

Supporting Information for

**Catalyst-Free Cross-Coupling of *N*-Tosylhydrazones with
Chromium(0) Fischer Carbene Complexes: A New Approach to
Diarylethanone**

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Jianbo Wang^{*,a}

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of Chemistry, Peking University Beijing 100871, China*

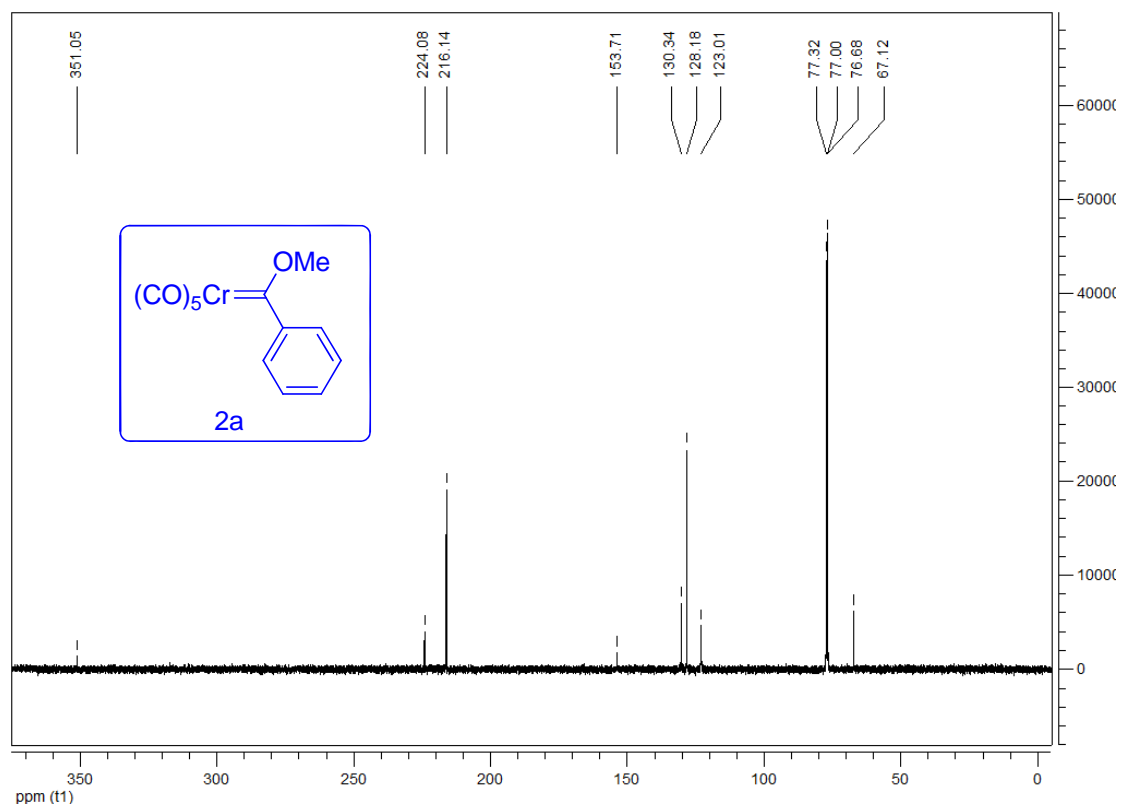
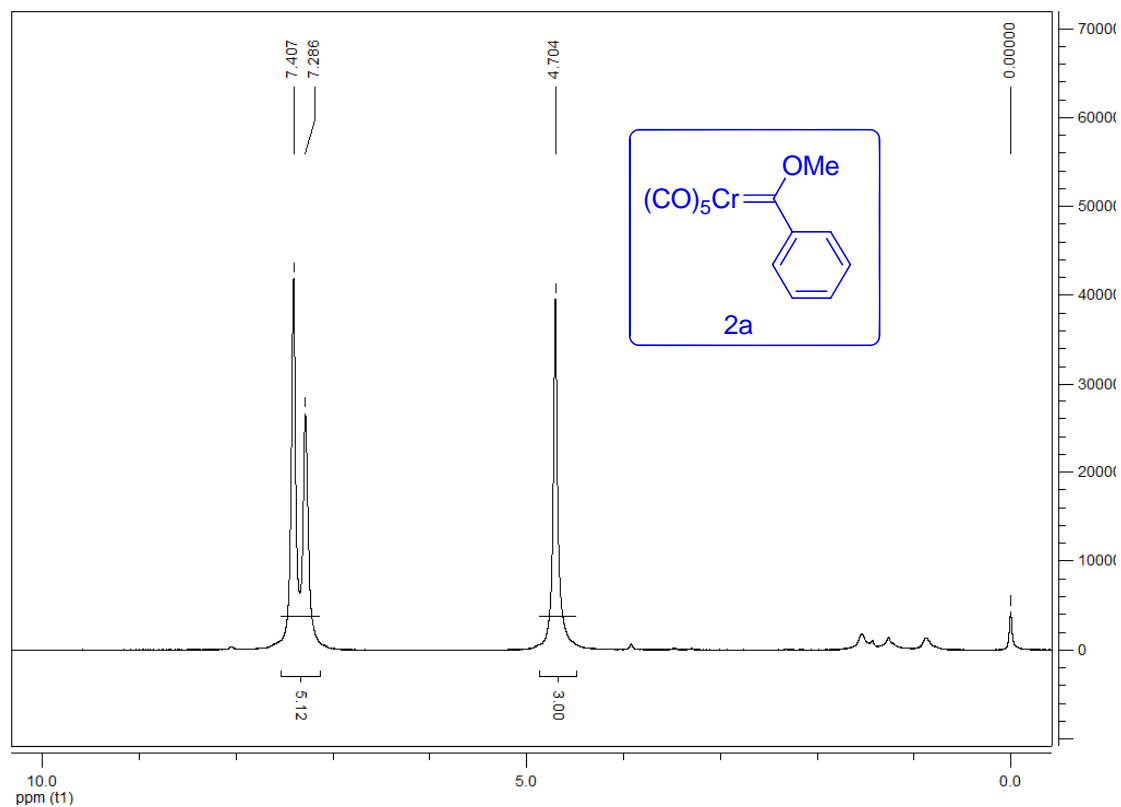
^b*School of Chemistry and Chemical Engineering, Shandong University, Jinan 250100,
China*

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361005, China*

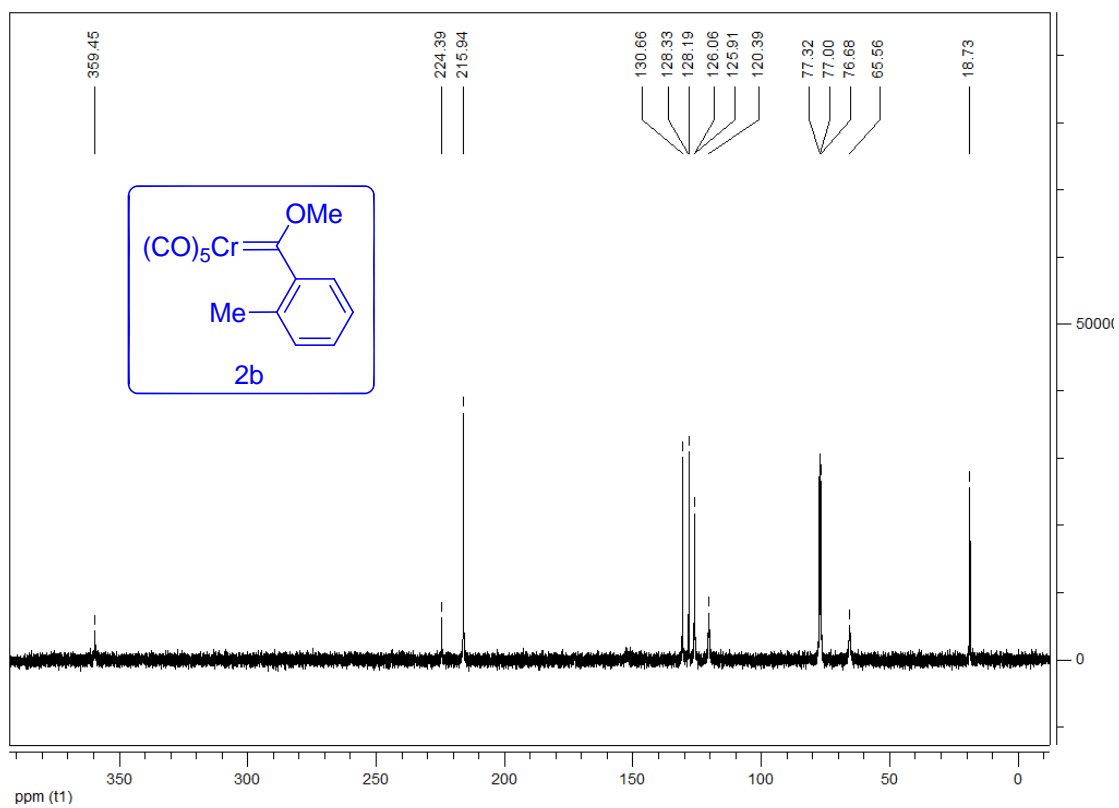
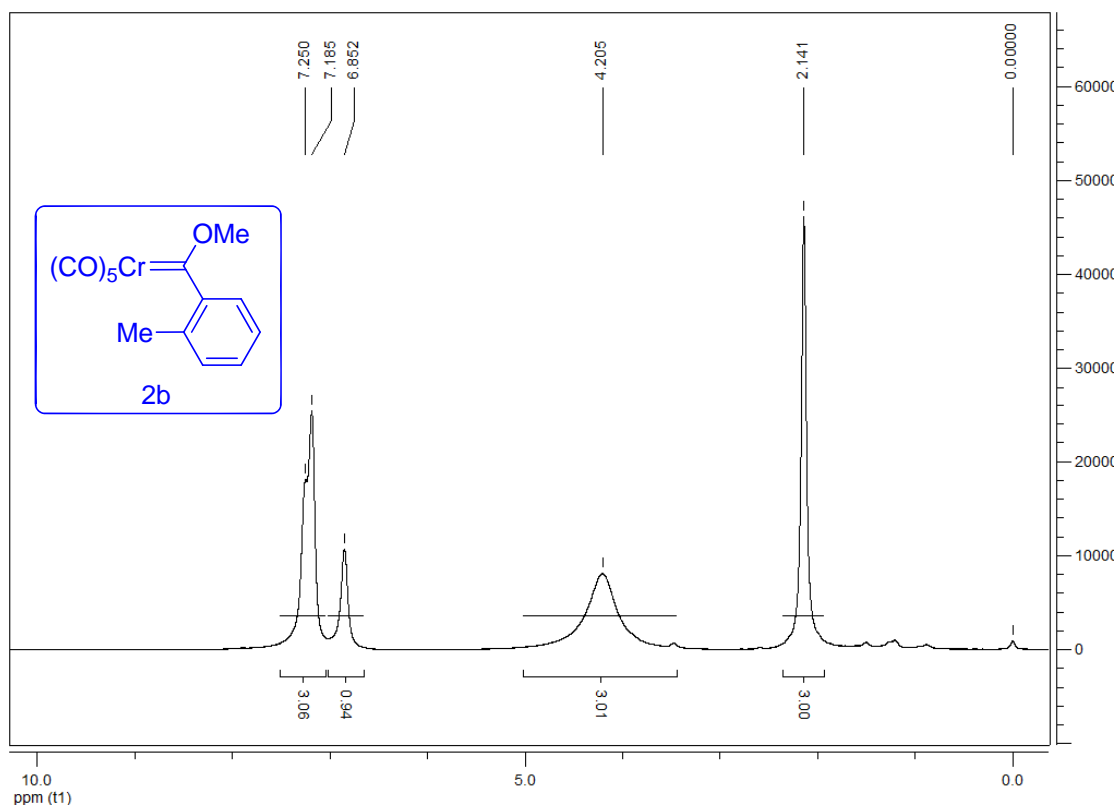
Email: wangjb@pku.edu.cn

¹H and ¹³C NMR spectra of substrates and products

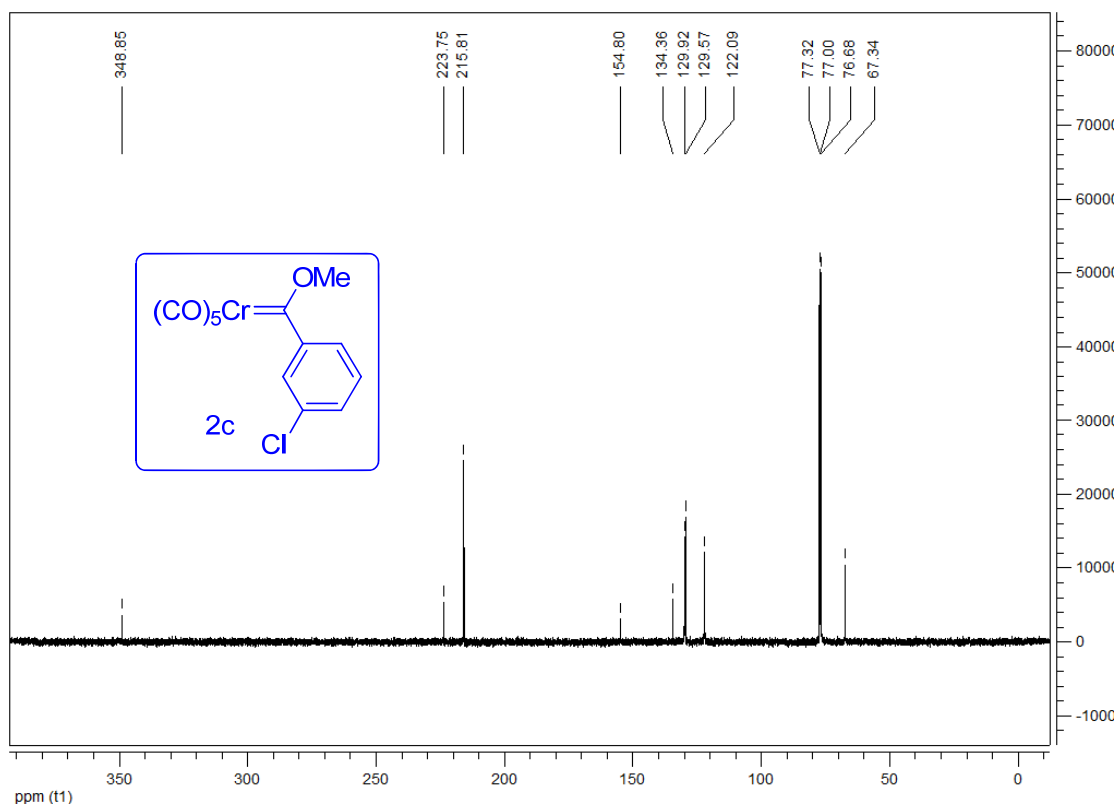
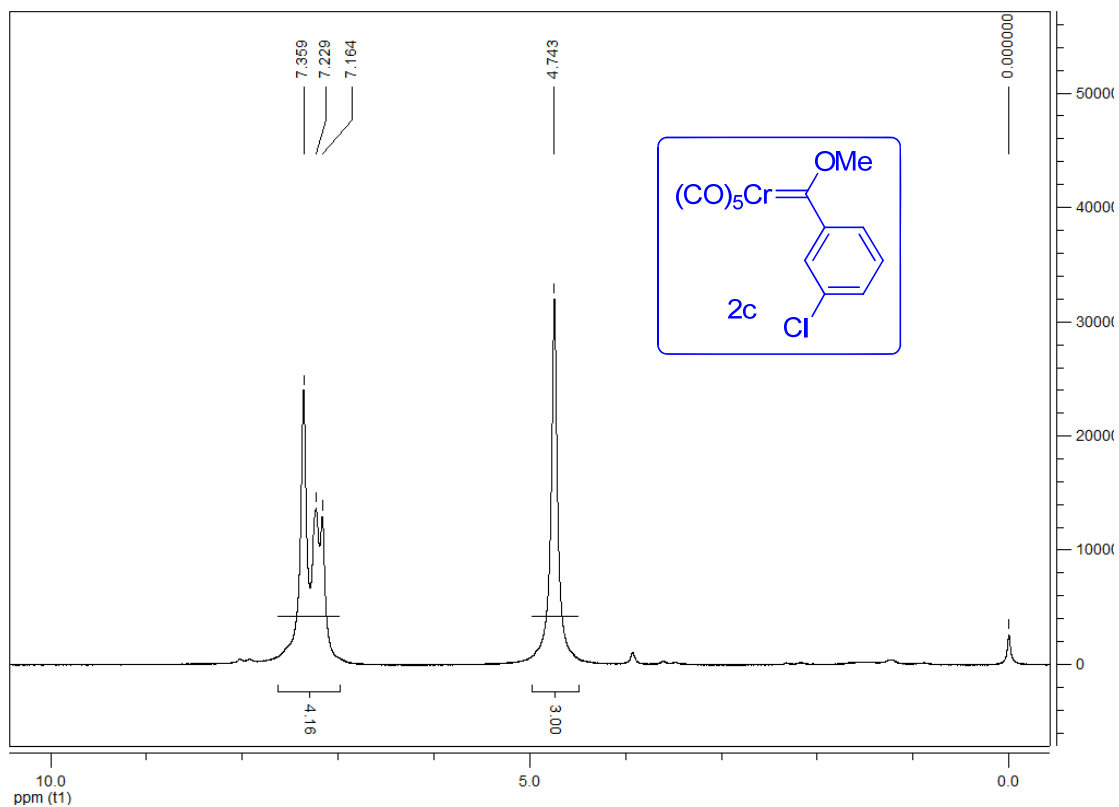
Pentacarbonyl[(methoxy)(phenyl)carbene]chromium(0) (2a)



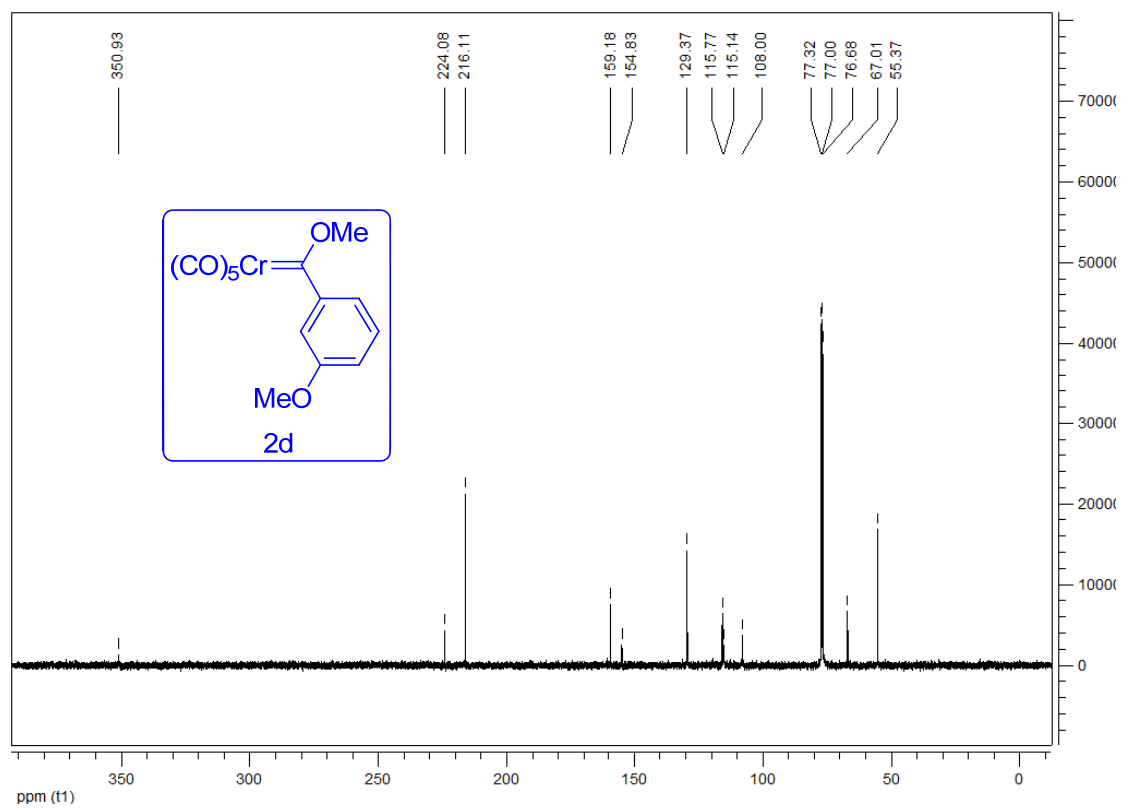
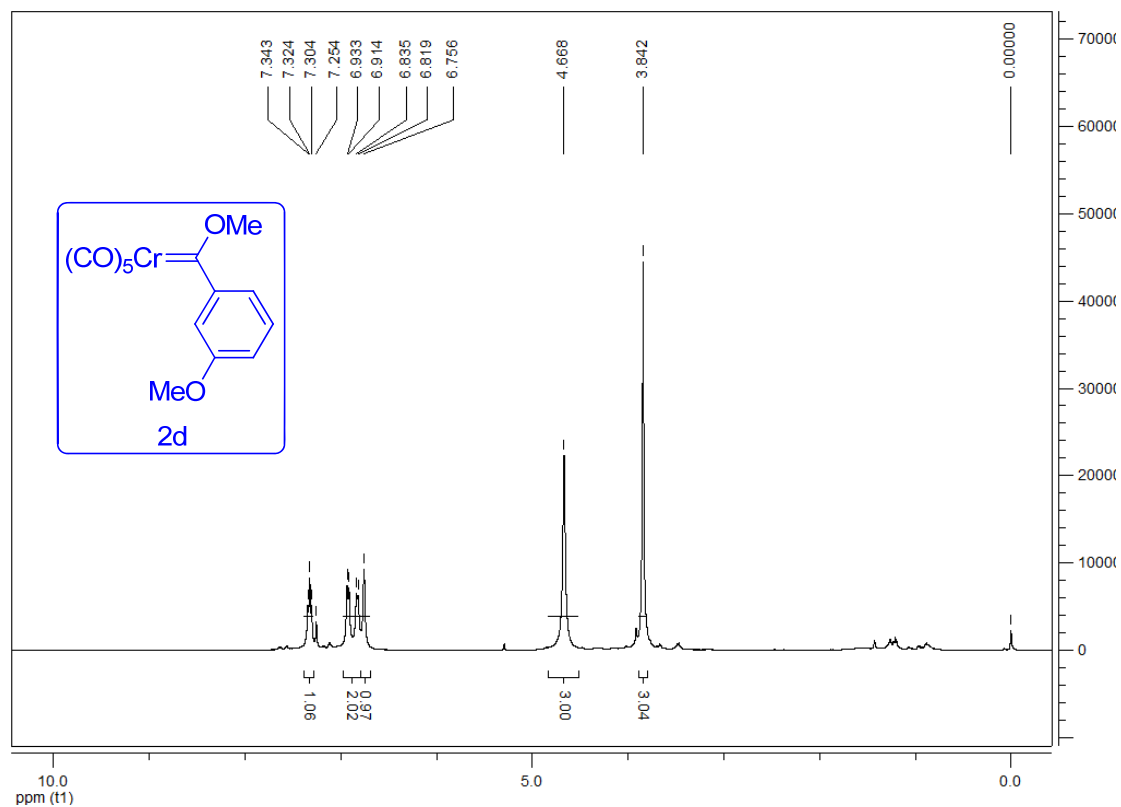
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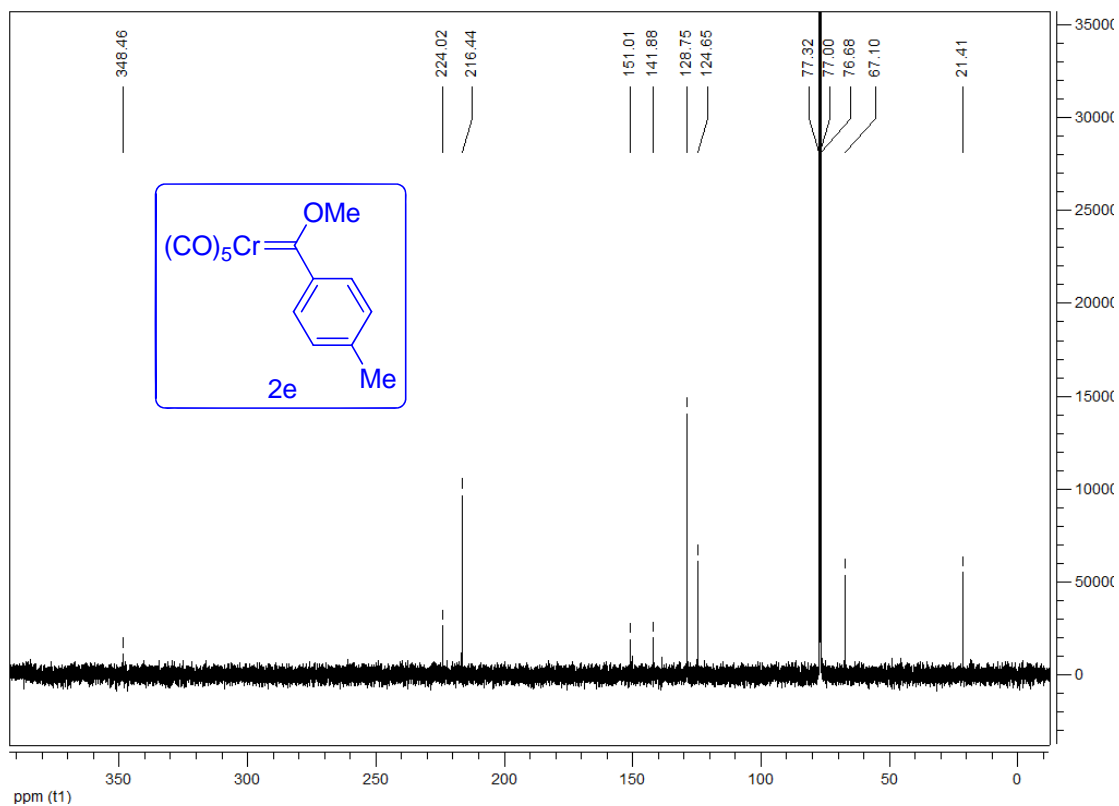
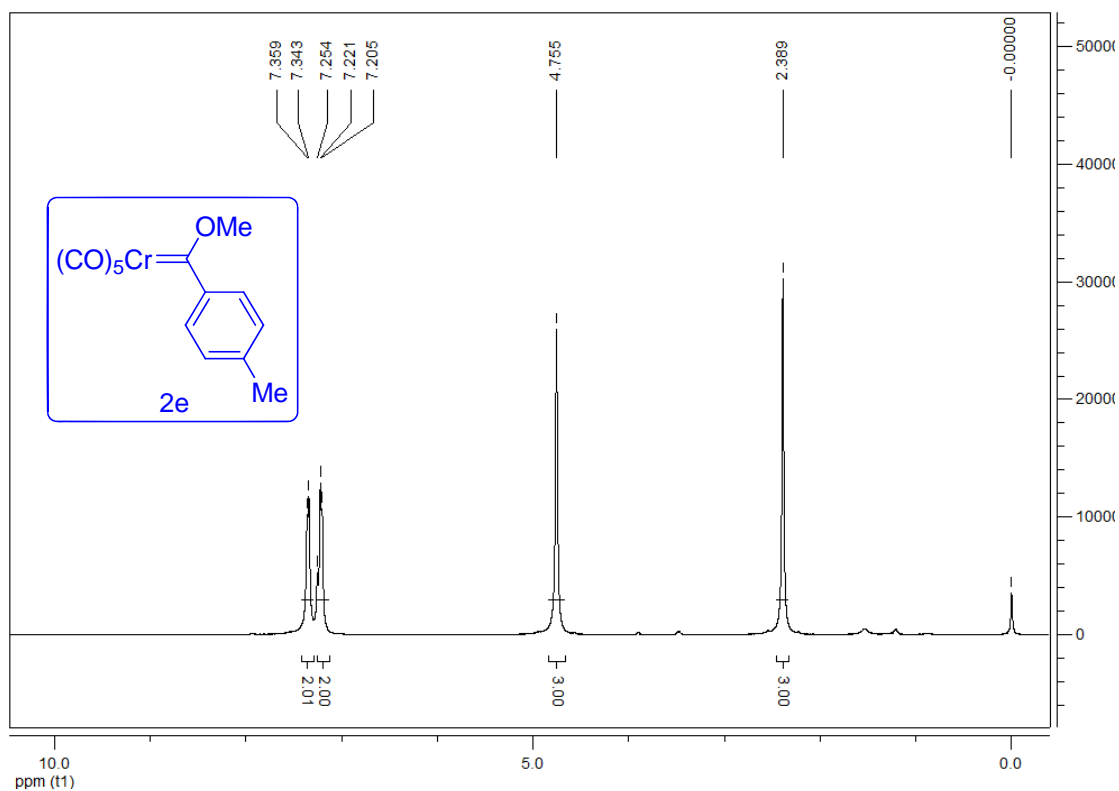
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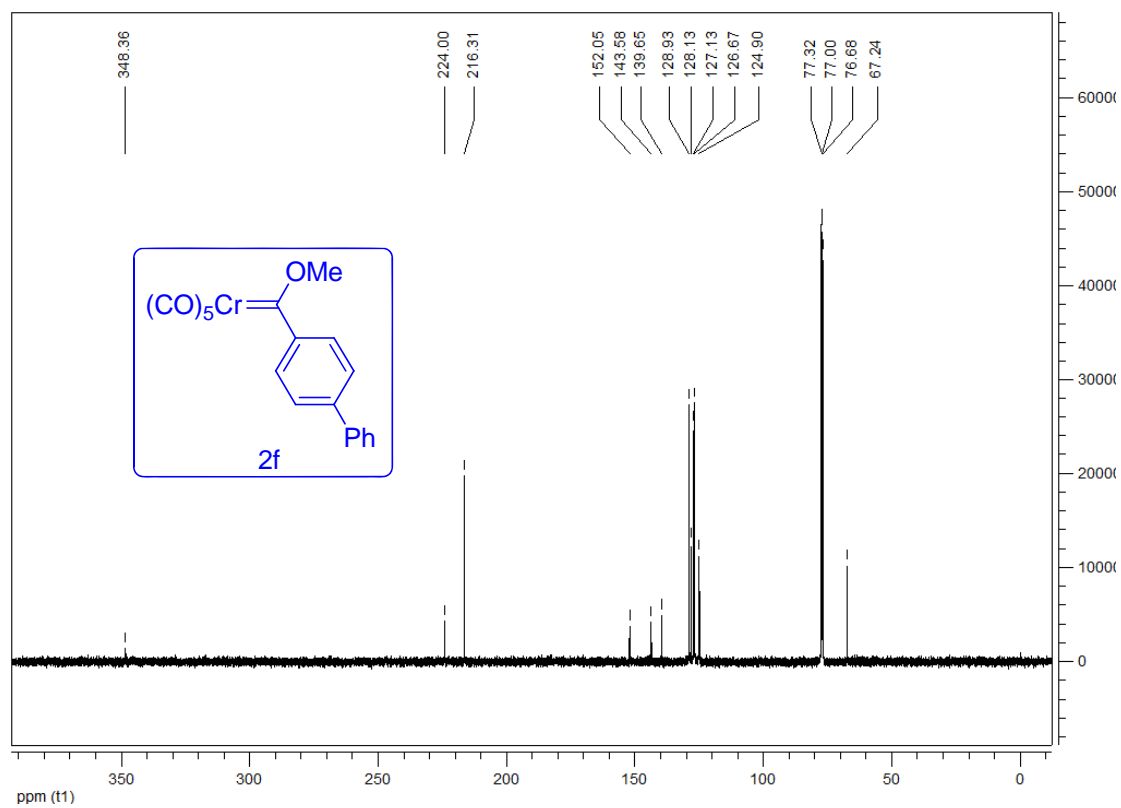
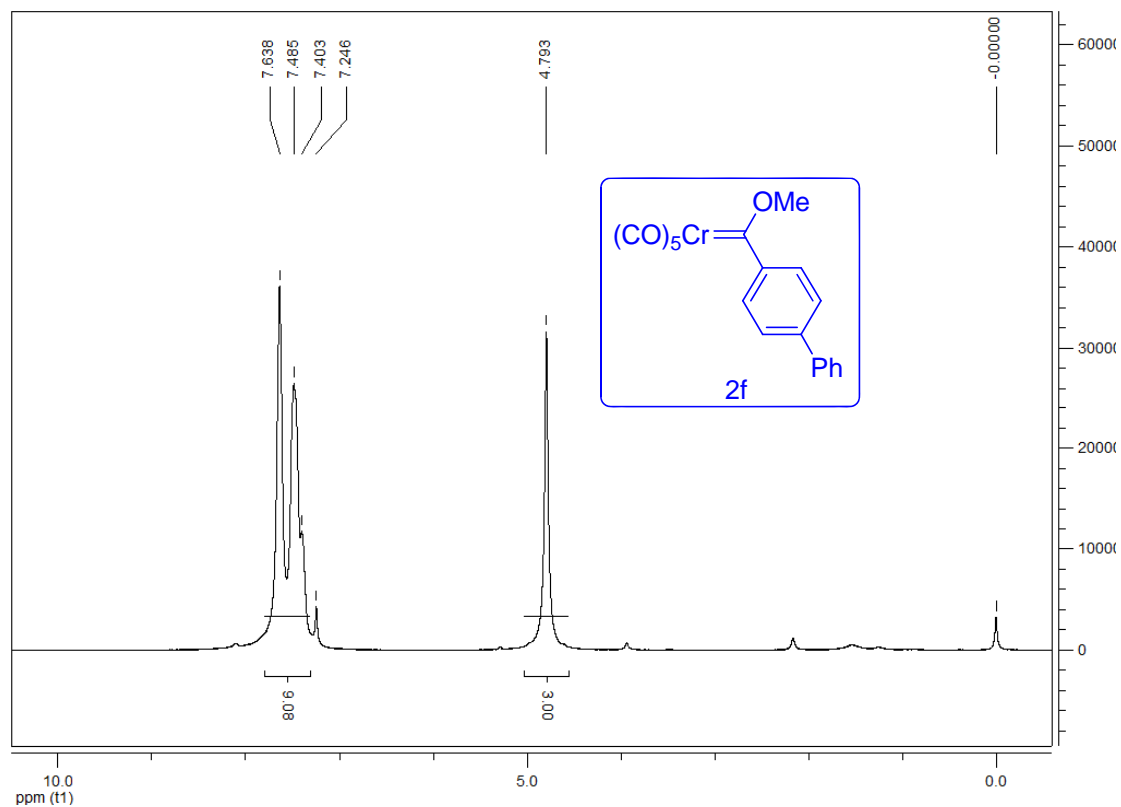
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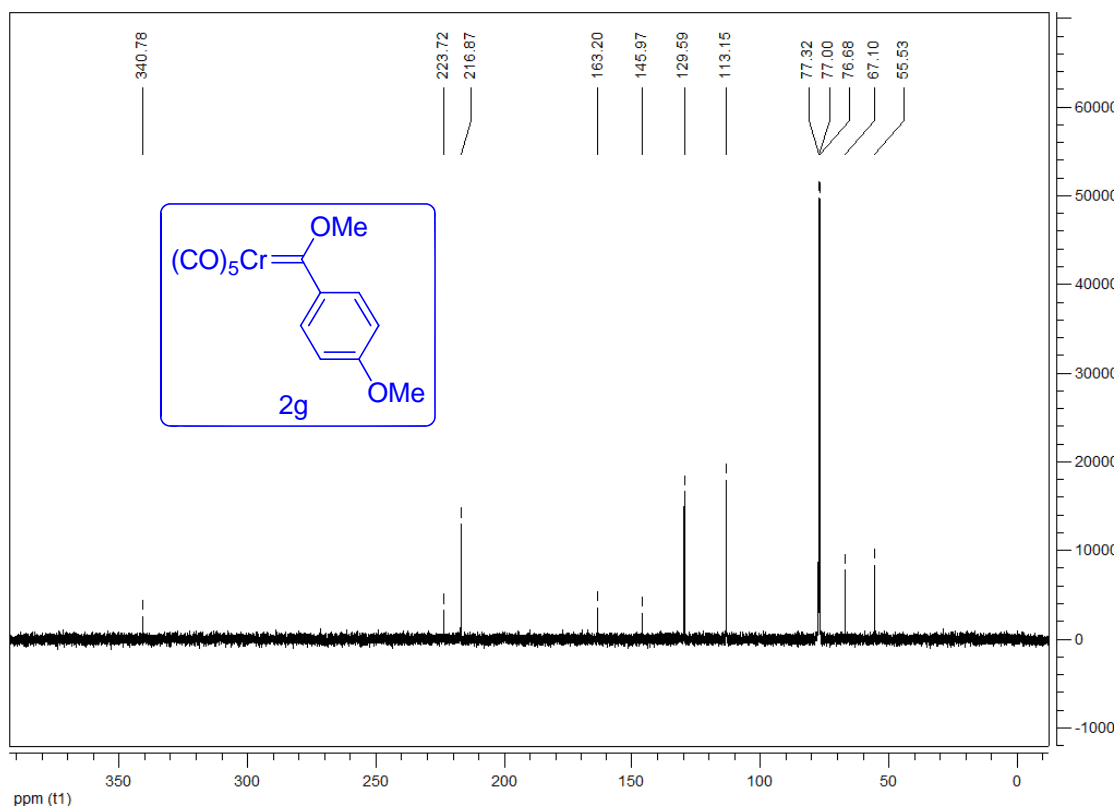
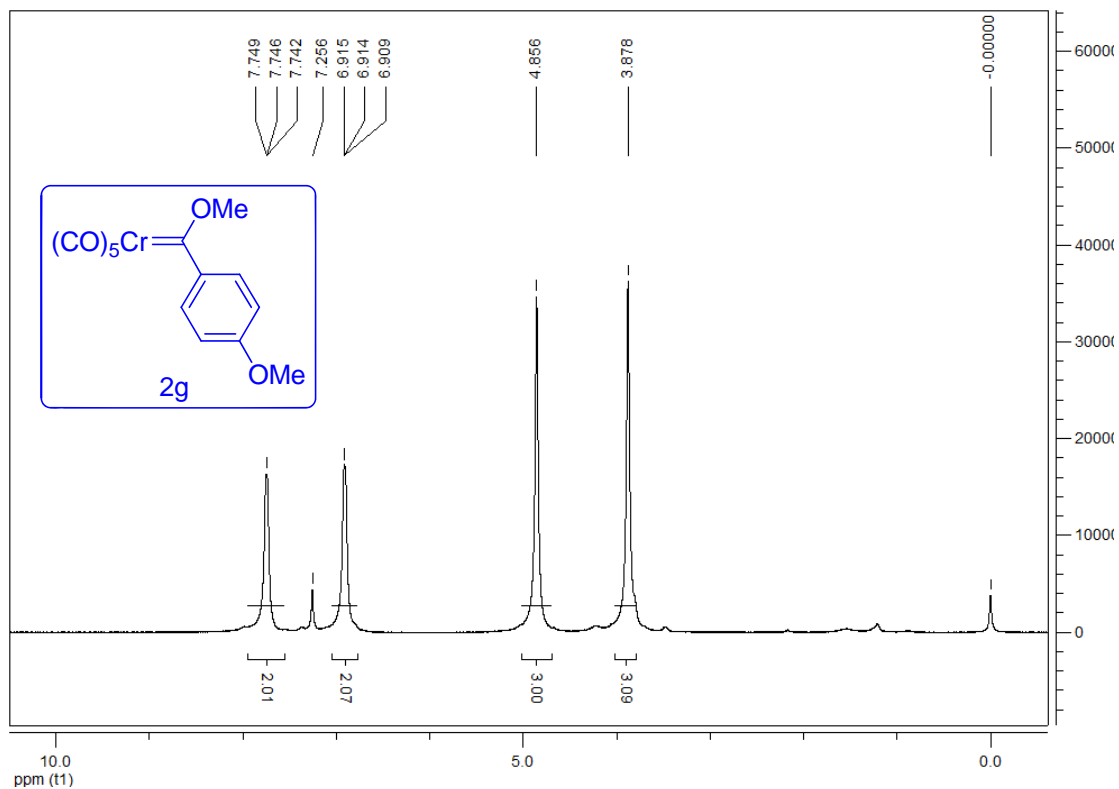
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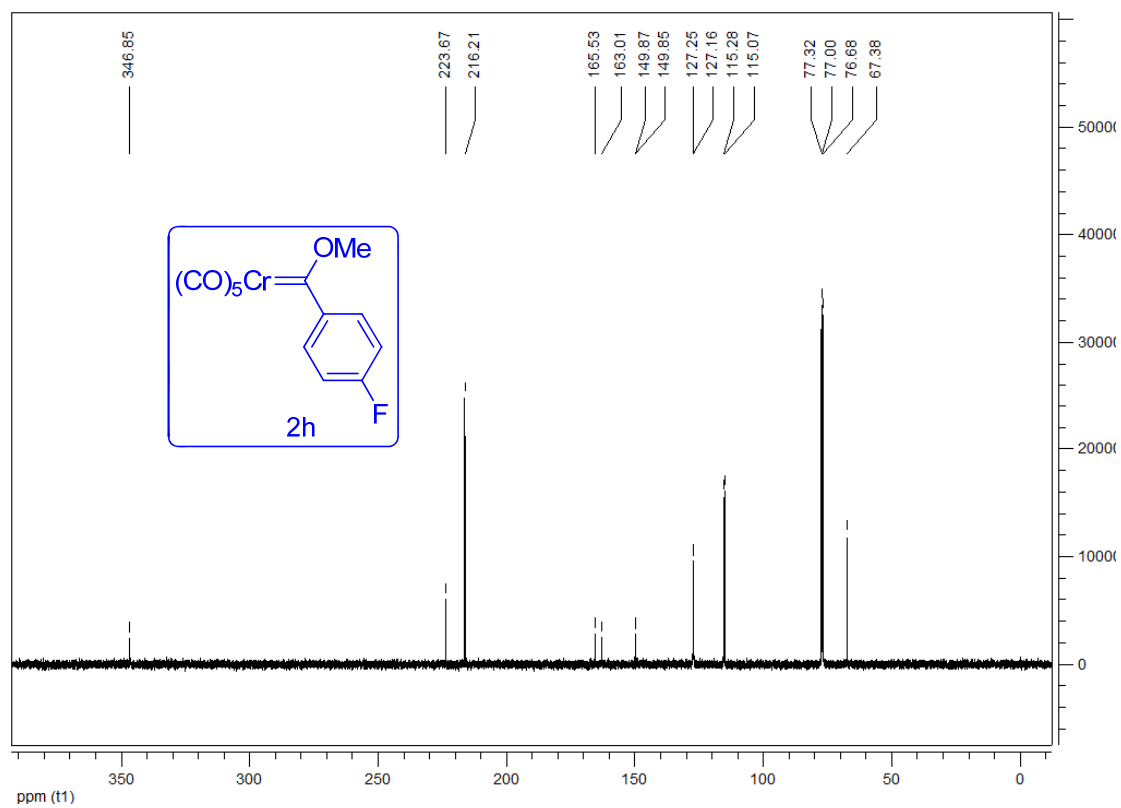
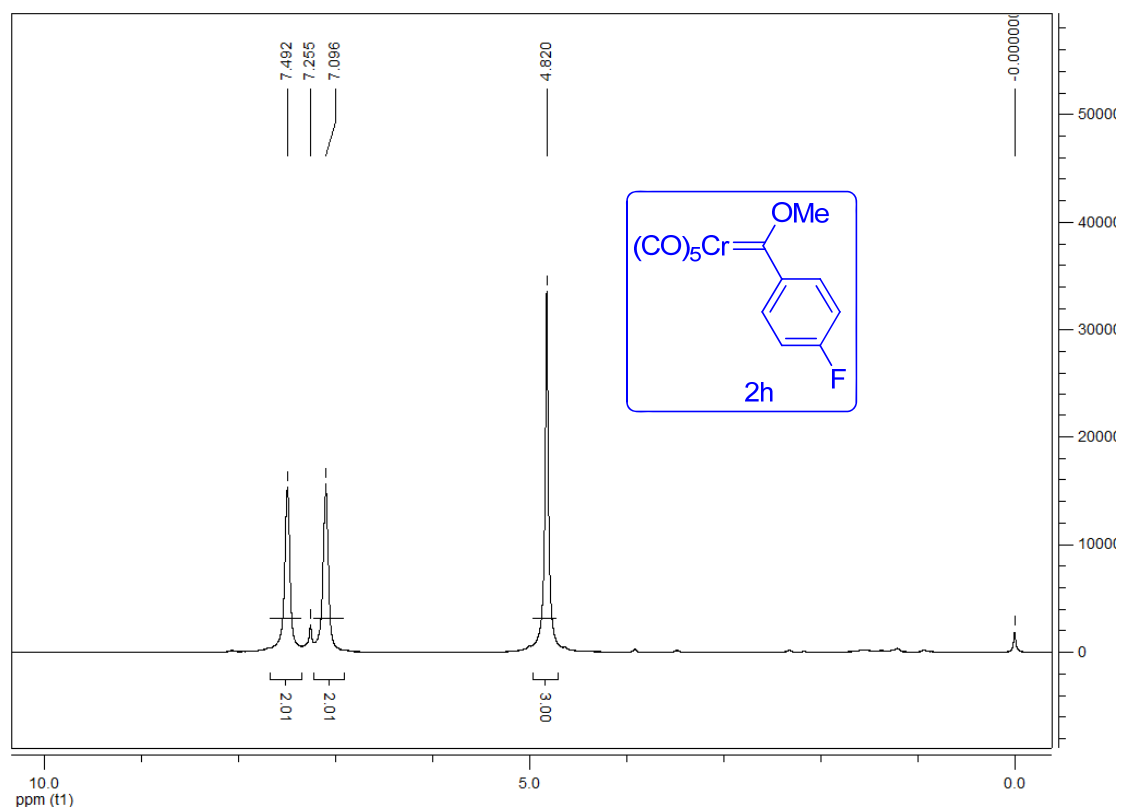
Pentacarbonyl[(4-biphenyl)(methoxy)carbene]chromium(0) (2f)



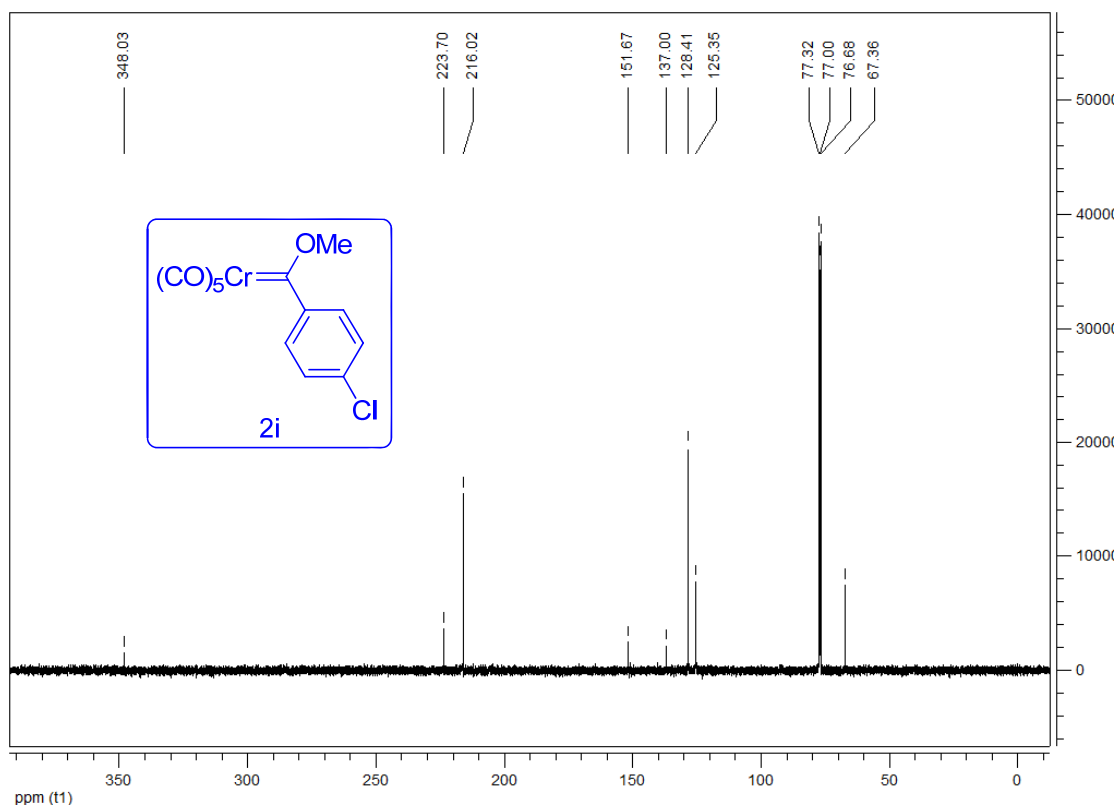
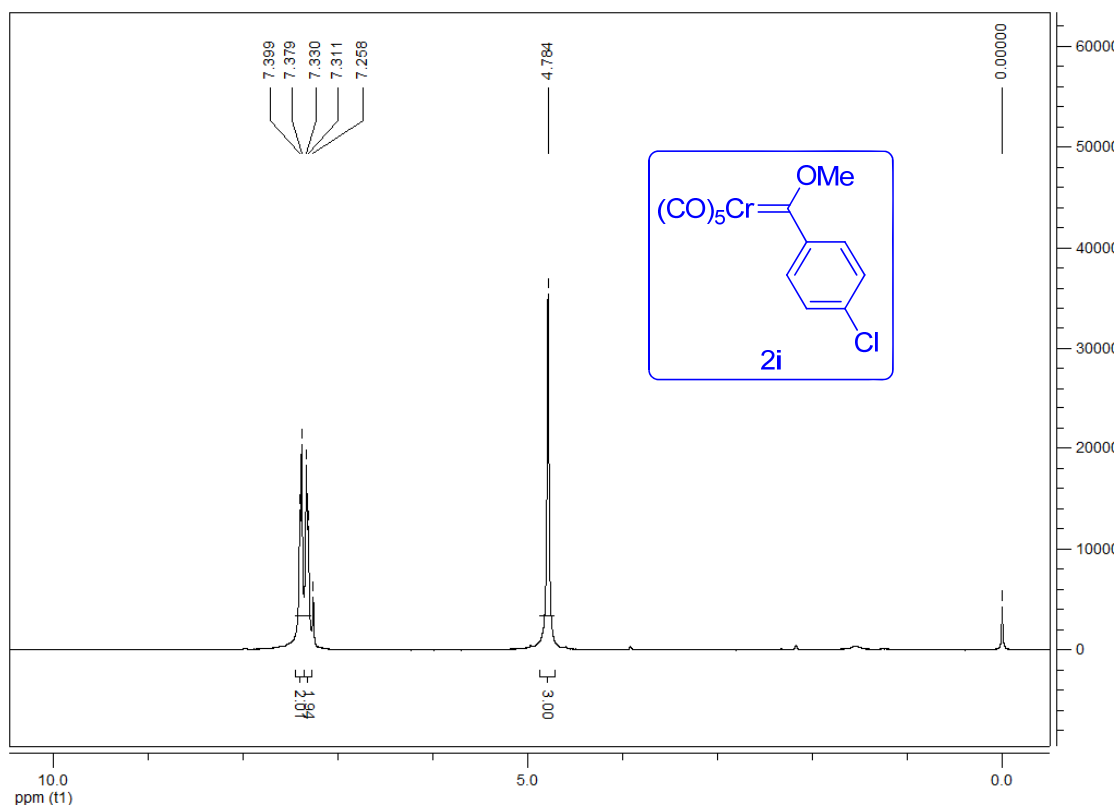
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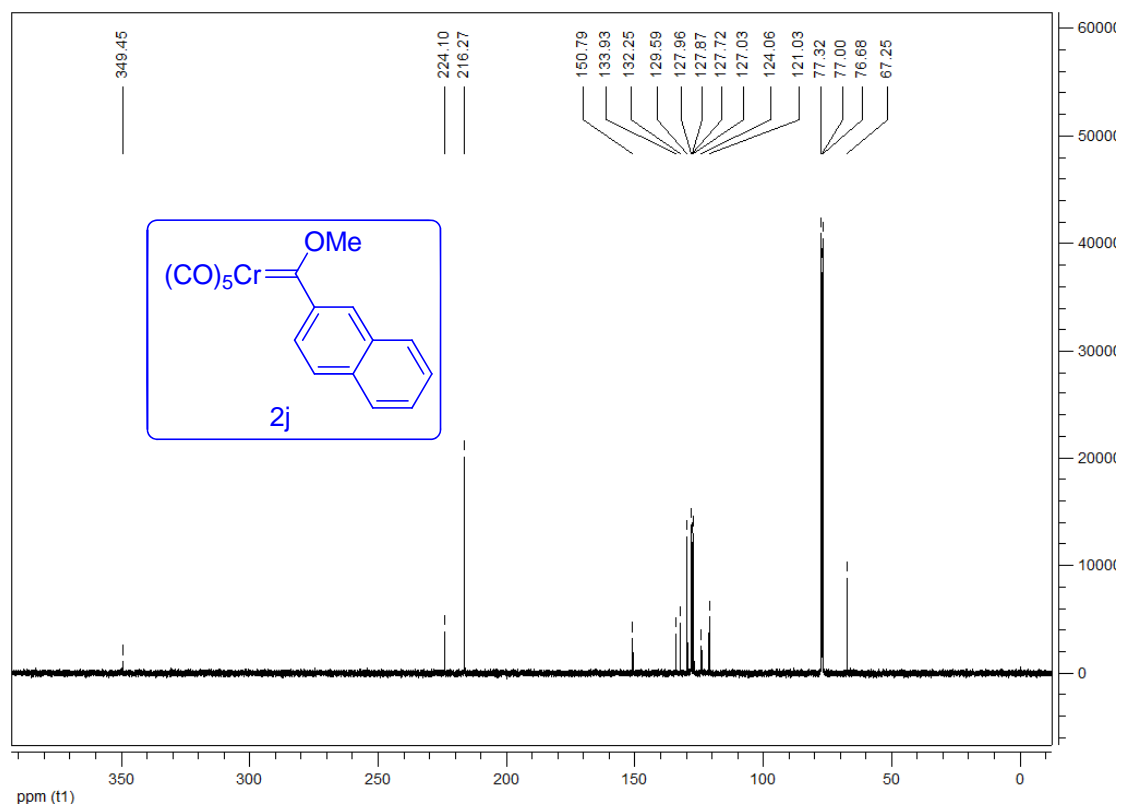
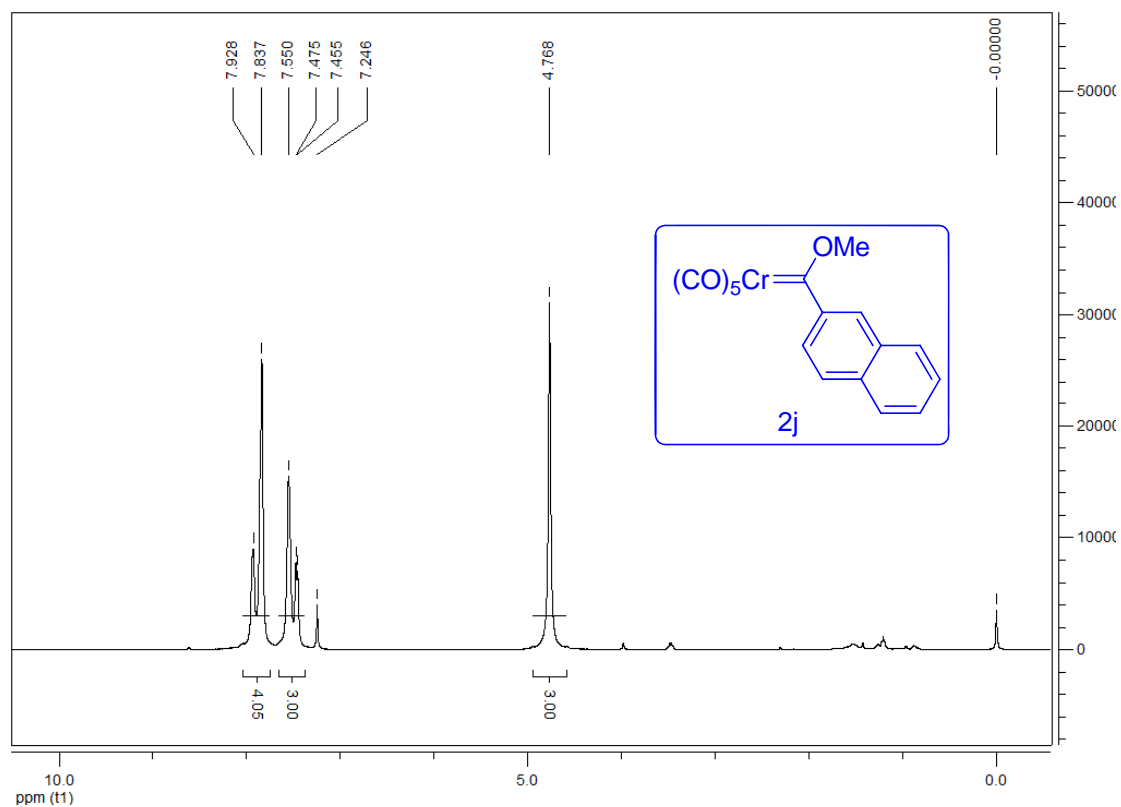
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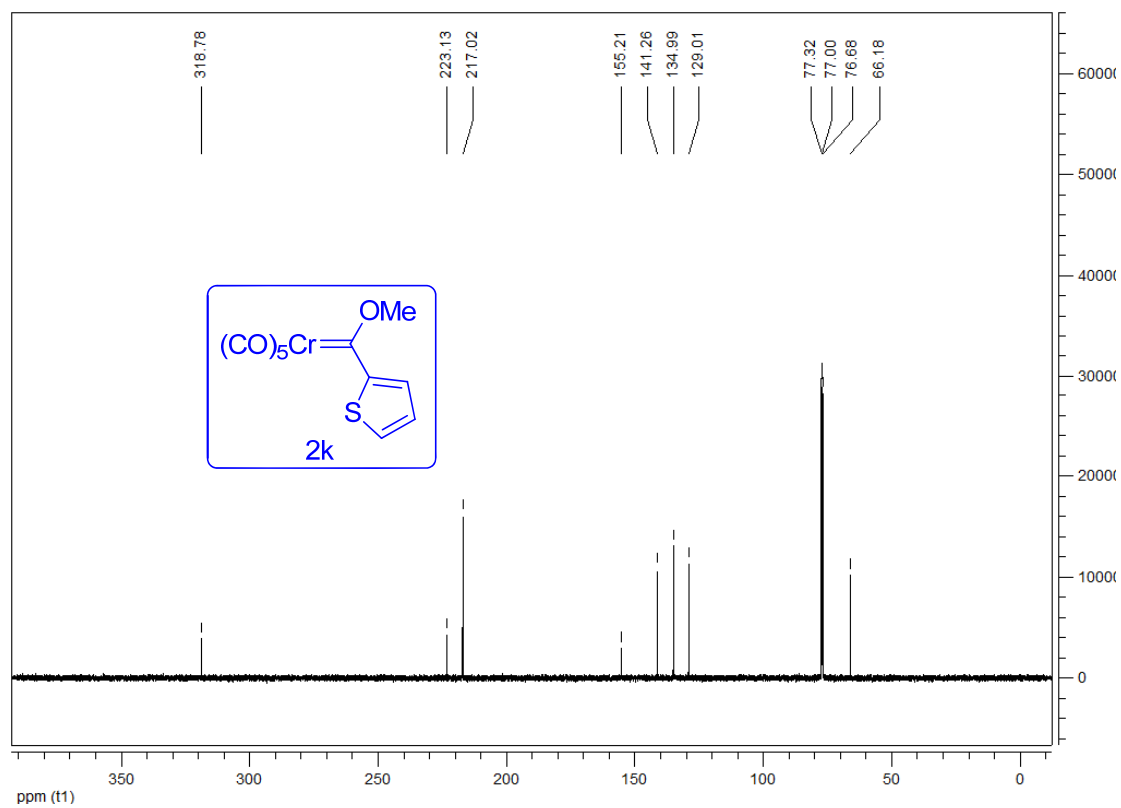
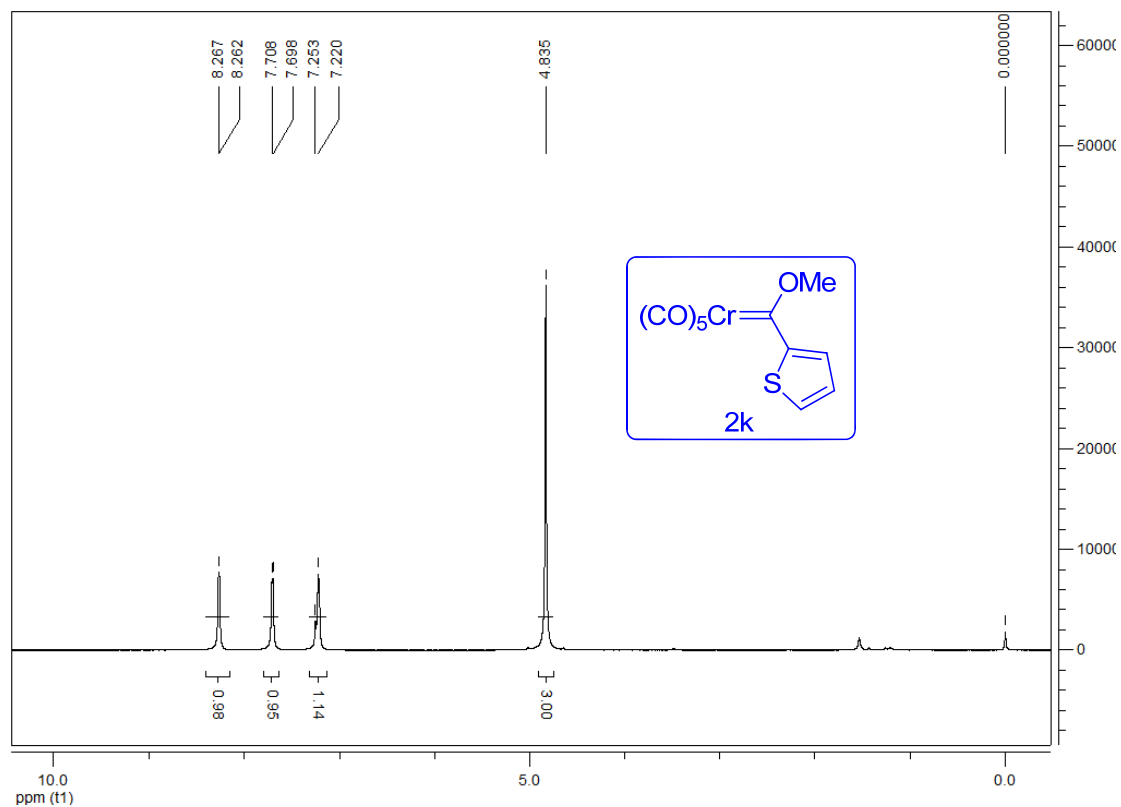
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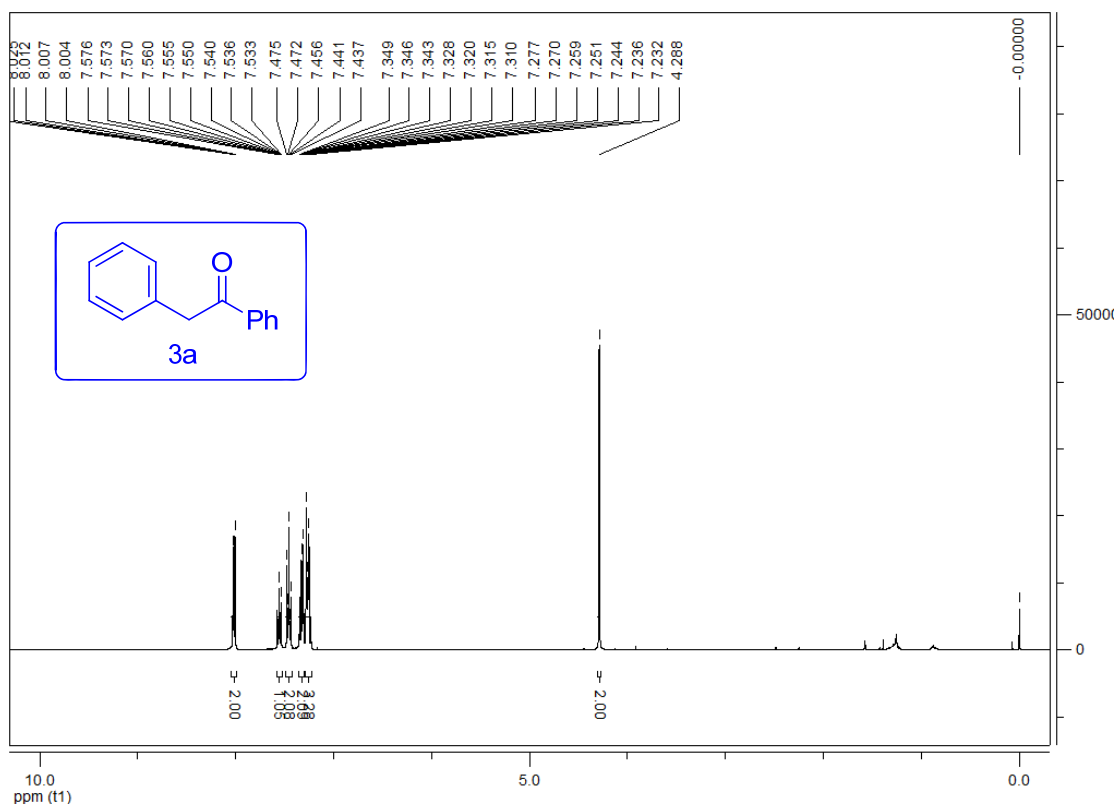
Pentacarbonyl[methoxy(2-naphthalenyl)carbene]chromium(0) (2j)



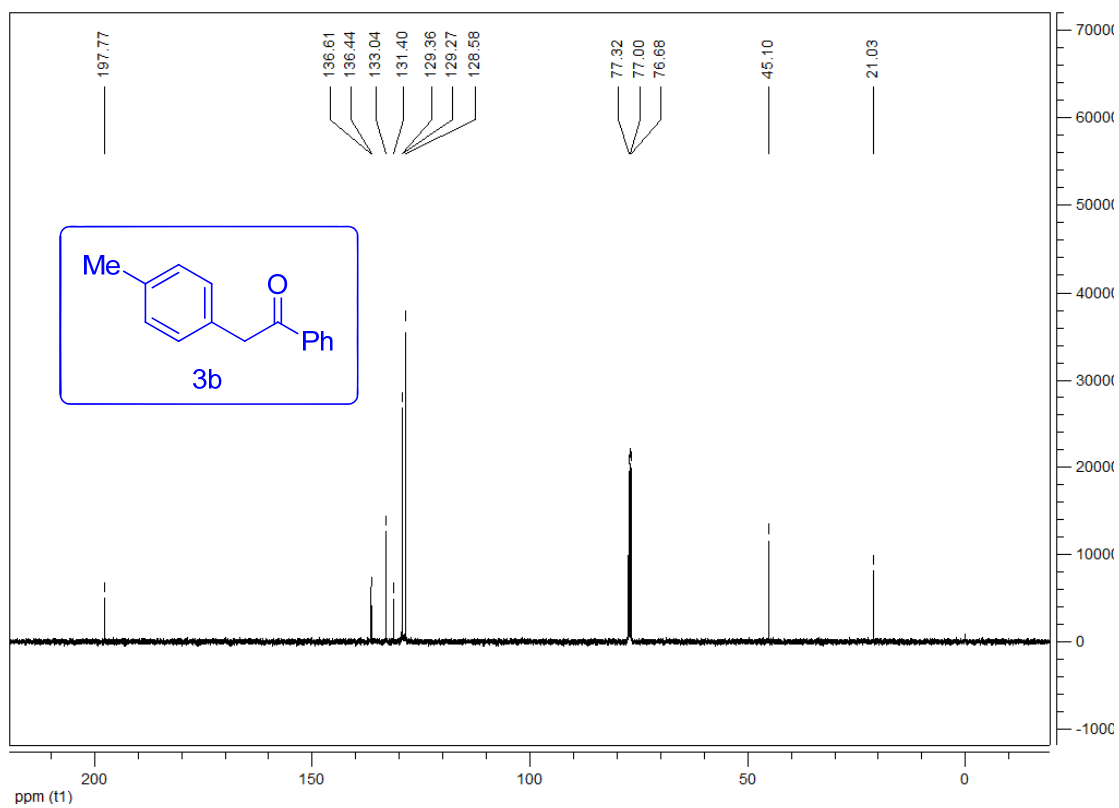
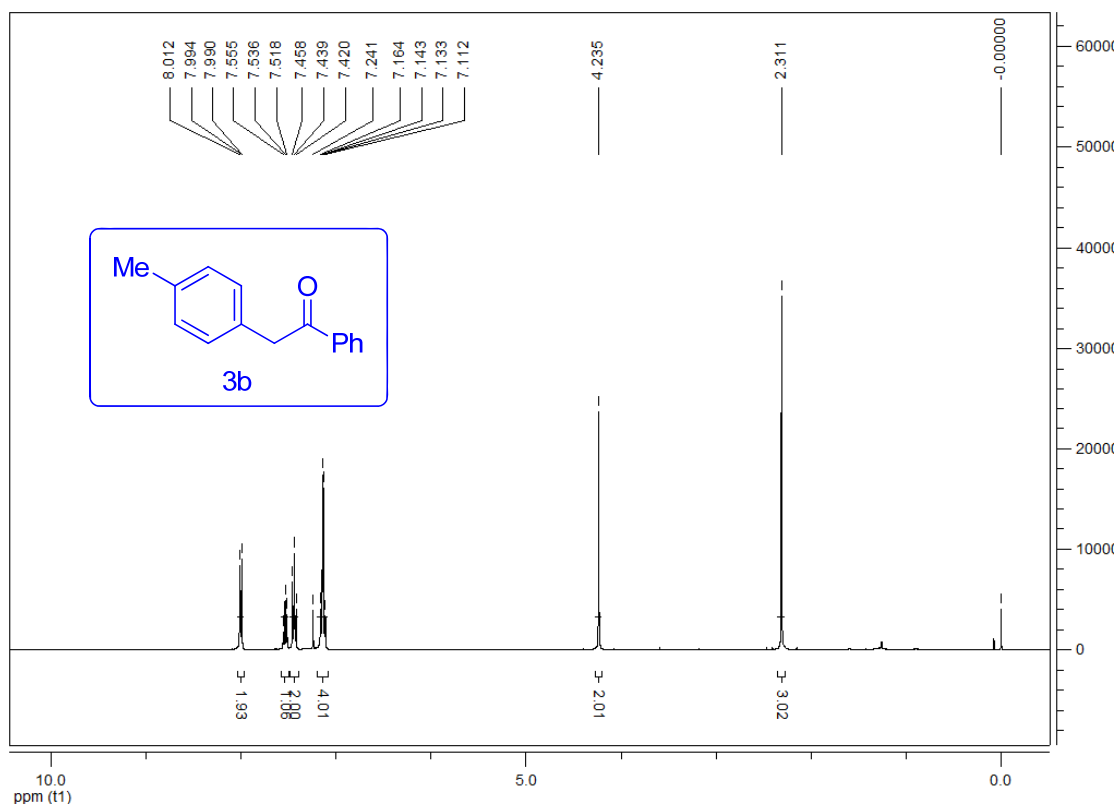
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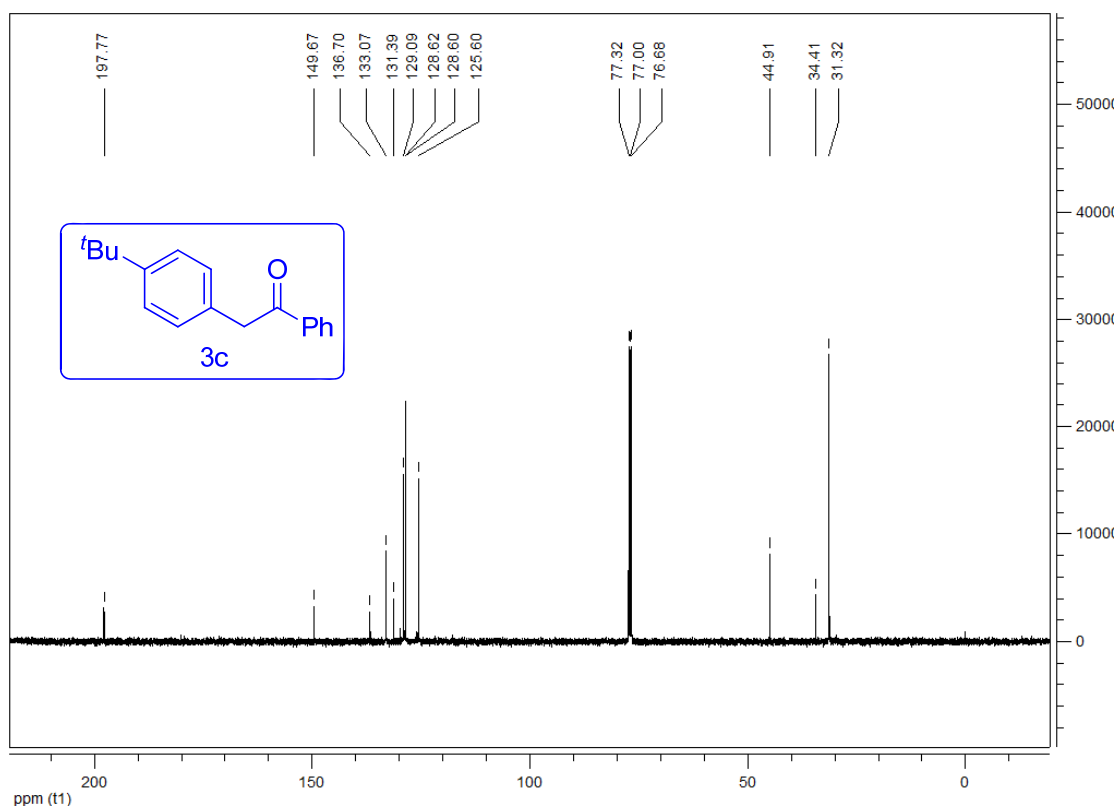
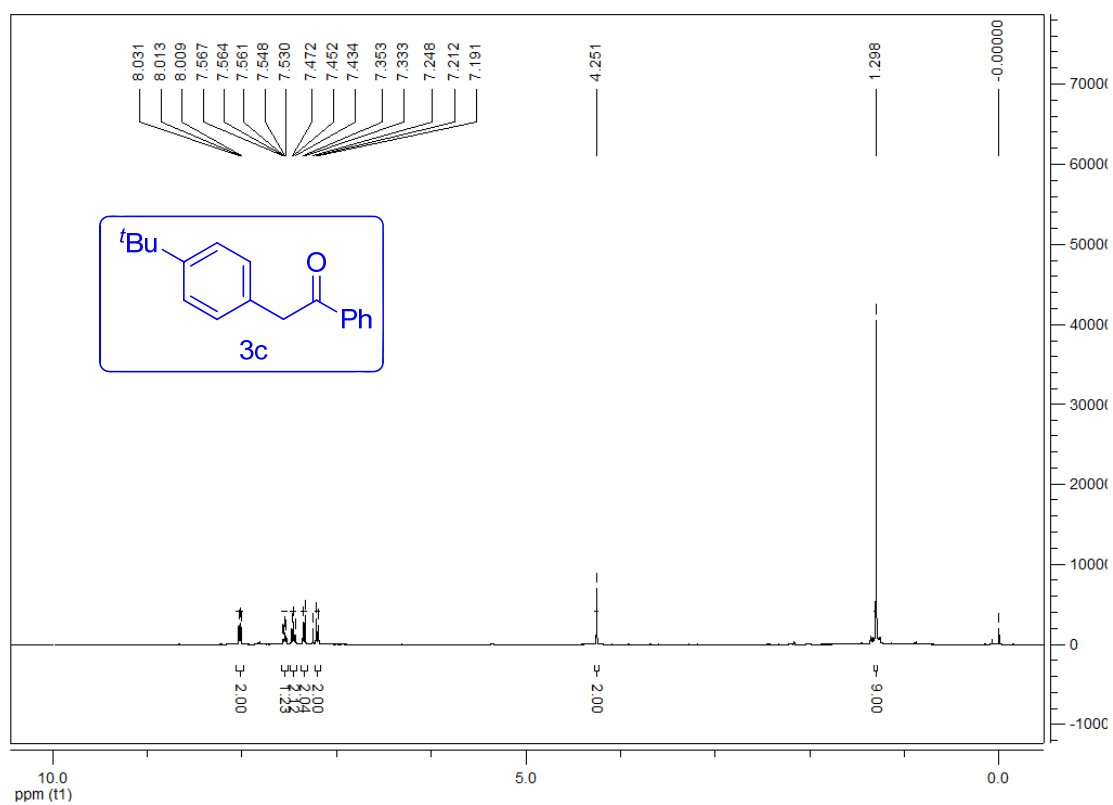
1,2-Diphenylethanone (3a)



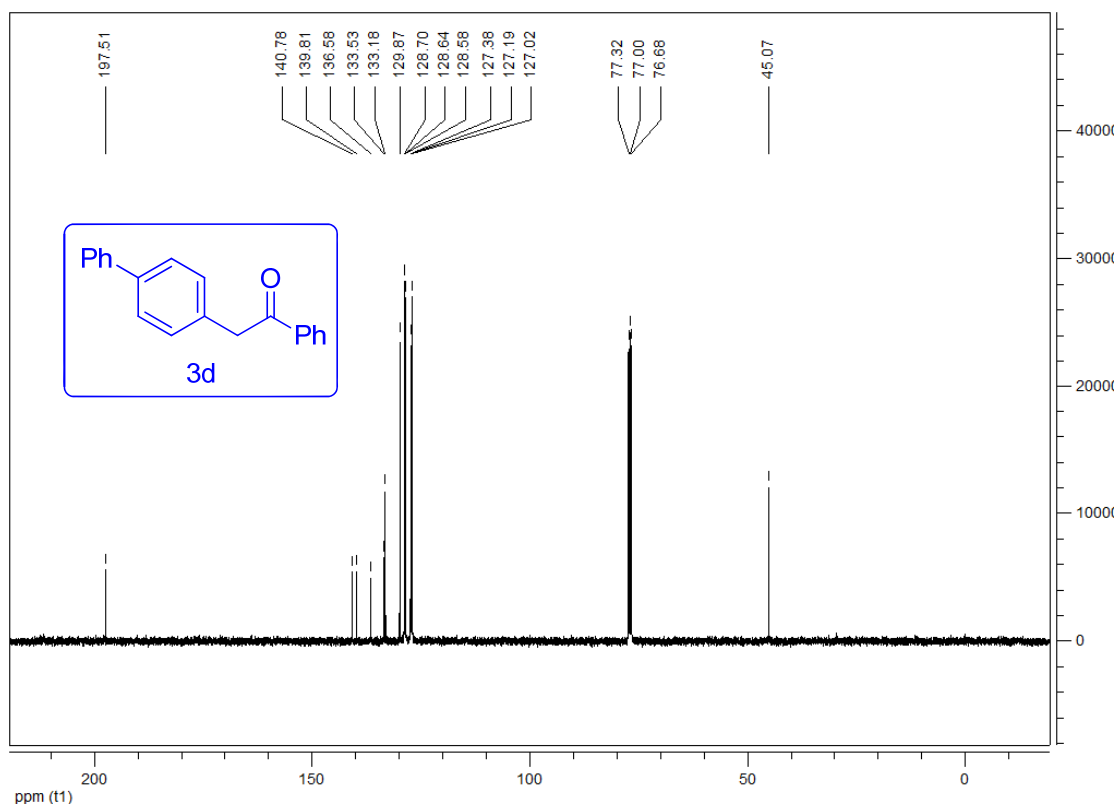
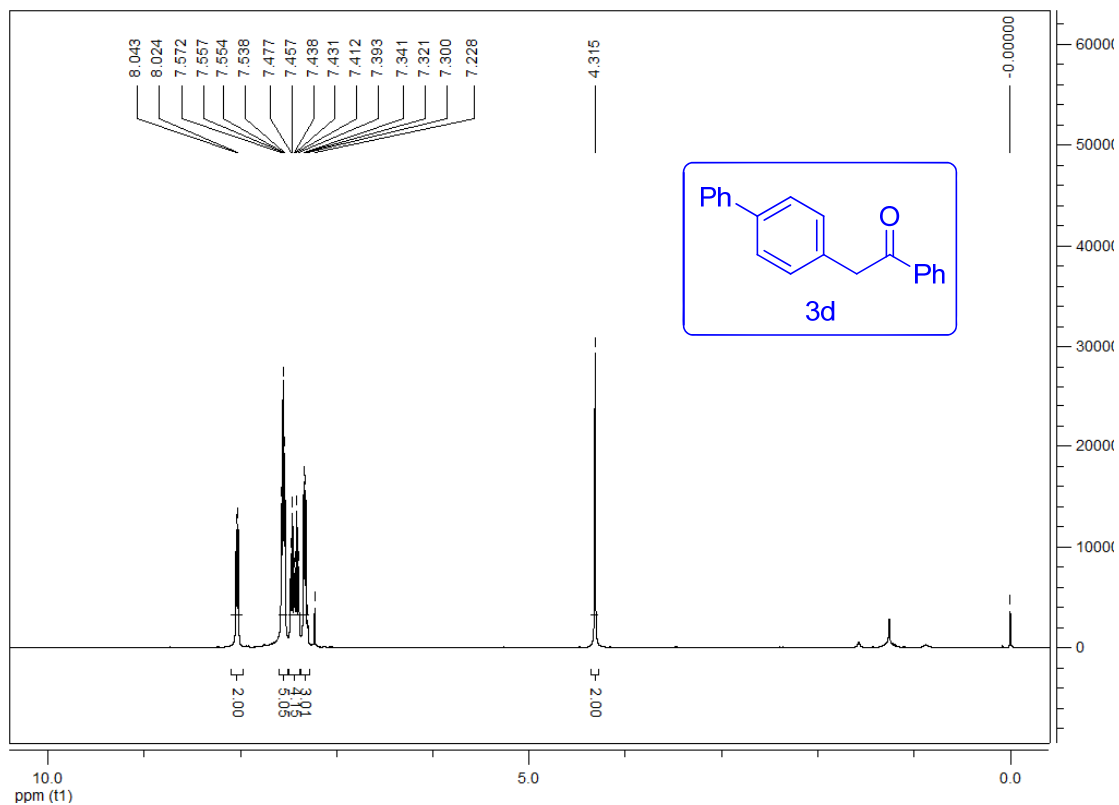
1-Phenyl-2-(p-tolyl)ethanone (3b)



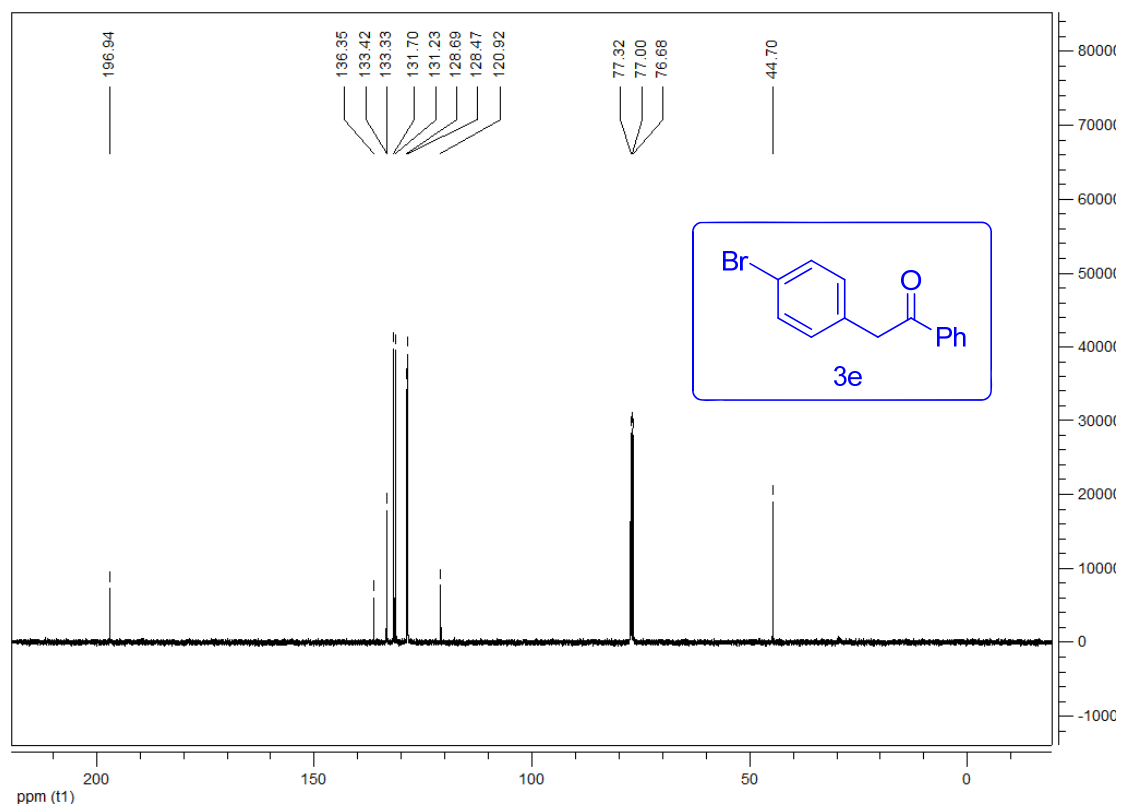
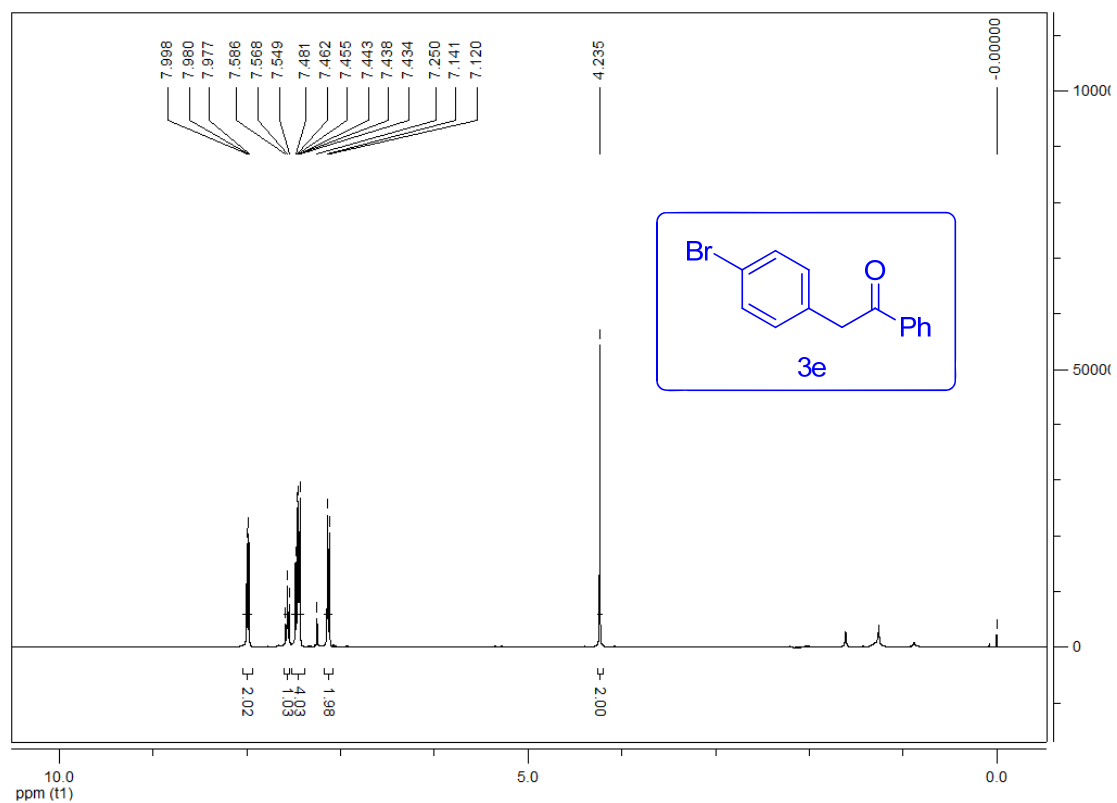
2-(4-(tert-Butyl)phenyl)-1-phenylethanone (3c)



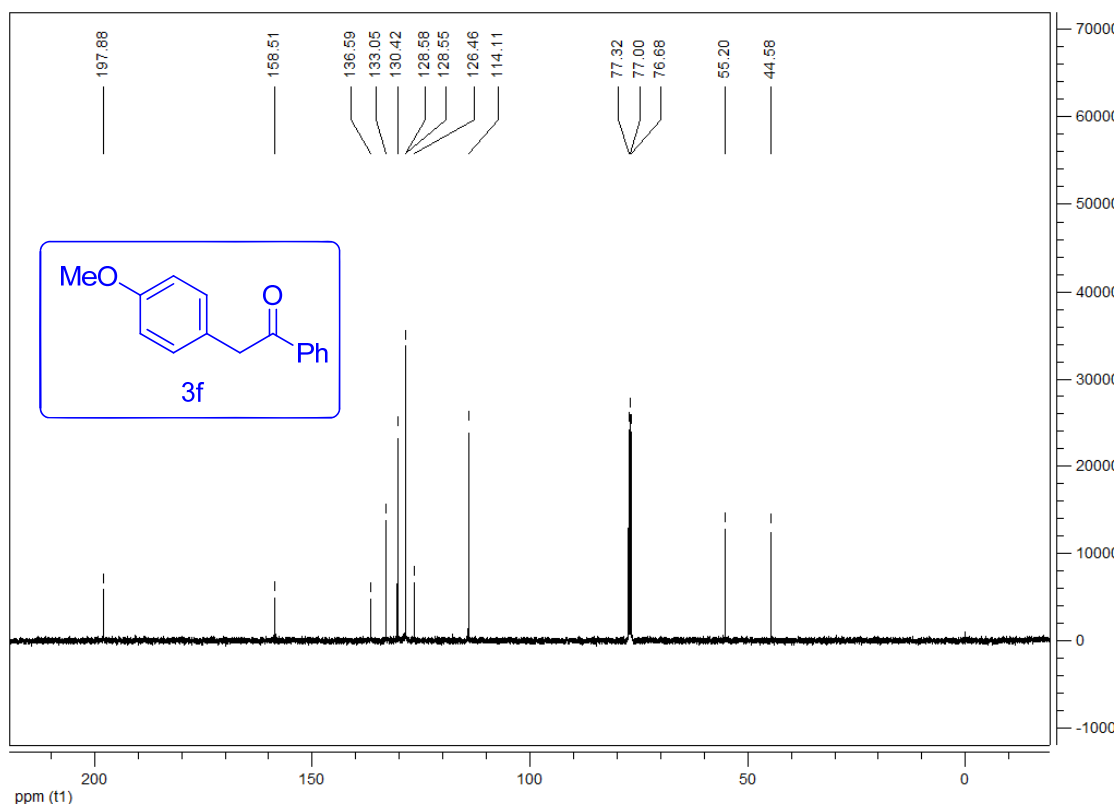
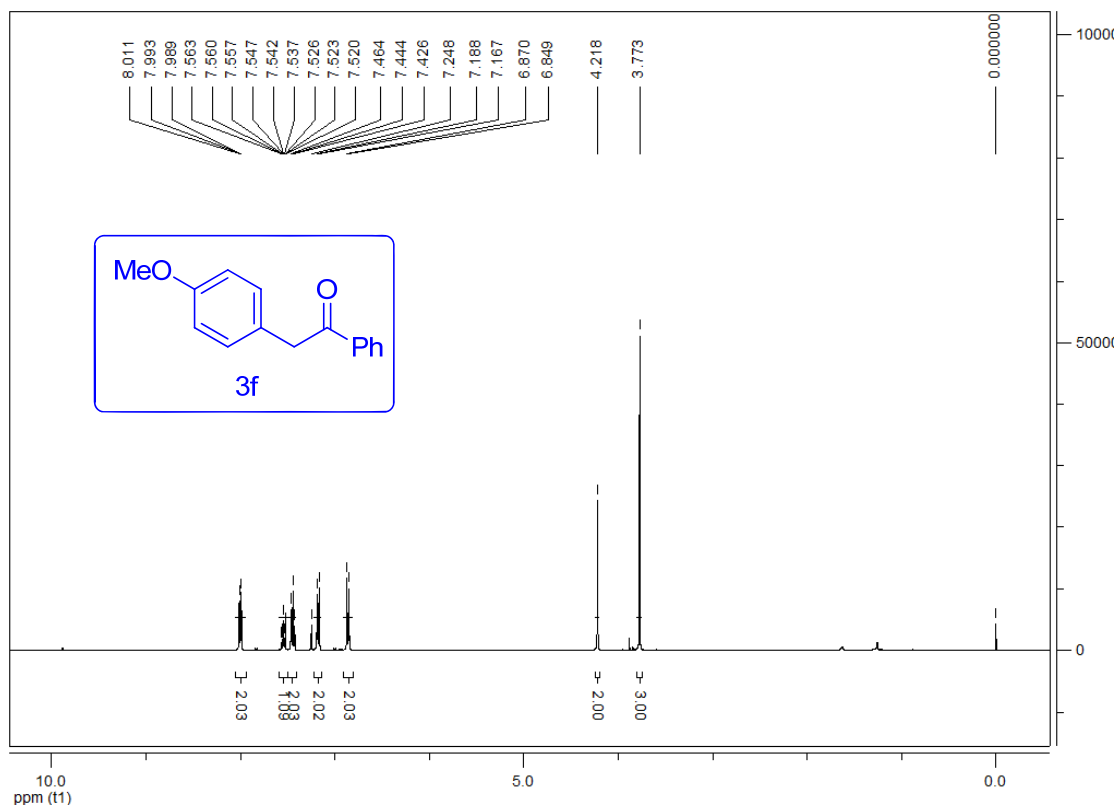
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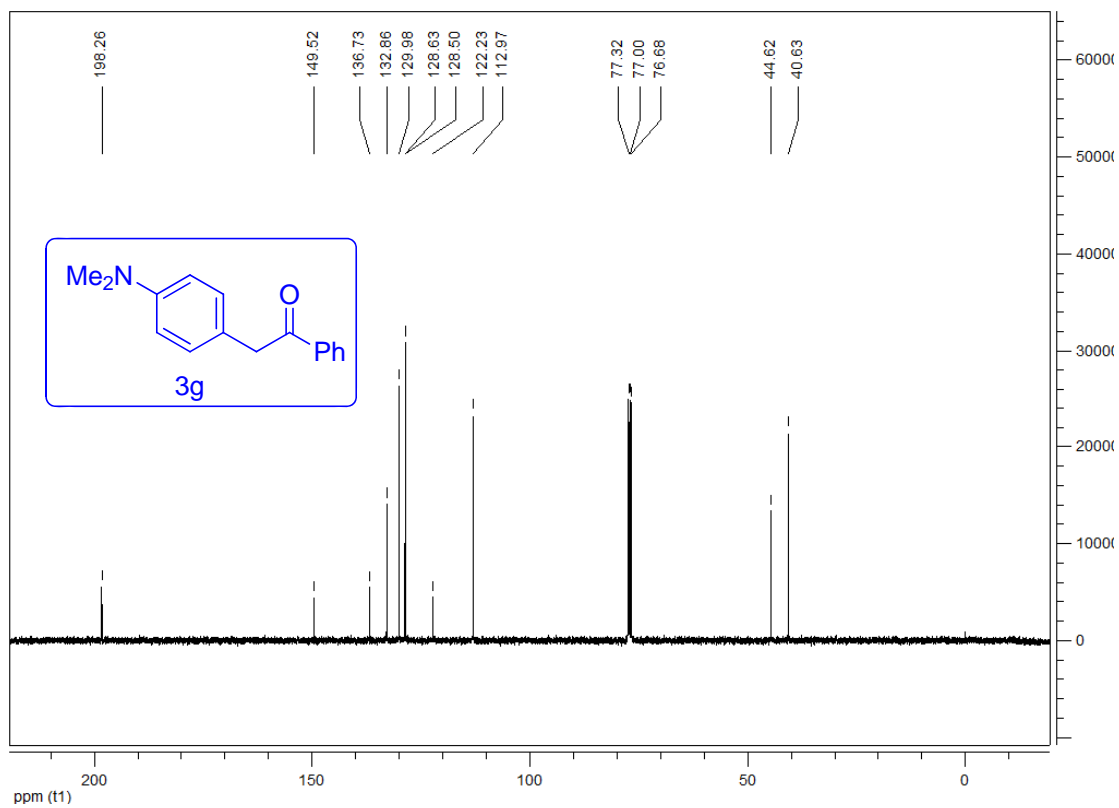
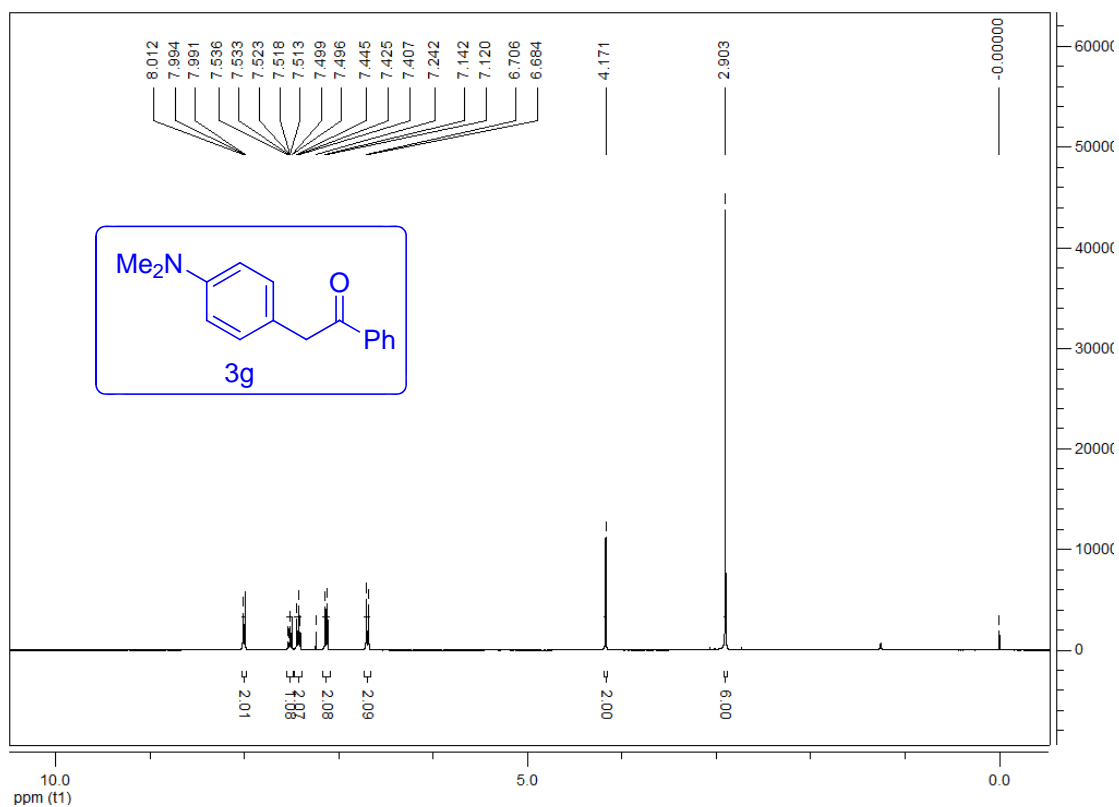
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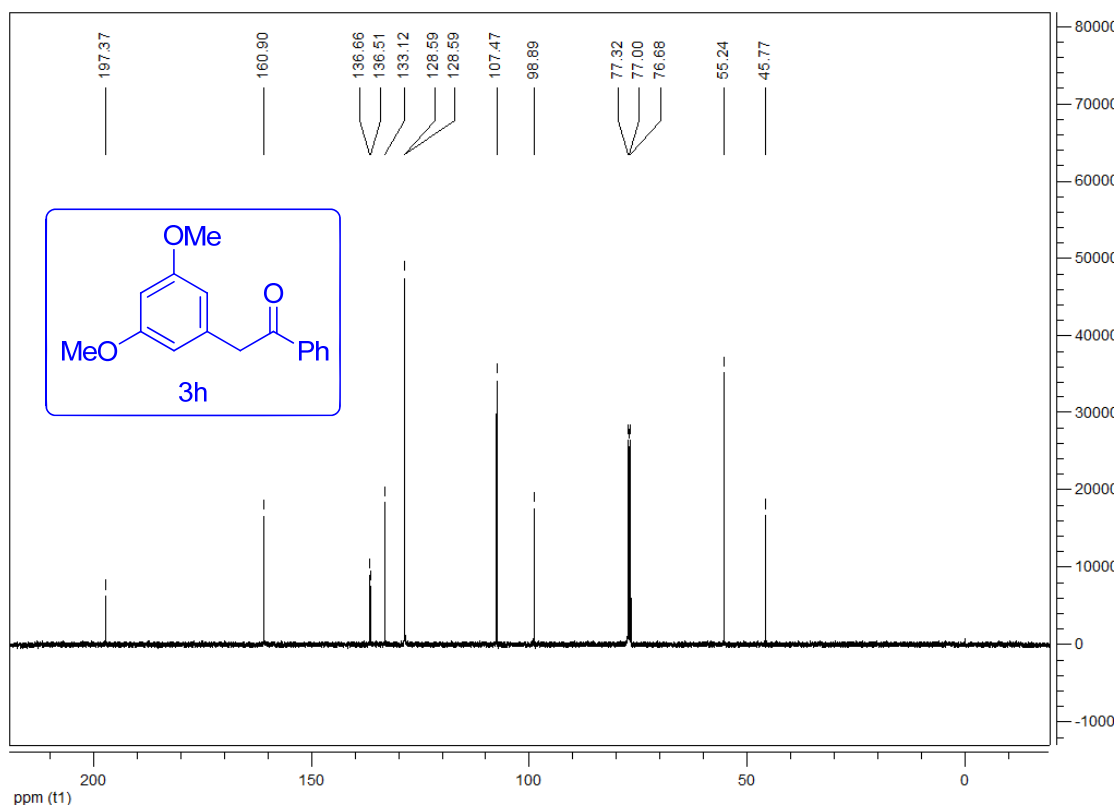
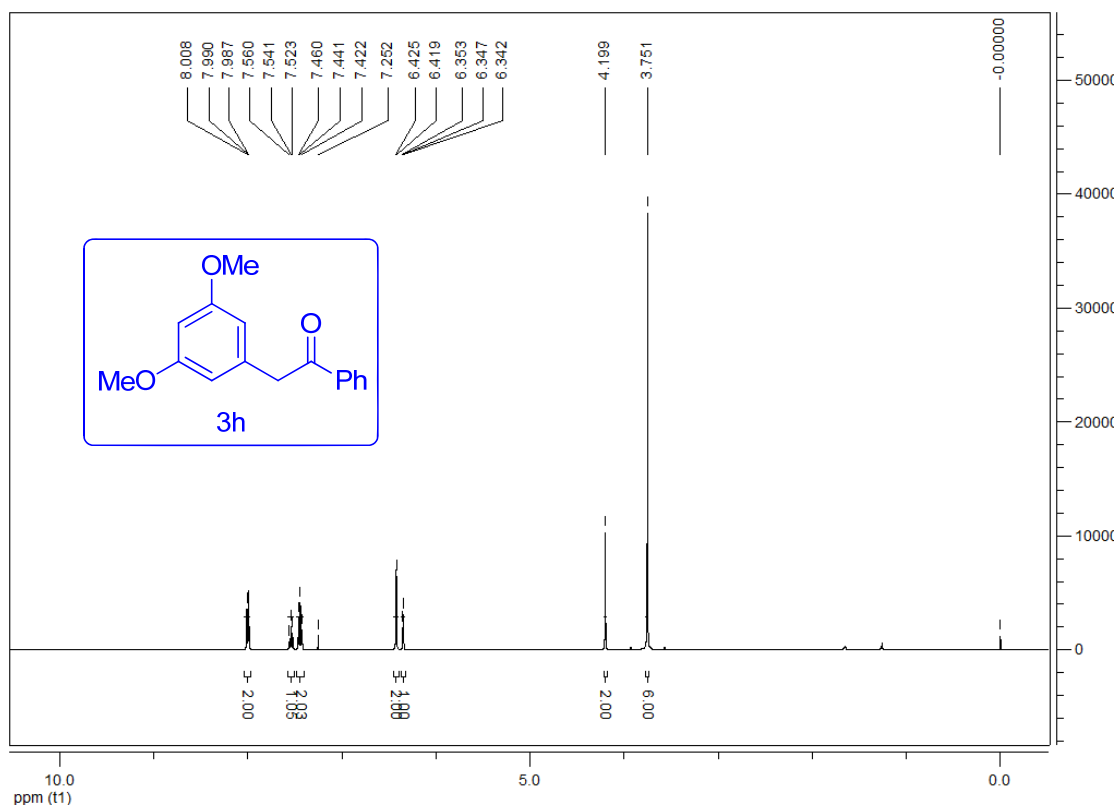
2-(4-Methoxyphenyl)-1-phenylethanone (3f)



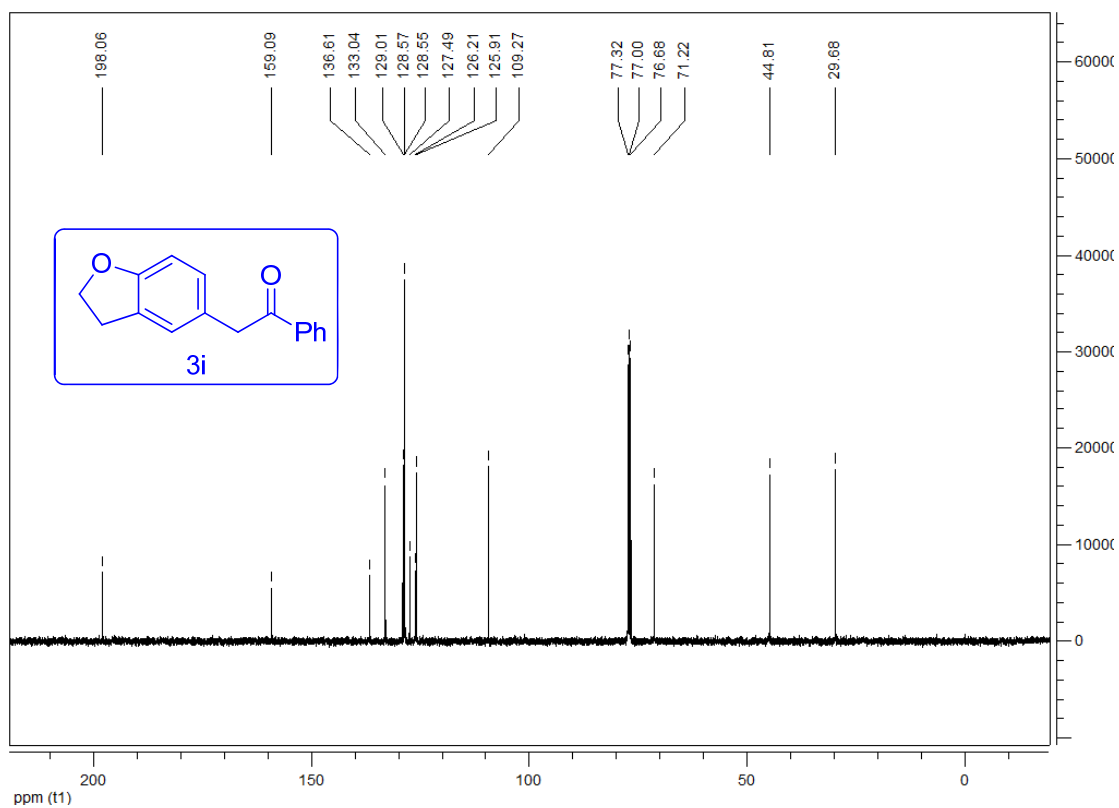
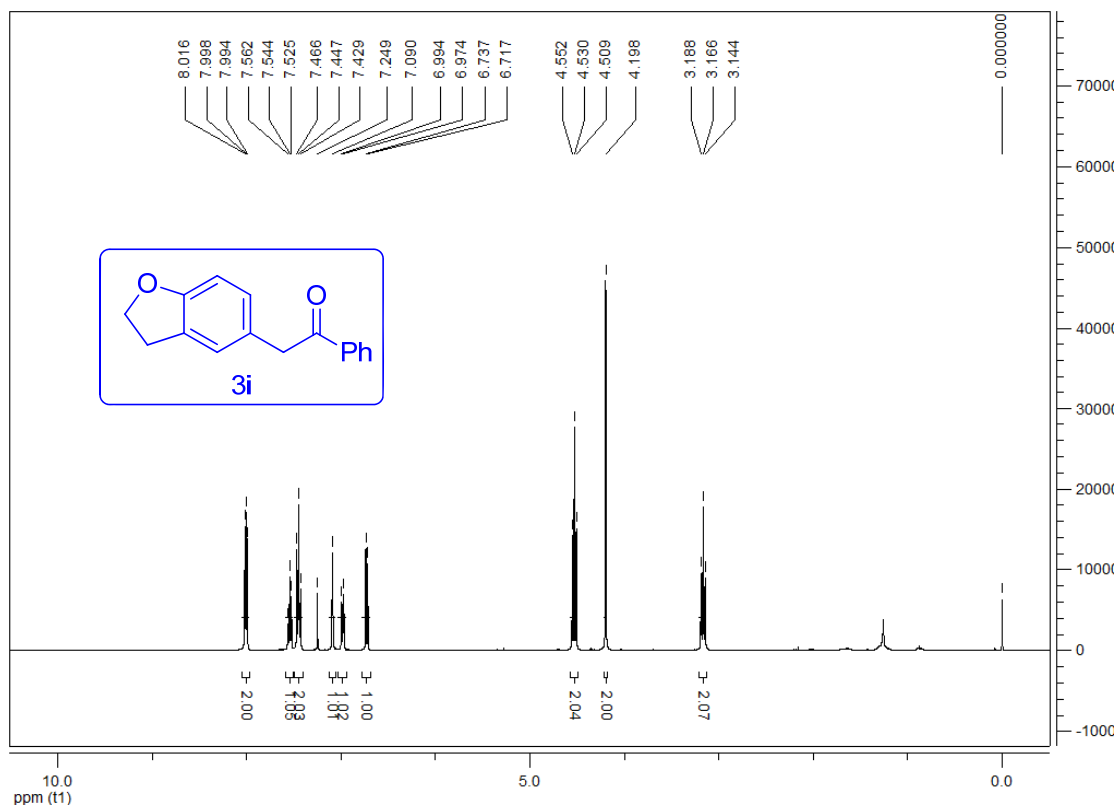
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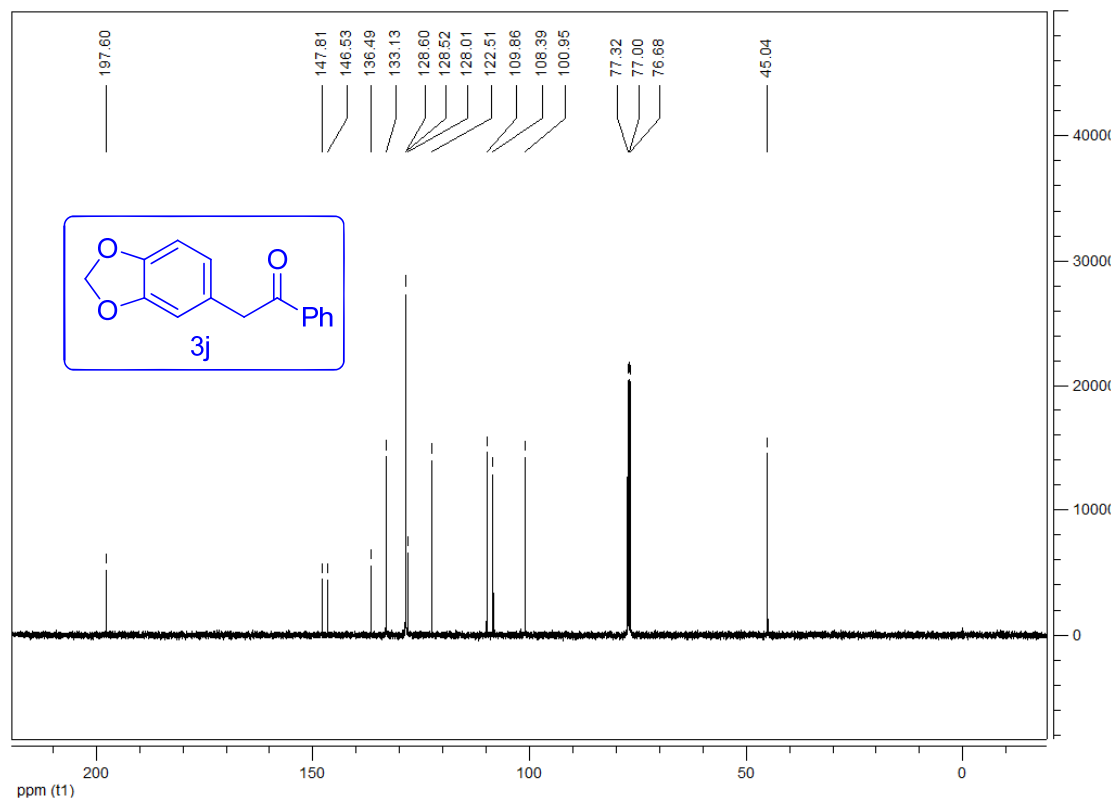
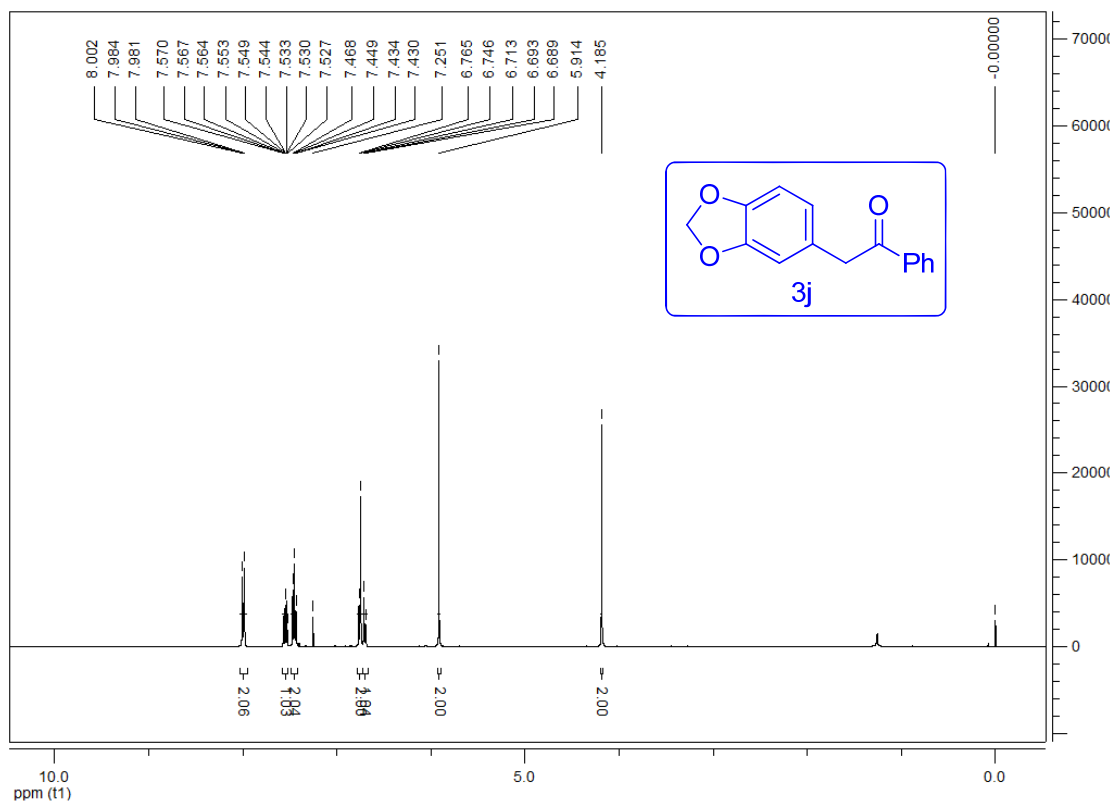
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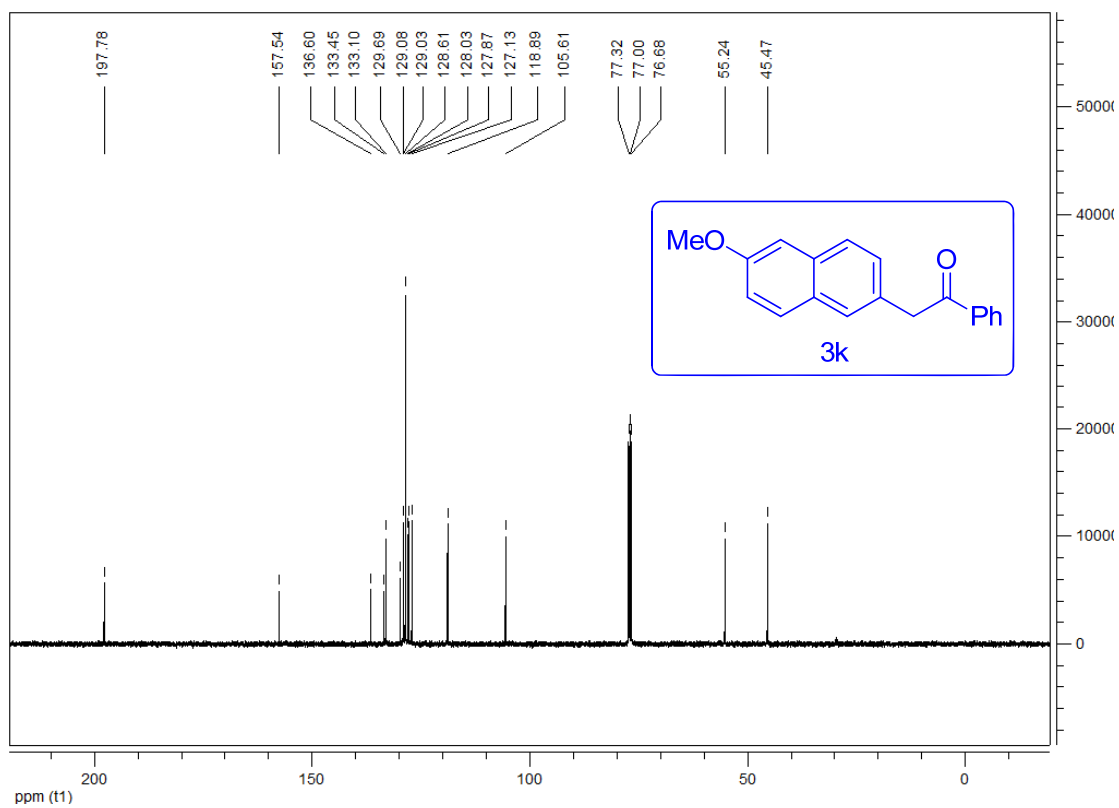
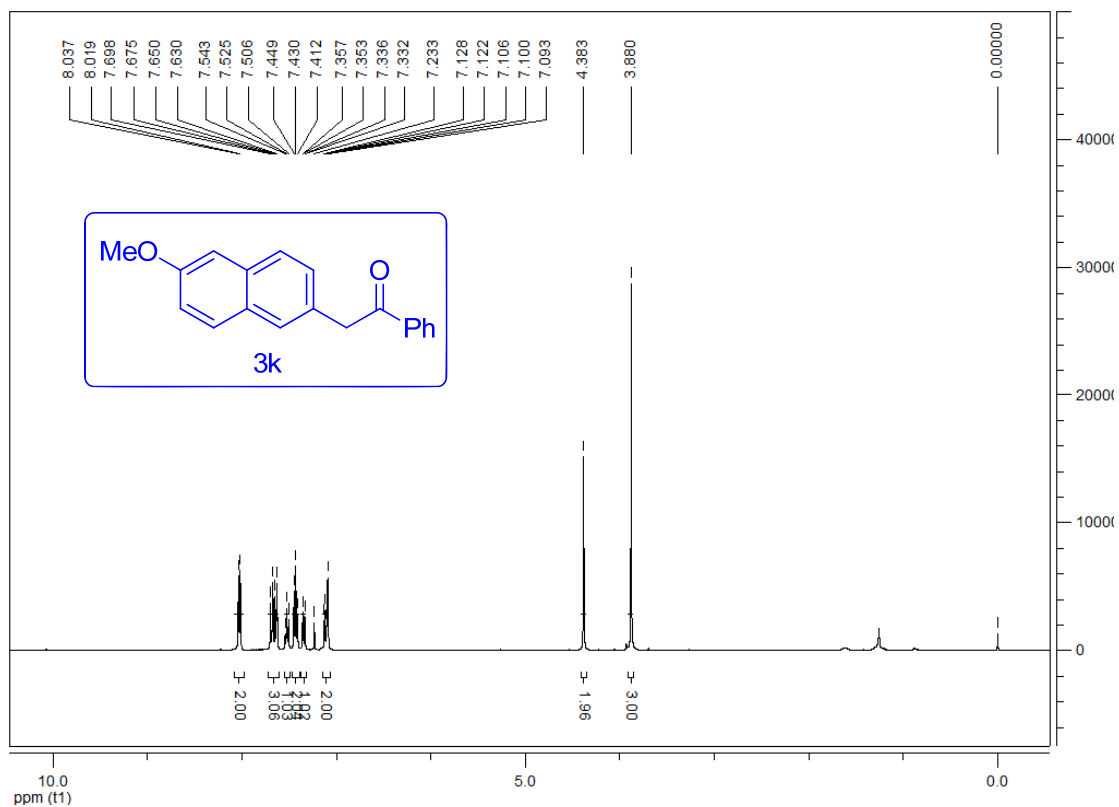
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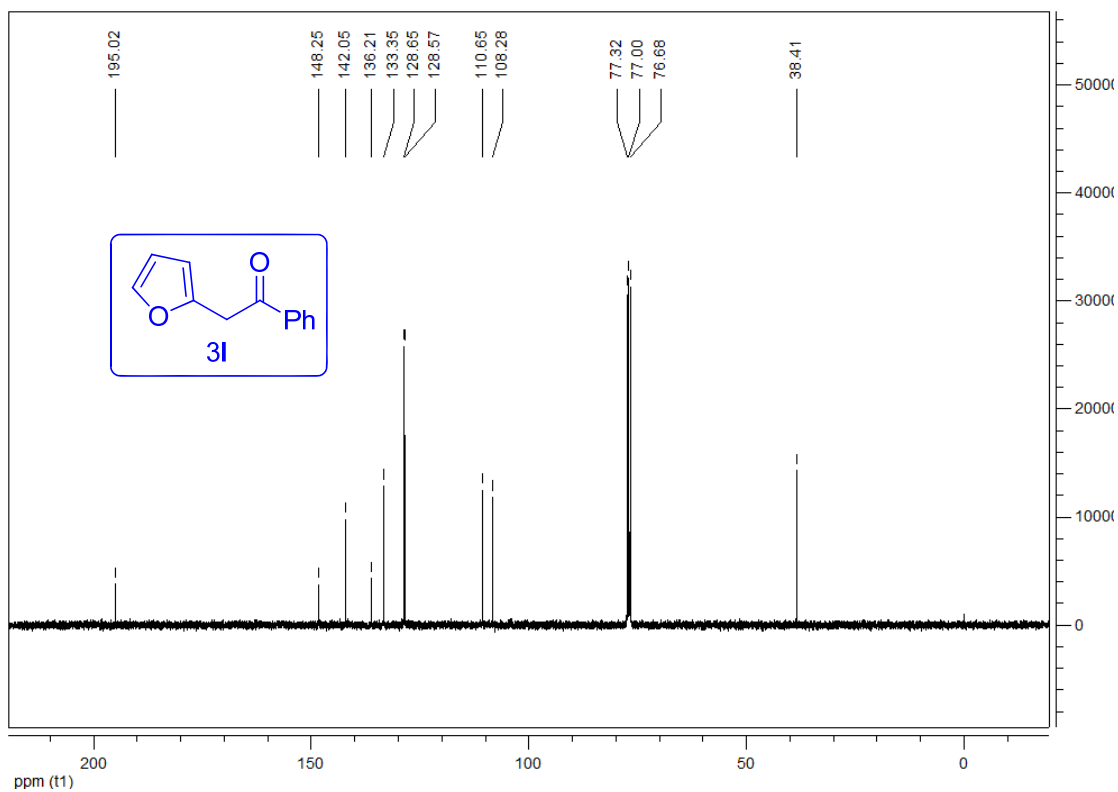
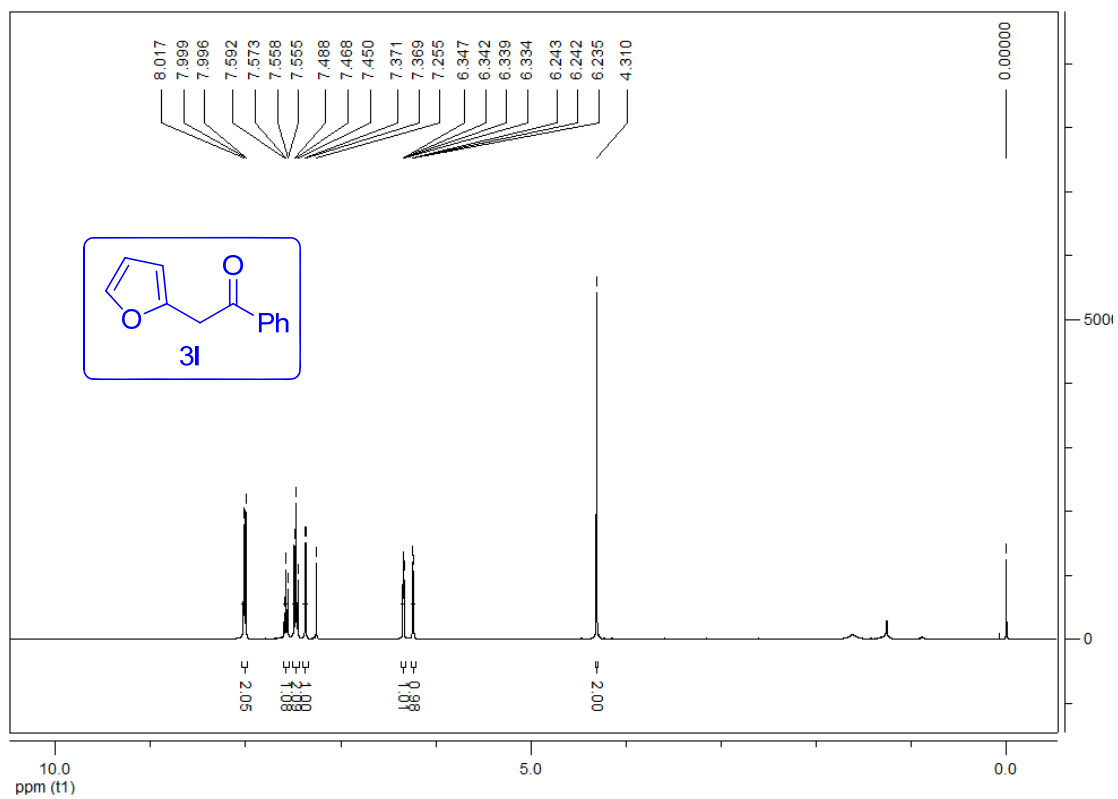
2-(Benzo[d][1,3]dioxol-5-yl)-1-phenylethanone (3j)



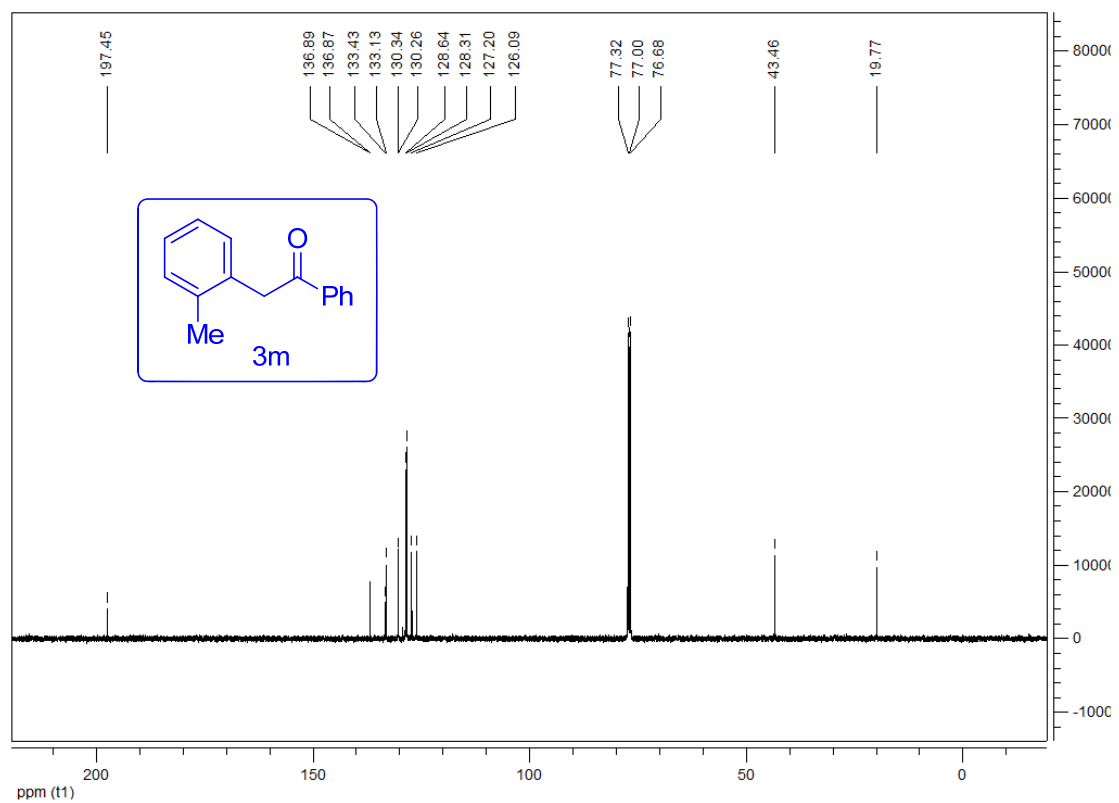
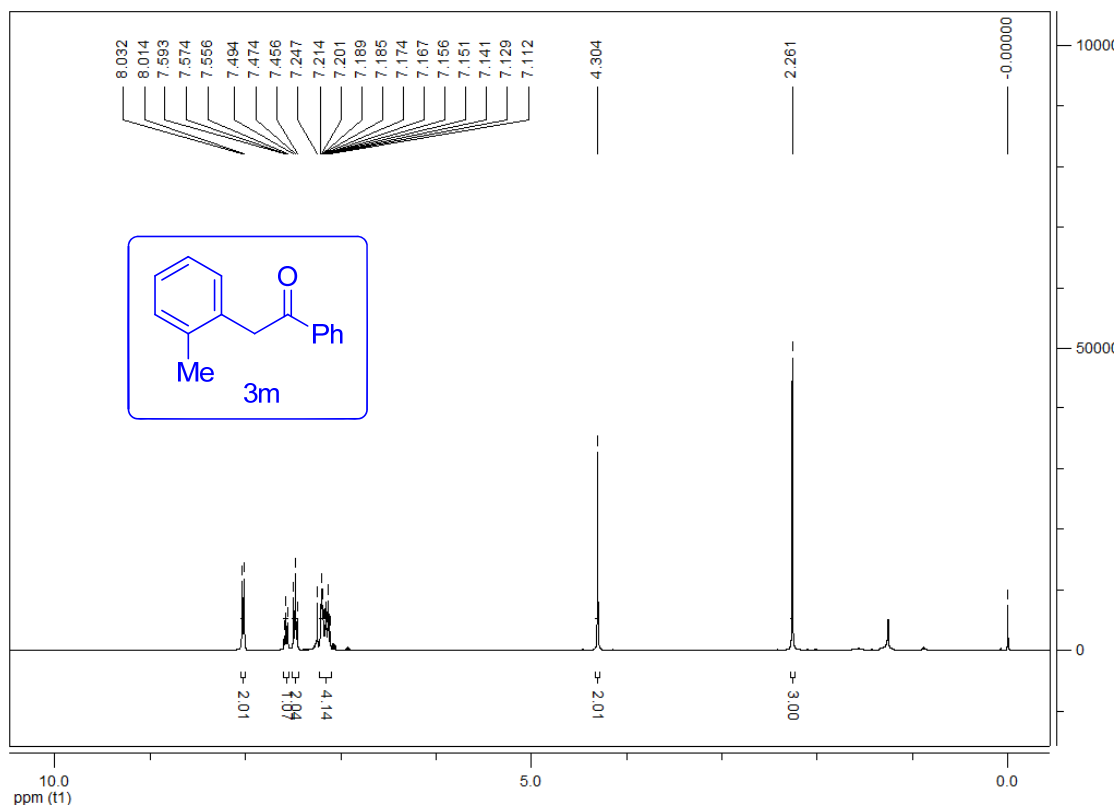
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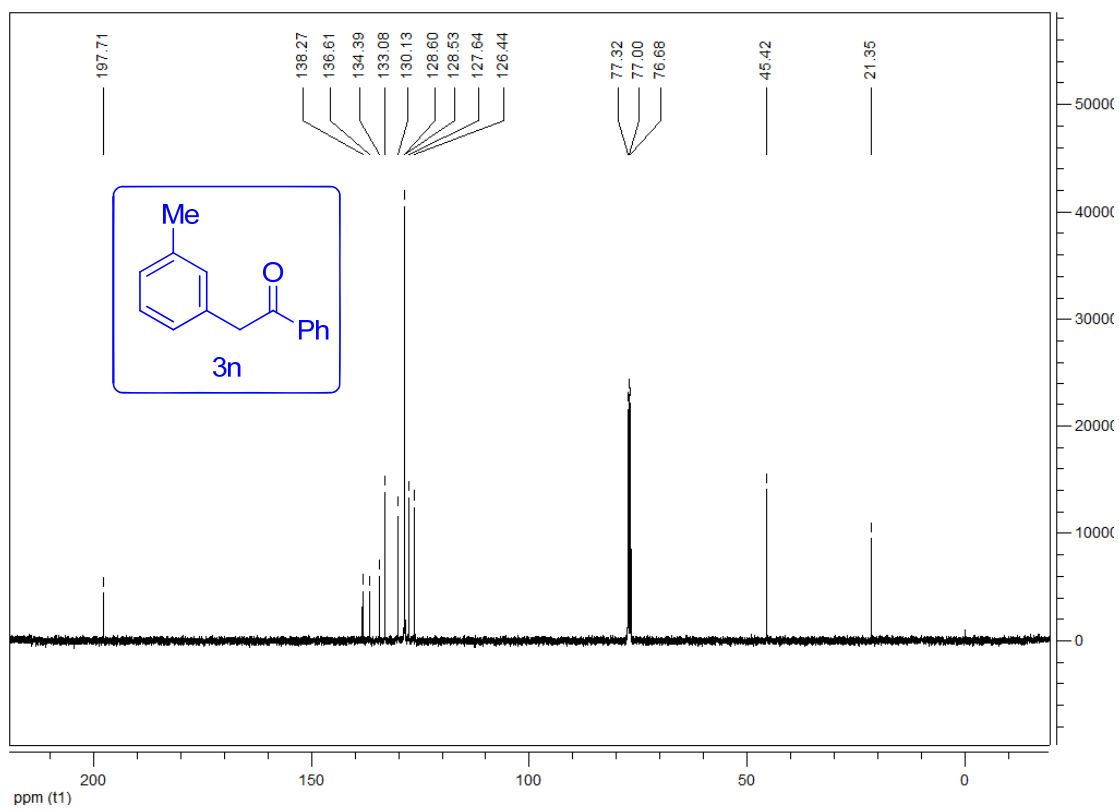
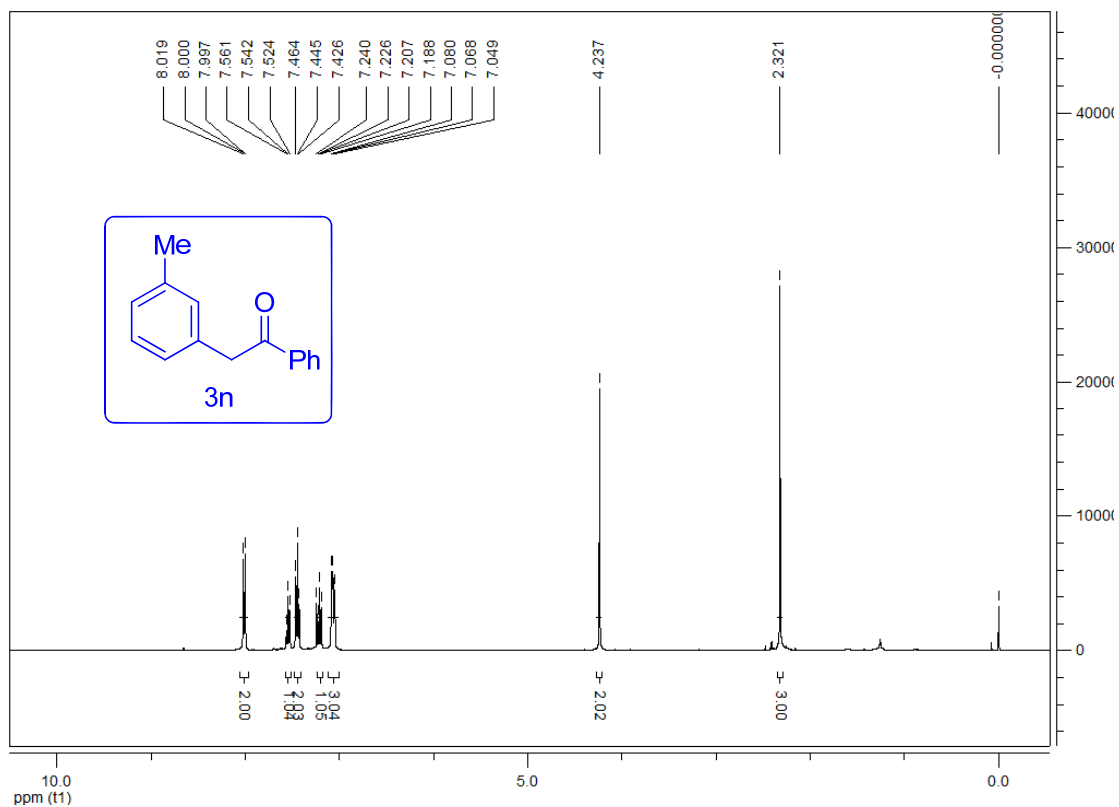
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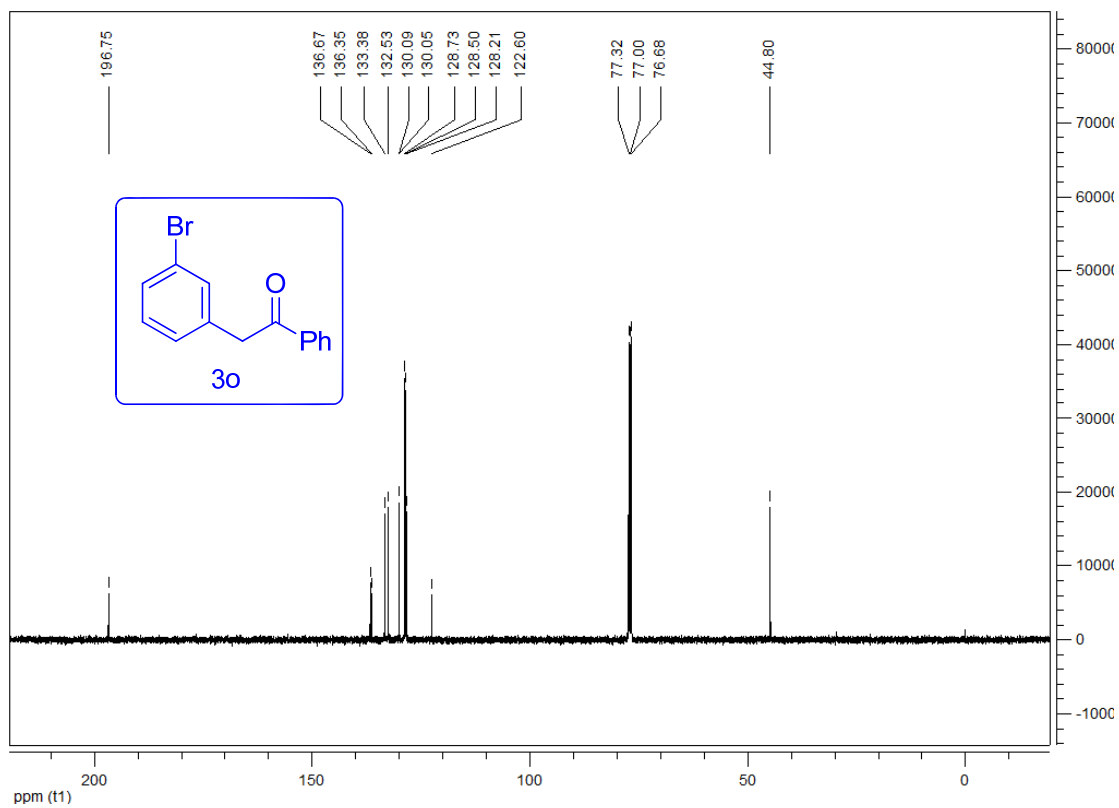
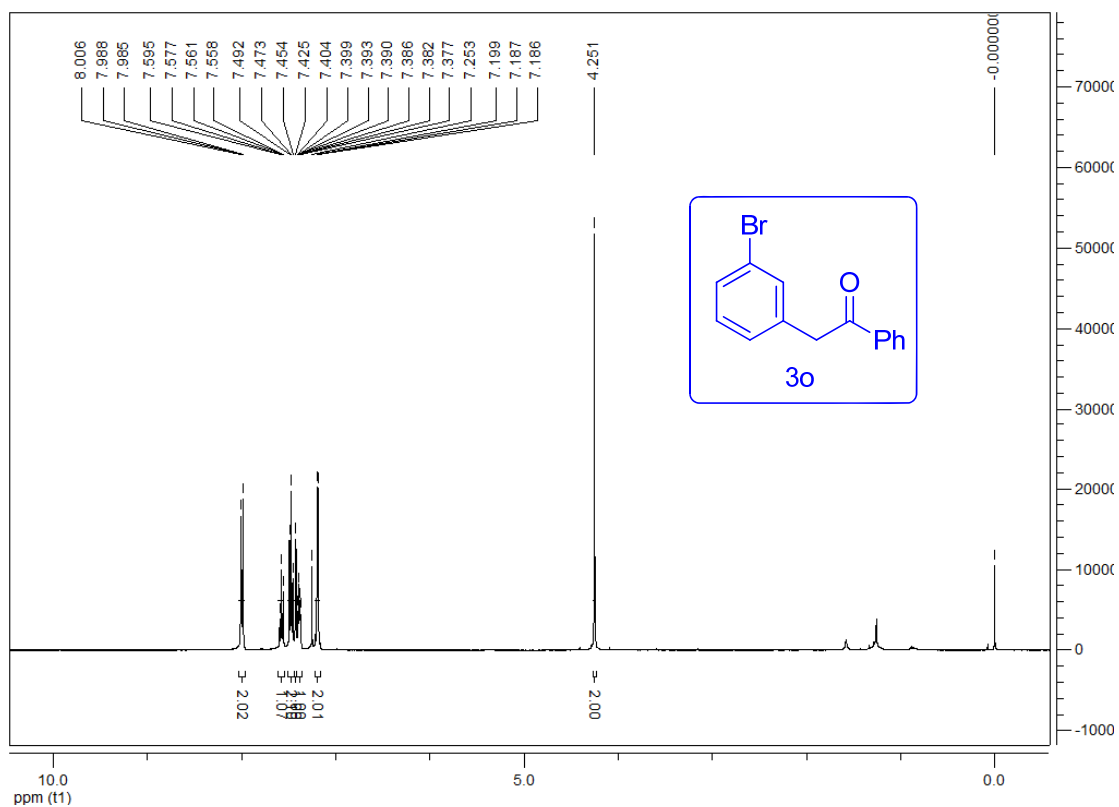
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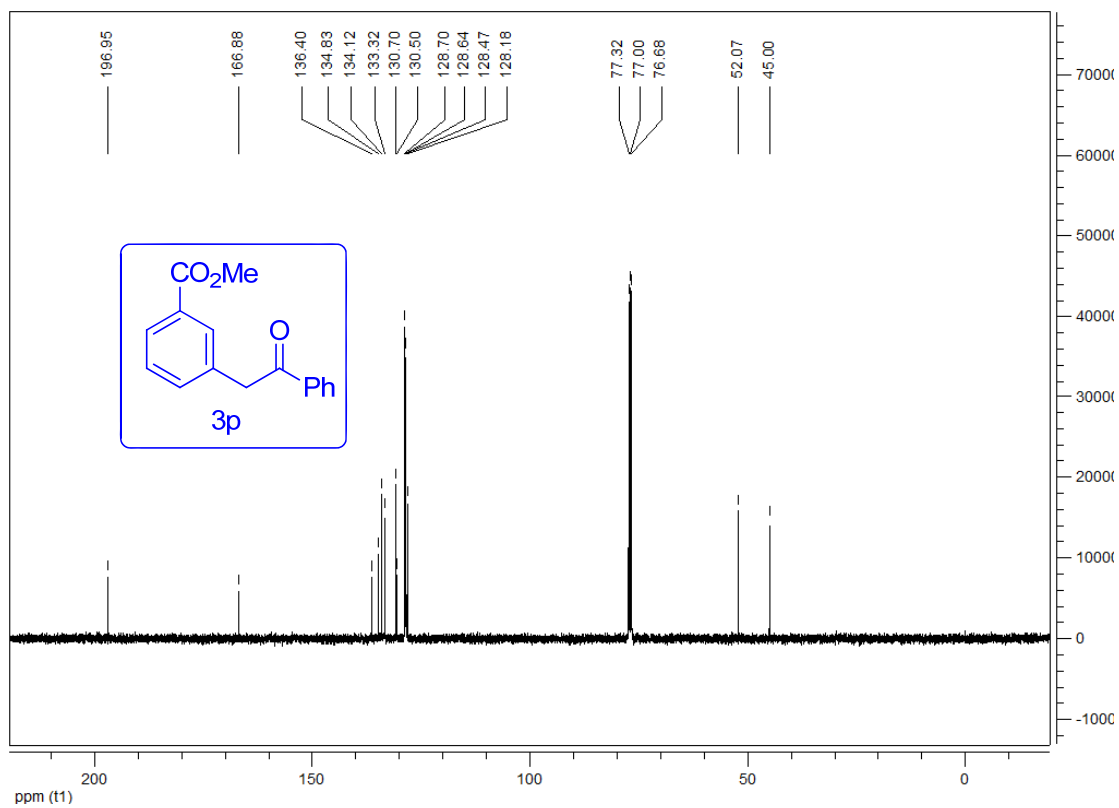
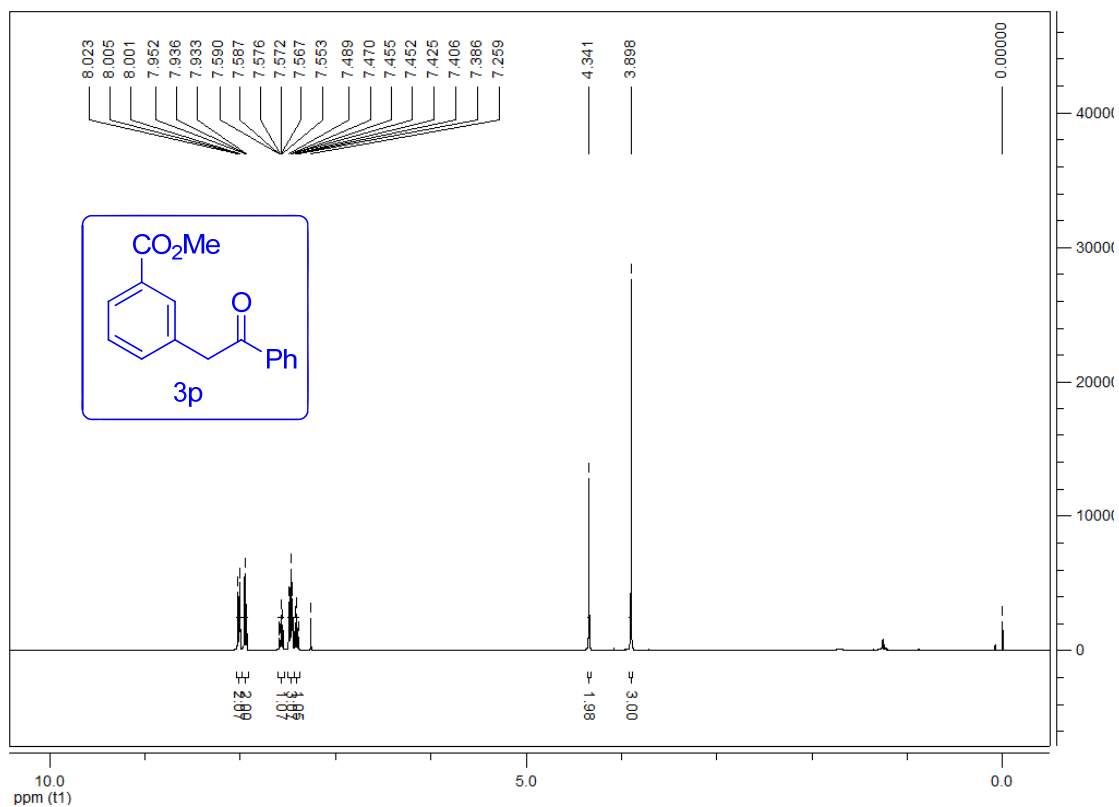
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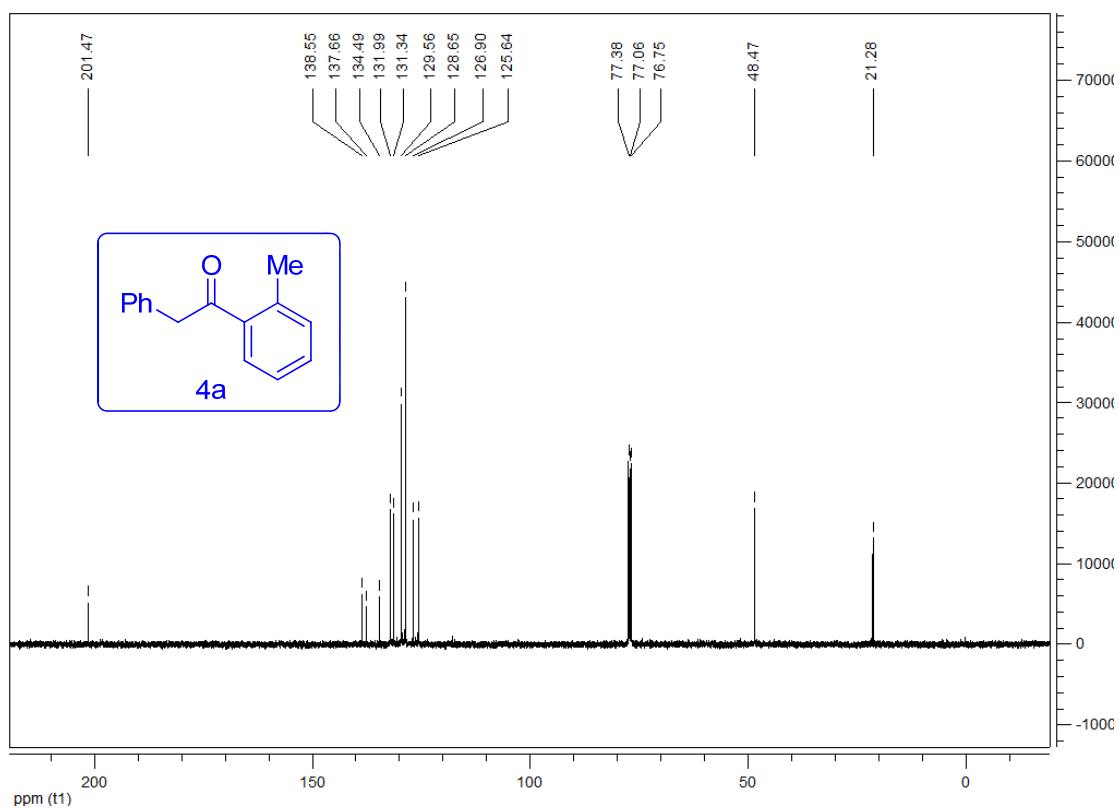
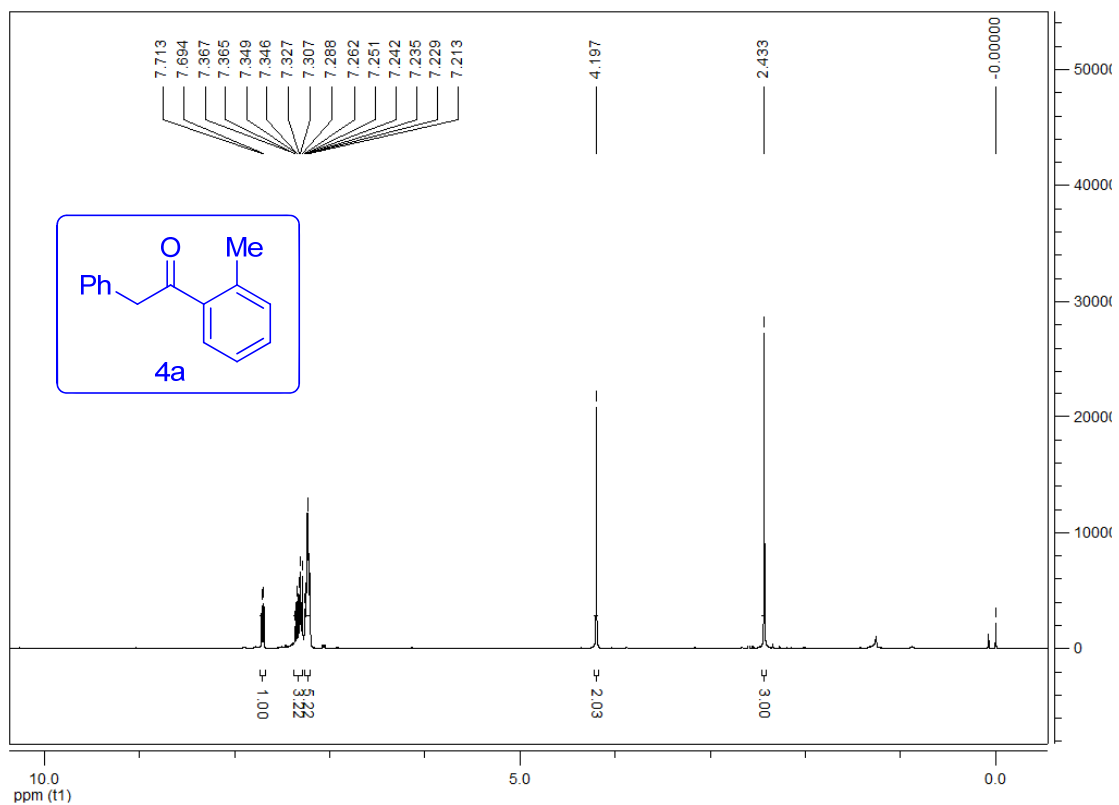
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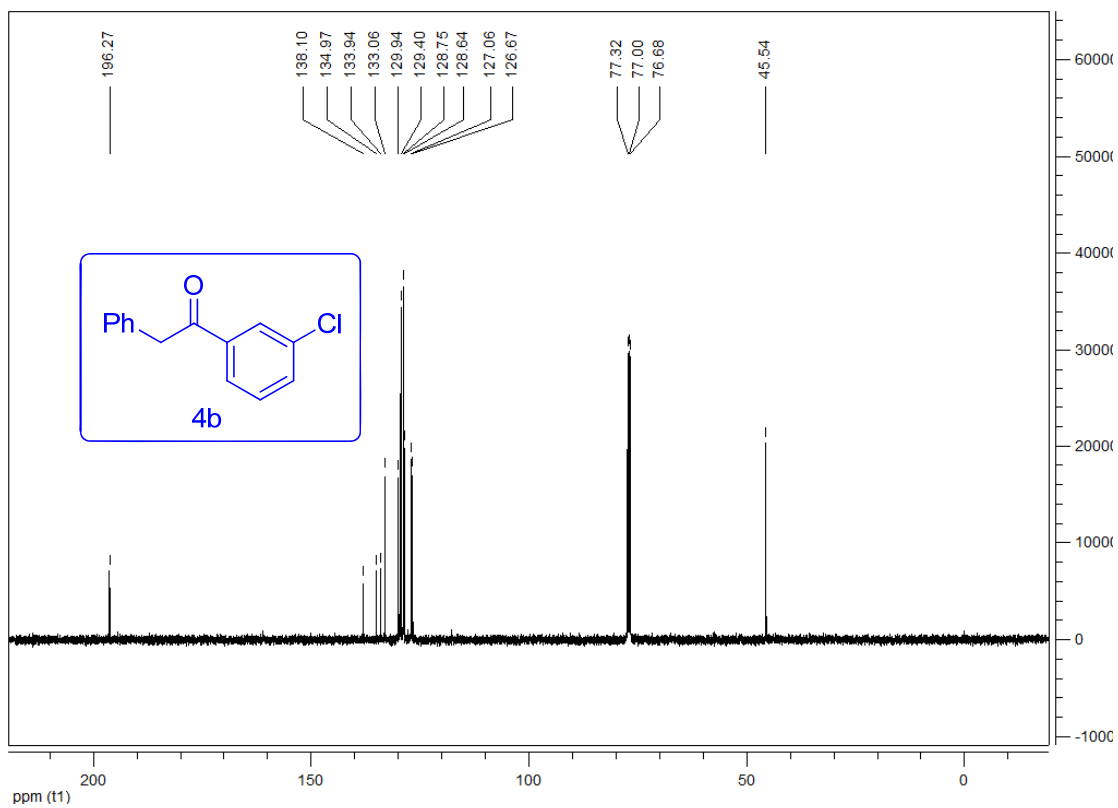
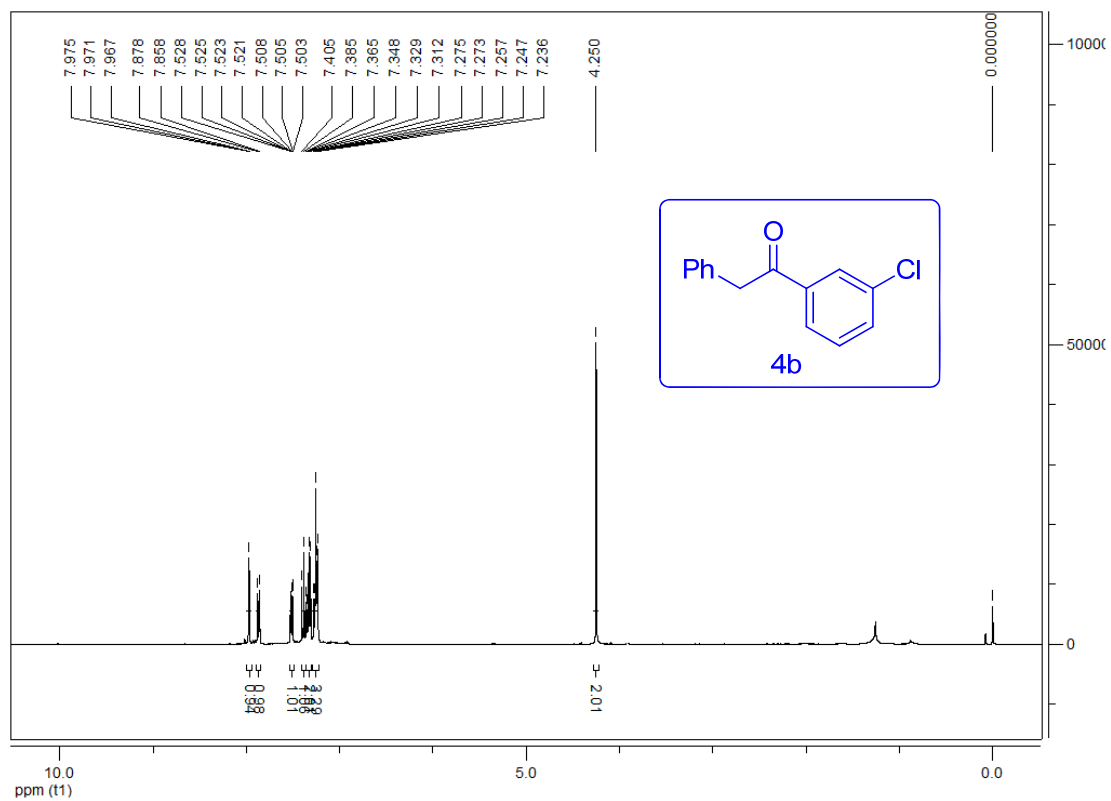
Methyl 3-(2-oxo-2-phenylethyl)benzoate (3p)



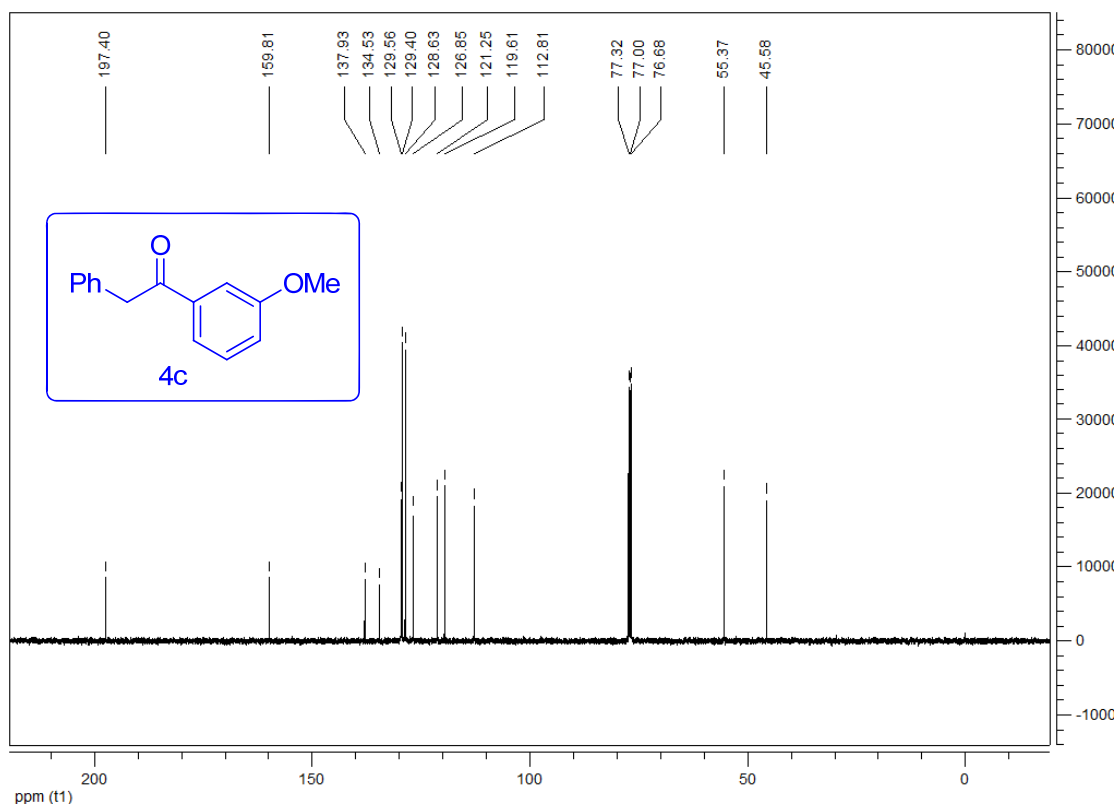
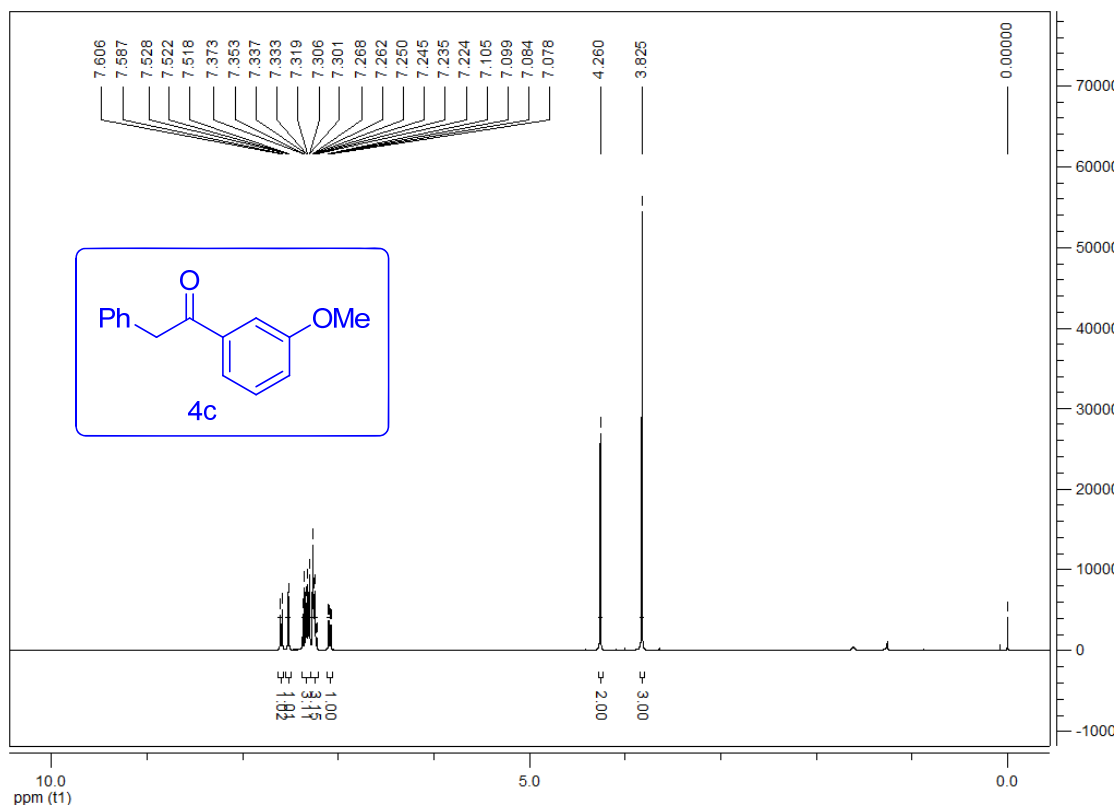
2-Phenyl-1-(o-tolyl)ethanone (4a)



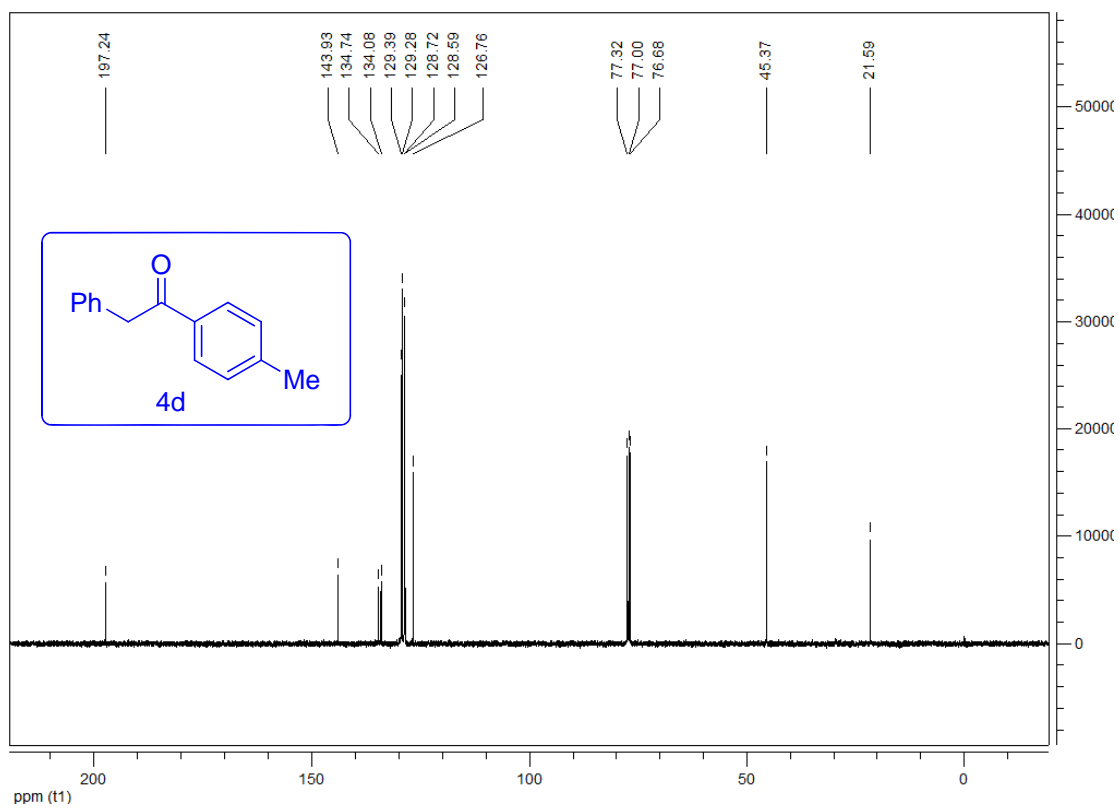
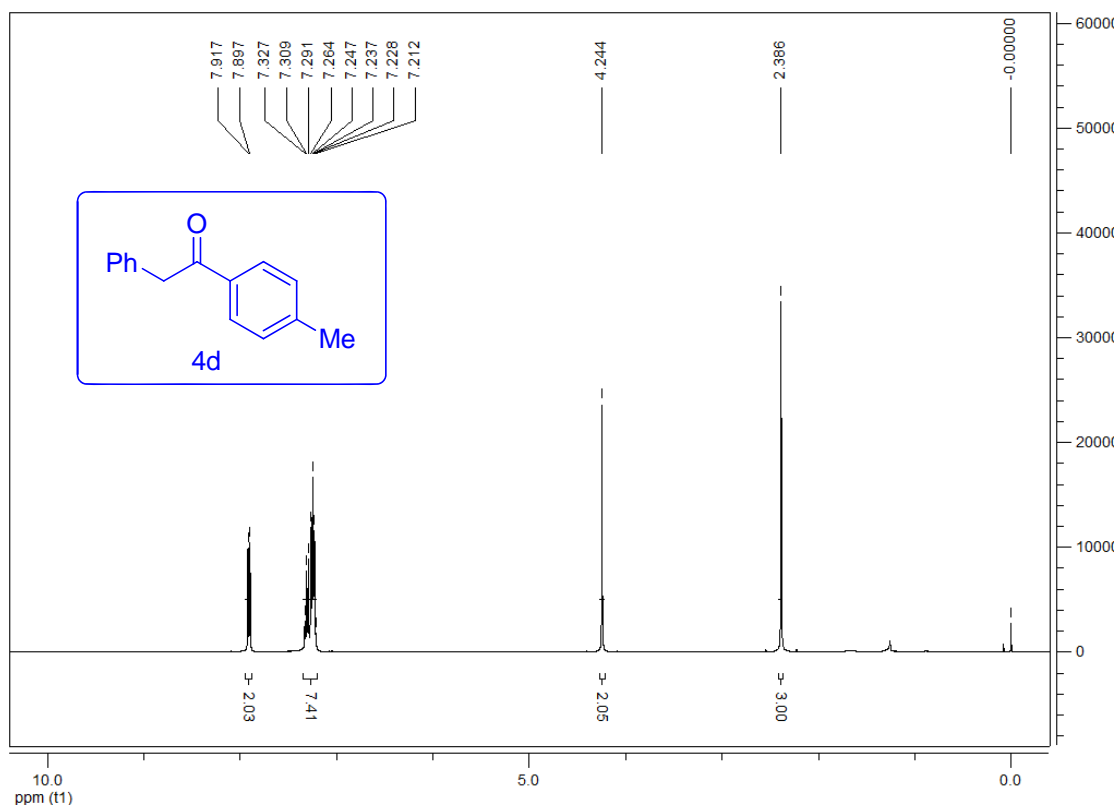
1-(3-Chlorophenyl)-2-phenylethanone (4b)



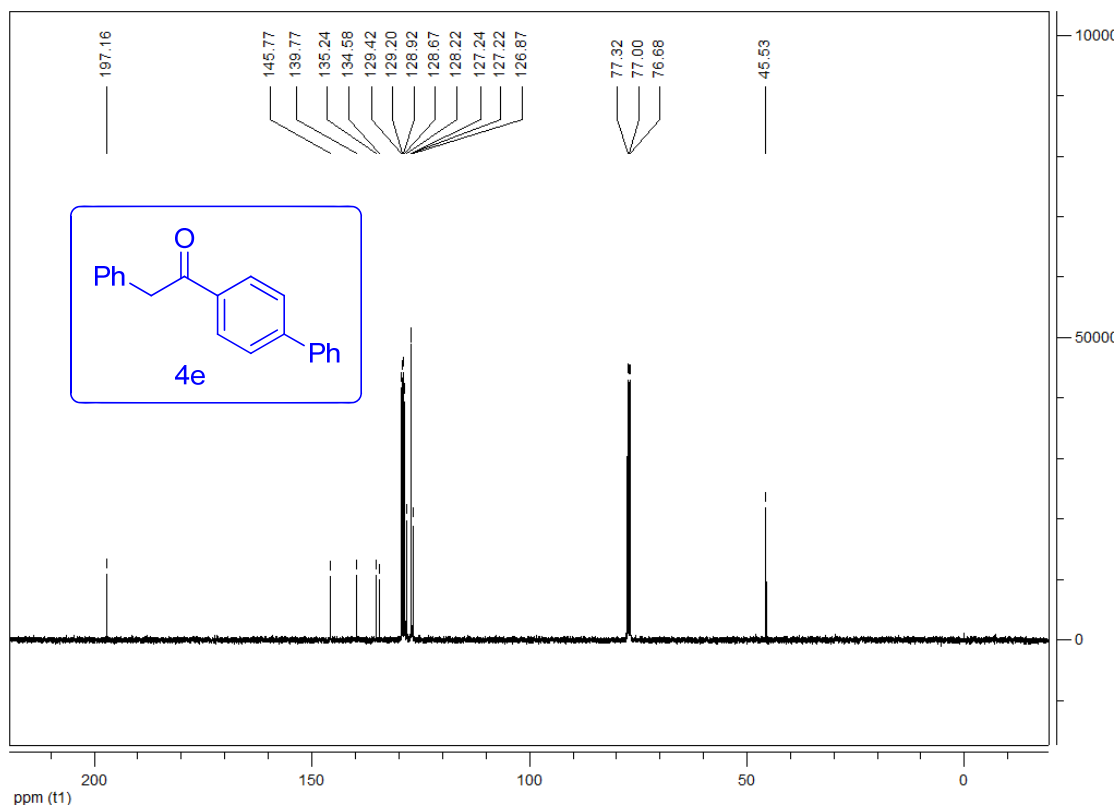
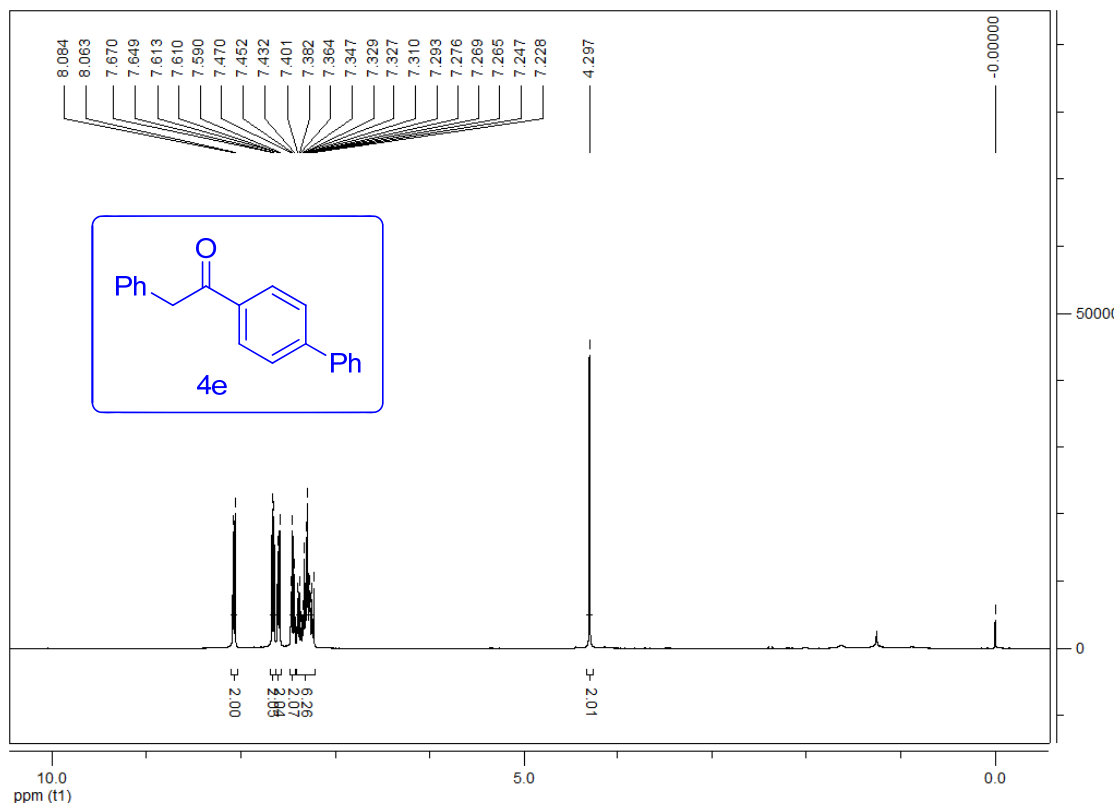
1-(3-Methoxyphenyl)-2-phenylethanone (4c)



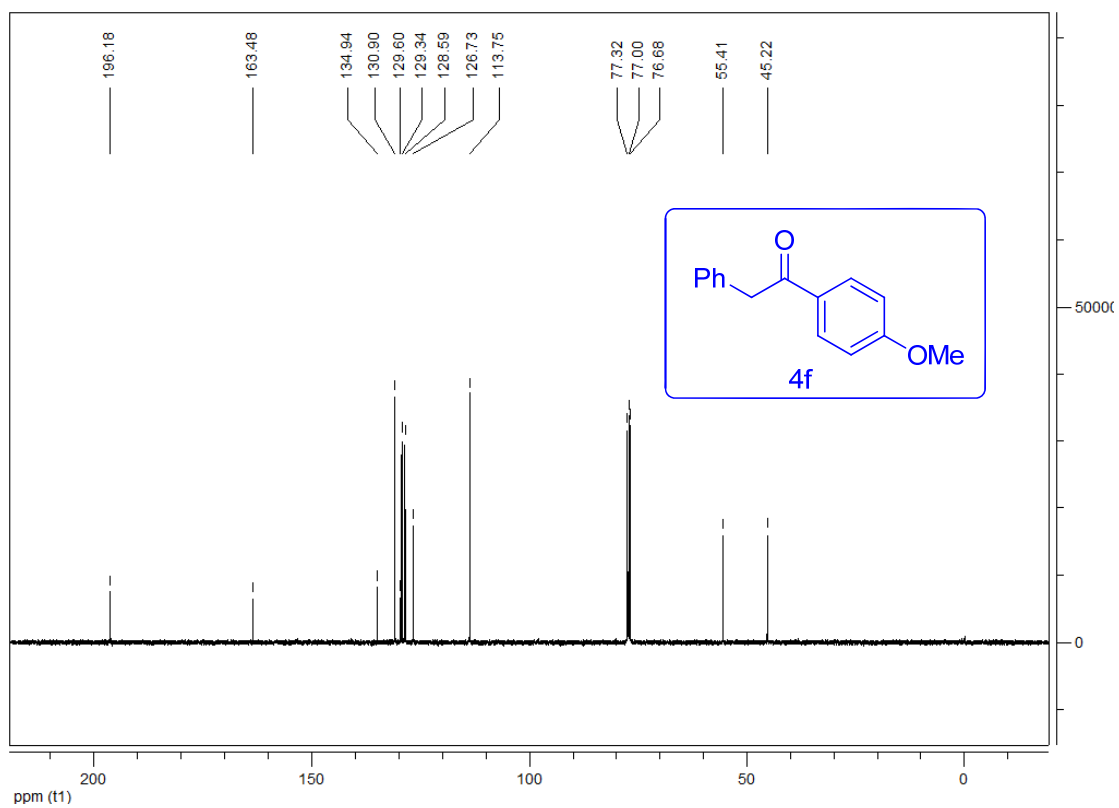
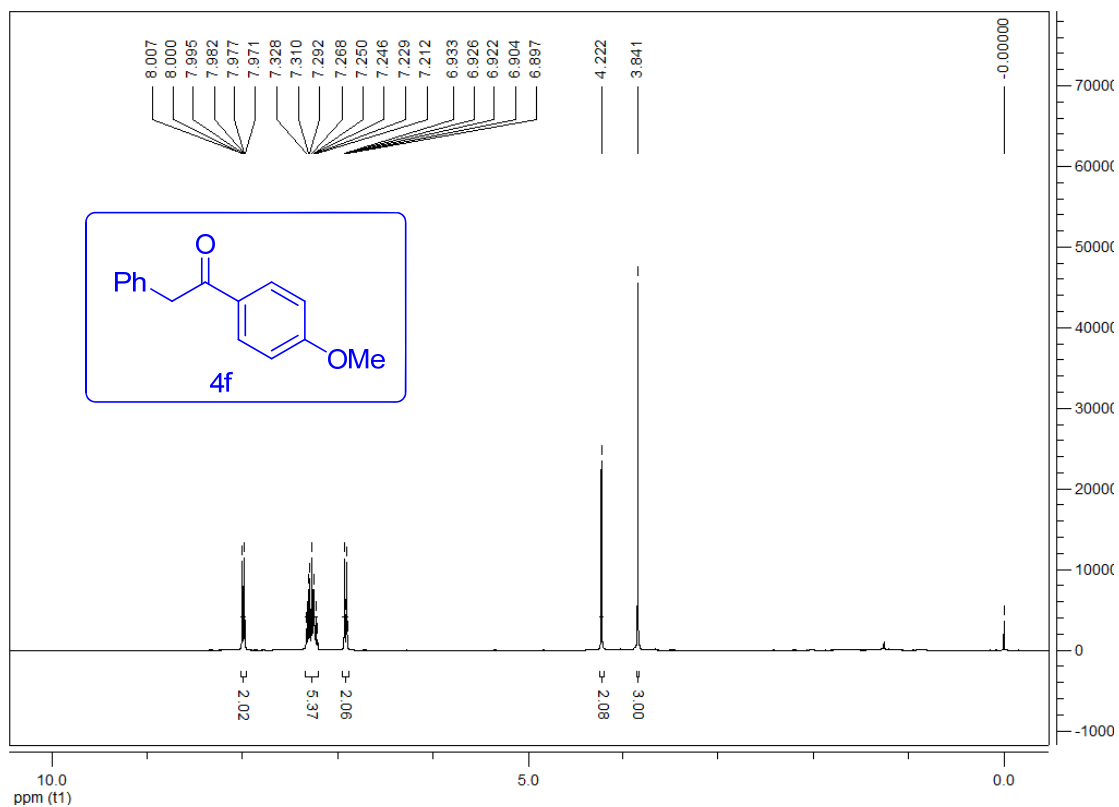
2-Phenyl-1-(p-tolyl)ethanone (4d)



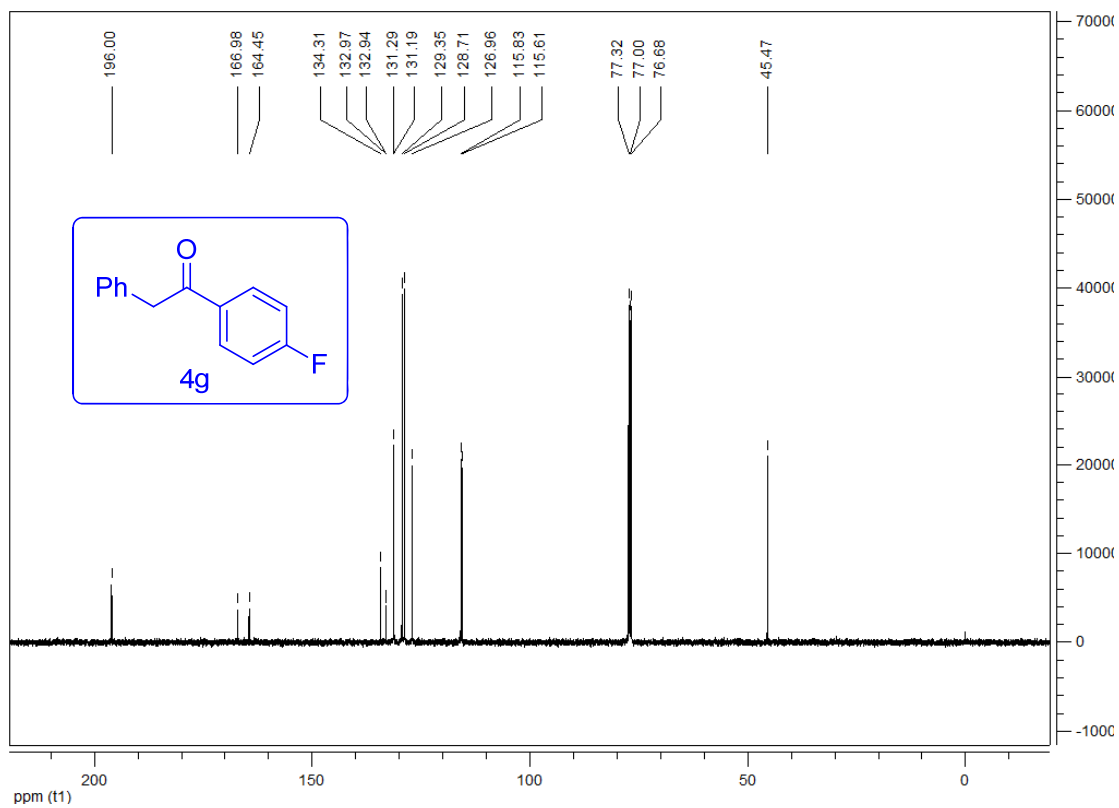
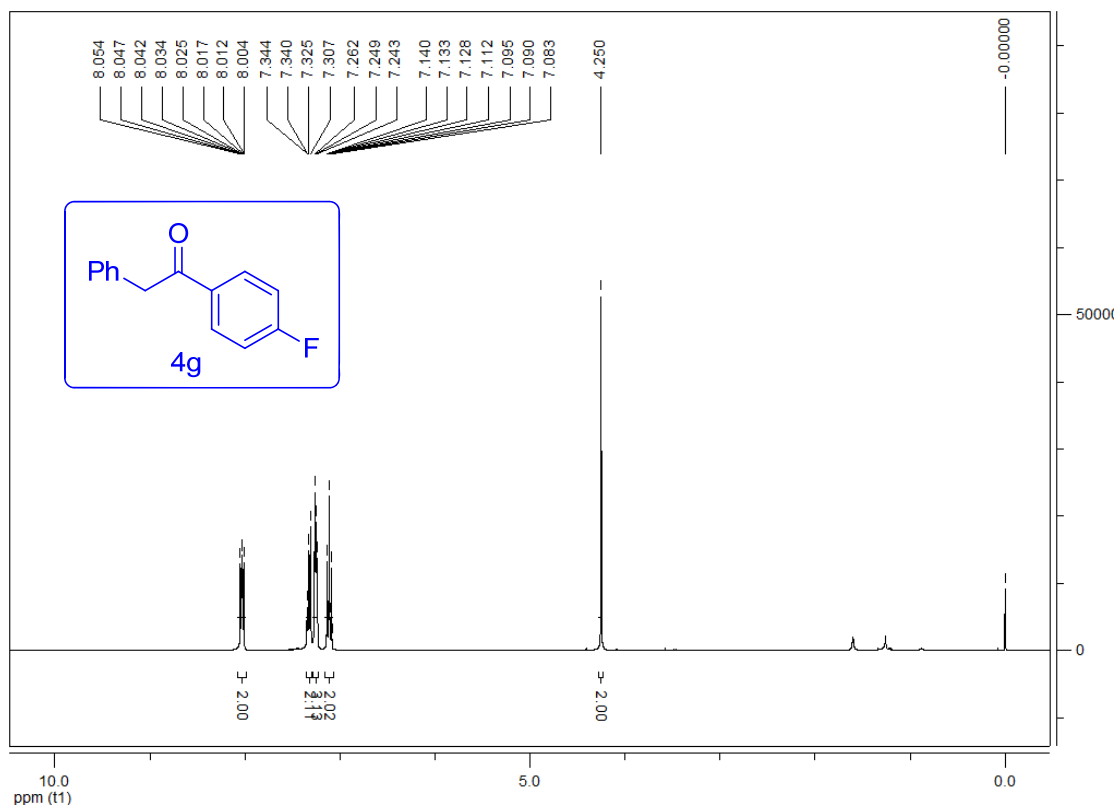
1-([1,1'-Biphenyl]-4-yl)-2-phenylethanone (4e)



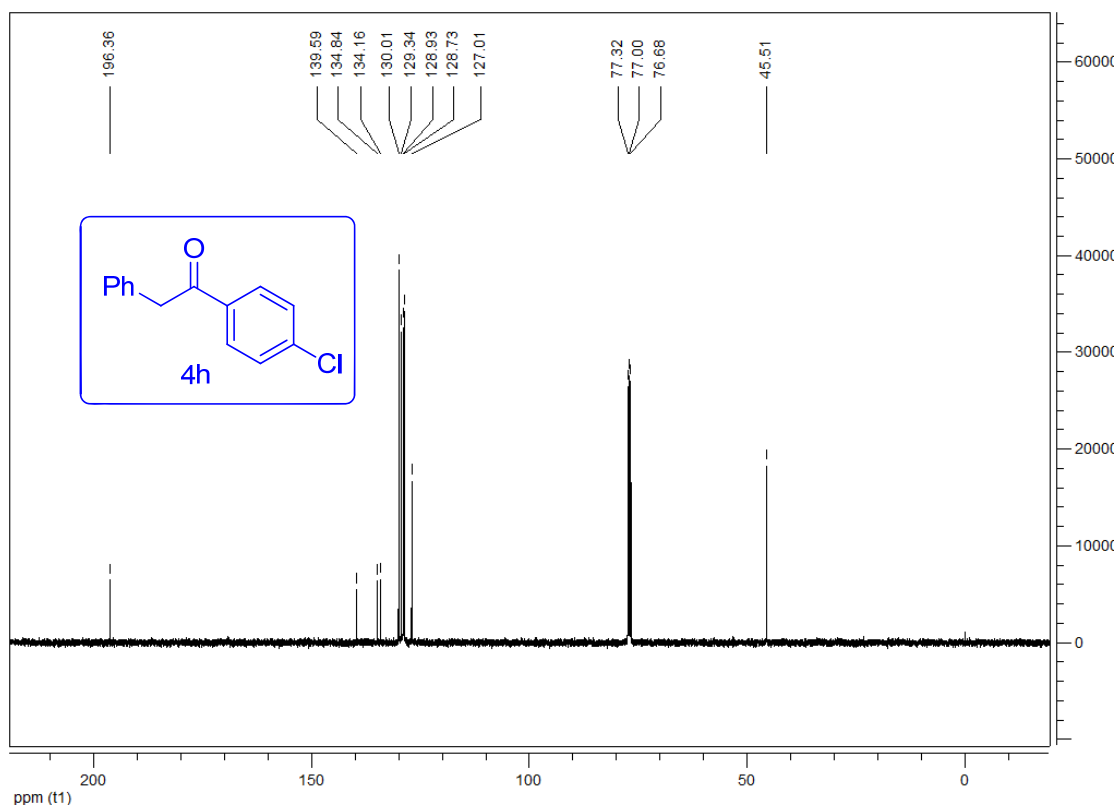
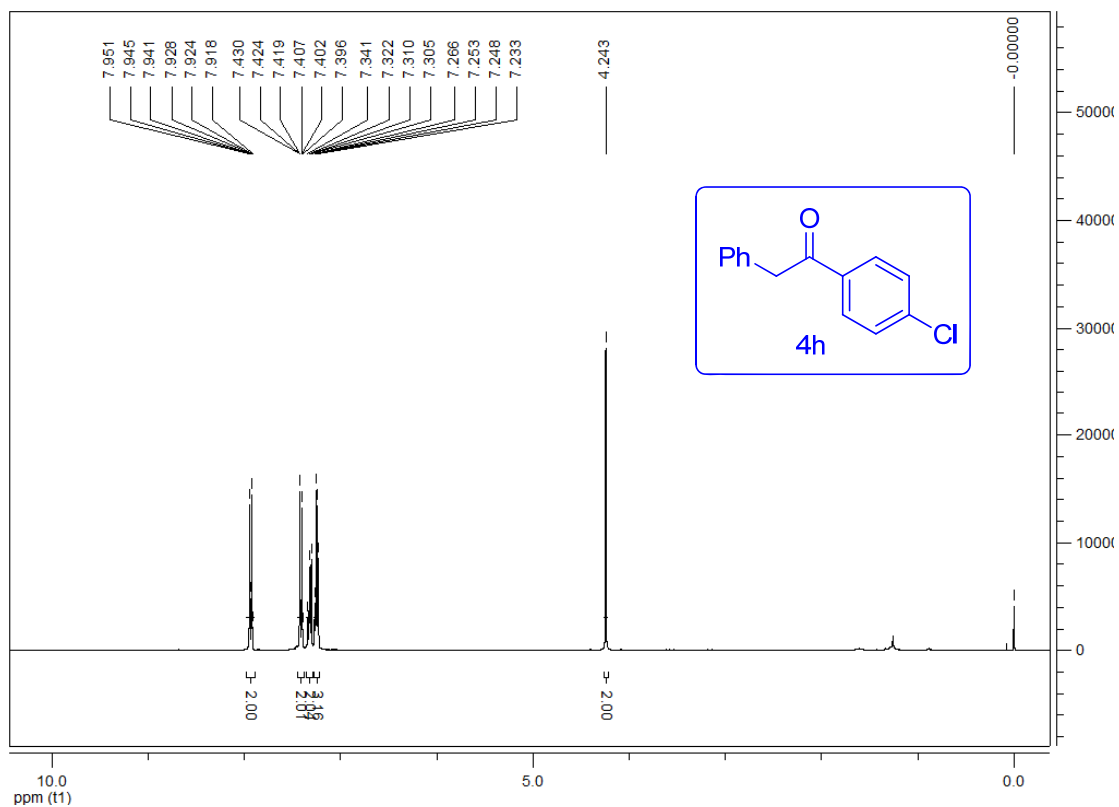
1-(4-Methoxyphenyl)-2-phenylethanone (4f)



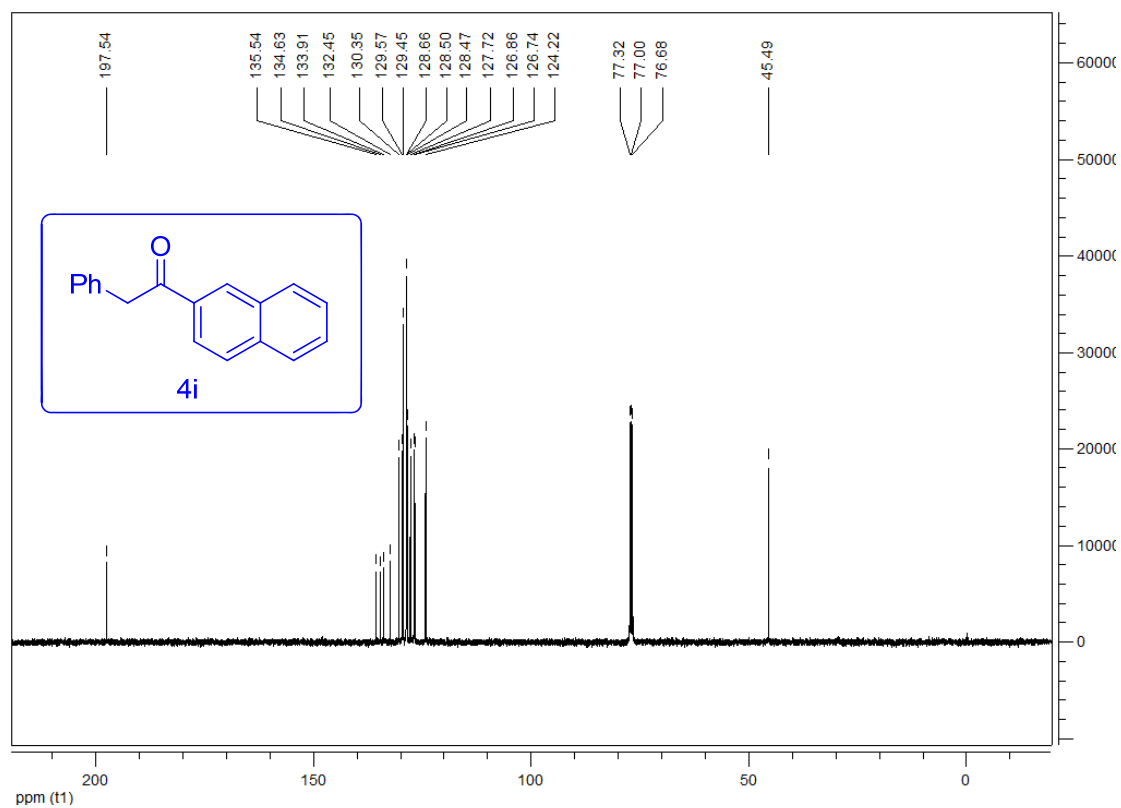
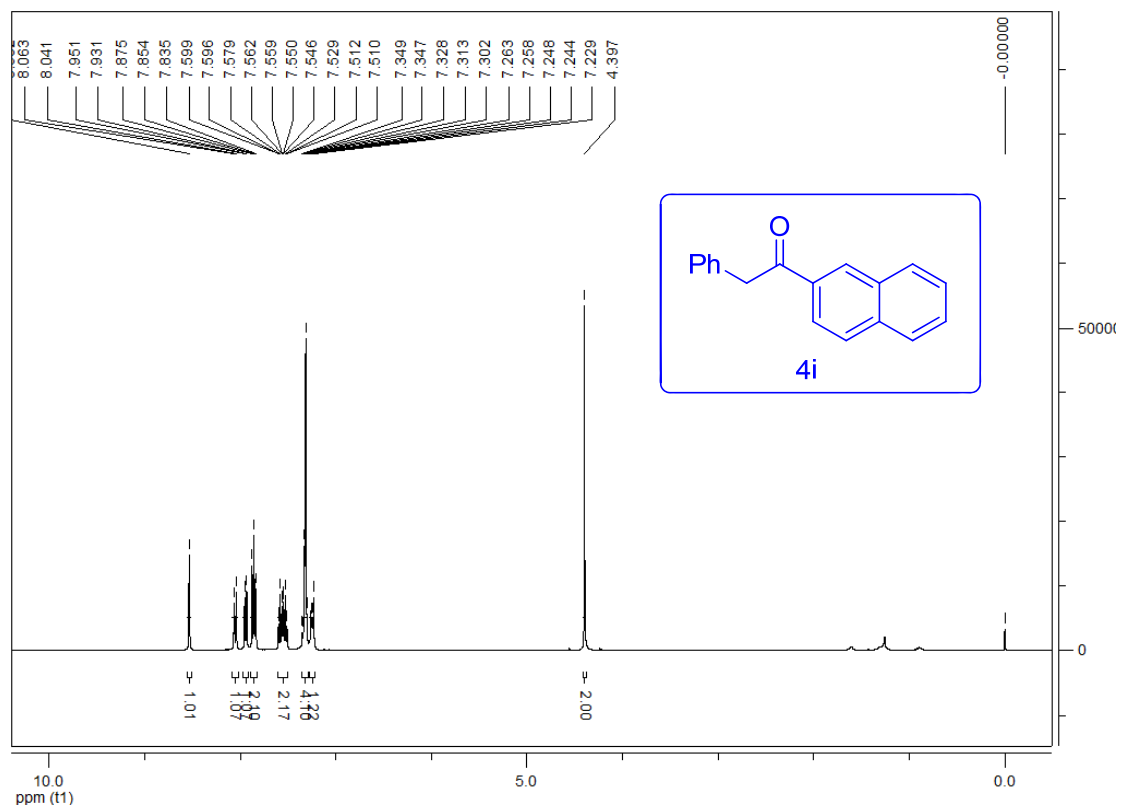
1-(4-Fluorophenyl)-2-phenylethanone (4g)



1-(4-Chlorophenyl)-2-phenylethanone (4h)



1-(Naphthalen-2-yl)-2-phenylethanone (4i)



2-Phenyl-1-(thiophen-2-yl)ethanone (4j)

