

Supplementary Information

Palladacycle Catalyzed Carbonylative Suzuki-Miyaura Coupling with Generation of High Turnover Numbers and Turnover Frequencies

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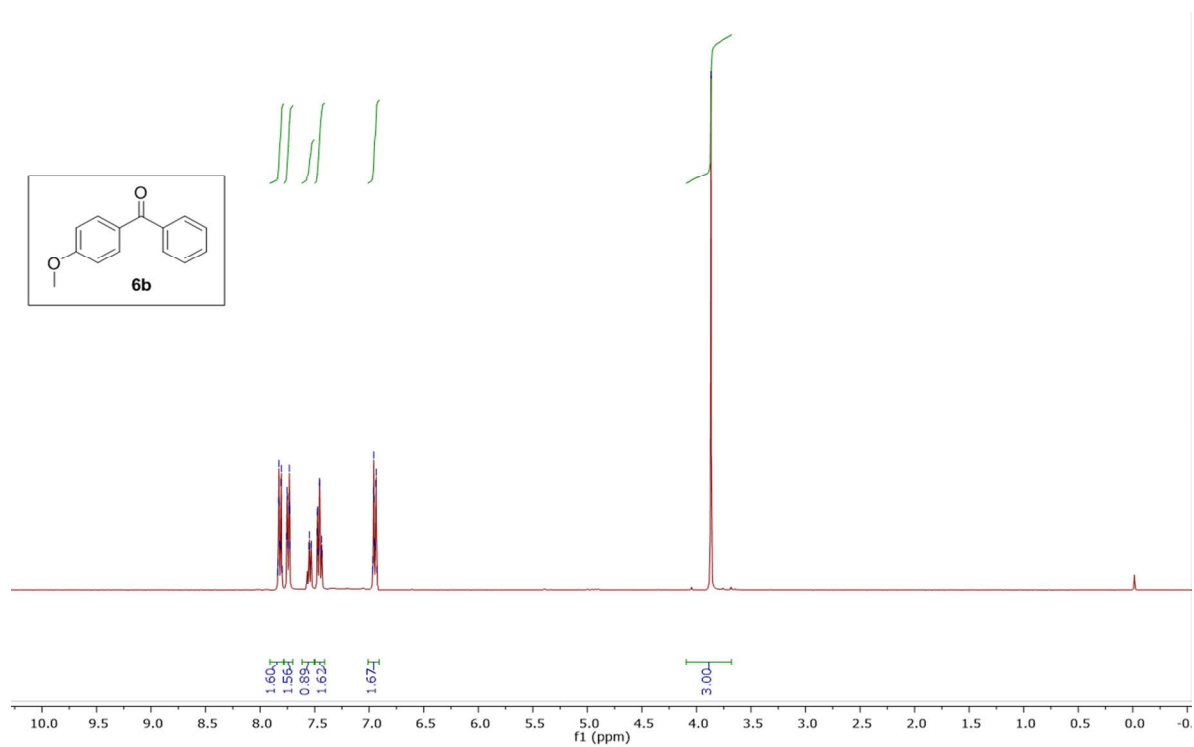
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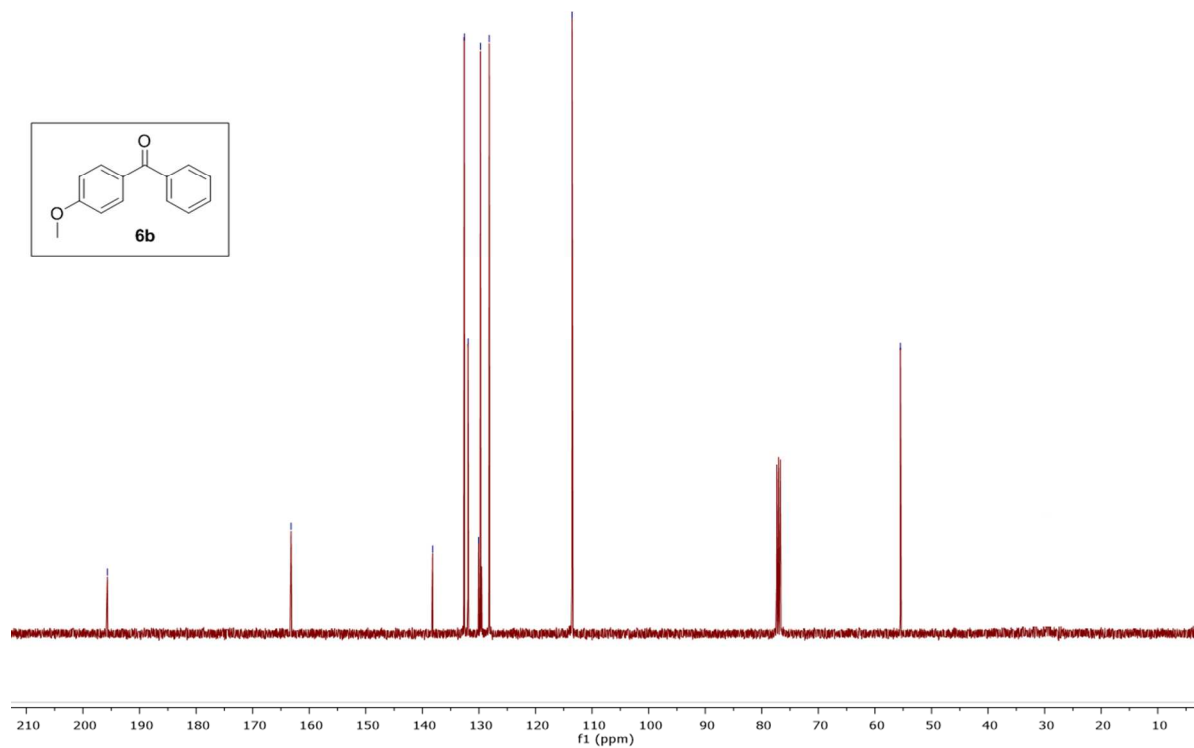
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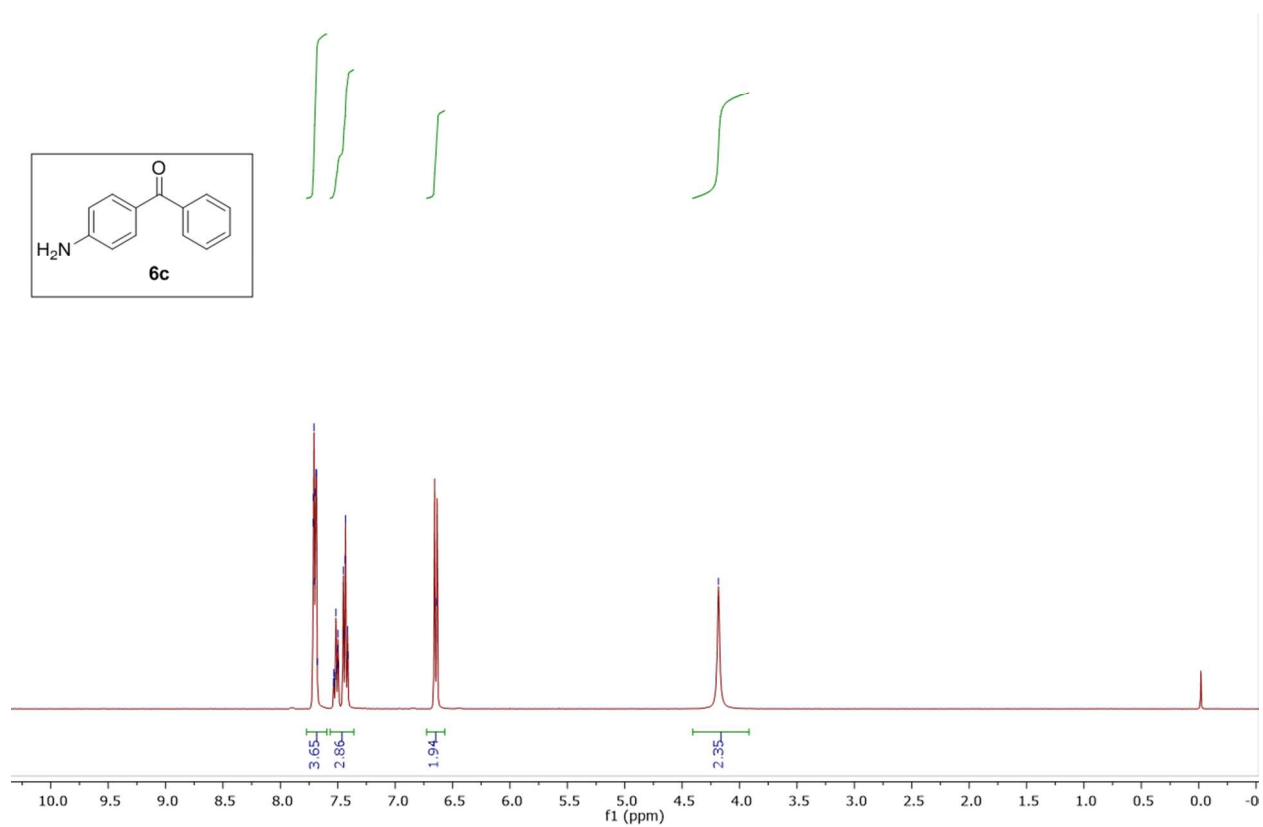
4-methoxybenzophenone (6b) (^1H NMR)



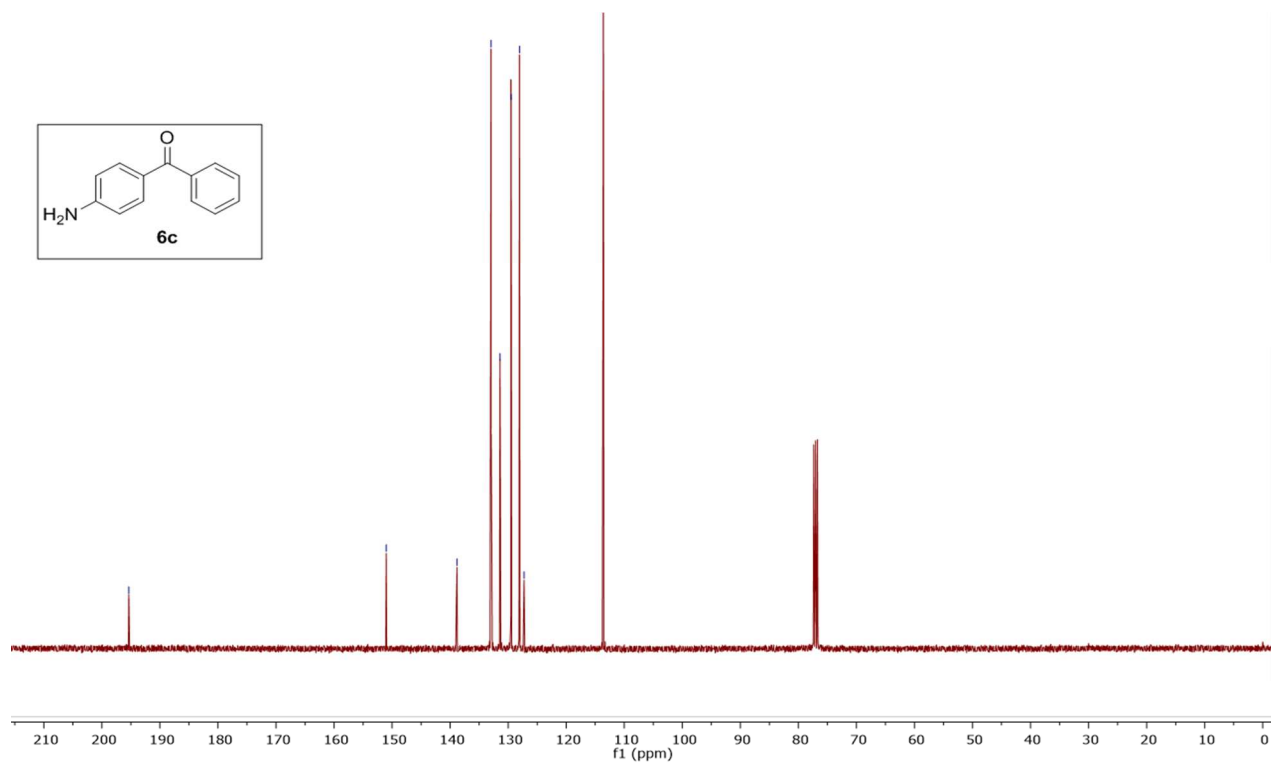
4-methoxybenzophenone (6b) (^{13}C NMR)



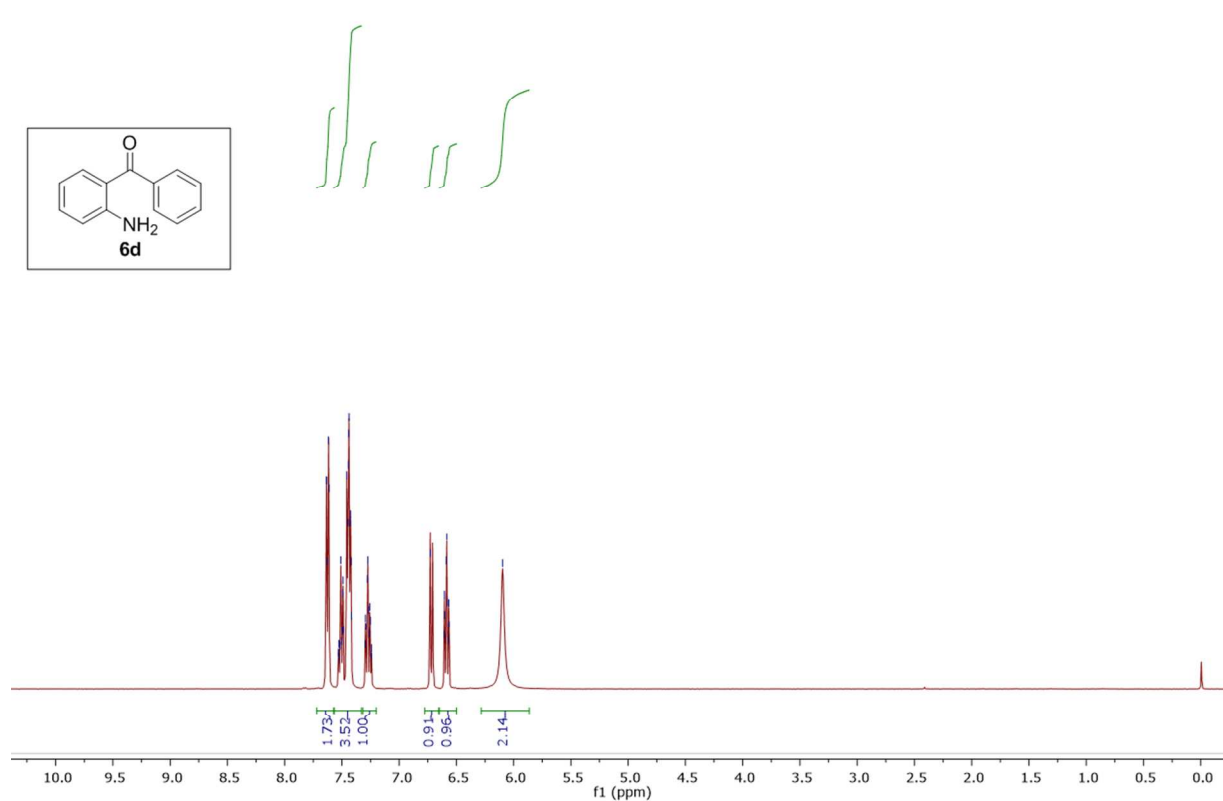
4-aminobenzophenone (6c) (^1H NMR)



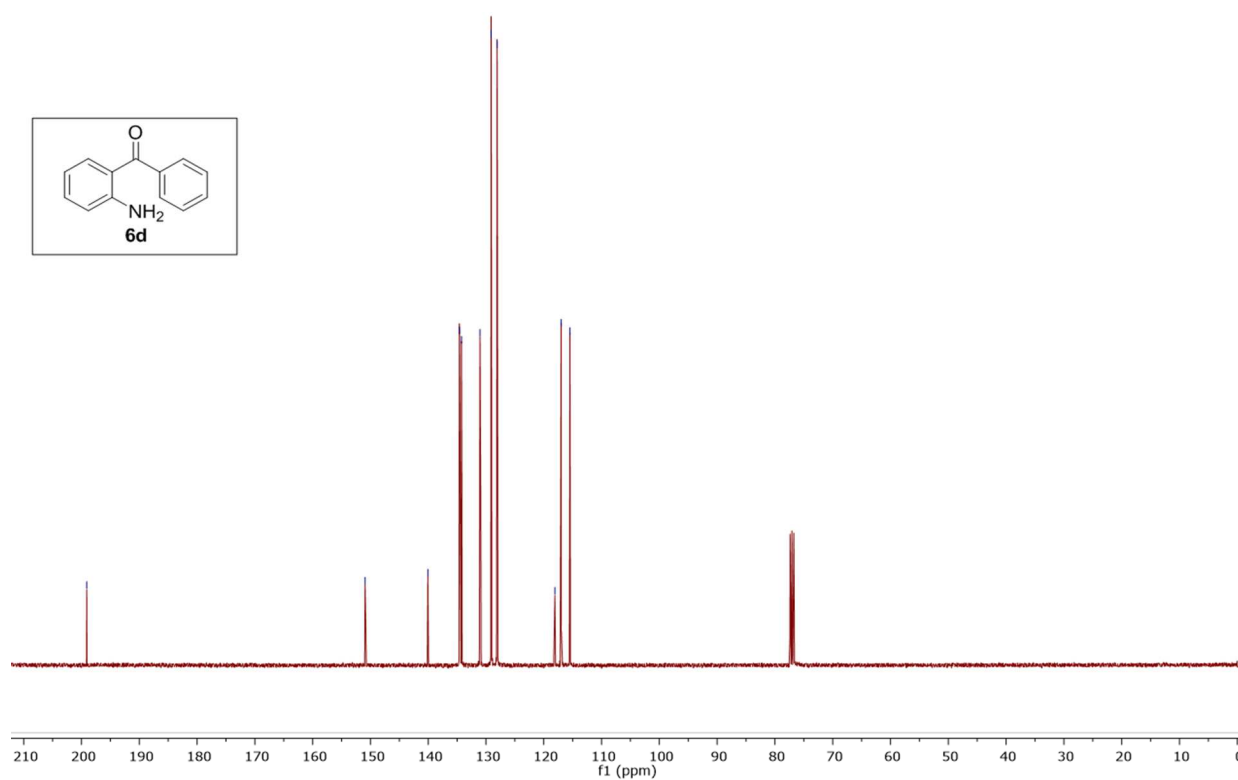
4-aminobenzophenone (6c) (^{13}C NMR)



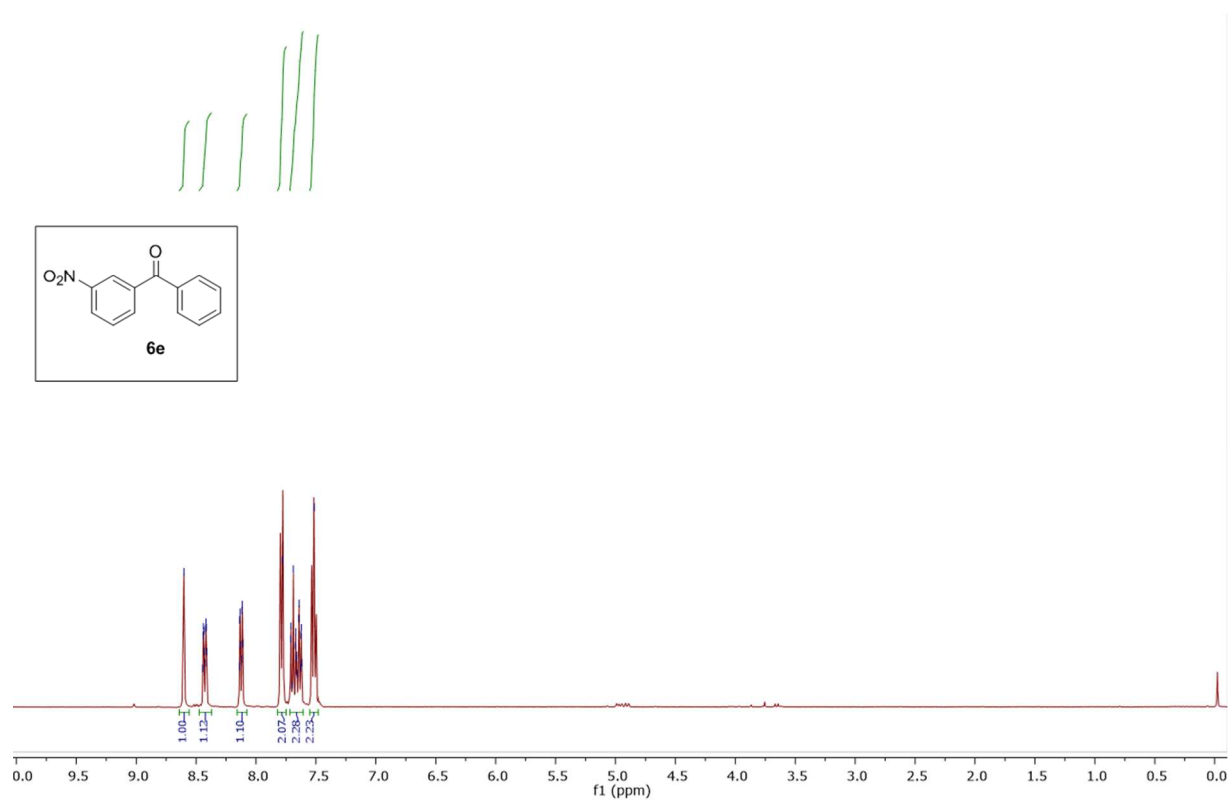
2-aminobenzophenone (6d) (^1H NMR)



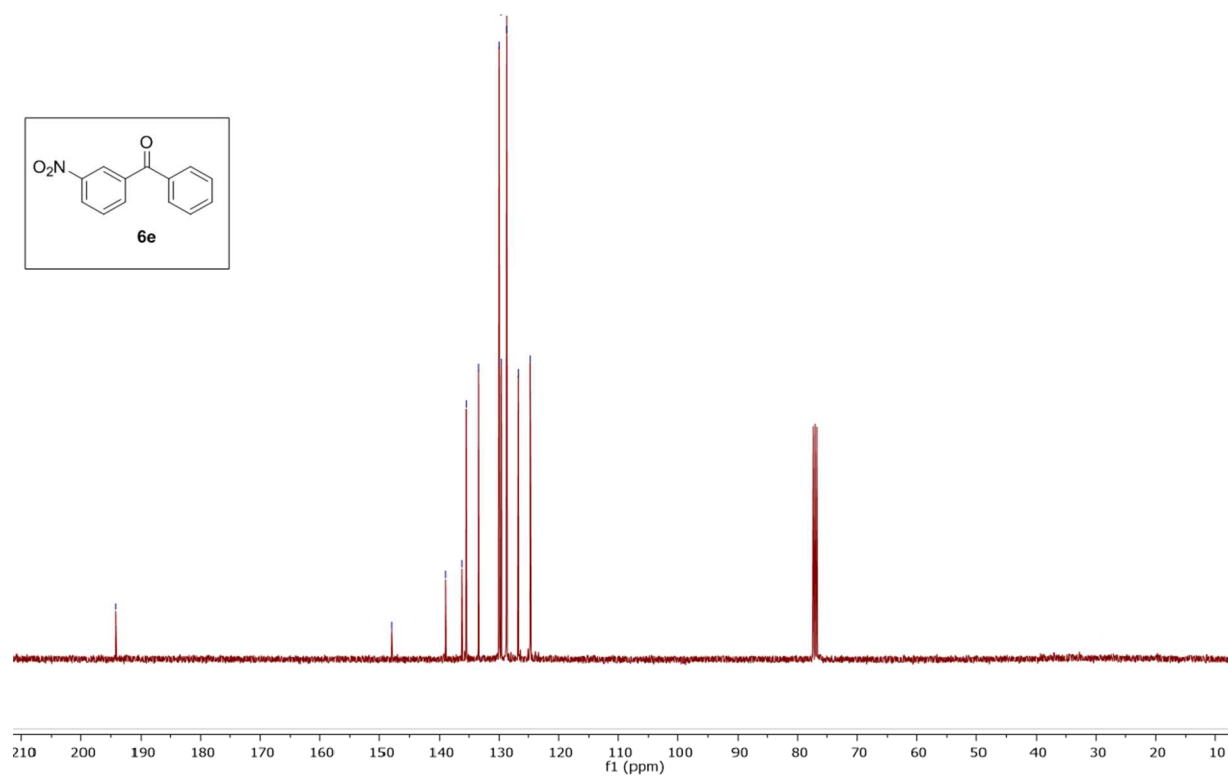
2-aminobenzophenone (6d) (^{13}C NMR)



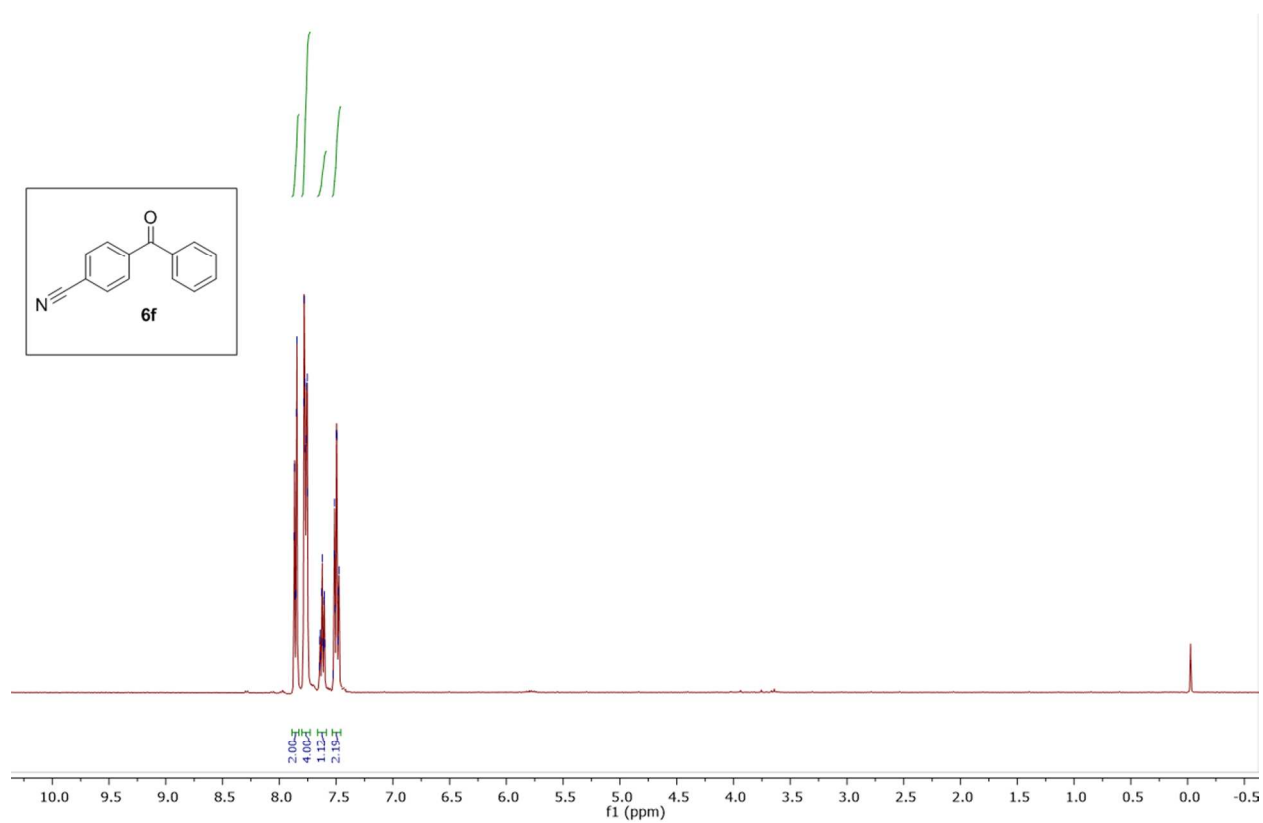
3-nitrobenzophenone (6e) (^1H NMR)



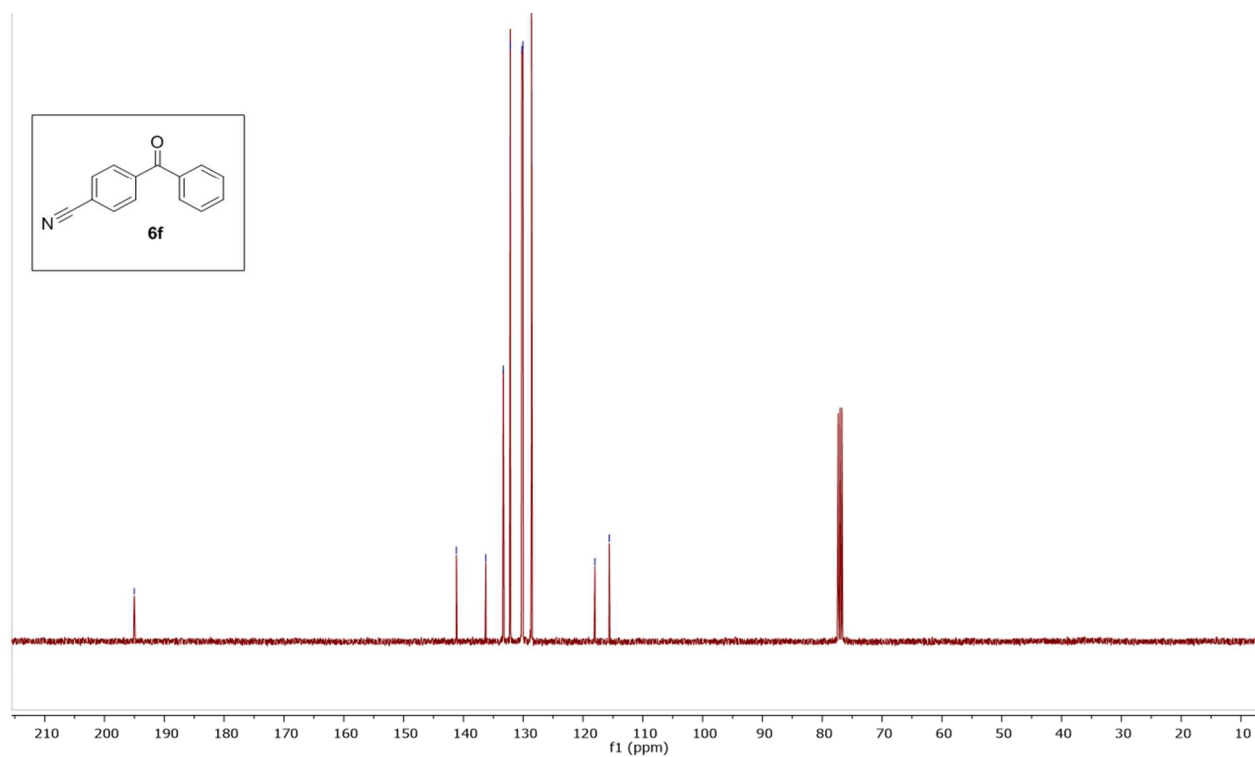
3-nitrobenzophenone (6e) (^{13}C NMR)



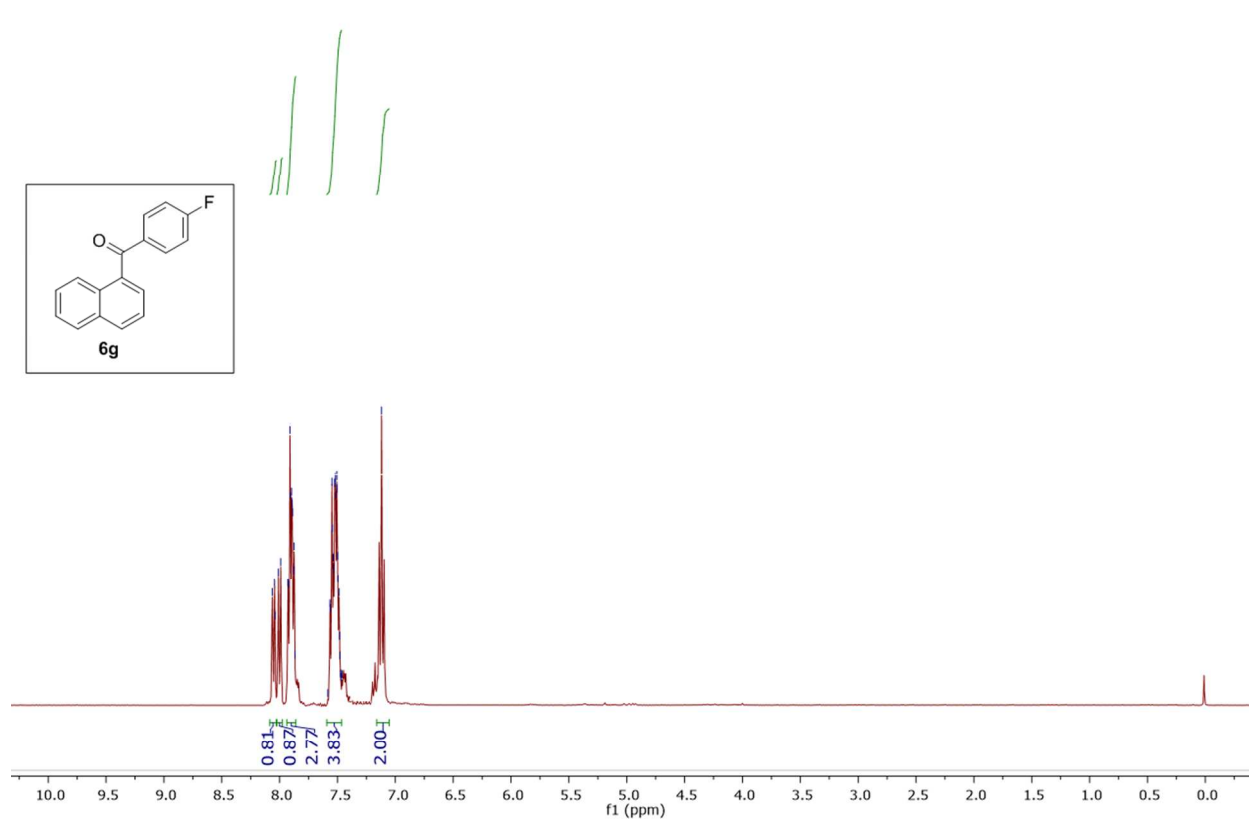
4-cyanobenzophenone (6f) (^1H NMR)



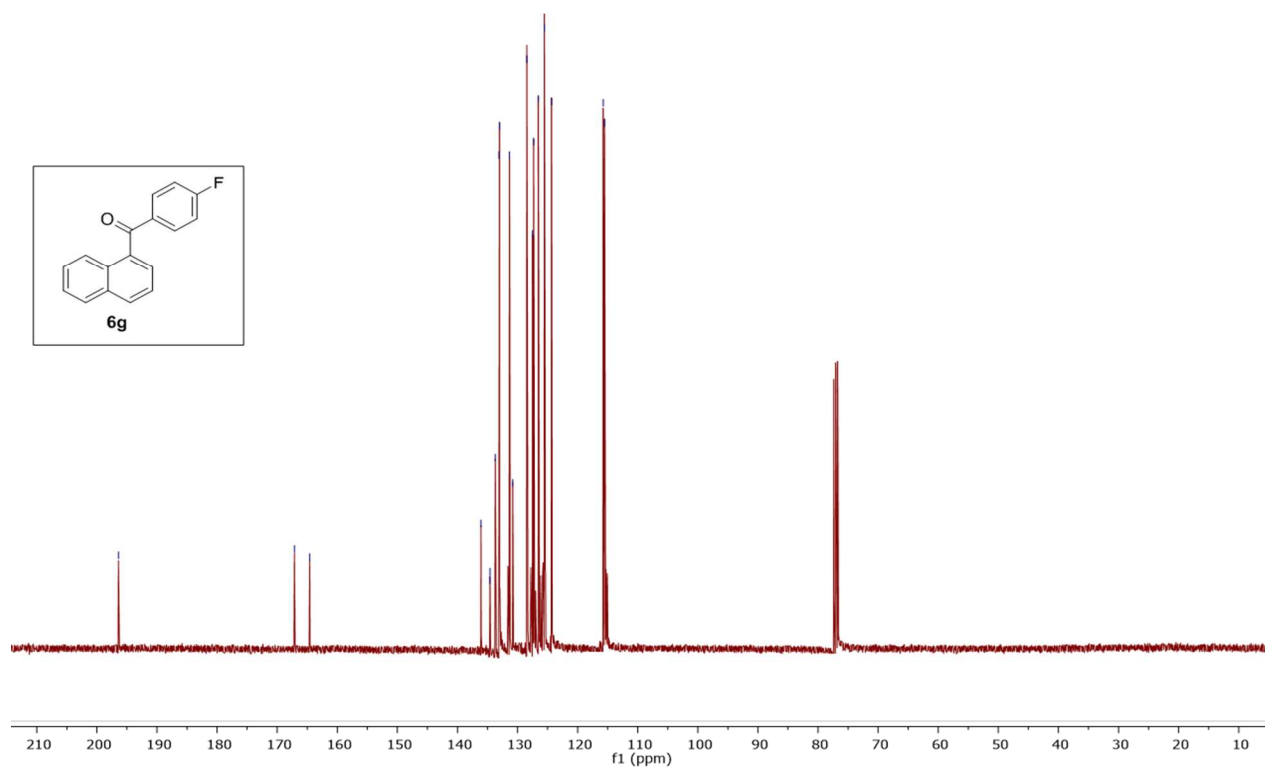
4-cyanobenzophenone (6f) (^{13}C NMR)



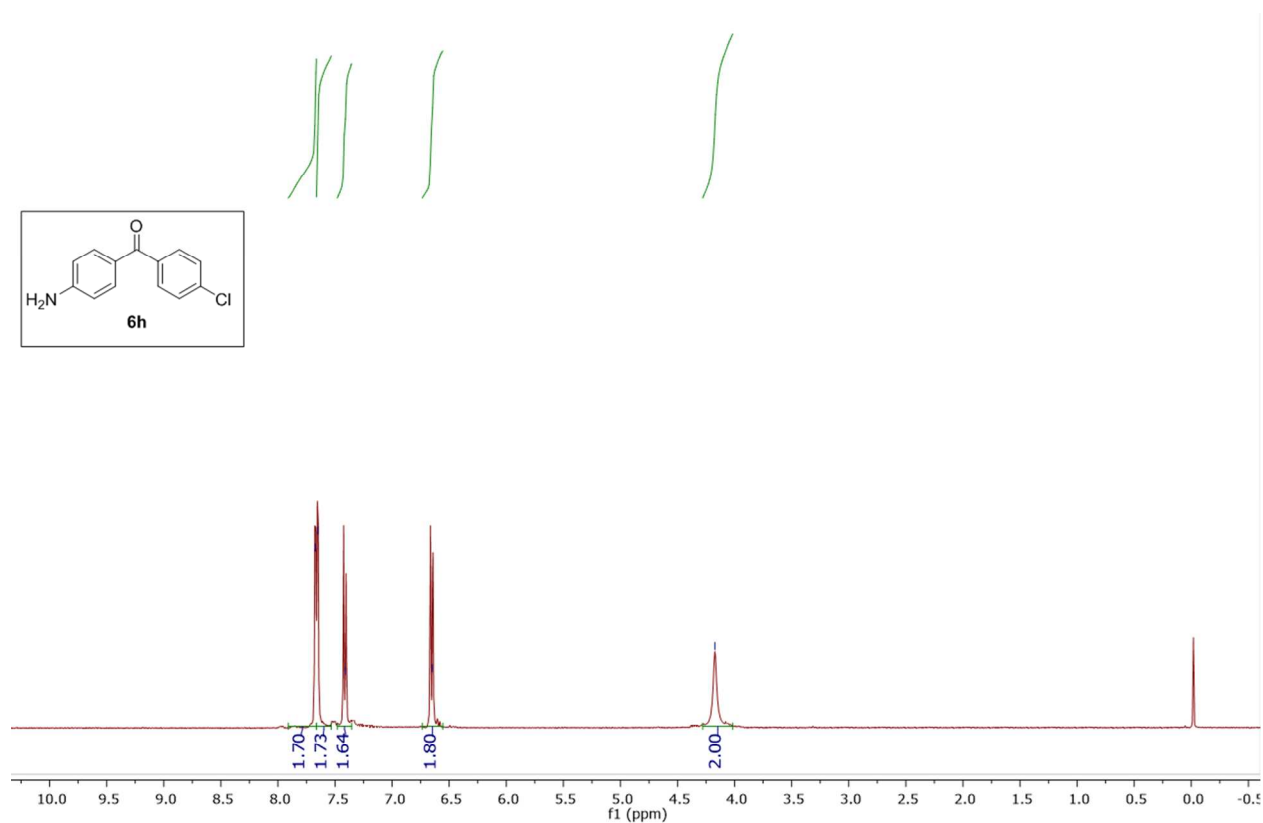
(4-fluorophenyl)(1-naphthalenyl)methanone (6g) (^1H NMR)



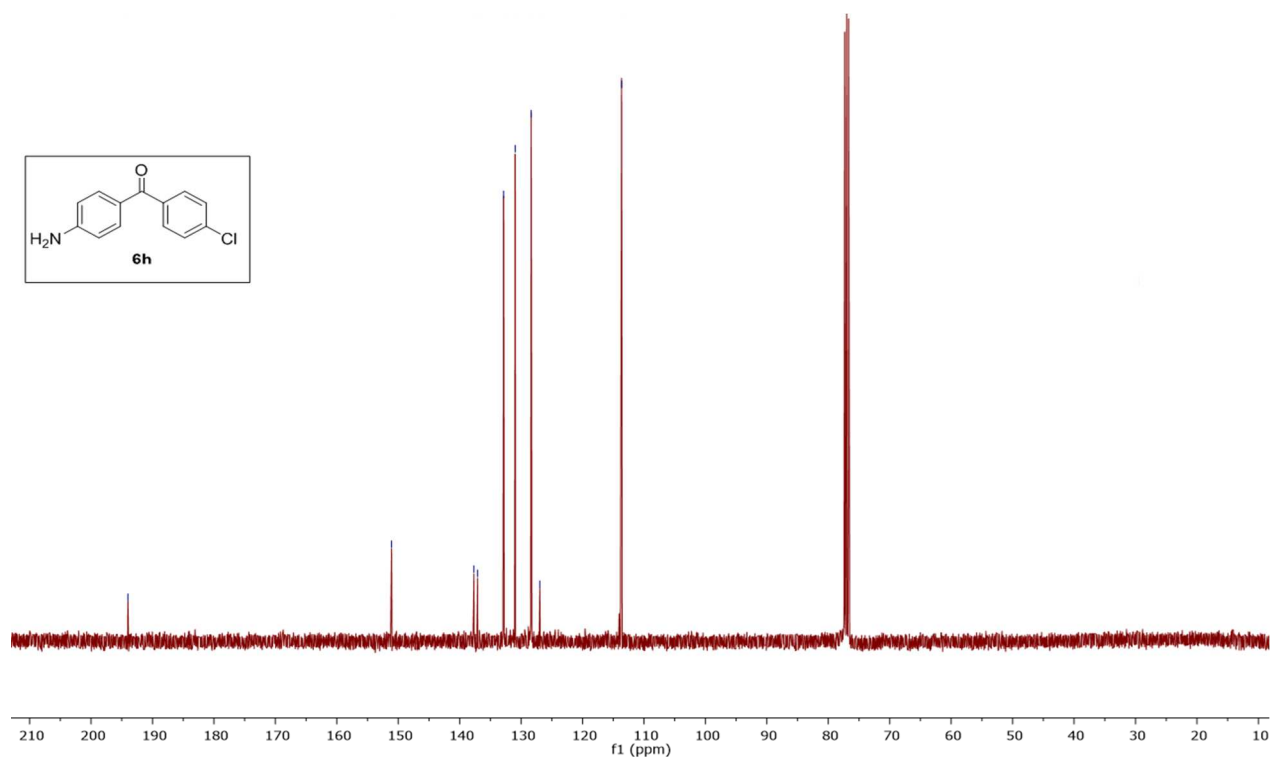
(4-fluorophenyl)(1-naphthalenyl)methanone (6g) (^{13}C NMR)



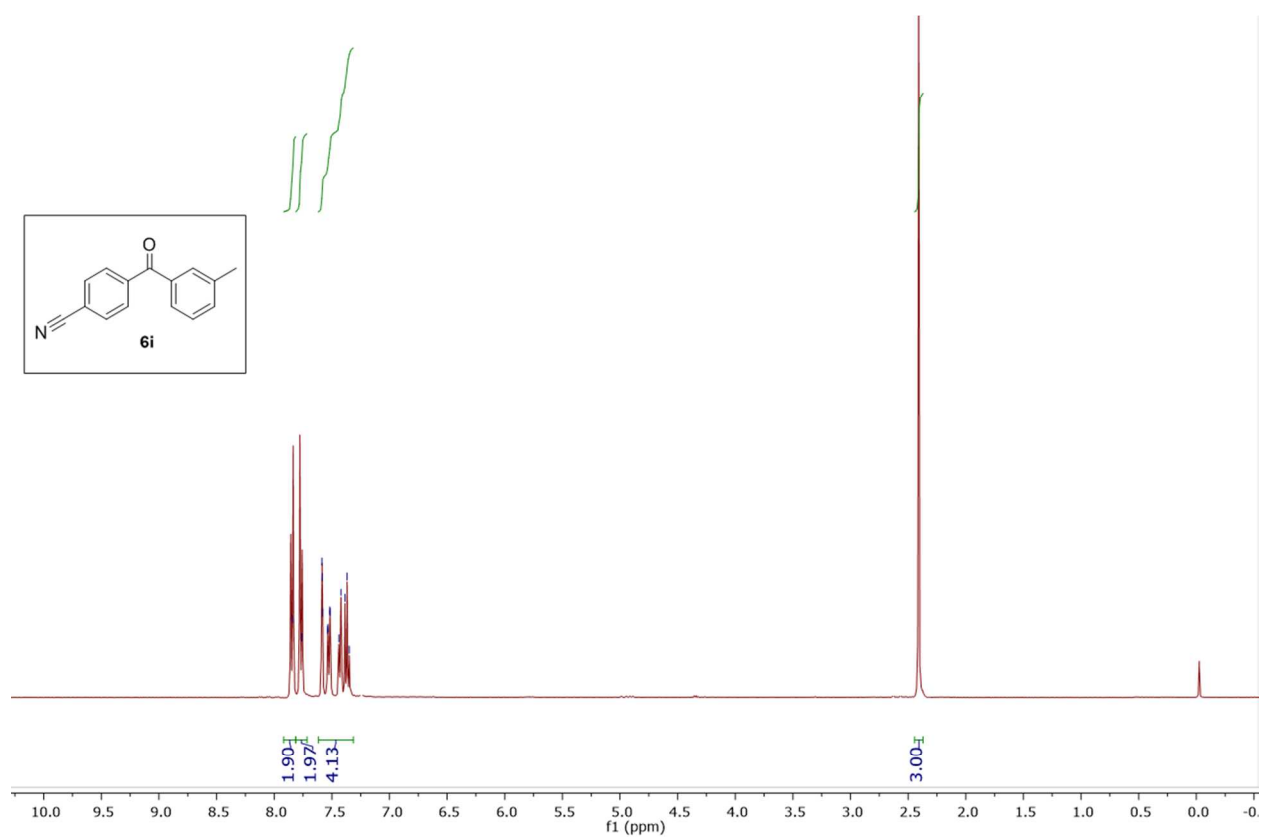
(4-aminophenyl)(4-chlorophenyl)methanone (6h) (^1H NMR)



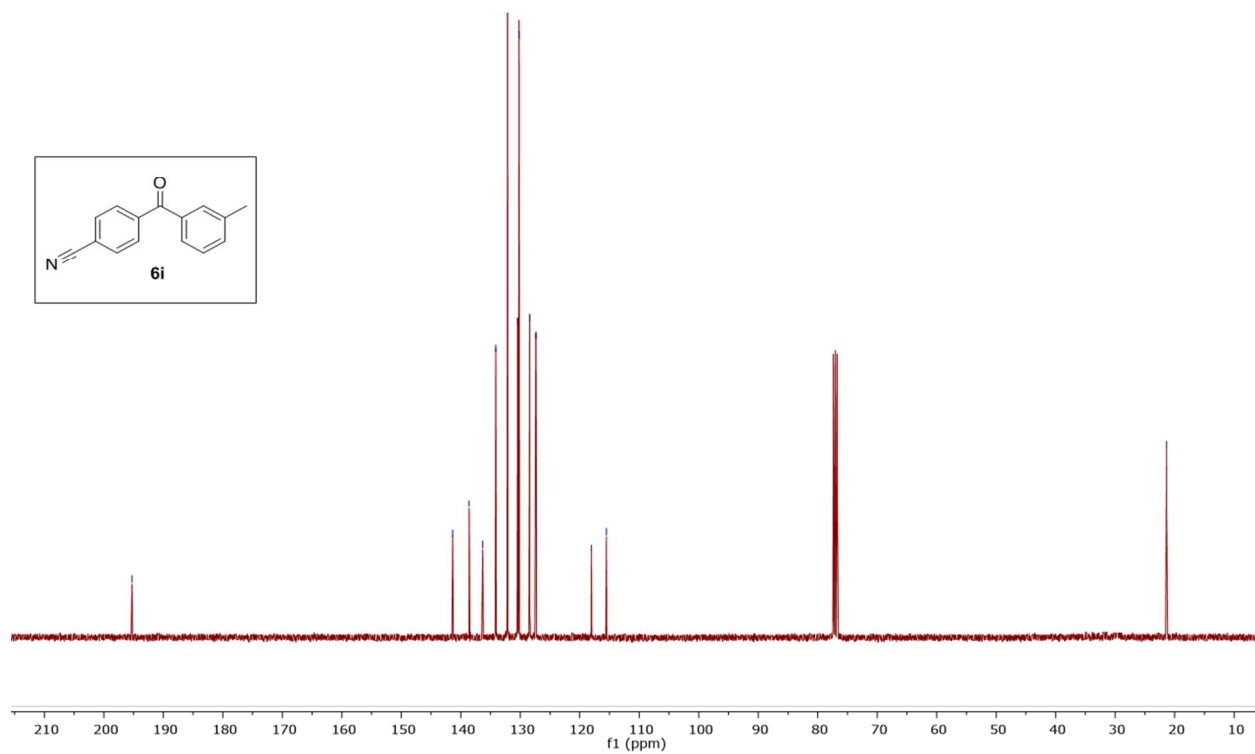
(4-aminophenyl)(4-chlorophenyl)methanone (6h) (^{13}C NMR)



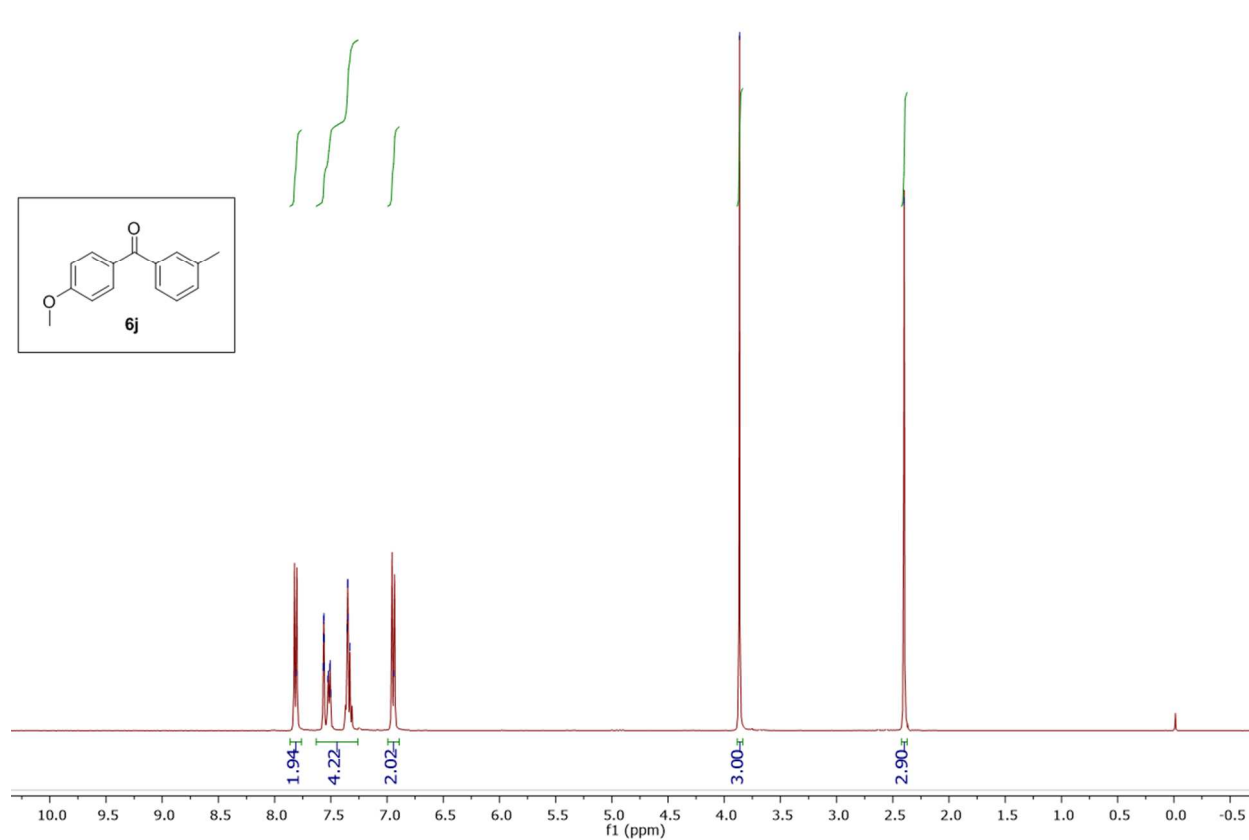
4-(3-methylbenzoyl)benzonitrile (6i) (^1H NMR)



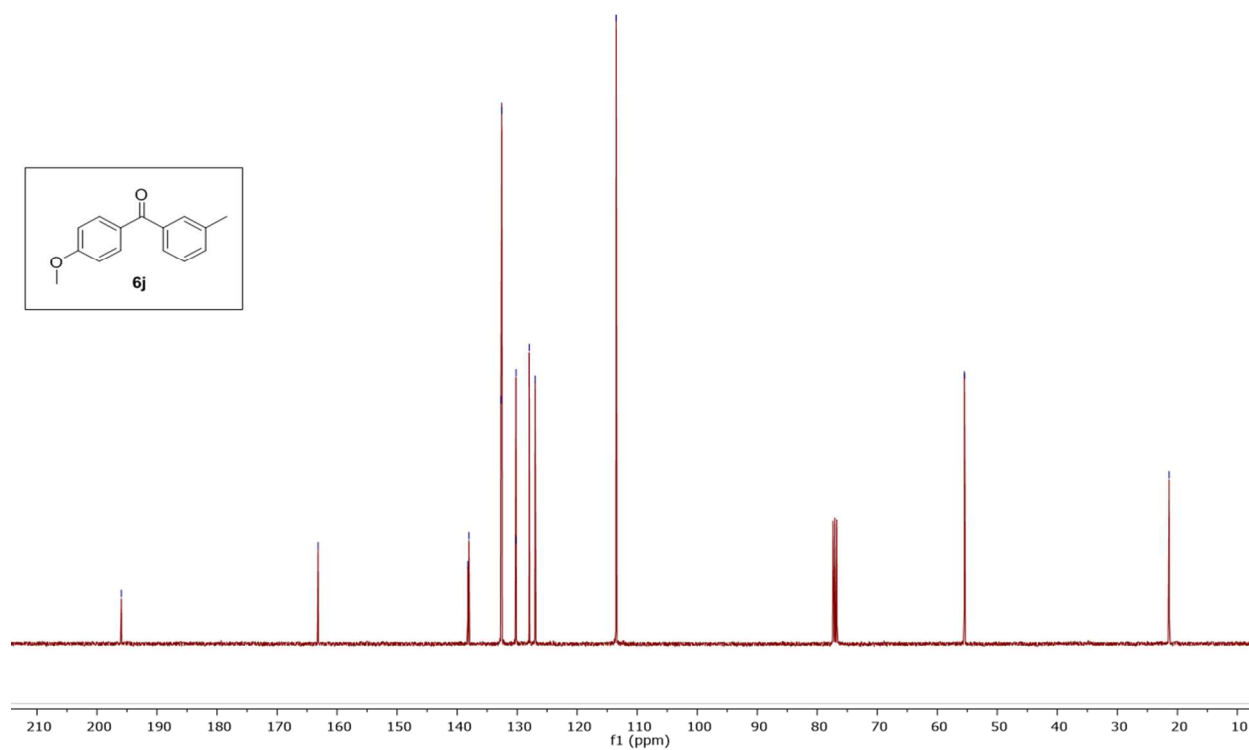
4-(3-methylbenzoyl)benzonitrile (6i) (^{13}C NMR)



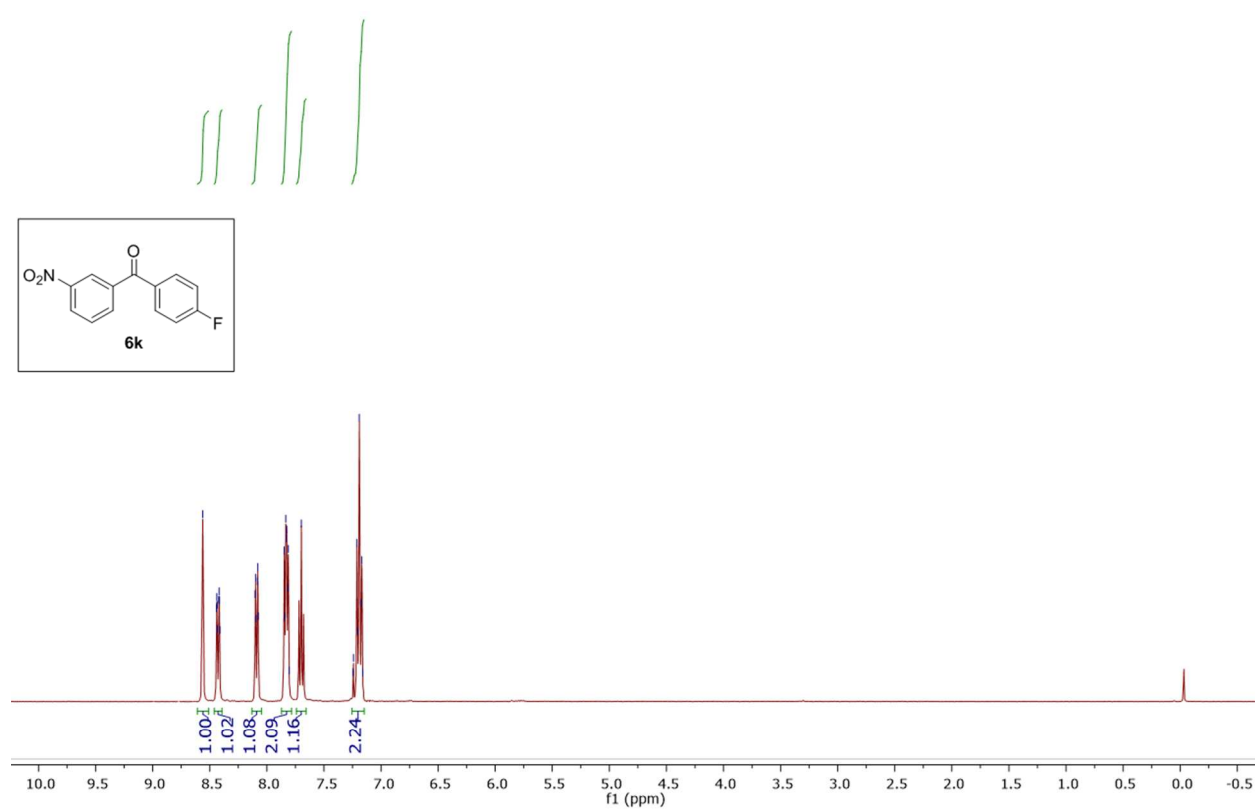
(4-methoxyphenyl)(m-tolyl)methanone (6j) (^1H NMR)



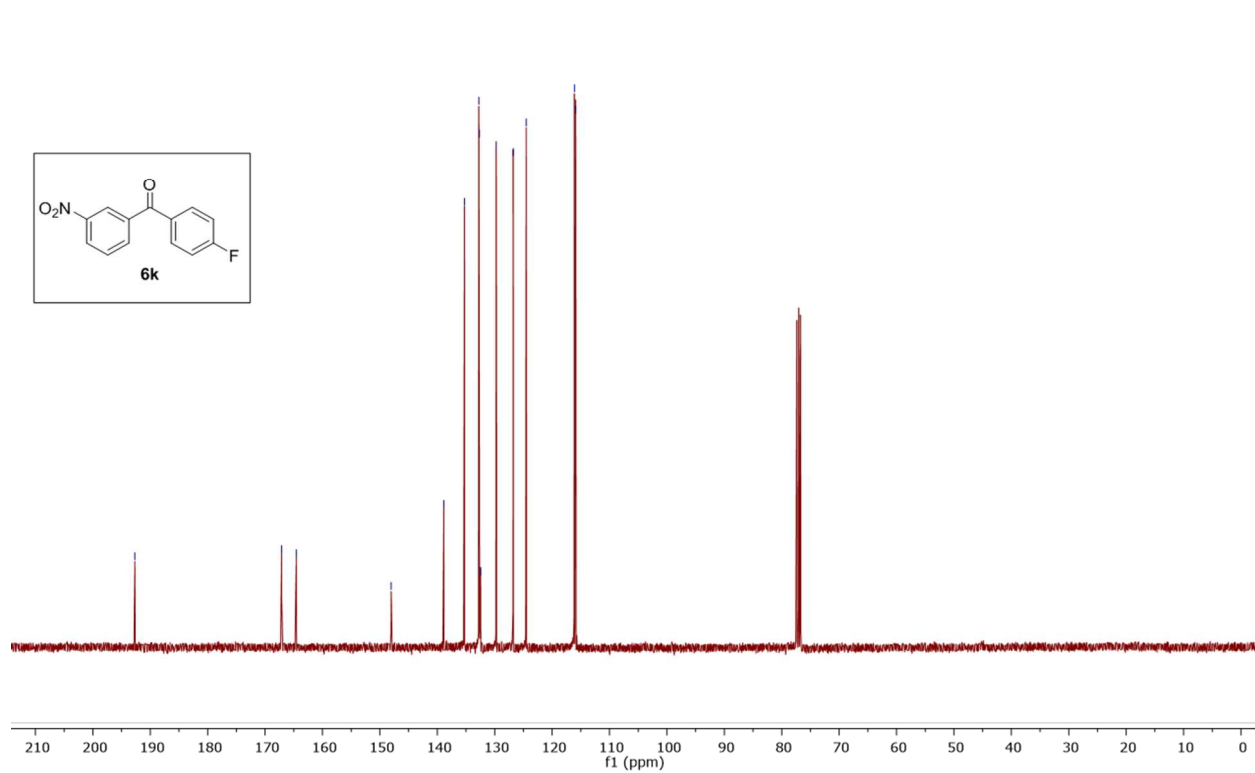
(4-methoxyphenyl)(m-tolyl)methanone (6j) (^{13}C NMR)



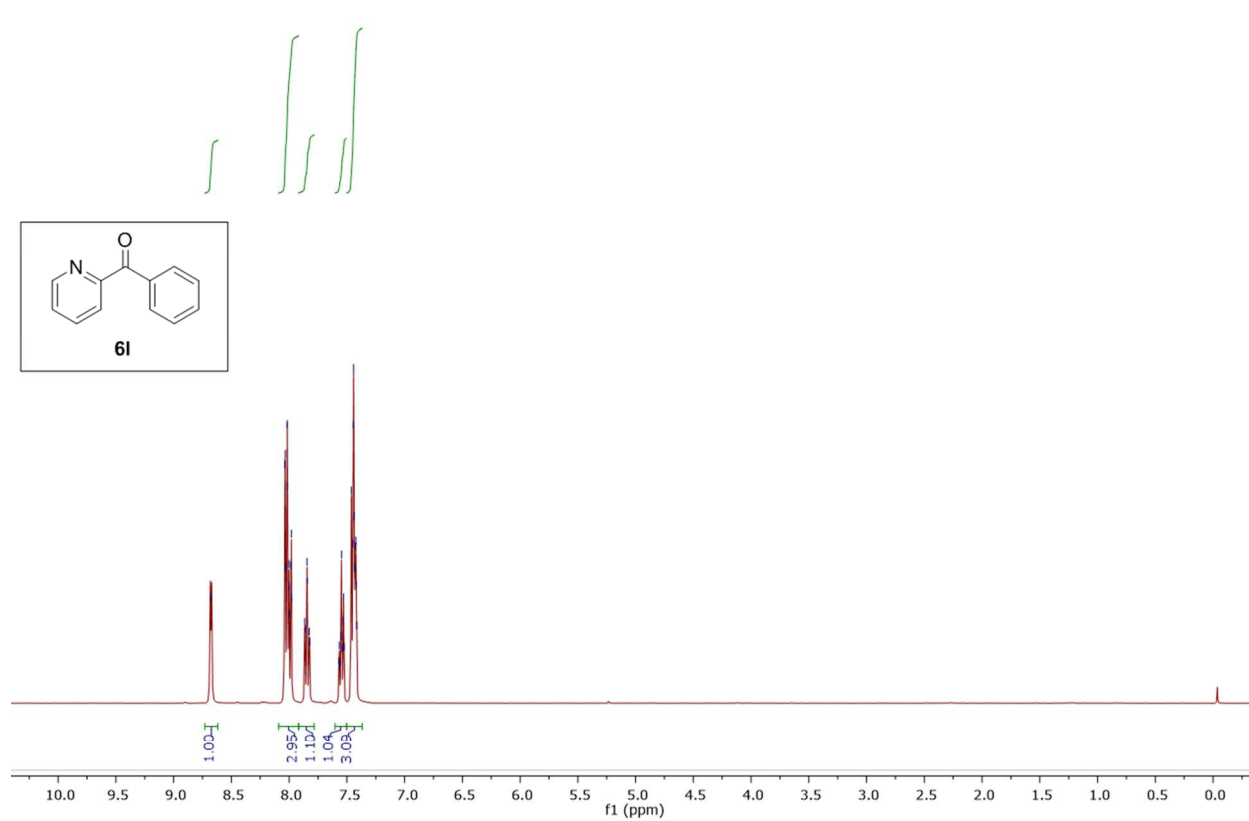
(4-fluorophenyl)(3-nitrophenyl)methanone (6k) (^1H NMR)



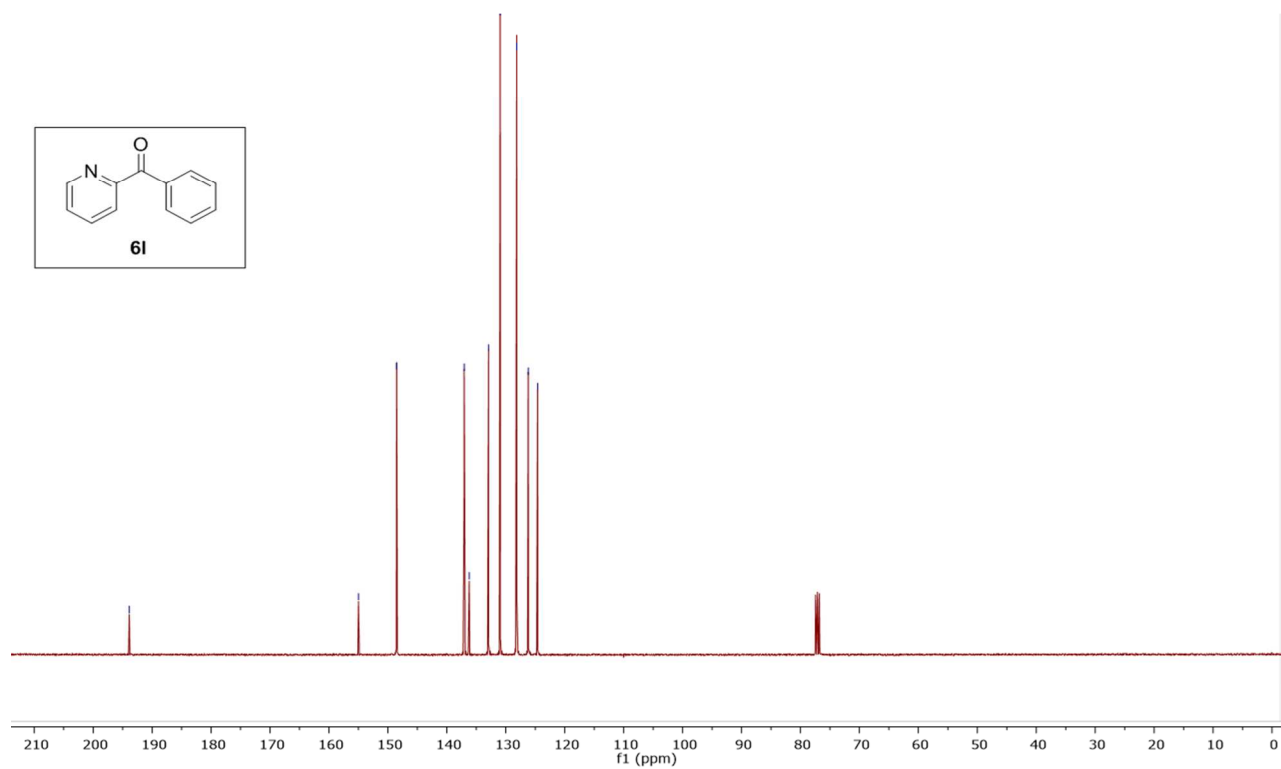
(4-fluorophenyl)(3-nitrophenyl)methanone (6k) (^{13}C NMR)



Phenyl(2-pyridinyl)methanone (6l) (¹H NMR)



Phenyl(2-pyridinyl)methanone (6l) (¹³C NMR)



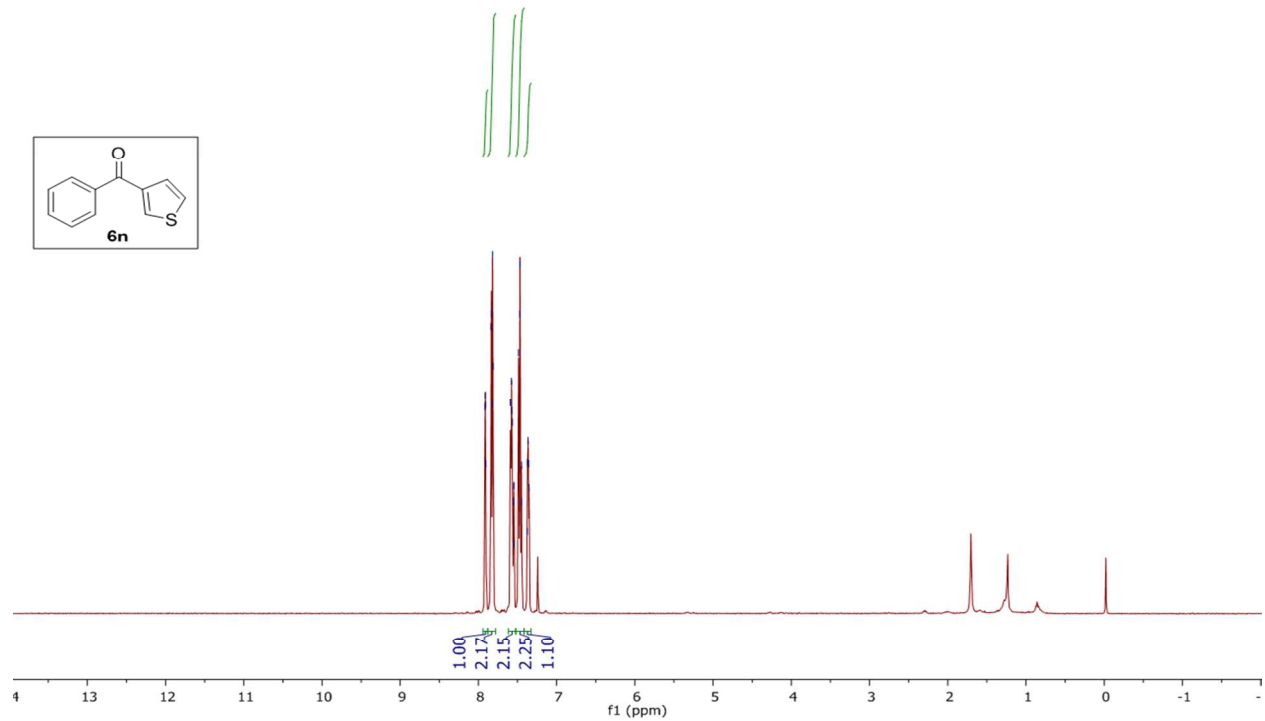
O=C(c1ccsc1)c2ccccc2
6m

1.9 ppm (s, 3H, integration 3.00)
2.6 ppm (t, 2H, integration 2.00)
4.1 ppm (t, 2H, integration 2.00)
7.2-7.8 ppm (m, 5H, integration 2.00, 0.95, 2.07, 2.10, 0.99)

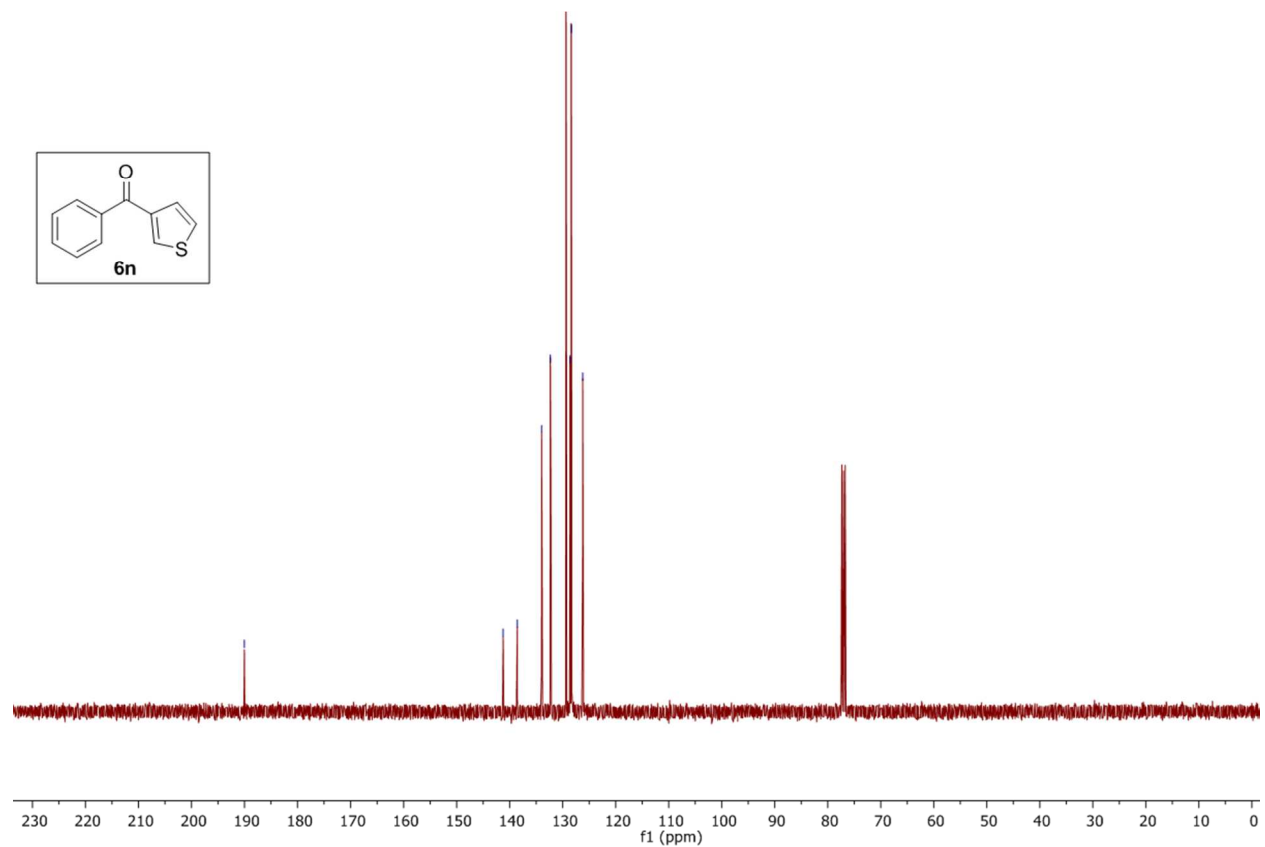
6m

13C NMR spectrum (ppm) of compound 6m. The spectrum shows a cluster of peaks between 120 and 140 ppm, a peak at approximately 190 ppm, and a peak at approximately 77 ppm. The x-axis ranges from 230 to -10 ppm.

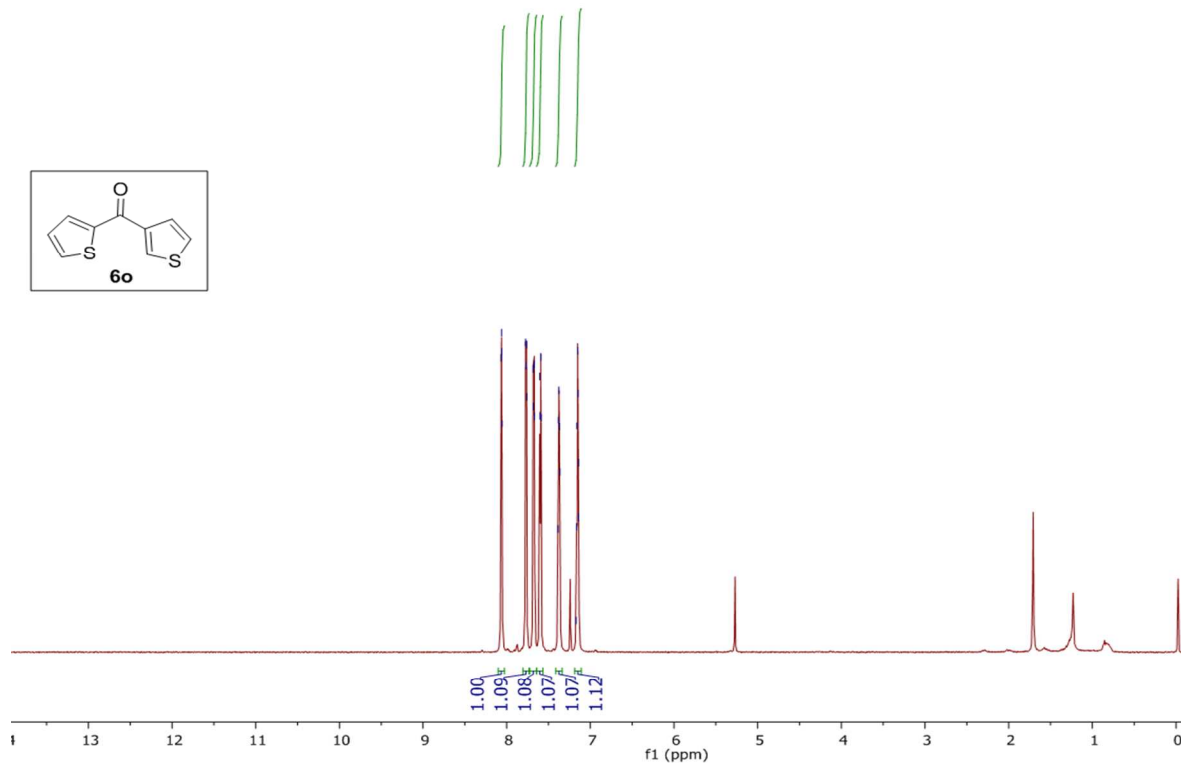
3-benzoylthiophene (6n) (^1H NMR)



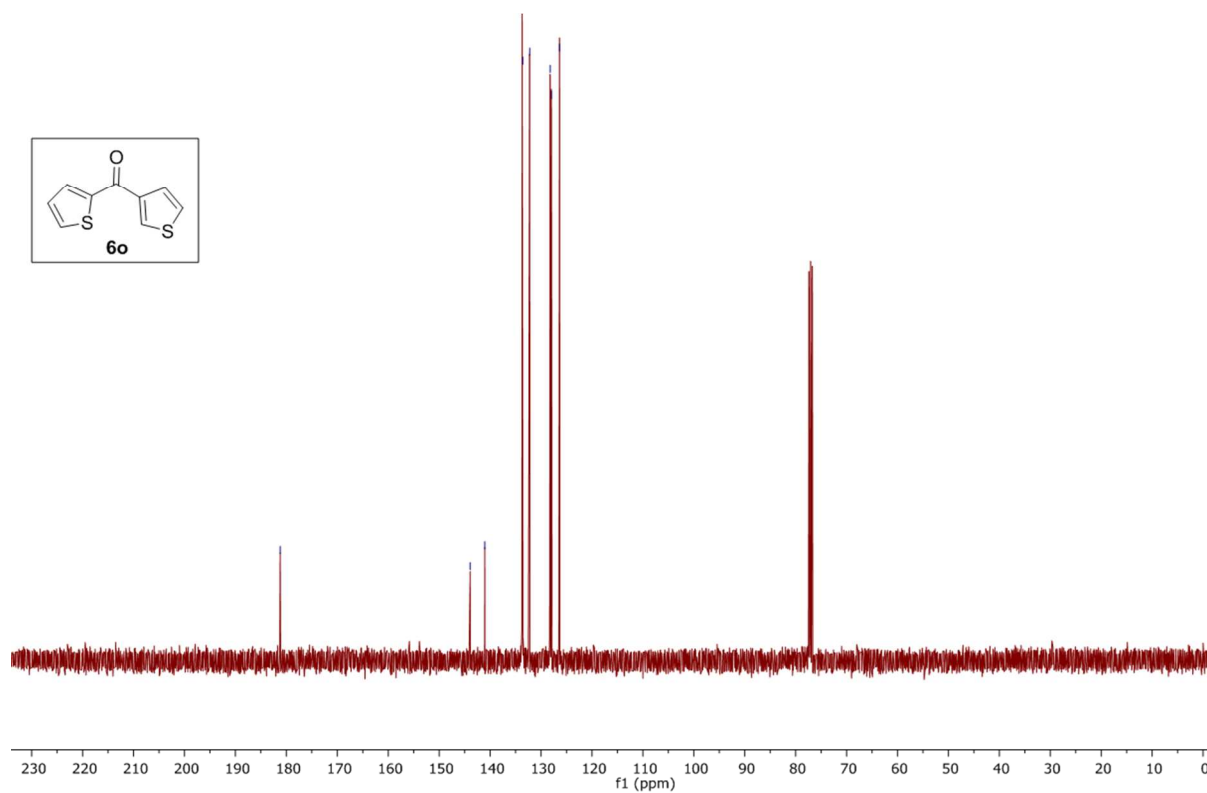
3-benzoylthiophene (6n) (^{13}C NMR)



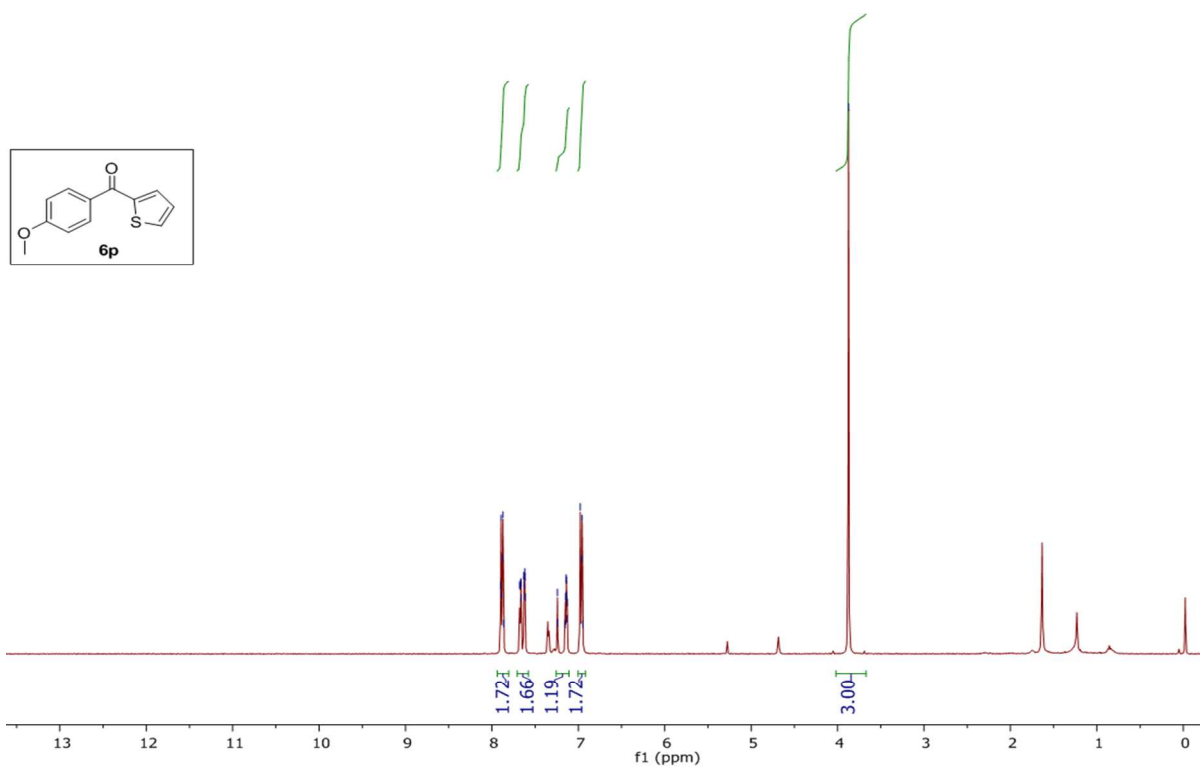
Thiophen-2-yl(thiophen-3-yl)methanone (6o) (^1H NMR)



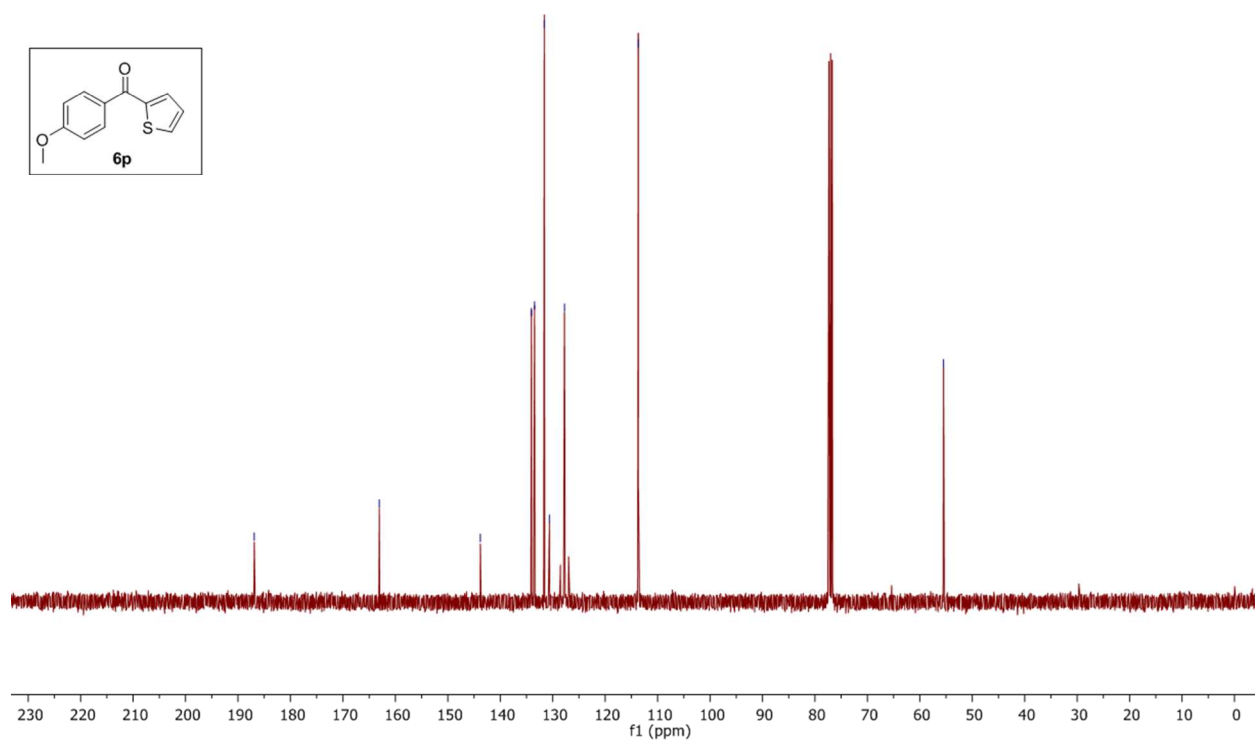
Thiophen-2-yl(thiophen-3-yl)methanone (6o) (^{13}C NMR)



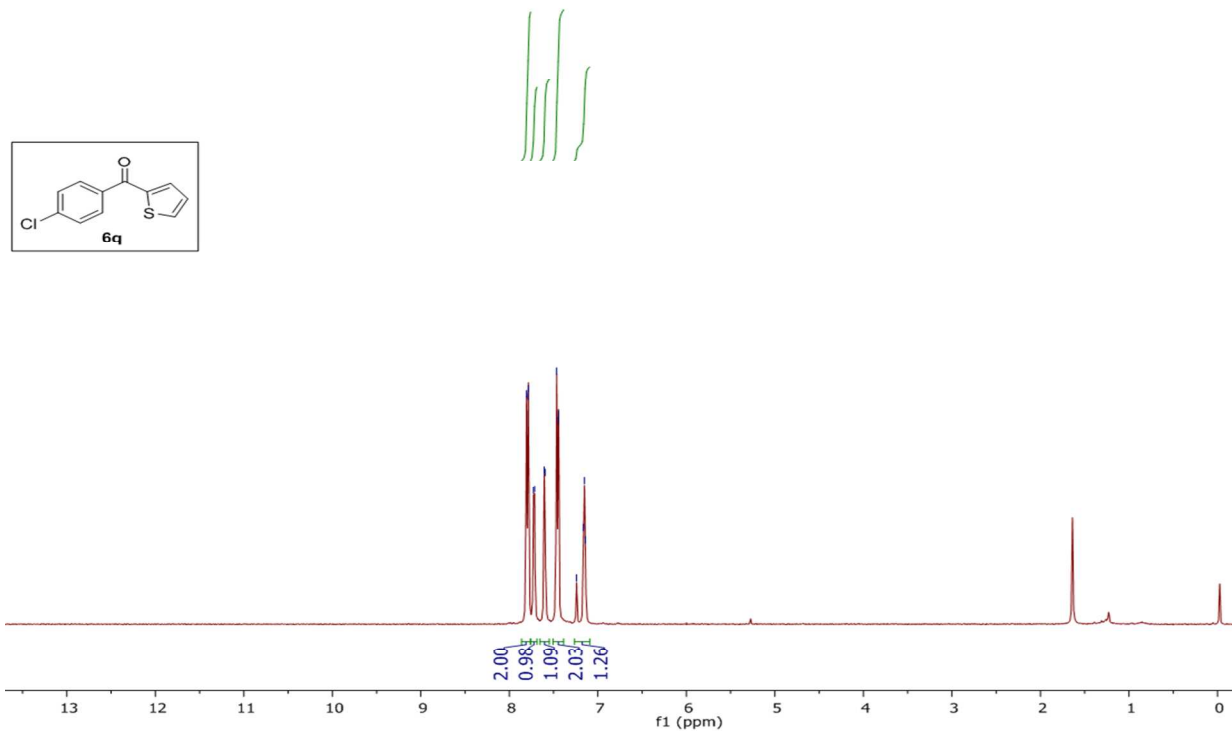
(4-methoxyphenyl)(thiophen-2-yl)methanone (6p) (^1H NMR)



(4-methoxyphenyl)(thiophen-2-yl)methanone (6p) (^{13}C NMR)



(4-chlorophenyl)(thiophen-2-yl)methanone (6q) (^1H NMR)



(4-chlorophenyl)(thiophen-2-yl)methanone (6q) (^{13}C NMR)

