

## A One-Pot Successive Cyclization-Alkylation Strategy for the Synthesis of 2,3-Disubstituted Benzo[*b*]thiophenes

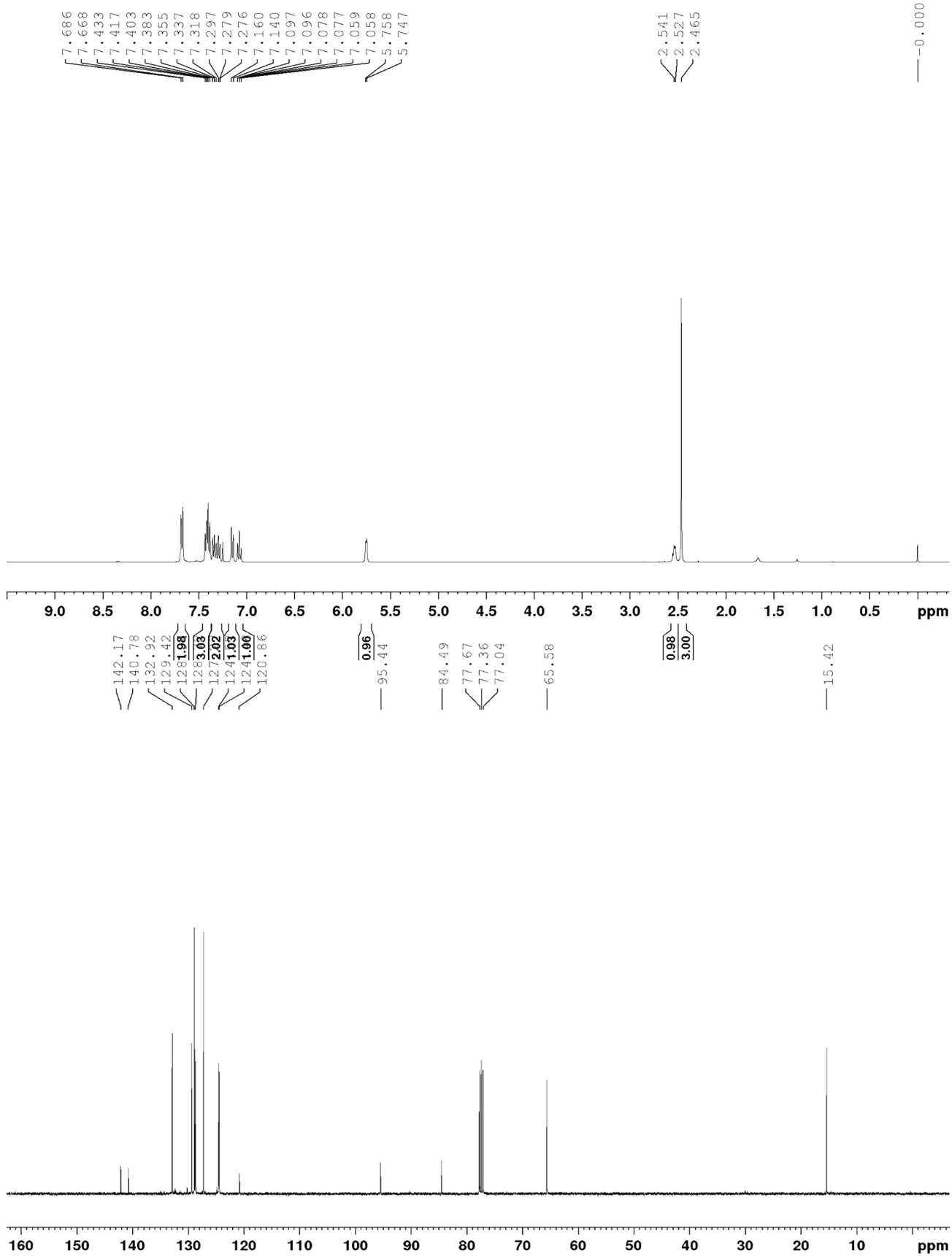
Christopher Cunningham, Matthew Cloyd, Aimee Phillips, Soha Khan, Katherine Whalen, Tanay Kesharwani\*

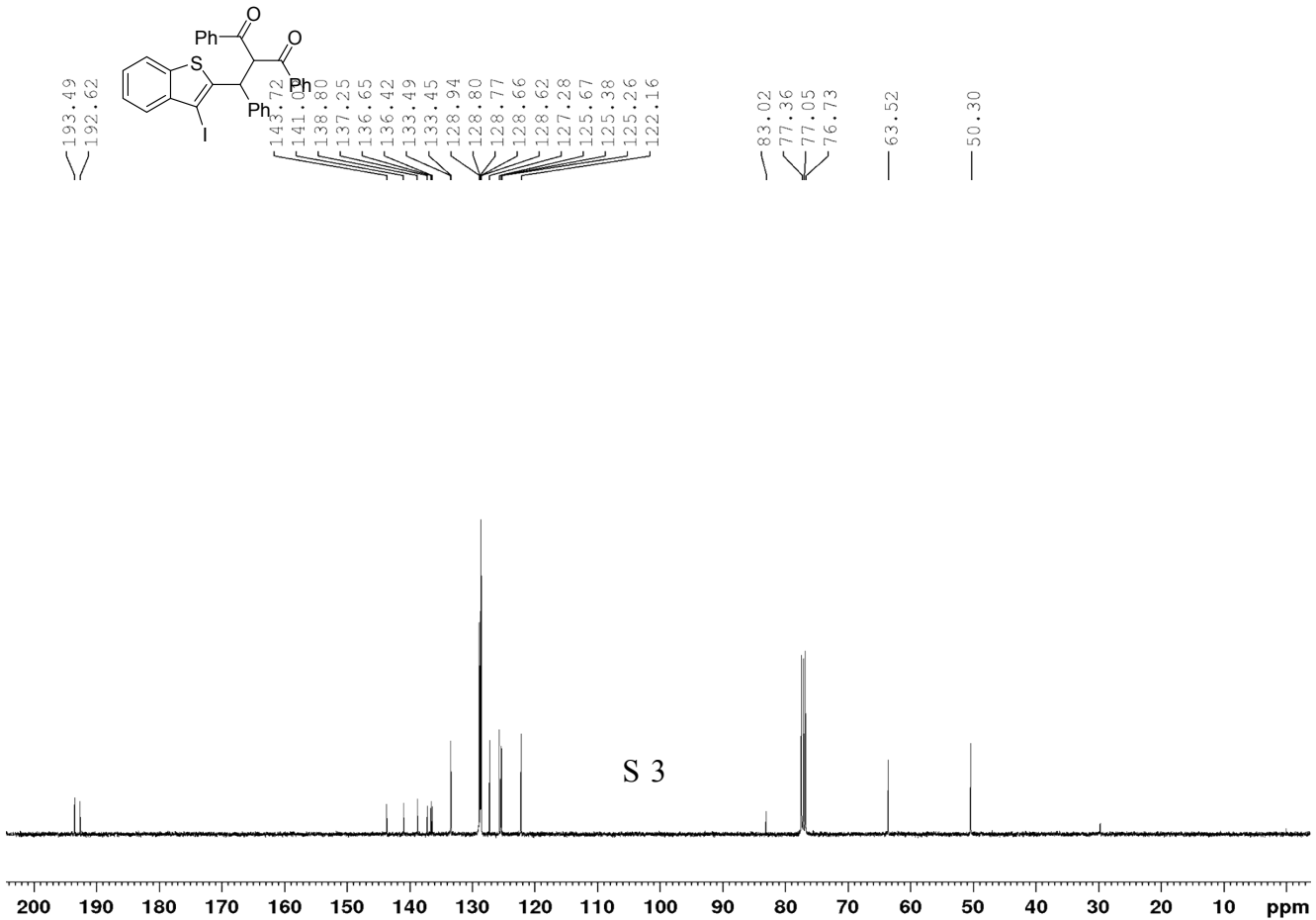
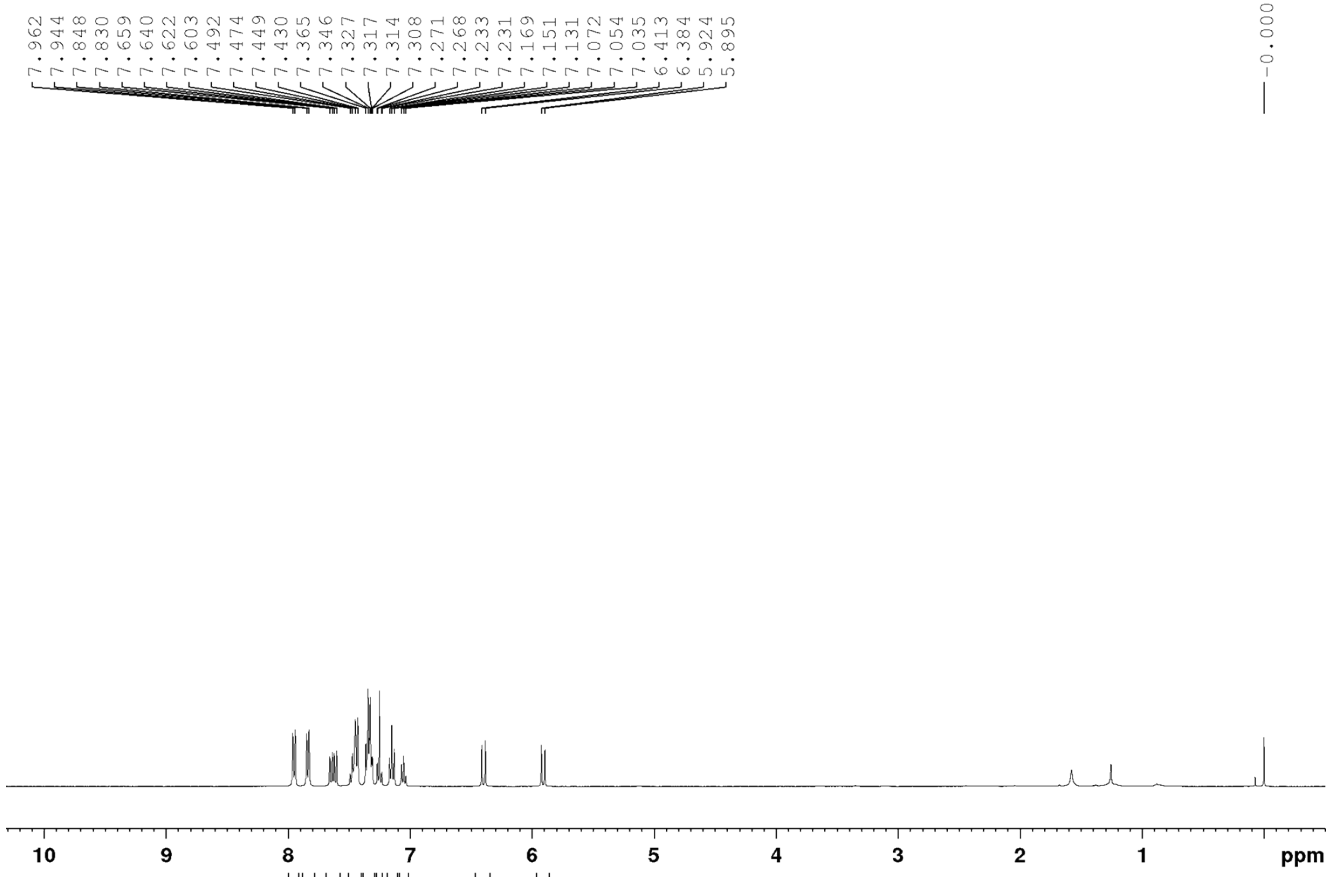
*Department of Chemistry, University of West Florida, 11000 University Parkway, Pensacola FL, 32514*

[tkesharwani@uwf.edu](mailto:tkesharwani@uwf.edu)

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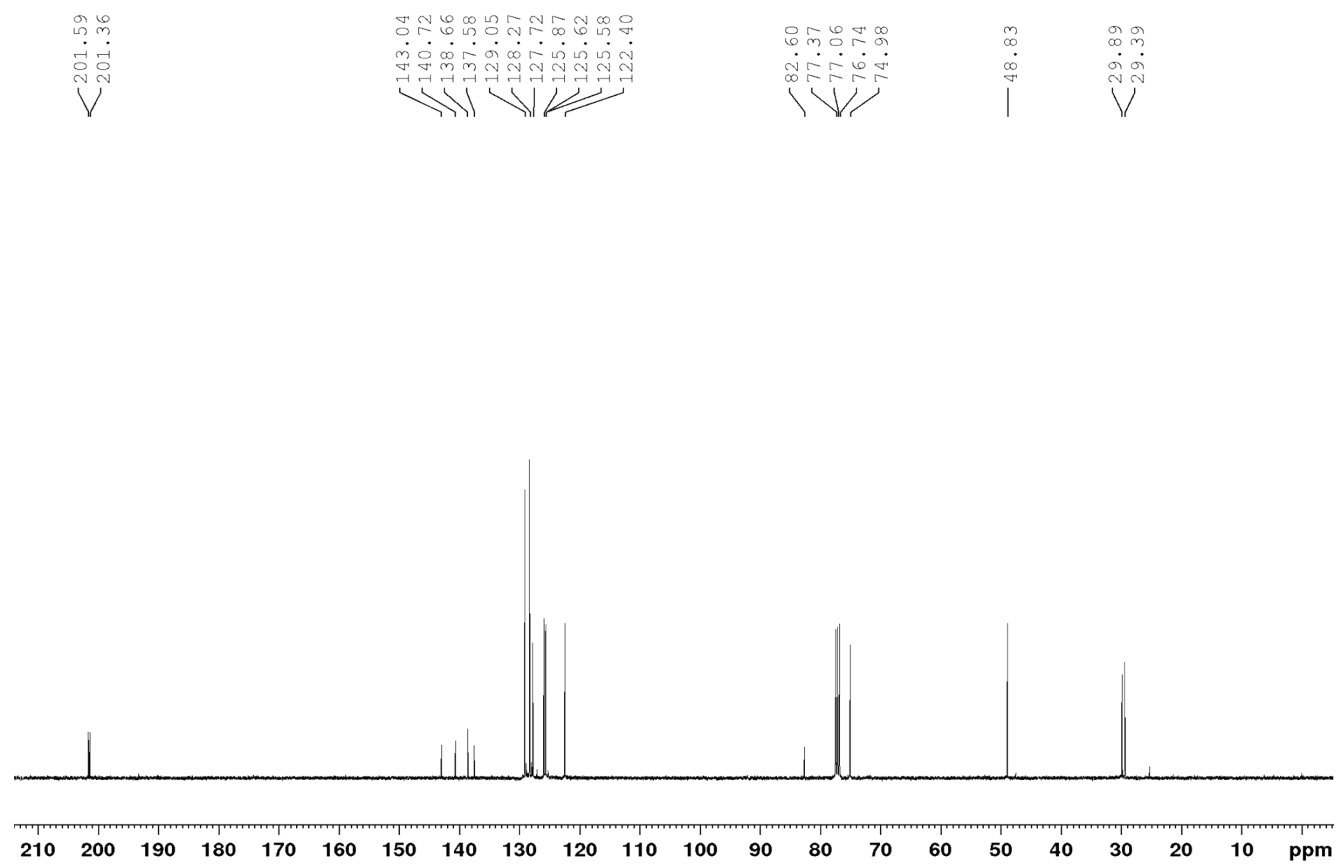
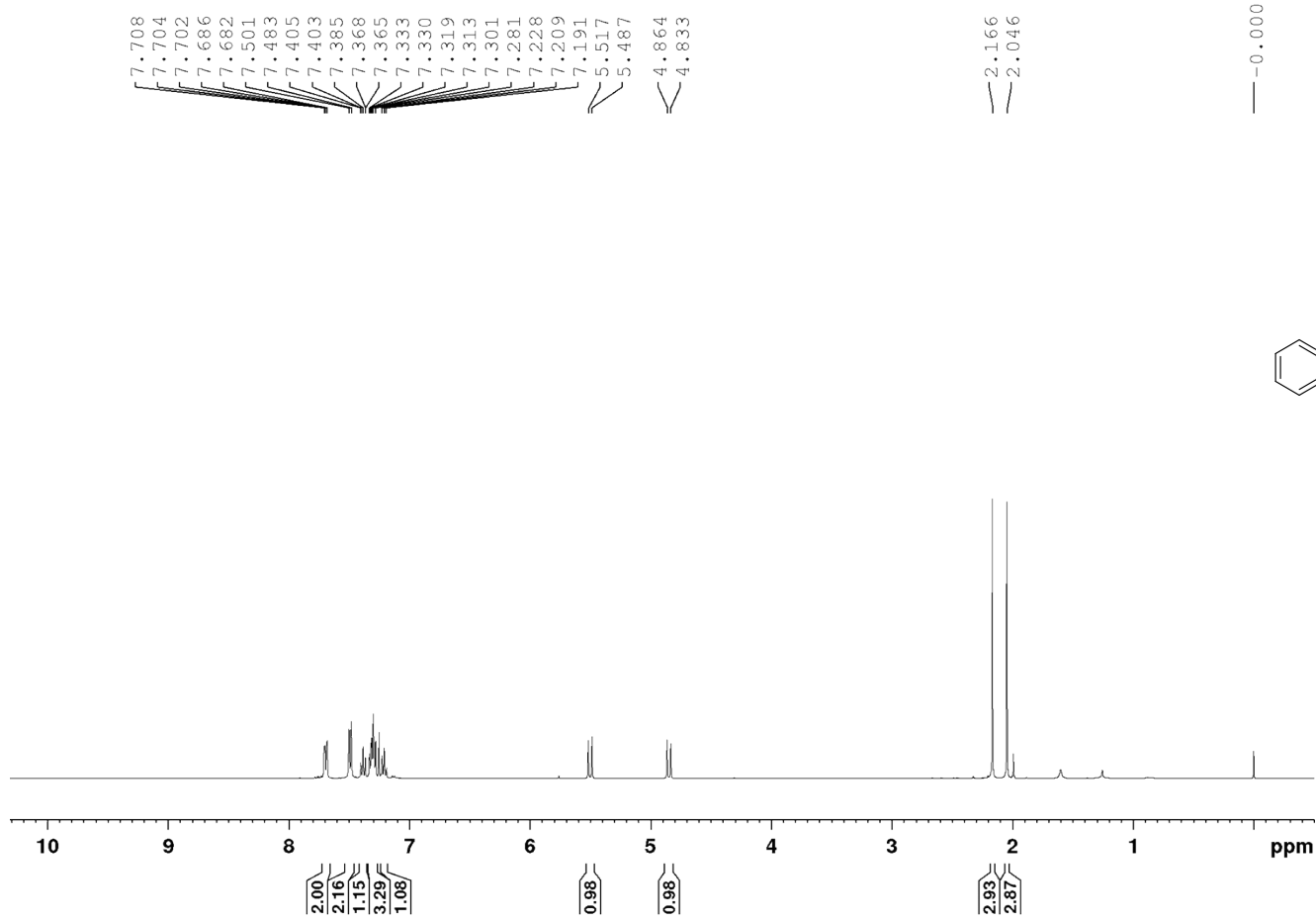
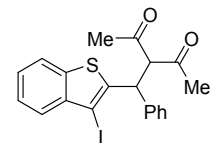
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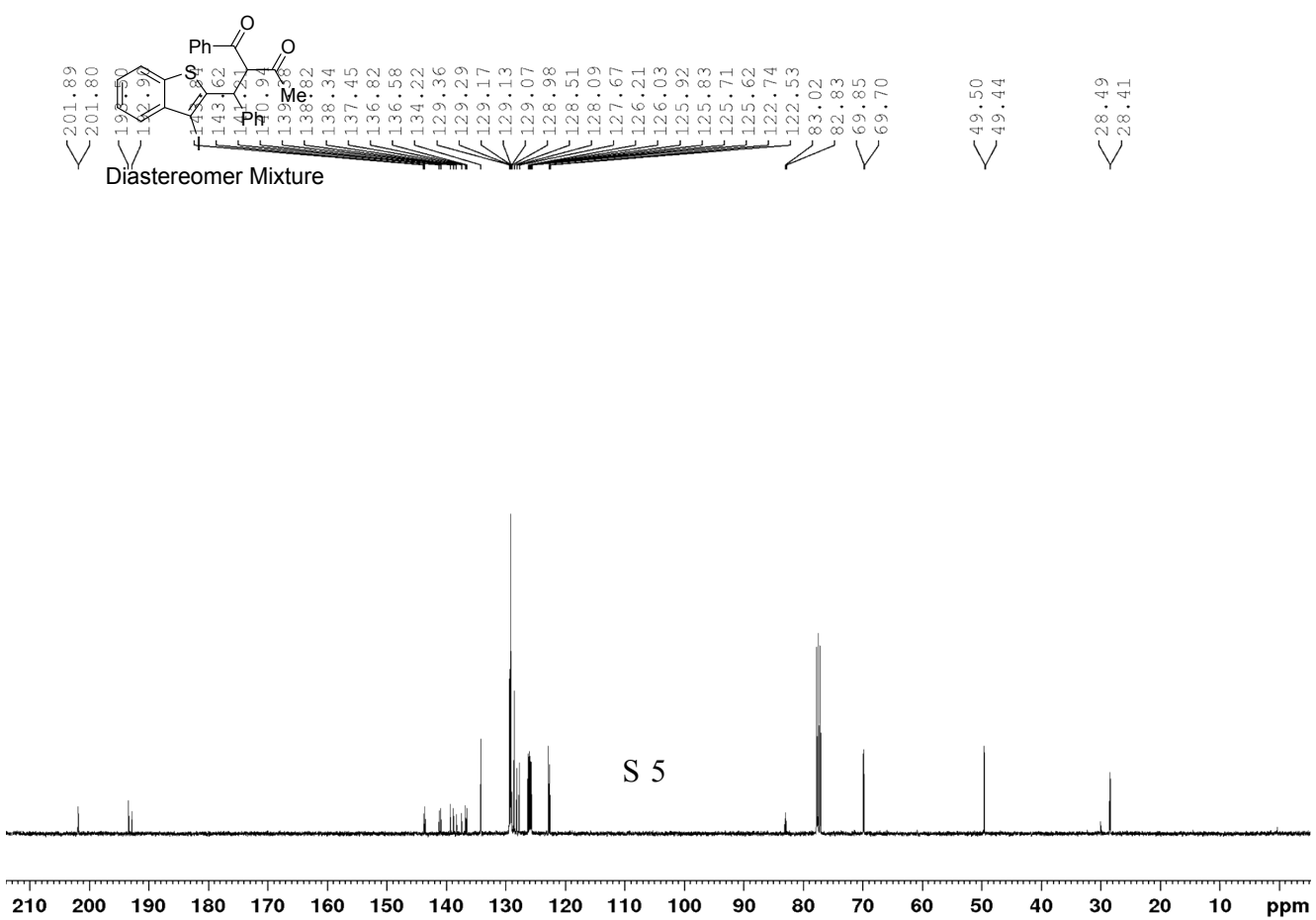
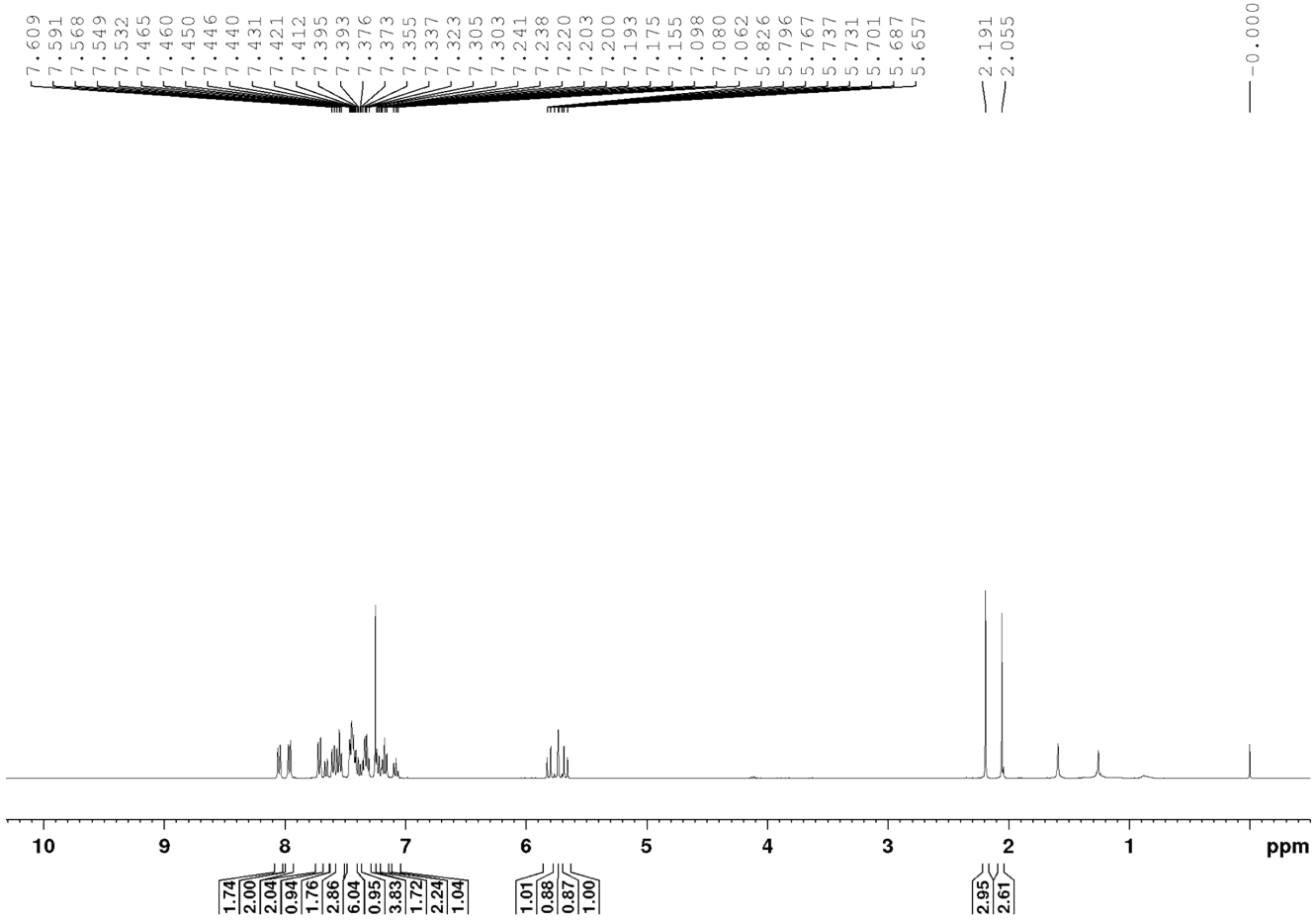


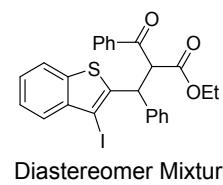
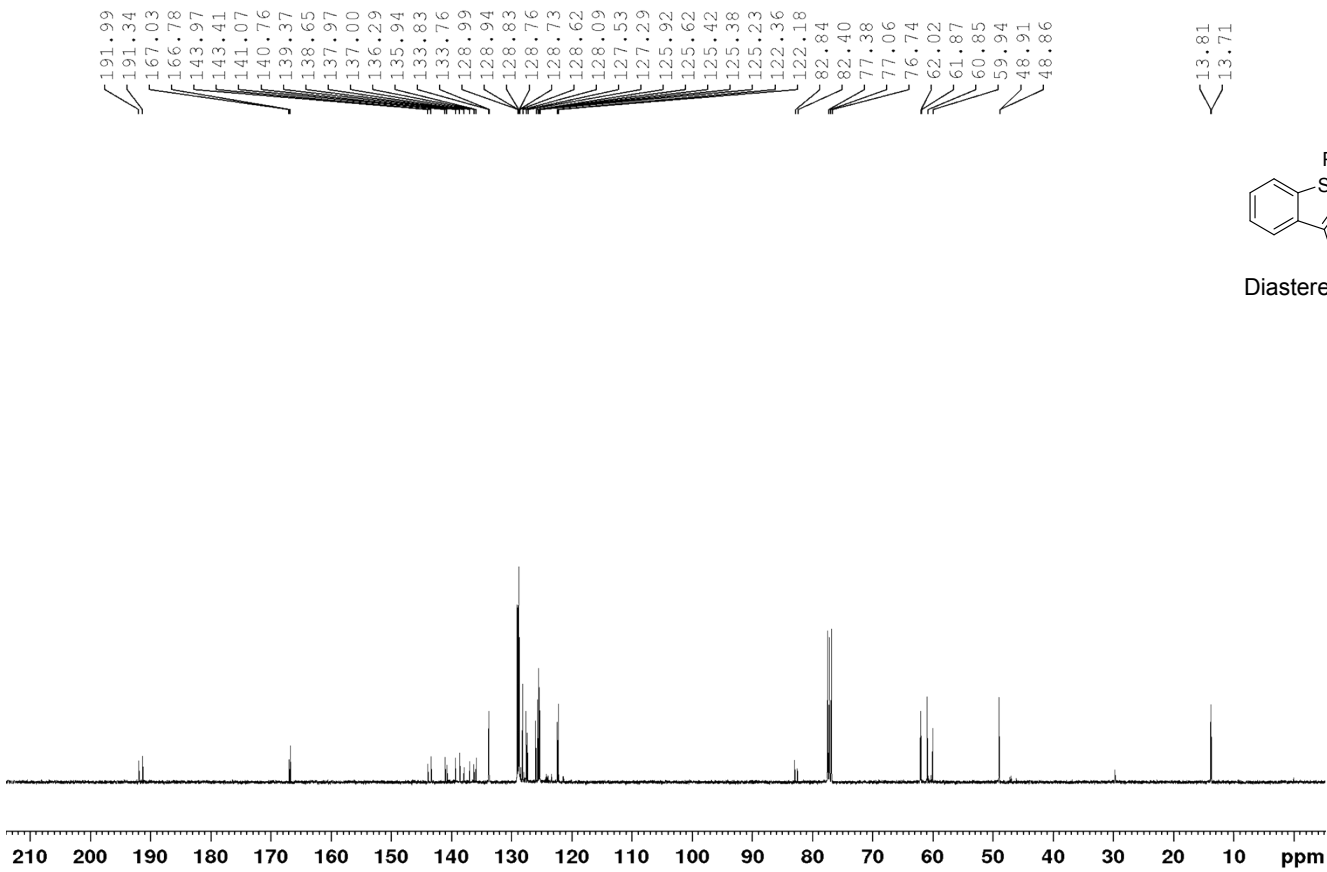
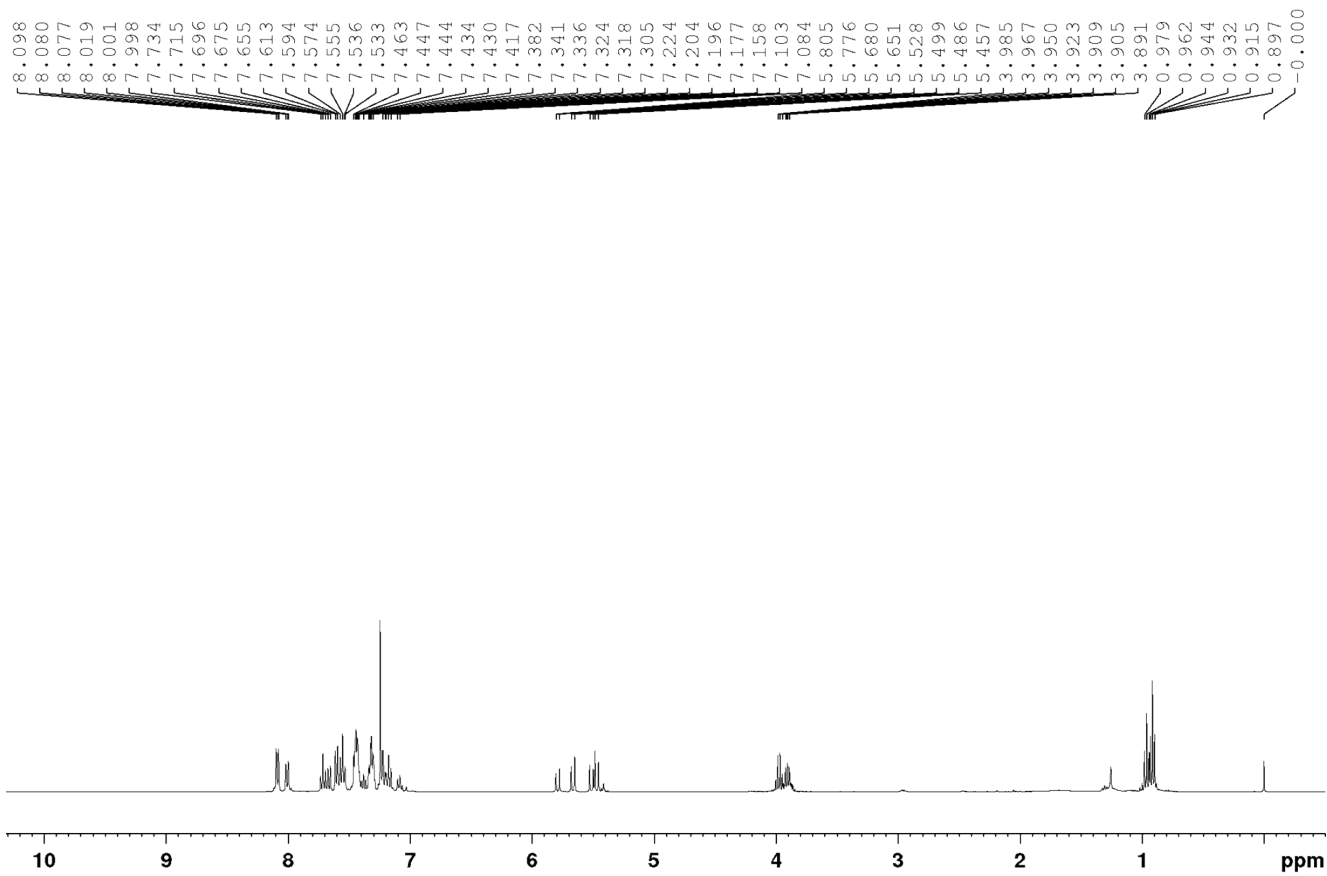


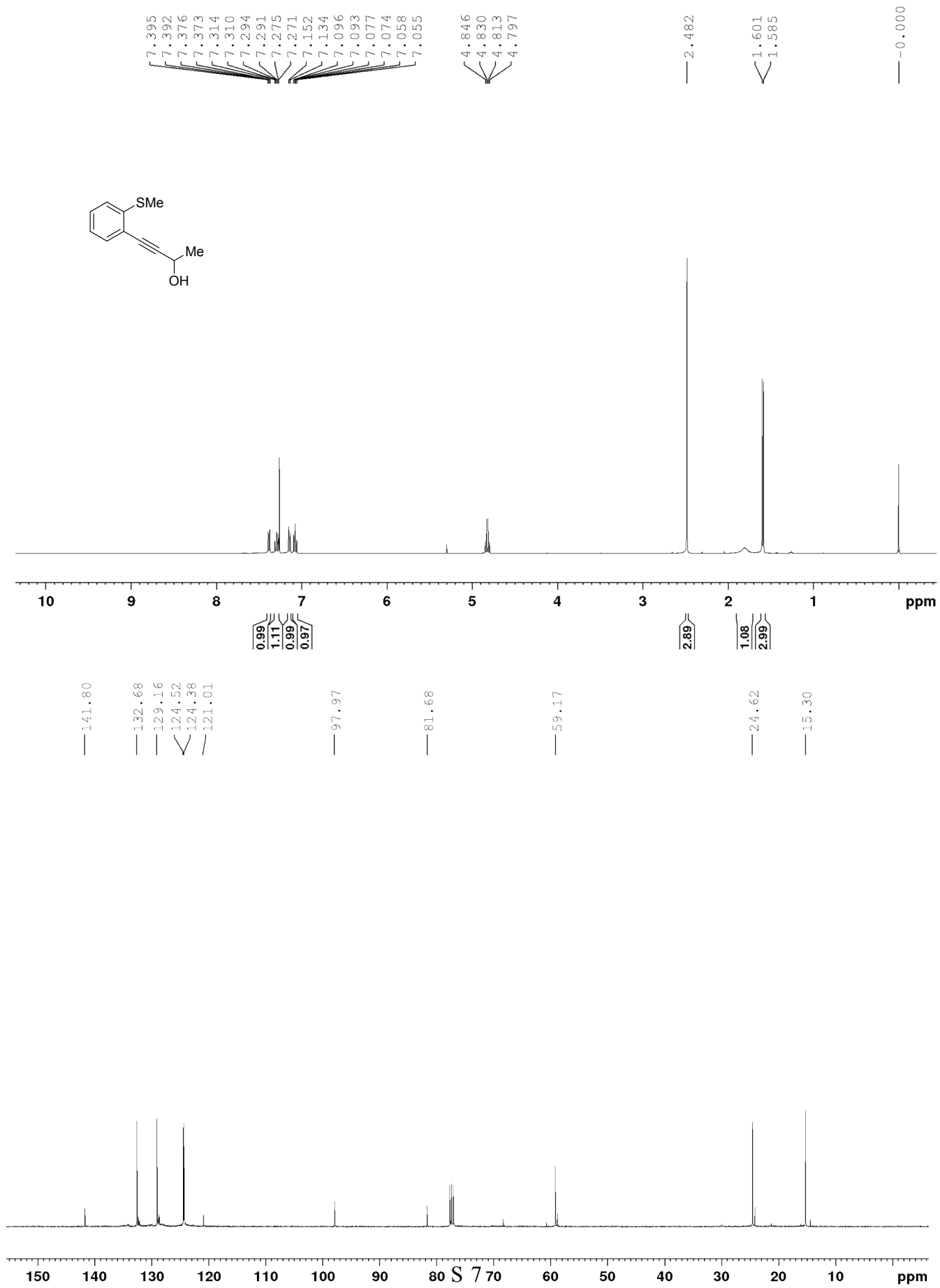
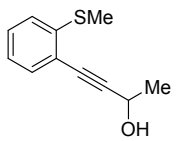
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S 3





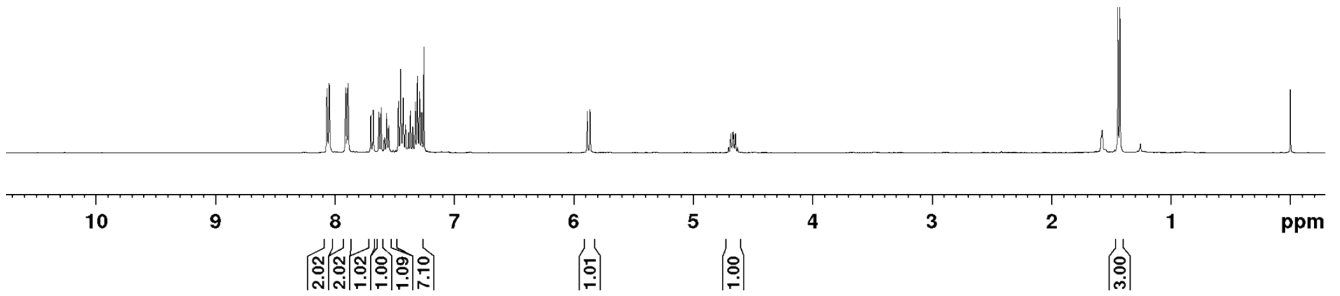
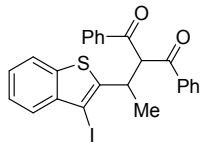




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7.550  
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193.84

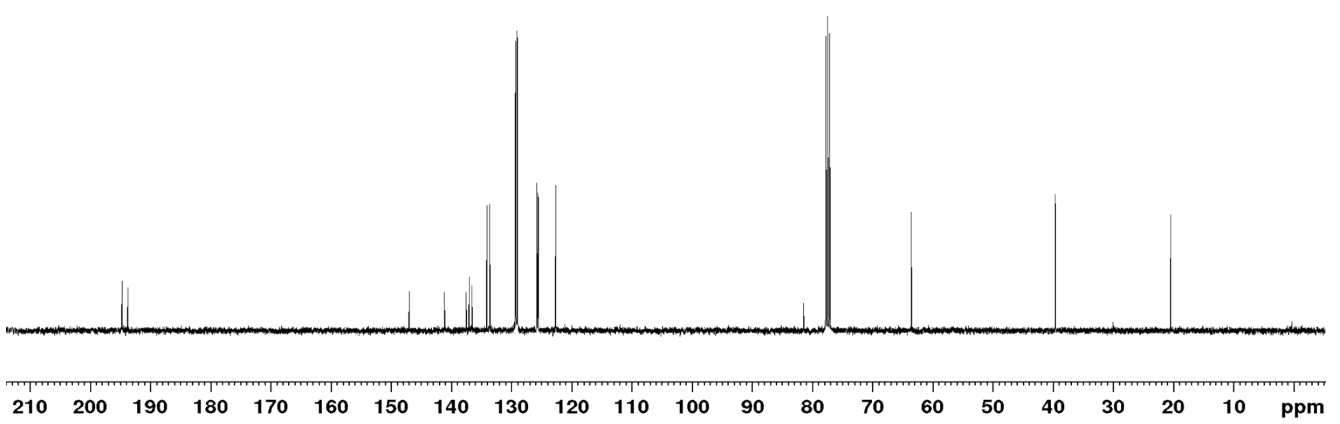
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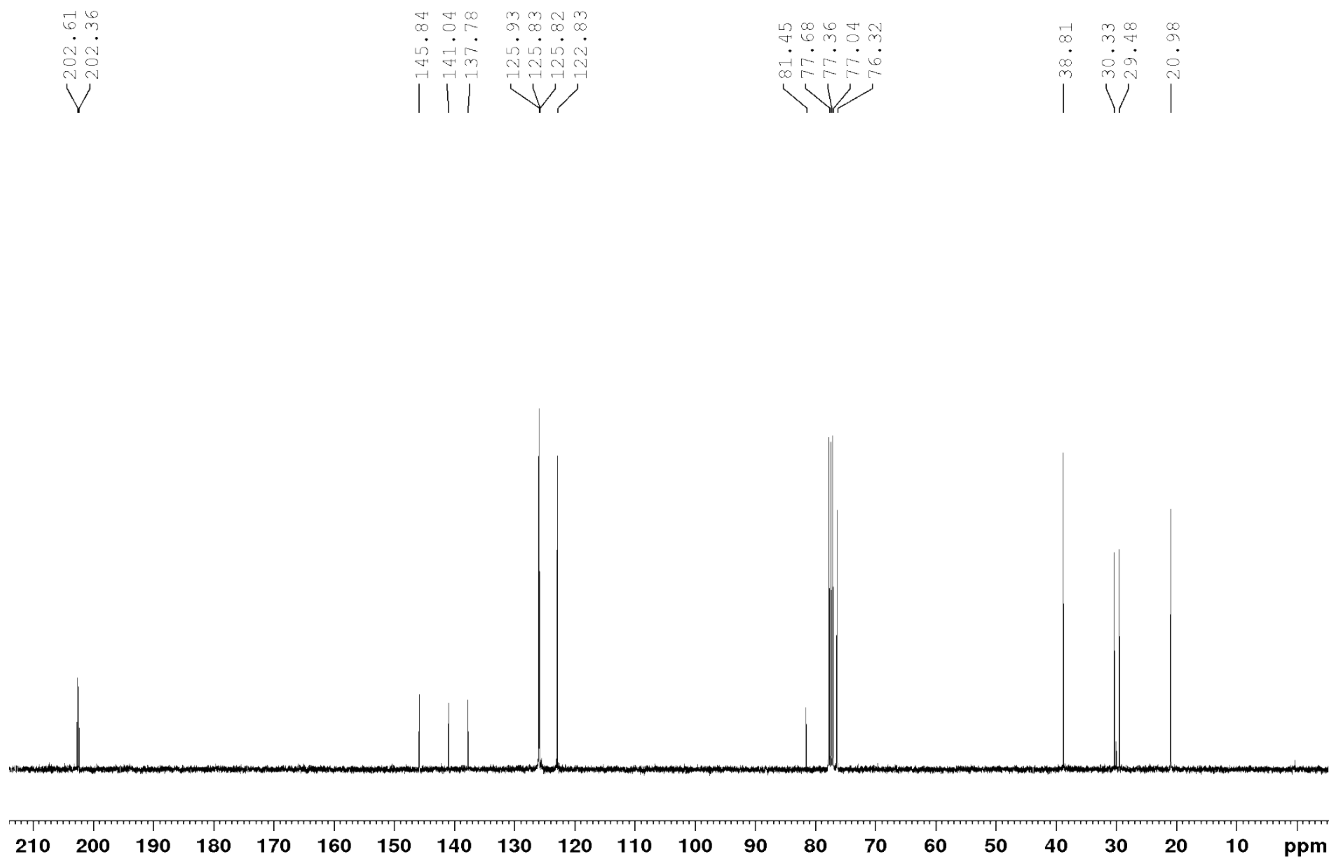
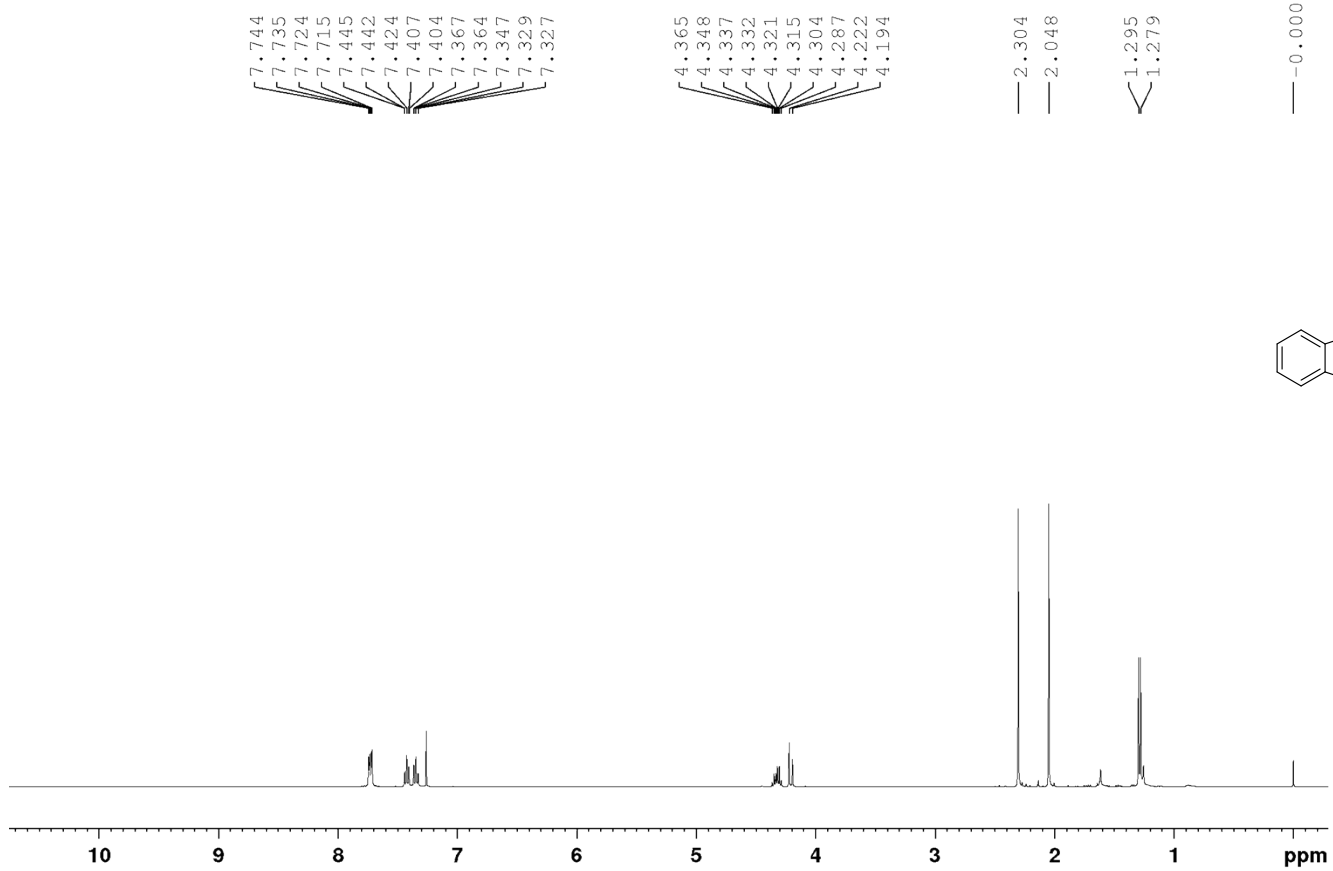
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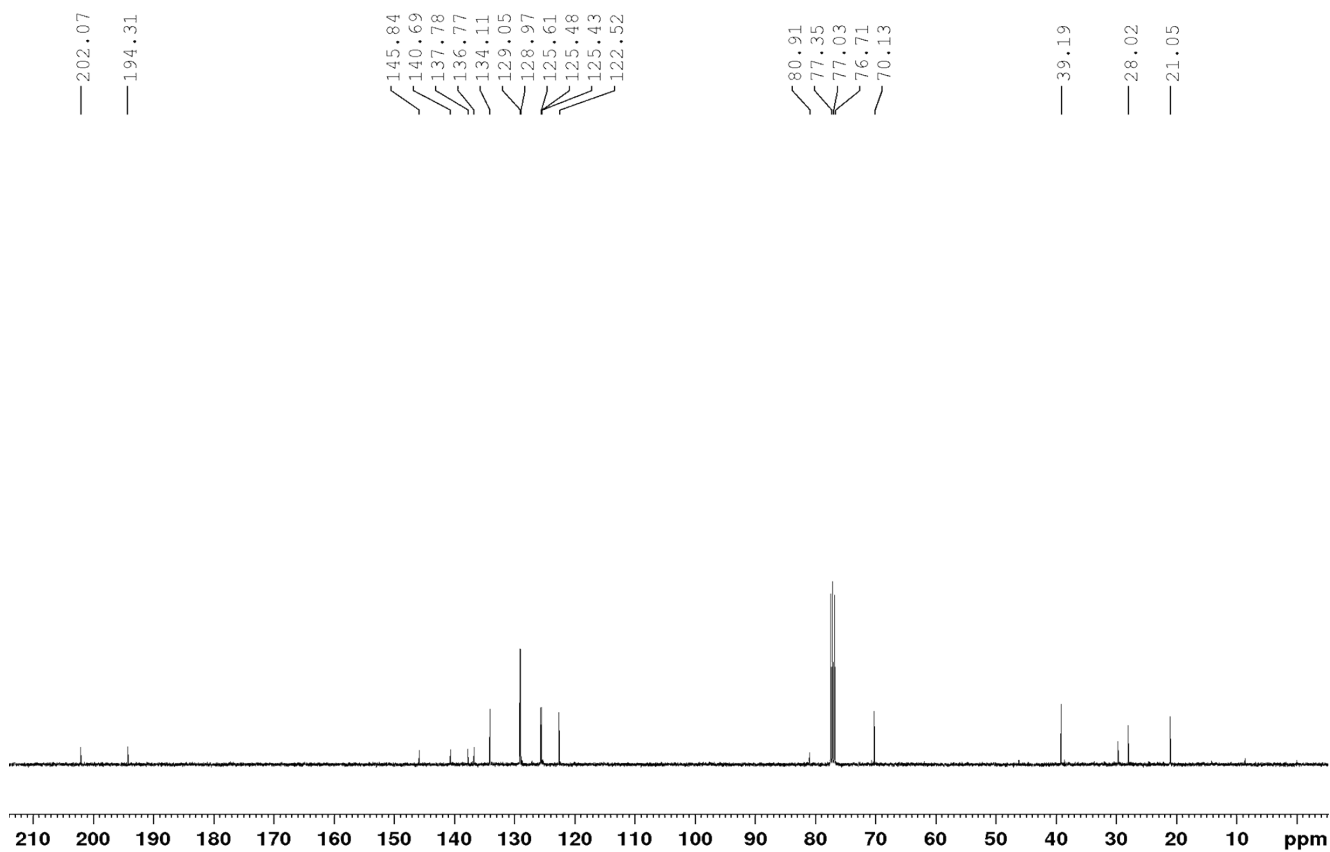
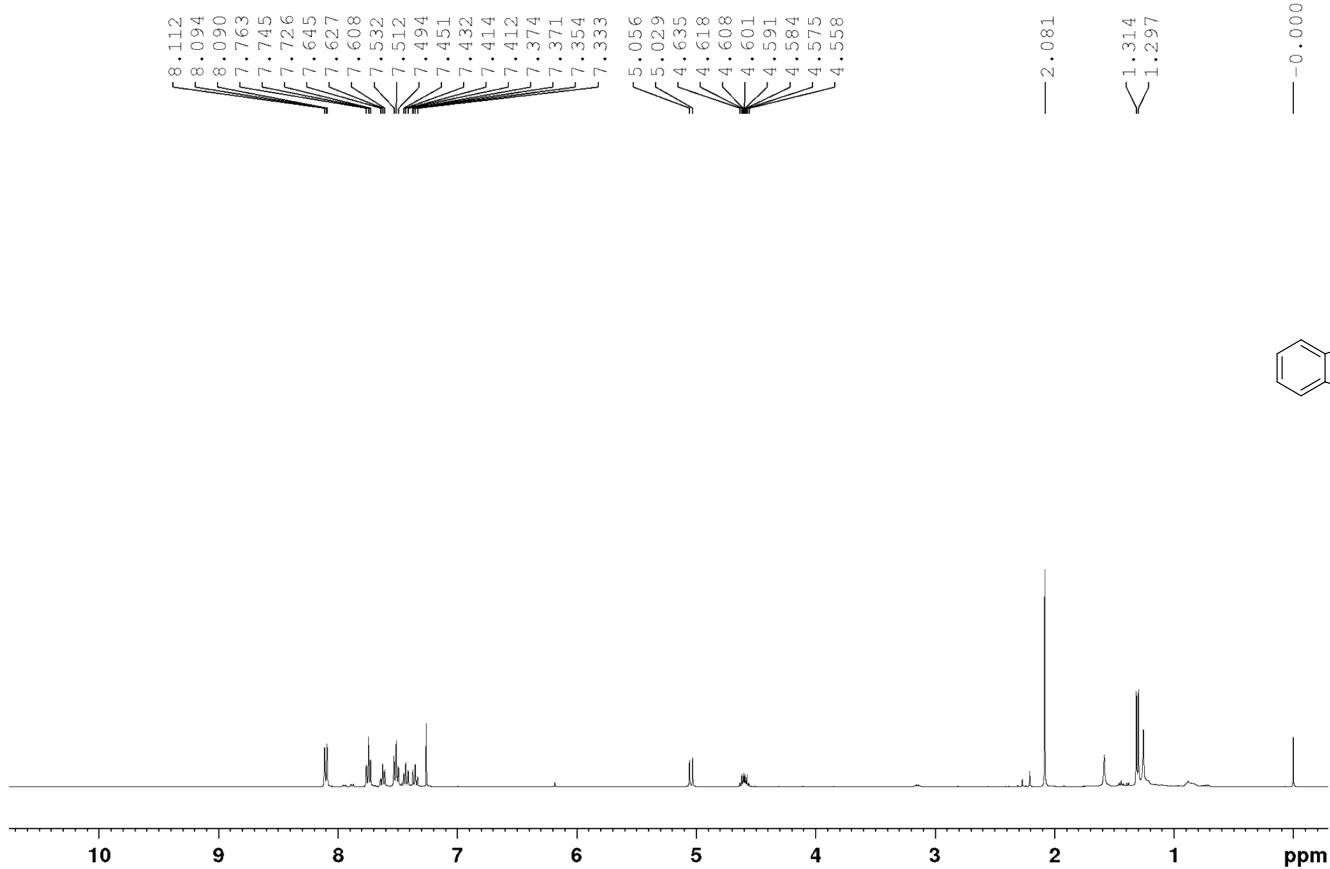
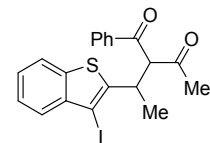
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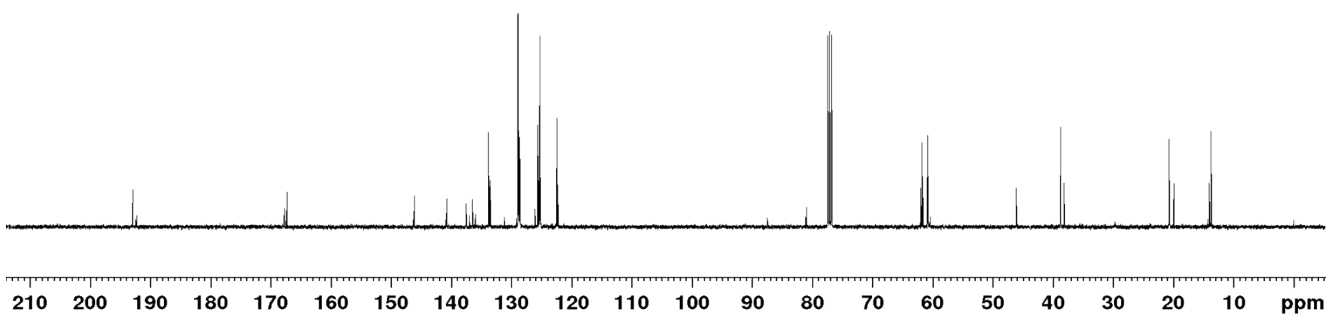
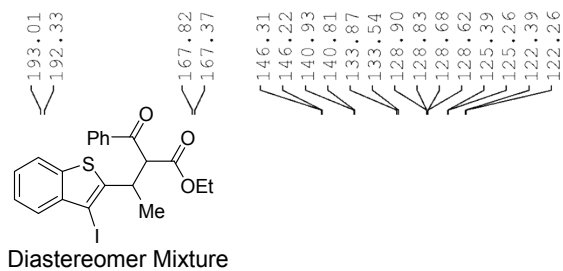
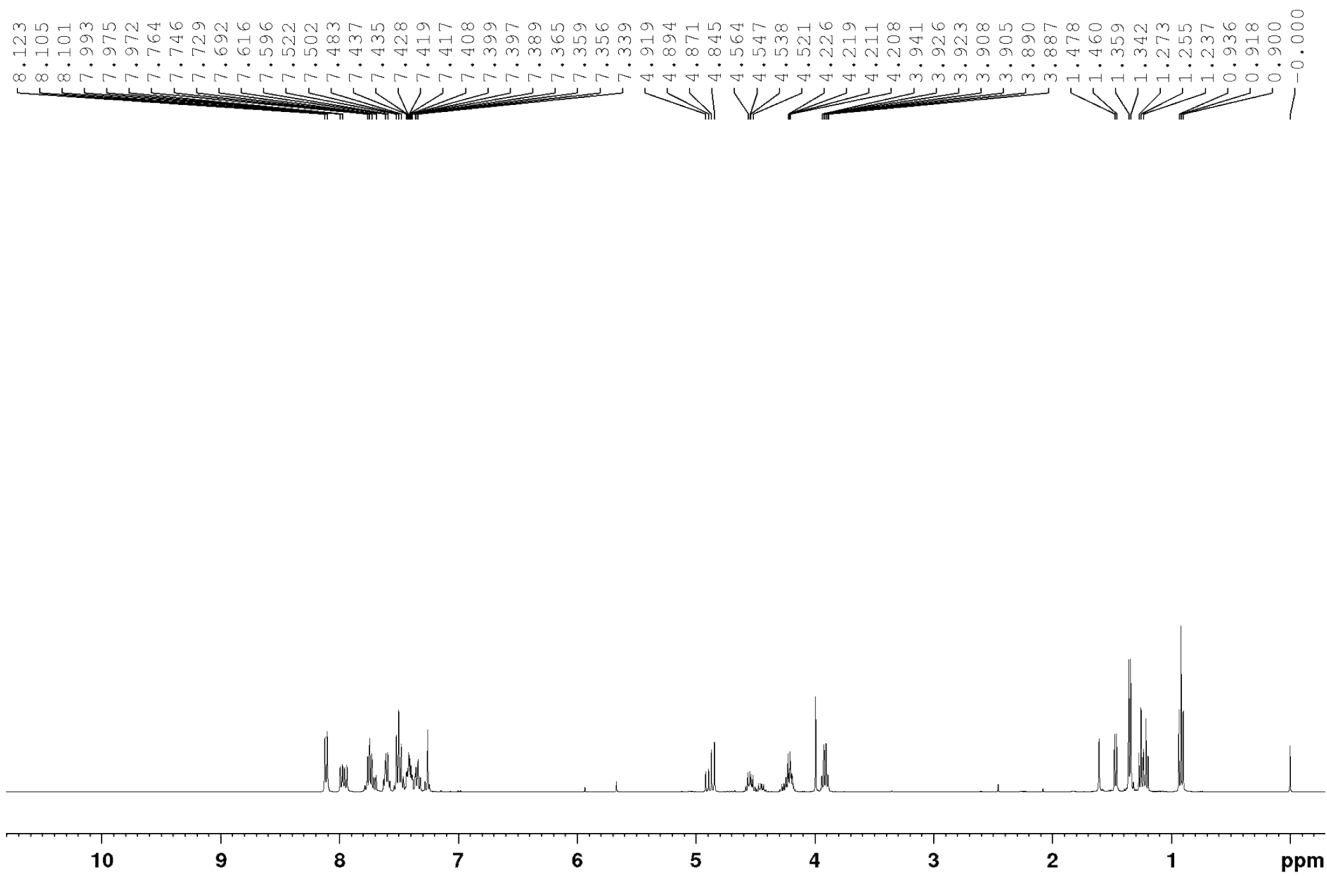
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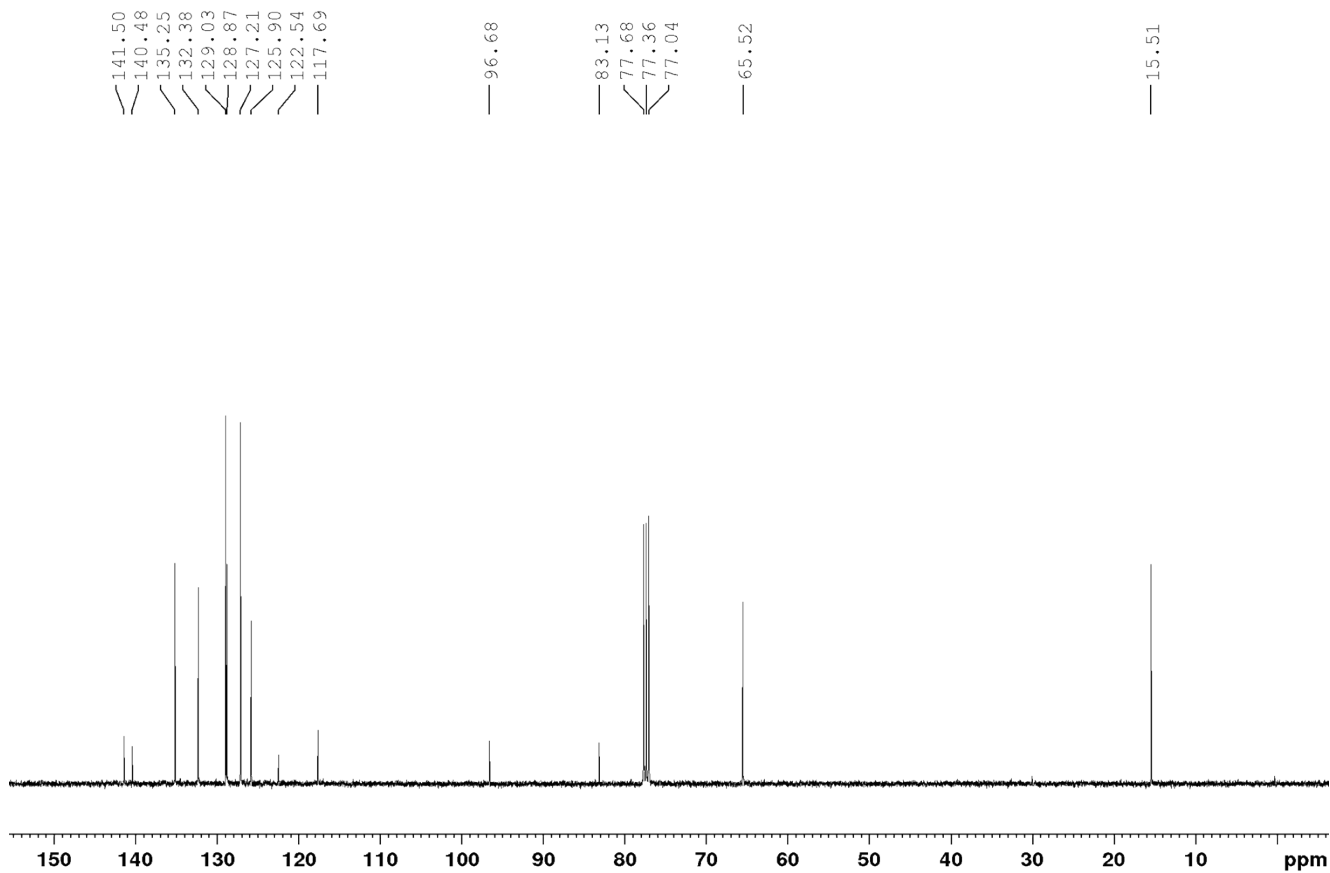
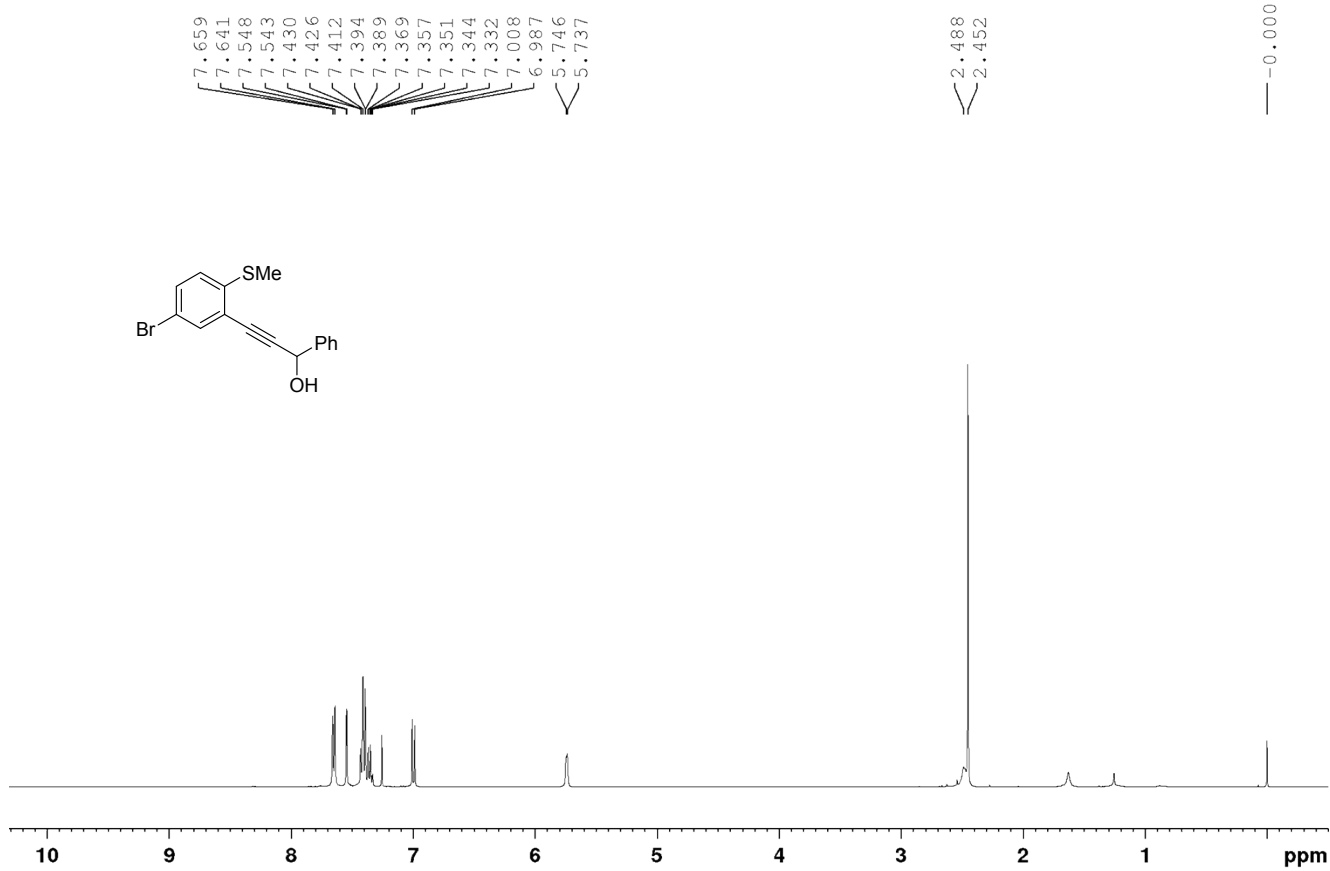
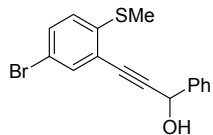


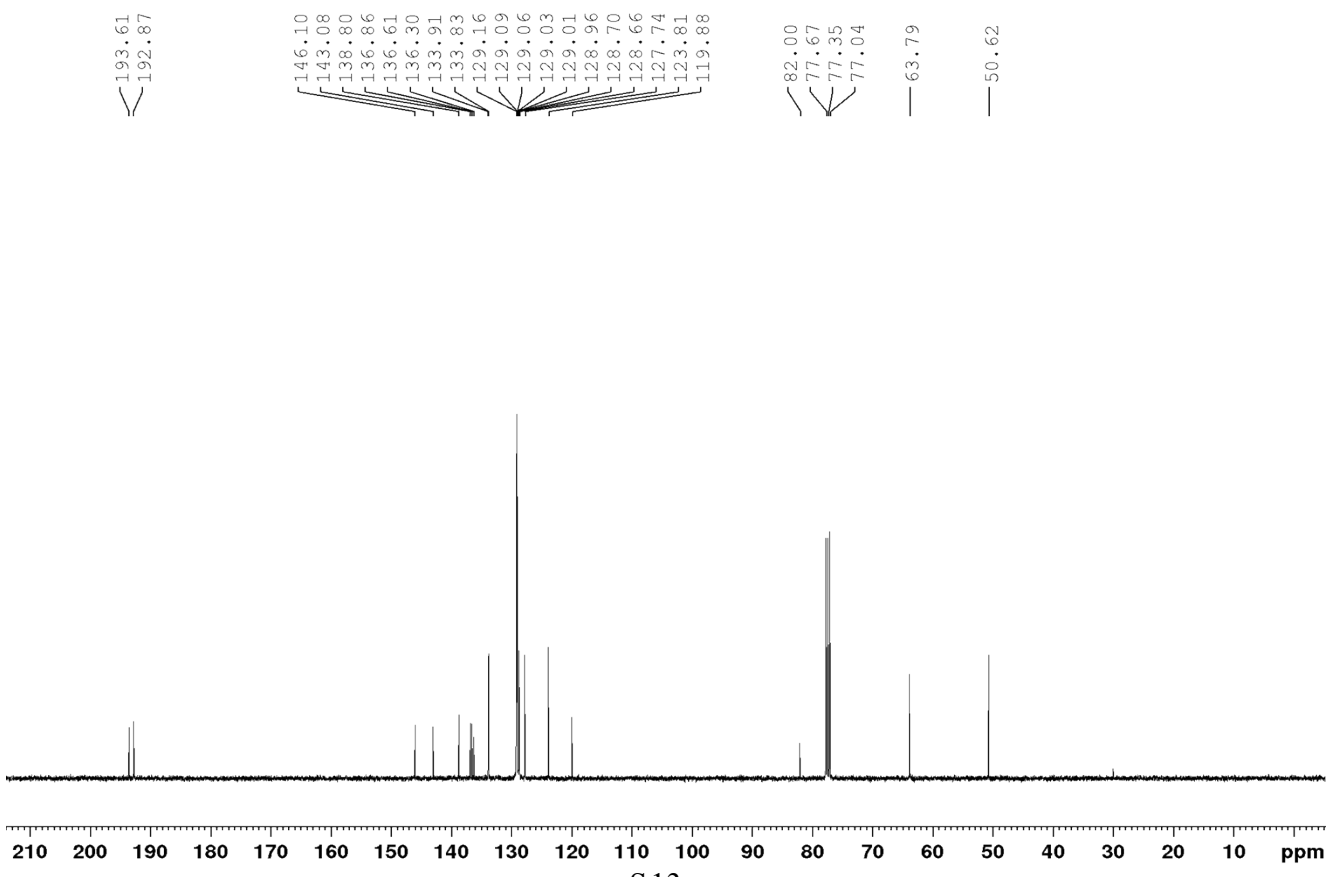
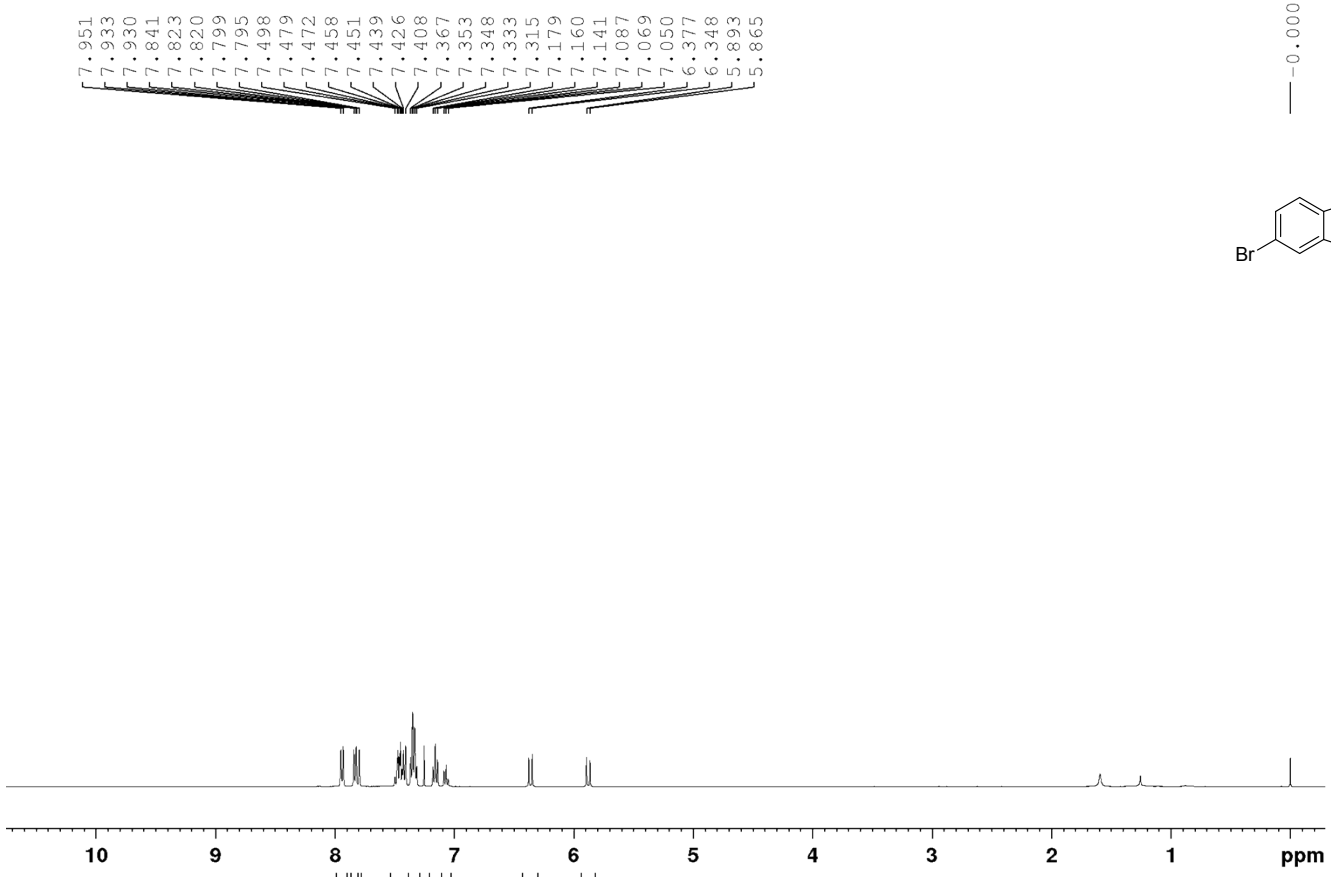


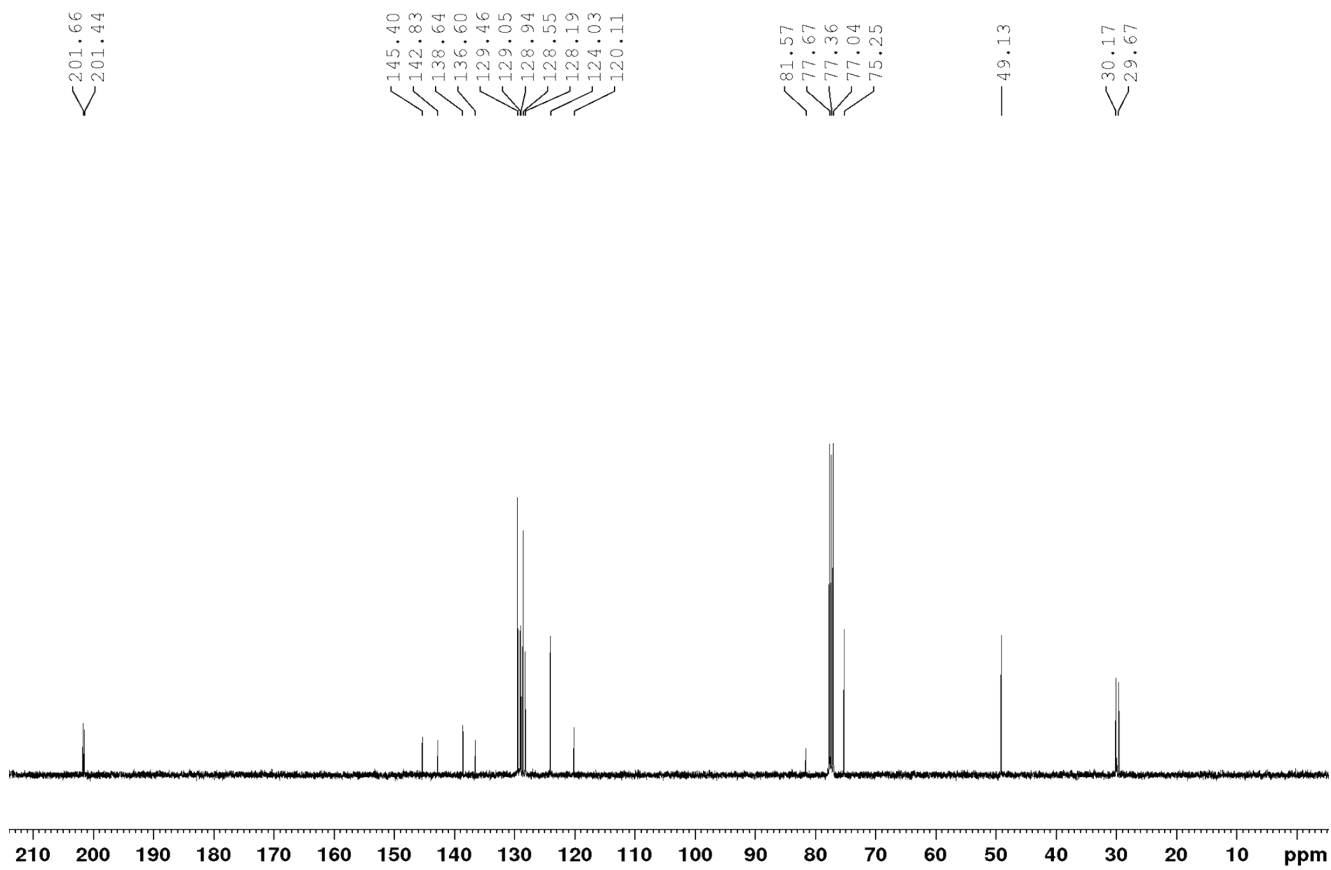
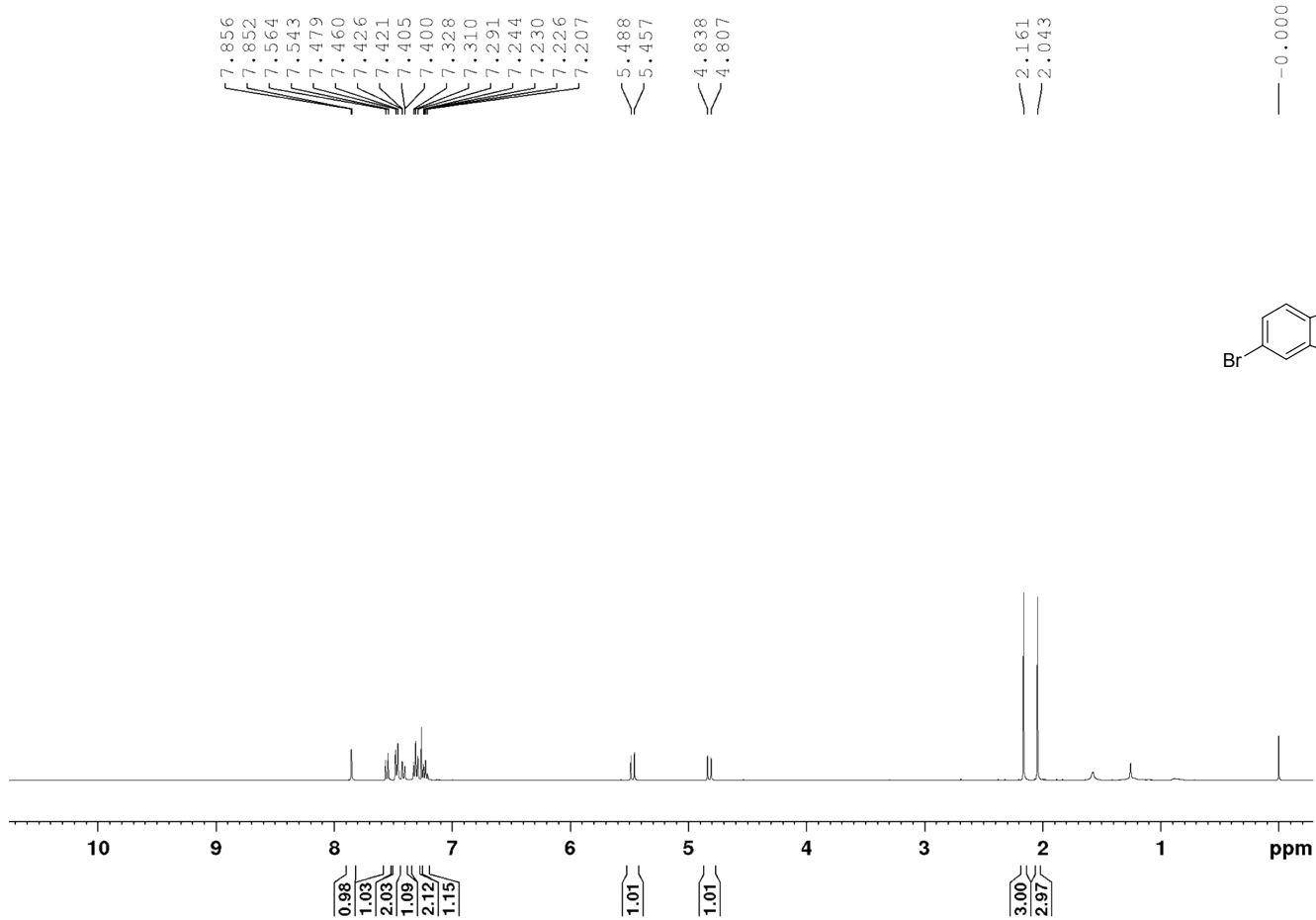
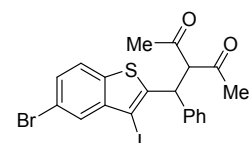


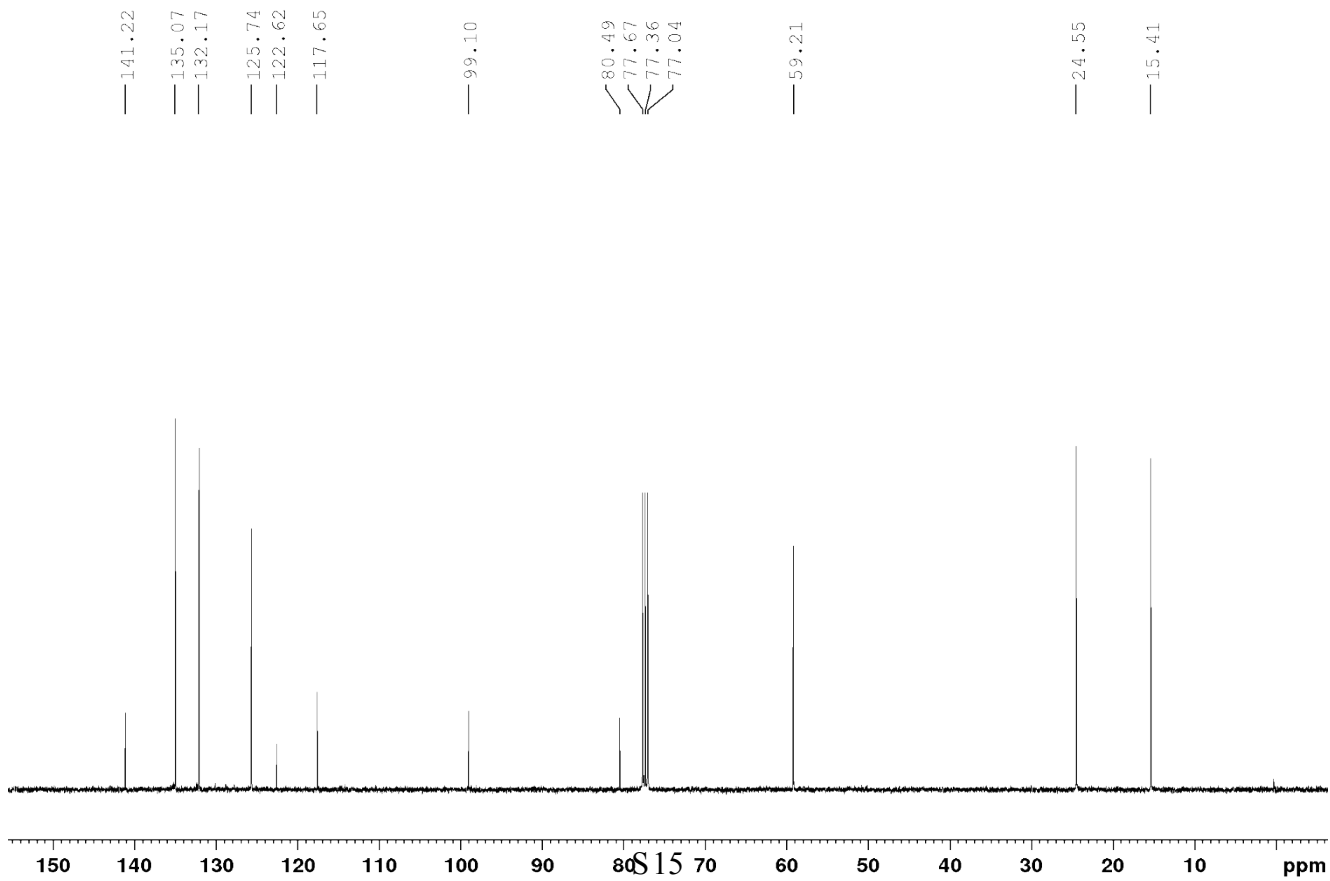
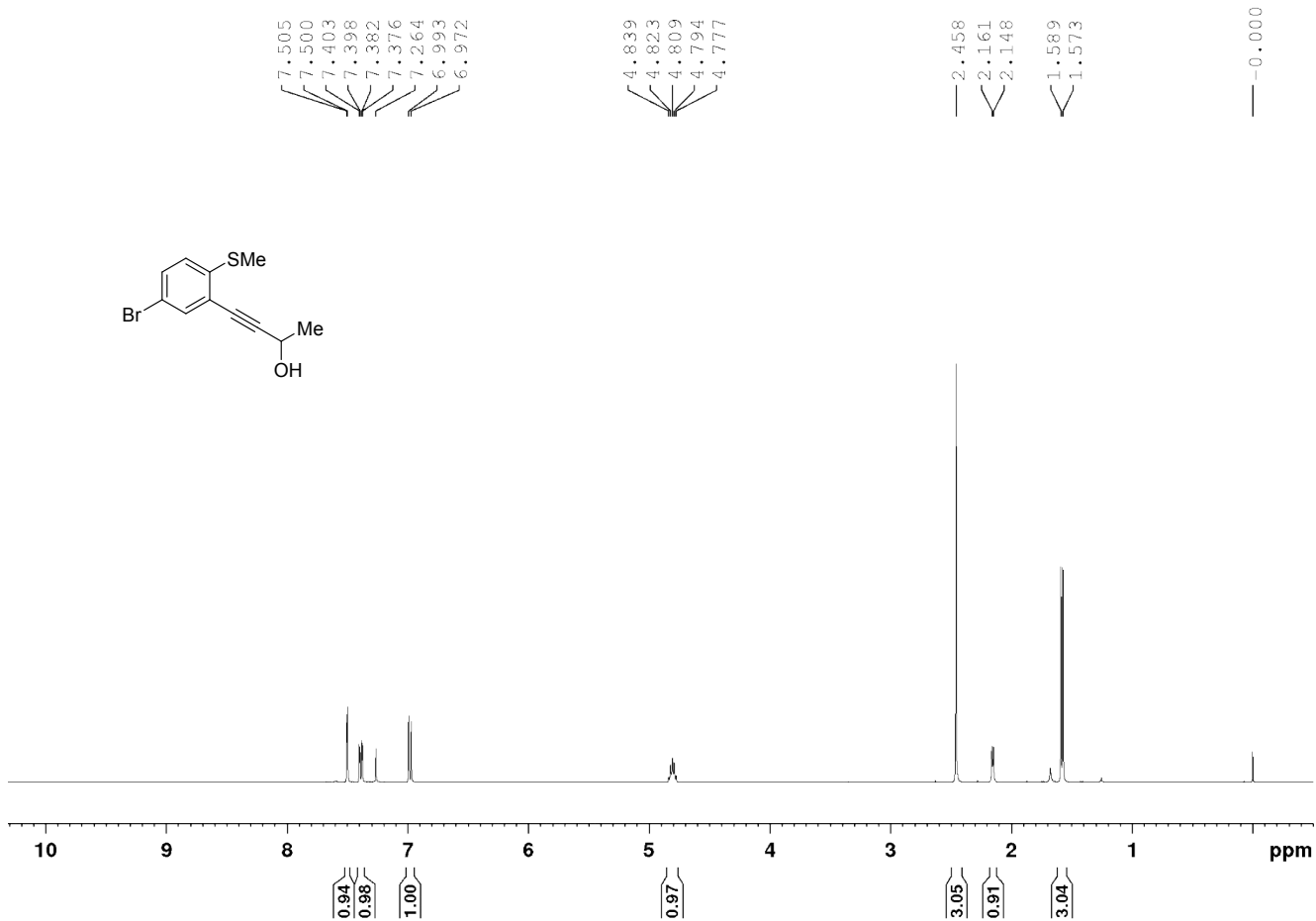
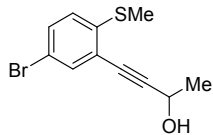


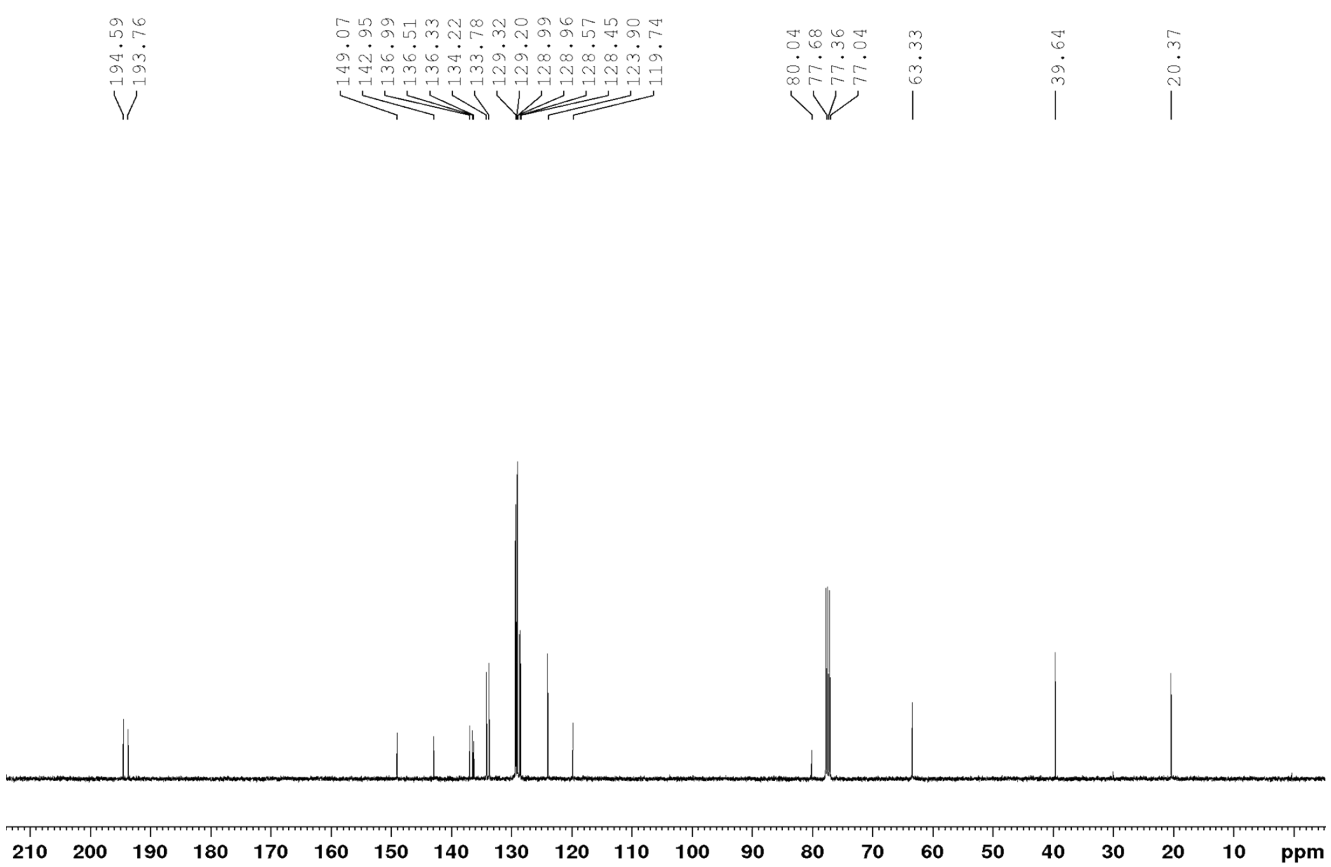
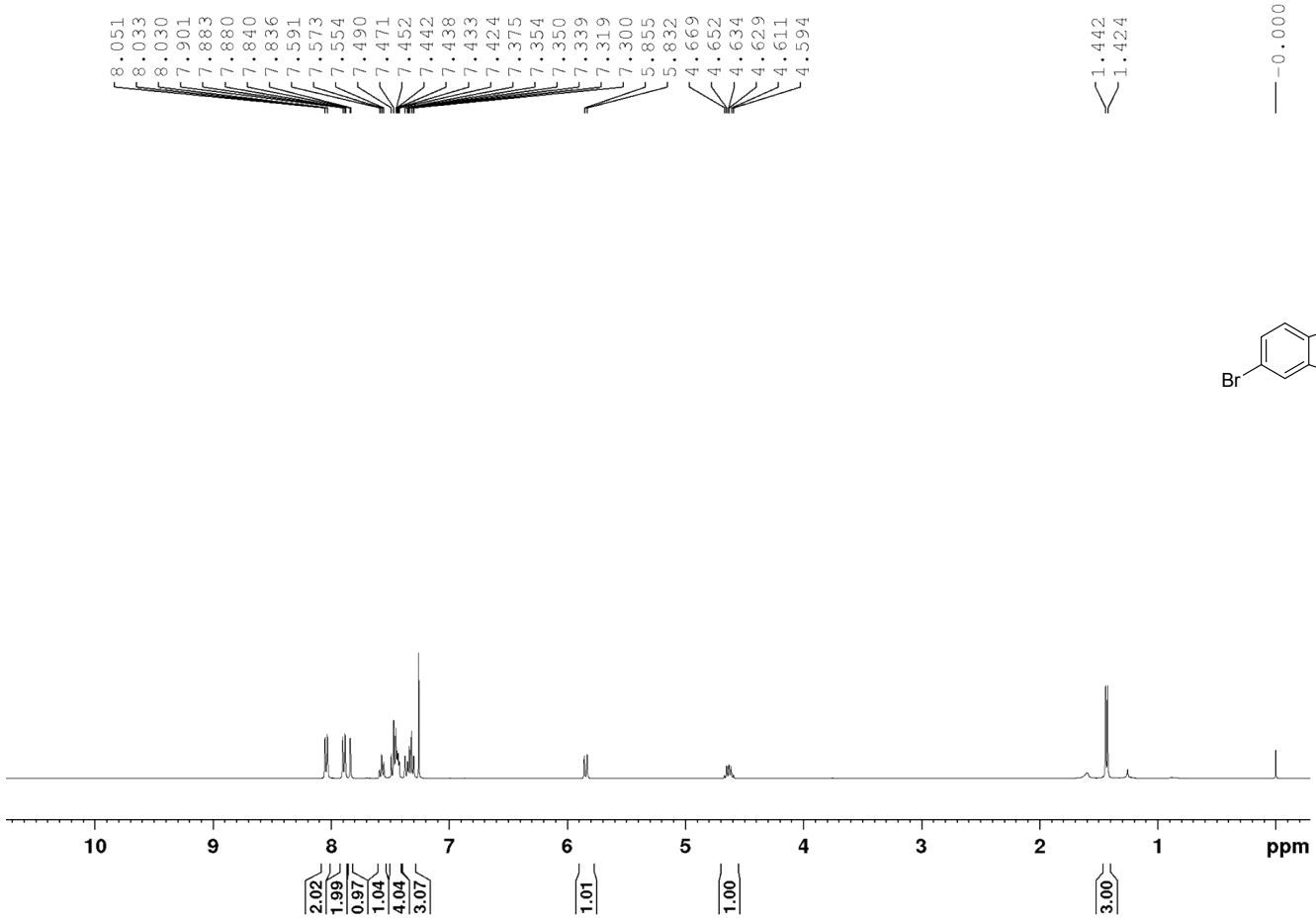
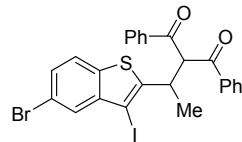




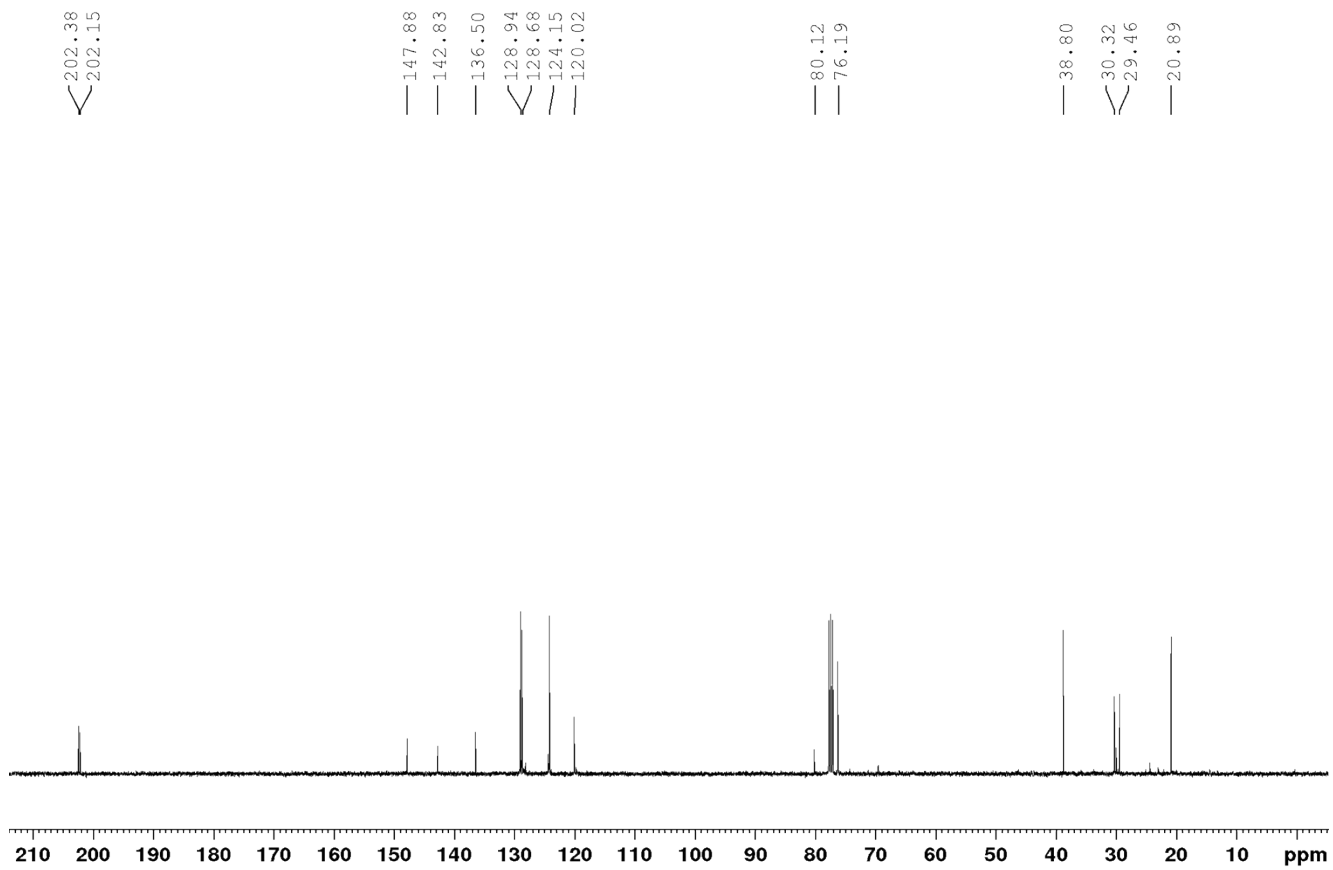
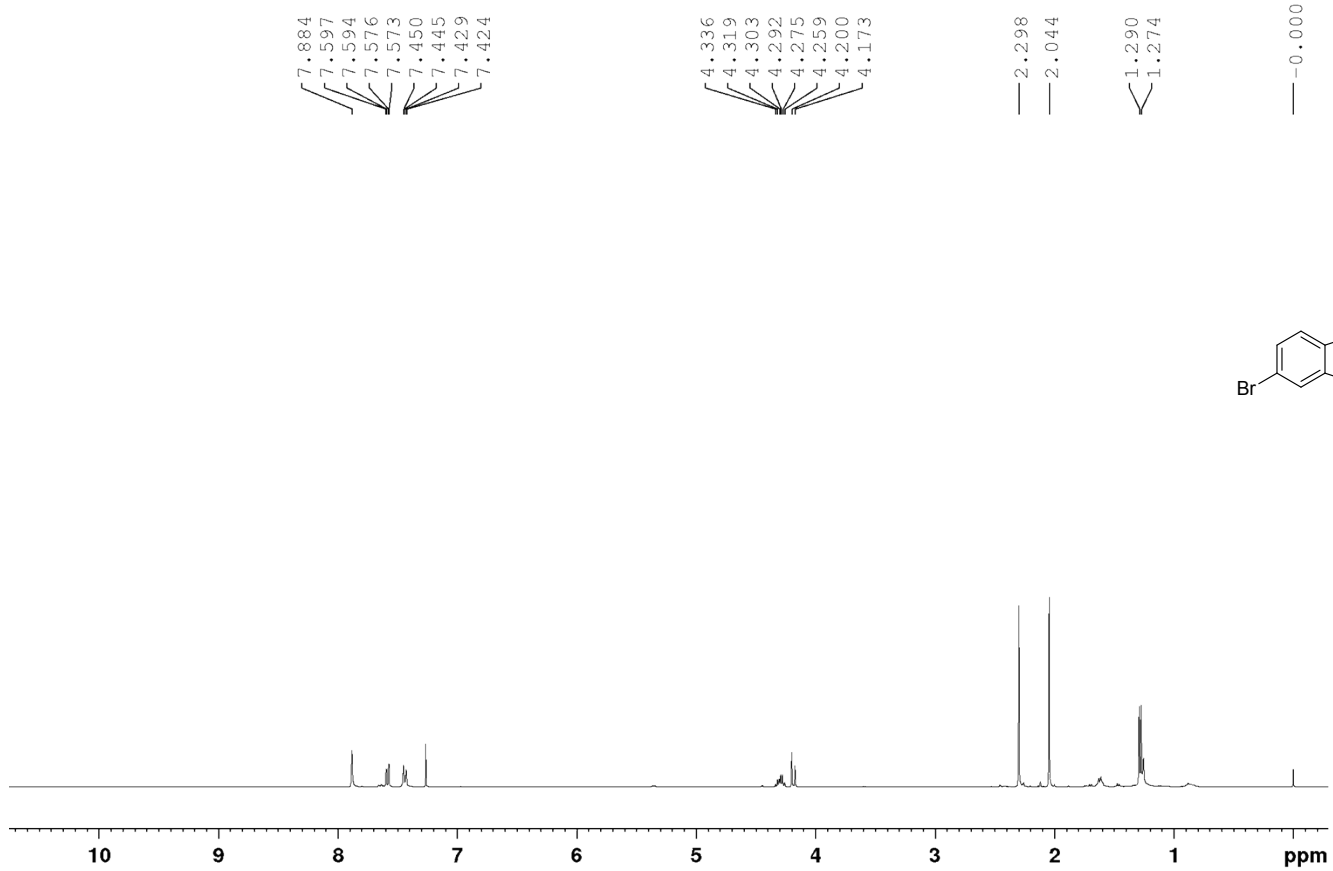


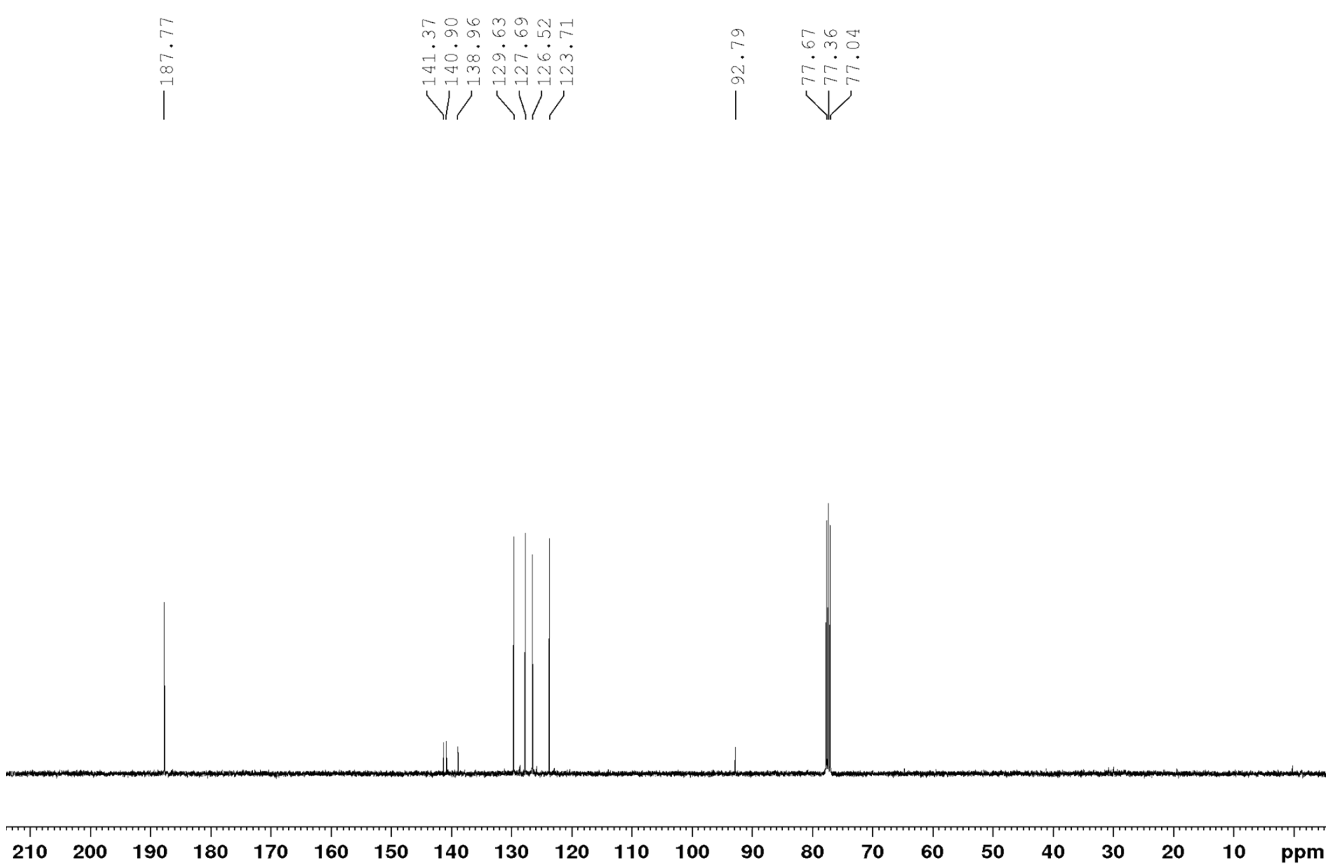
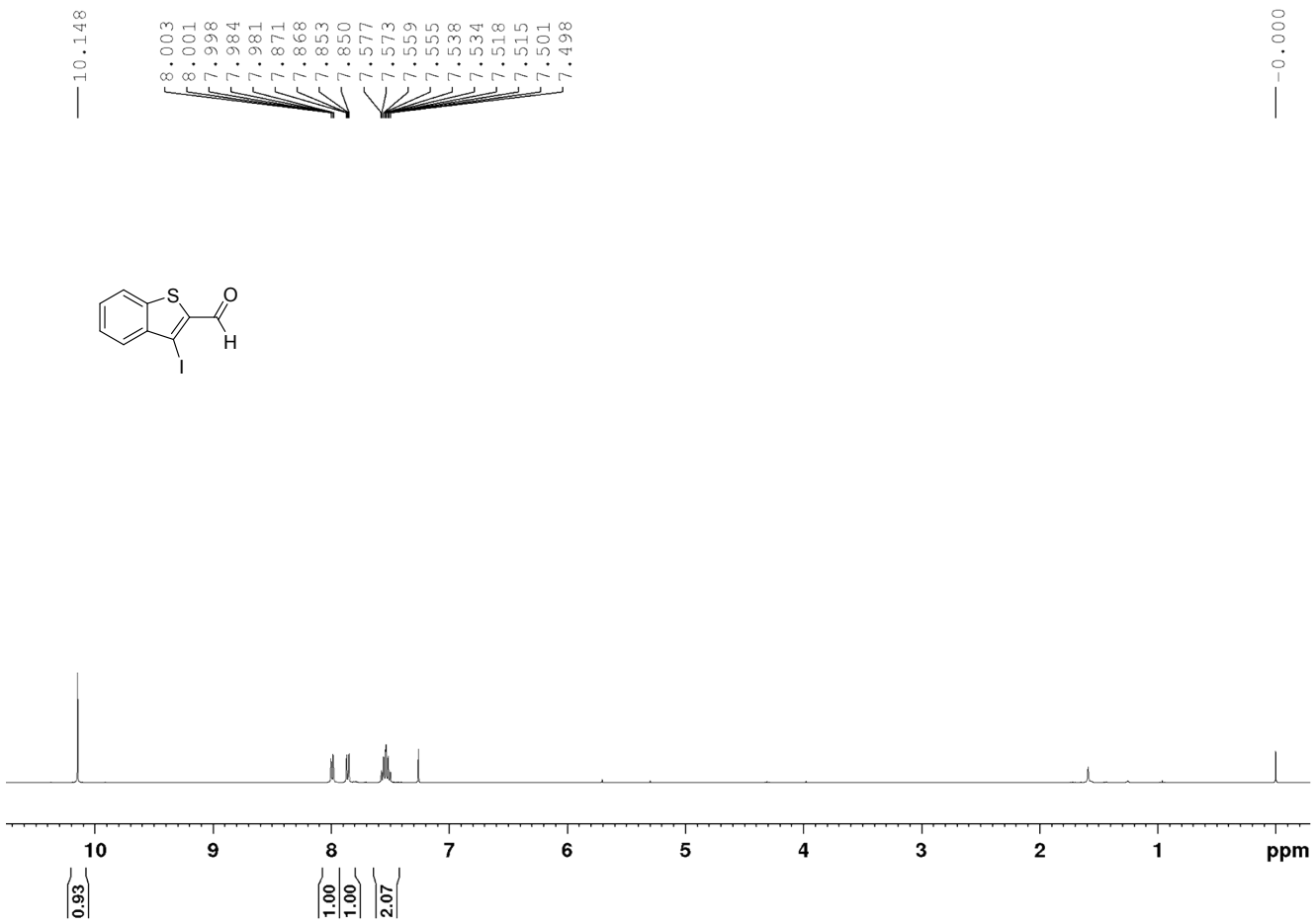


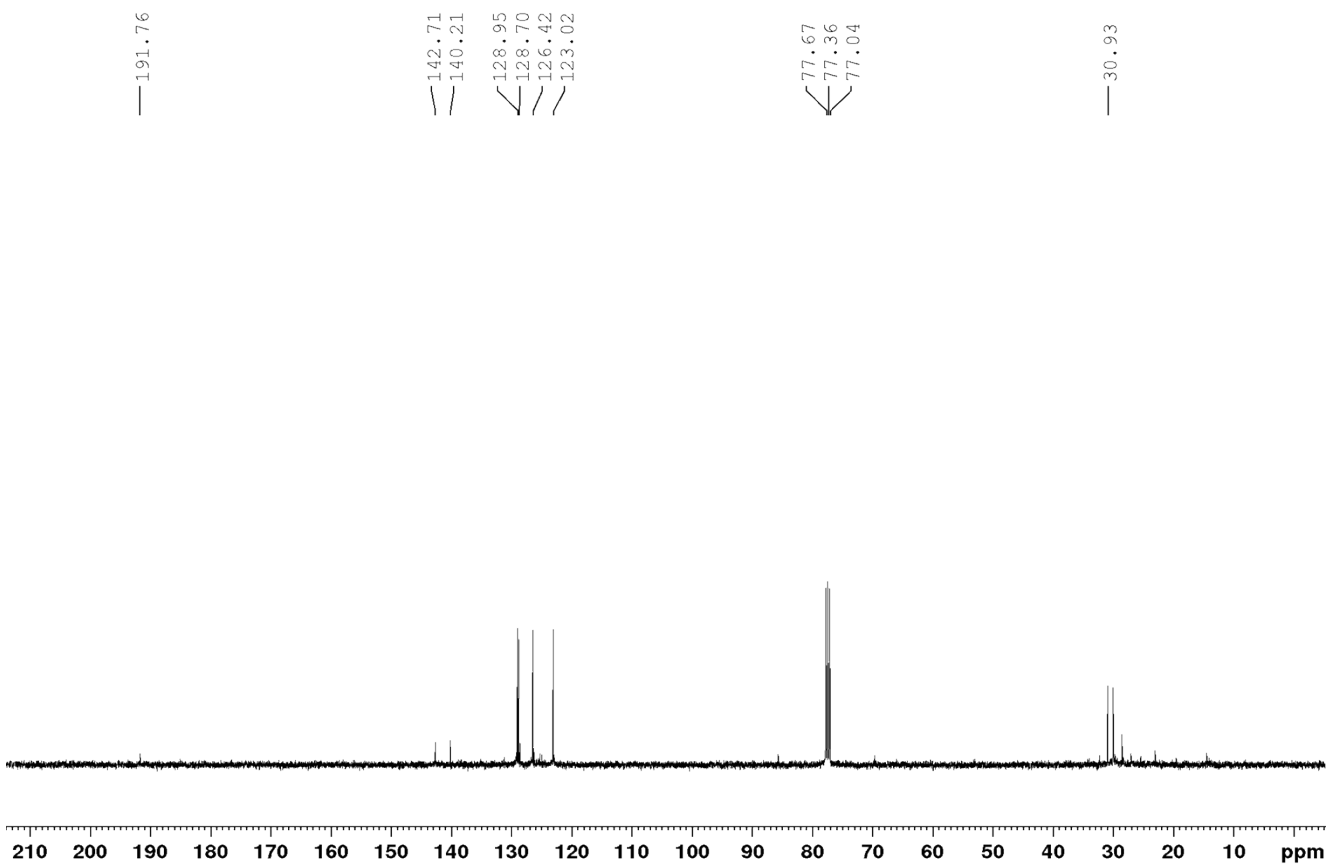
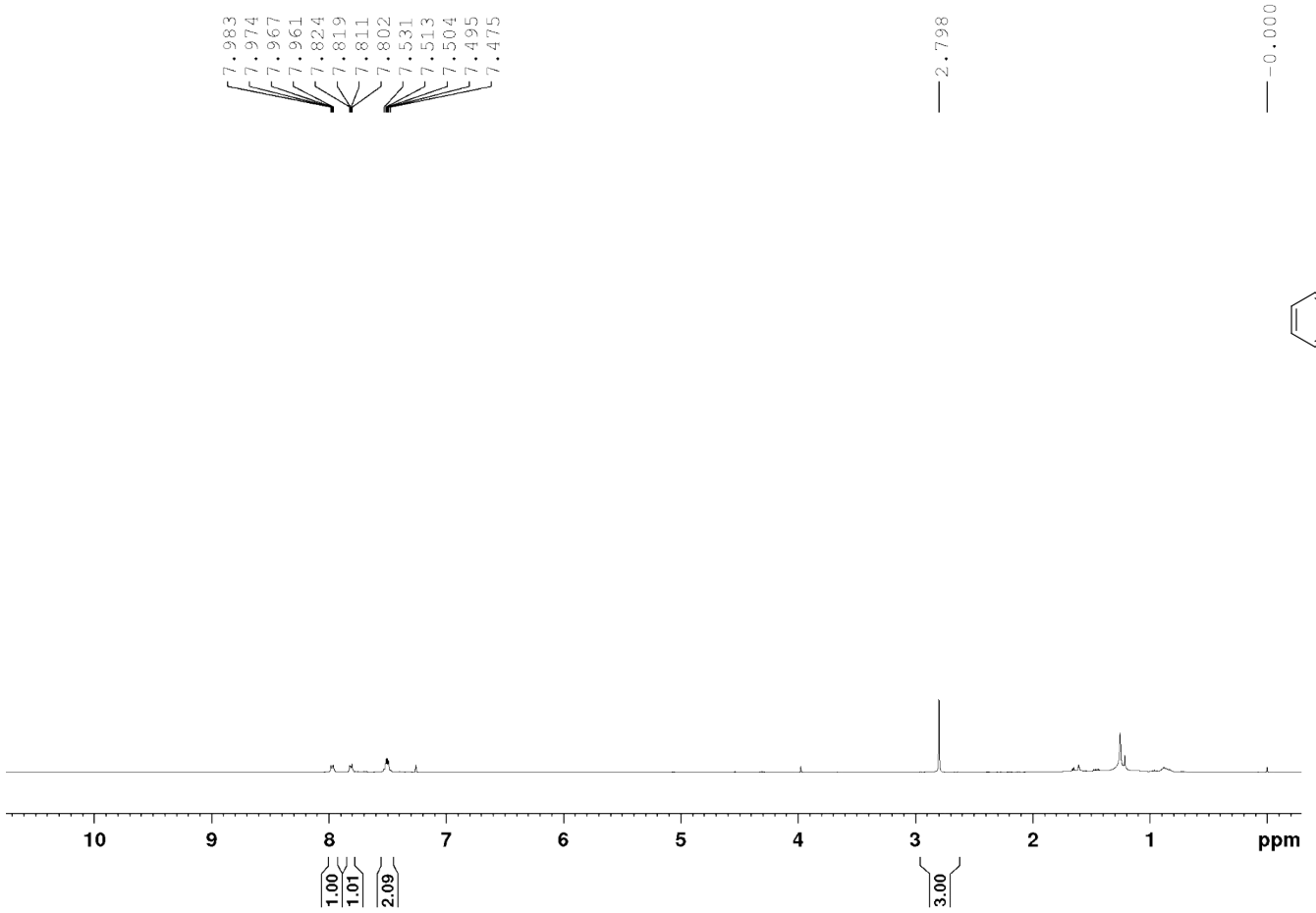
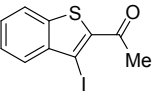


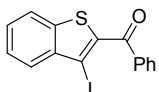




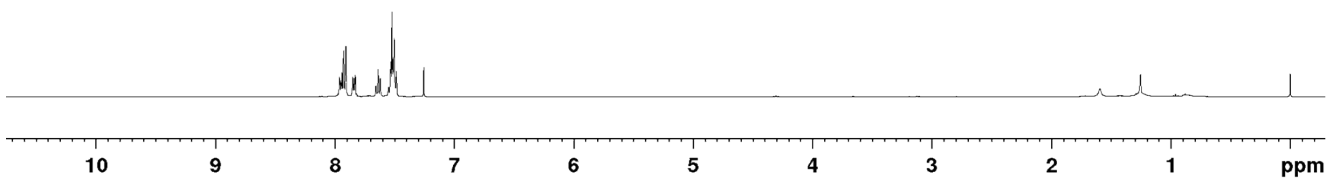








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7.945  
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7.909  
7.906  
7.861  
7.852  
7.844  
7.835  
7.830  
7.819  
7.657  
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7.620  
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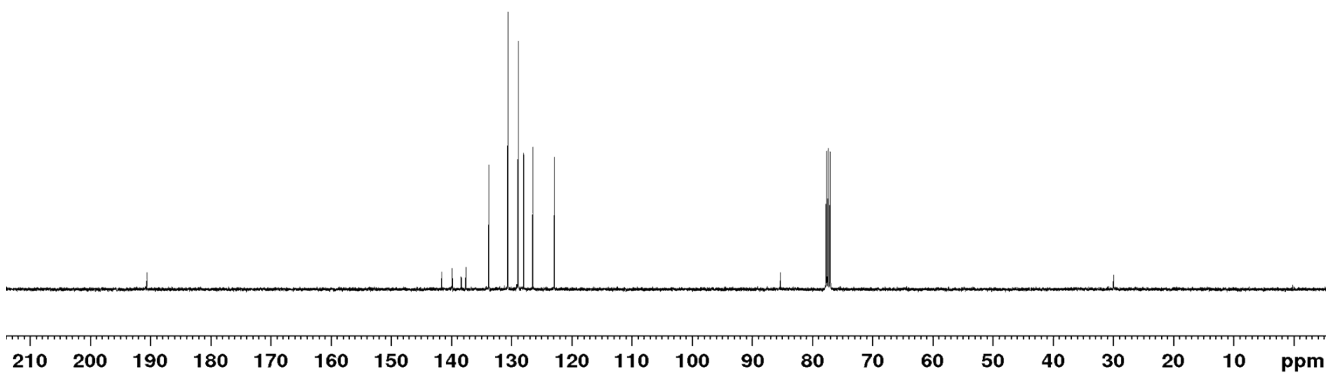


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1.00  
1.01  
3.96

190.62

141.70  
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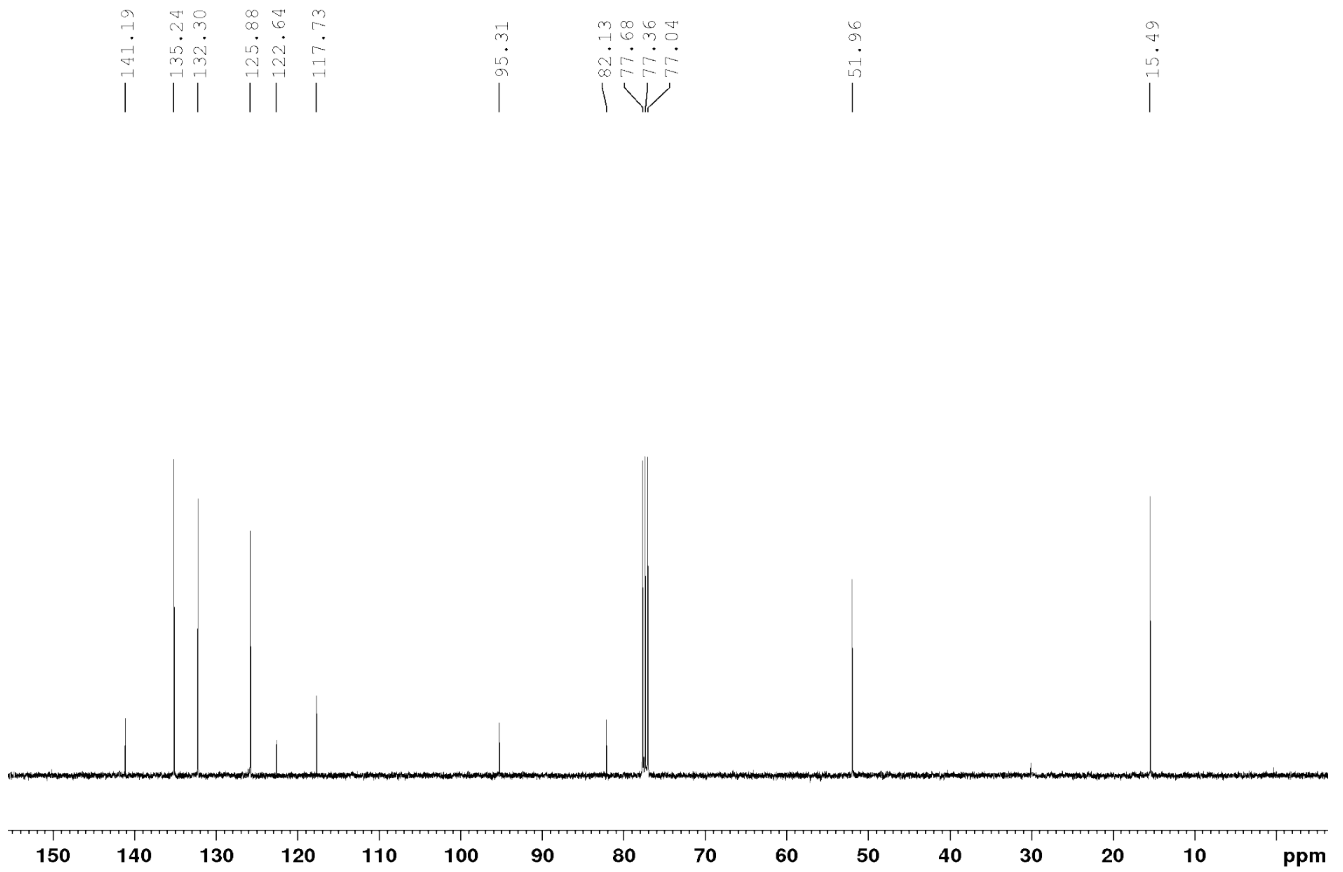
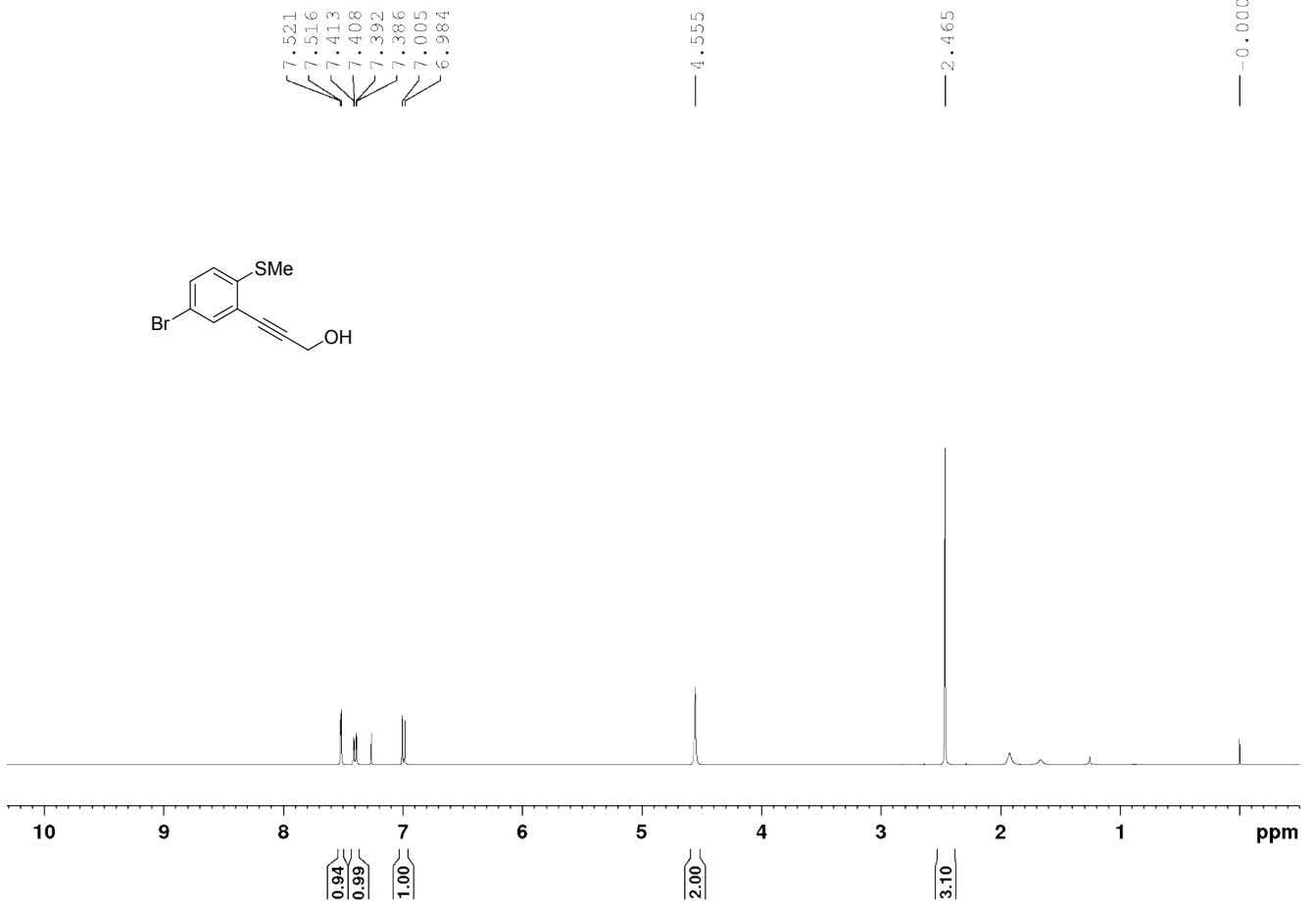
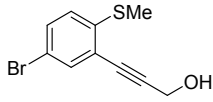
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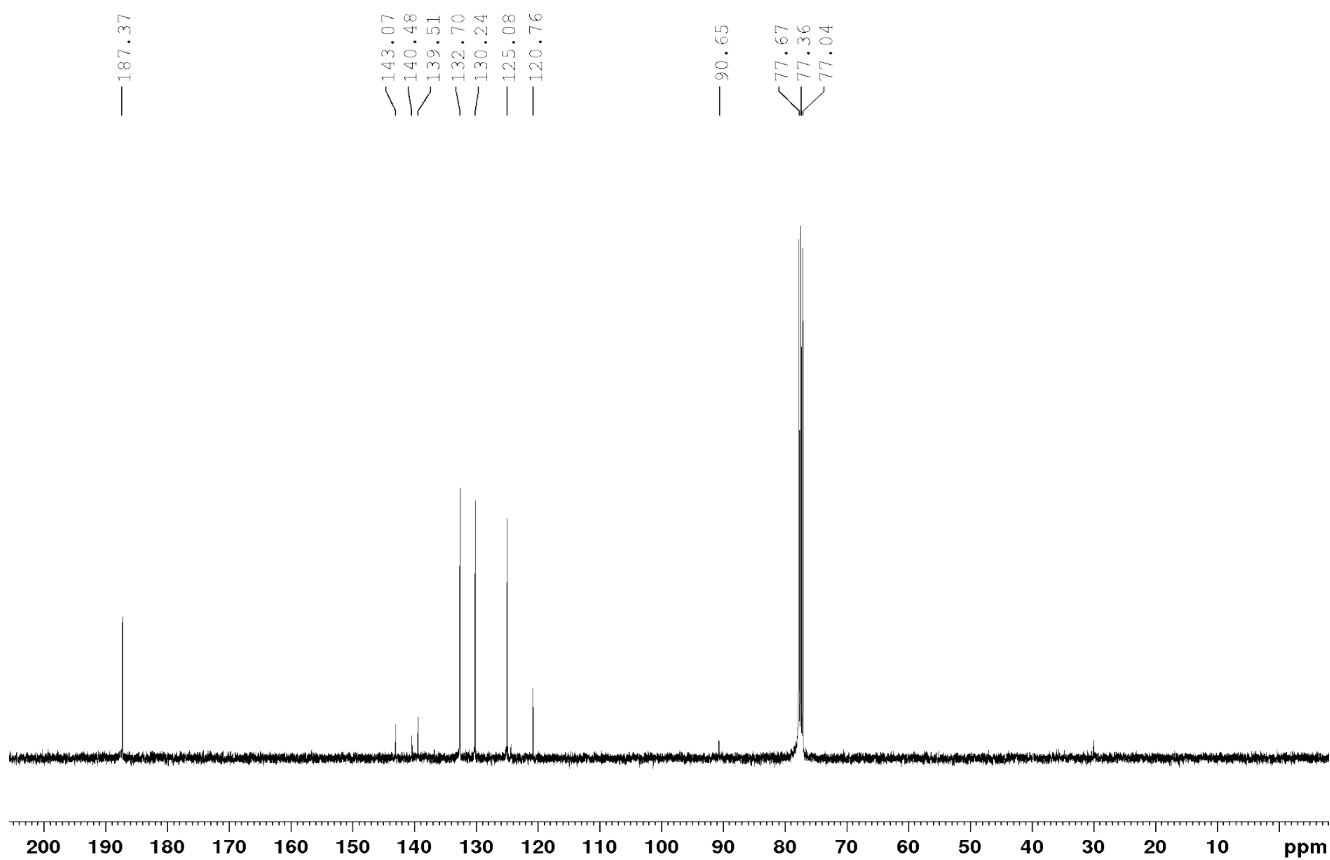
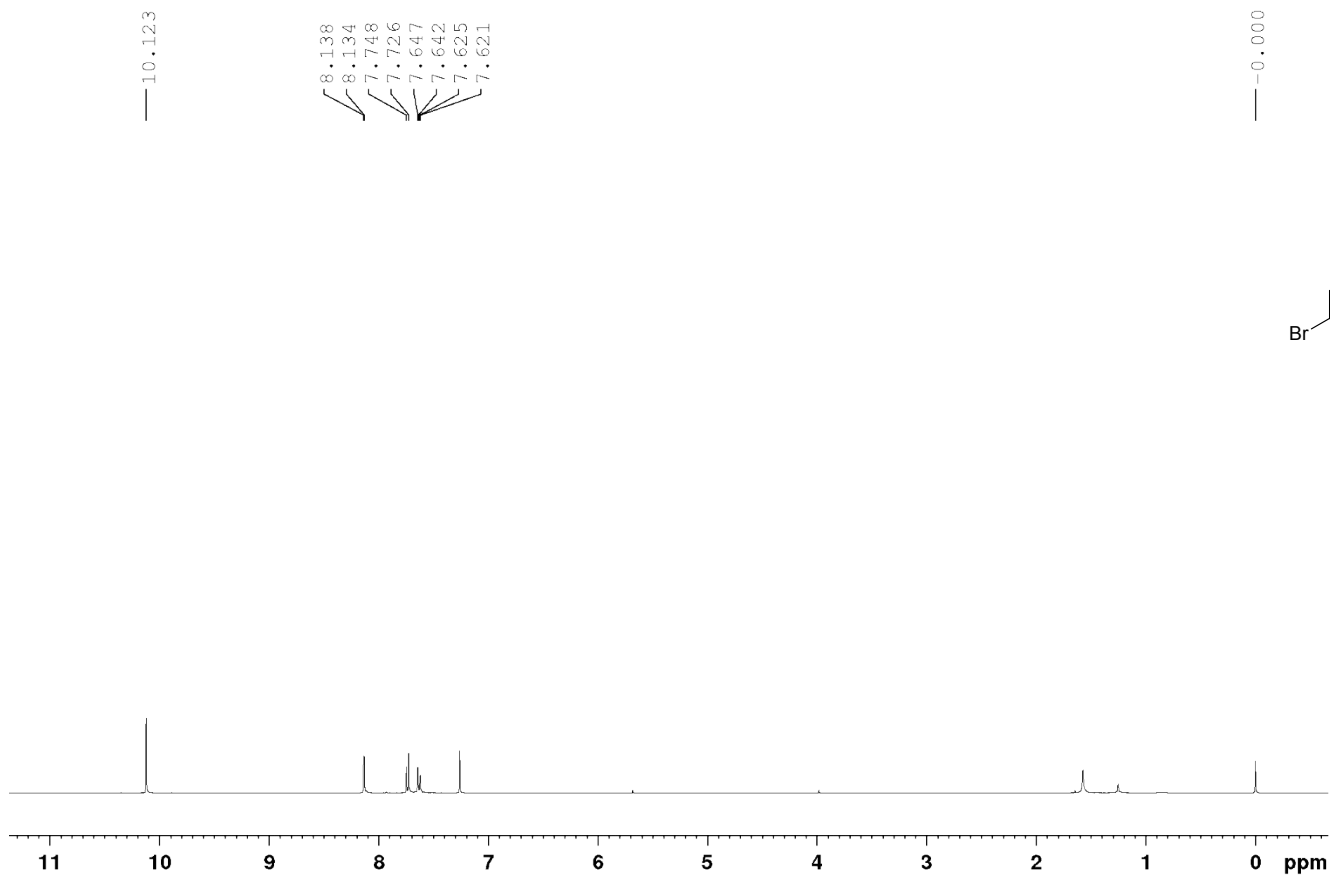
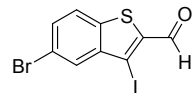


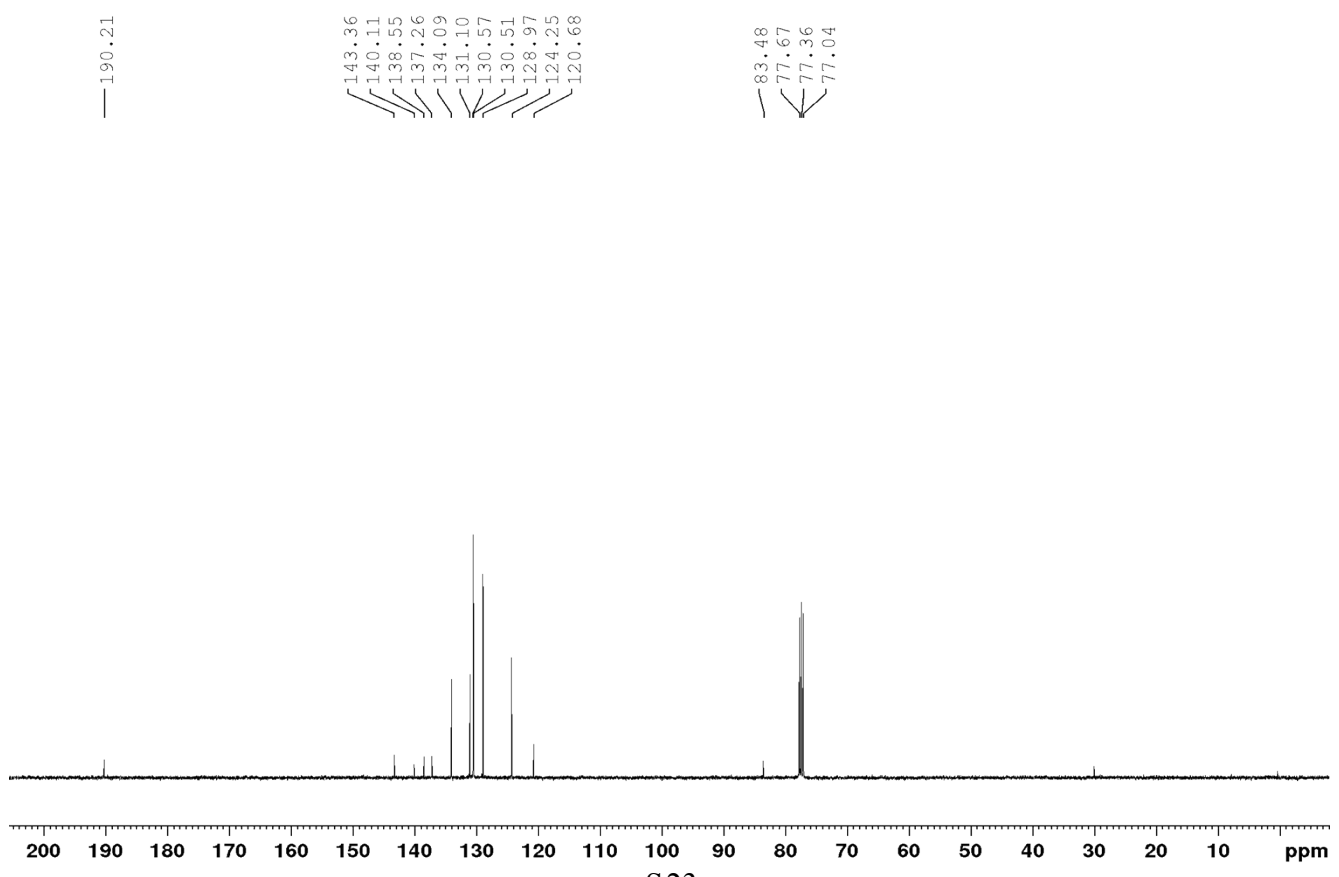
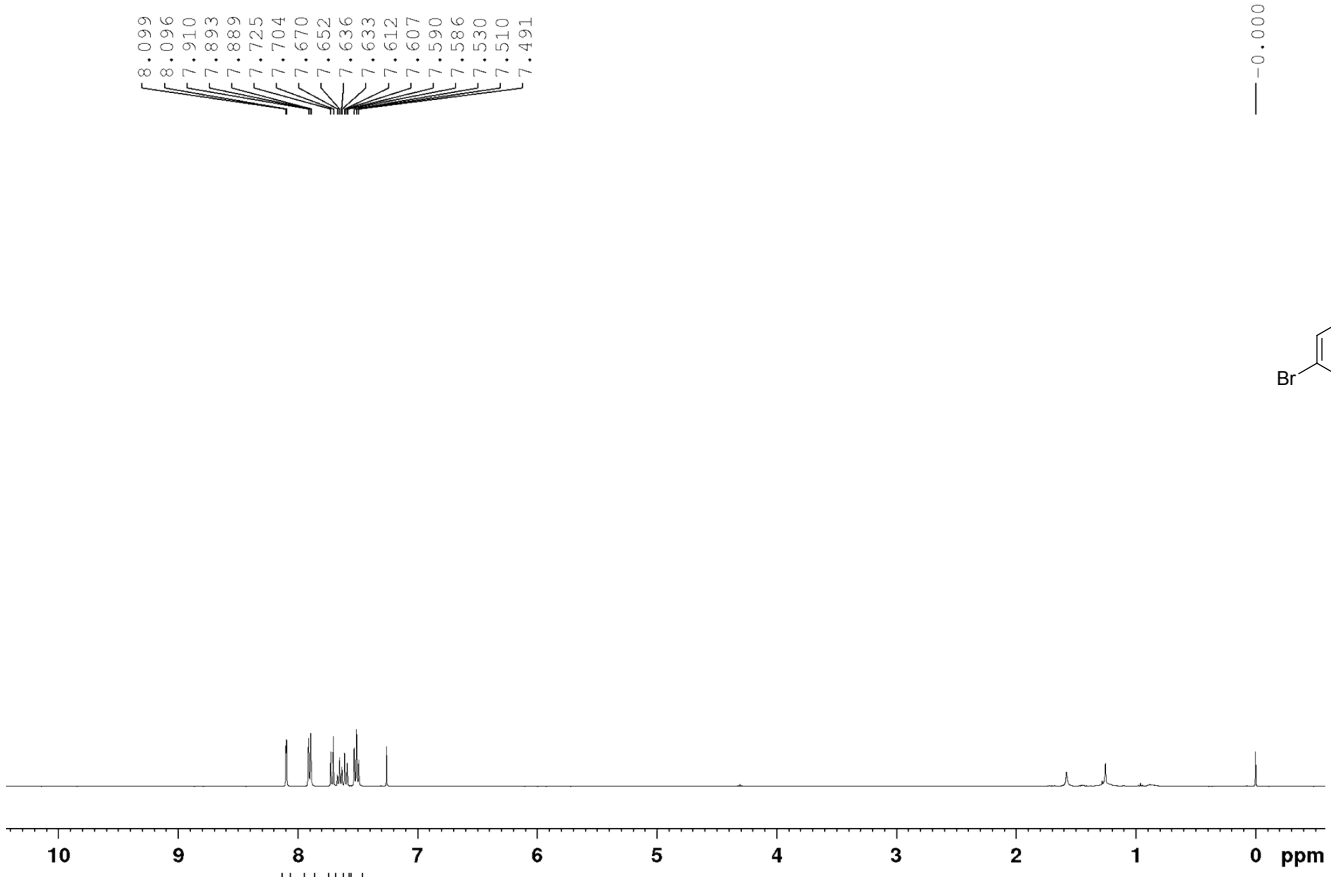
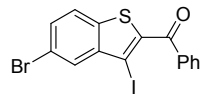
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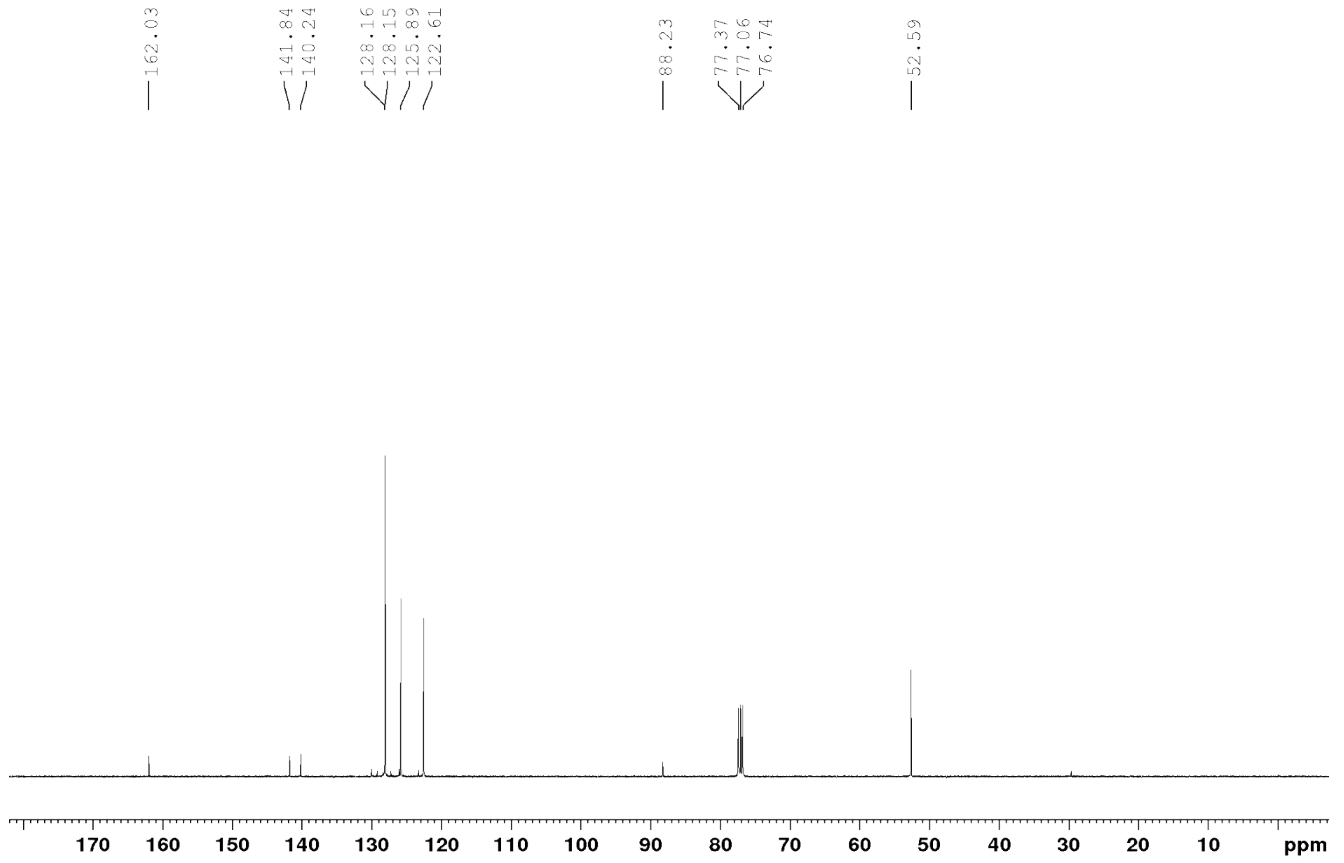
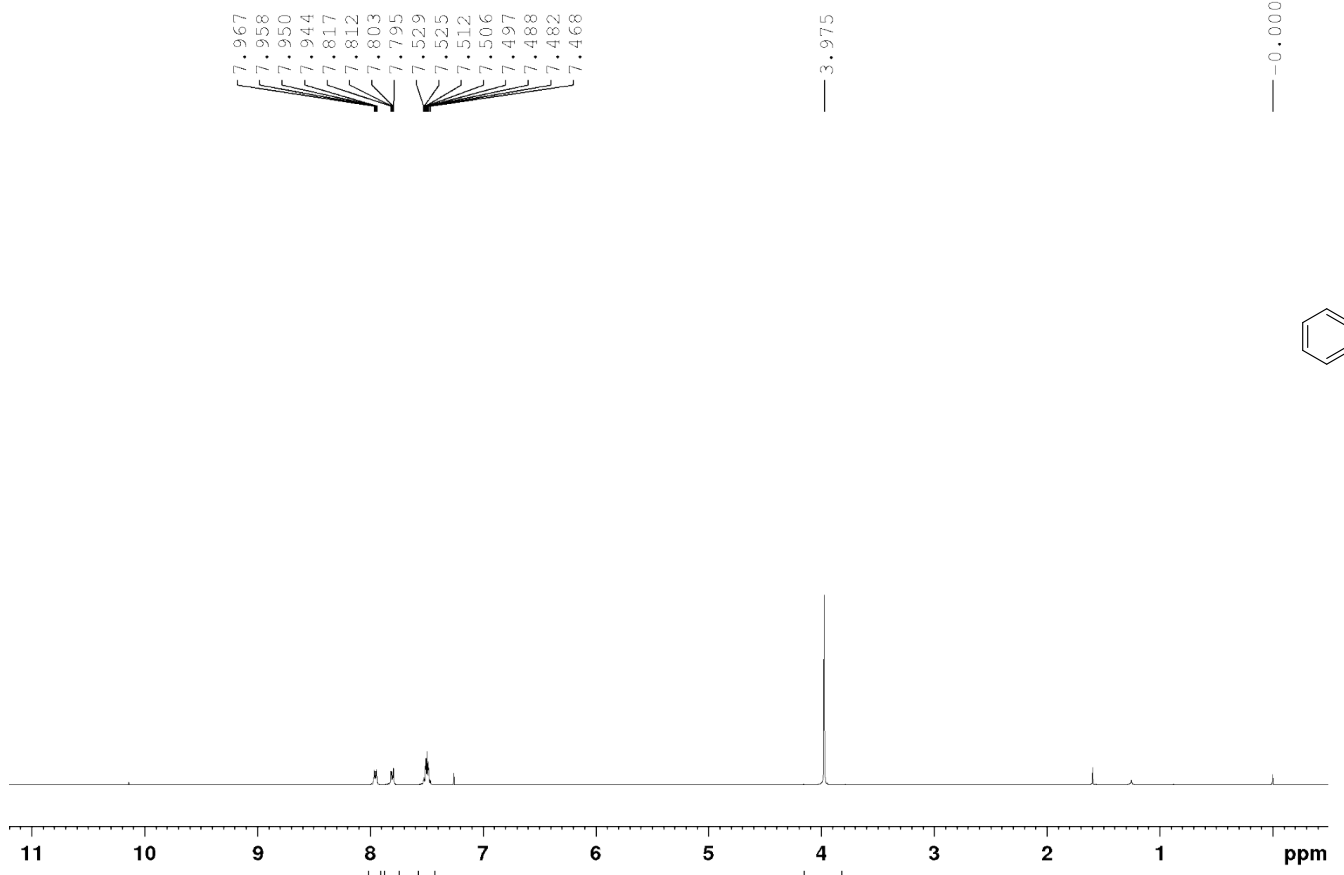
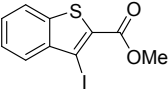
S20

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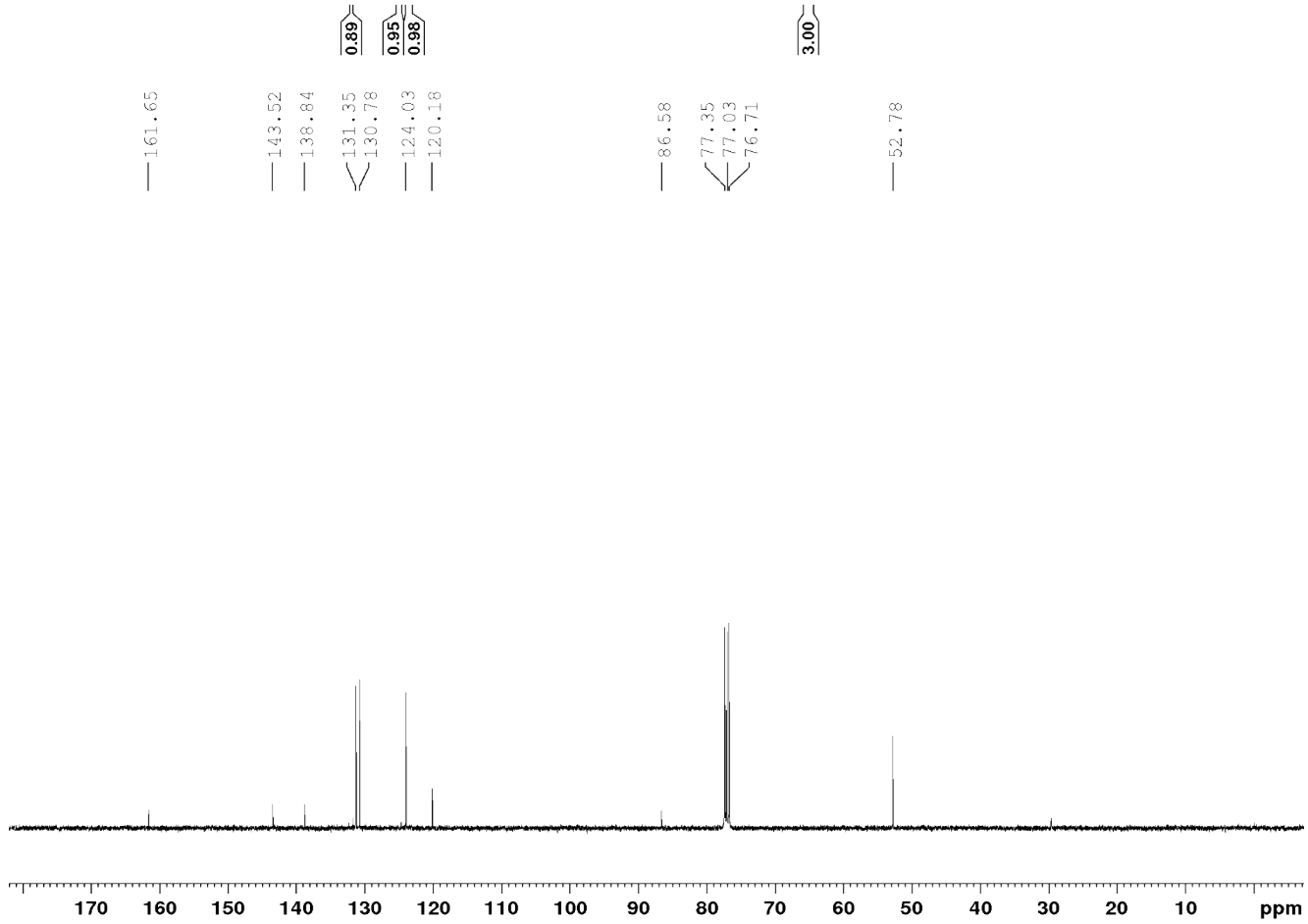
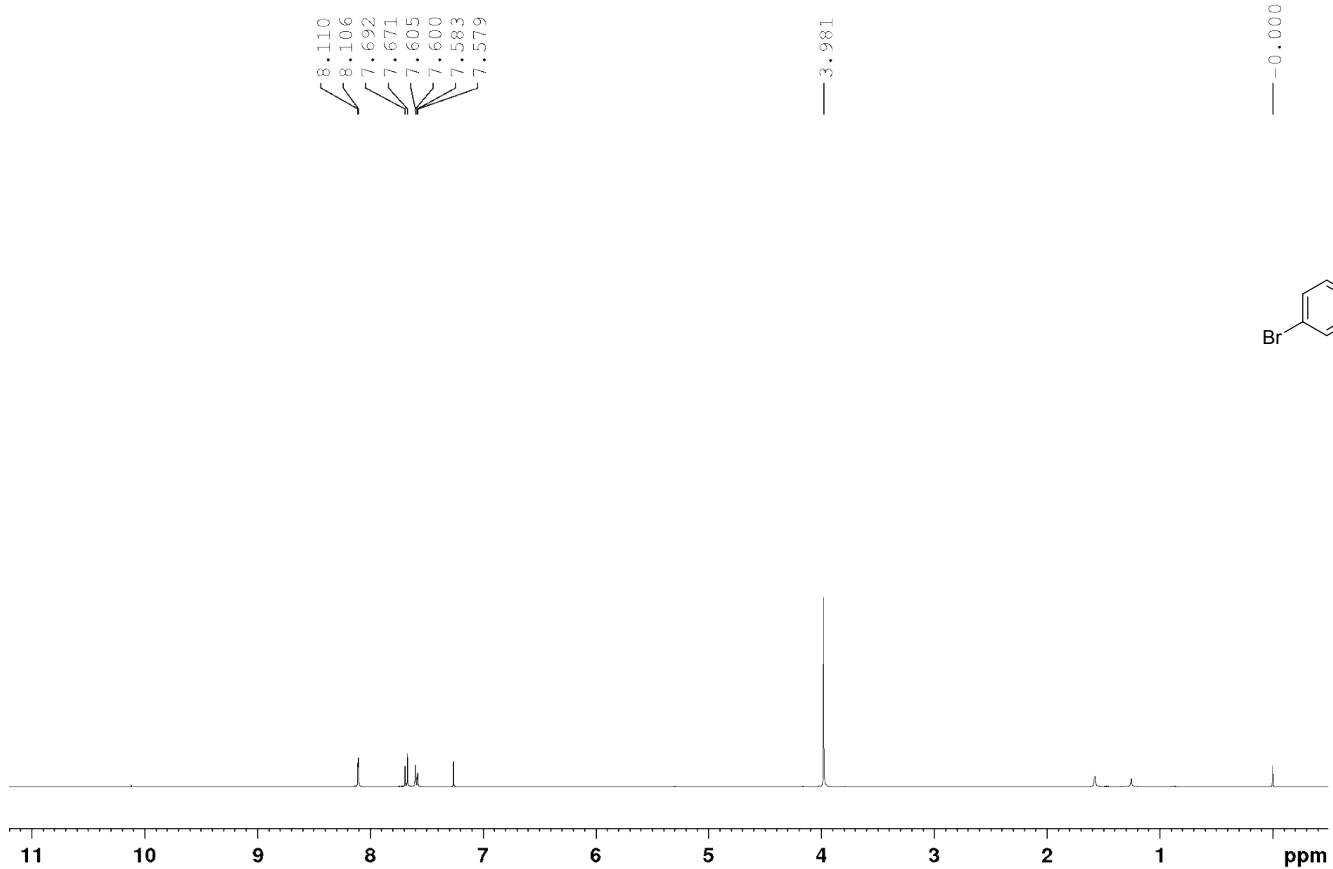
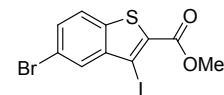




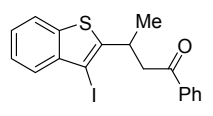








7.976  
7.743  
7.720  
7.589  
7.585  
7.582  
7.572  
7.567  
7.562  
7.552  
7.549  
7.545  
7.483  
7.463  
7.445  
7.443  
7.433  
7.431  
7.415  
7.412  
7.395  
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7.341  
7.325  
7.322  
7.308  
7.306  
7.304  
7.255  
4.181  
4.167  
4.163  
4.159  
4.150  
4.146  
4.142  
4.129  
3.496  
3.483  
3.454  
3.441  
3.312  
3.290  
3.269  
3.248  
1.470  
1.453



10 9 8 7 6 5 4 3 2 1 0 ppm

1.89  
1.85  
0.96  
2.83  
0.99

0.96

0.99  
1.00

3.00

— 197.61

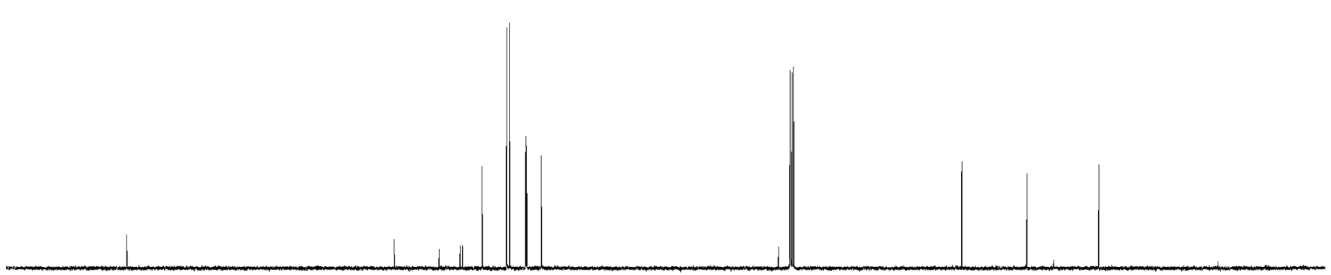
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128.18  
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125.22  
125.03  
122.39

79.46  
77.35  
77.03  
76.72

— 46.26

— 34.46

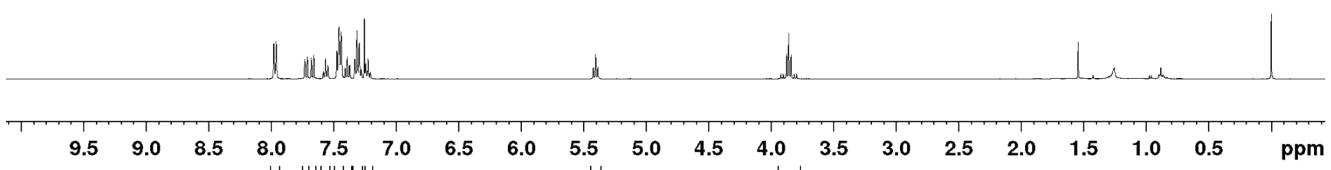
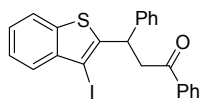
— 21.57



210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 ppm

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7.712  
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7.661  
7.585  
7.566  
7.548  
7.476  
7.460  
7.457  
7.442  
7.409  
7.391  
7.371  
7.332  
7.314  
7.295  
7.278  
7.244  
7.226  
7.208  
5.423  
5.405  
5.387

3.923  
3.905  
3.879  
3.860  
3.842  
3.816  
3.798



2.05  
1.00  
1.03  
1.05  
4.10  
1.10  
3.11  
1.09

1.00

2.08

— 1.545

— -0.000

— 196.62

146.65  
141.63  
141.10  
137.63  
136.64  
133.33  
128.74  
128.69  
128.15  
127.92  
127.14  
125.47  
125.31  
125.16  
122.29

81.26  
77.34  
77.03  
76.71

45.09  
44.41

