Supporting Information for

Cu-Catalyzed Generation of Alkyl Radicals from Alkylsilyl Peroxides and Subsequent C(sp^3)–C(sp^2) Cross-Coupling with Arylboronic Acids

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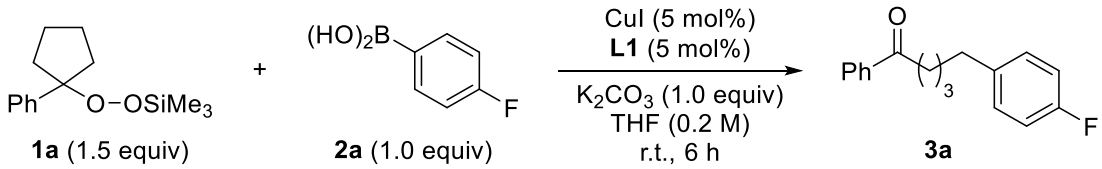
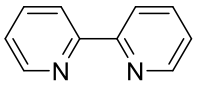
2. Further Optimization of Reaction Conditions

Table S1.



Entry	Deviation from above	NMR yield of **3a** (%)
1	-	96 (95[a])
2	$NiCl_2$	N.R.
3	$NiCl_2(PPh_3)_2$, w/o **L1**	N.R.
4	$Ni(OAc)_2$•$4H_2O$	N.R.
5	$FeCl_2$	N.R.
6	$FeSO_4$•$7H_2O$	N.R.
7	$Fe(acac)_3$	N.R.
8	$NiCl_2$, $FeCl_2$, **L1** (10 mol%)	N.R.
9	Entry 8, 60 °C	N.R.
10	Na_2CO_3	91
11	Cs_2CO_3	85
12	K_3PO_4	>99



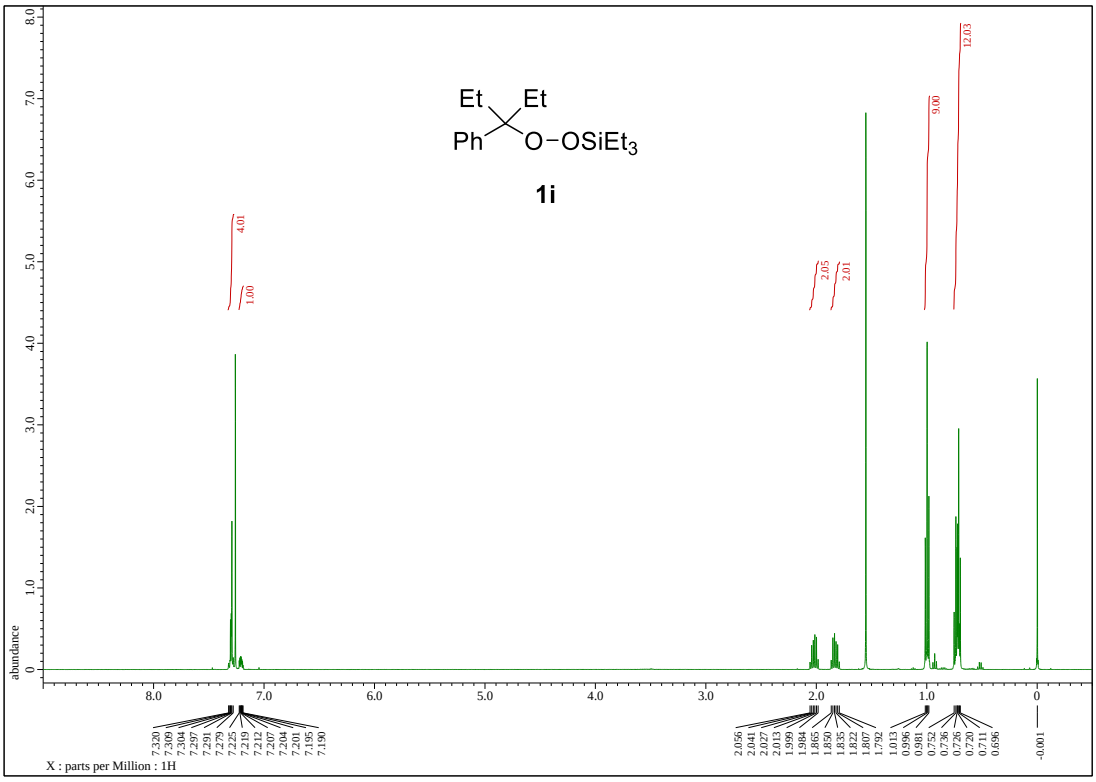
L1 (bpy)

Internal Standard = 1,1,2,2-Tetrachloroethane.

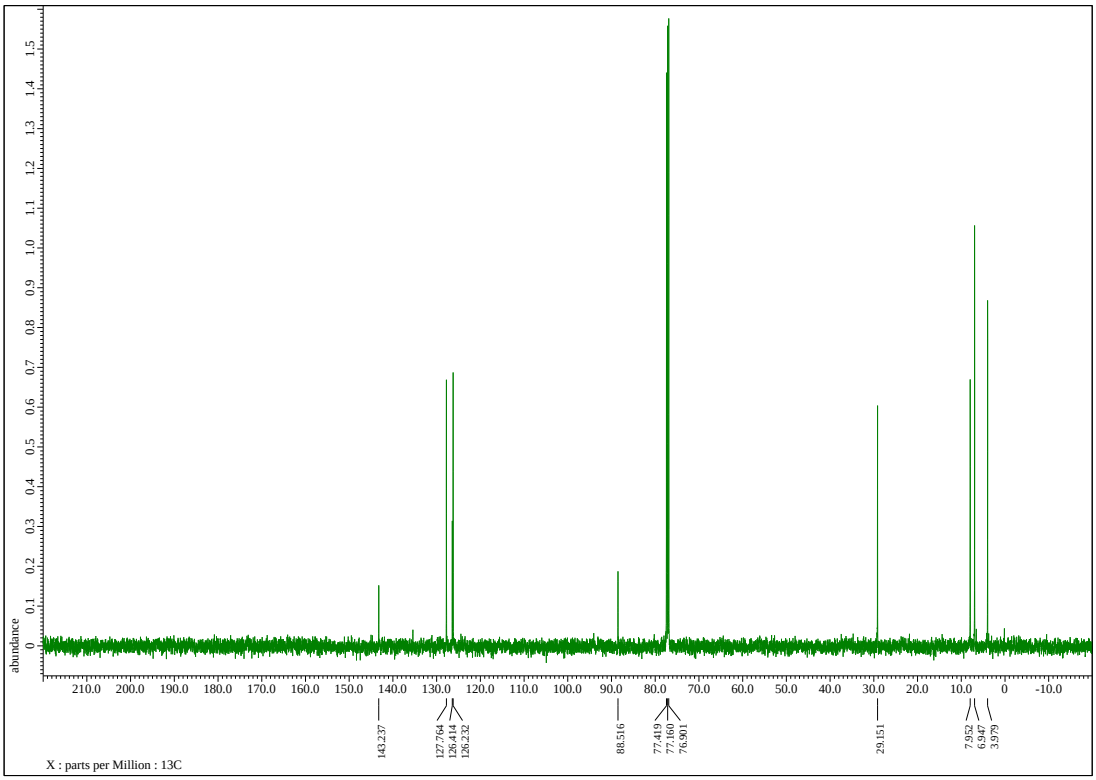
[a]Isolated yield based on **2a.**

2. ^{1}H NMR and ^{13}C{^{1}H} NMR Spectra

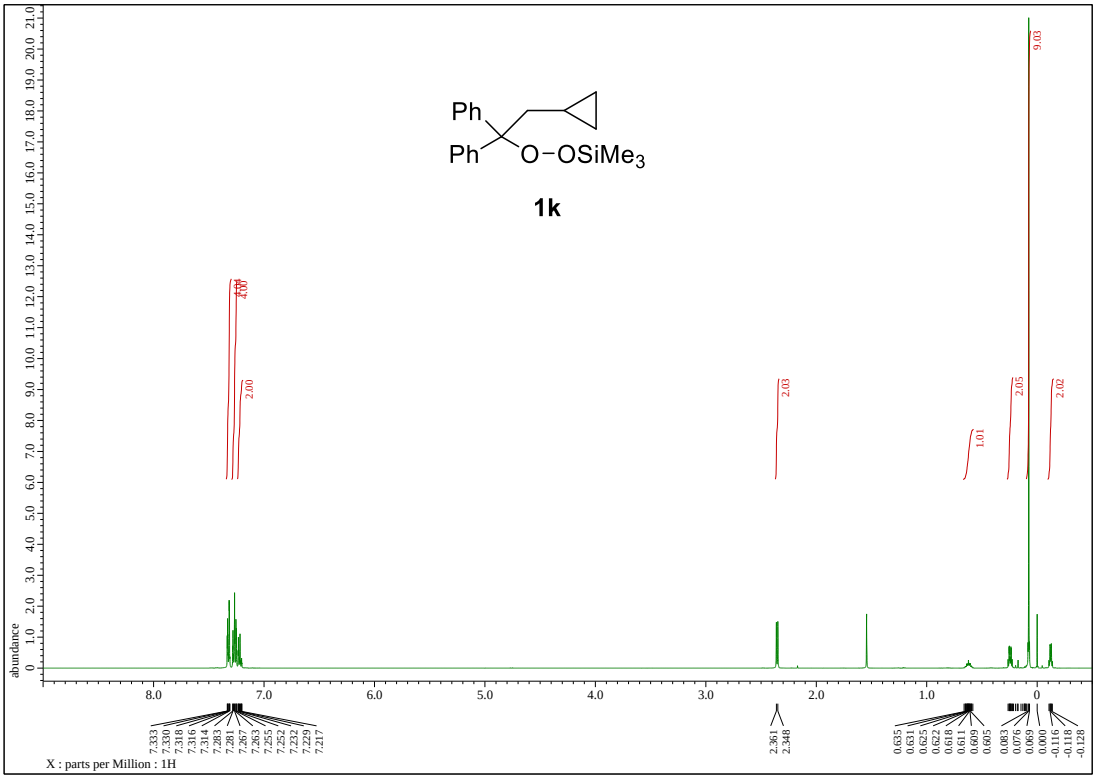
^{1}H NMR spectrum of **1i** (500 MHz, $CDCl_3$)



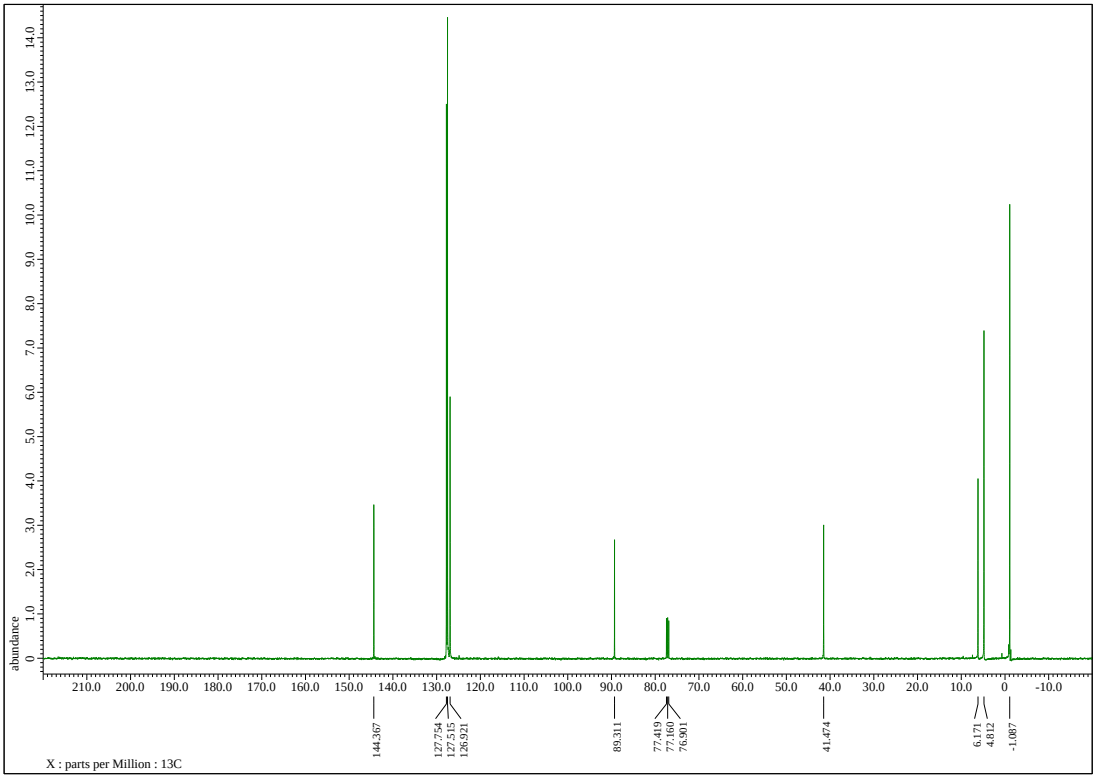
^{13}C{^{1}H} NMR spectrum of **1i** (125 MHz, $CDCl_3$)



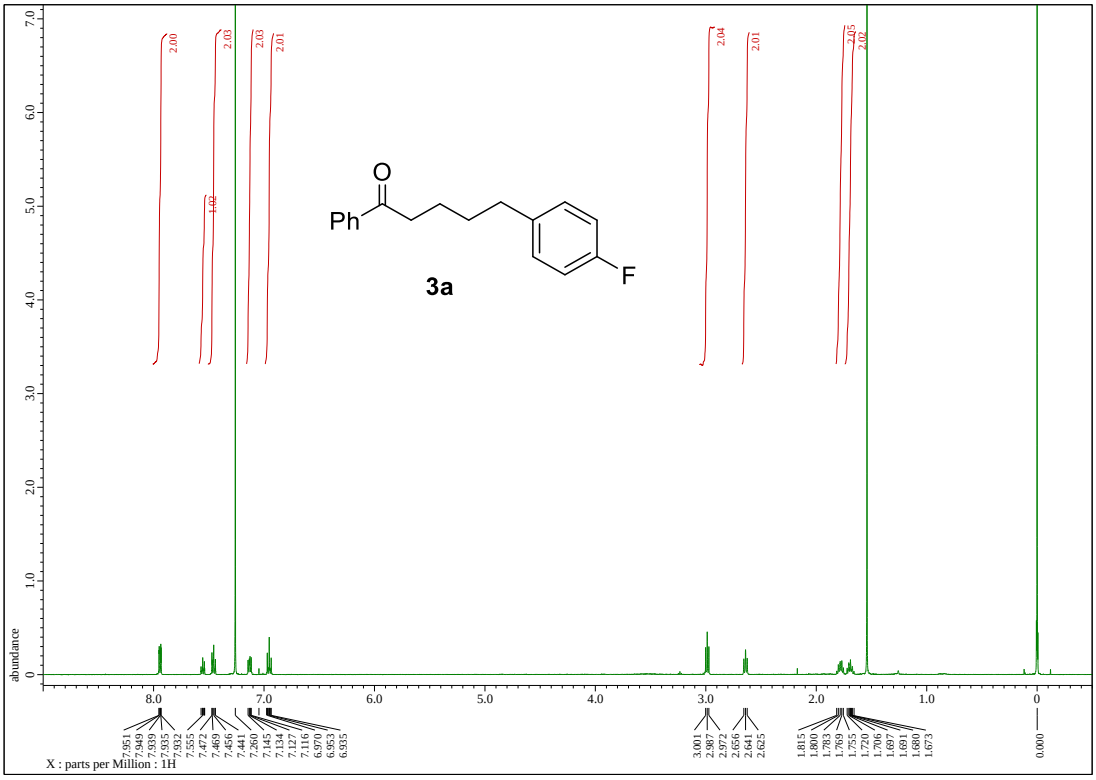
^{1}H NMR spectrum of **1k** (500 MHz, $CDCl_3$)



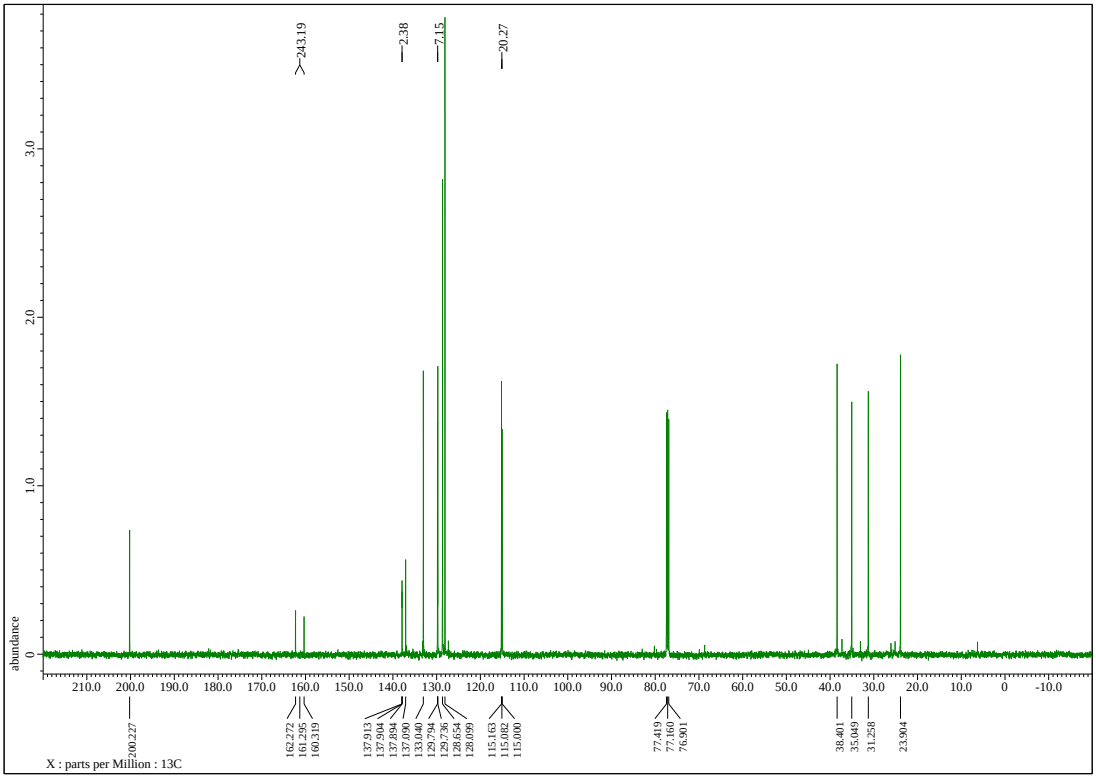
^{13}C{^{1}H} NMR spectrum of **1k** (125 MHz, $CDCl_3$)



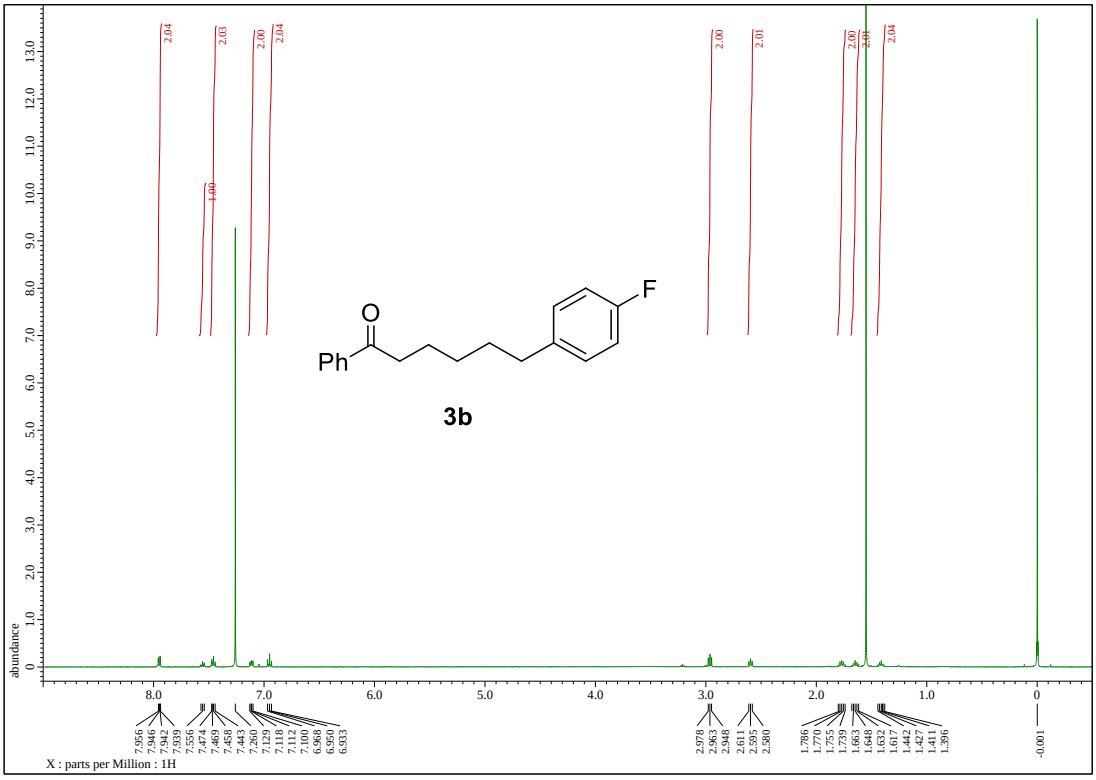
^{1}H NMR spectrum of **3a** (500 MHz, $CDCl_3$)



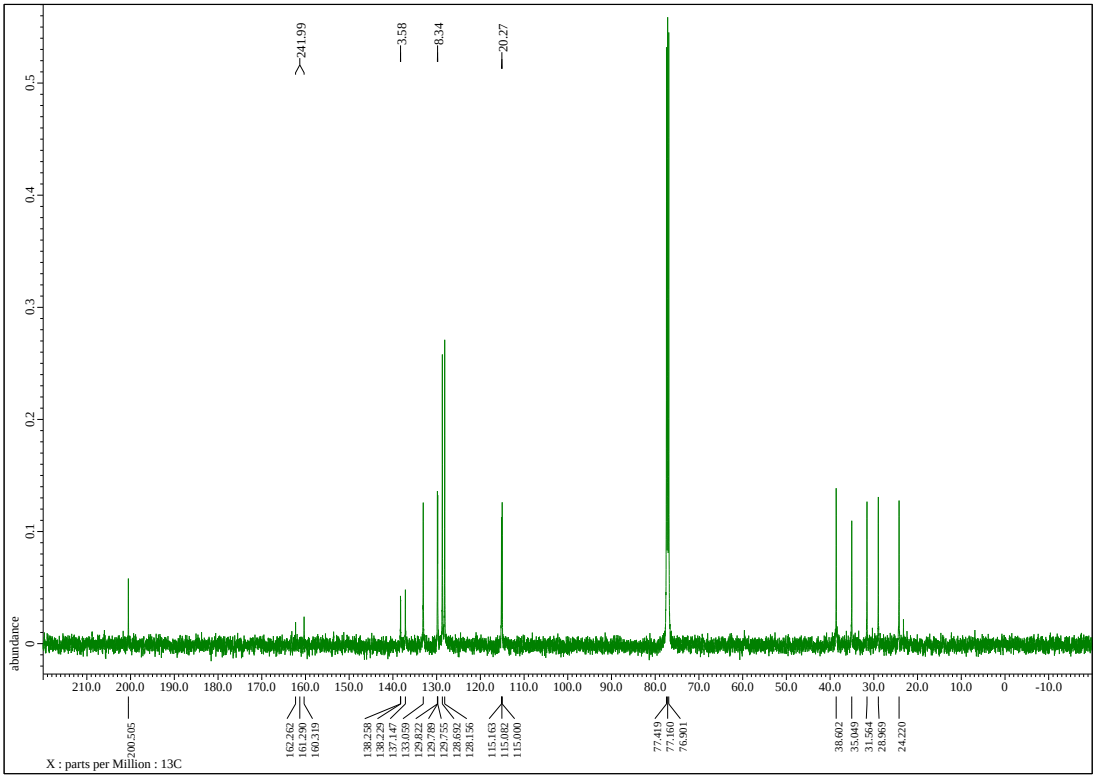
^{13}C{^{1}H} NMR spectrum of **3a** (125 MHz, $CDCl_3$)



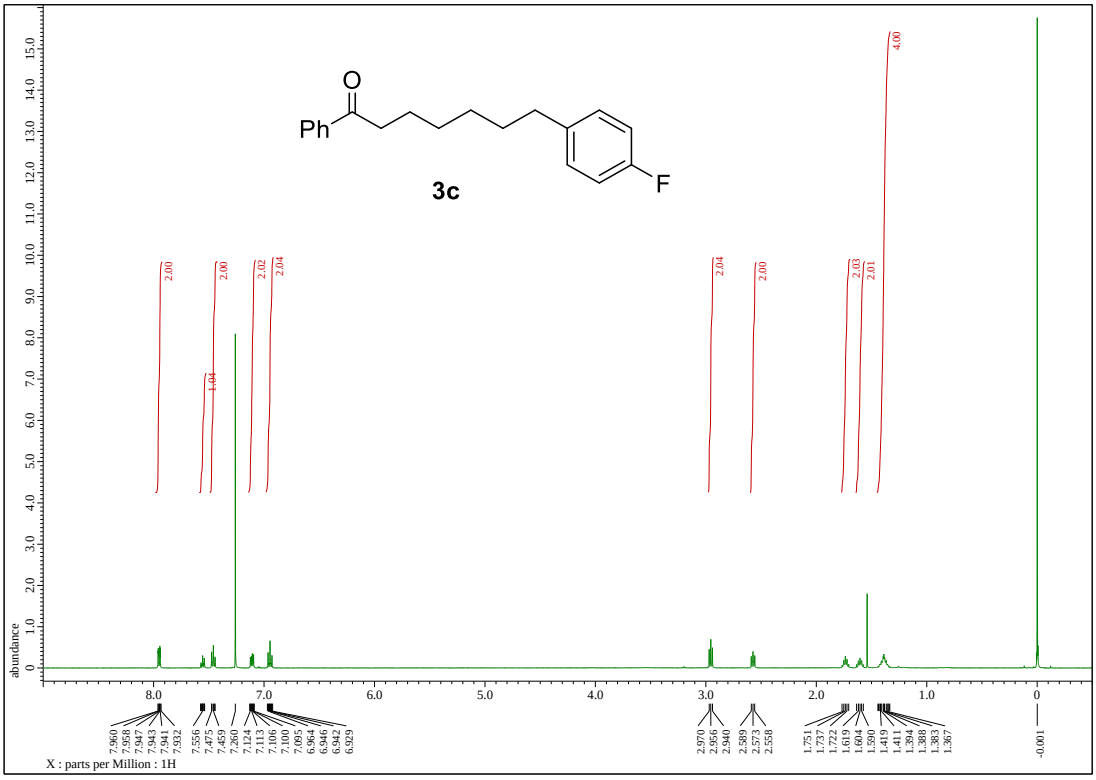
^{1}H NMR spectrum of **3b** (500 MHz, $CDCl_3$)



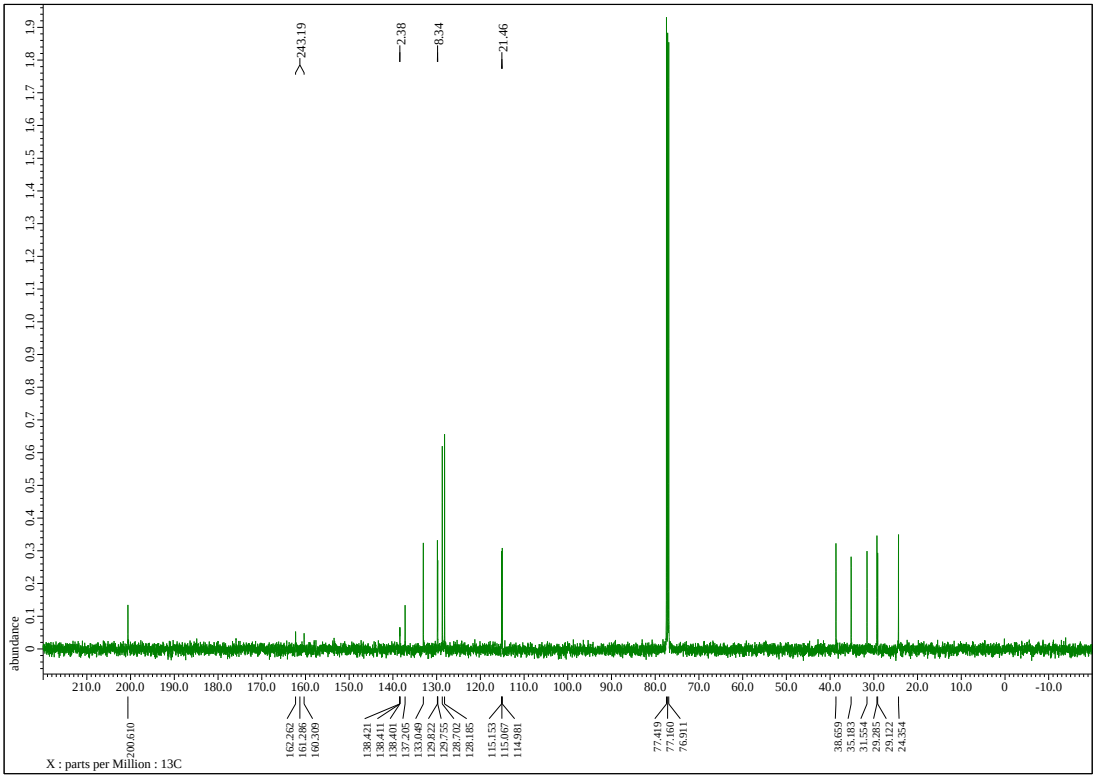
^{13}C{^{1}H} NMR spectrum of **3b** (125 MHz, $CDCl_3$)



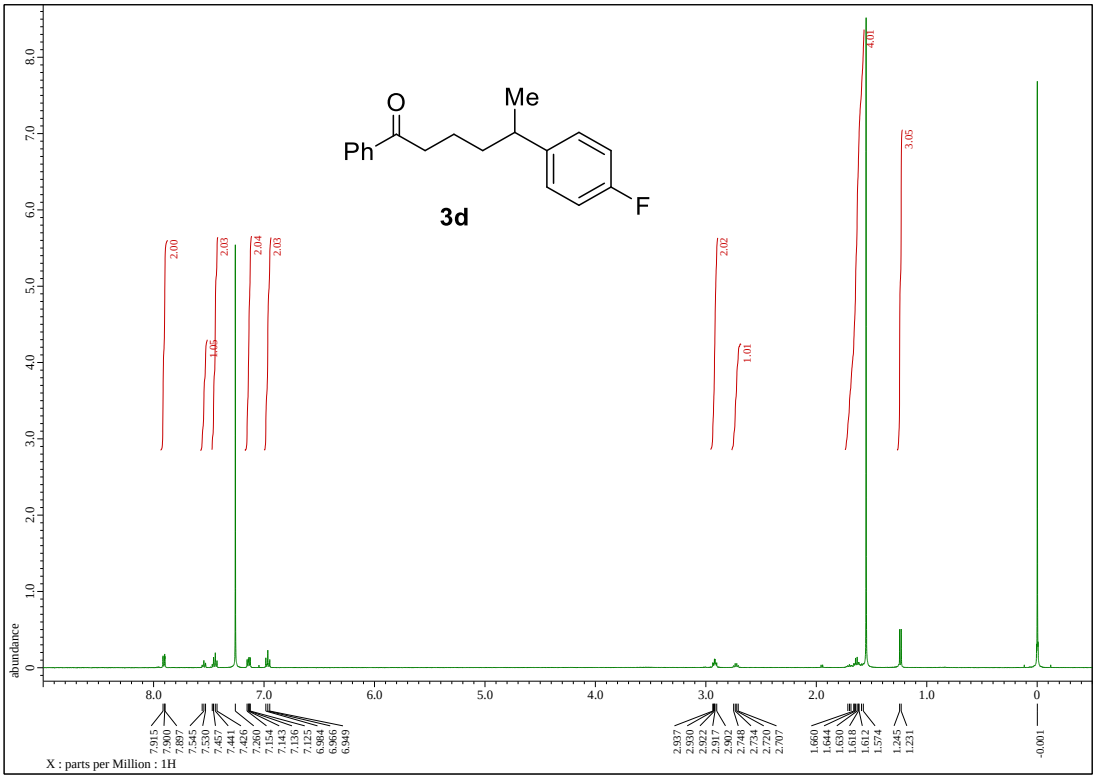
^{1}H NMR spectrum of **3c** (500 MHz, $CDCl_3$)



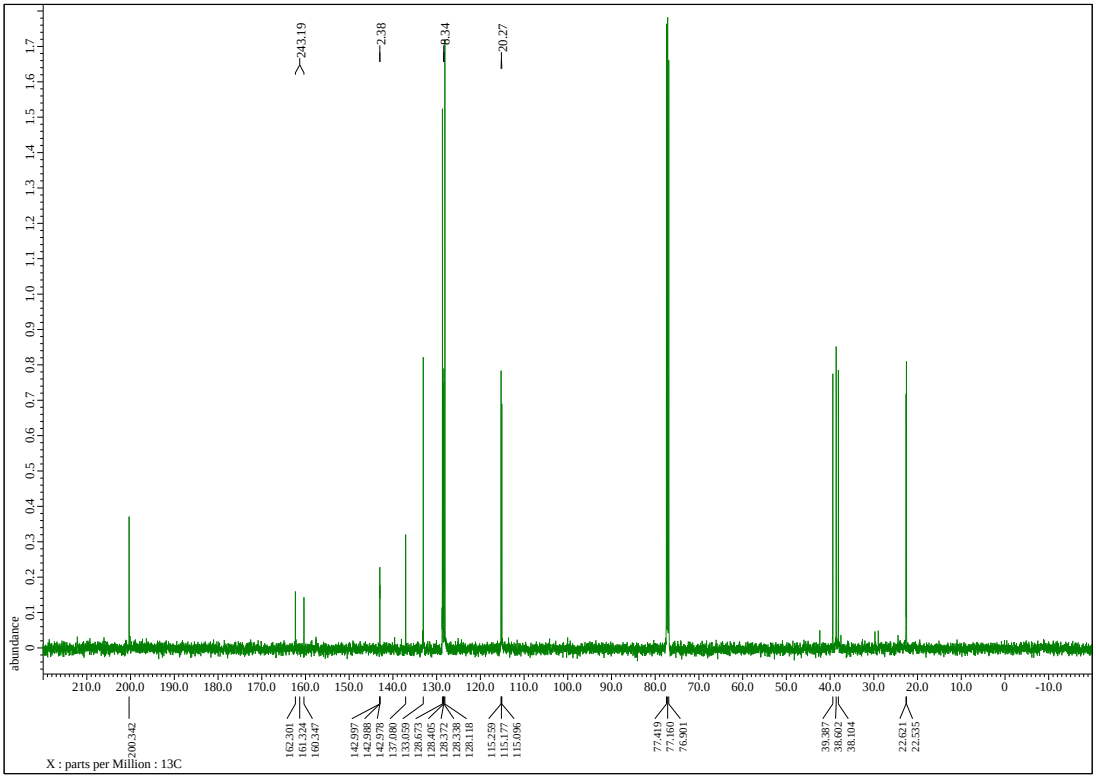
^{13}C{^{1}H} NMR spectrum of **3c** (125 MHz, $CDCl_3$)



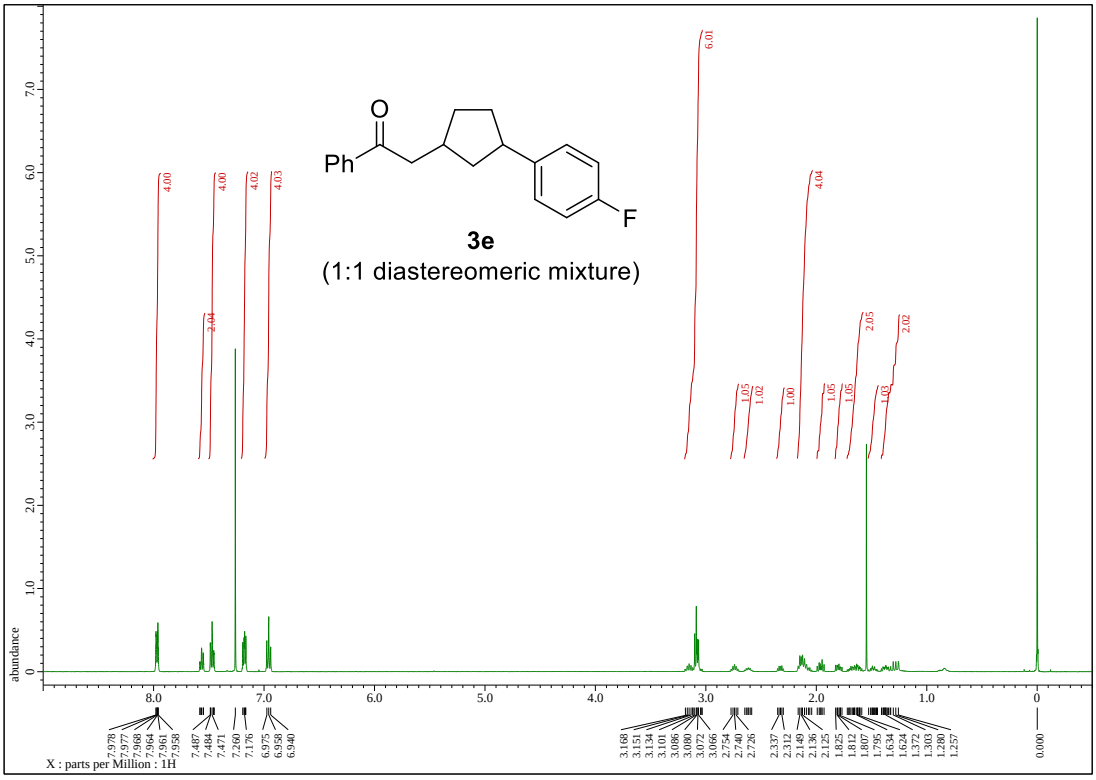
^{1}H NMR spectrum of **3d** (500 MHz, $CDCl_3$)



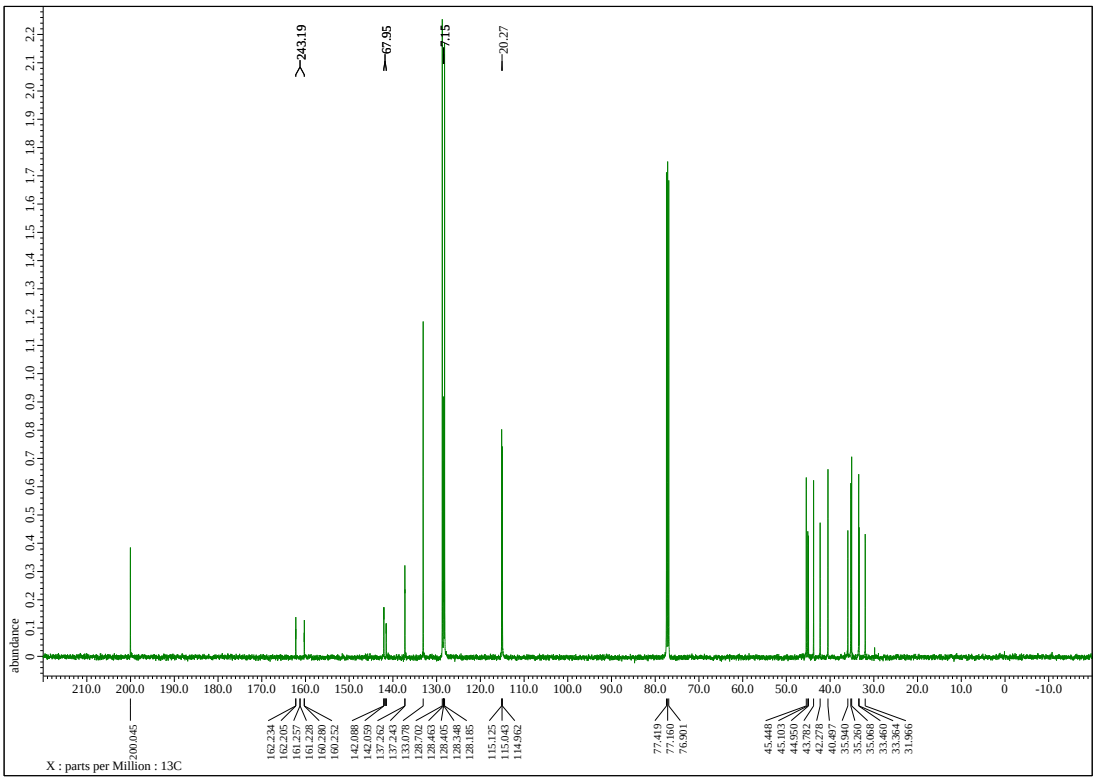
^{13}C{^{1}H} NMR spectrum of **3d** (125 MHz, $CDCl_3$)



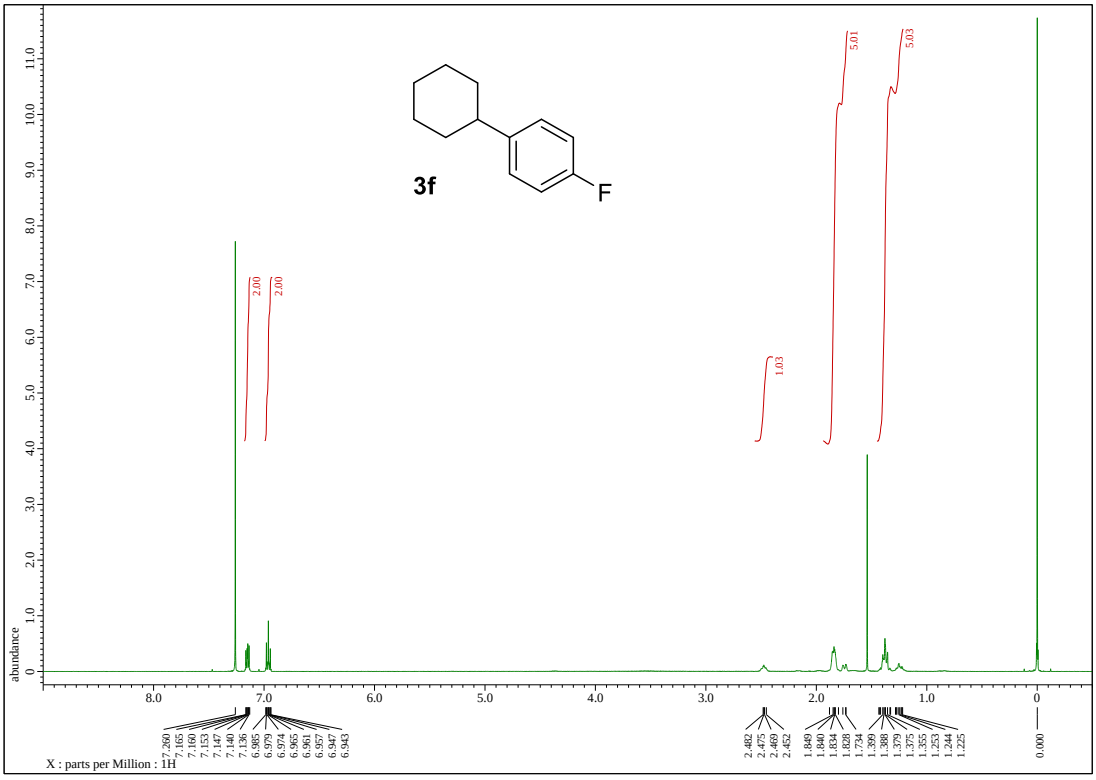
^{1}H NMR spectrum of **3e** (500 MHz, $CDCl_3$)



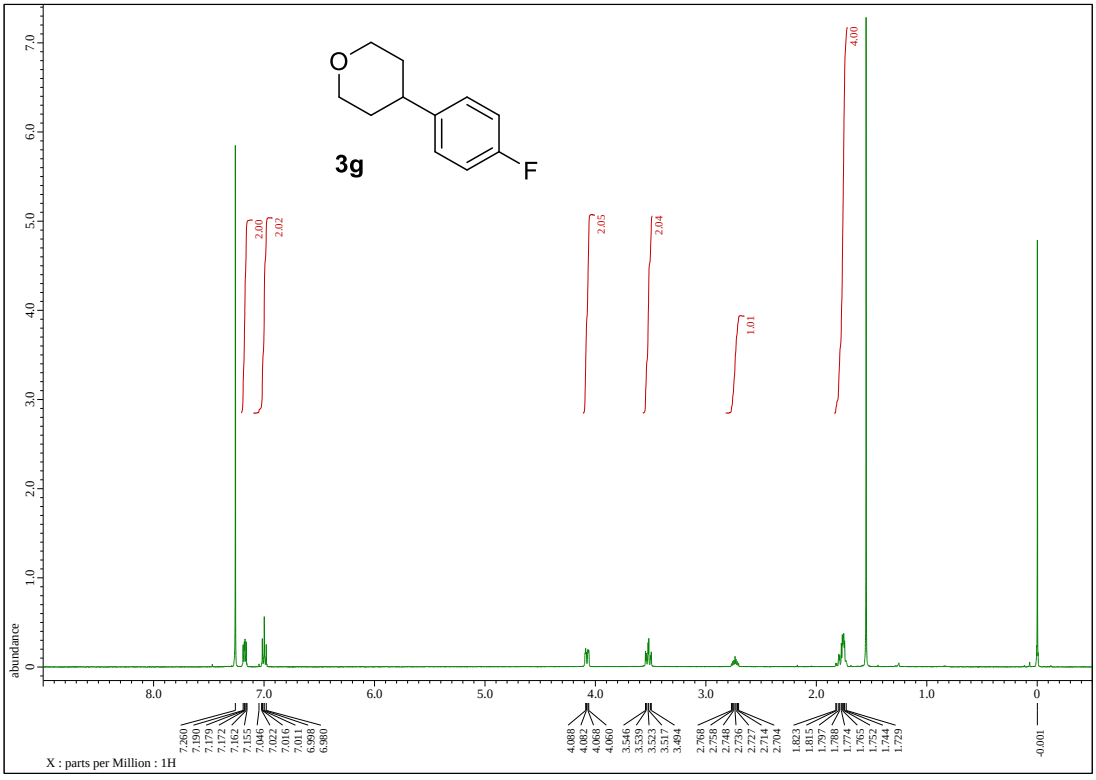
^{13}C{^{1}H} NMR spectrum of **3e** (125 MHz, $CDCl_3$)



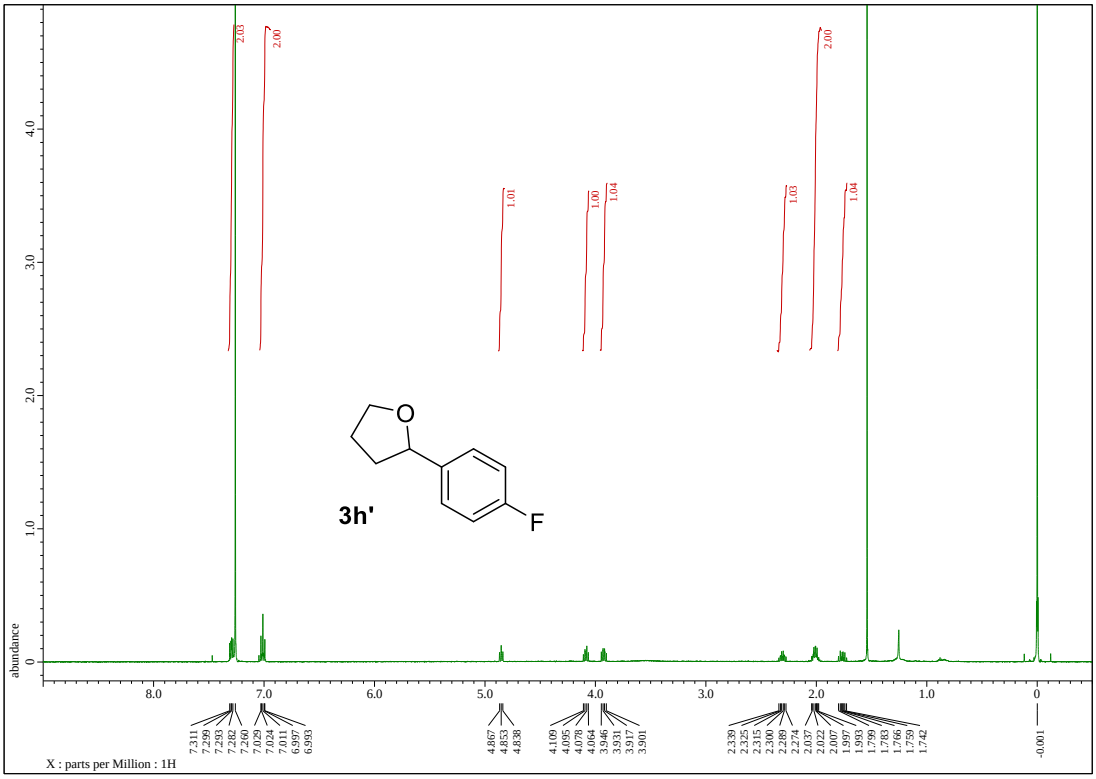
^{1}H NMR spectrum of **3f** (500 MHz, $CDCl_3$)



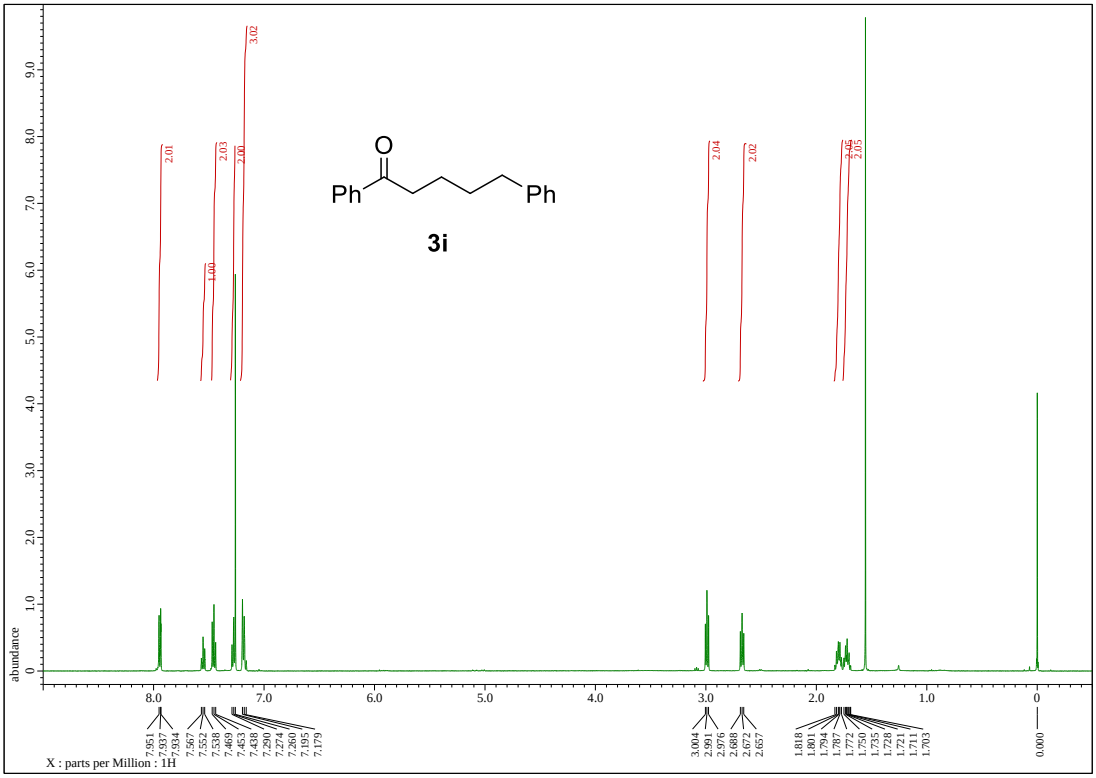
^{1}H NMR spectrum of **3g** (500 MHz, $CDCl_3$)



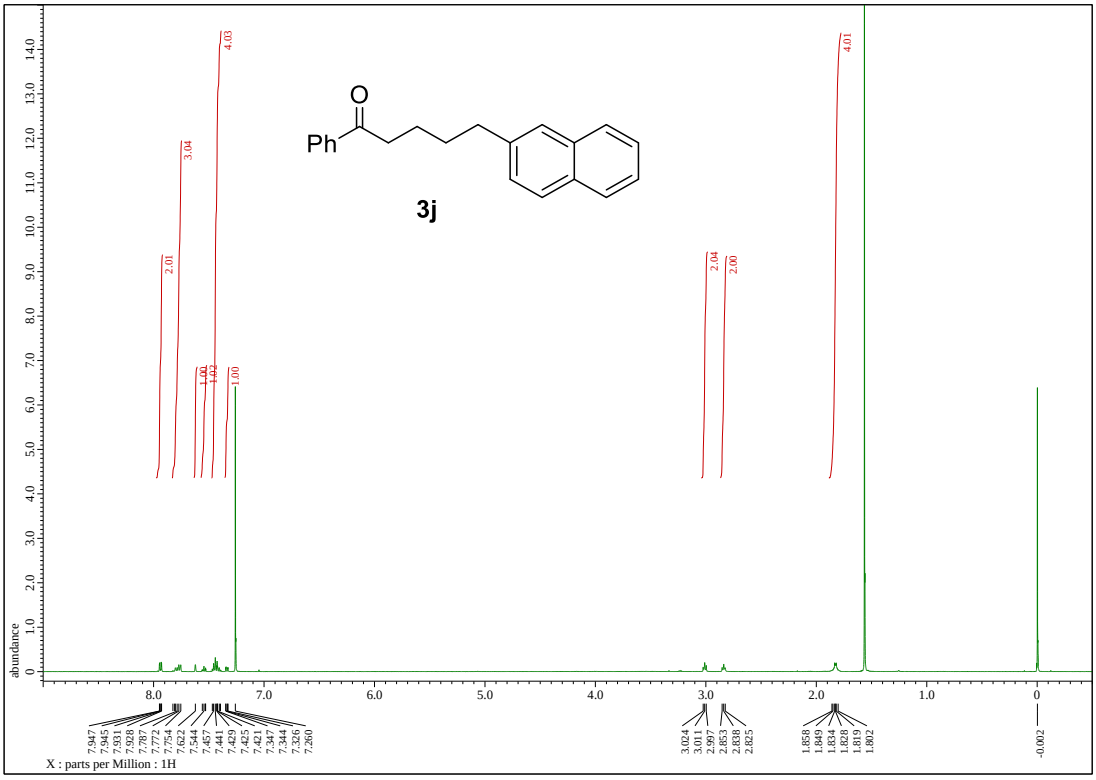
^{1}H NMR spectrum of **3h'** (500 MHz, $CDCl_3$)



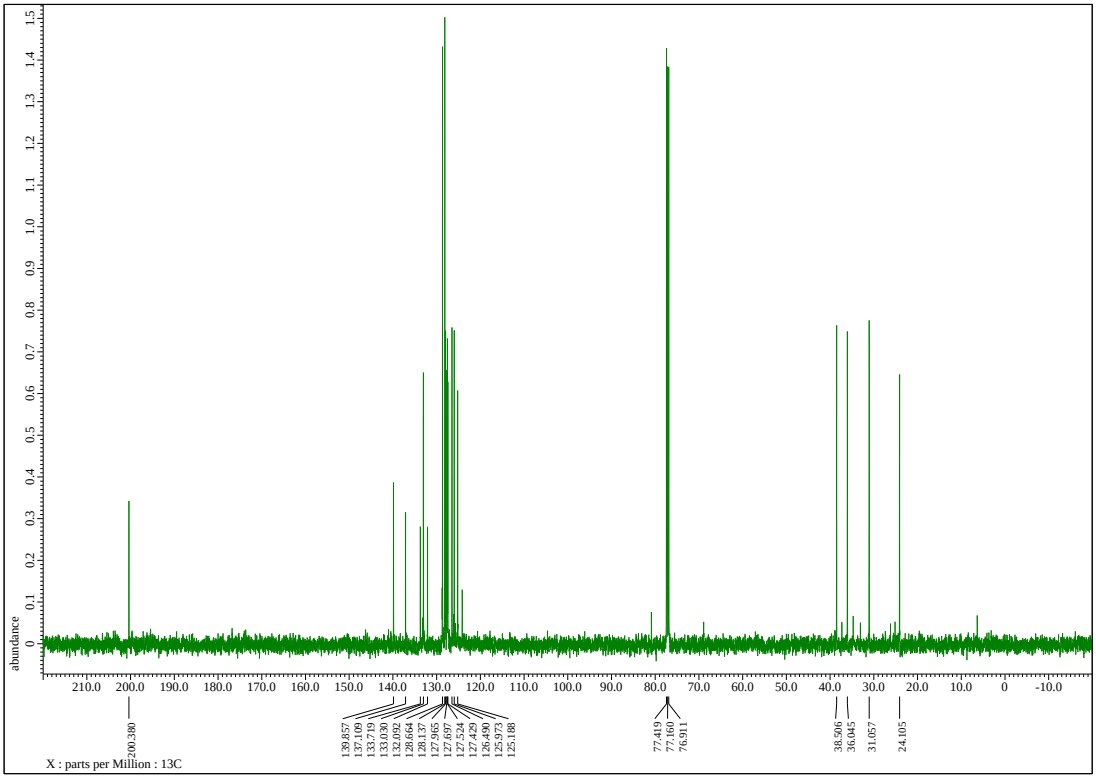
^{1}H NMR spectrum of **3i** (500 MHz, $CDCl_3$)



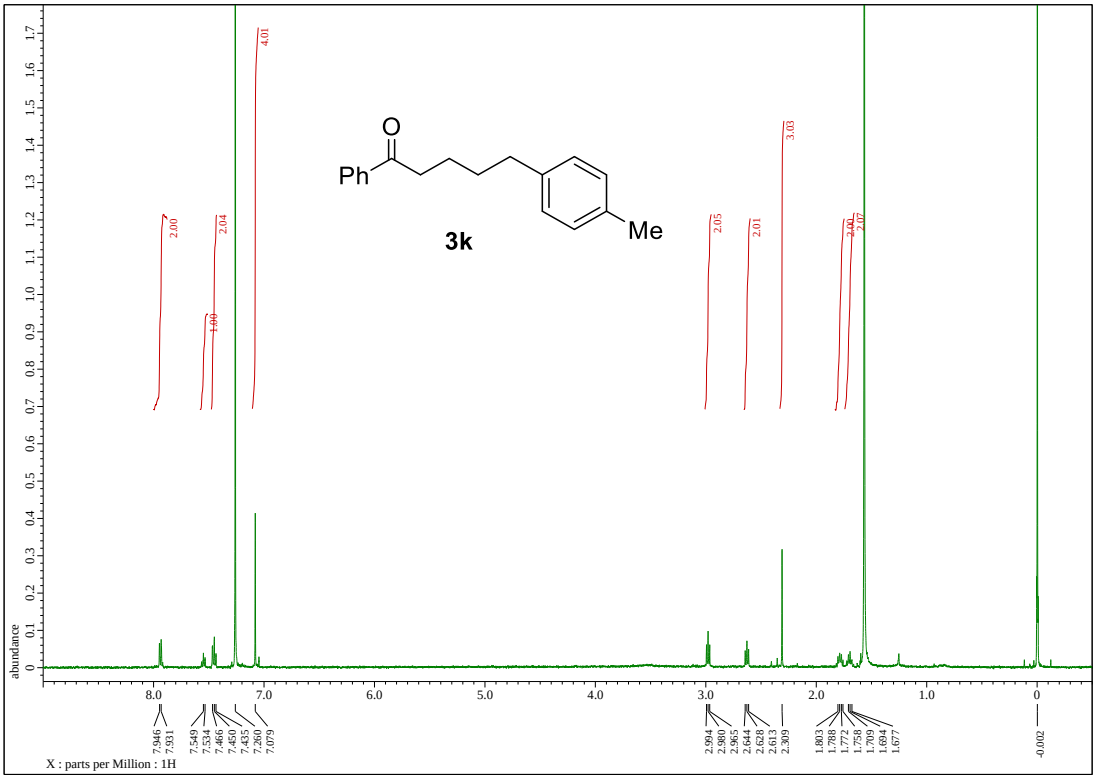
^{1}H NMR spectrum of **3j** (500 MHz, $CDCl_3$)



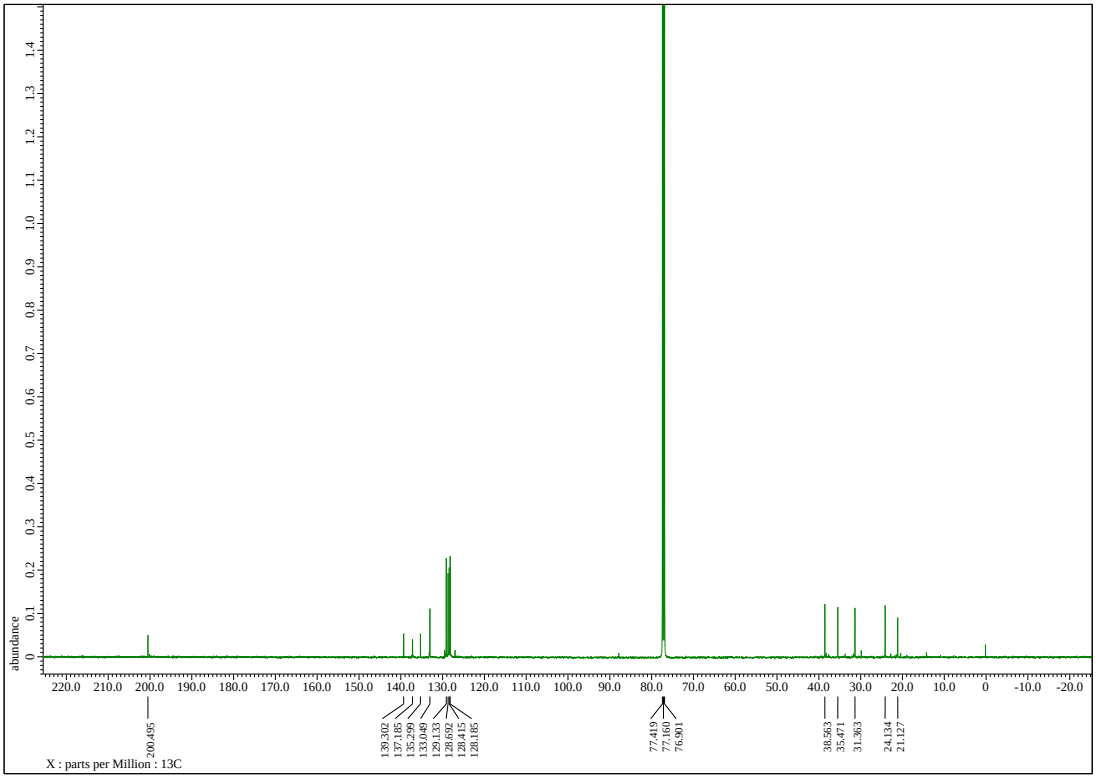
^{13}C{^{1}H} NMR spectrum of **3j** (125 MHz, $CDCl_3$)



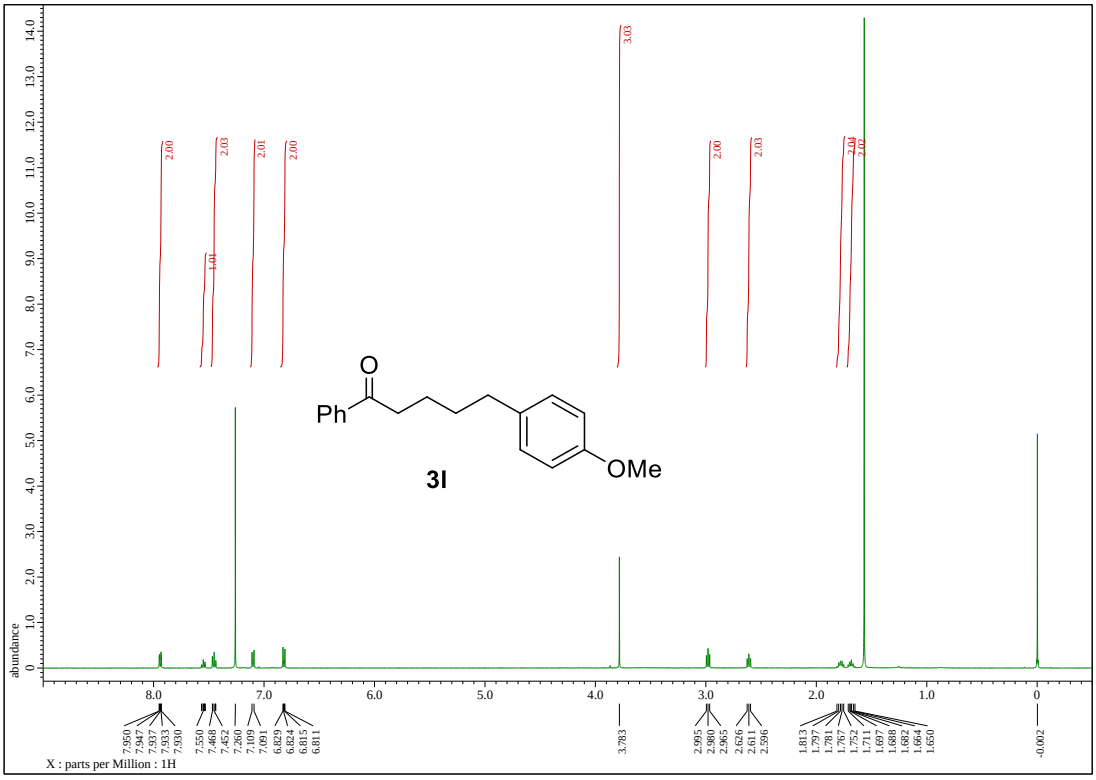
^{1}H NMR spectrum of **3k** (500 MHz, $CDCl_3$)



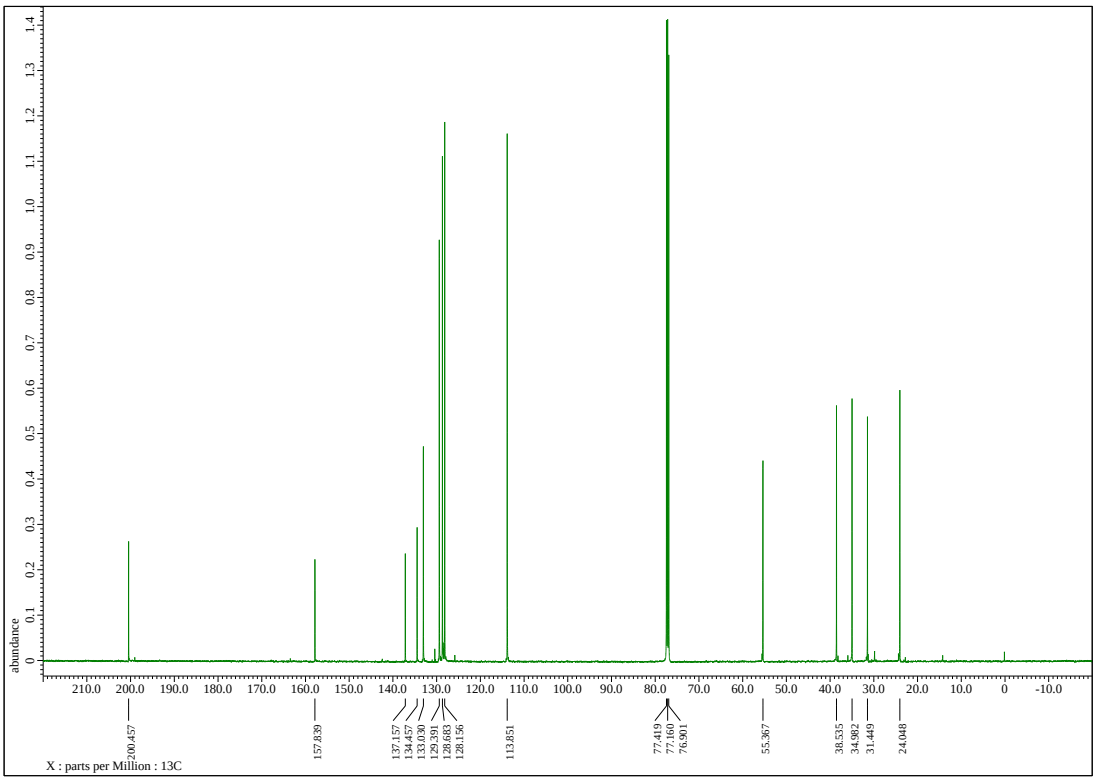
^{13}C{^{1}H} NMR spectrum of **3k** (125 MHz, $CDCl_3$)



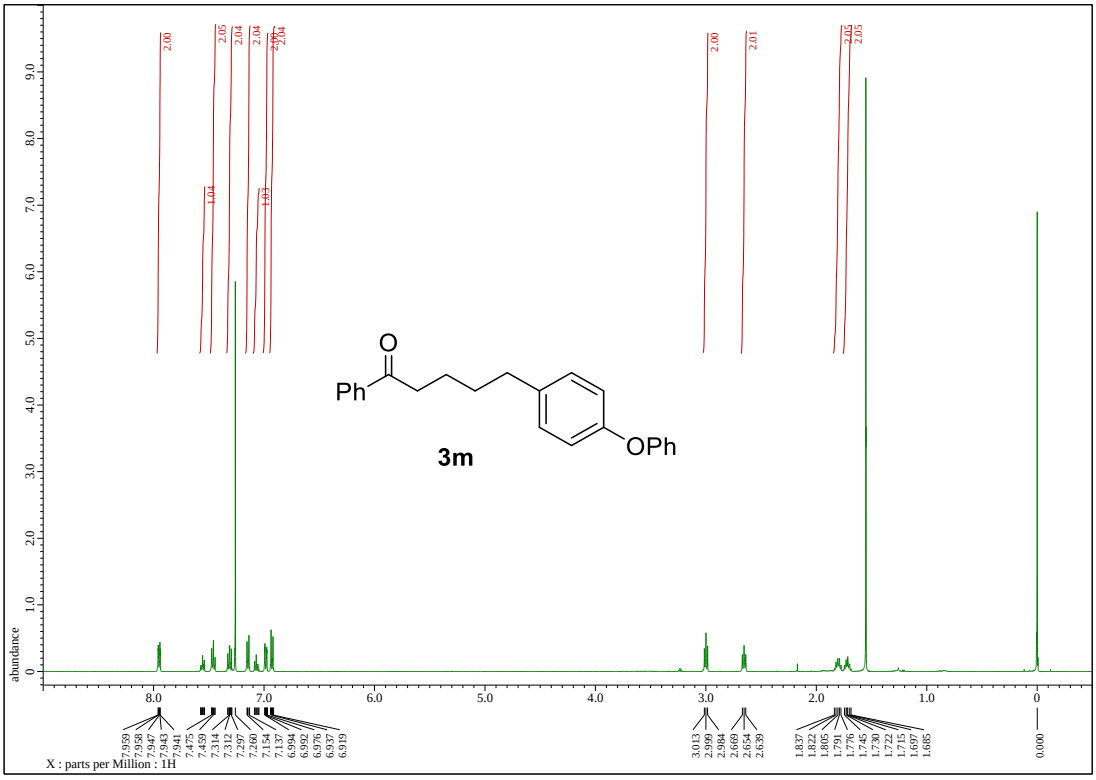
^{1}H NMR spectrum of **3l** (500 MHz, $CDCl_3$)



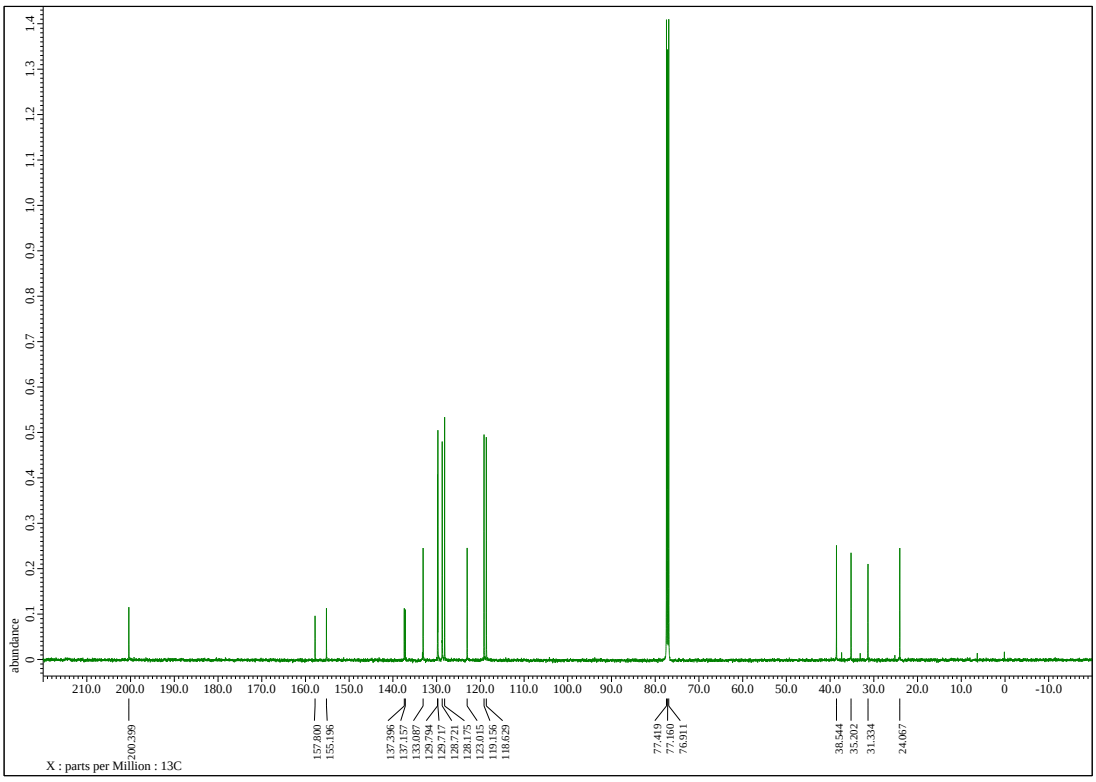
^{13}C{^{1}H} NMR spectrum of **3l** (125 MHz, $CDCl_3$)



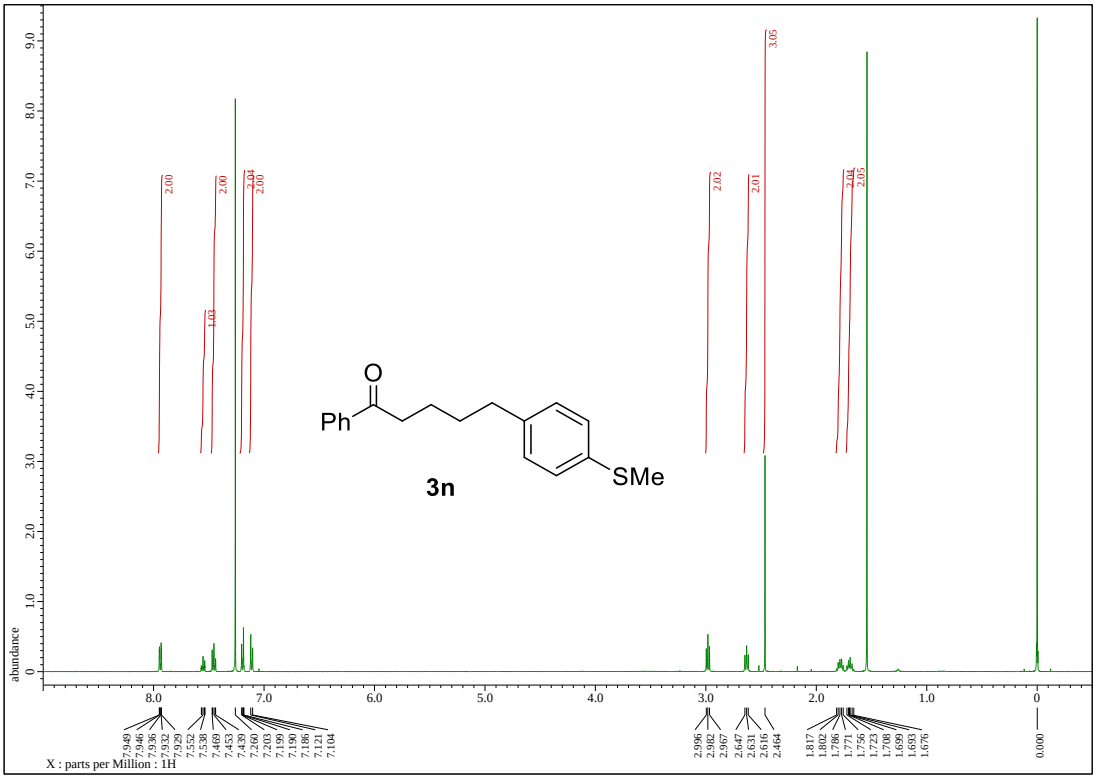
^{1}H NMR spectrum of **3m** (500 MHz, $CDCl_3$)



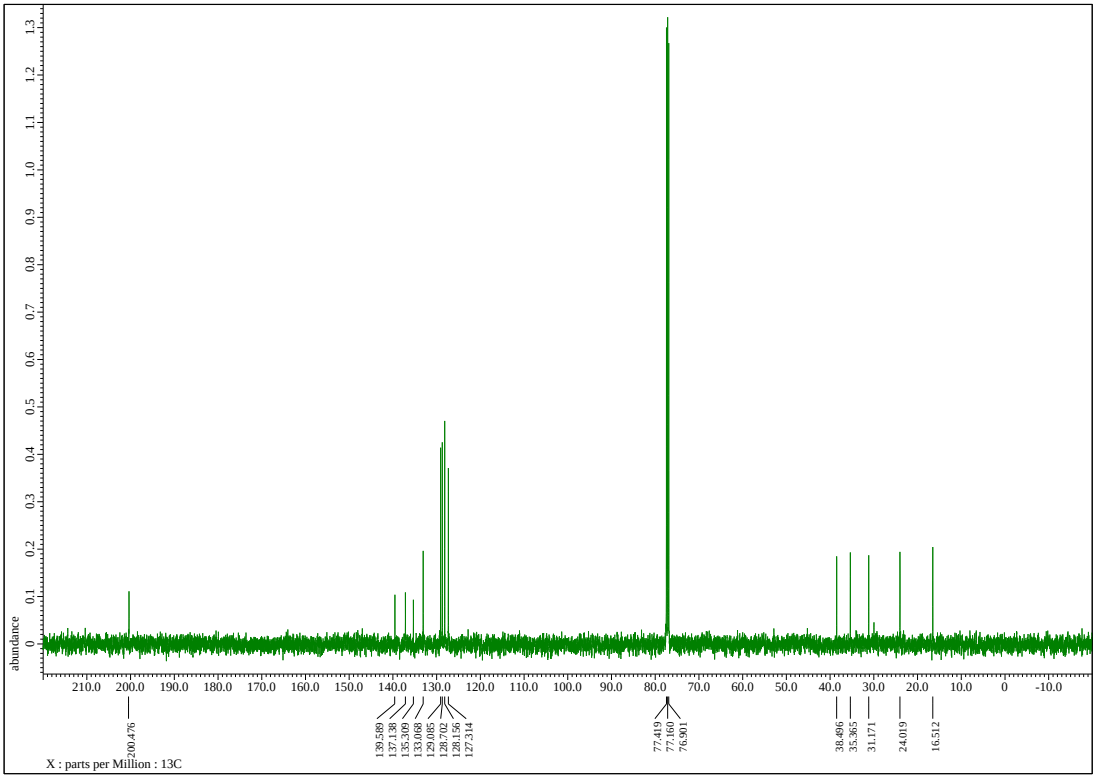
^{13}C{^{1}H} NMR spectrum of **3m** (125 MHz, $CDCl_3$)



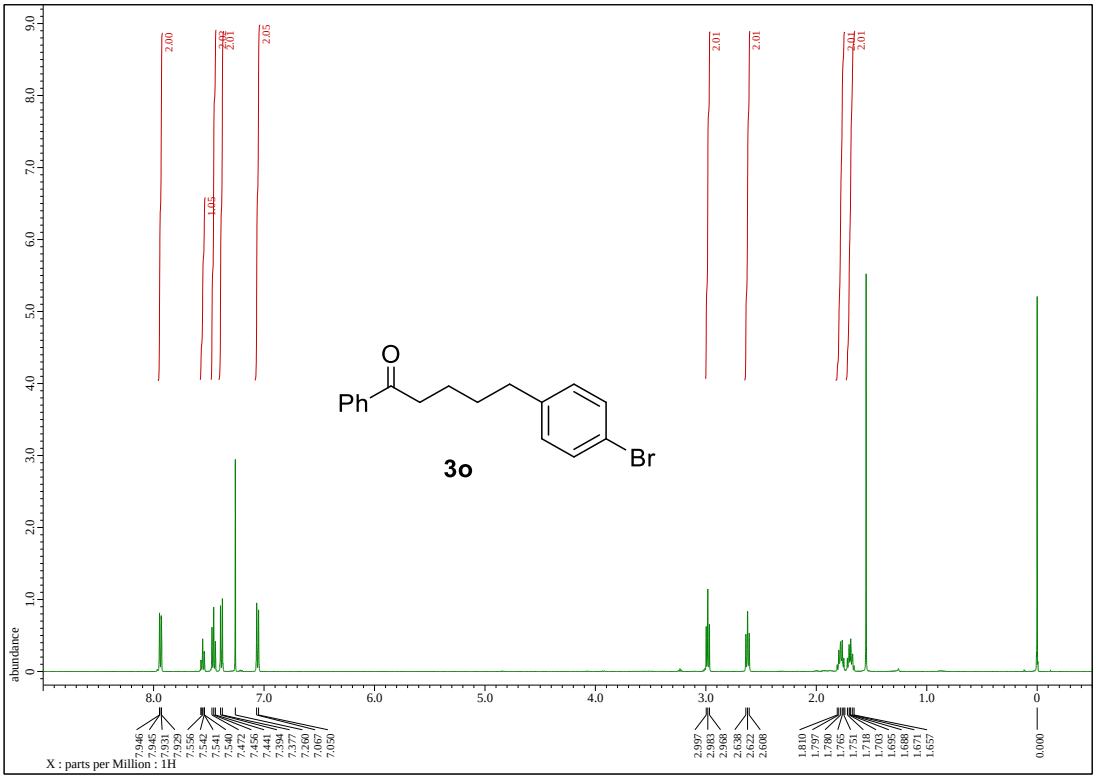
^{1}H NMR spectrum of **3n** (500 MHz, $CDCl_3$)



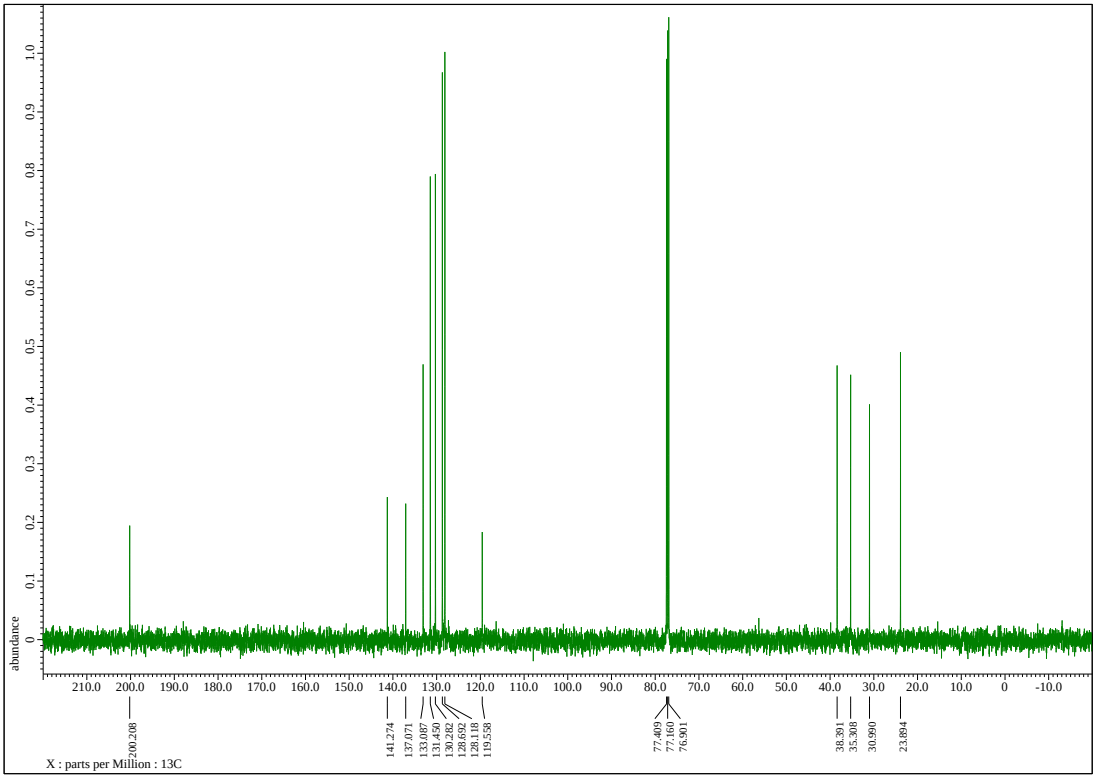
^{13}C{^{1}H} NMR spectrum of **3n** (125 MHz, $CDCl_3$)



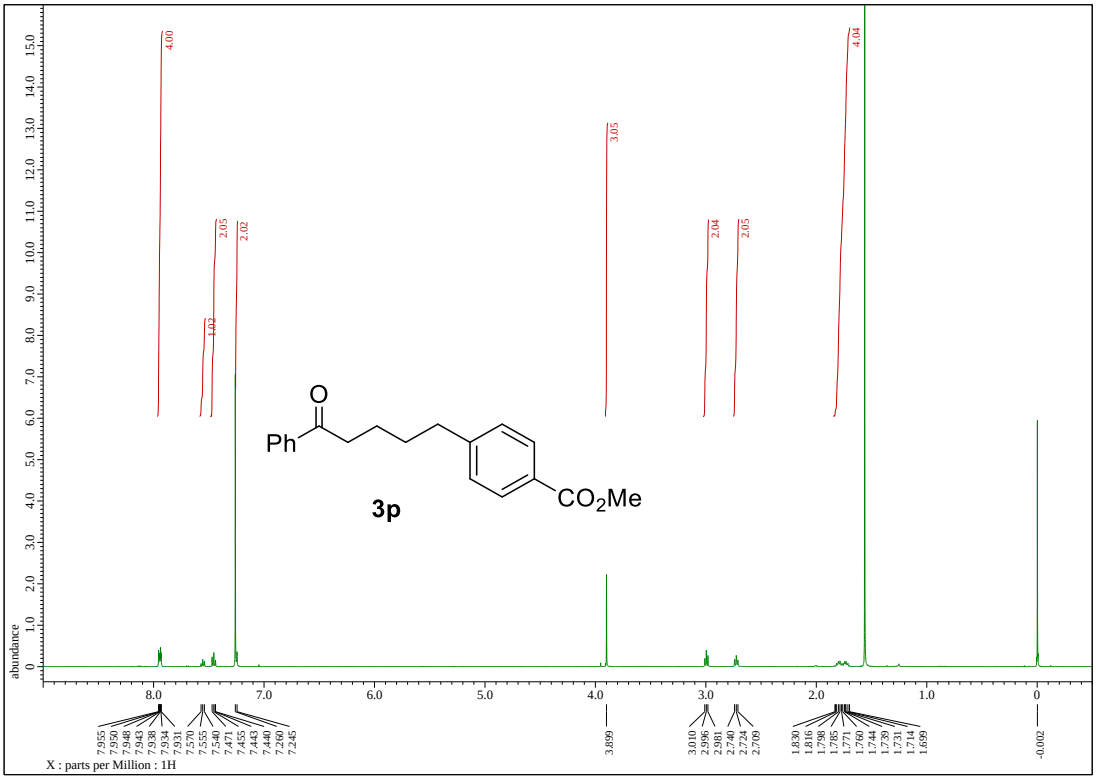
^{1}H NMR spectrum of **3o** (500 MHz, $CDCl_3$)



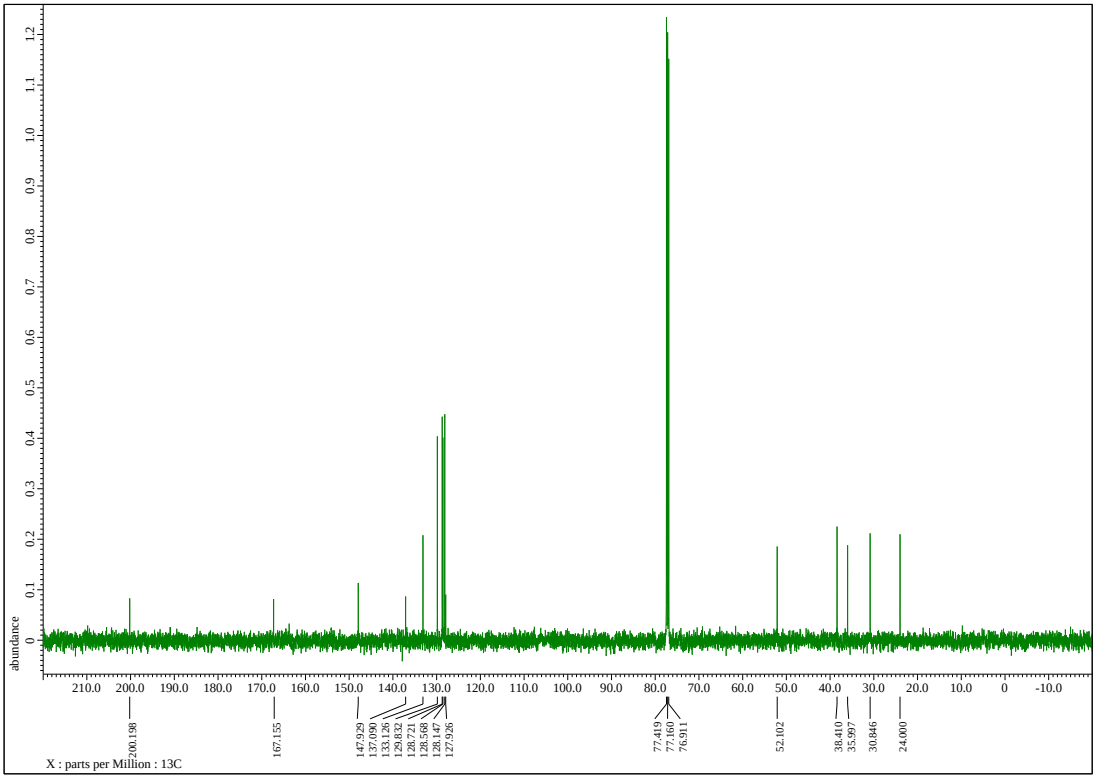
^{13}C{^{1}H} NMR spectrum of **3o** (125 MHz, $CDCl_3$)



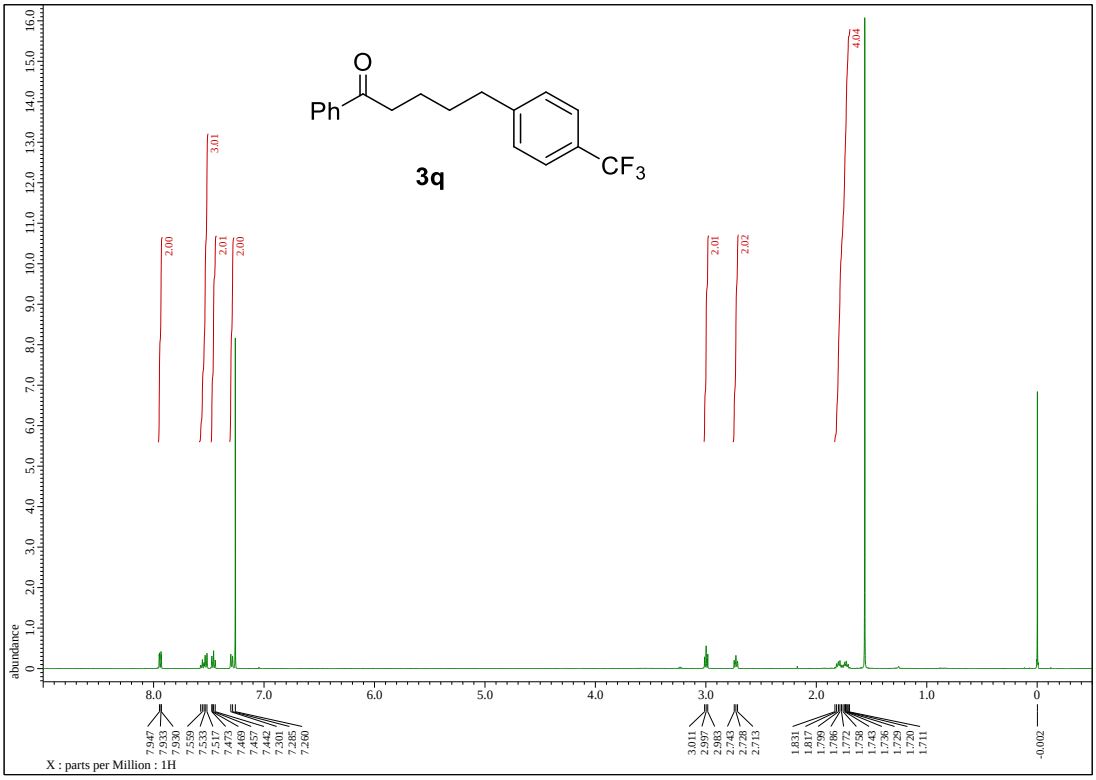
^{1}H NMR spectrum of **3p** (500 MHz, $CDCl_3$)



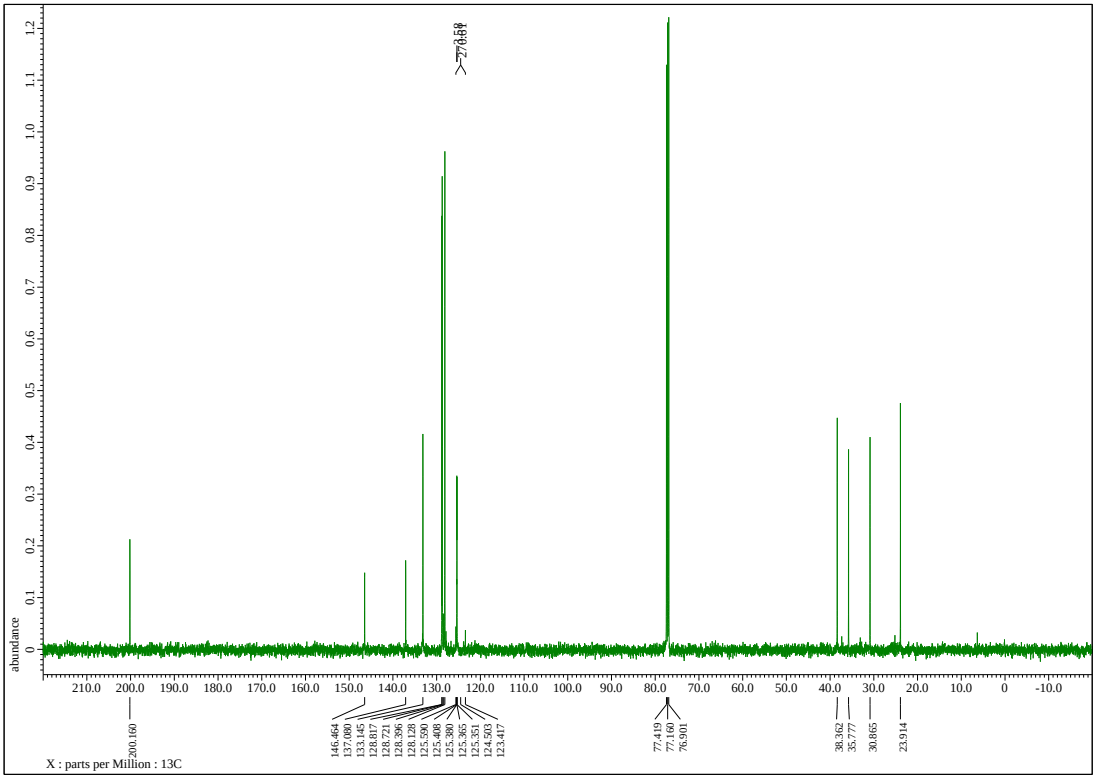
^{13}C{^{1}H} NMR spectrum of **3p** (125 MHz, $CDCl_3$)



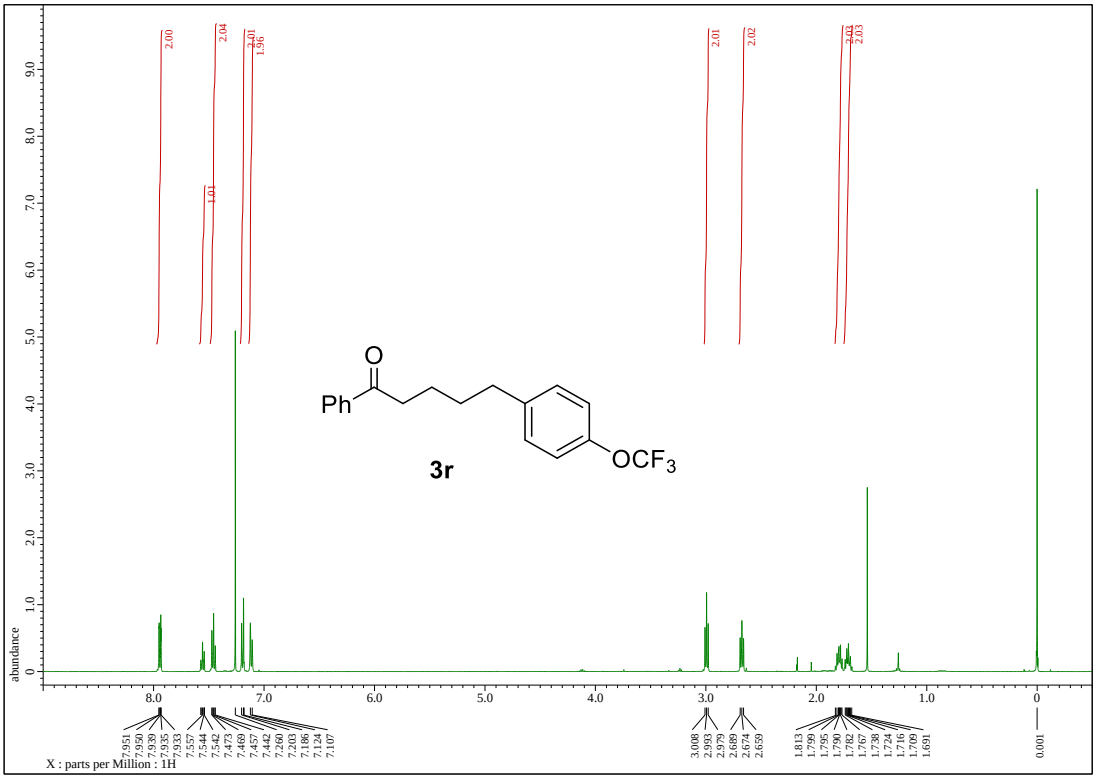
^{1}H NMR spectrum of **3q** (500 MHz, $CDCl_3$)



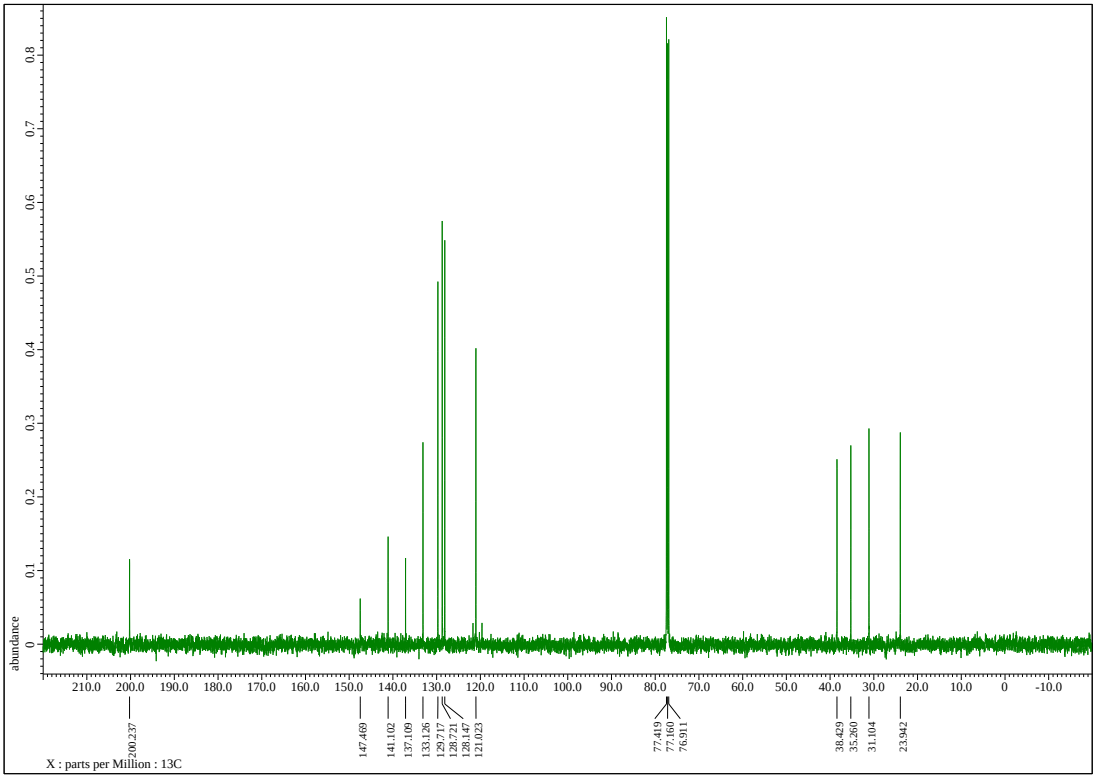
^{13}C{^{1}H} NMR spectrum of **3q** (125 MHz, $CDCl_3$)



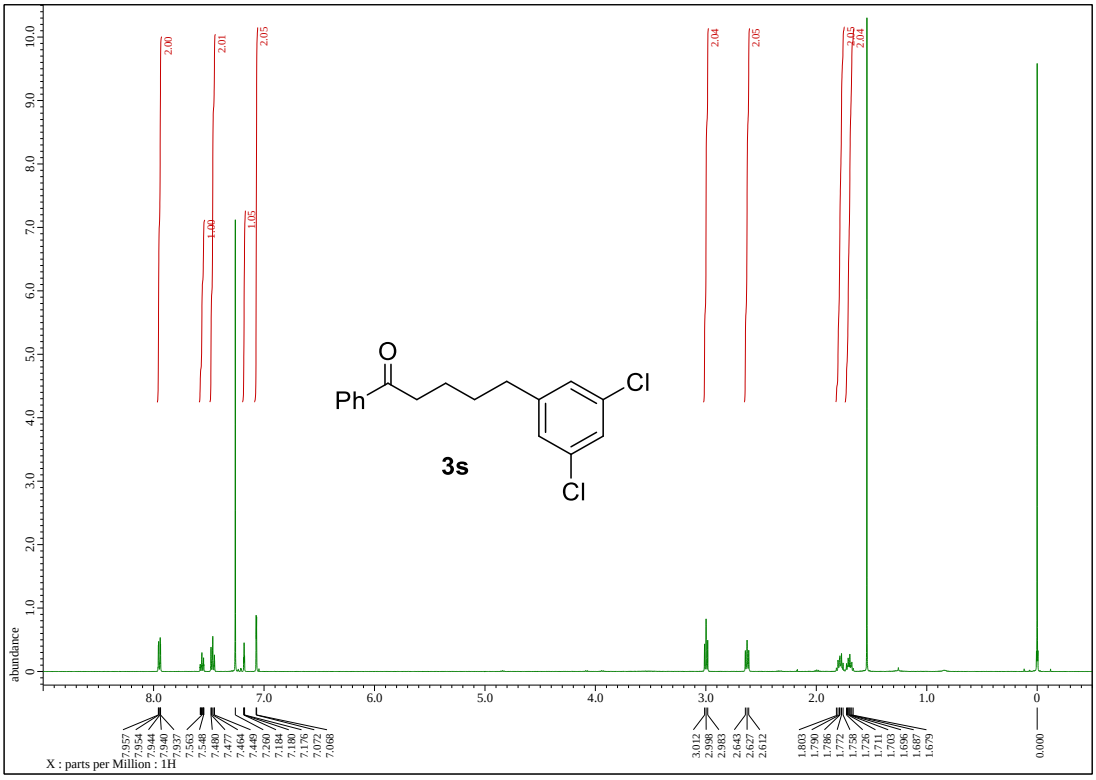
^{1}H NMR spectrum of **3r** (500 MHz, $CDCl_3$)



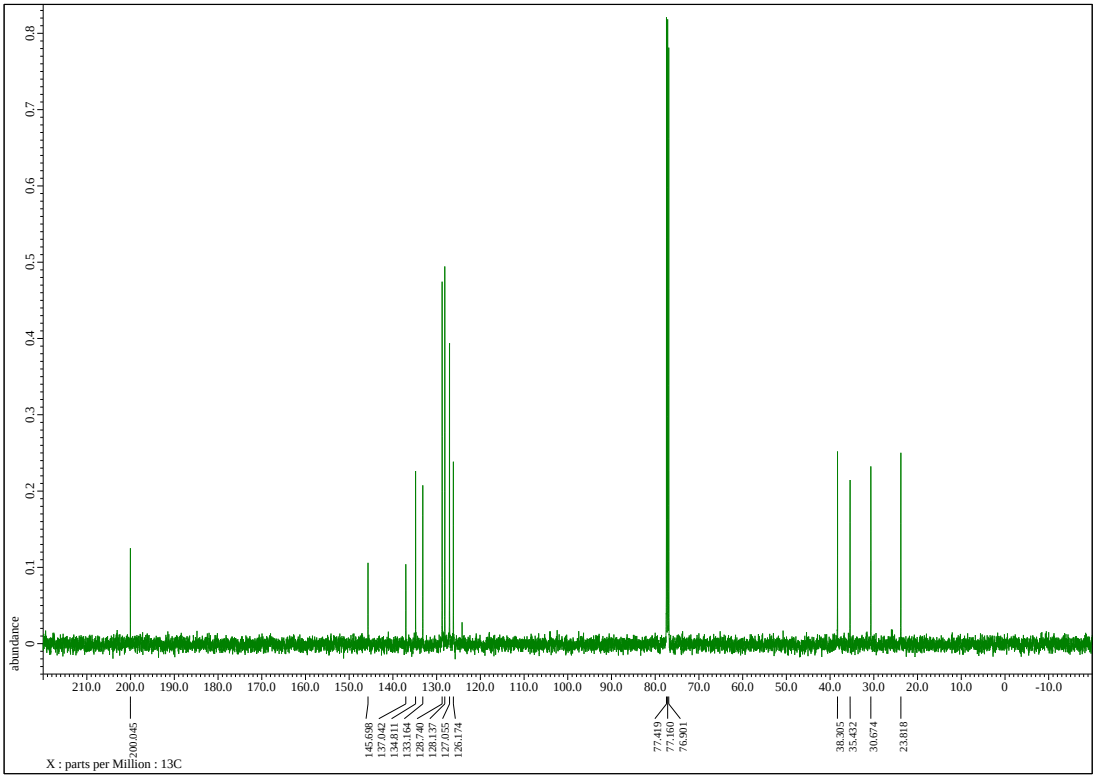
^{13}C{^{1}H} NMR spectrum of **3r** (125 MHz, $CDCl_3$)



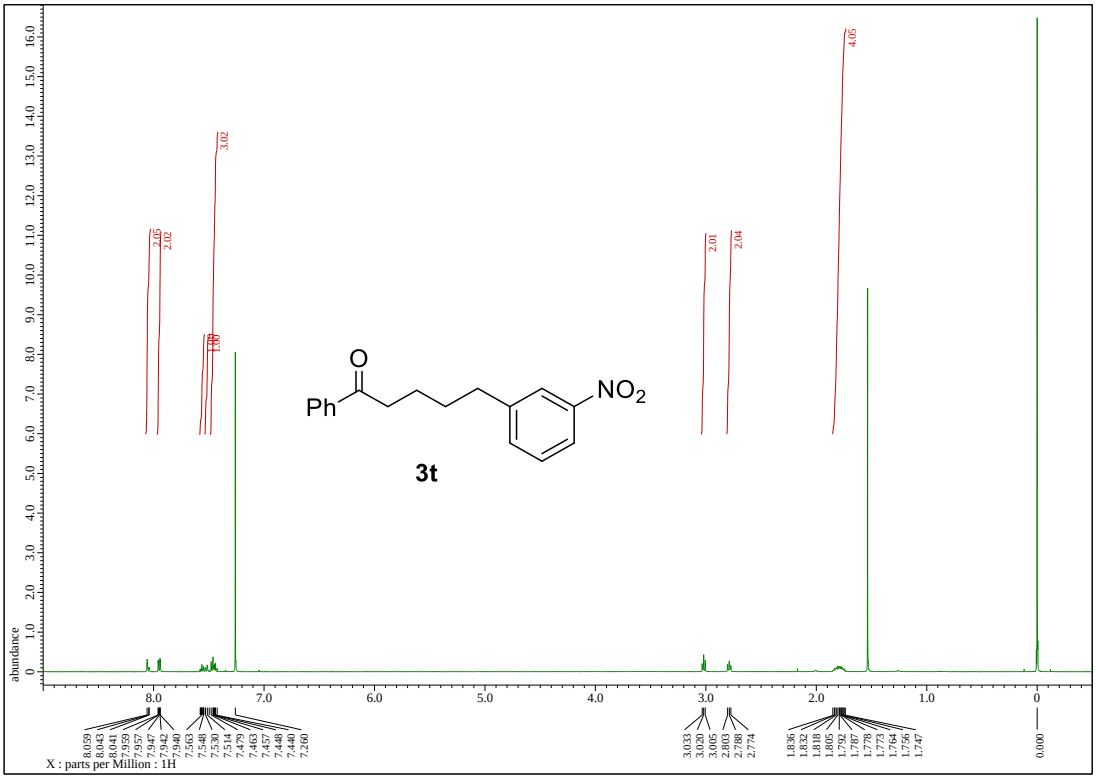
^{1}H NMR spectrum of **3s** (500 MHz, $CDCl_3$)



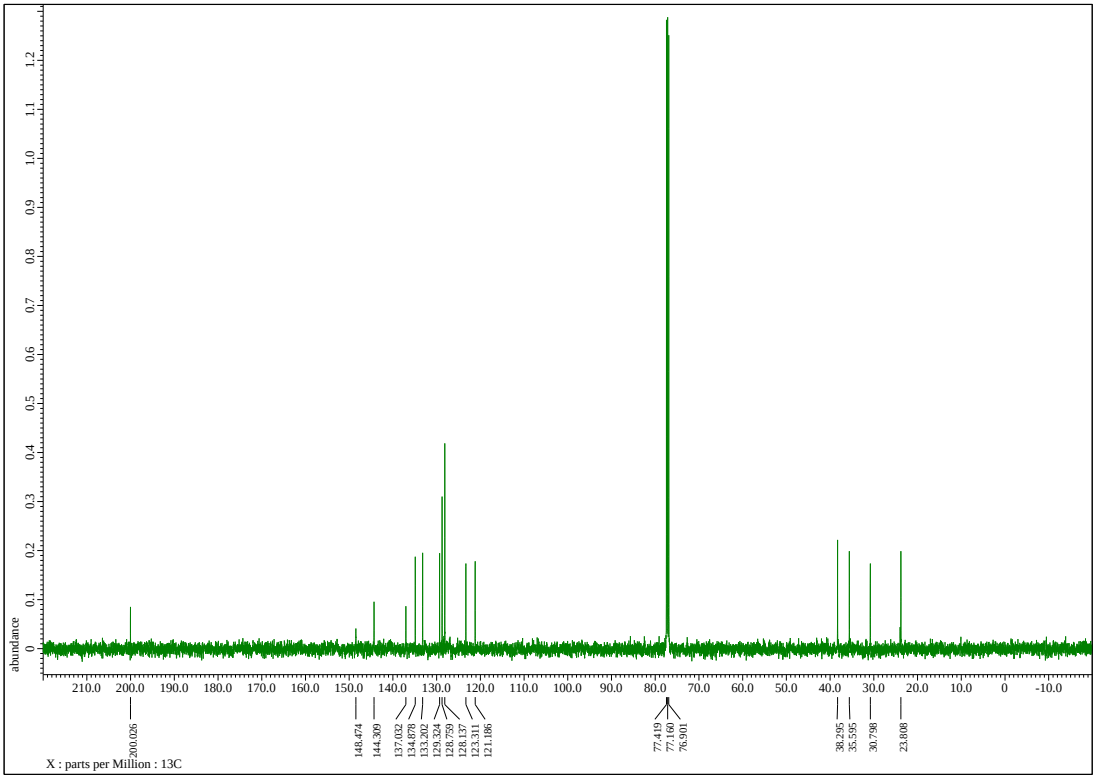
^{13}C{^{1}H} NMR spectrum of **3s** (125 MHz, $CDCl_3$)



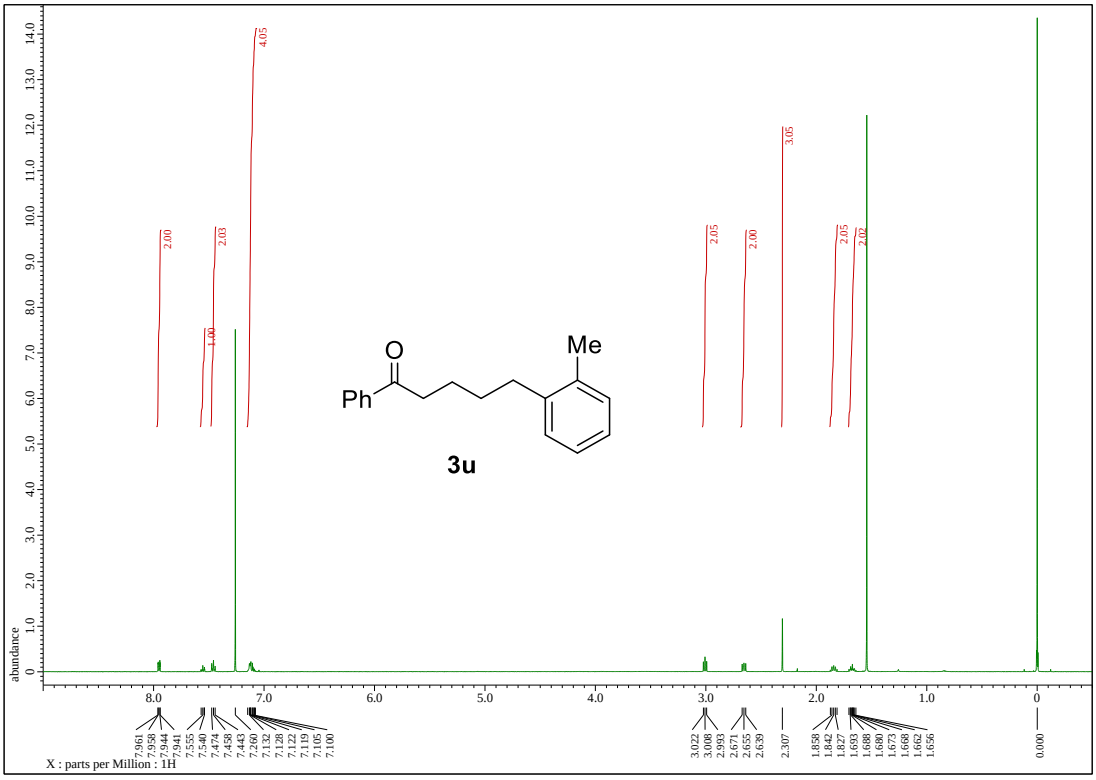
^{1}H NMR spectrum of **3t** (500 MHz, $CDCl_3$)



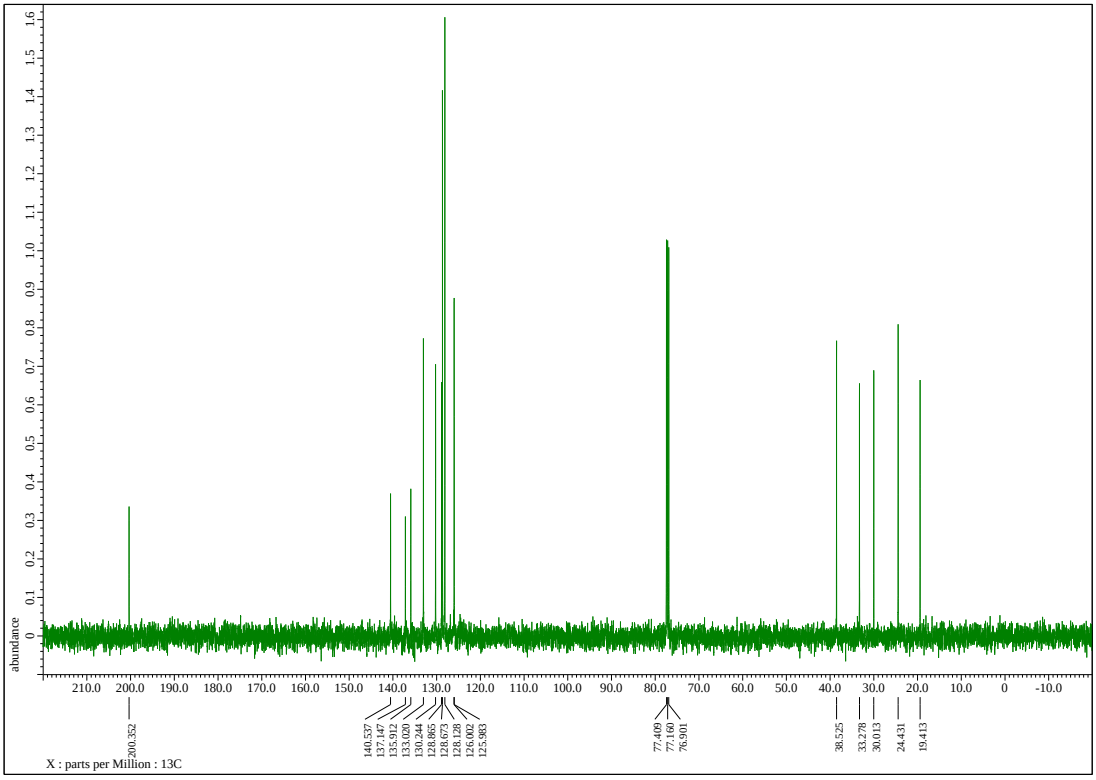
^{13}C{^{1}H} NMR spectrum of **3t** (125 MHz, $CDCl_3$)



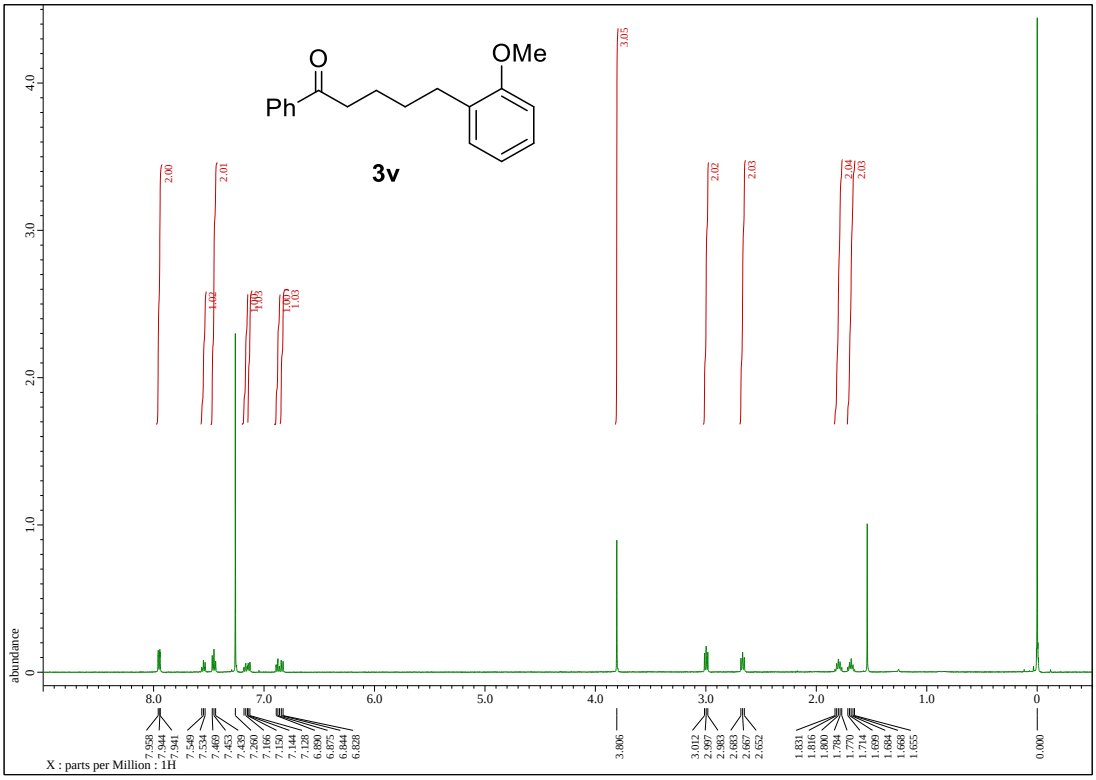
^{1}H NMR spectrum of **3u** (500 MHz, $CDCl_3$)



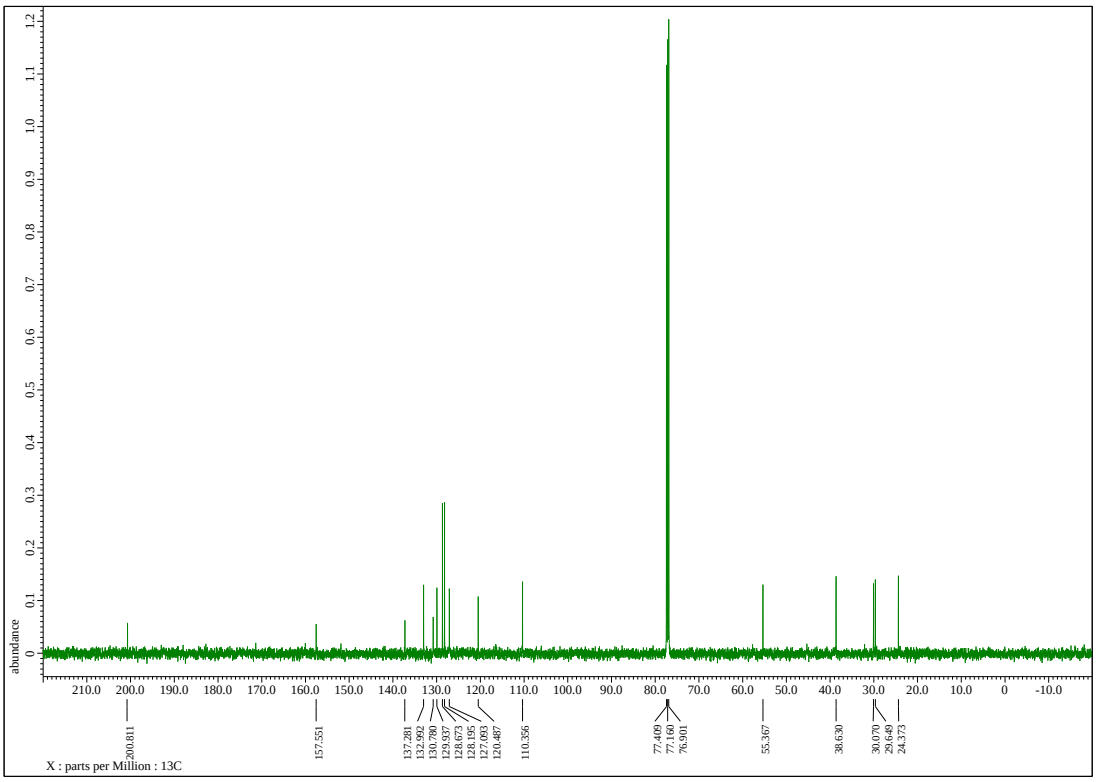
^{13}C{^{1}H} NMR spectrum of **3u** (125 MHz, $CDCl_3$)



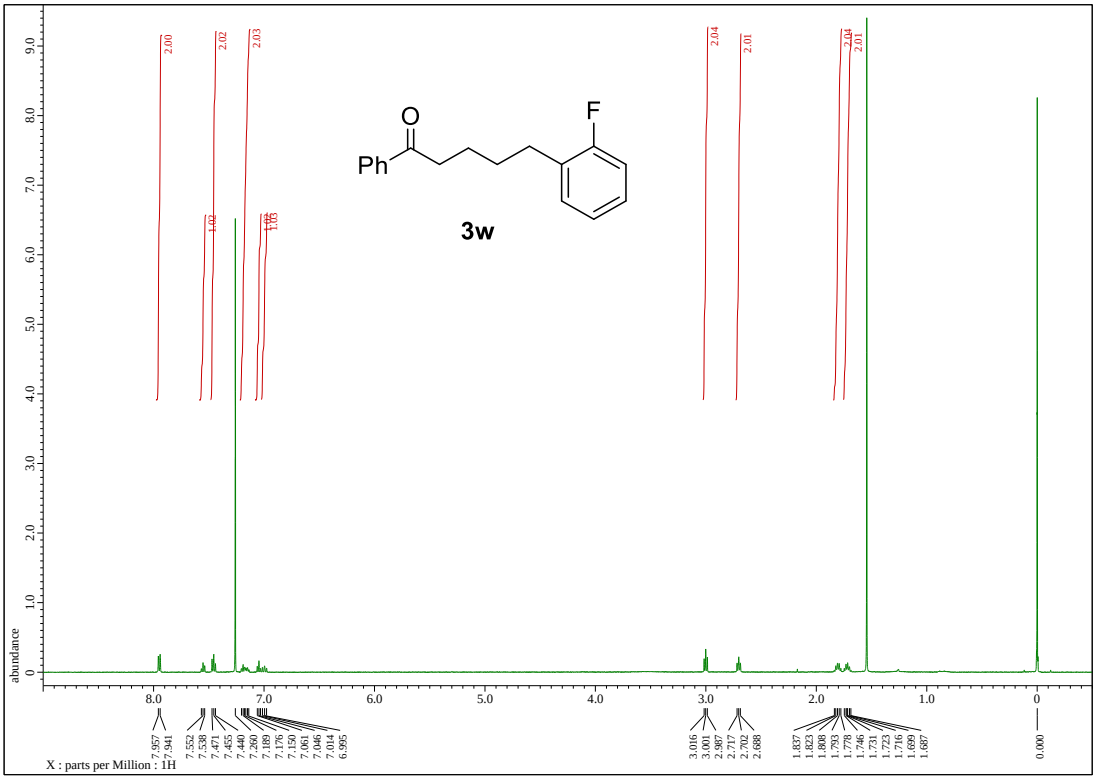
^{1}H NMR spectrum of **3v** (500 MHz, $CDCl_3$)



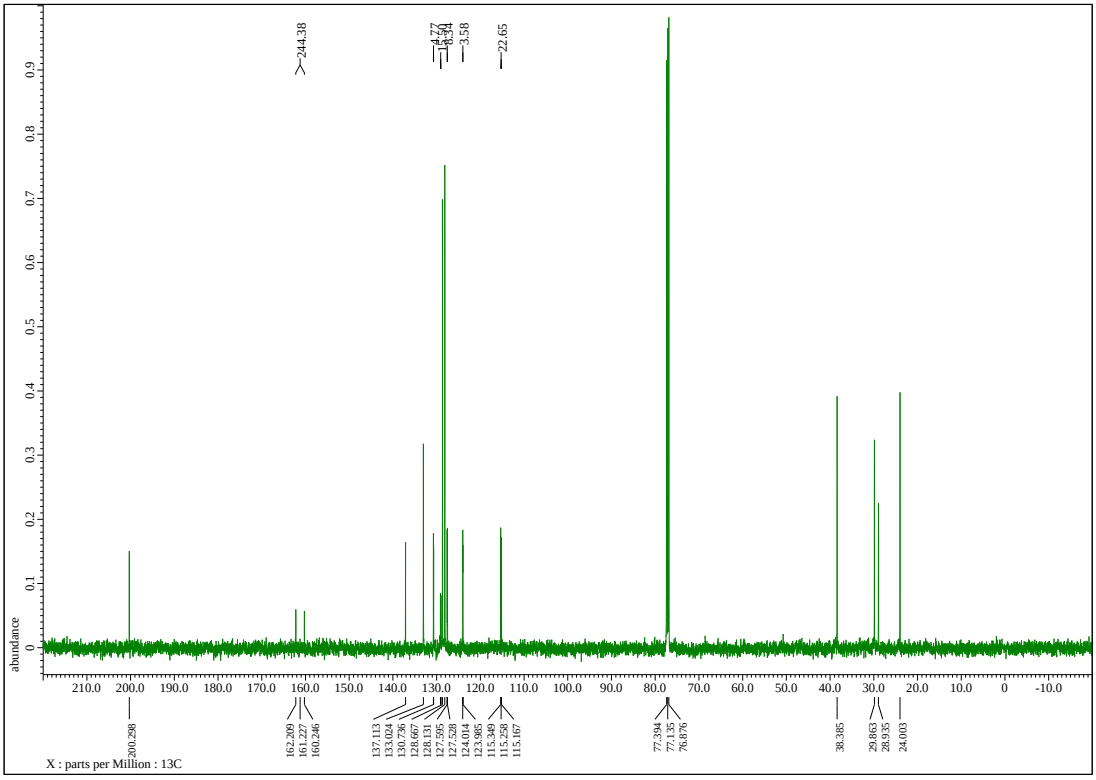
^{13}C{^{1}H} NMR spectrum of **3v** (125 MHz, $CDCl_3$)



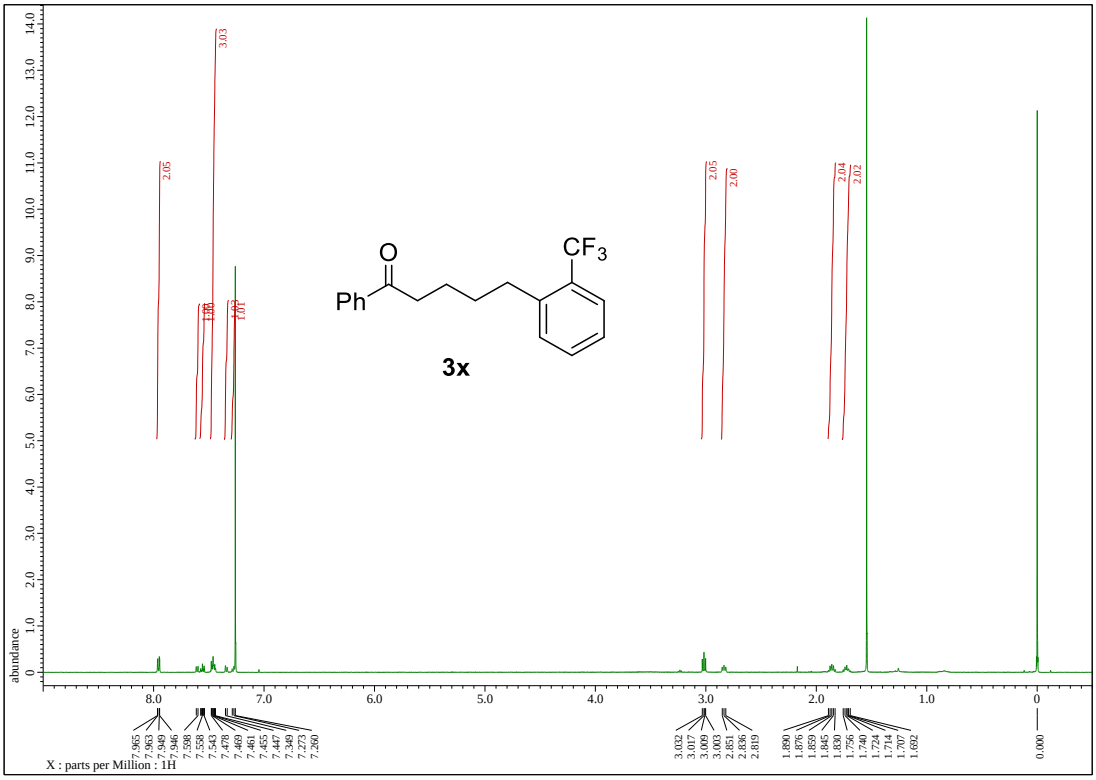
^{1}H NMR spectrum of **3w** (500 MHz, $CDCl_3$)



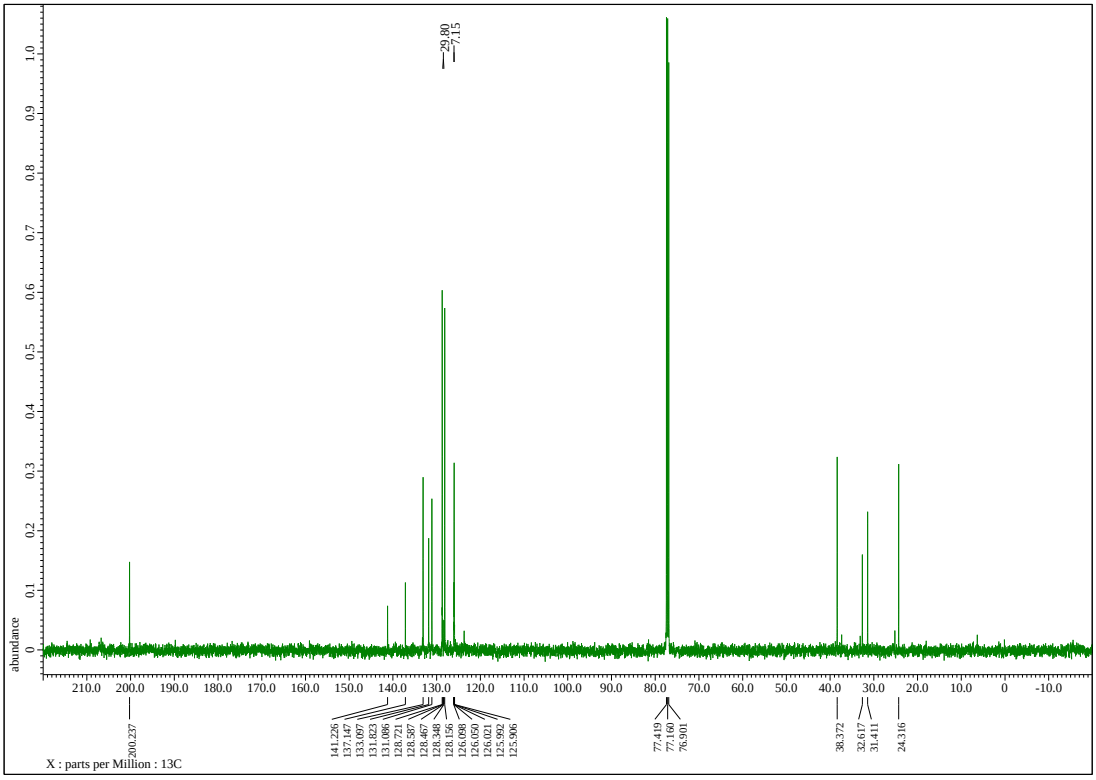
^{13}C{^{1}H} NMR spectrum of **3w** (125 MHz, $CDCl_3$)



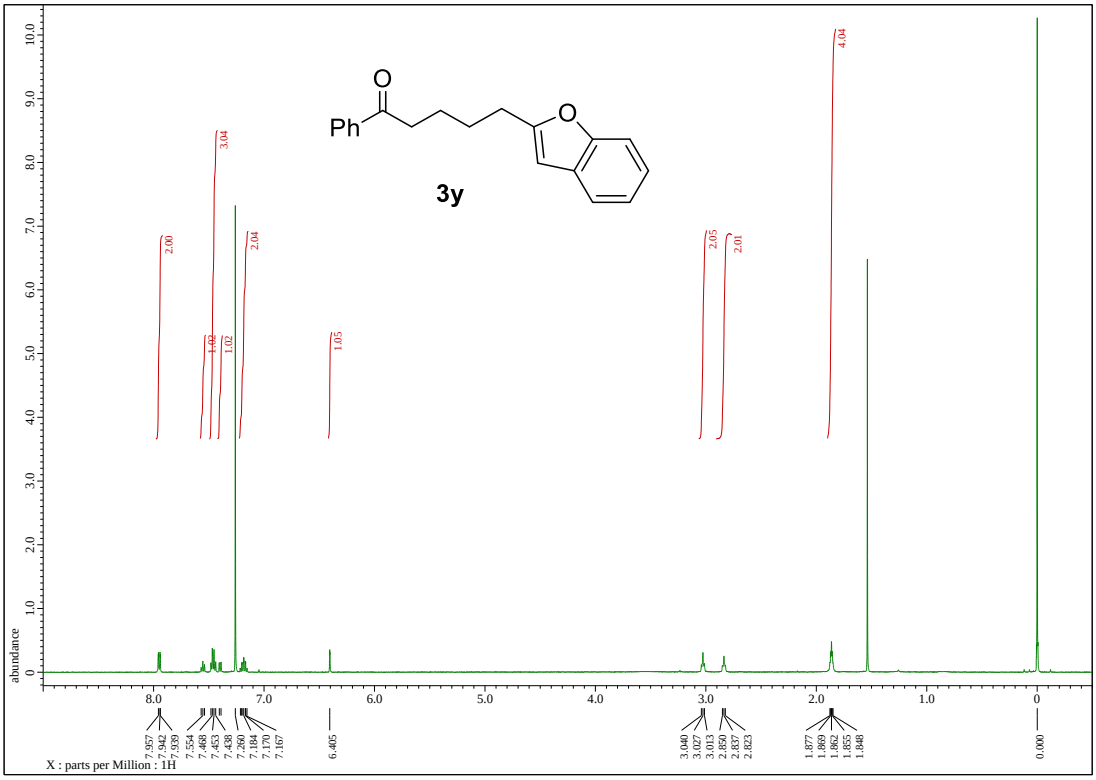
^{1}H NMR spectrum of **3x** (500 MHz, $CDCl_3$)



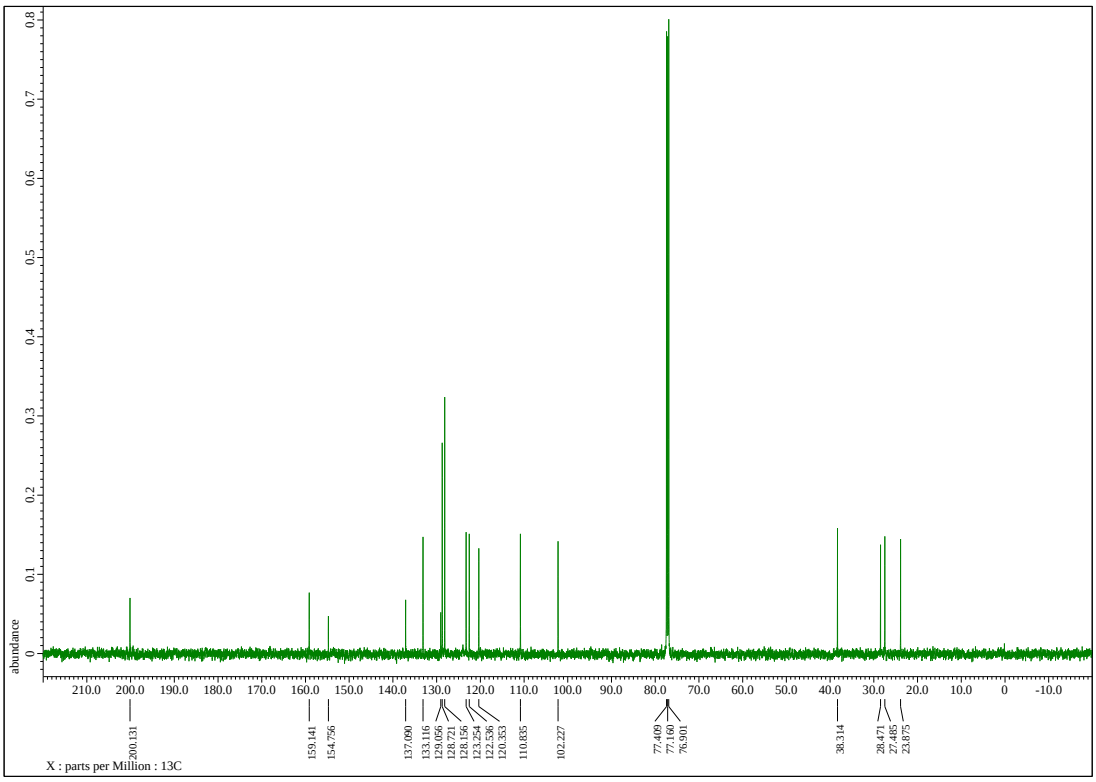
^{13}C{^{1}H} NMR spectrum of **3x** (125 MHz, $CDCl_3$)



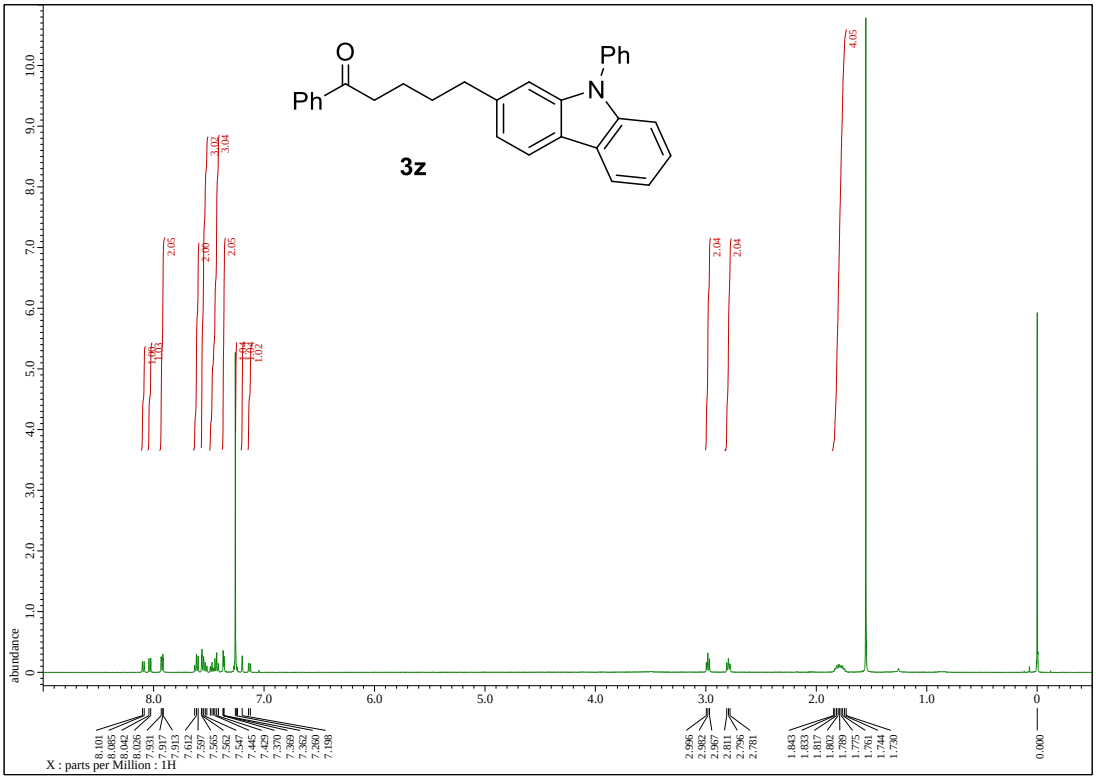
^{1}H NMR spectrum of **3y** (500 MHz, $CDCl_3$)



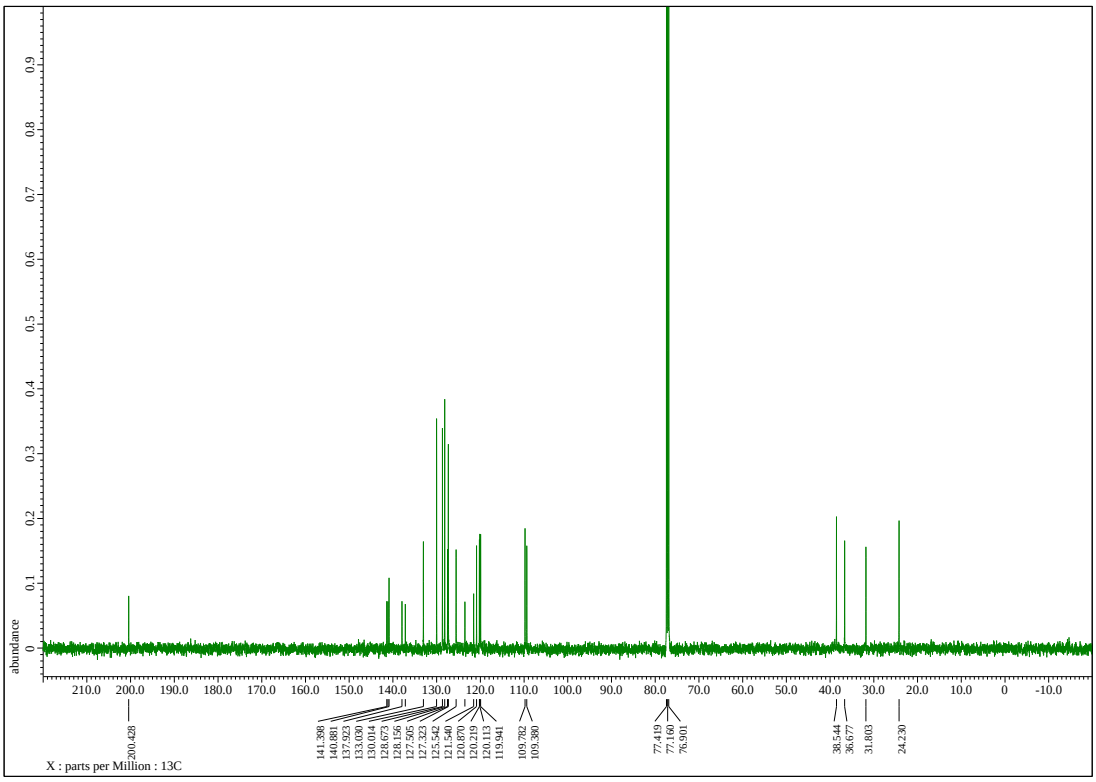
^{13}C{^{1}H} NMR spectrum of **3y** (125 MHz, $CDCl_3$)



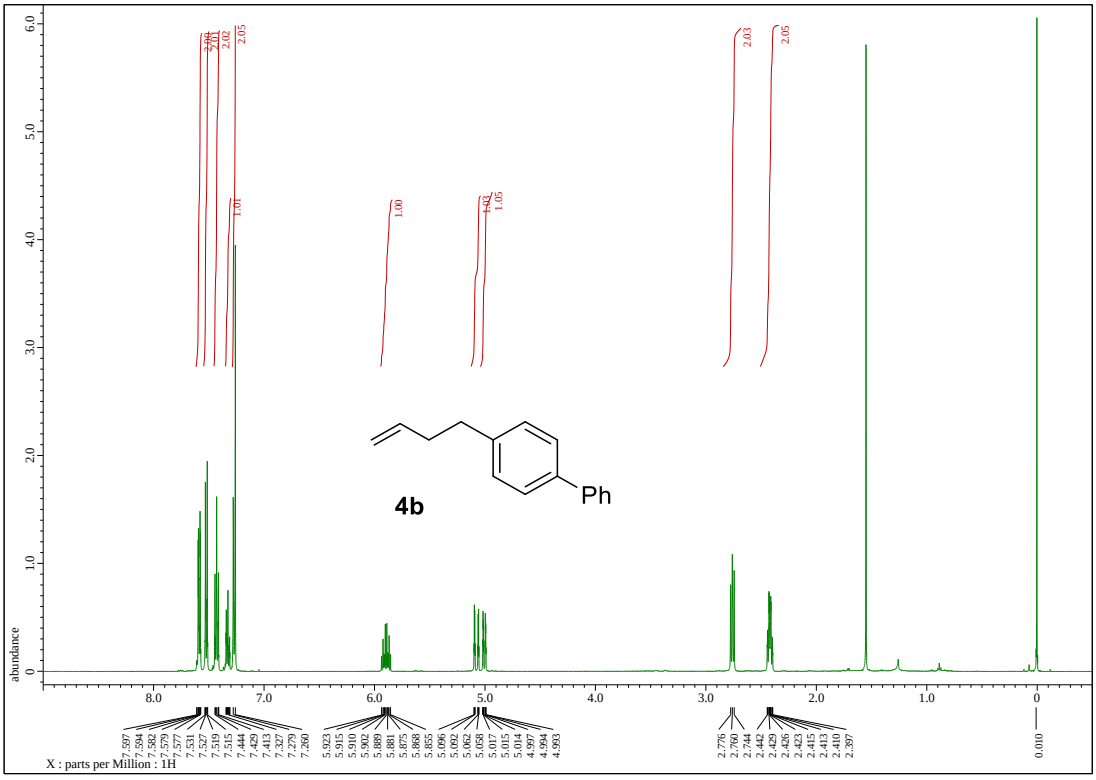
^{1}H NMR spectrum of **3z** (500 MHz, $CDCl_3$)



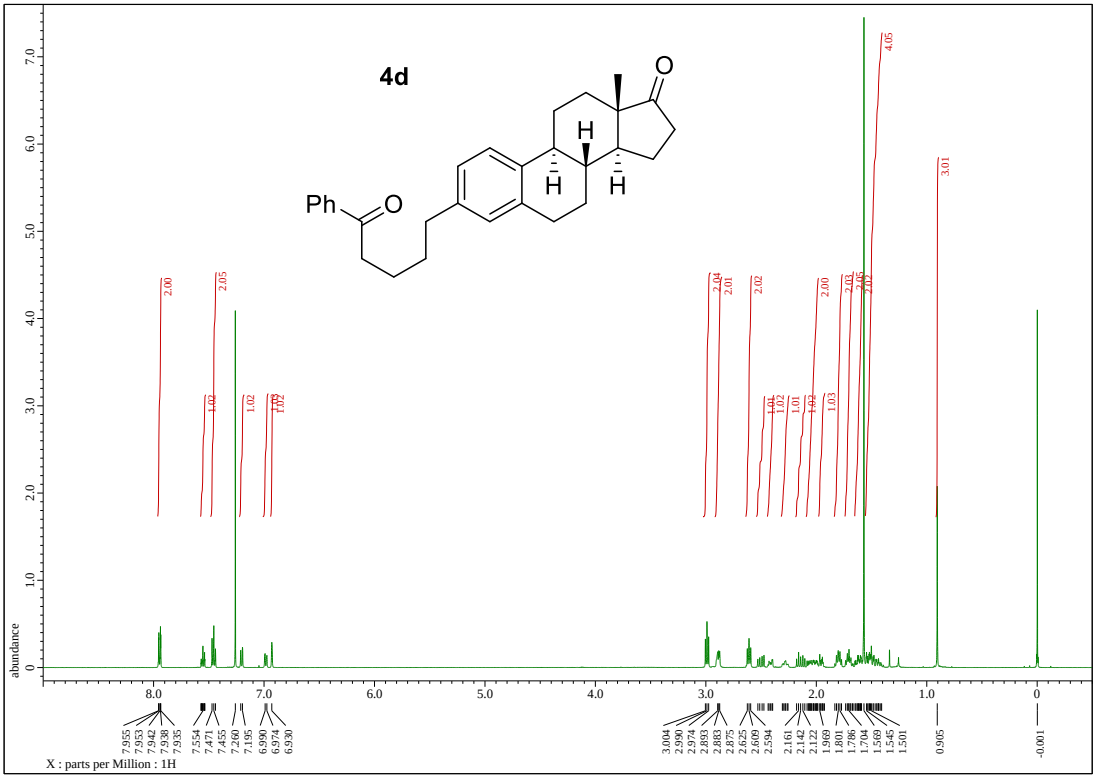
^{13}C{^{1}H} NMR spectrum of **3z** (125 MHz, $CDCl_3$)



^{1}H NMR spectrum of **4b** (500 MHz, $CDCl_3$)



^{1}H NMR spectrum of **4d** (500 MHz, $CDCl_3$)



$^{13}C\{^{1}H\}$ NMR spectrum of **4d** (125 MHz, $CDCl_3$)