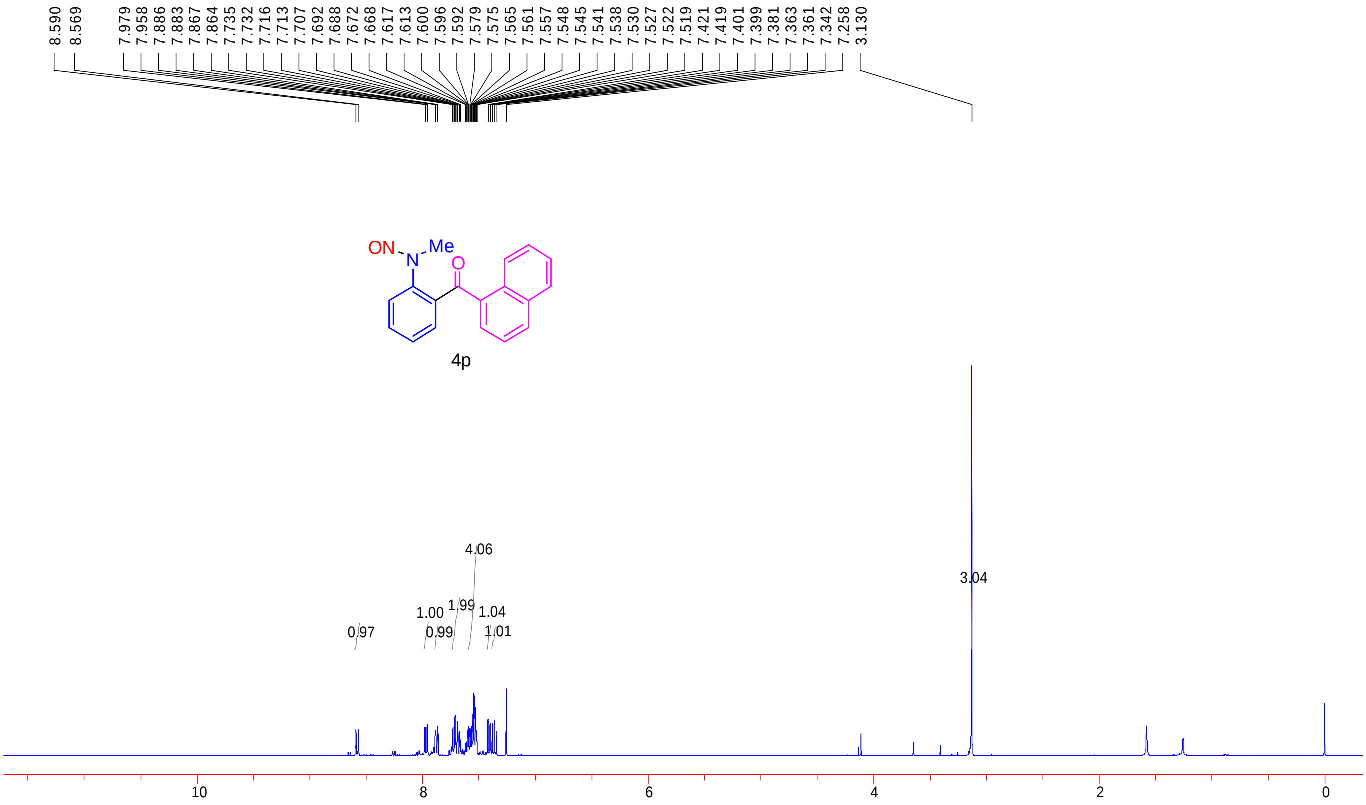
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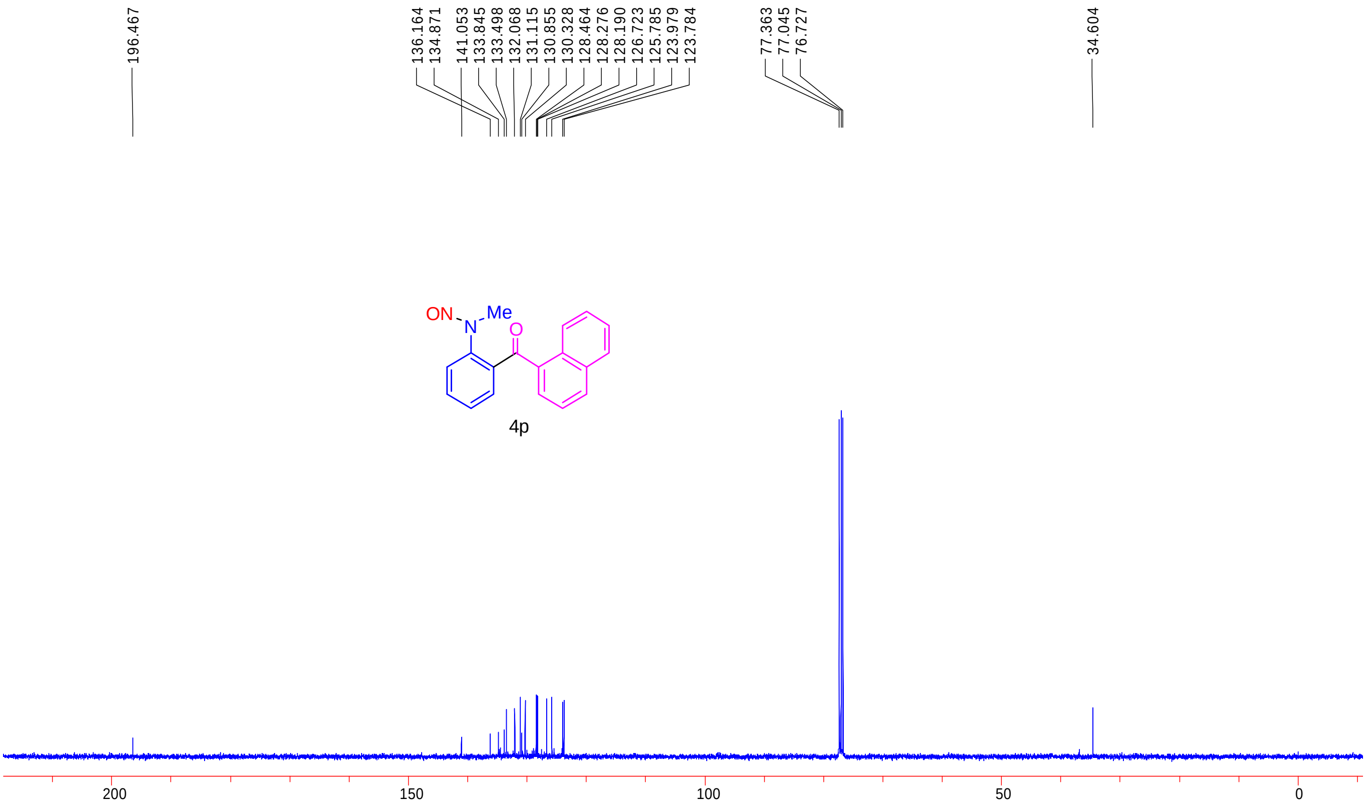
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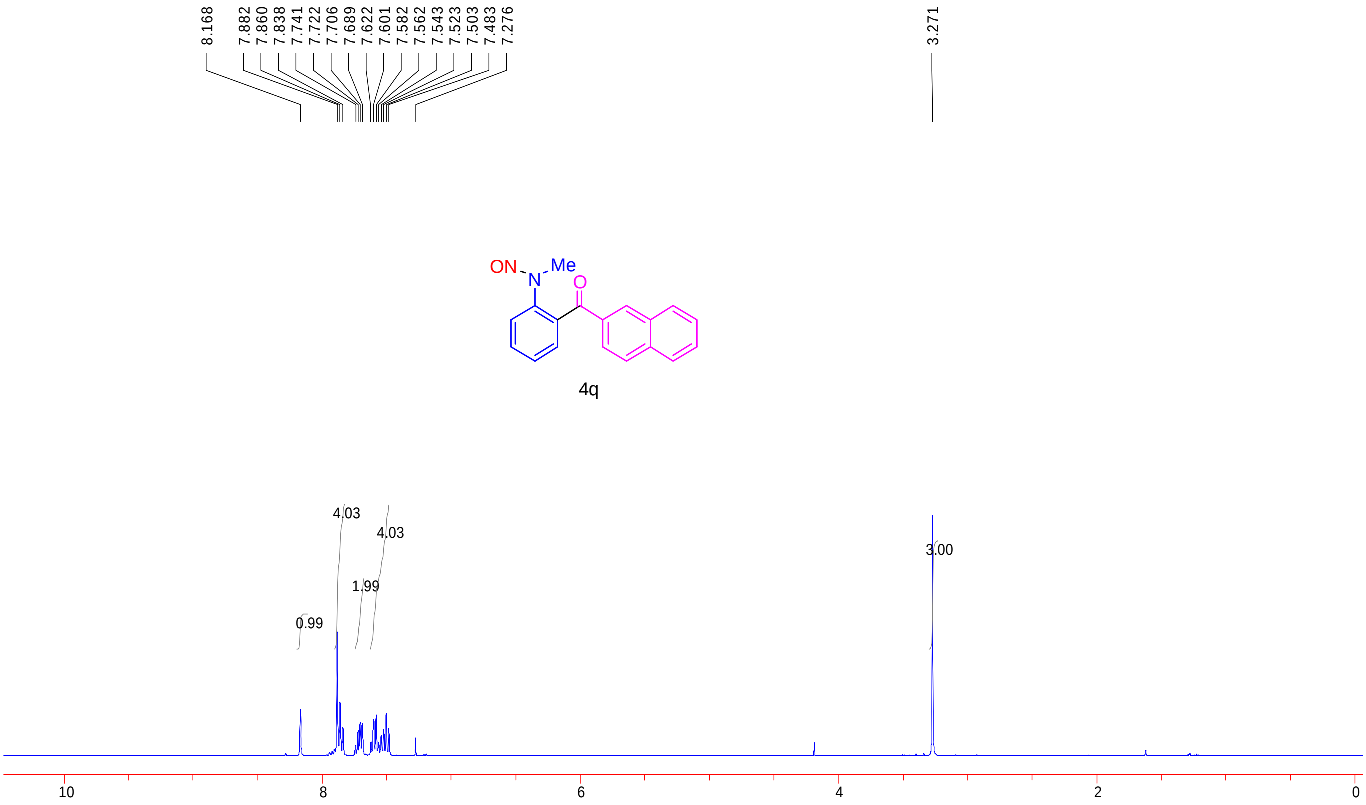
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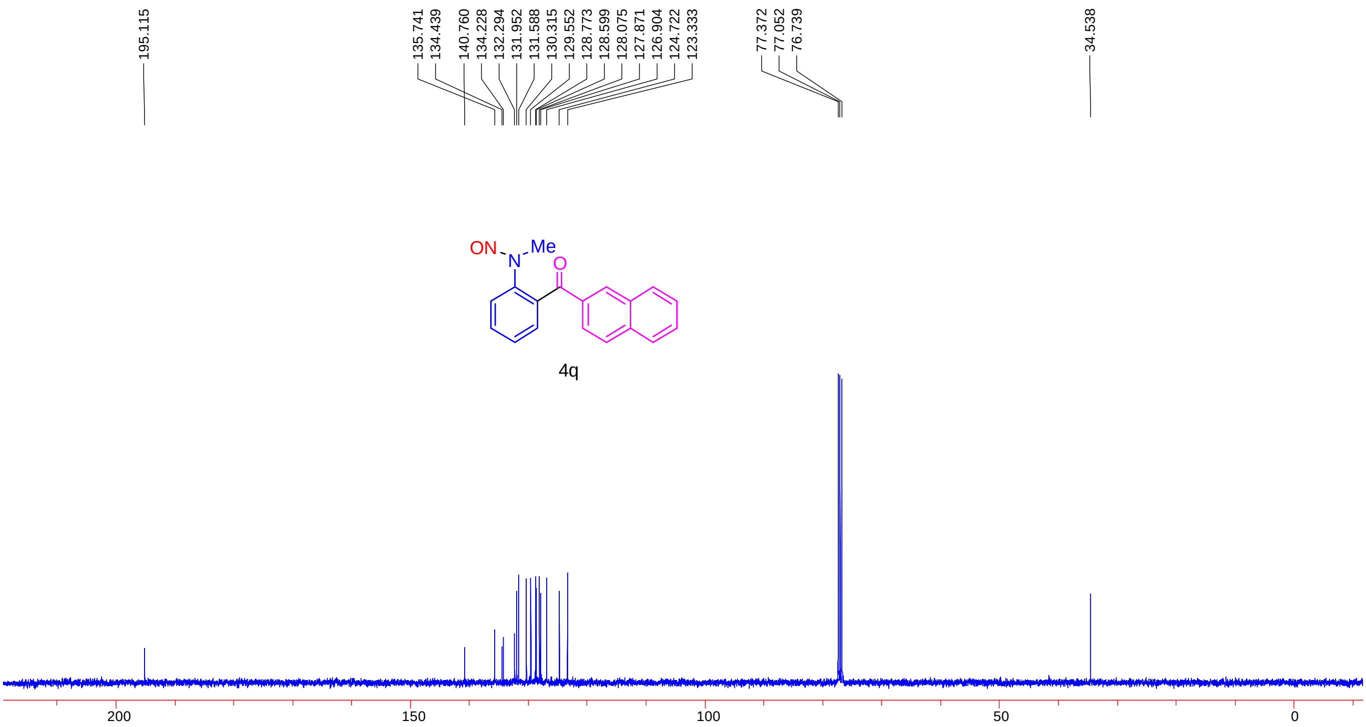
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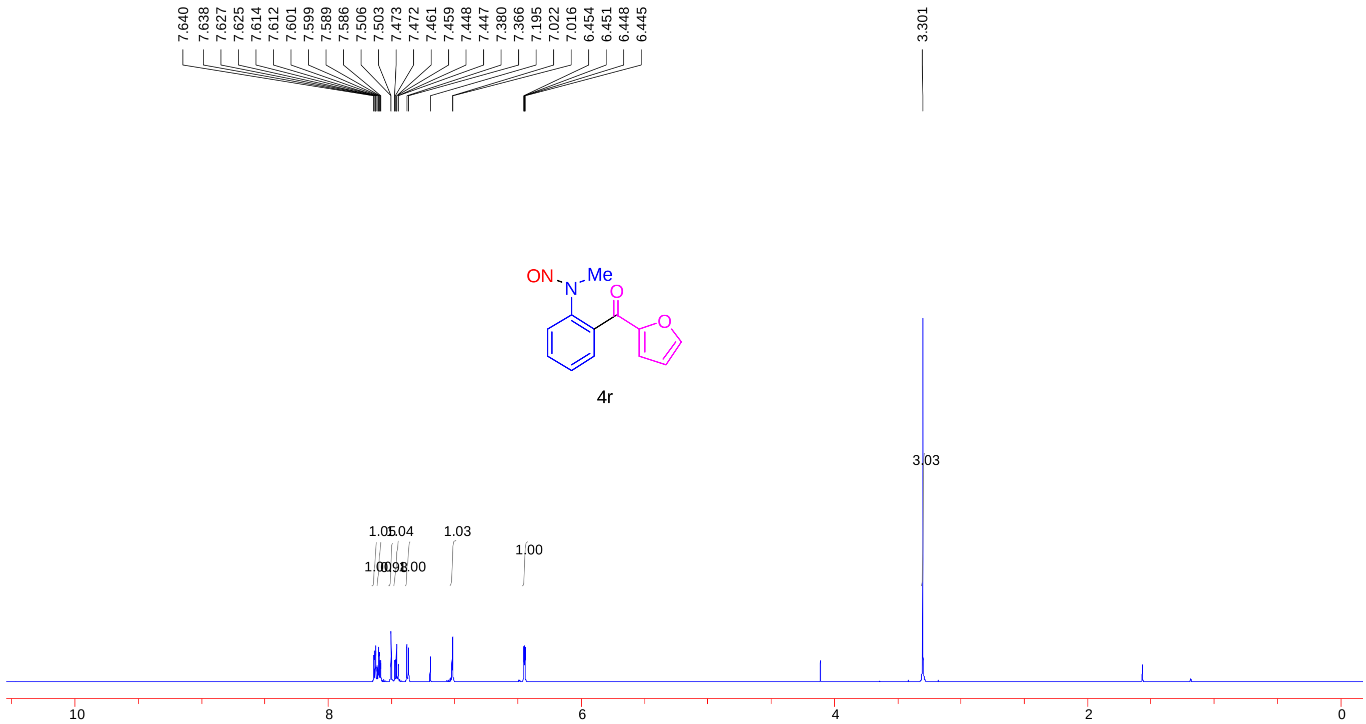

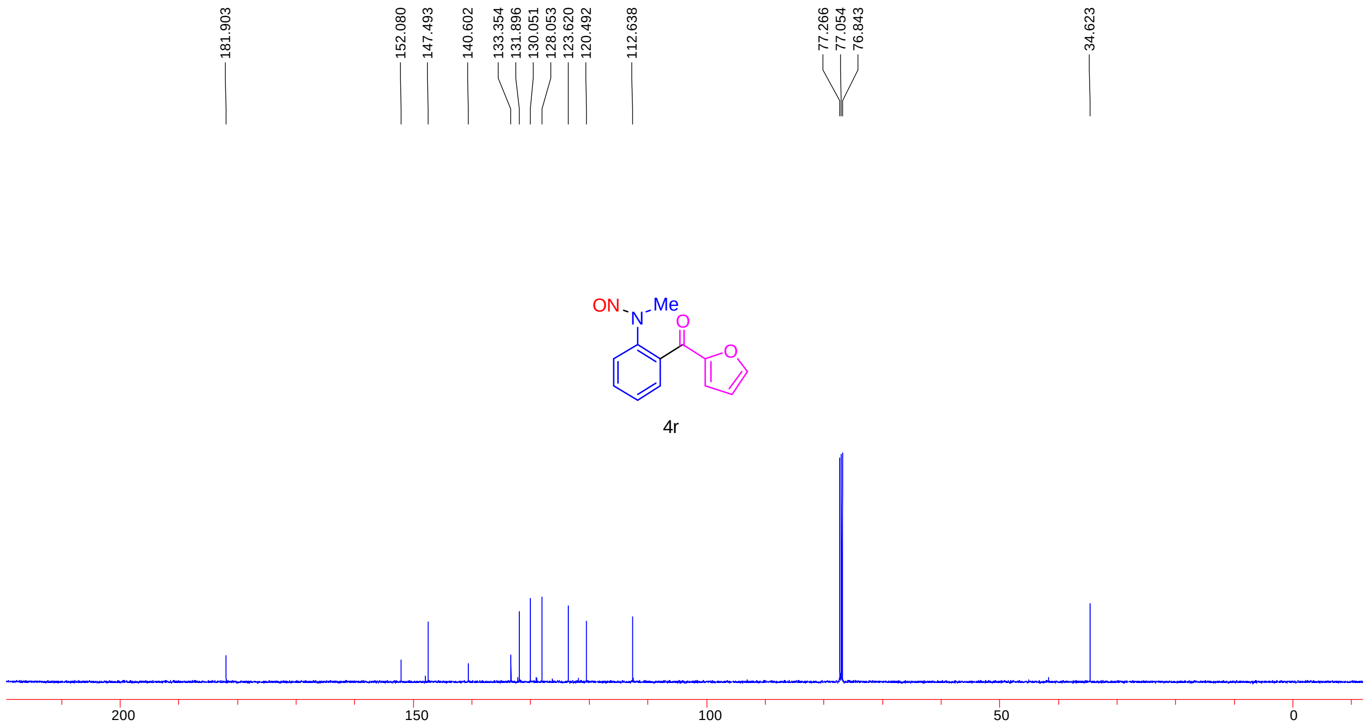

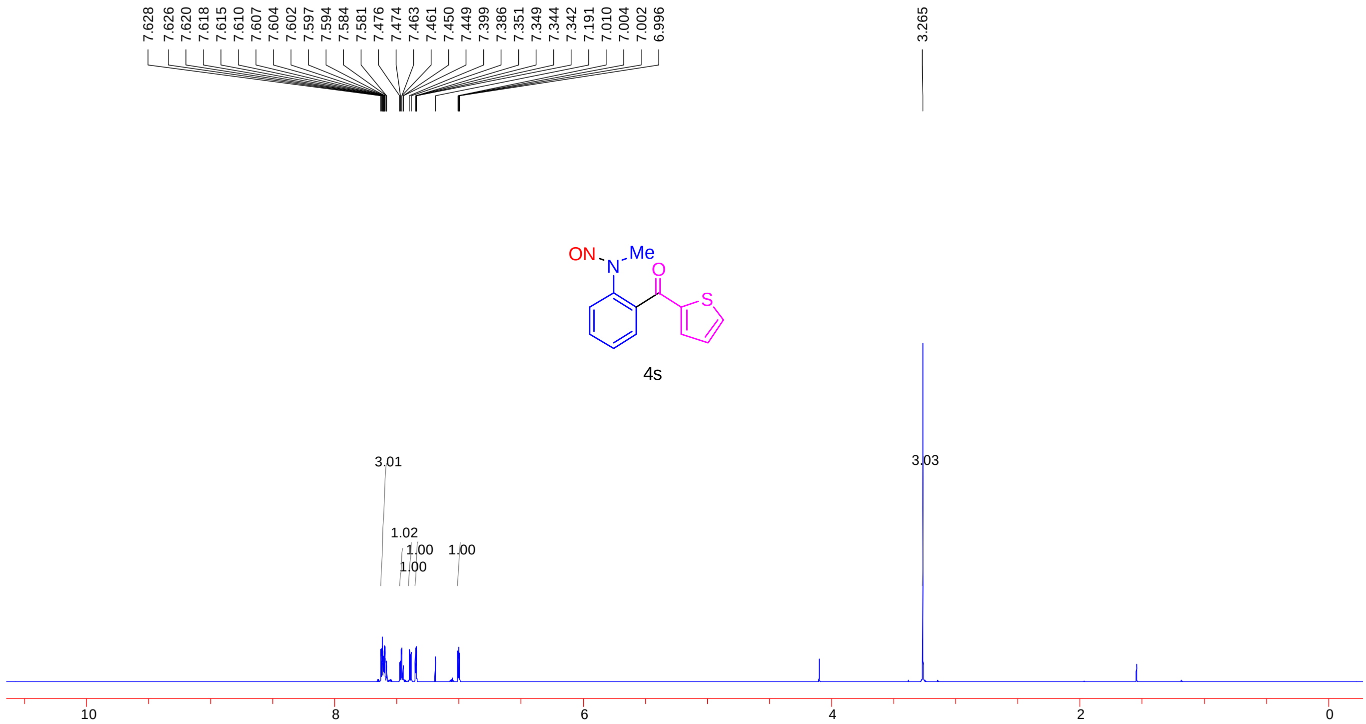
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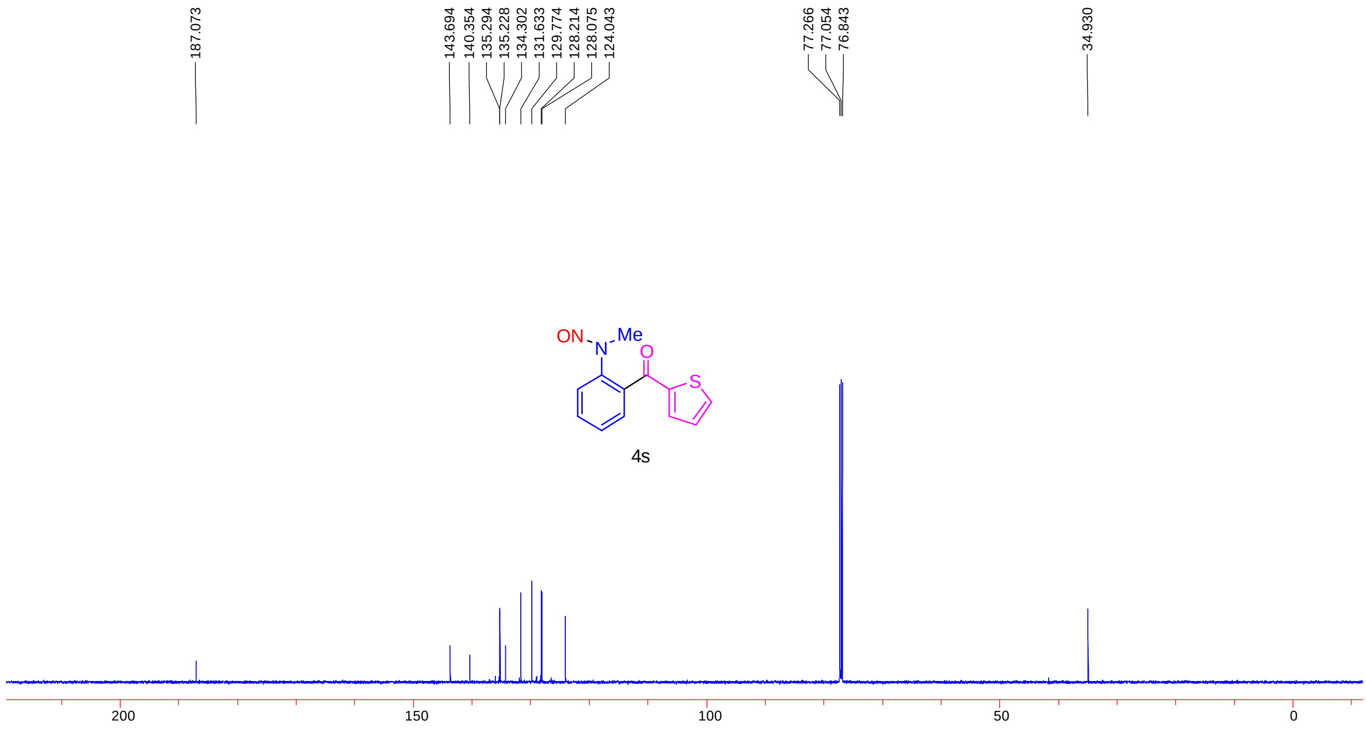
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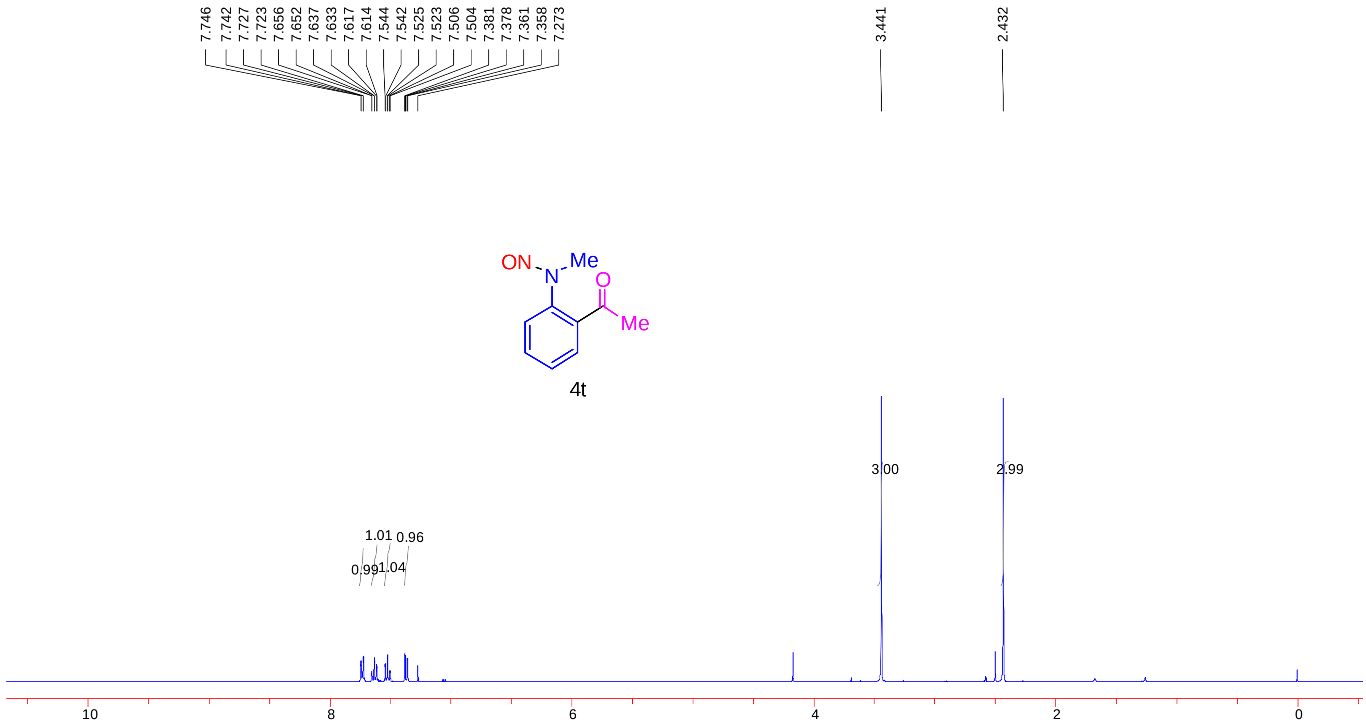
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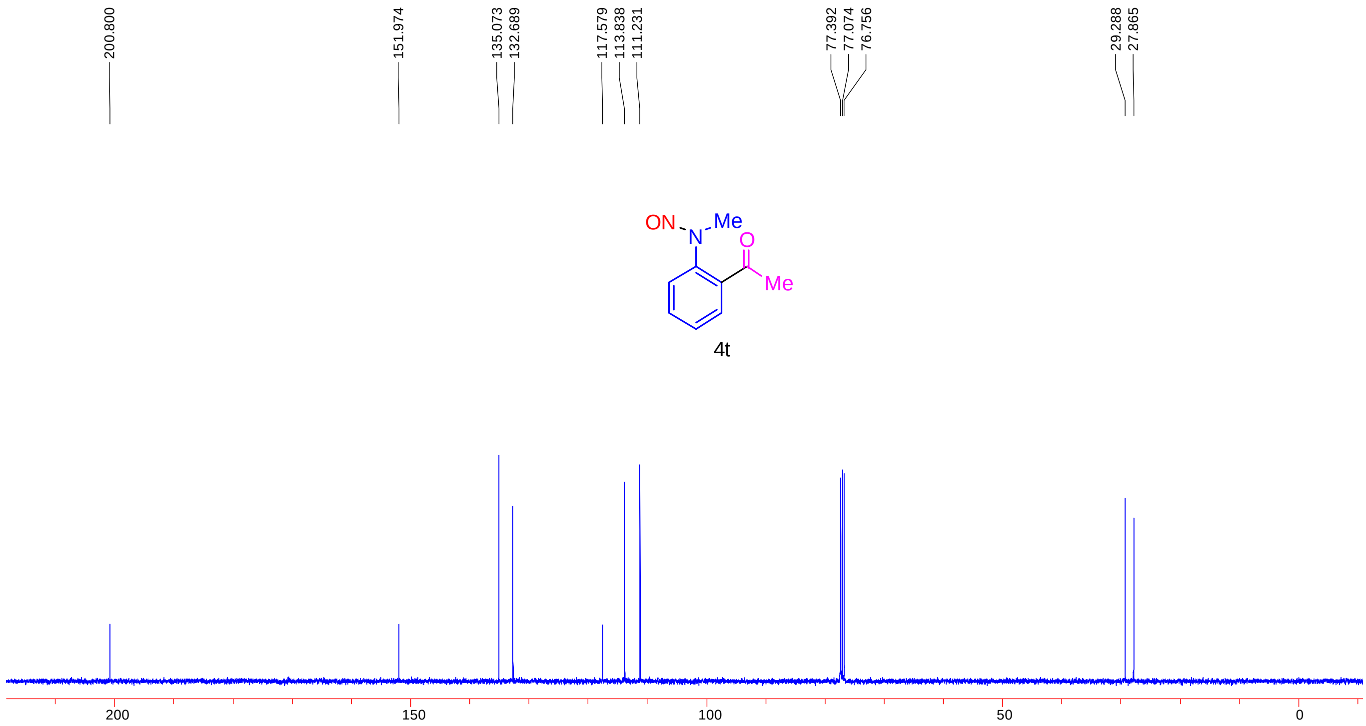
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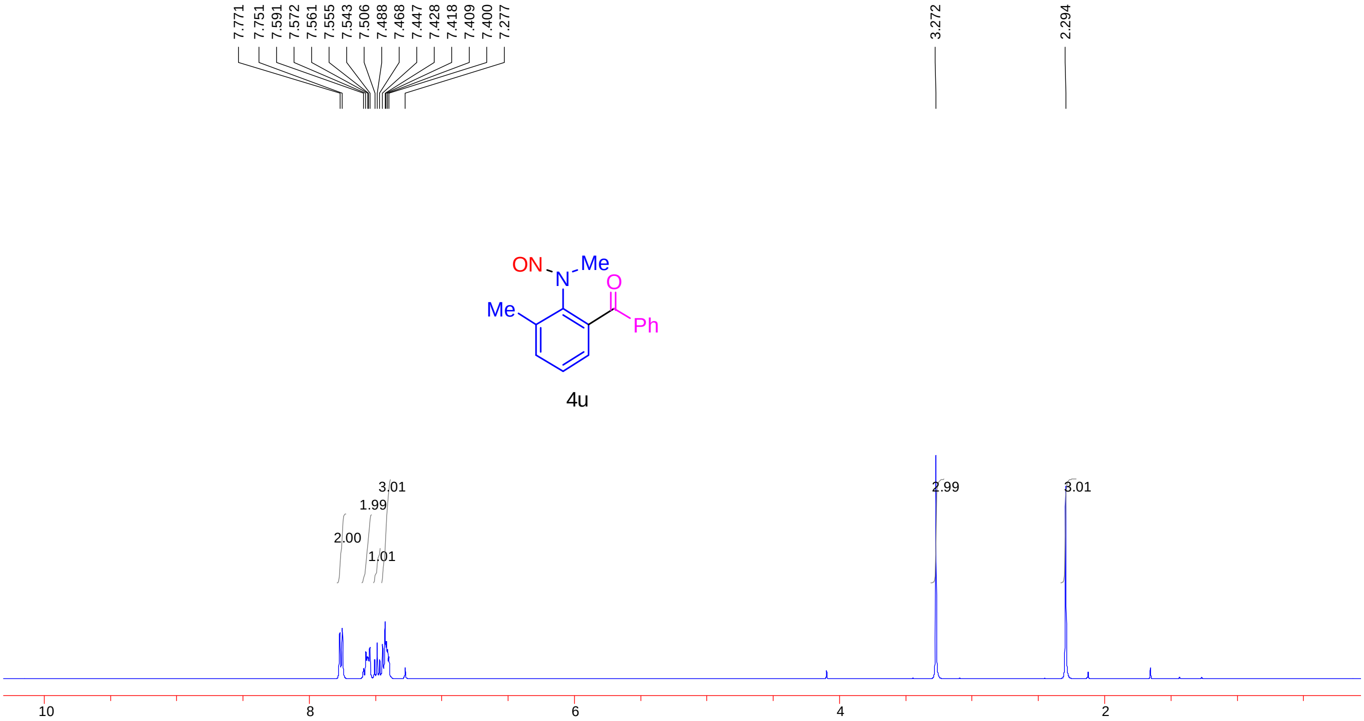
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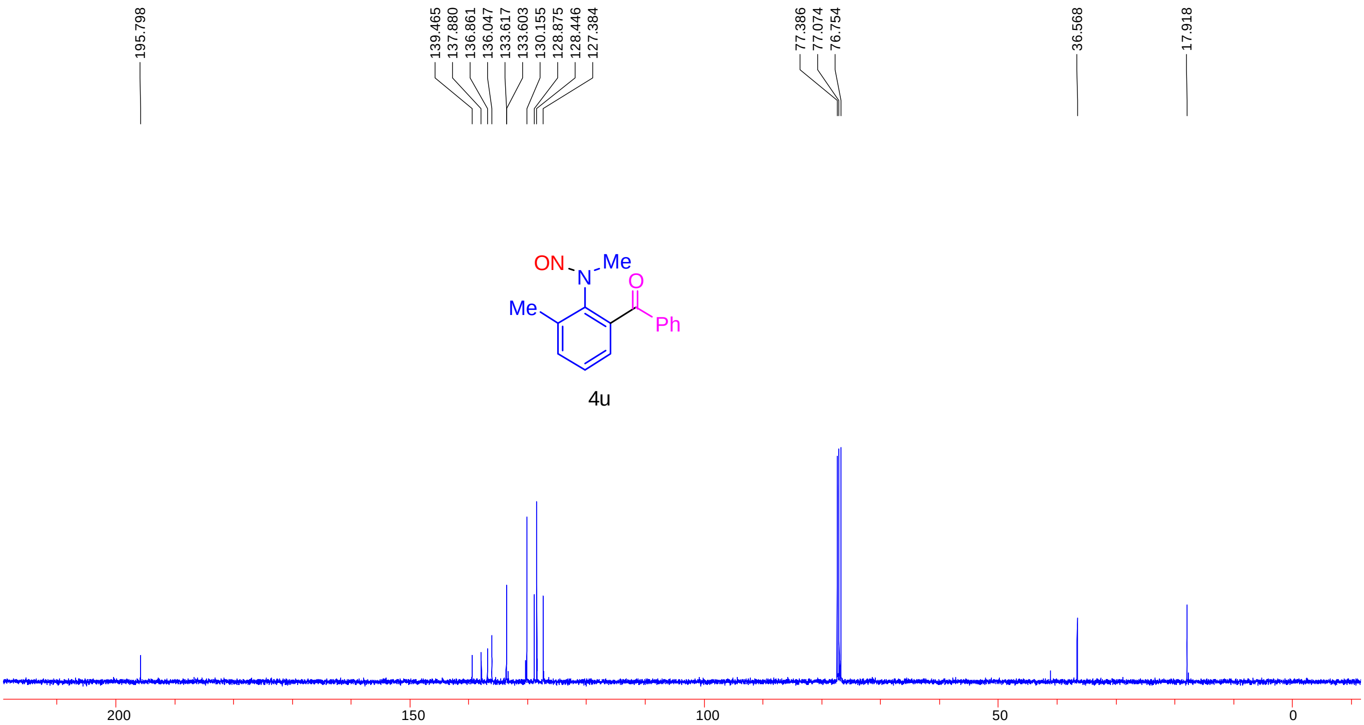
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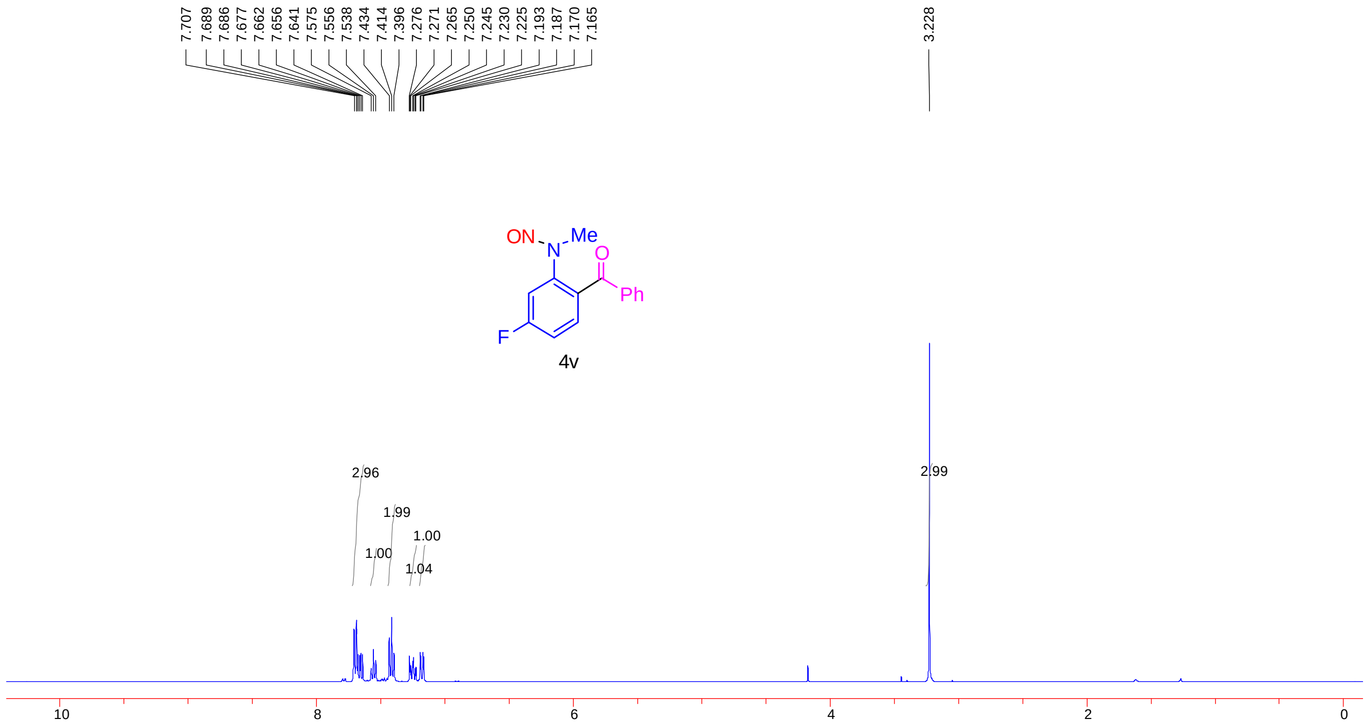

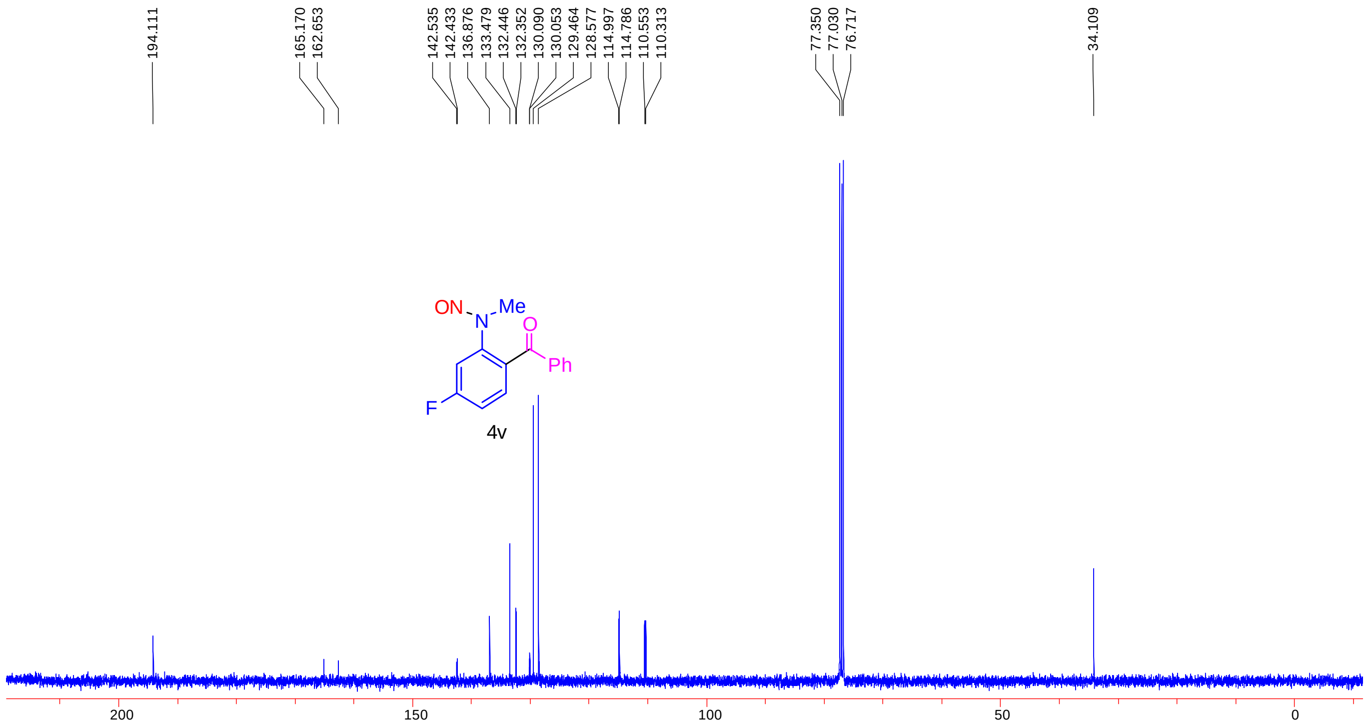

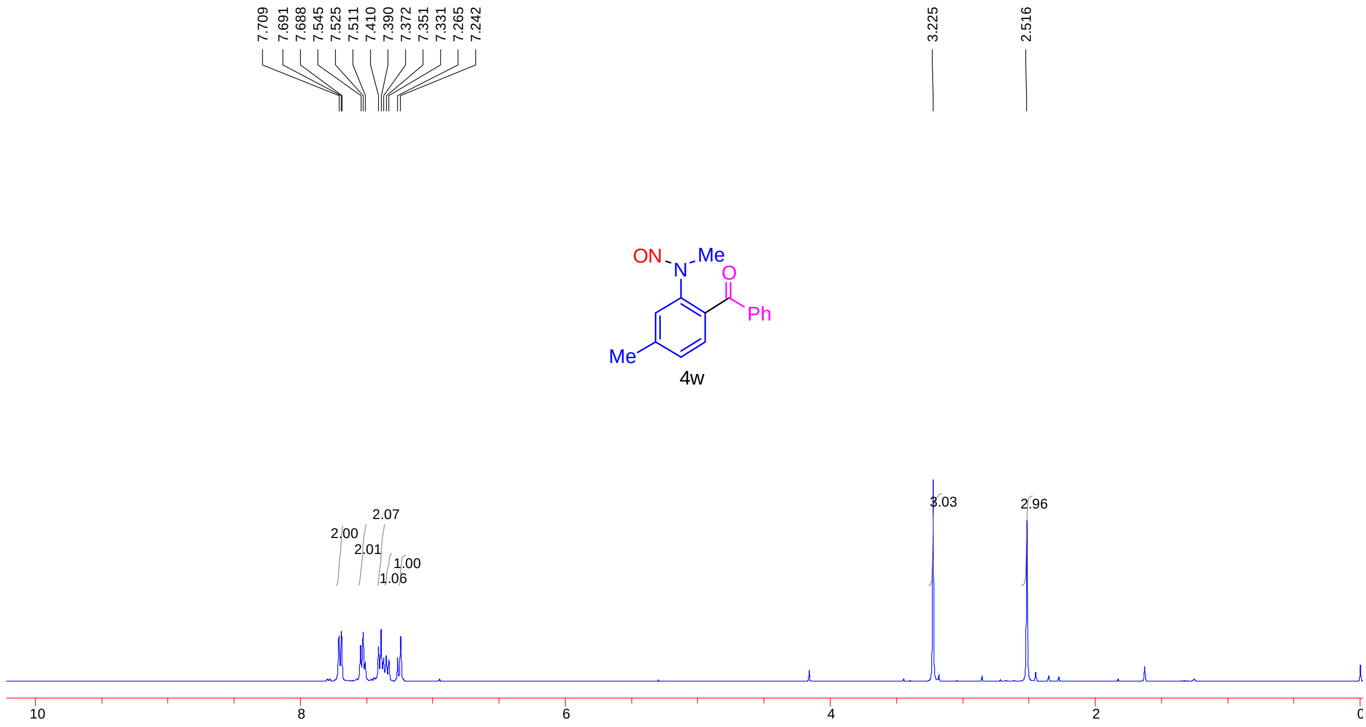
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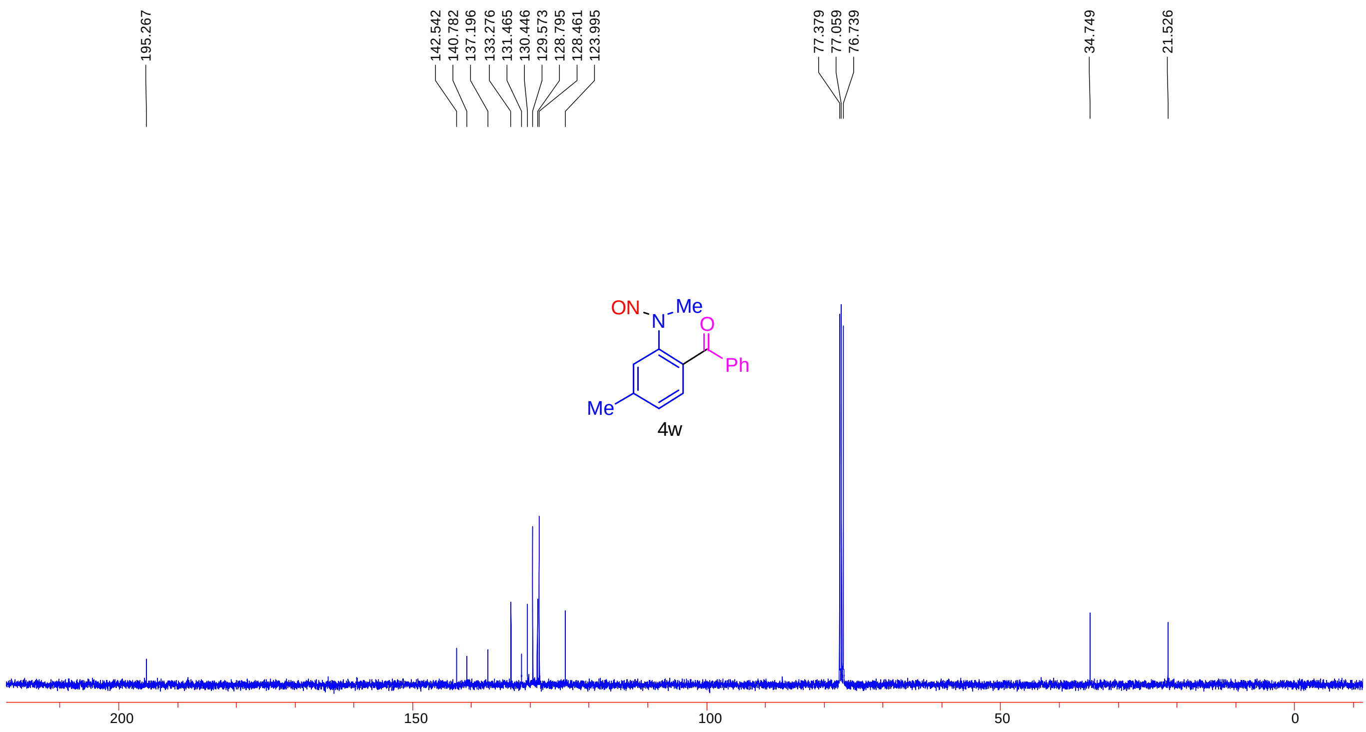
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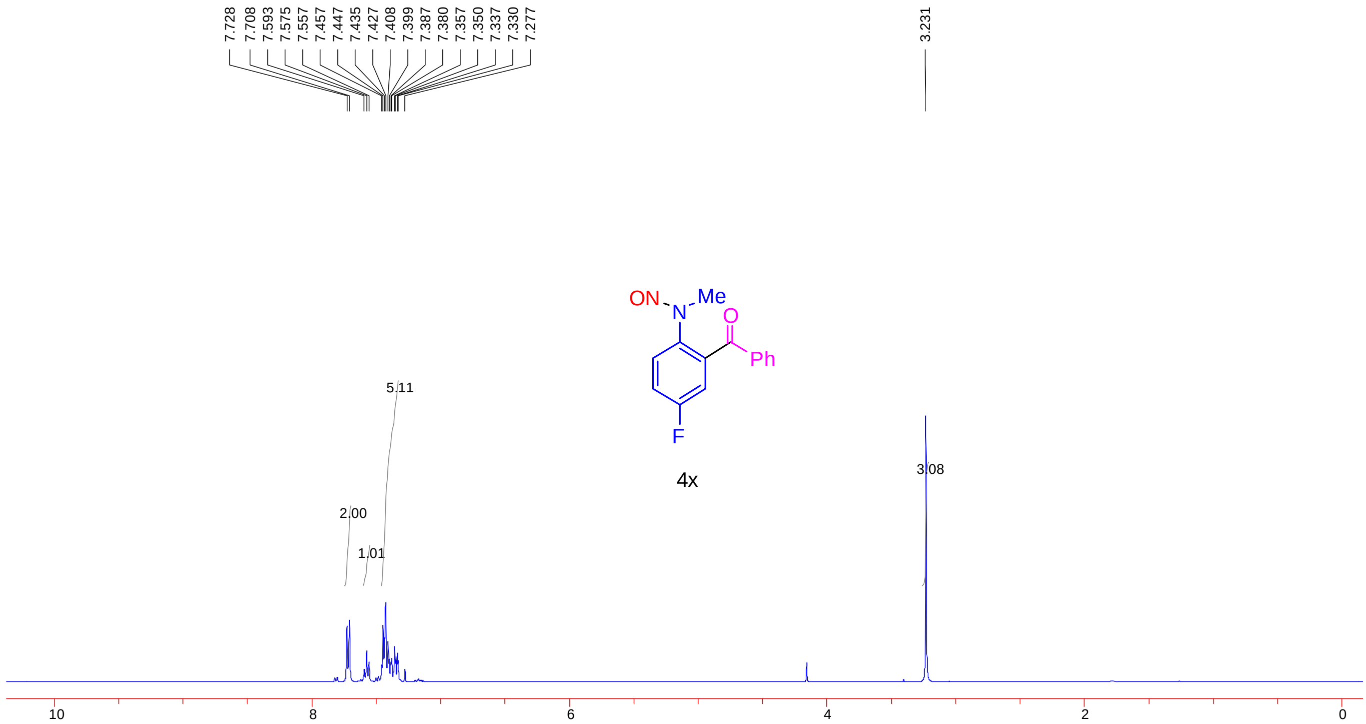

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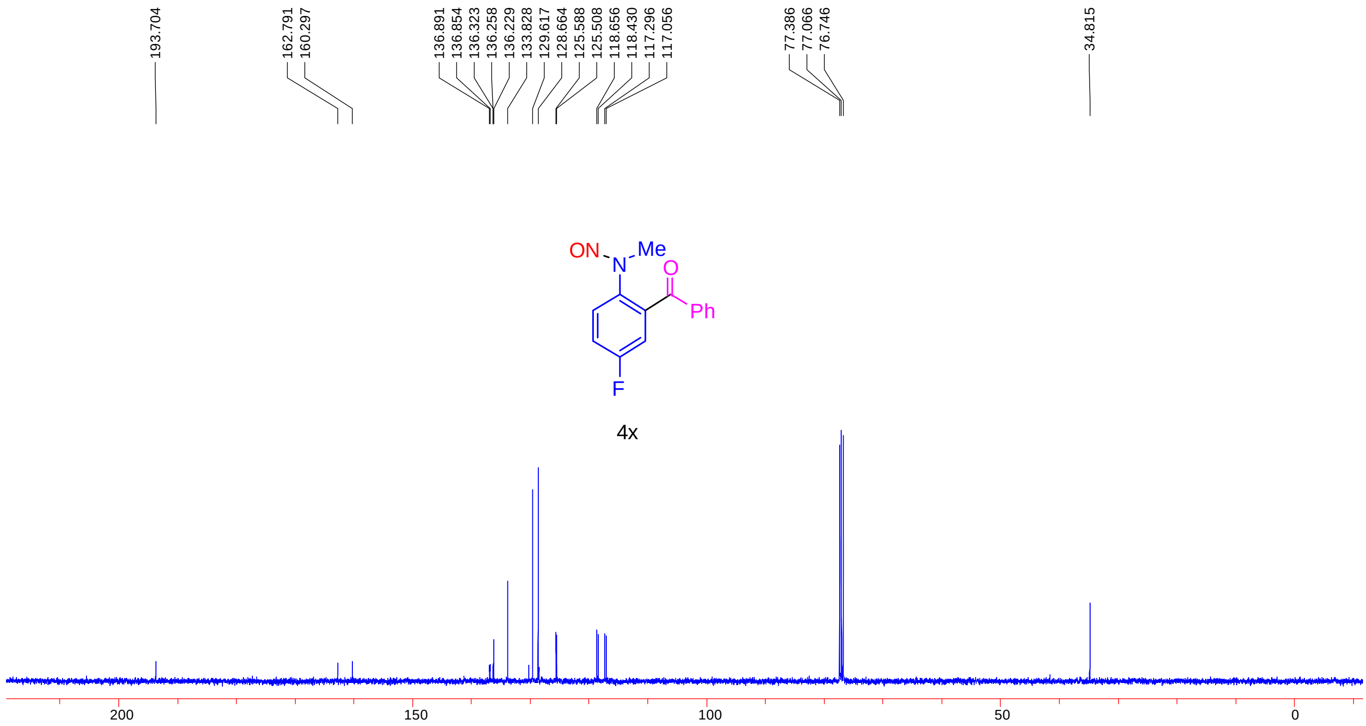

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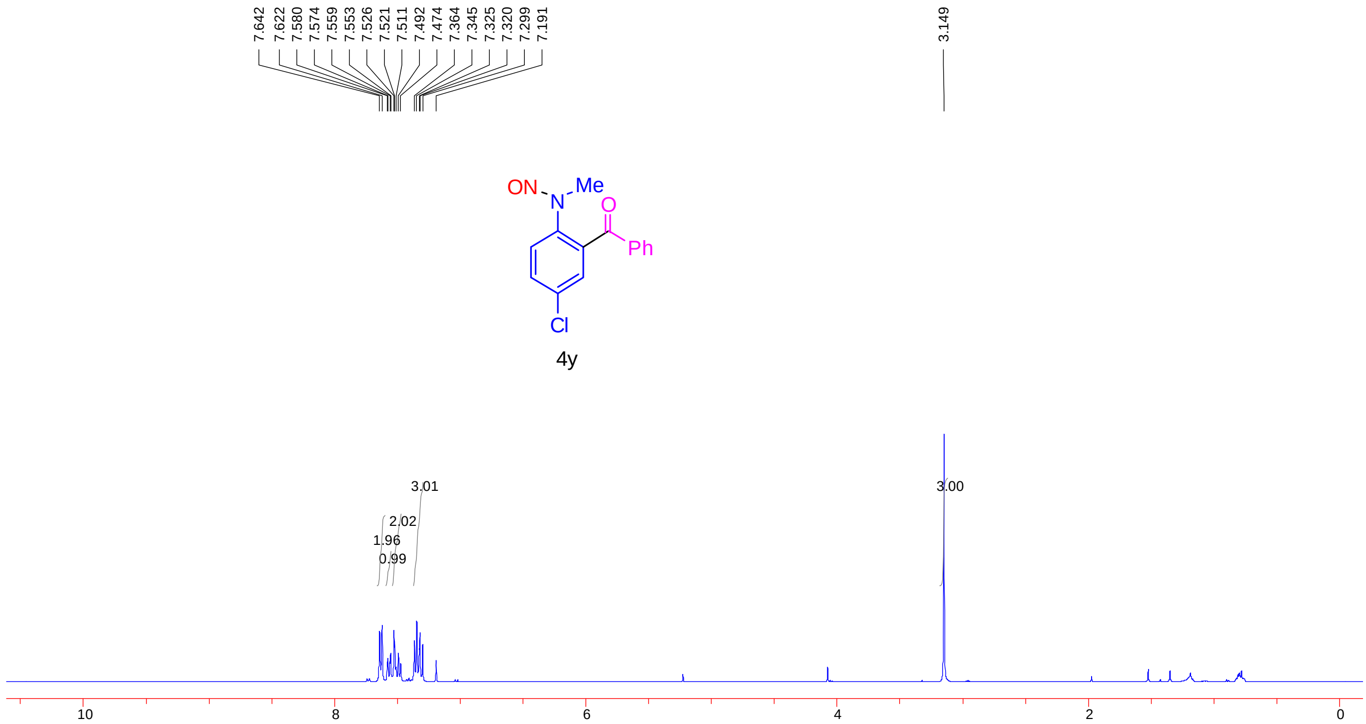
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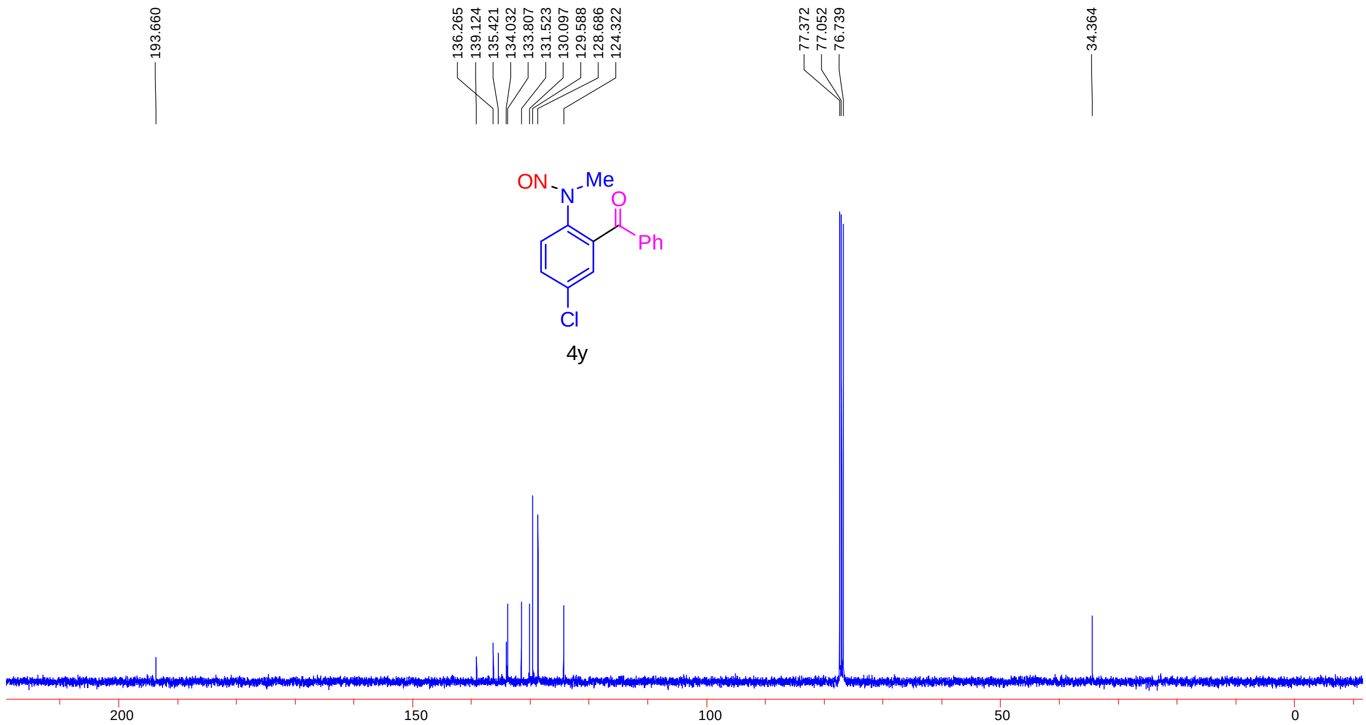
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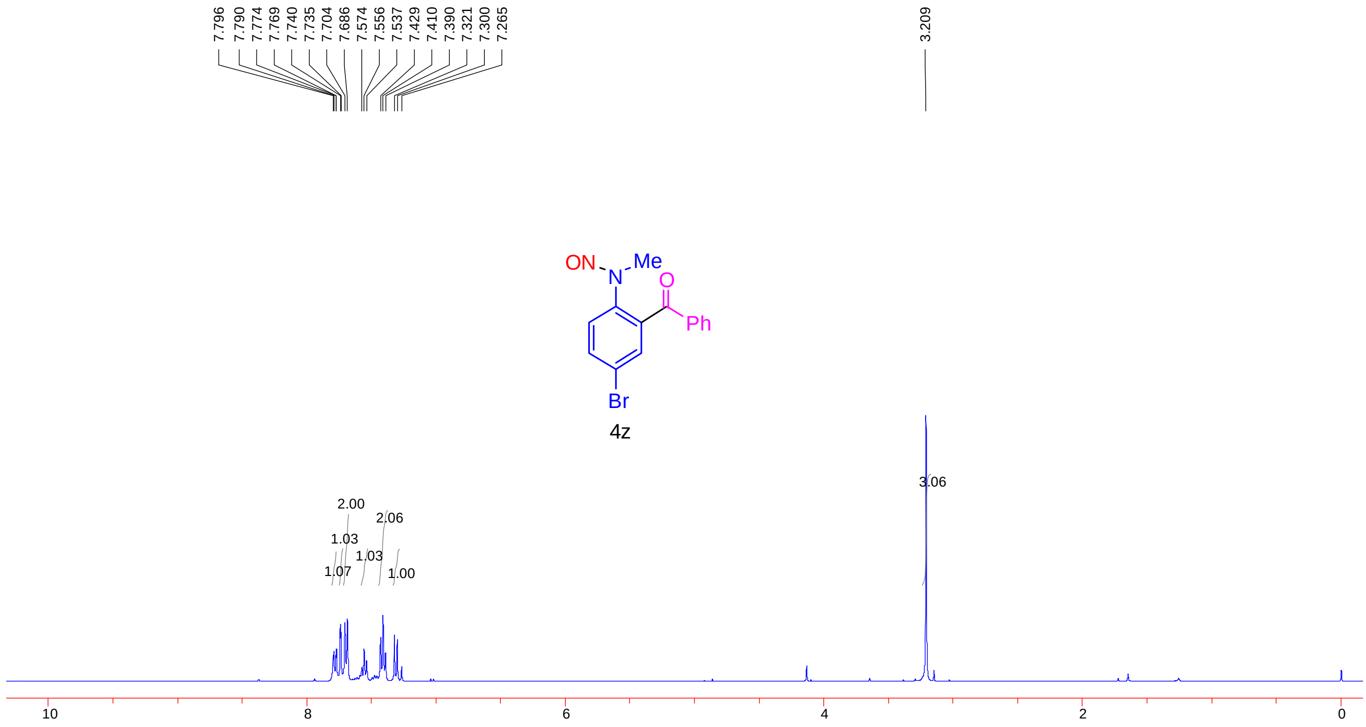
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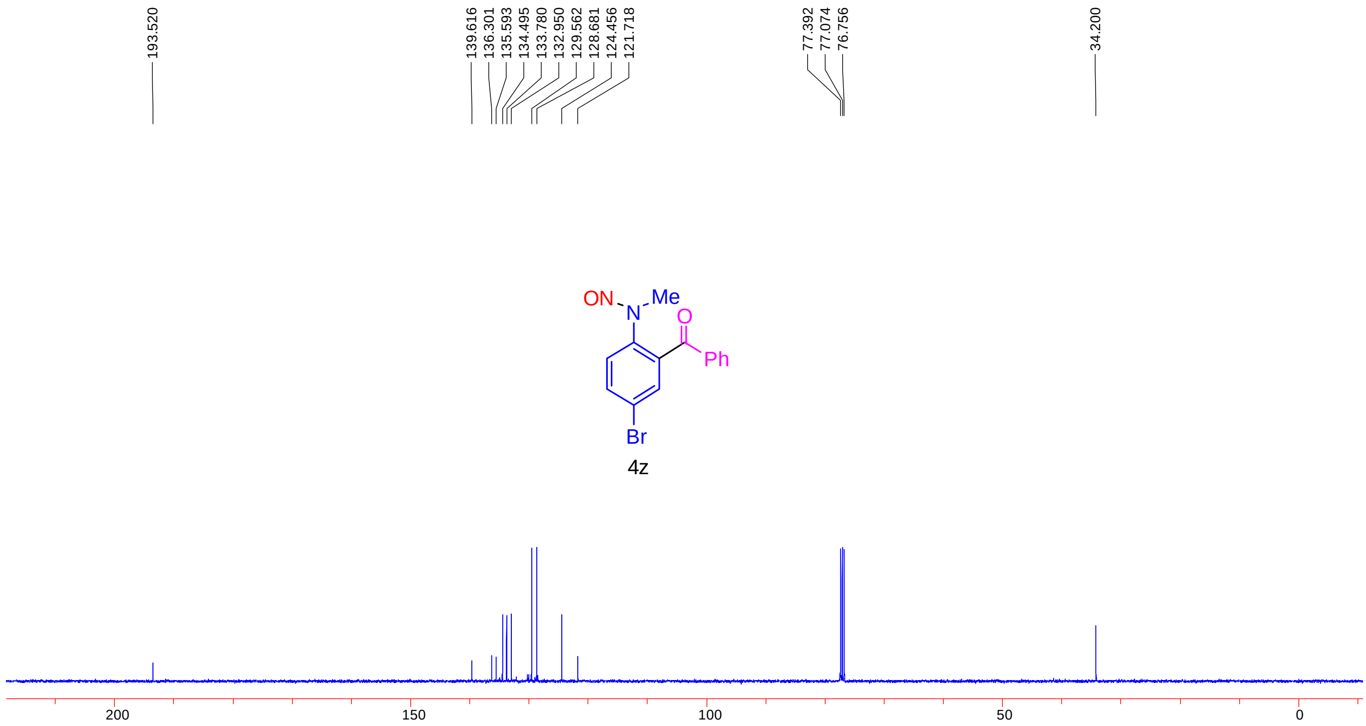
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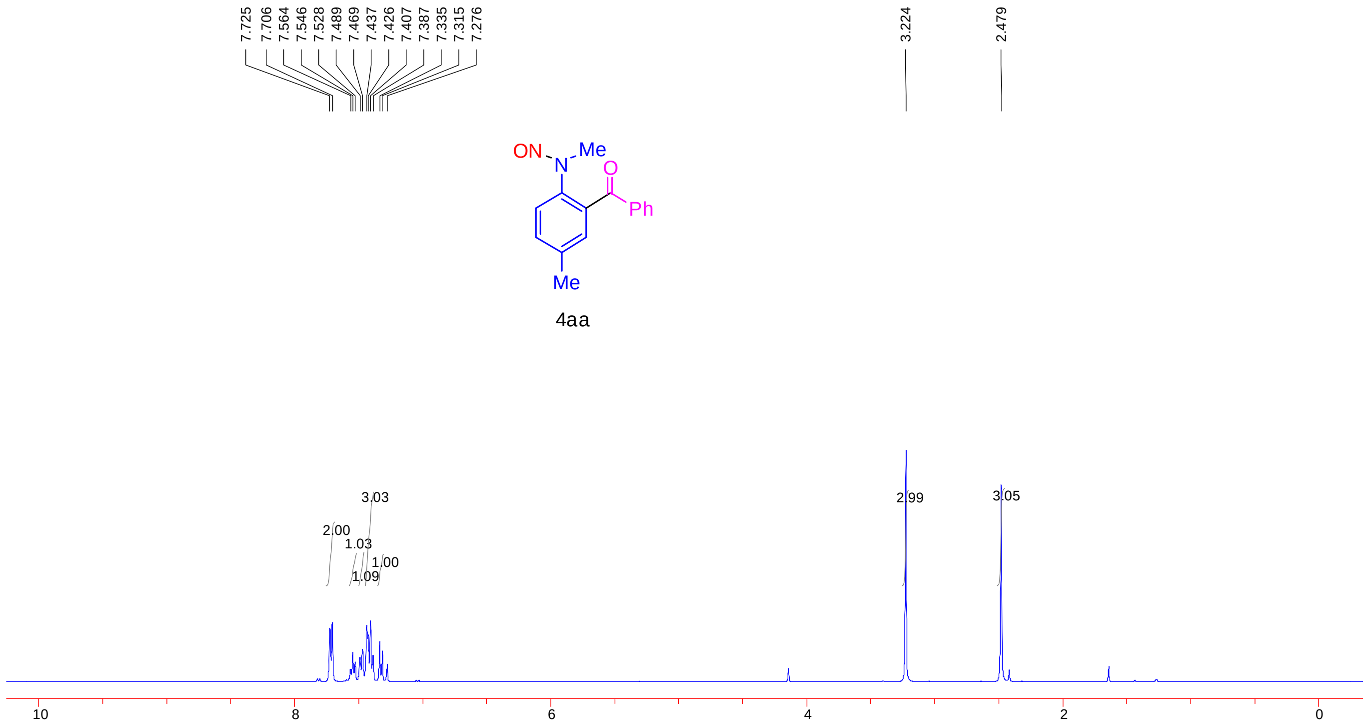
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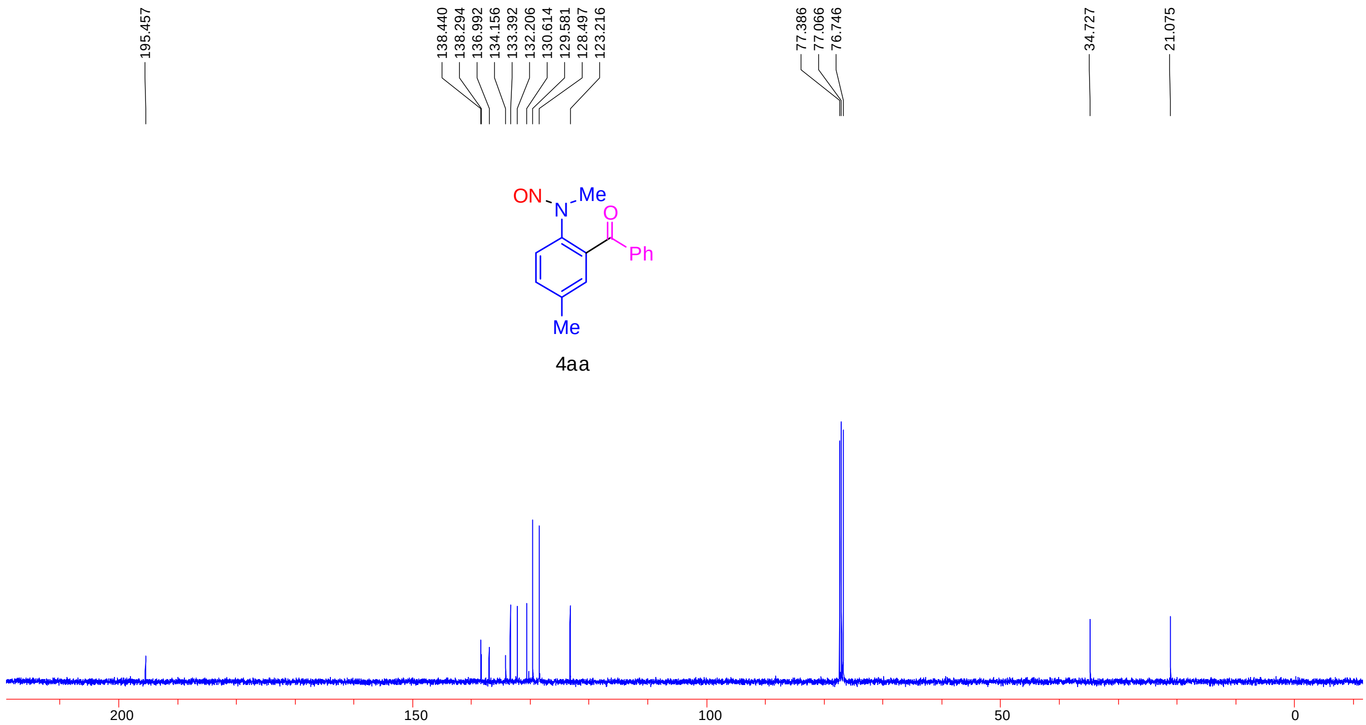
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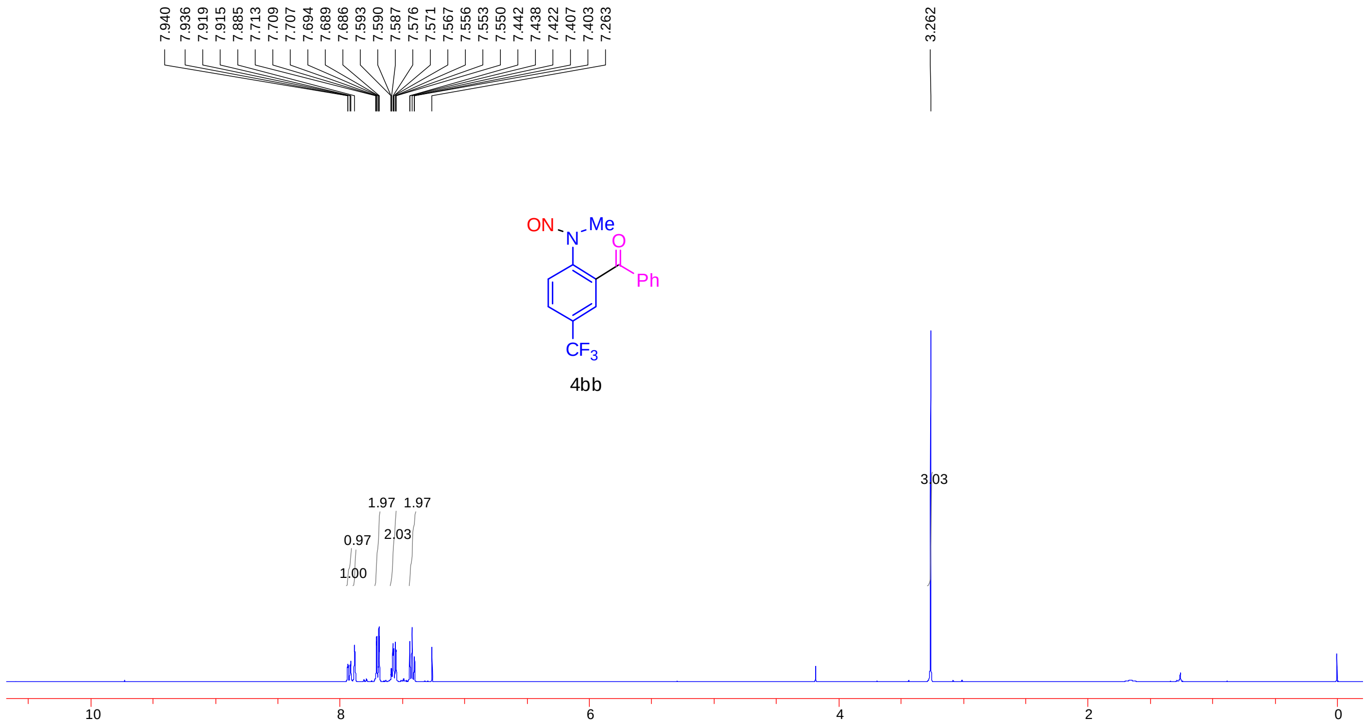
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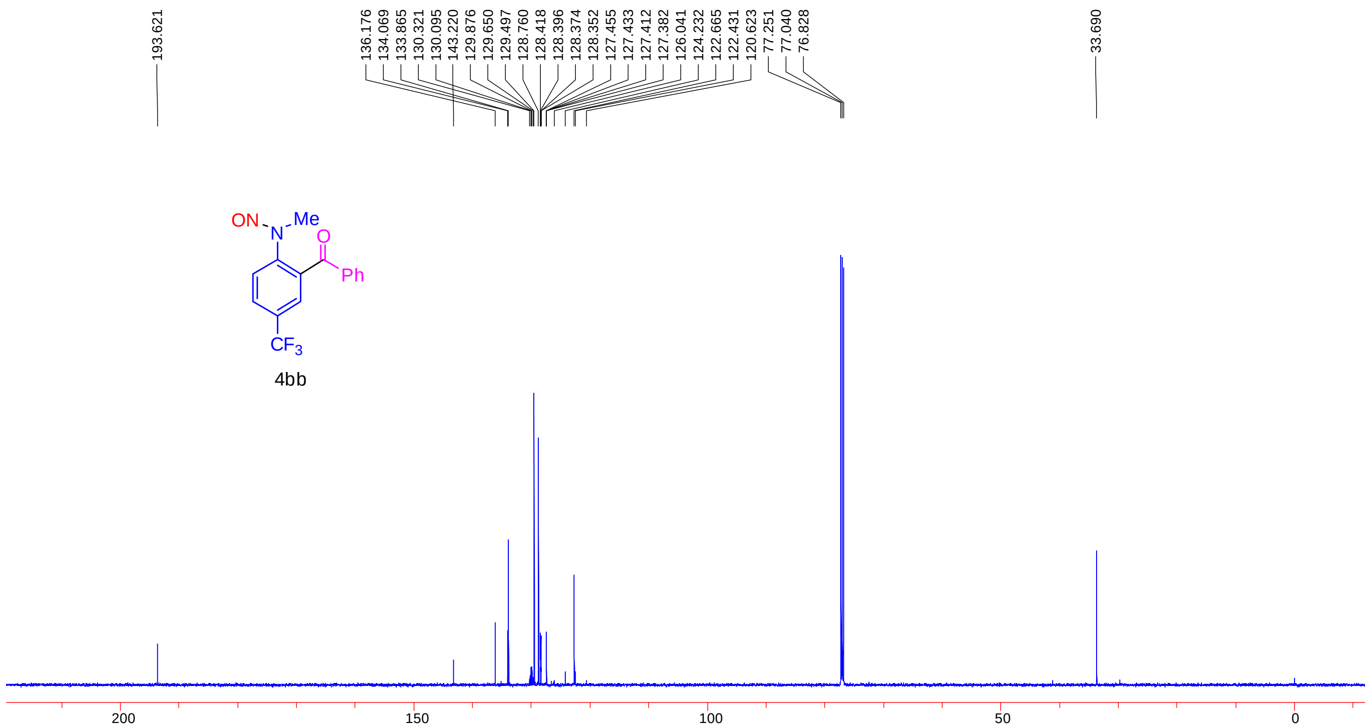
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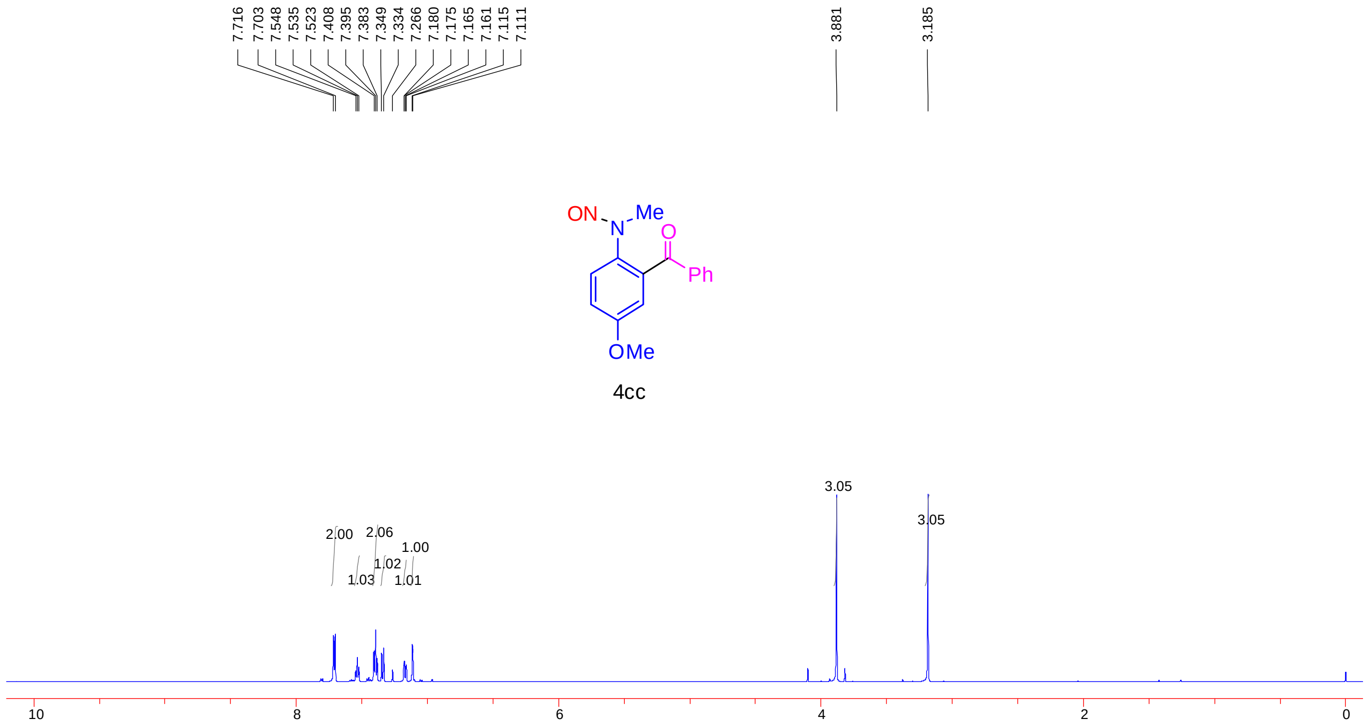
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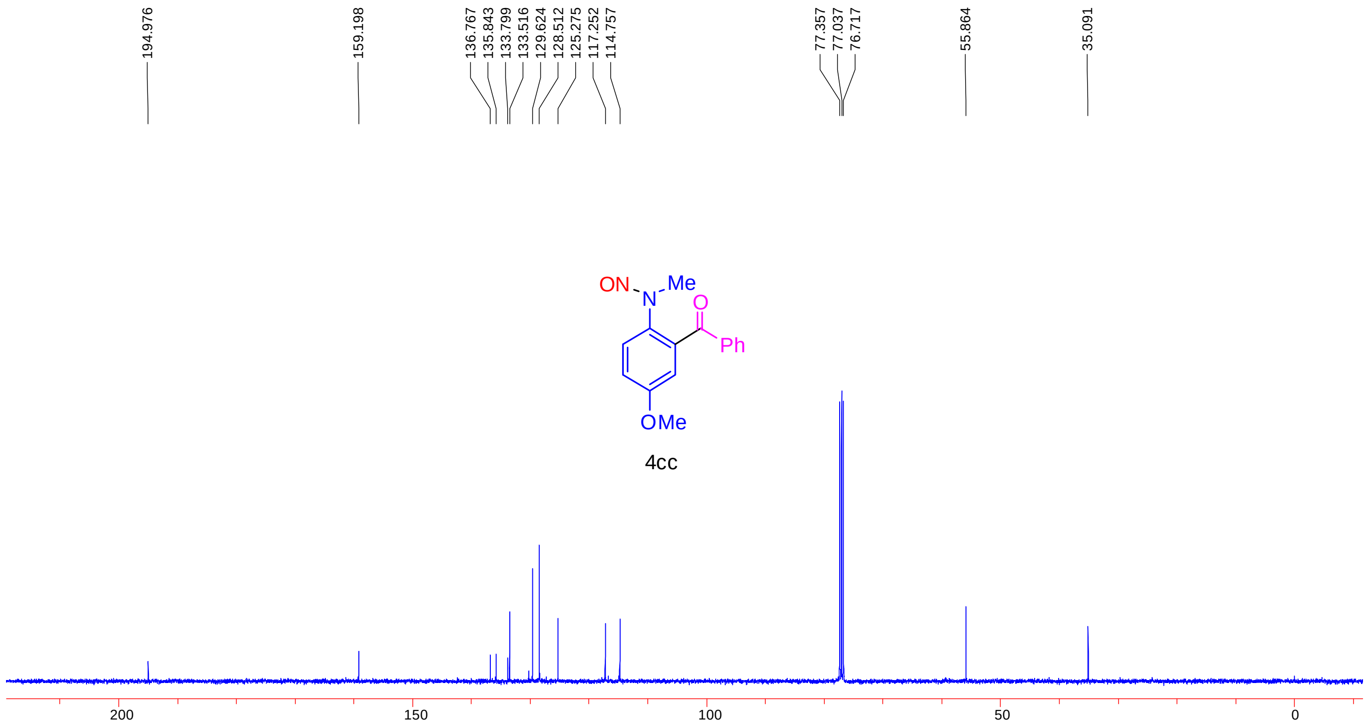
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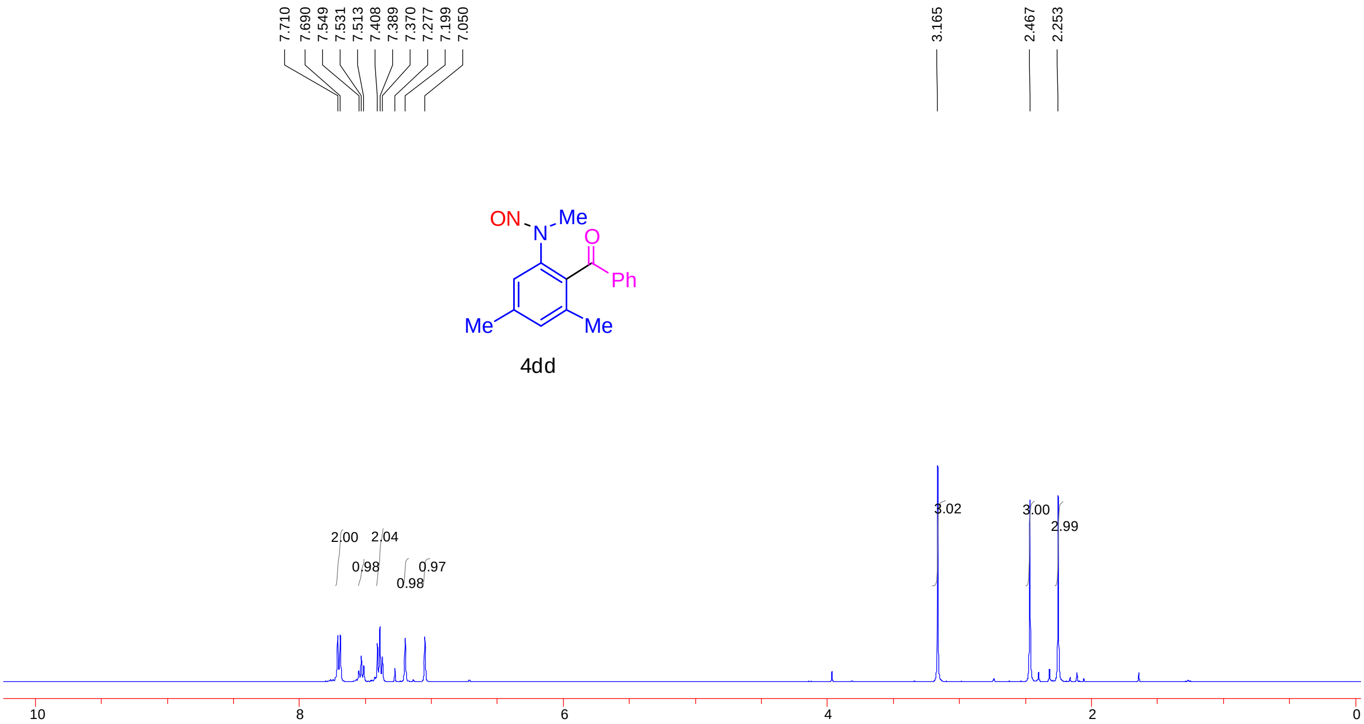

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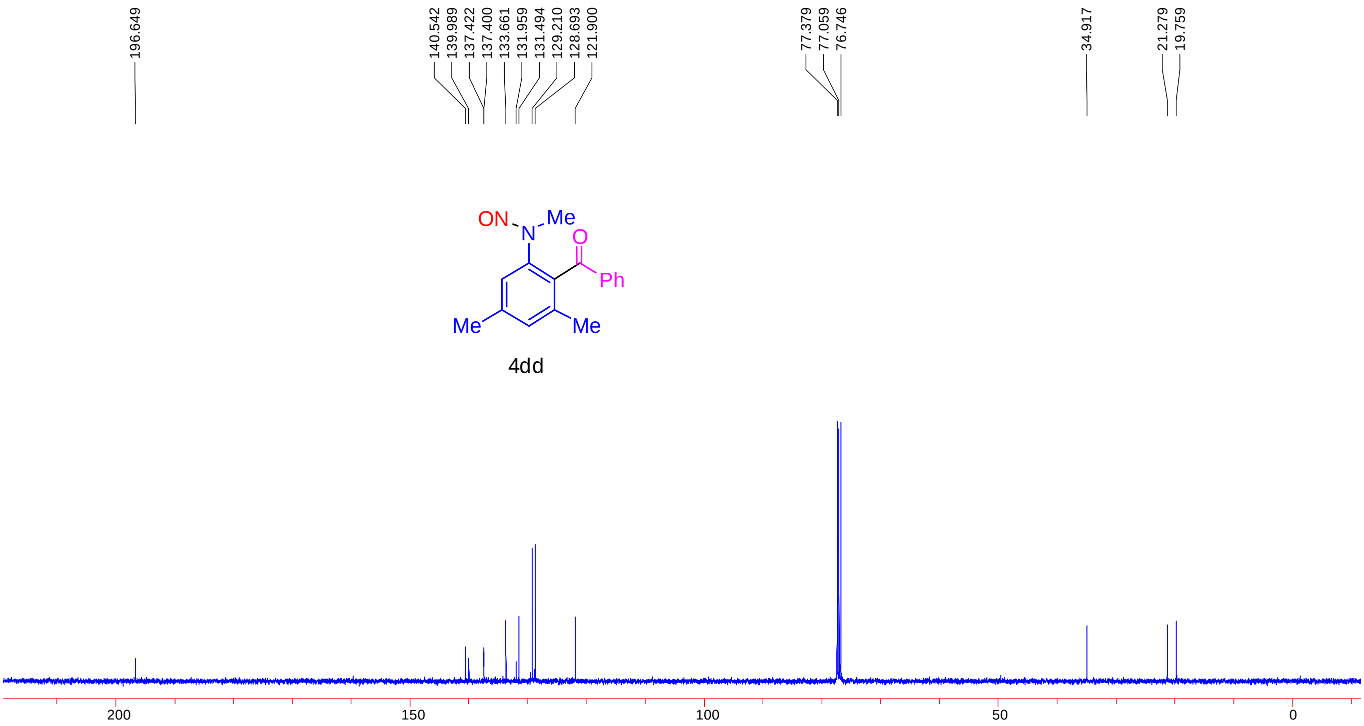

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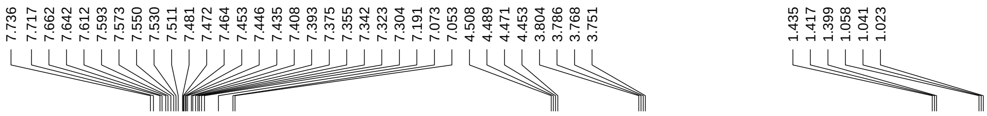

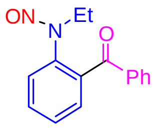

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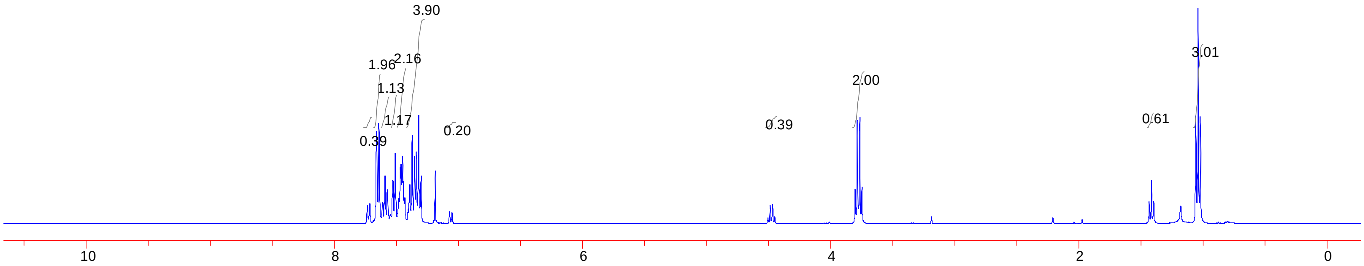

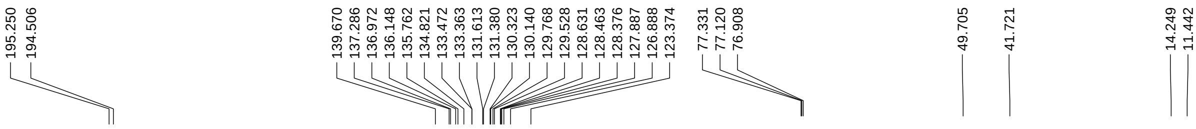

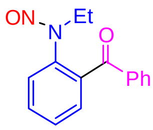

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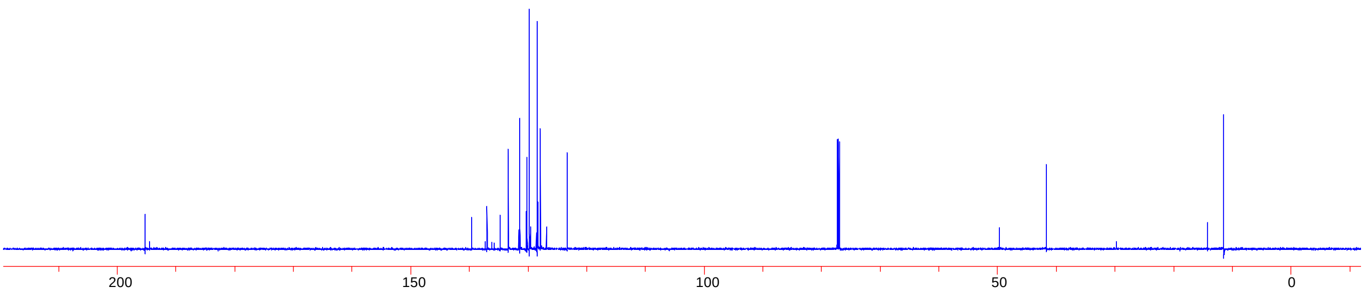

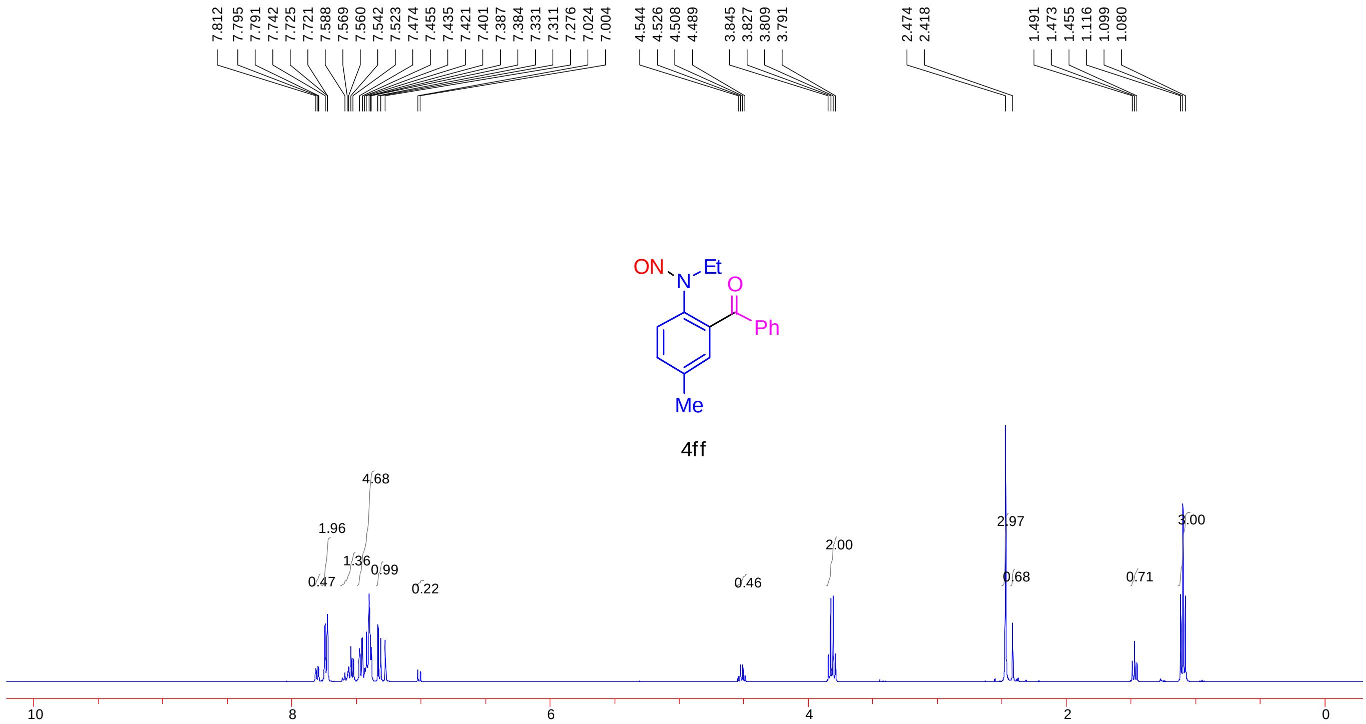

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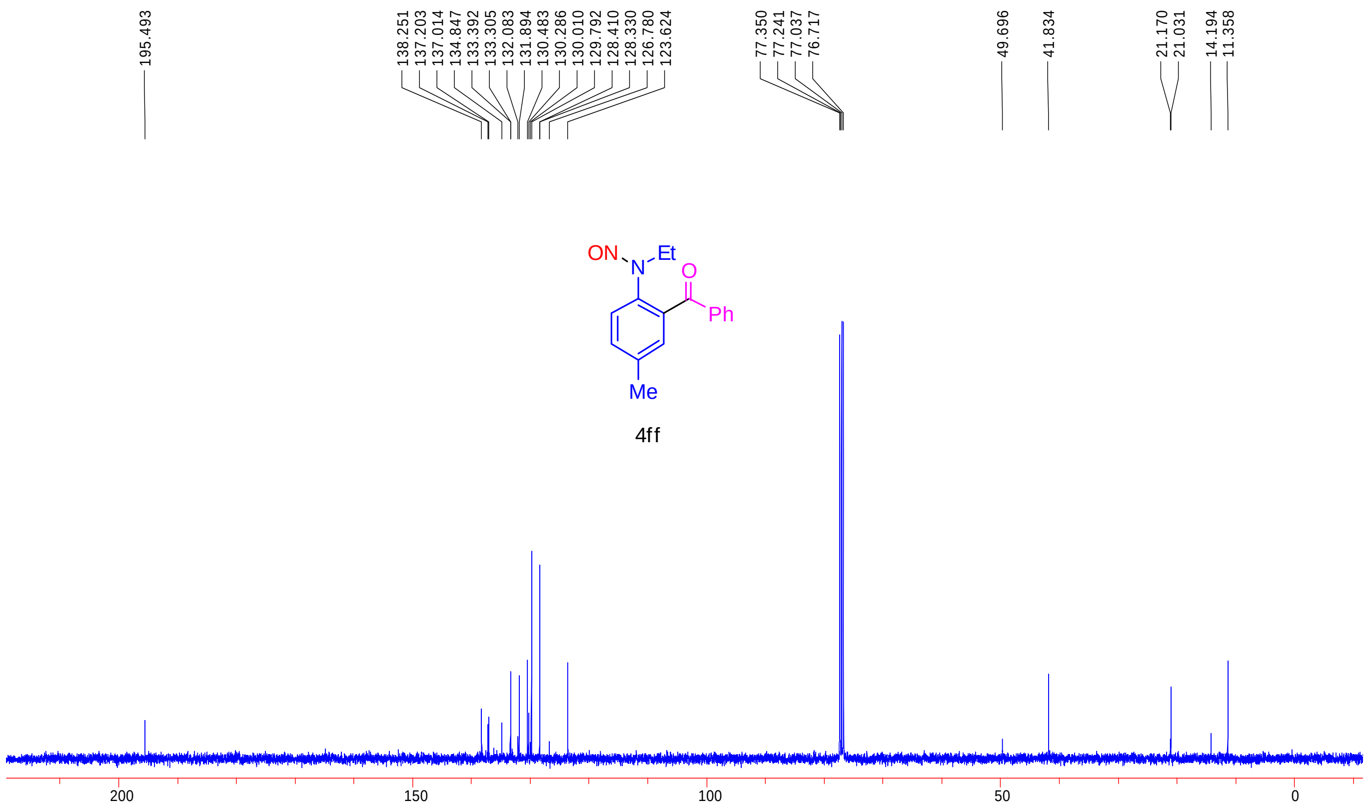

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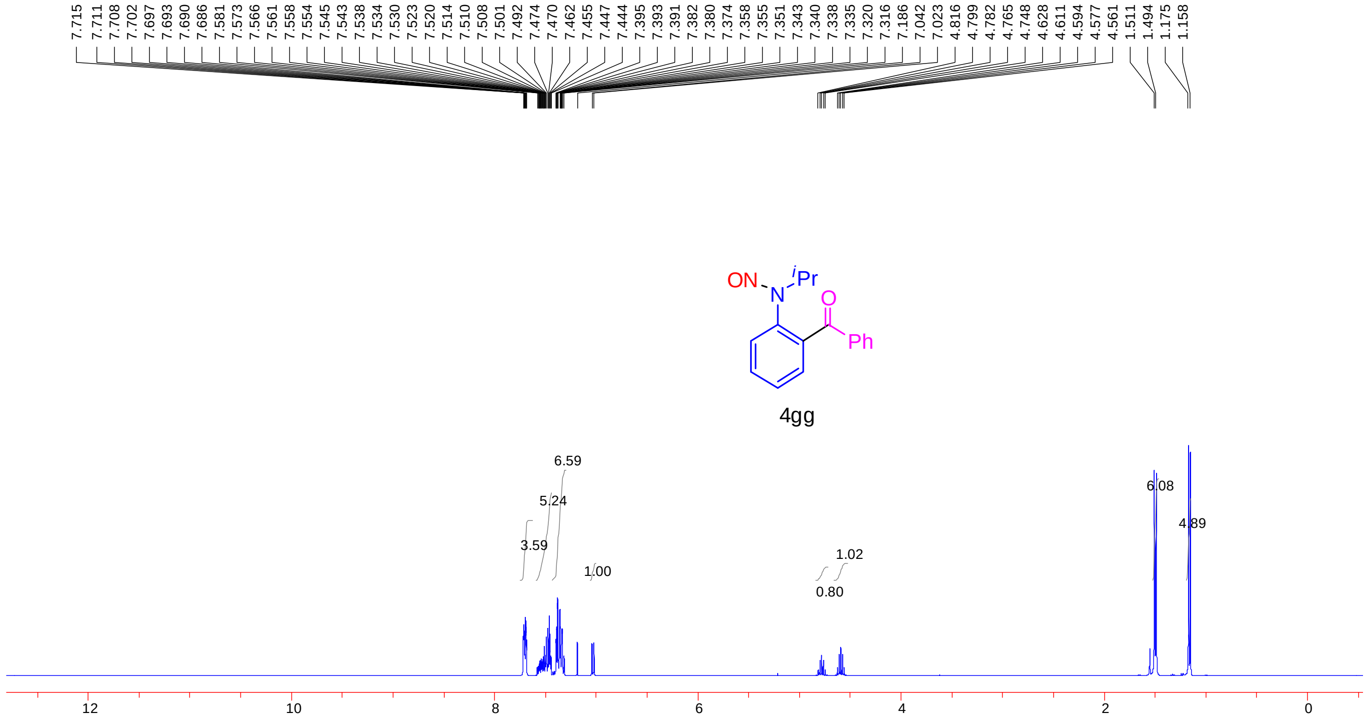

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7.534
7.530
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7.520
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7.508
7.501
7.492
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7.316
7.186
7.042
7.023
4.816
4.799
4.782
4.765
4.748
4.628
4.611
4.594
4.577
4.561
1.511
1.494
1.175
1.158
ON
N
iPr
O
Ph
4gg
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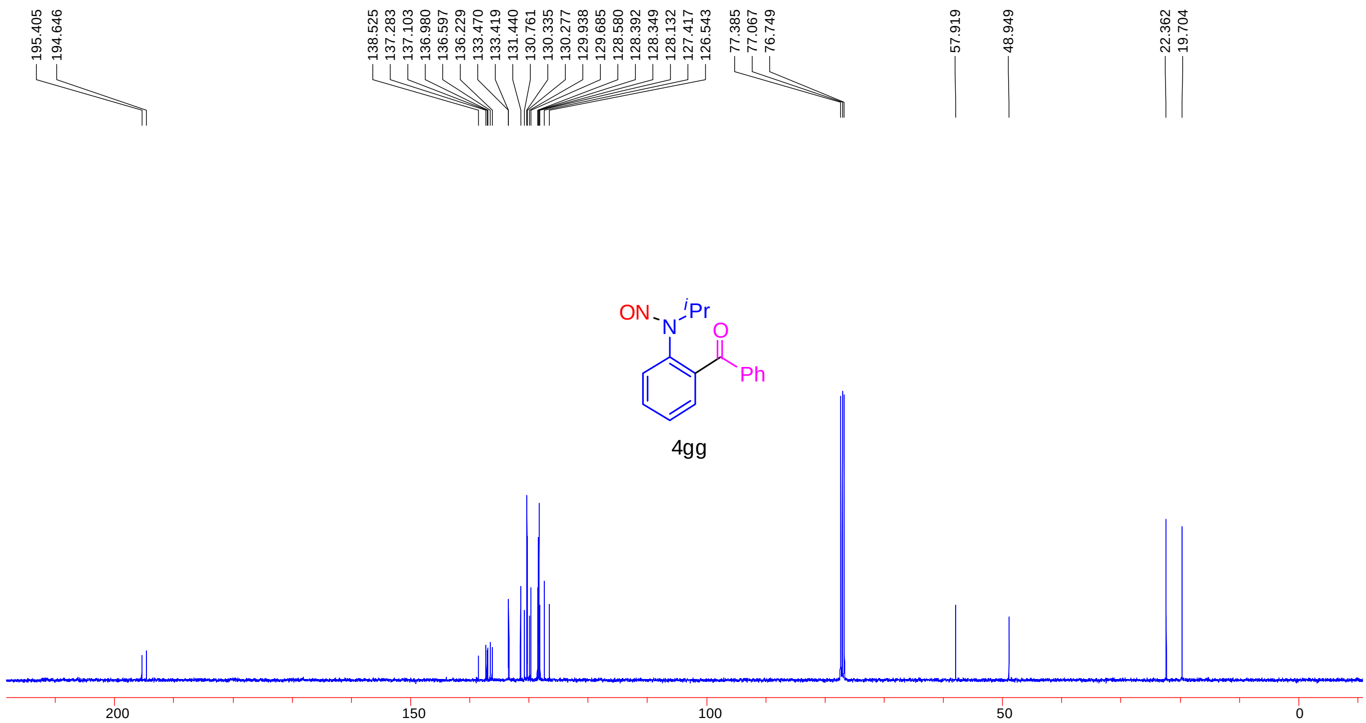

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136.229
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130.335
130.277
129.938
129.685
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128.392
128.349
128.132
127.417
126.543
77.385
77.067
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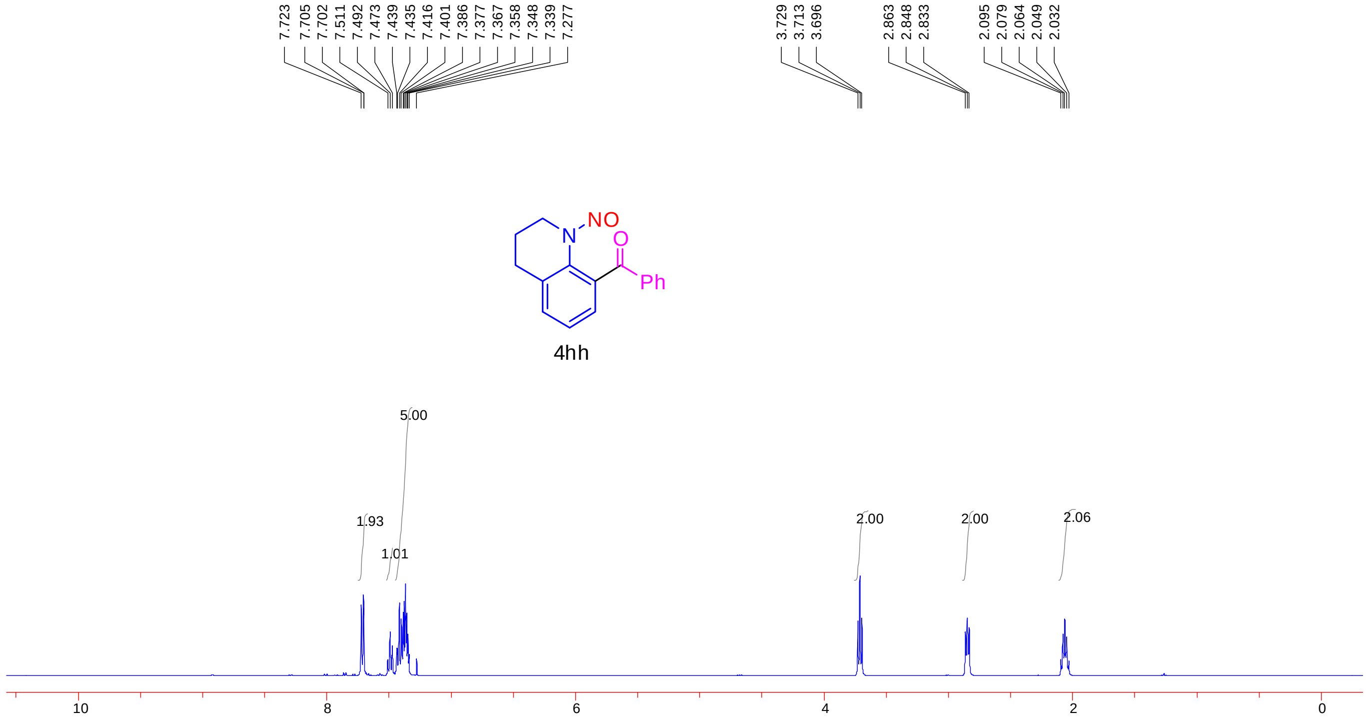
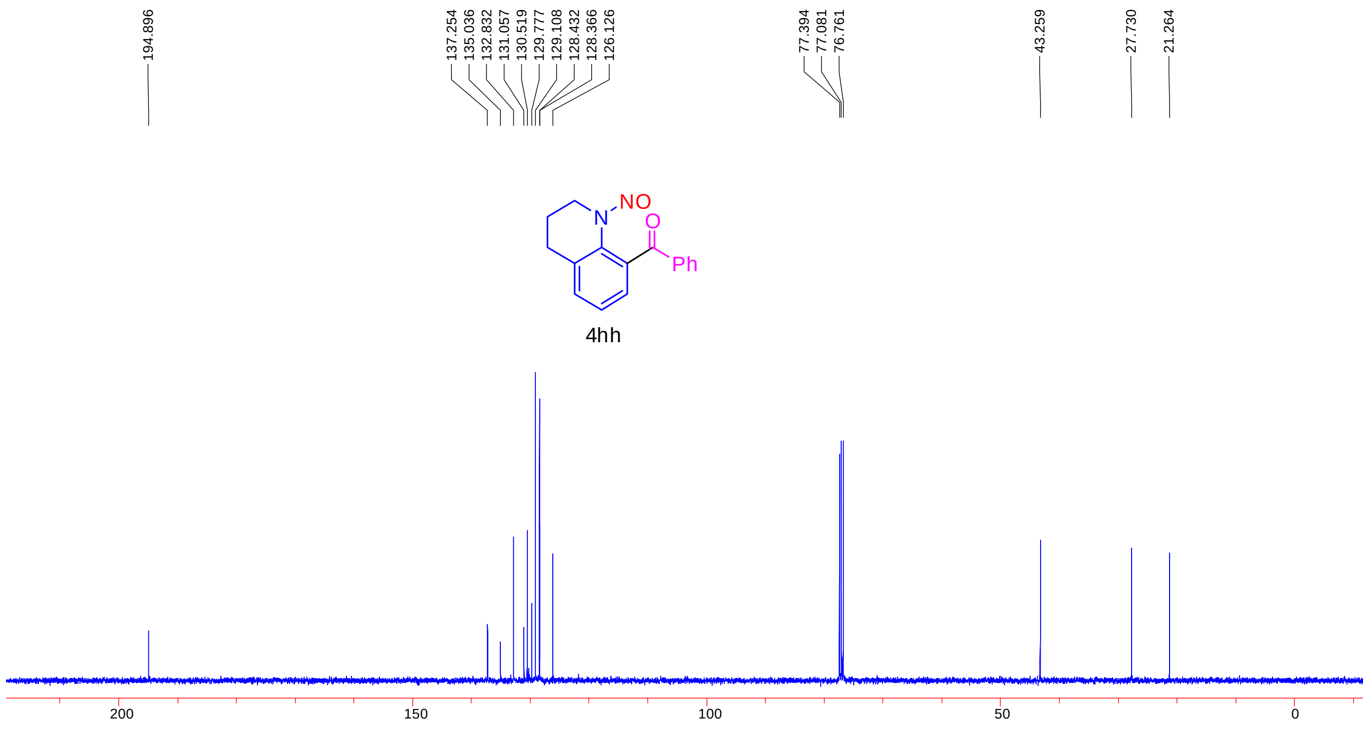
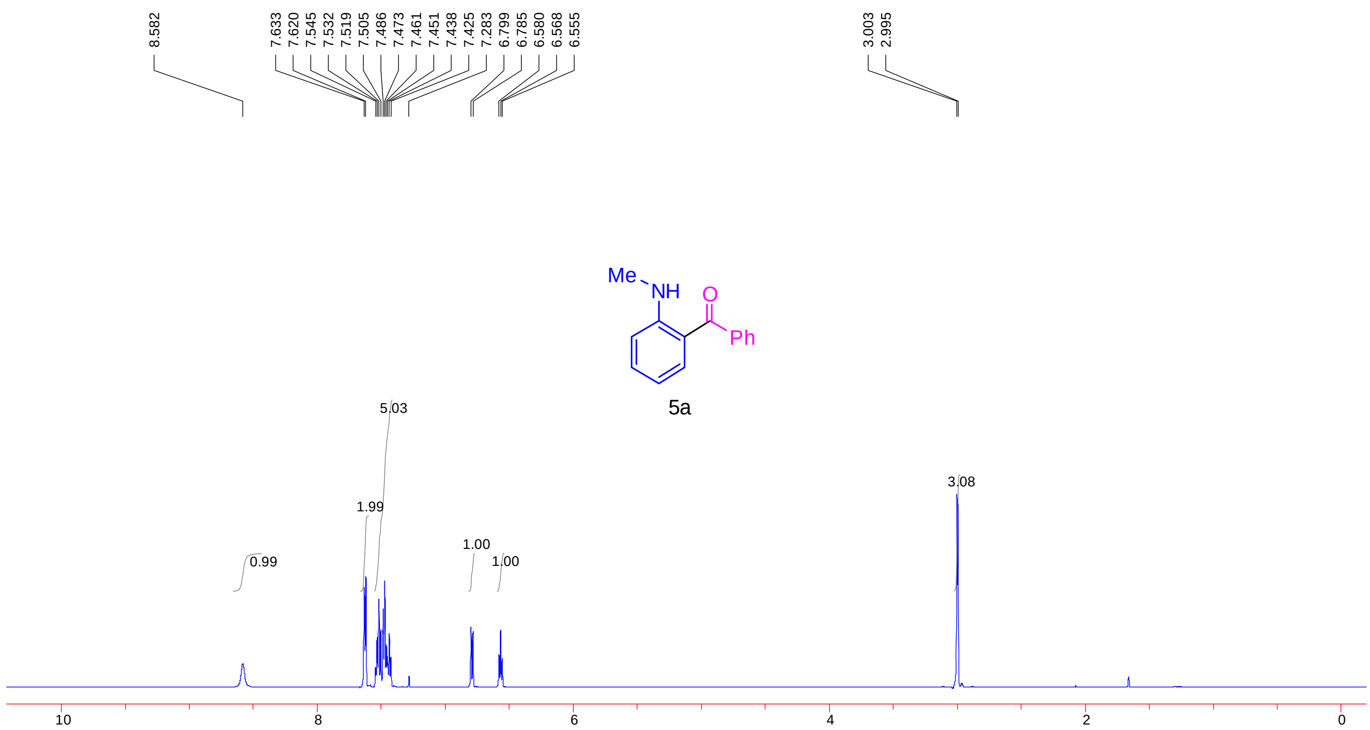
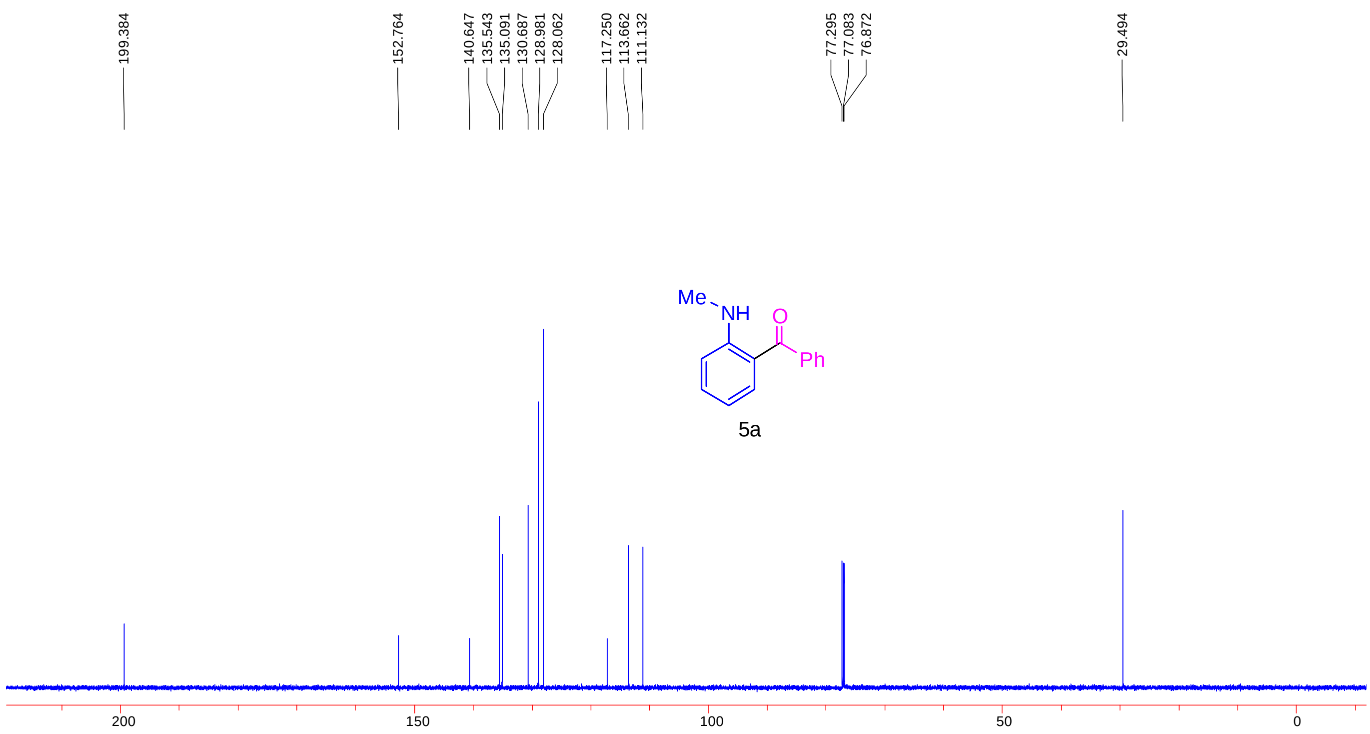
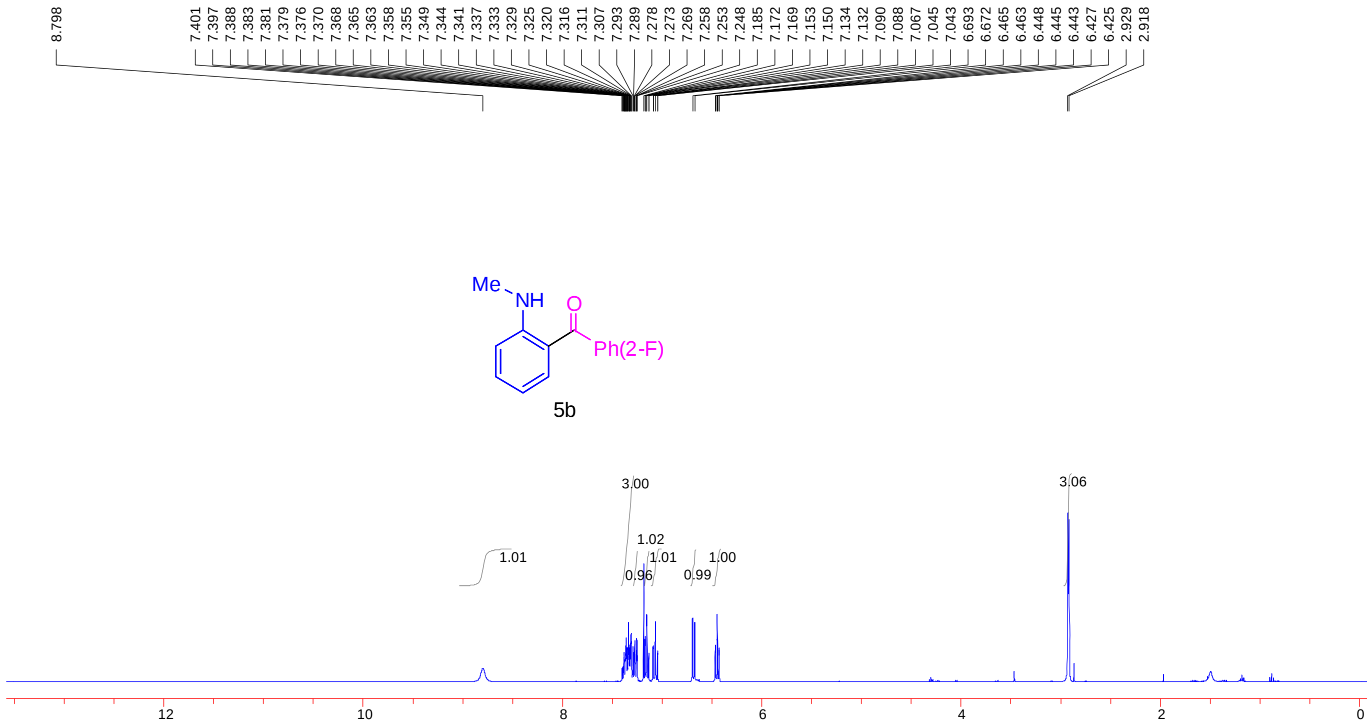




II. Copies of ^{1}H and ^{13}C NMR spectra of **5a**-**5r**



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Me
NH
O
Ph(2-F)
5b
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1.02
1.01
0.99
1.00
3.06
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10
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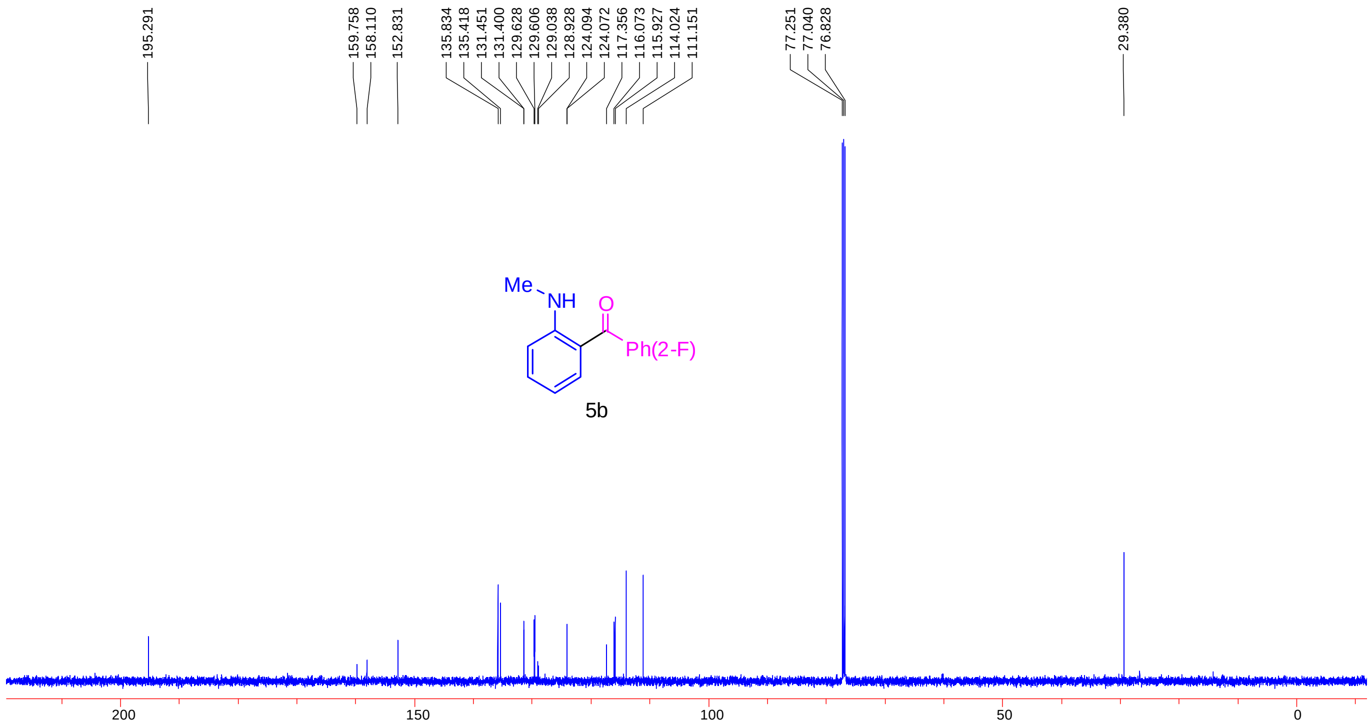
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135.834 135.418 131.451 131.400 129.628 129.606 129.038 128.928 124.094 124.072 117.356 116.073 115.927 114.024 111.151
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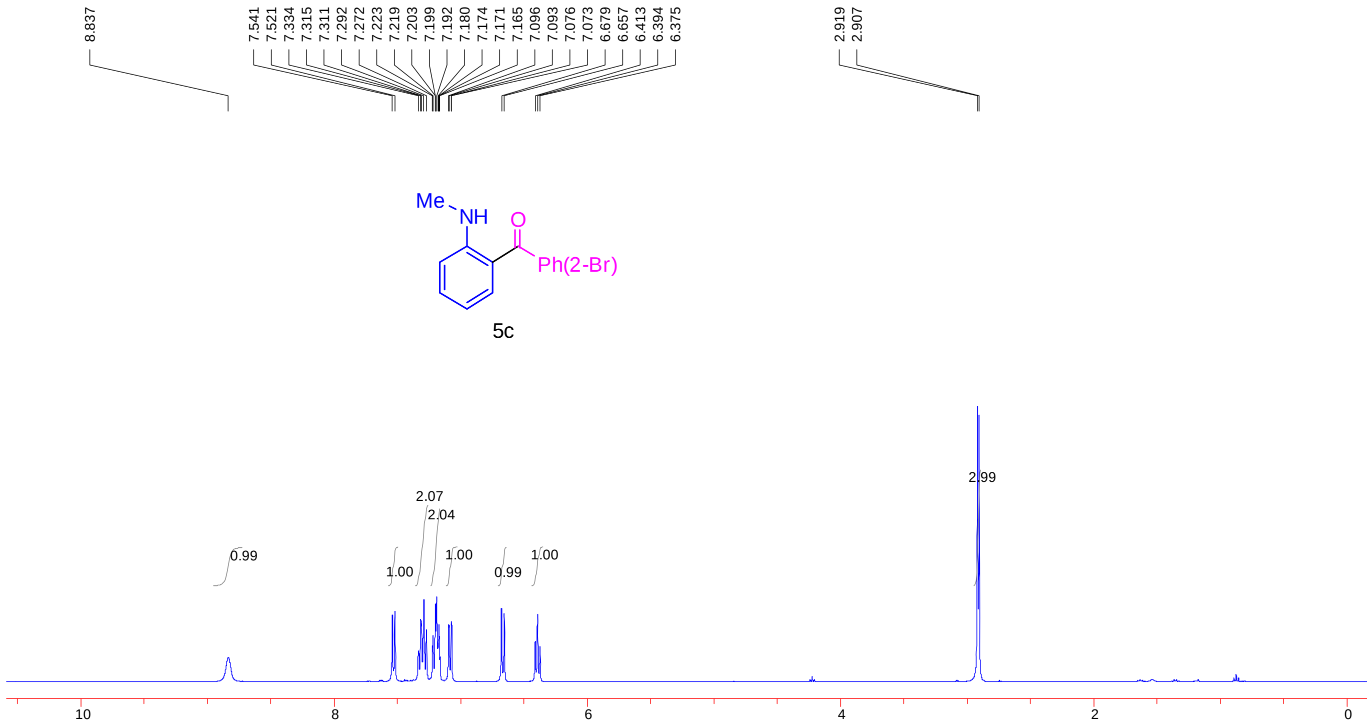
150
100
50
0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7.192
7.180
7.174
7.171
7.165
7.096
7.093
7.076
7.073
6.679
6.657
6.413
6.394
6.375
2.919
2.907
Me
NH
O
Ph(2-Br)
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2.99
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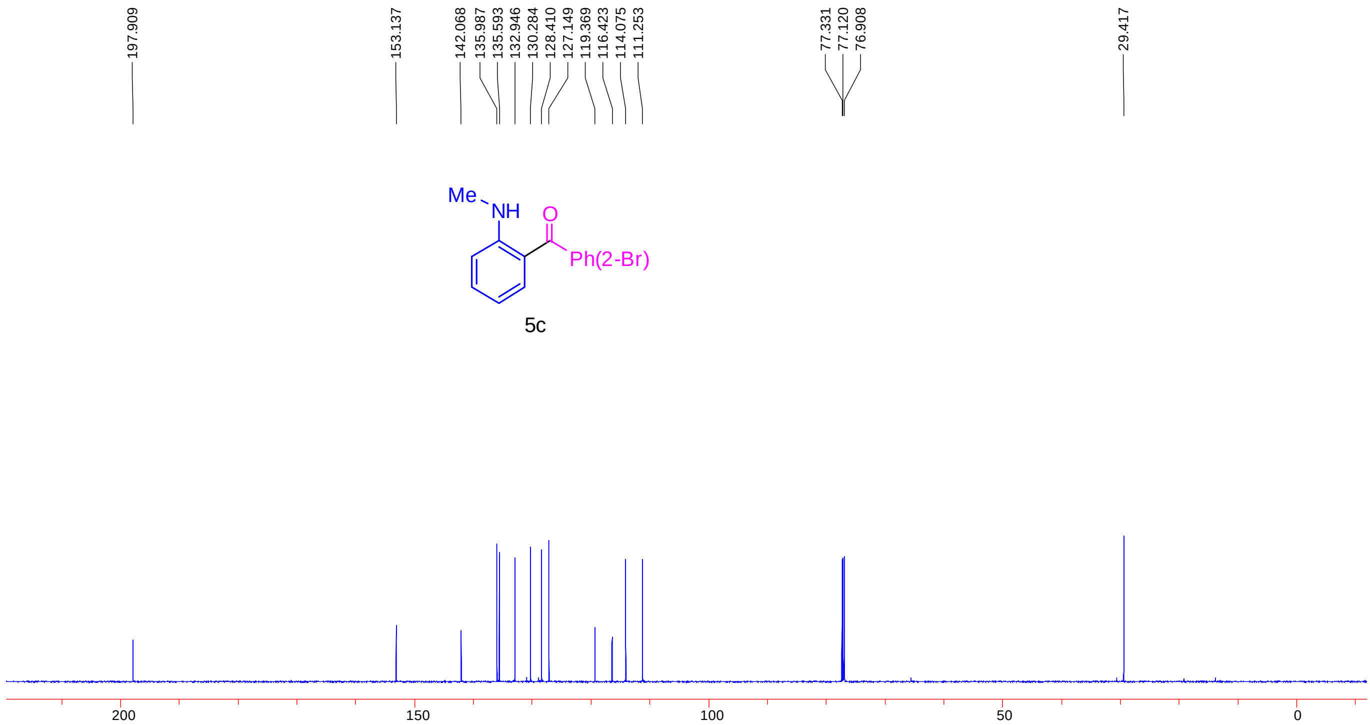
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135.593
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128.410
127.149
119.369
116.423
114.075
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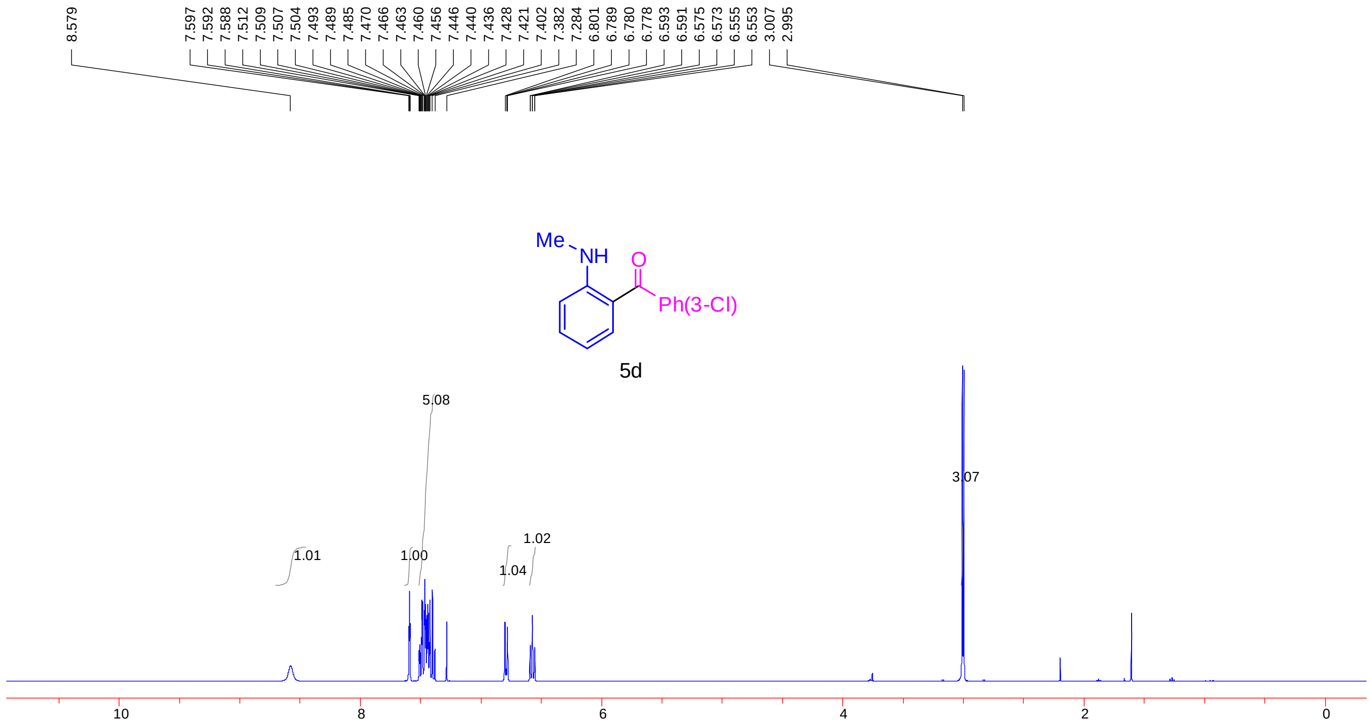
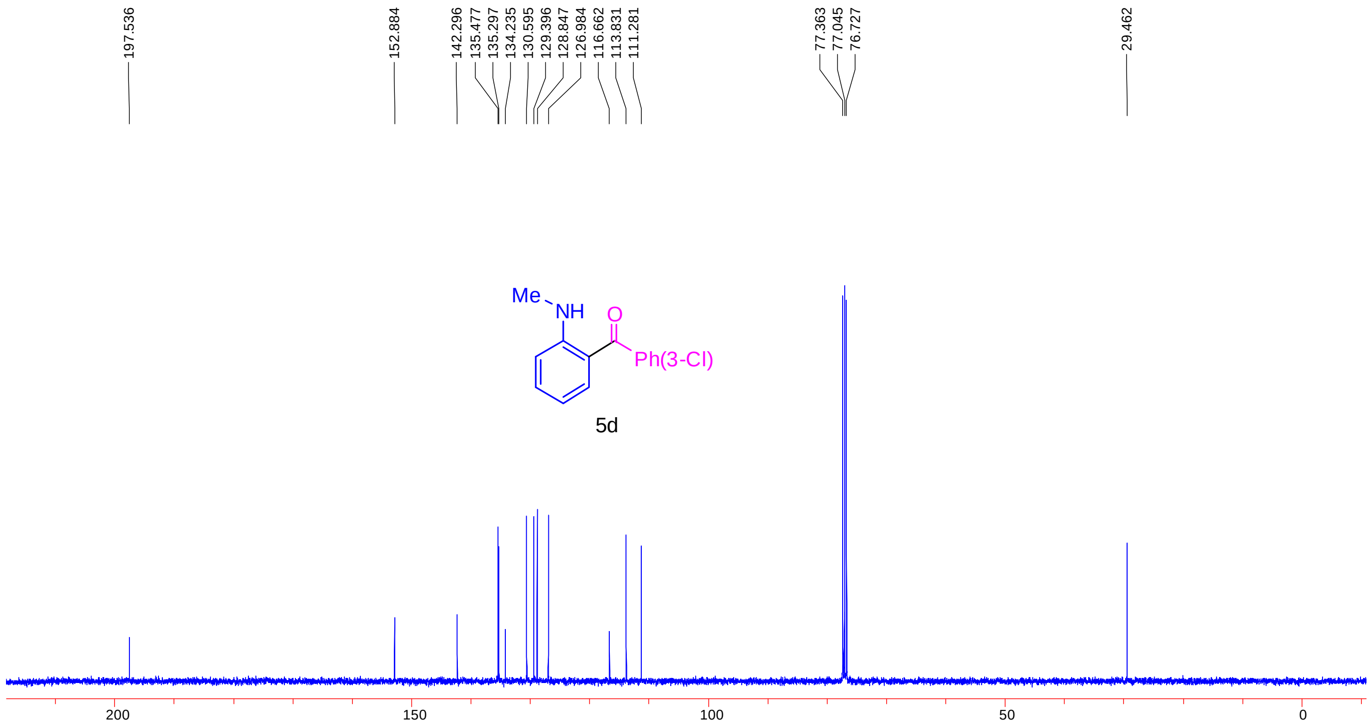
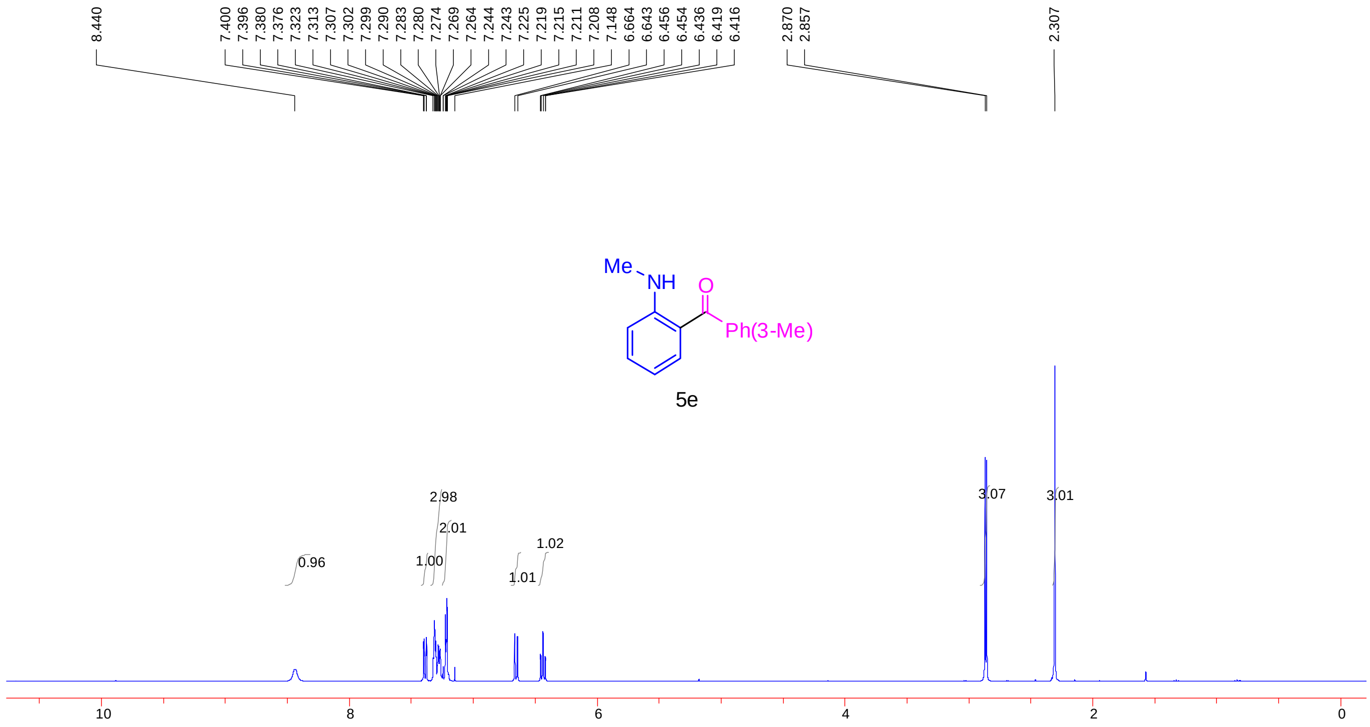
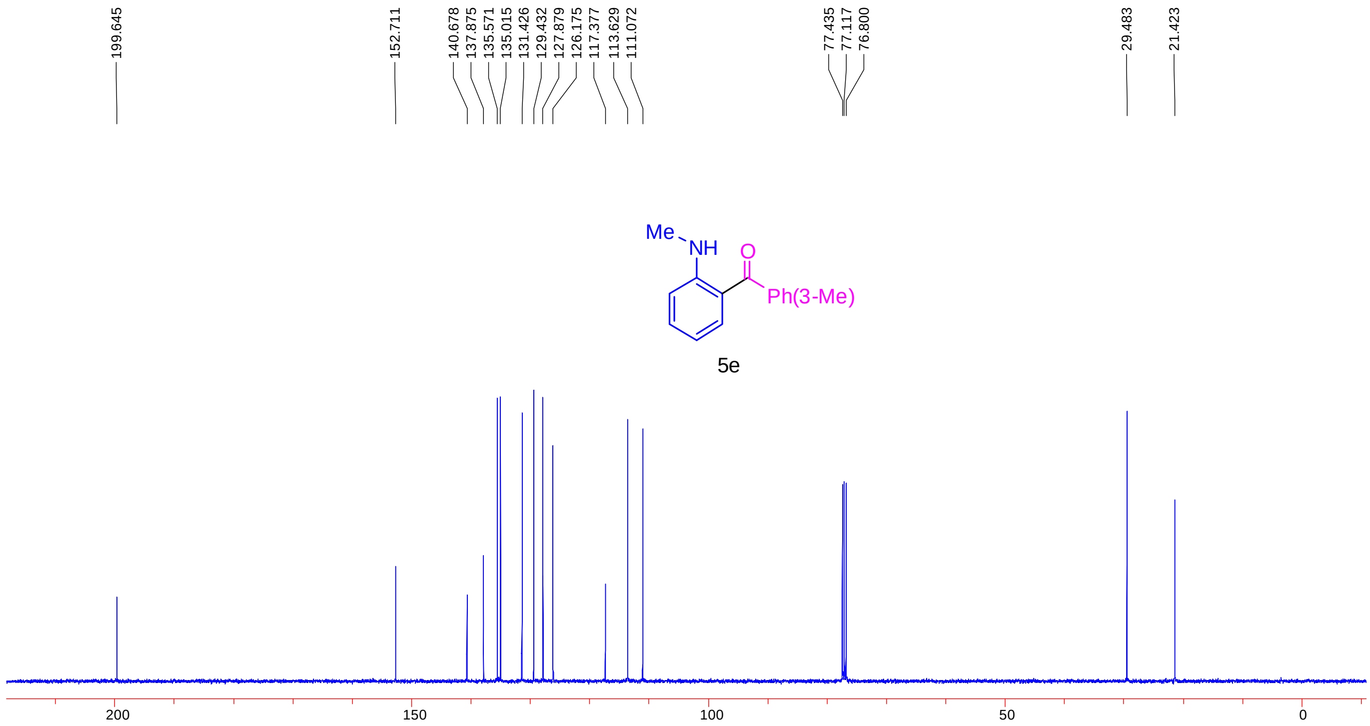
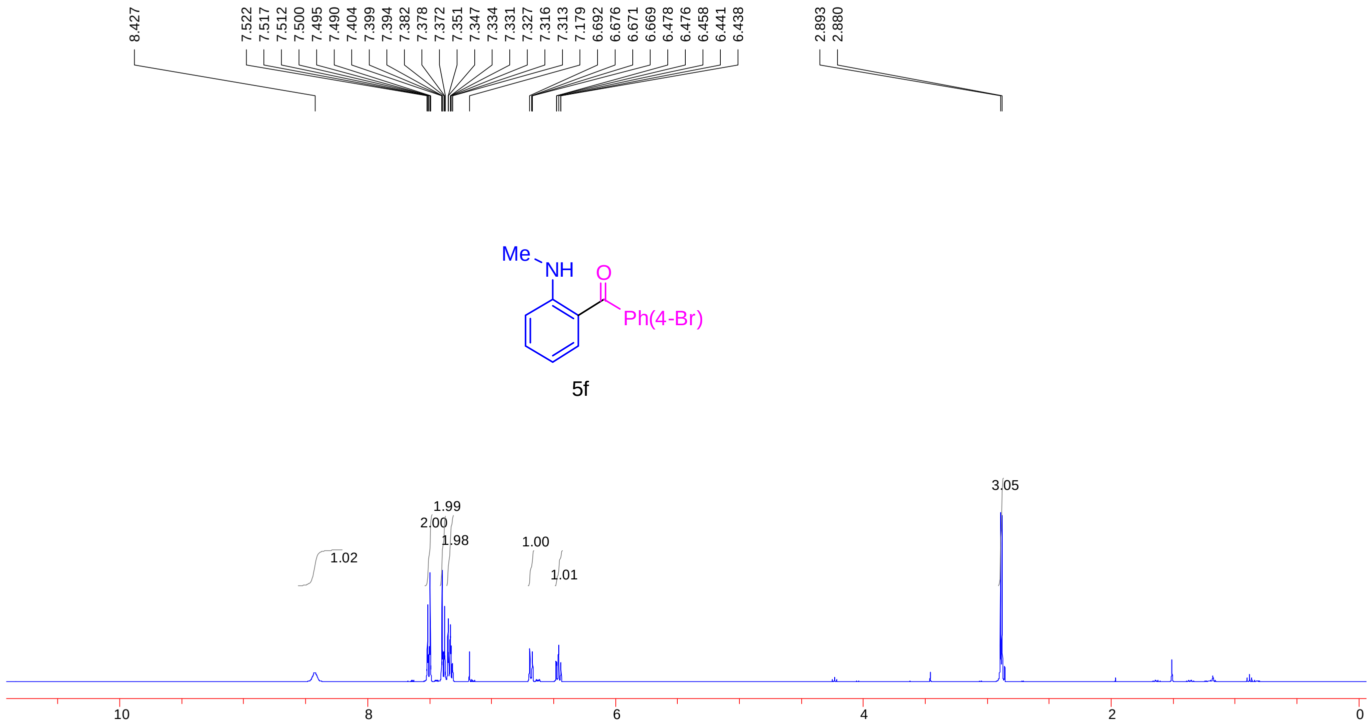
77.331
77.120
76.908
29.417
Me
NH
O
Ph(2-Br)
5c
200
150
100
50
0







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7.495
7.490
7.404
7.399
7.394
7.382
7.378
7.372
7.351
7.347
7.334
7.331
7.327
7.316
7.313
7.179
6.692
6.676
6.671
6.669
6.478
6.476
6.458
6.441
6.438
2.893
2.880
Me
NH
O
Ph(4-Br)
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1.98
1.00
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3.05
10
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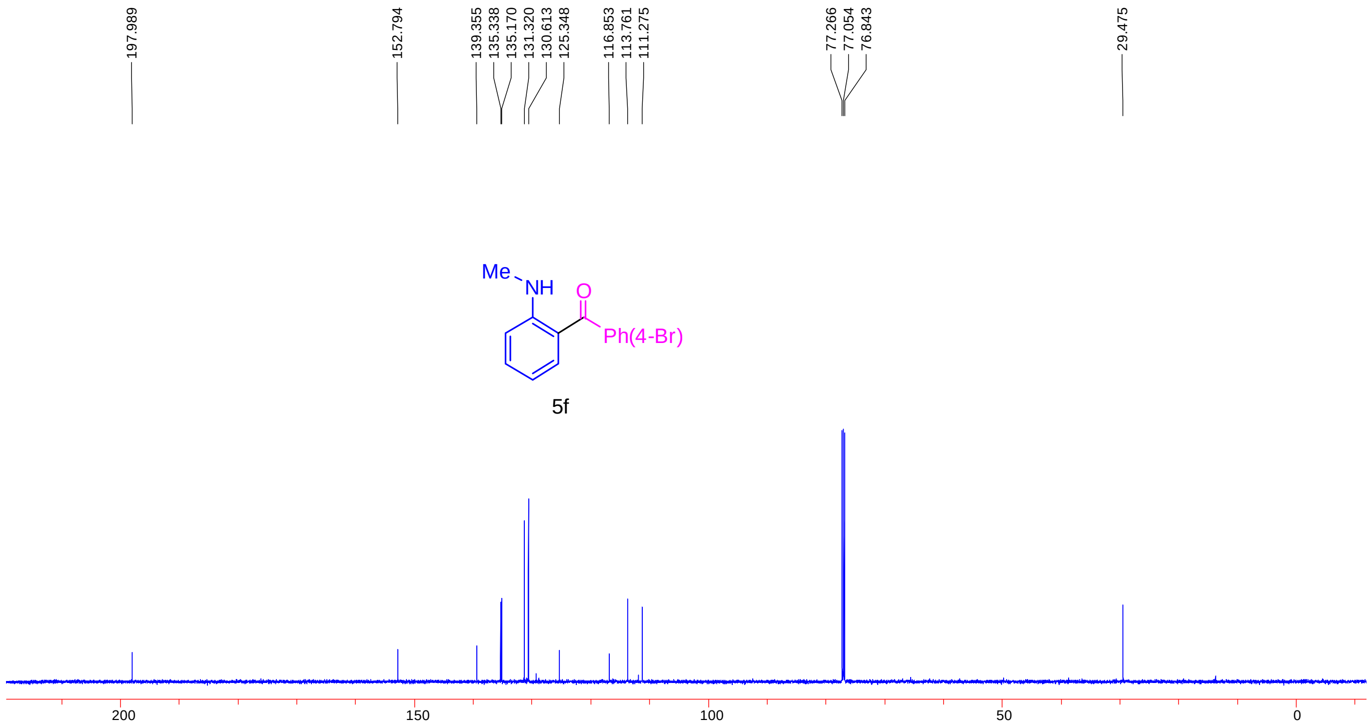
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125.348
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113.761
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76.843
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Ph(4-Br)
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100
50
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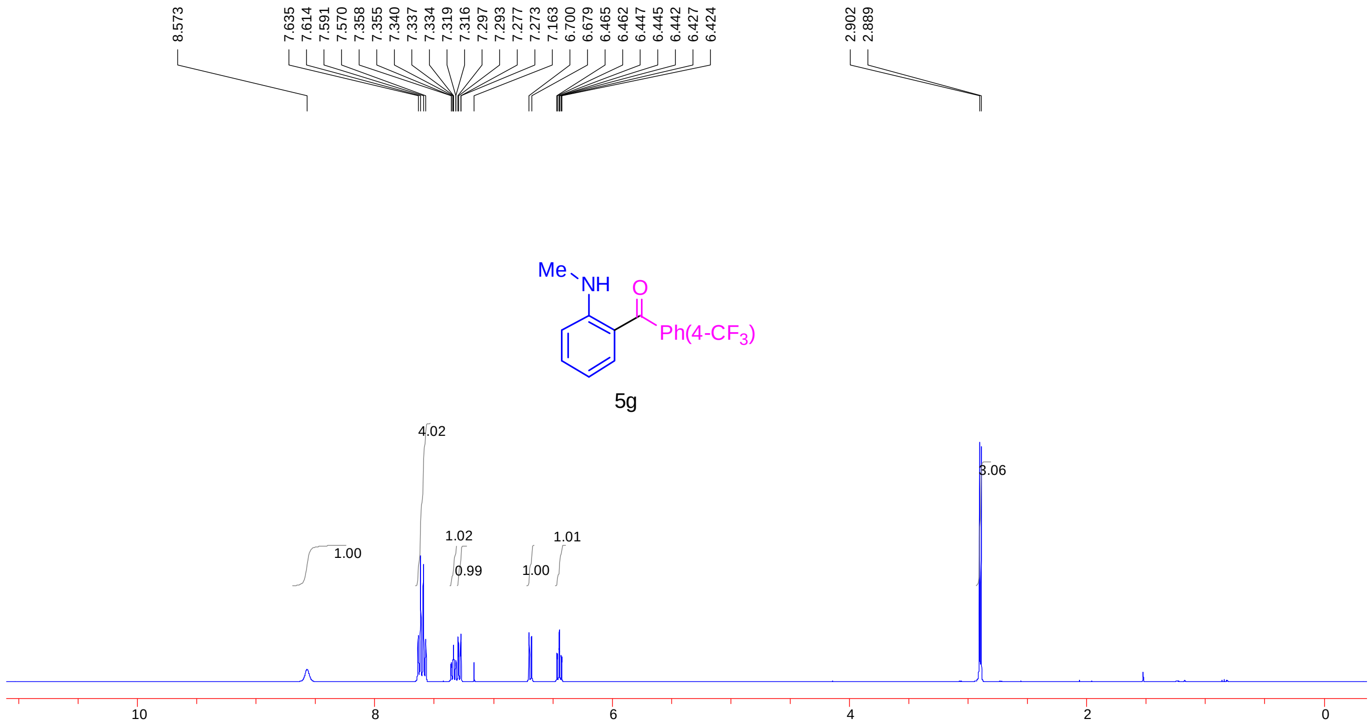
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2.902 2.889
Me
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O
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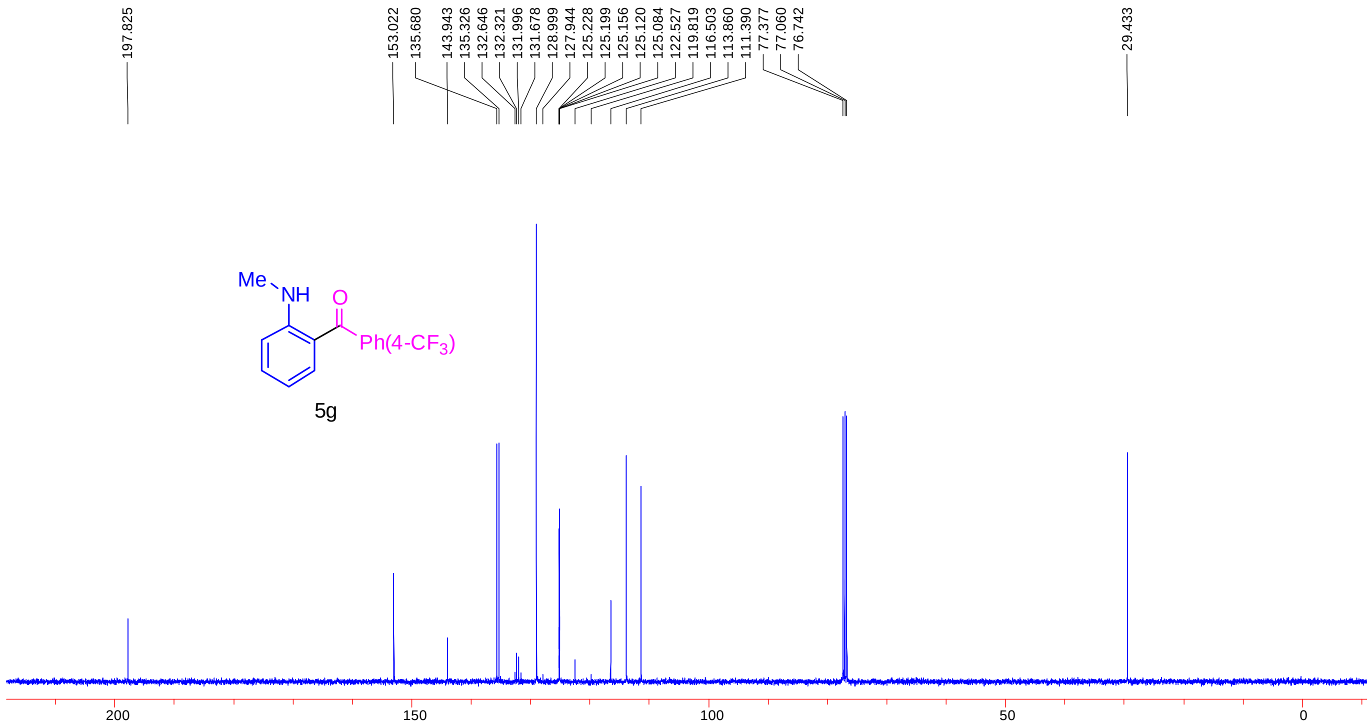
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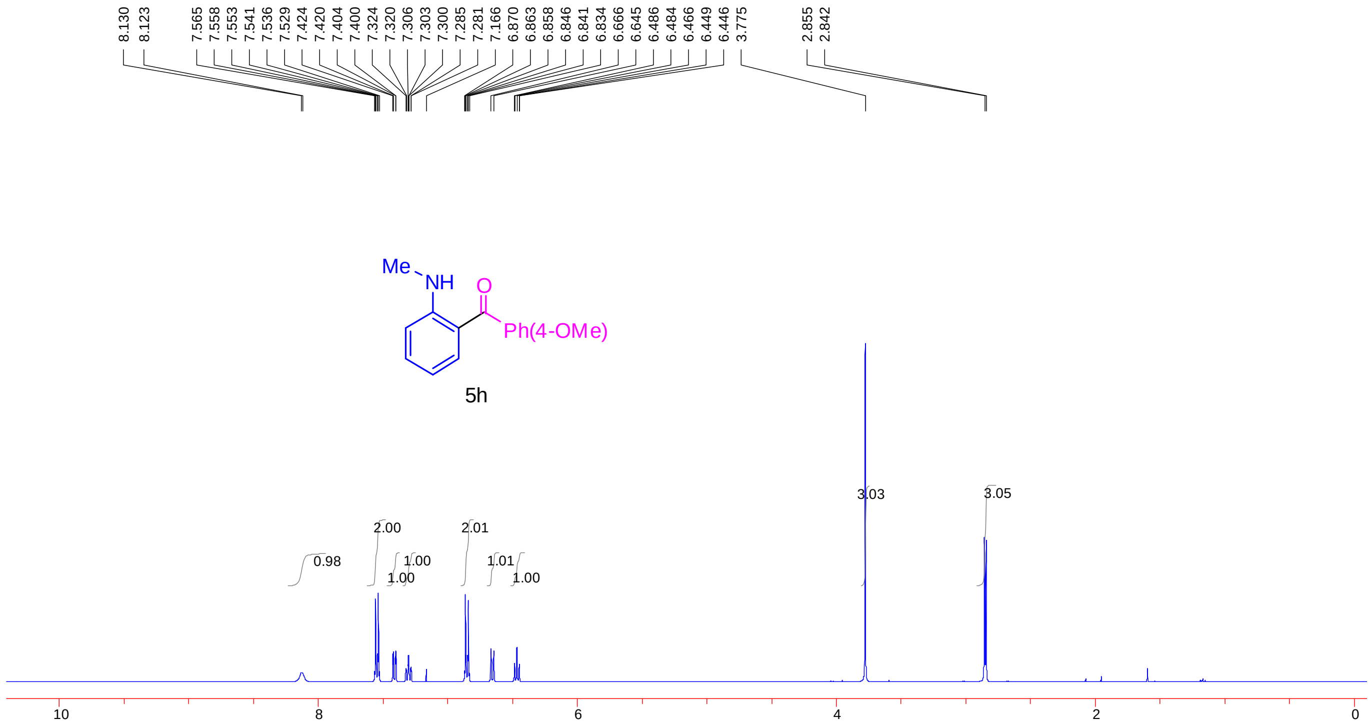
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7.320
7.306
7.303
7.300
7.285
7.281
7.166
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6.863
6.858
6.846
6.841
6.834
6.666
6.645
6.486
6.484
6.466
6.449
6.446
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2.855
2.842
Me
NH
O
Ph(4-OMe)
5h
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3.05
10
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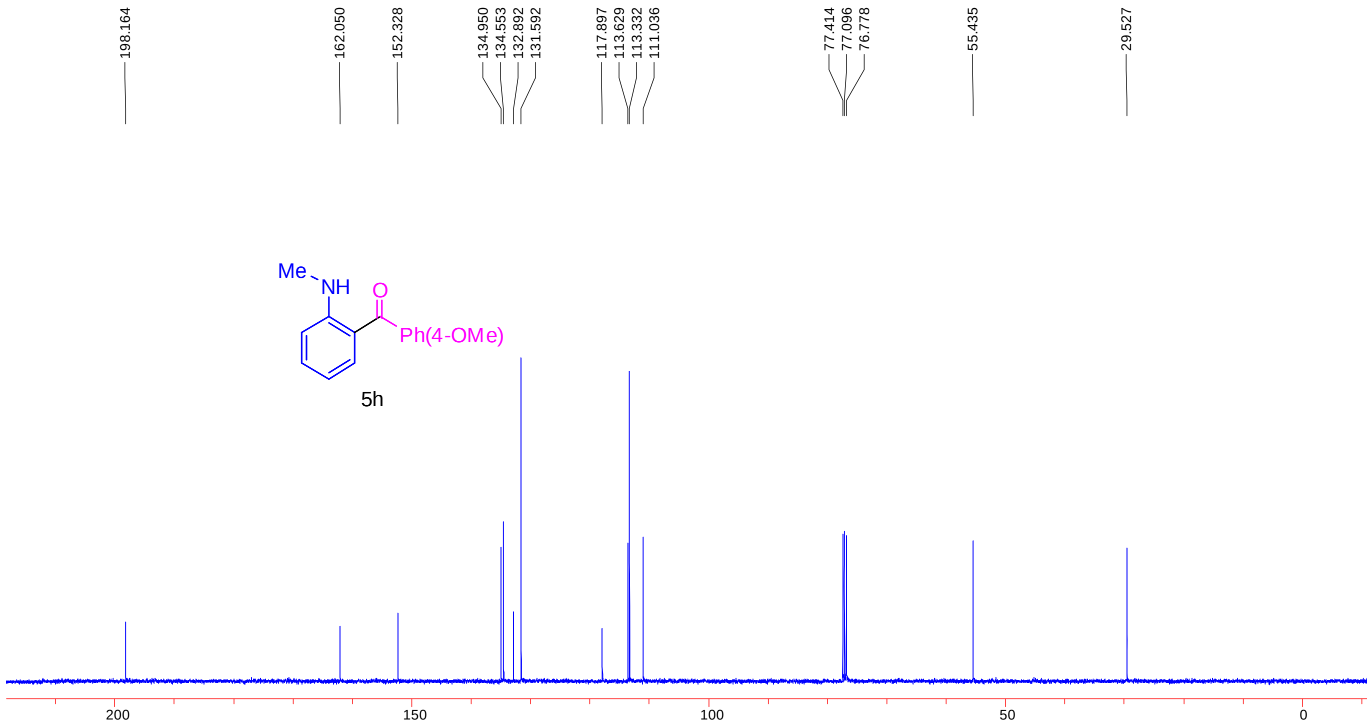
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55.435
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Ph(4-OMe)
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150
100
50
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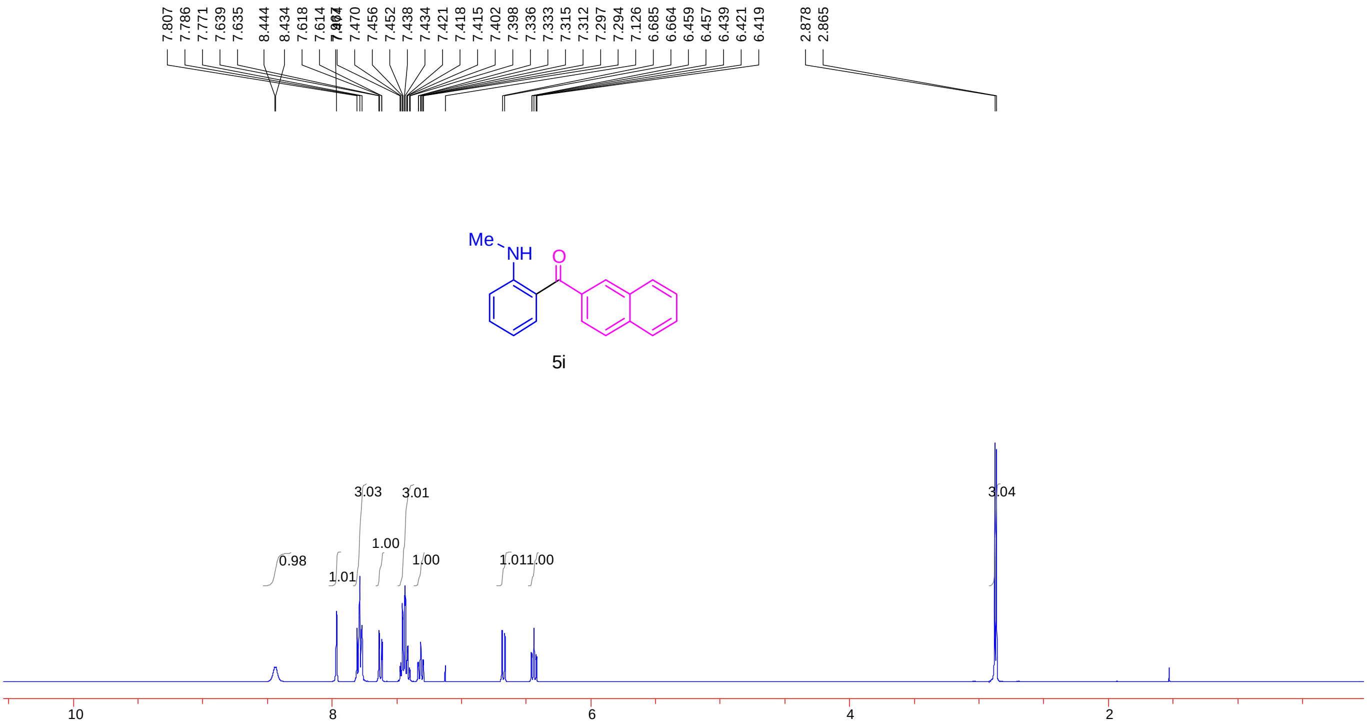

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O
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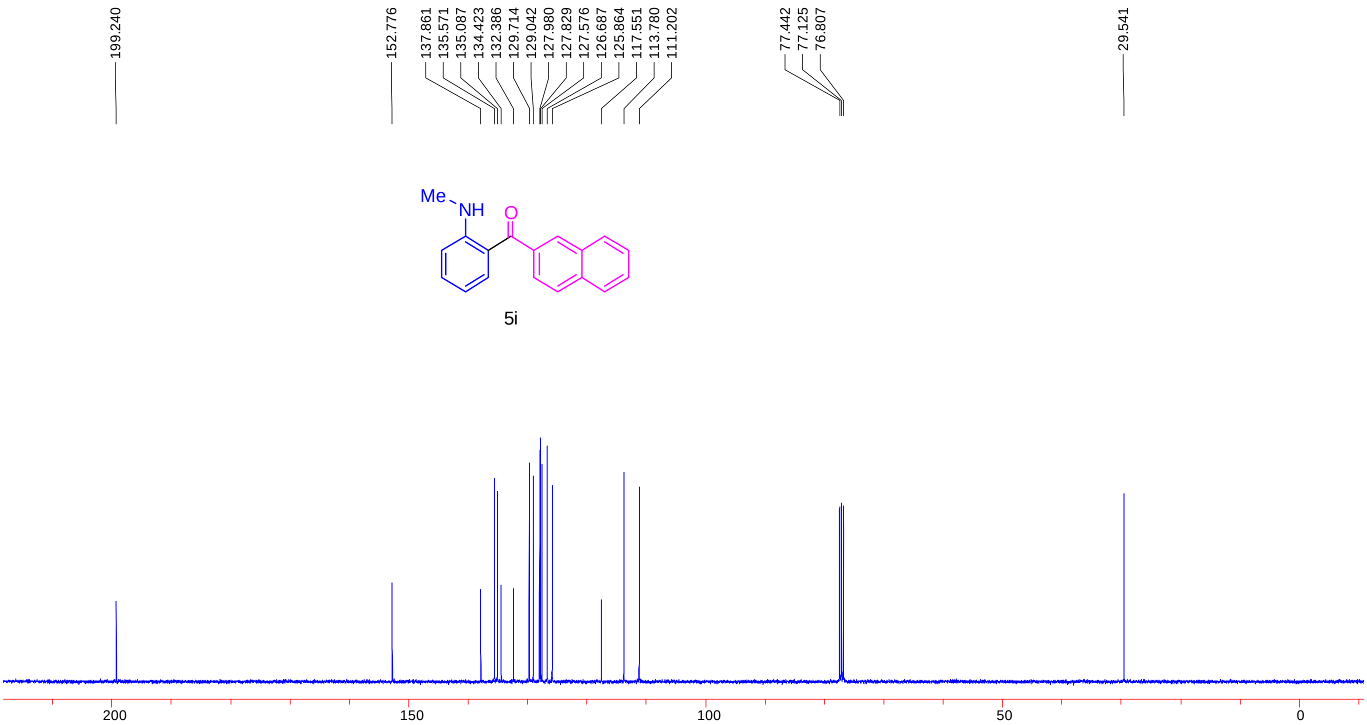
10 8 6 4 2



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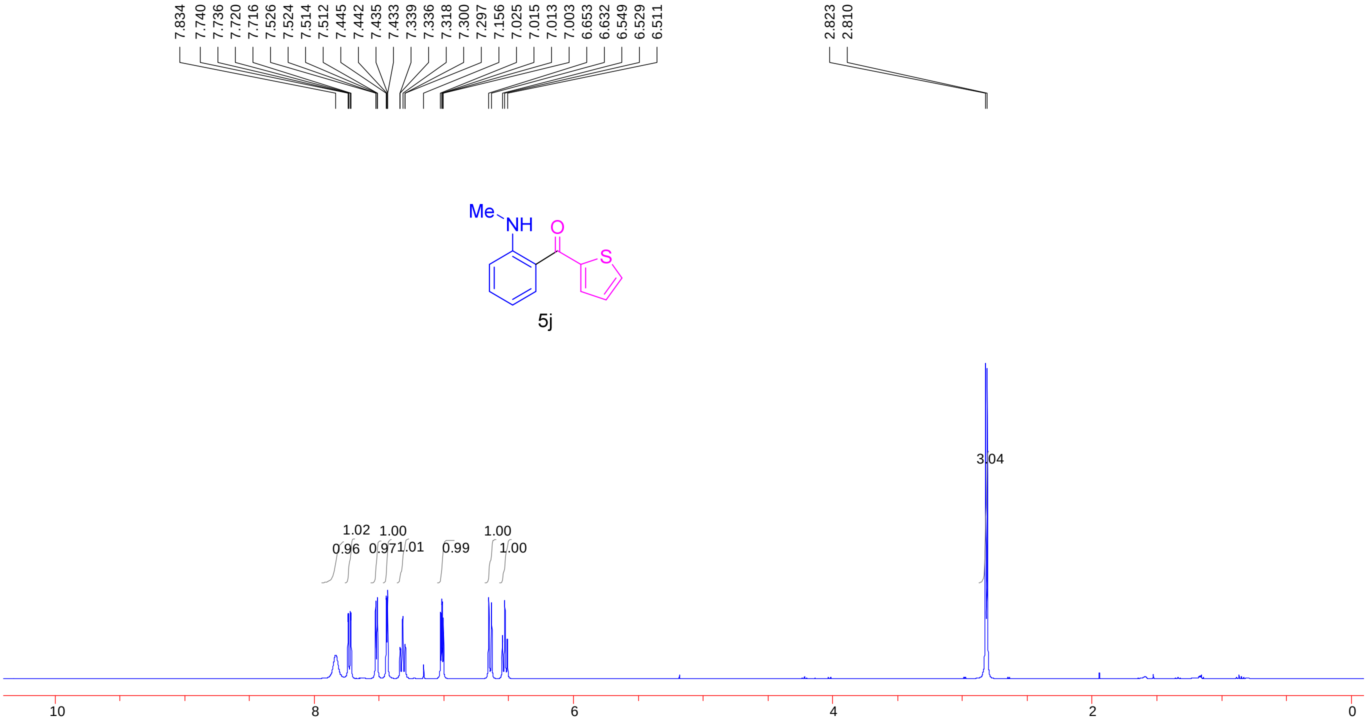
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Me
NH
O
S
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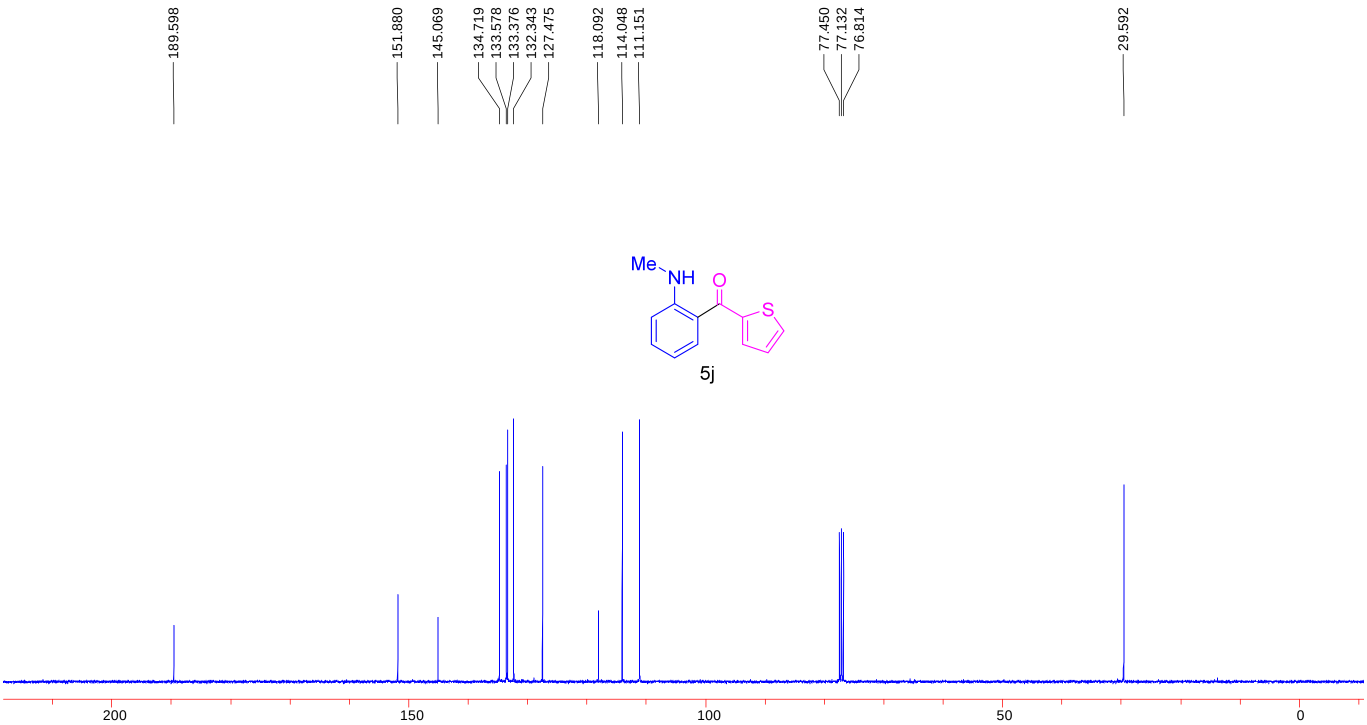
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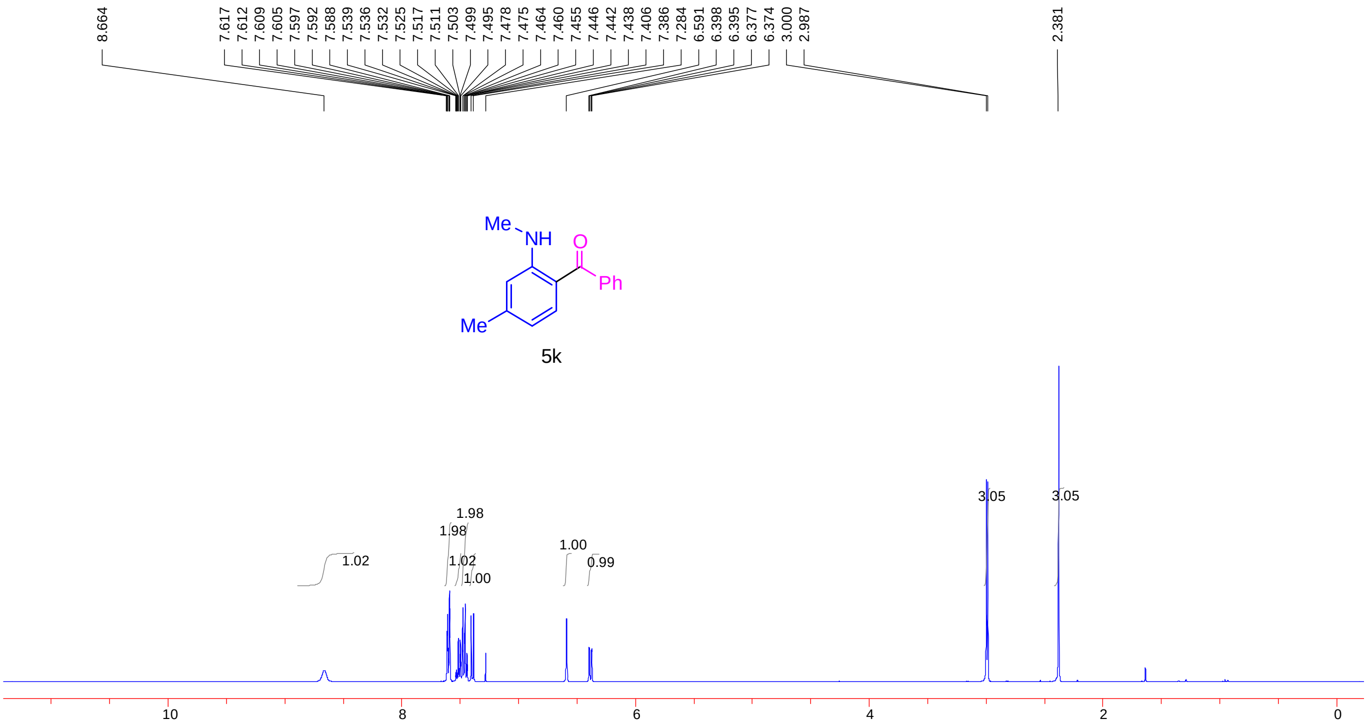
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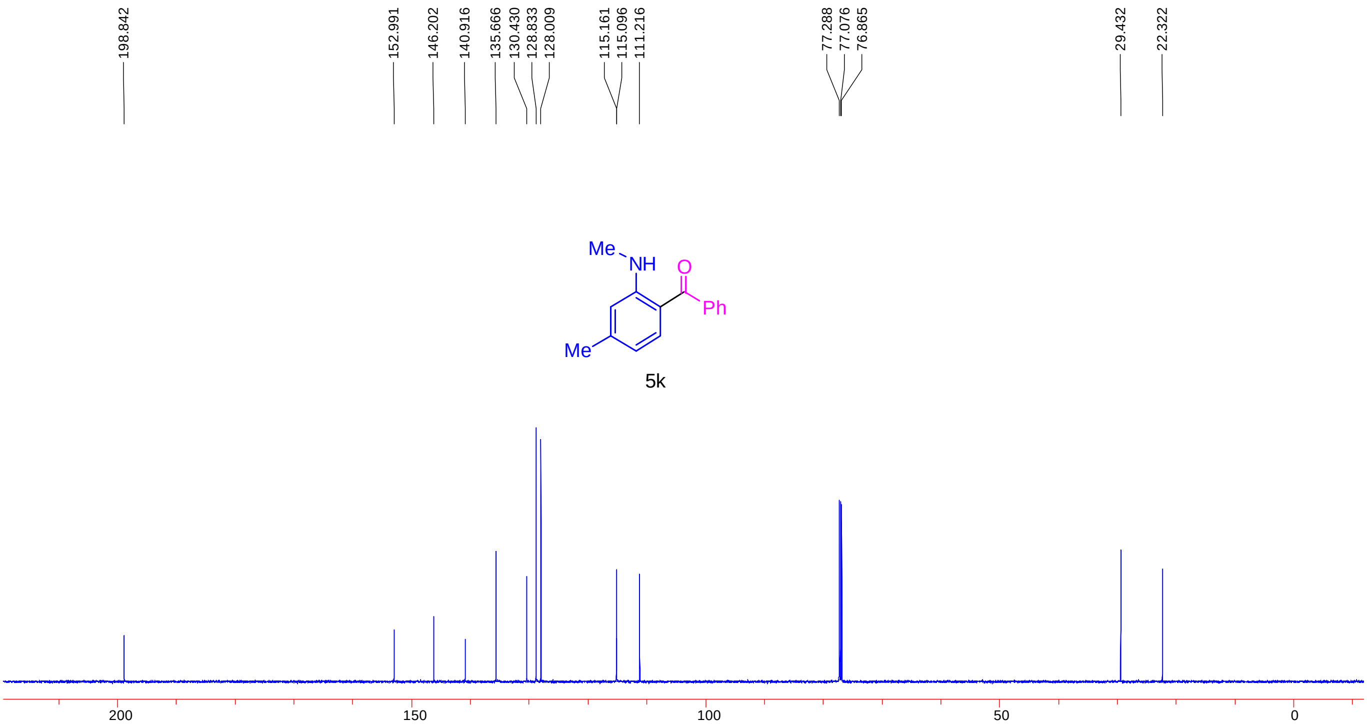
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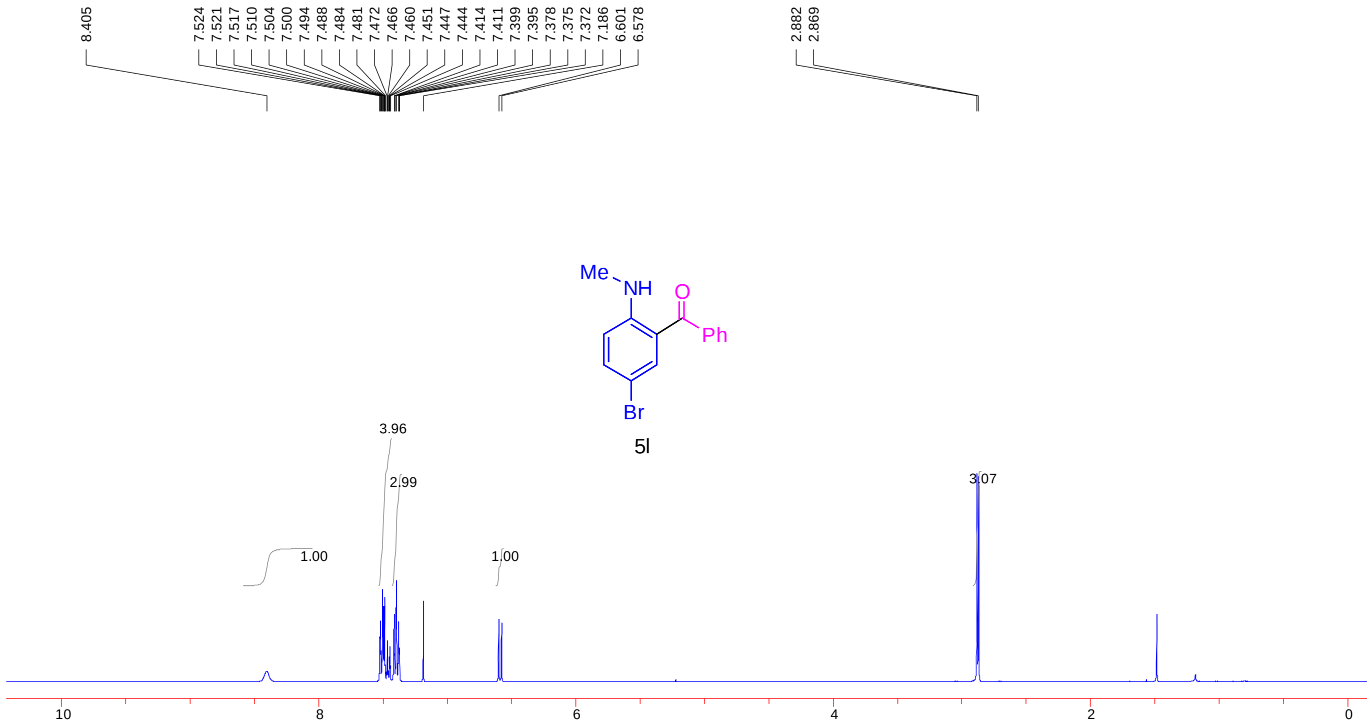
5k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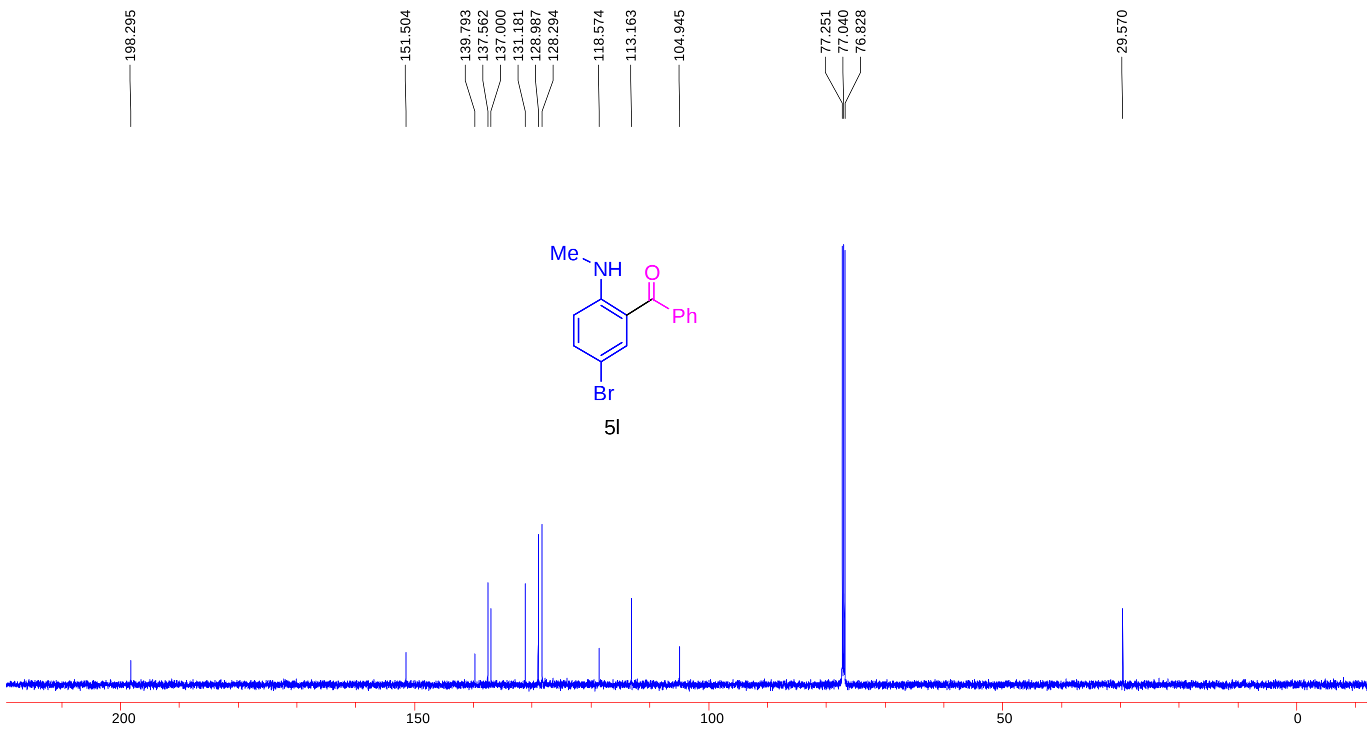
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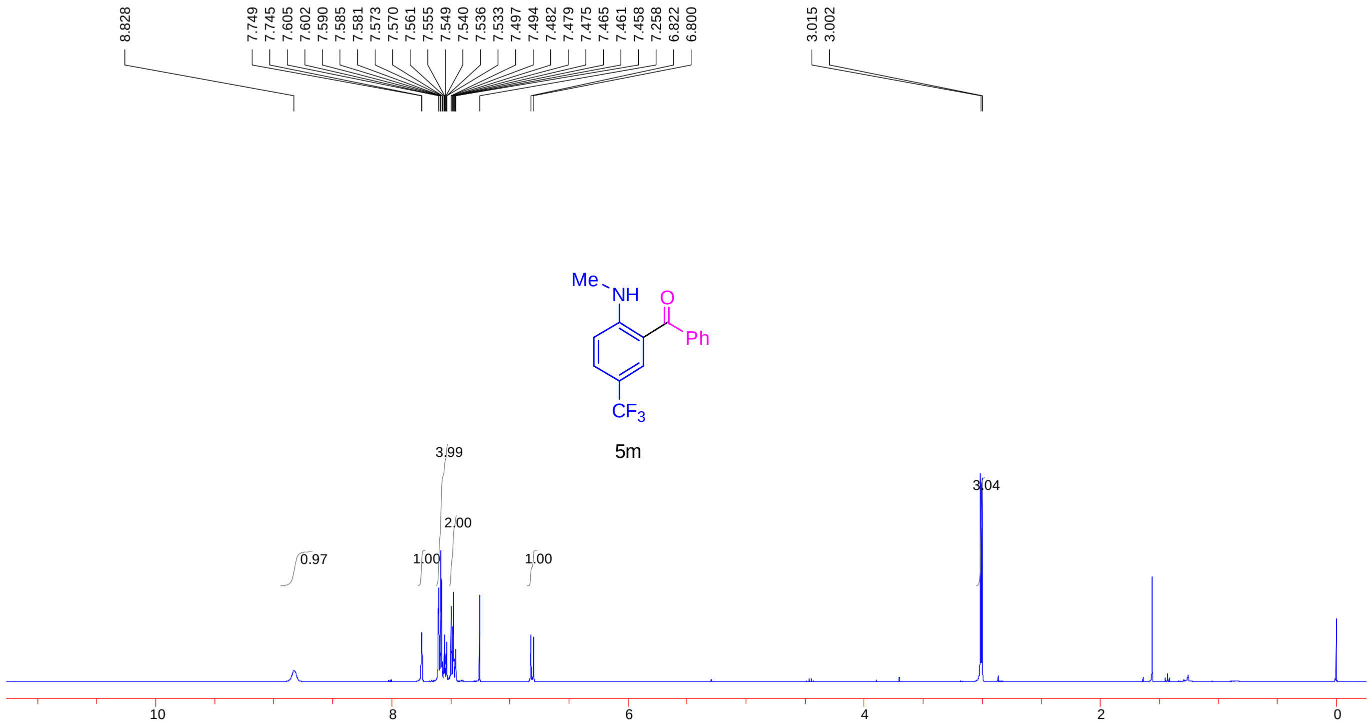
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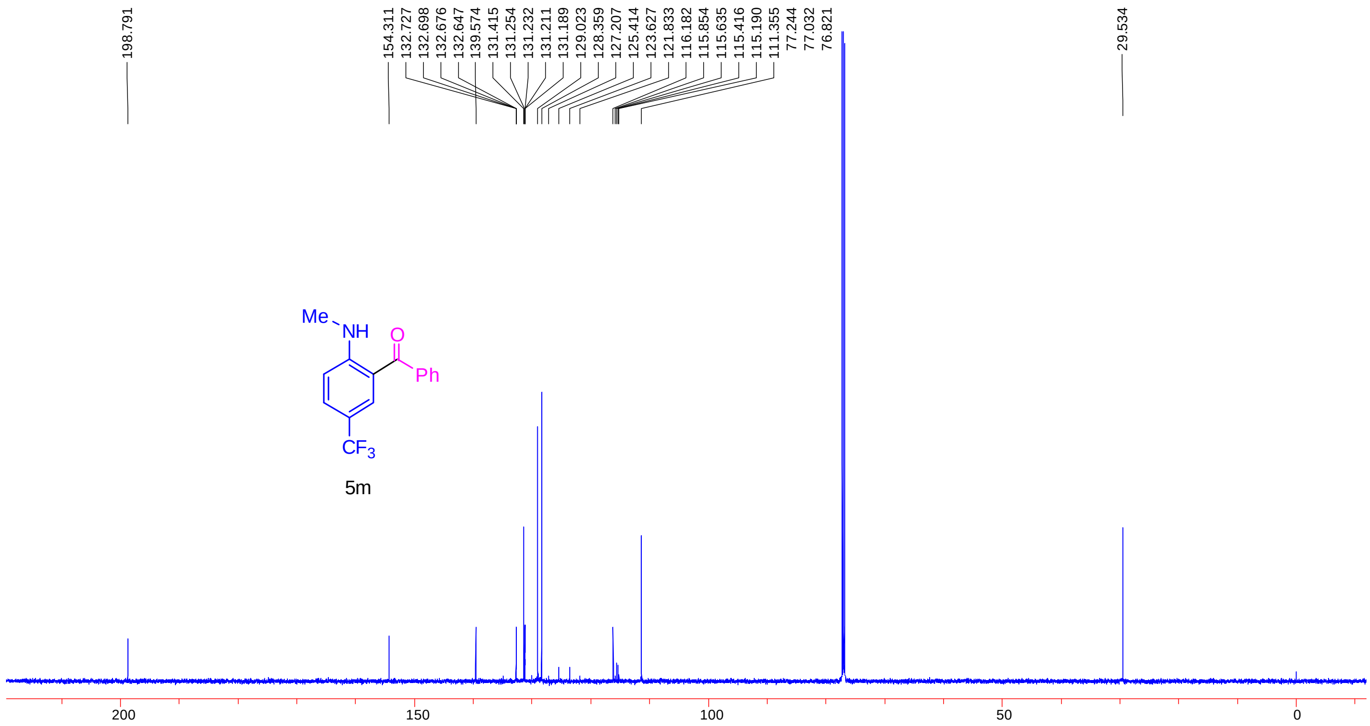
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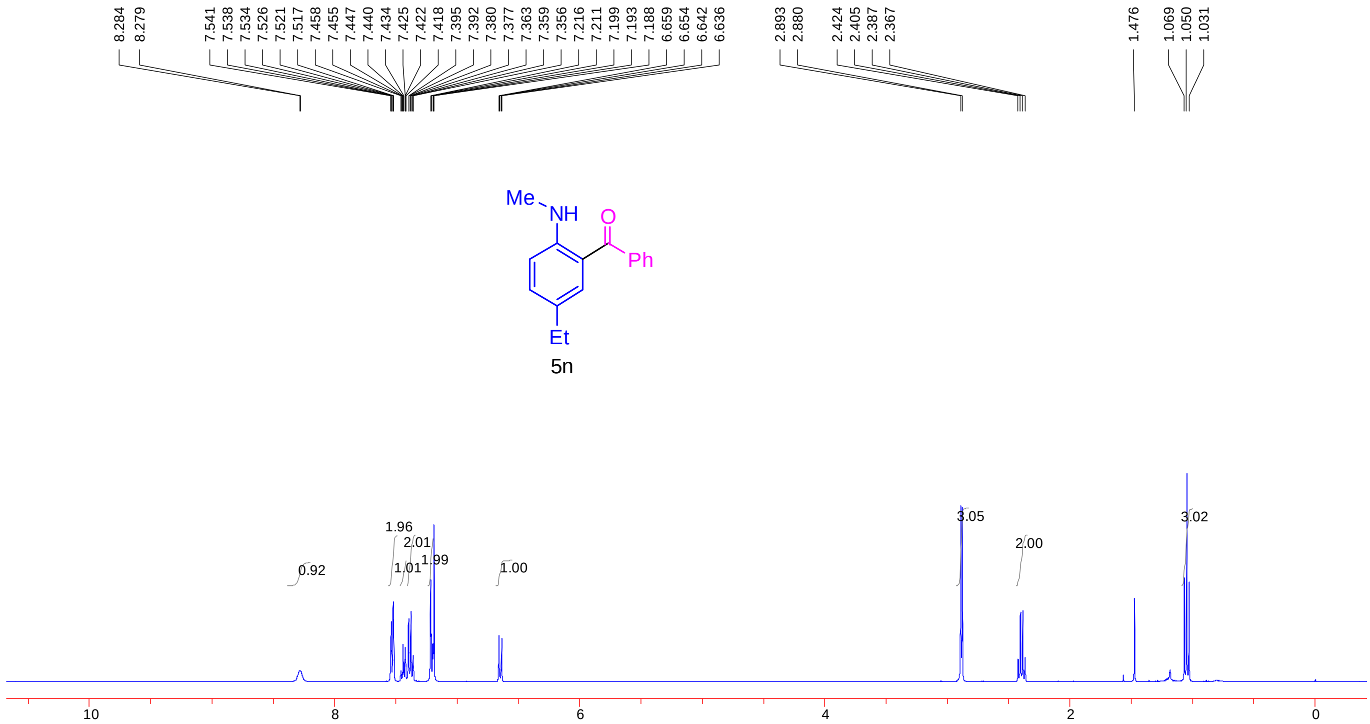

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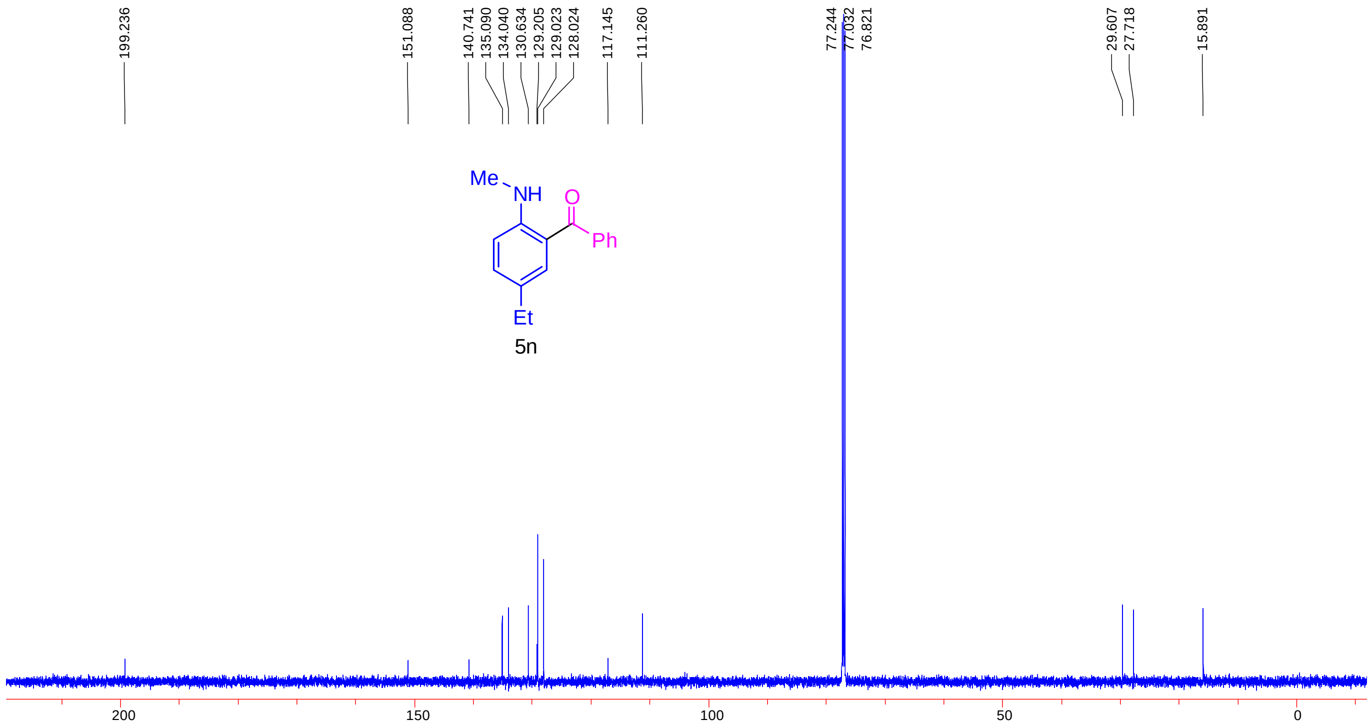

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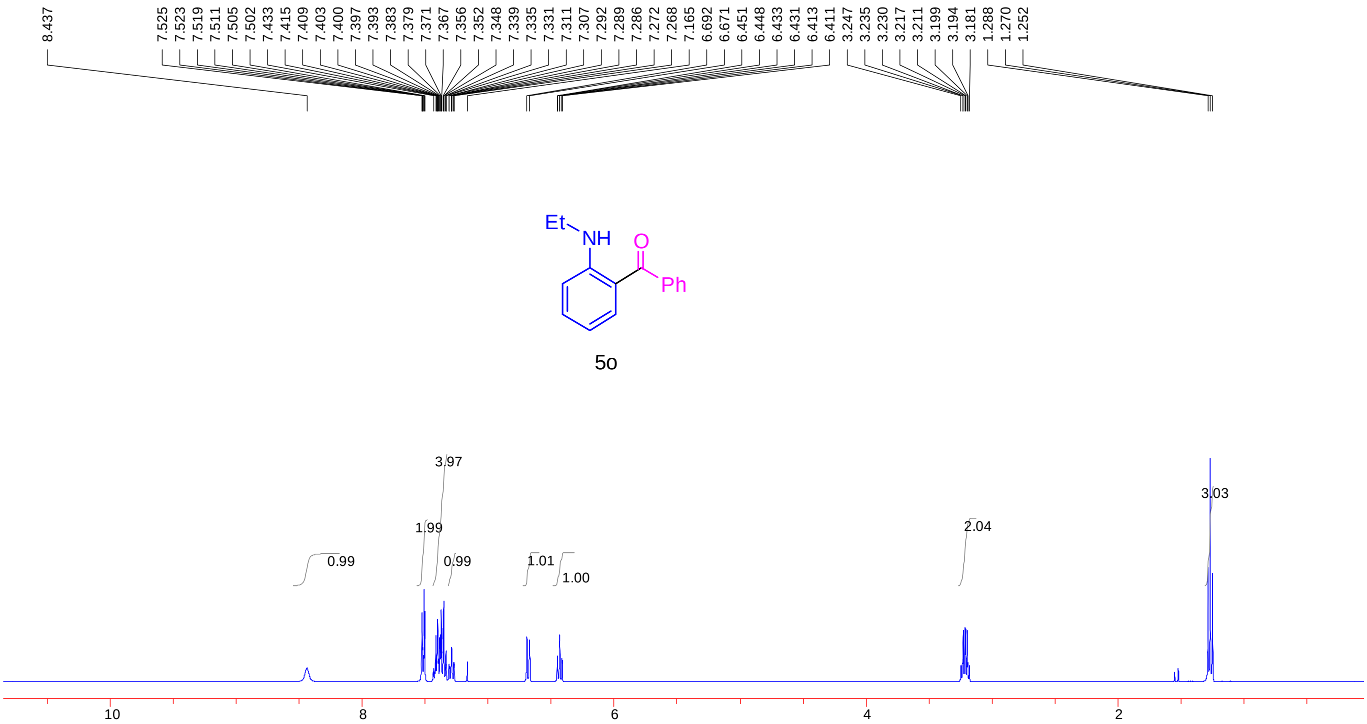
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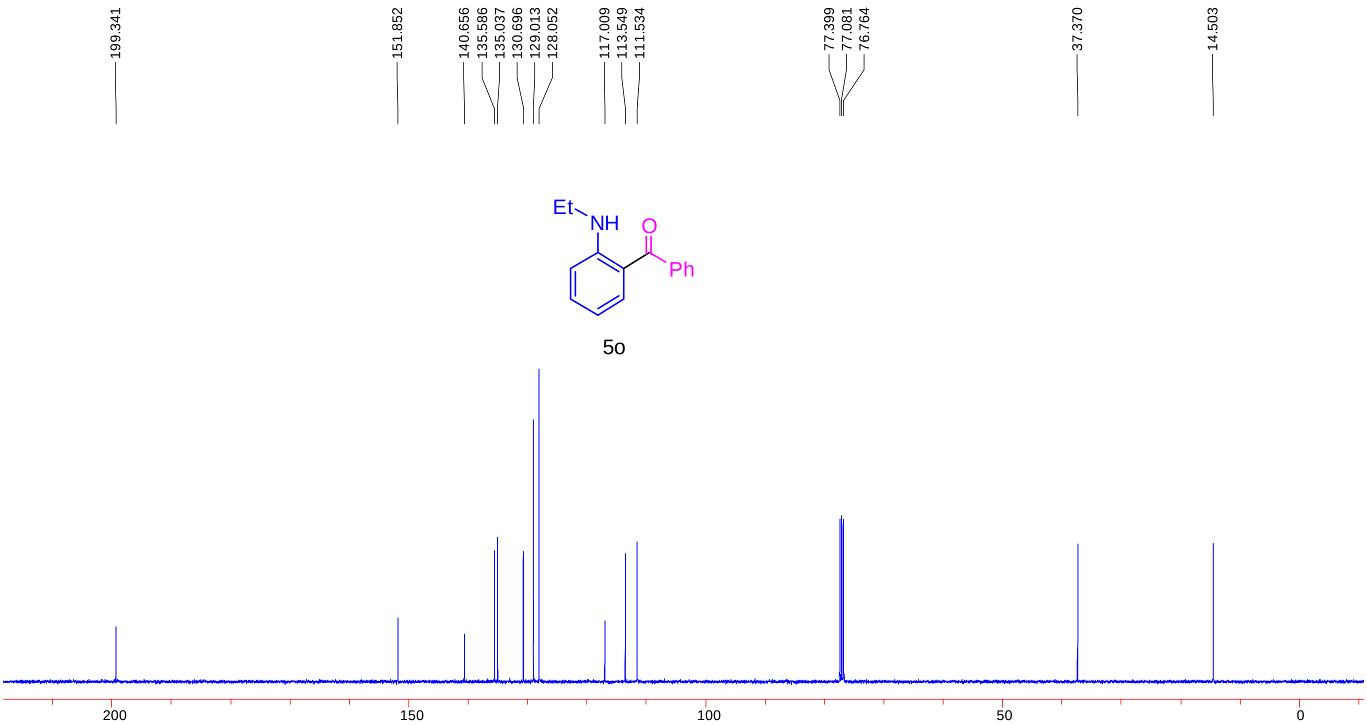
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Ph
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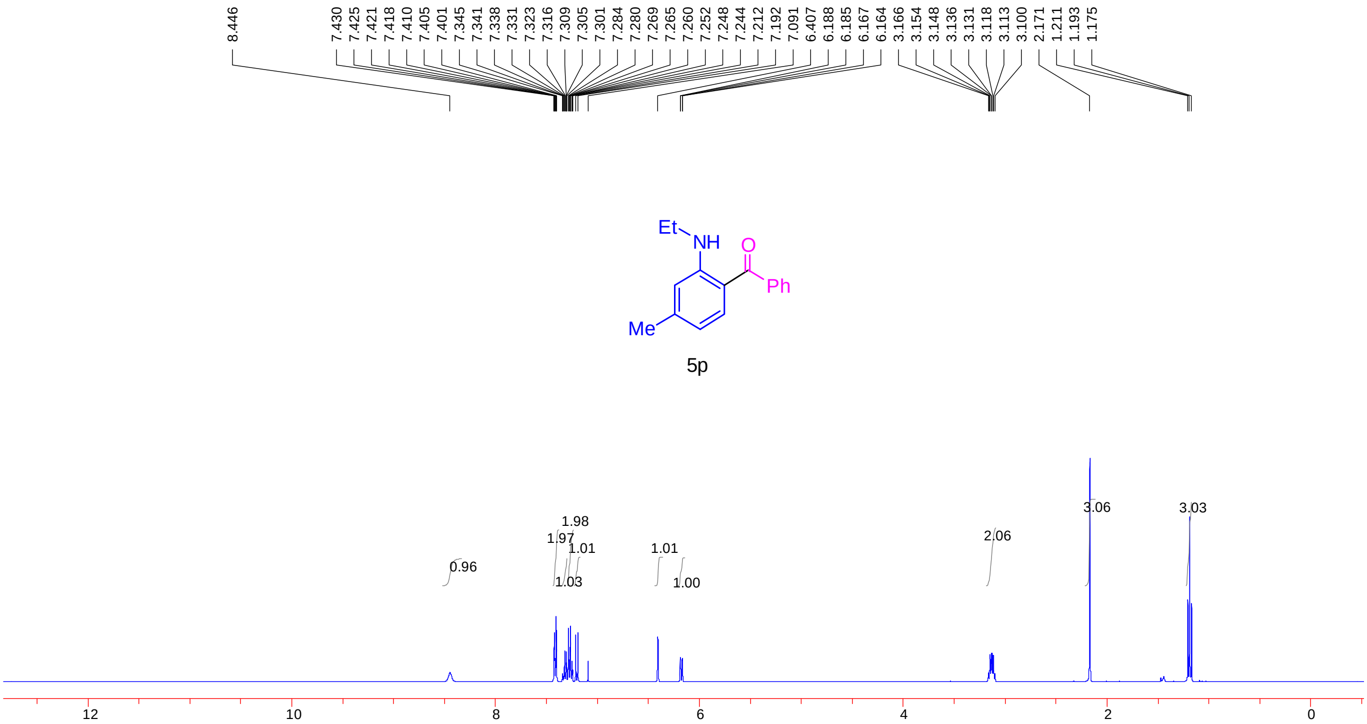
5o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6.407 6.188 6.185 6.167 6.164
3.166 3.154 3.148 3.136 3.131 3.118 3.113 3.100
2.171
1.211 1.193 1.175
Et
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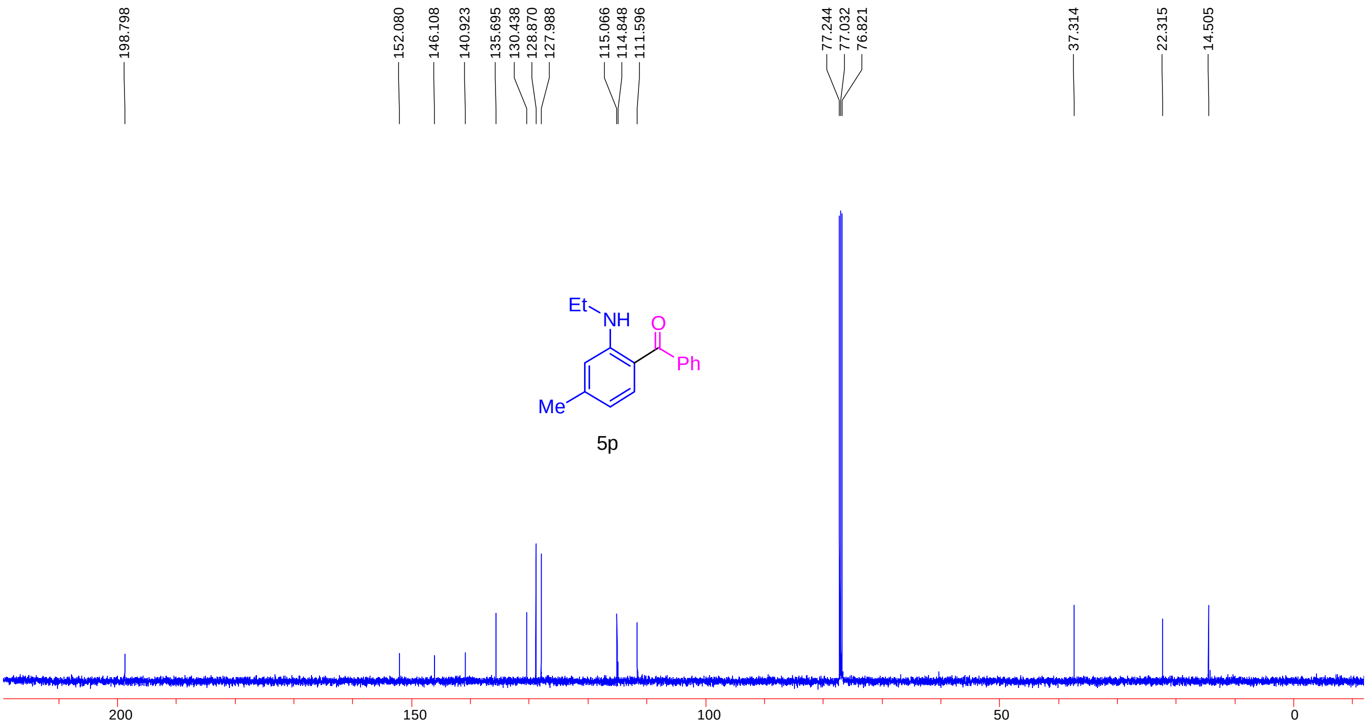
0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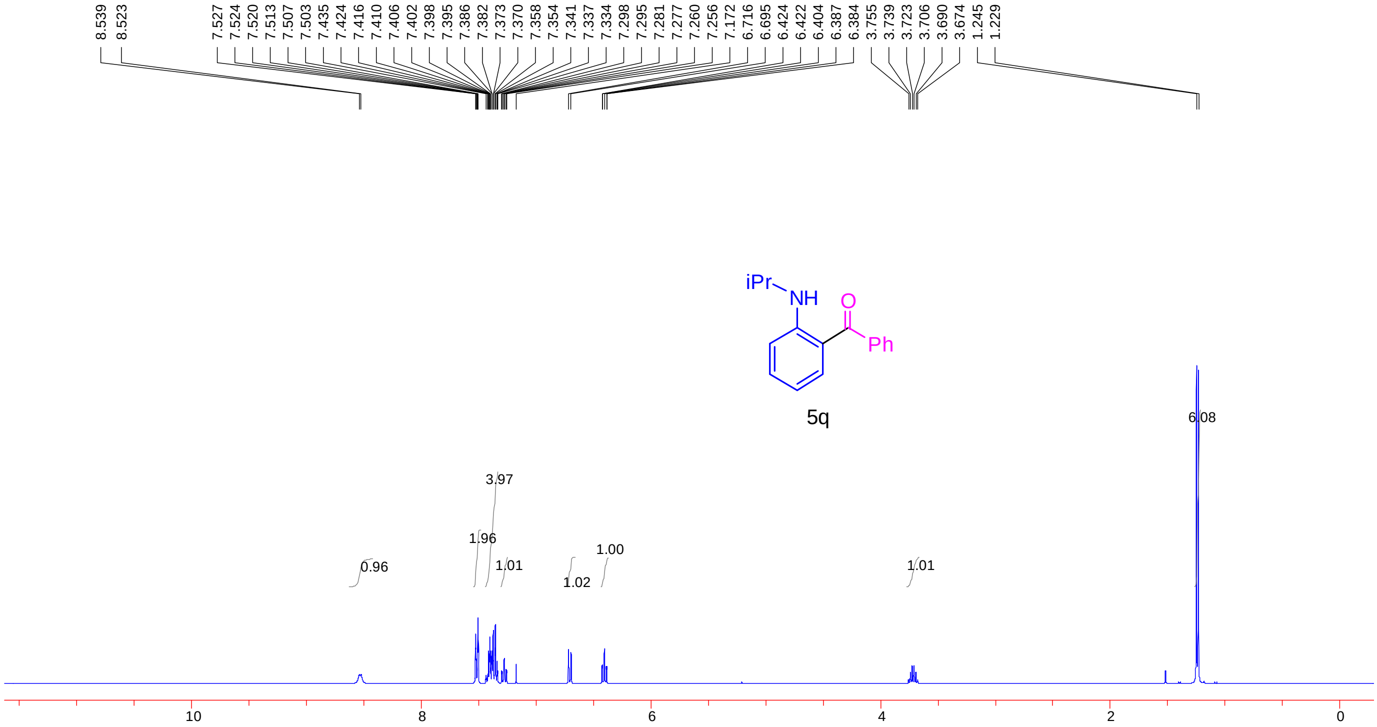
115.066 114.848 111.596
77.244 77.032 76.821
37.314
22.315
14.505
Et
NH
O
Ph
Me
5p
200
150
100
50
0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iPr
NH
O
Ph
5q
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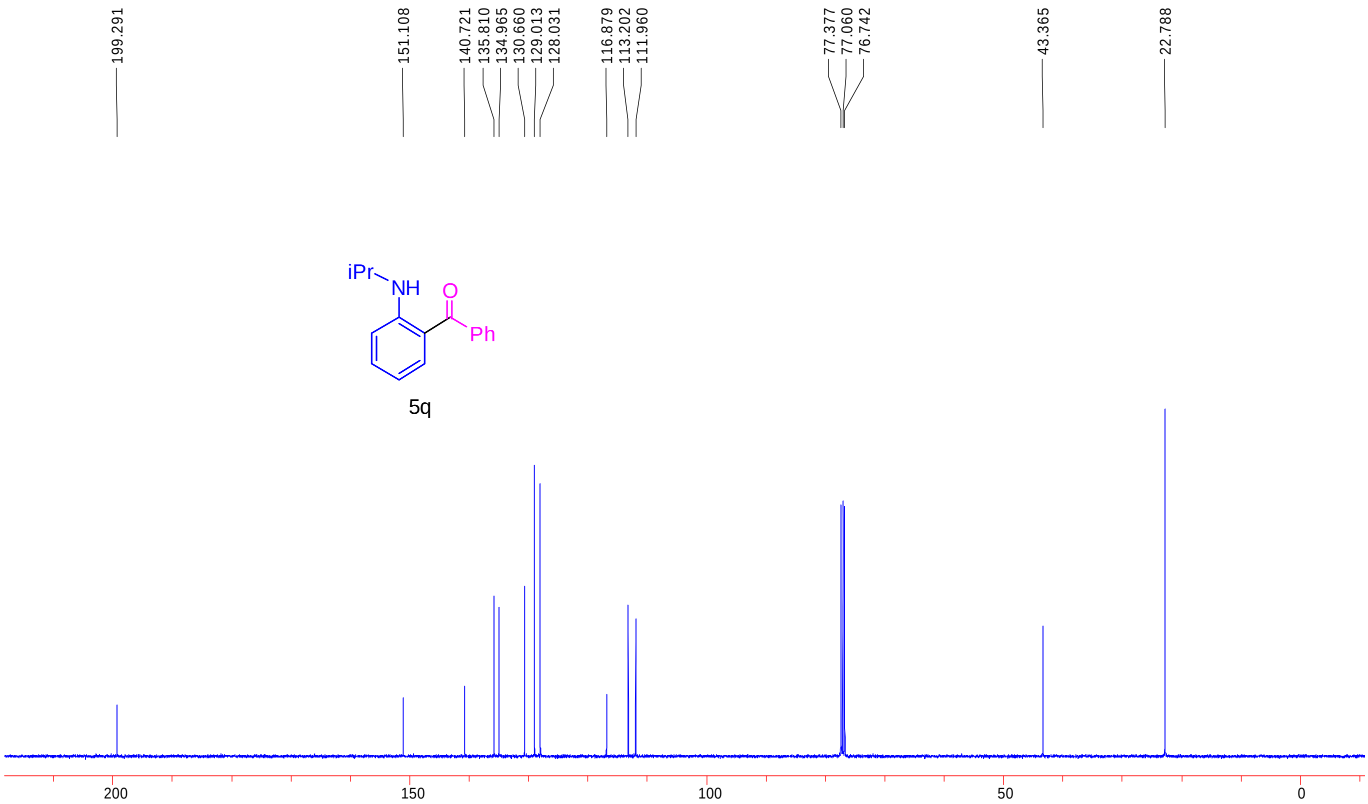
3.97
1.96
1.01
1.00
0.96
1.02
1.01
10
8
6
4
2
0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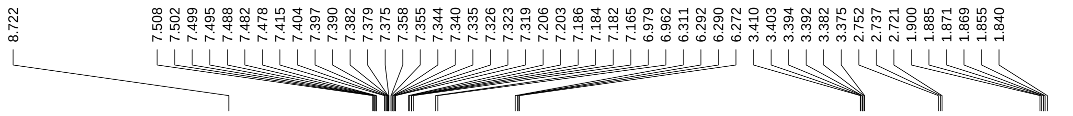
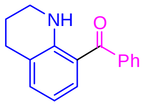
151.108
140.721 135.810 134.965 130.660 129.013 128.031
116.879 113.202 111.960
77.377 77.060 76.742
43.365
22.788
iPr
NH
O
Ph
5q
200
150
100
50
0


8.722
7.508 7.502 7.499 7.495 7.488 7.482 7.478 7.415 7.404 7.397 7.390 7.382 7.379 7.375 7.358 7.355 7.344 7.340 7.335 7.326 7.323 7.319 7.206 7.203 7.186 7.184 7.182 7.165 6.979 6.962 6.311 6.292 6.290 6.272 3.410 3.403 3.394 3.392 3.382 3.375 2.752 2.737 2.721 1.900 1.885 1.871 1.869 1.855 1.840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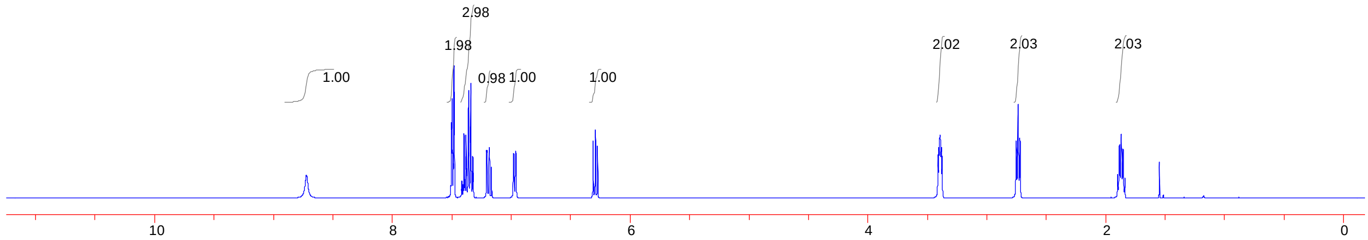
O
Ph

5r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0.98
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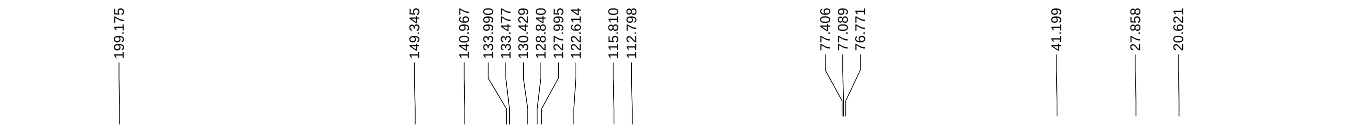
1.00
2.02
2.03
2.03
10
8
6
4
2
0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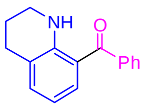
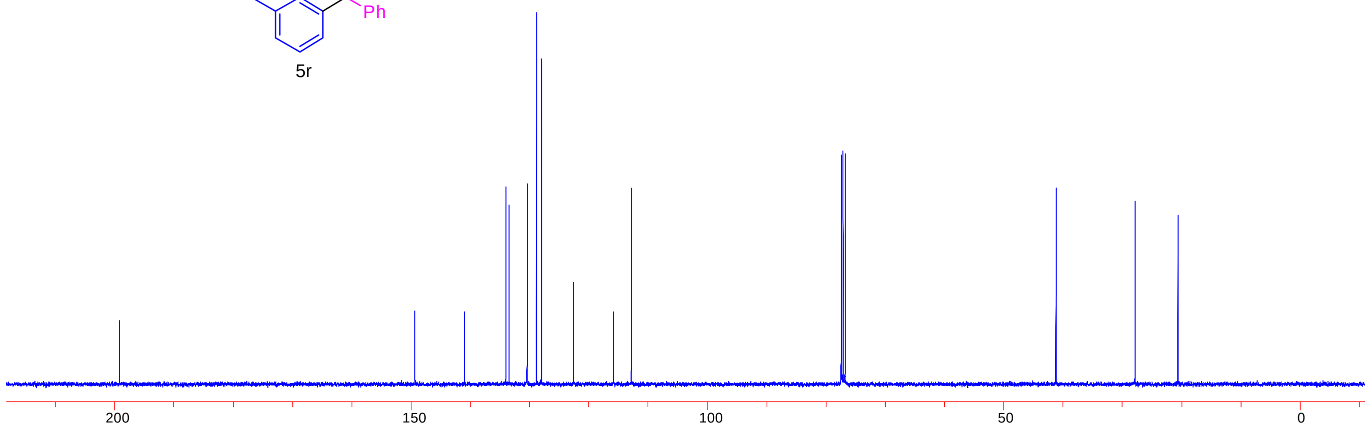
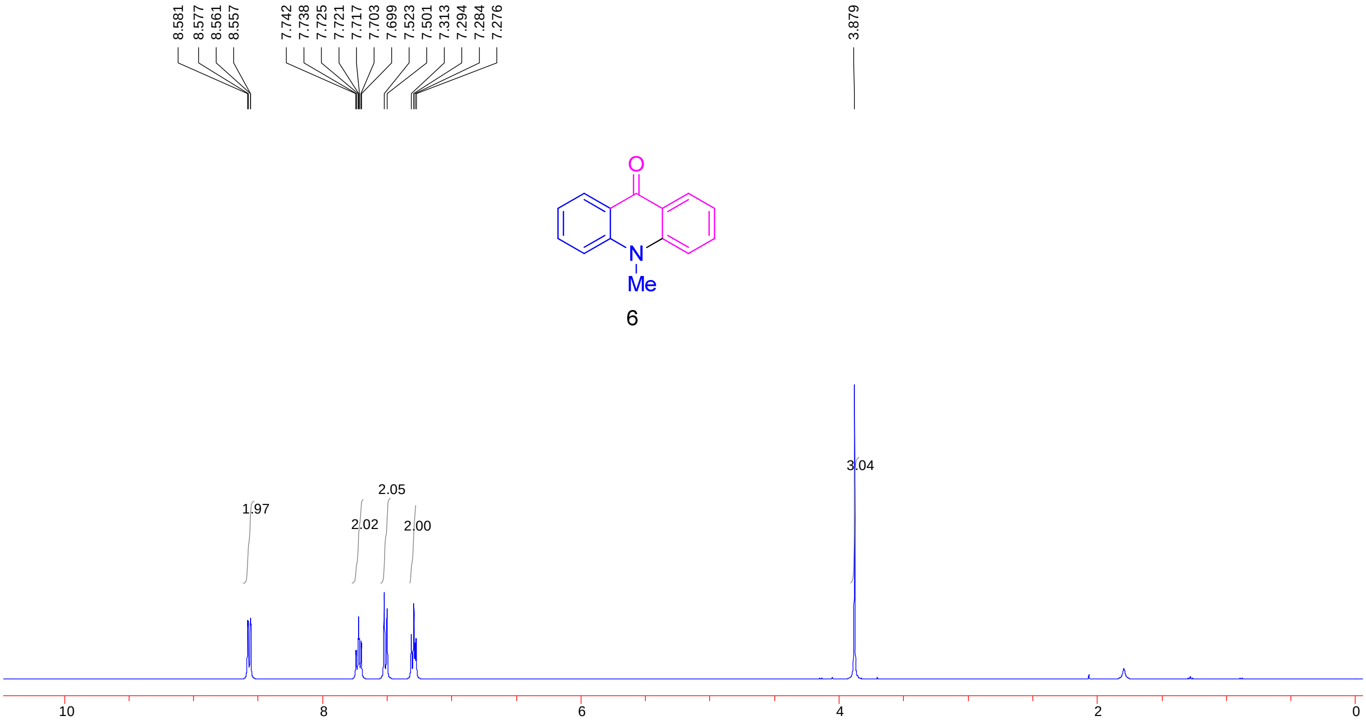
149.345
140.967 133.990 133.477 130.429 128.840 127.995 122.614
115.810 112.798
77.406 77.089 76.771
41.199
27.858
20.621

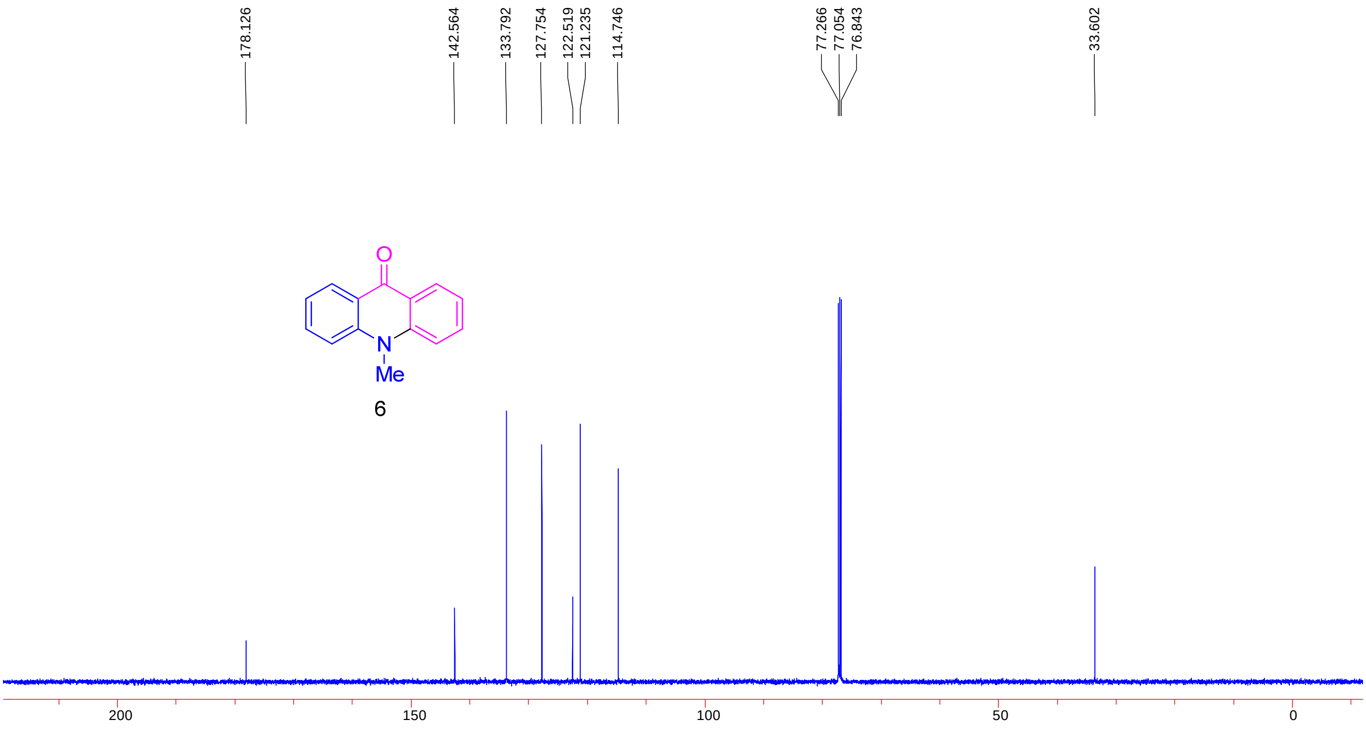

NH
O
Ph

5r


200
150
100
50
0

III. Copies of ^{1}H and ^{13}C NMR spectra of **6**





IV. Copies of ^{1}H and ^{13}C NMR spectra of intermediate **A**