Supporting Information

A convenient one-pot synthesis of *N*-substituted amidoximes and their application toward 1,2,4-oxadiazol-5-ones

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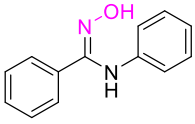
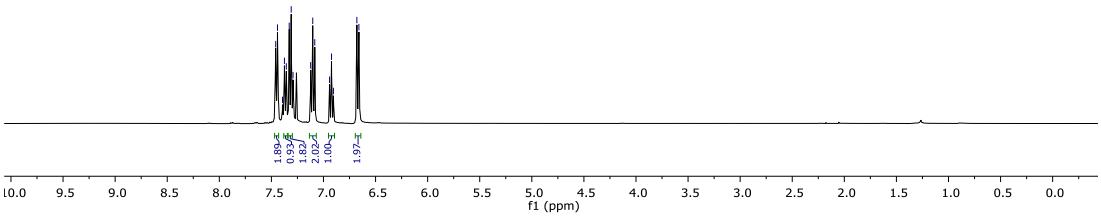
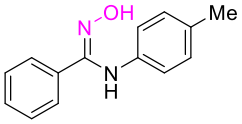
NMR spectra of all products

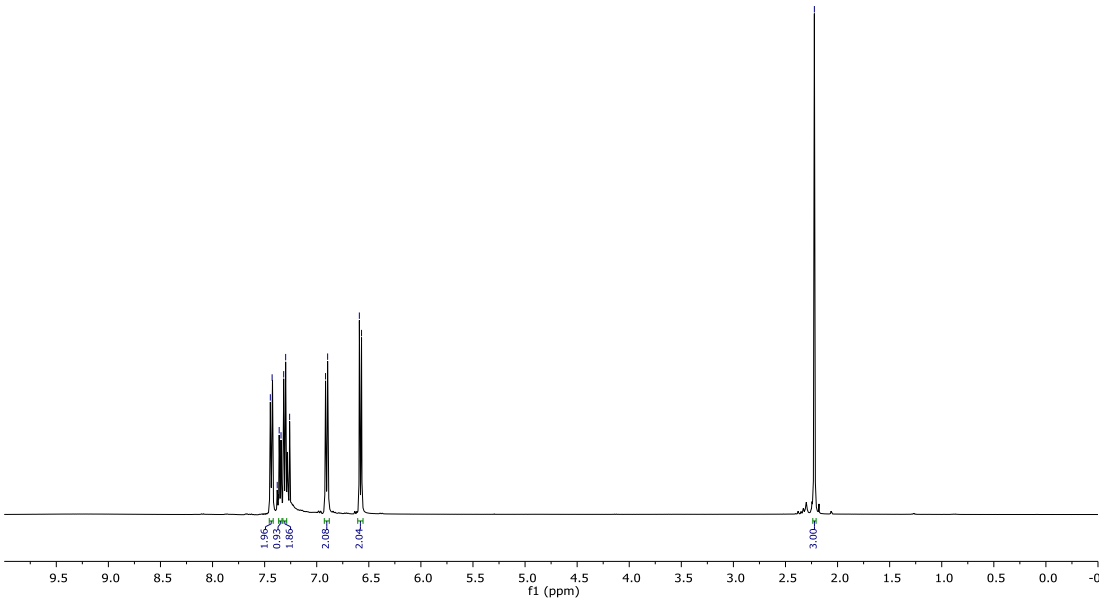


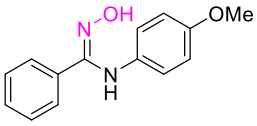
(Scheme 2, **2a**); ^{1}H NMR (400 MHz, $CDCl_3$)



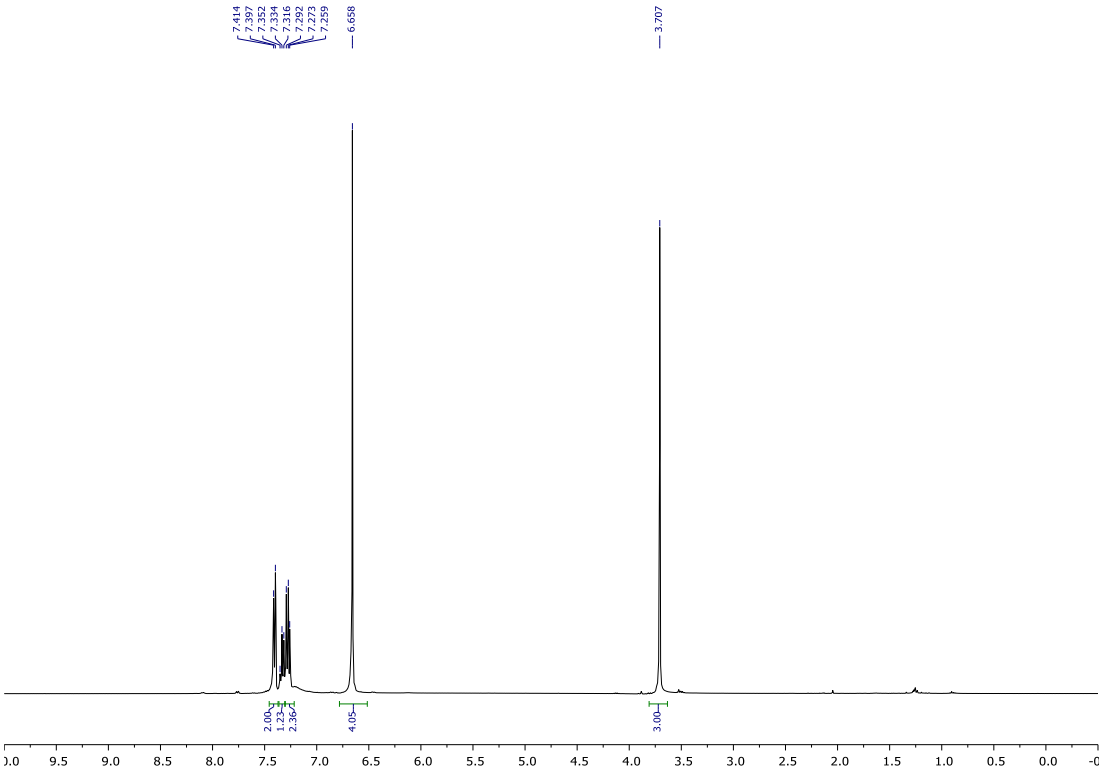


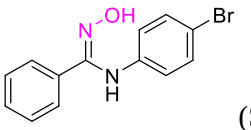
(Scheme 2, **2b**); ^{1}H NMR (400 MHz, $CDCl_3$)





(Scheme 2, **2c**); ^{1}H NMR (400 MHz, $CDCl_3$)





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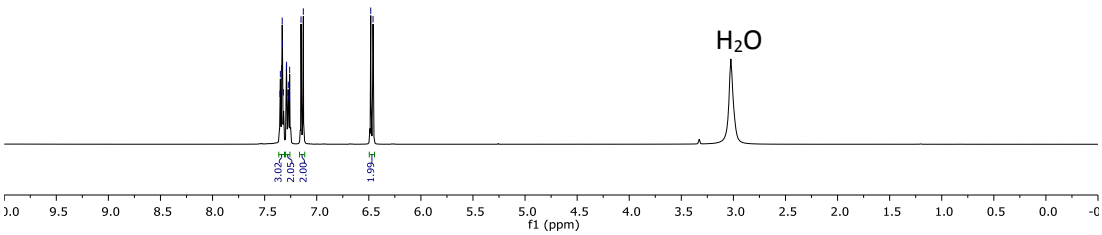

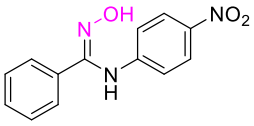

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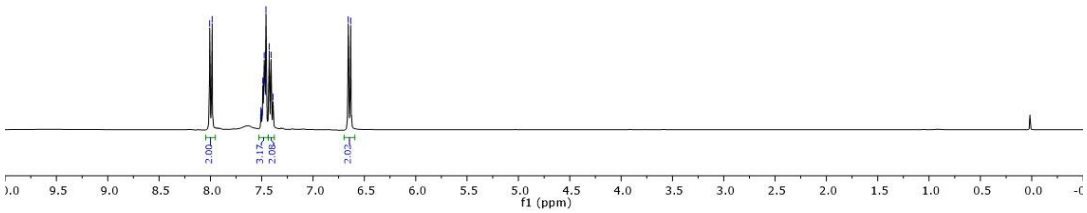
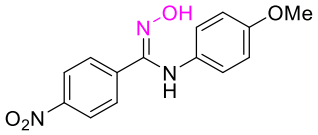
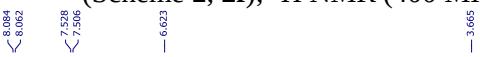
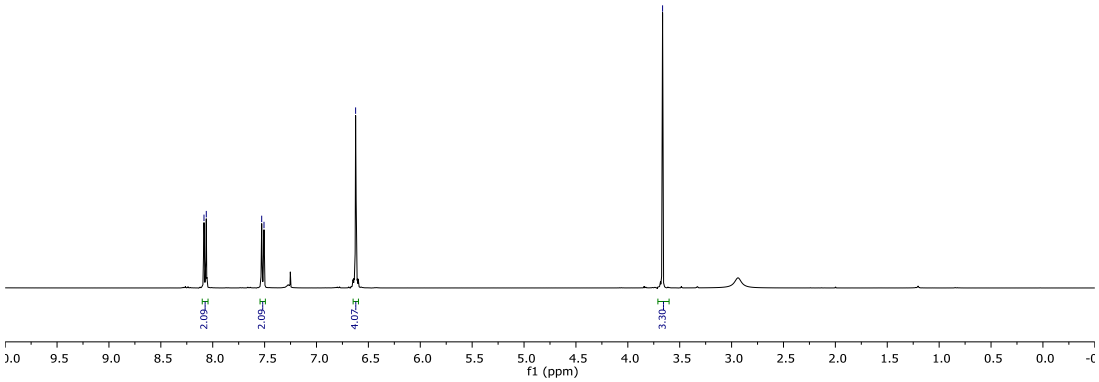
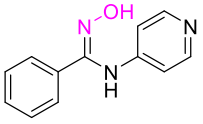




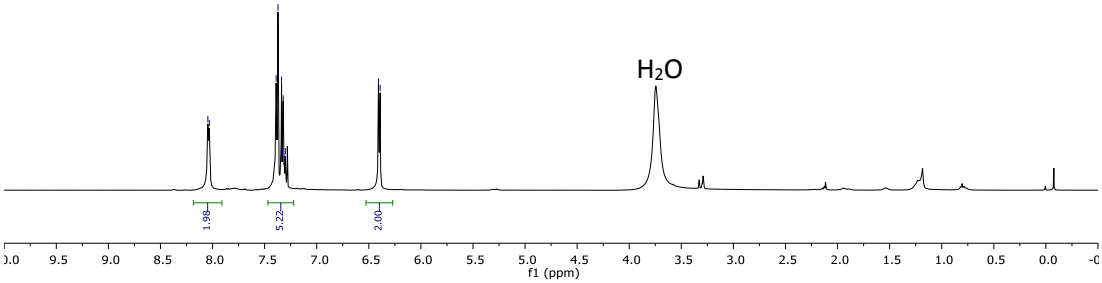
(Scheme 2, **2f**); ^{1}H NMR (400 MHz, $CDCl_3$)



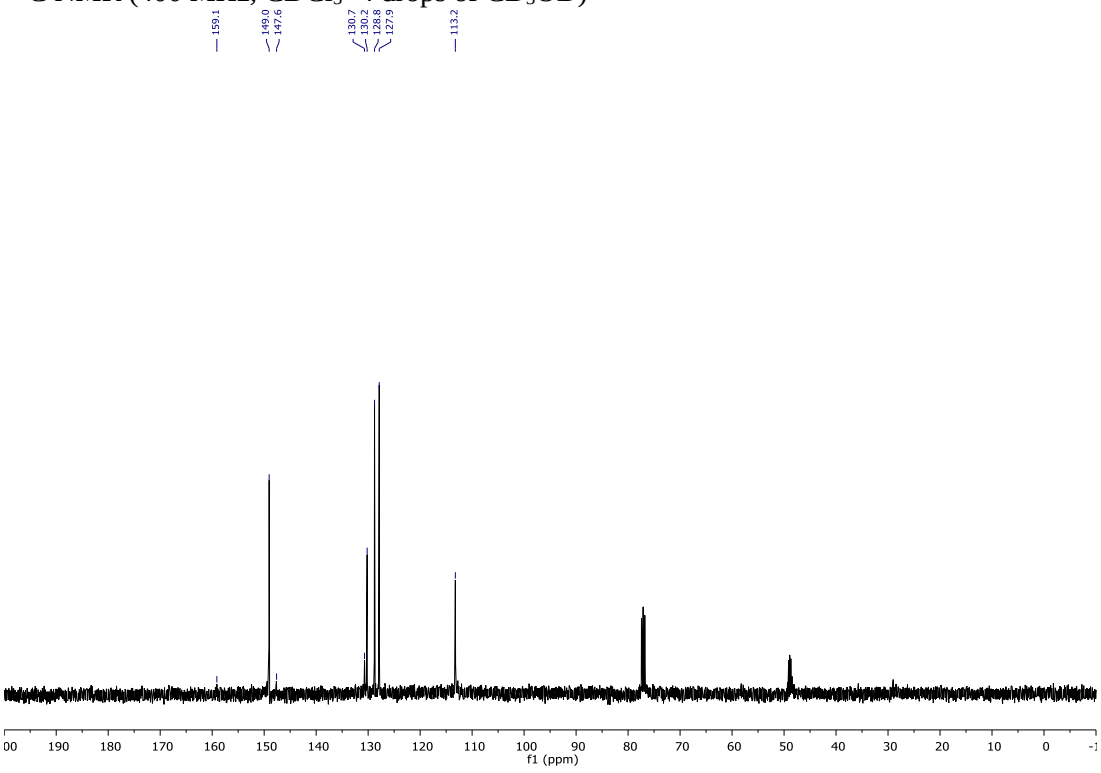


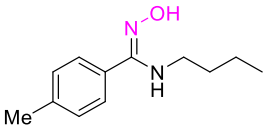


(Scheme 2, **2g**); ^{1}H NMR (400 MHz, $CDCl_3$+4 drops of CD_3OD)

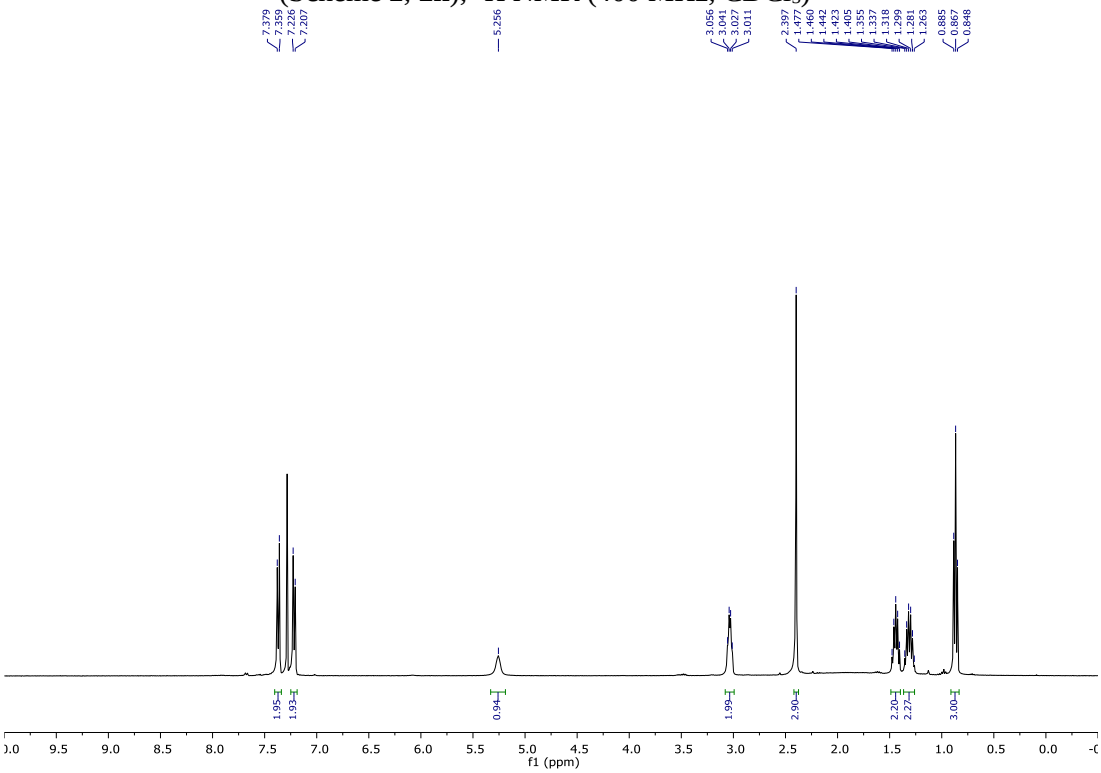


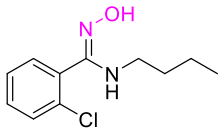
^{13}C NMR (400 MHz, $CDCl_3$+4 drops of CD_3OD)



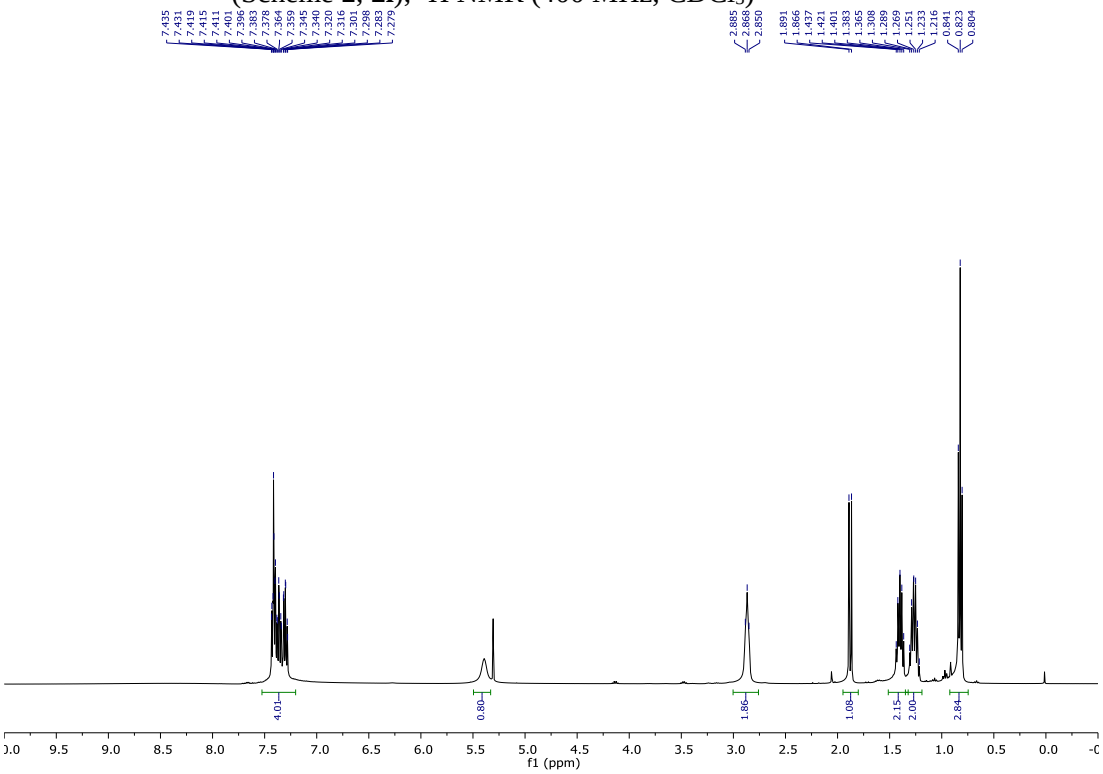


(Scheme 2, **2h**); ^{1}H NMR (400 MHz, $CDCl_3$)

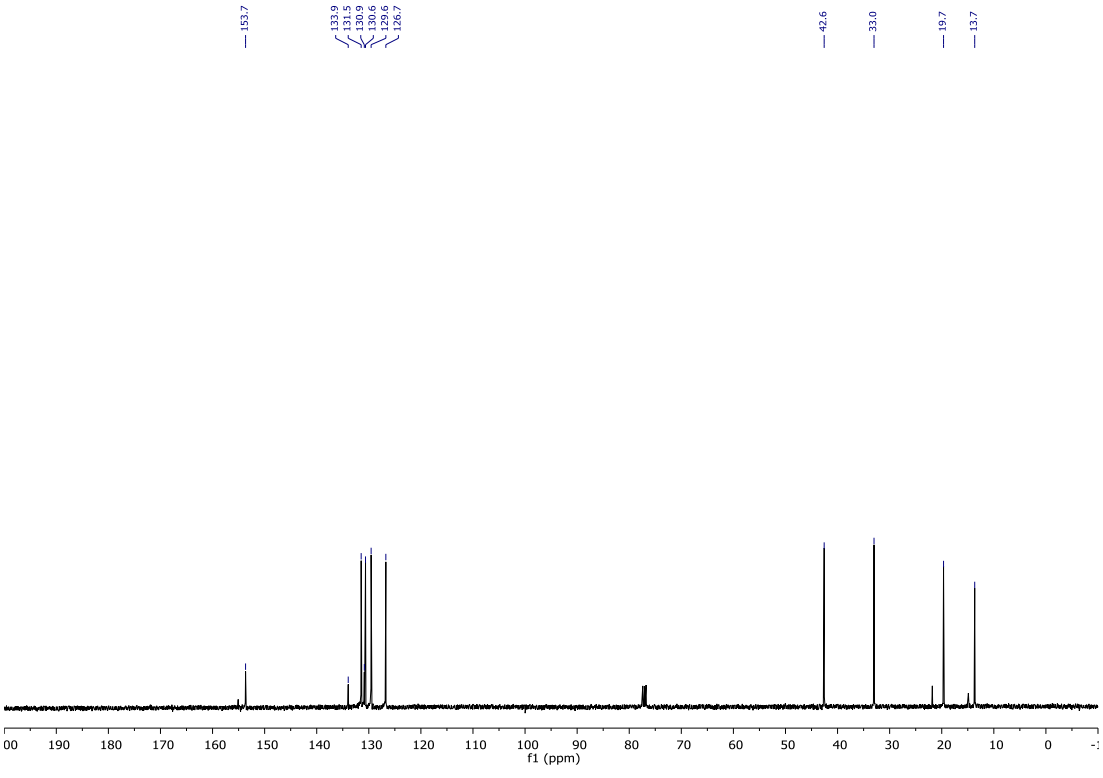


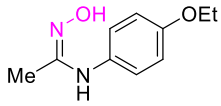


(Scheme 2, **2i**); ^{1}H NMR (400 MHz, $CDCl_3$)

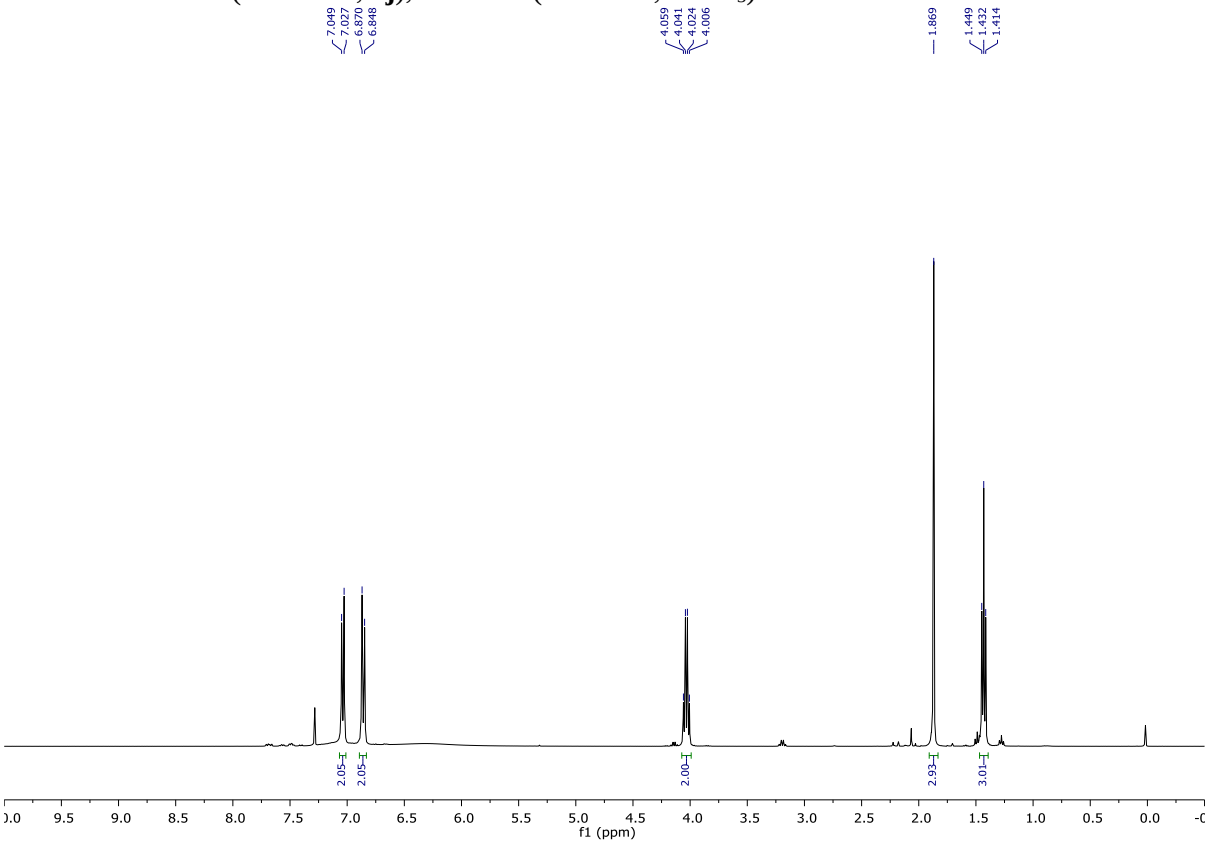


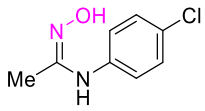
^{13}C NMR (400 MHz, $CDCl_3$)



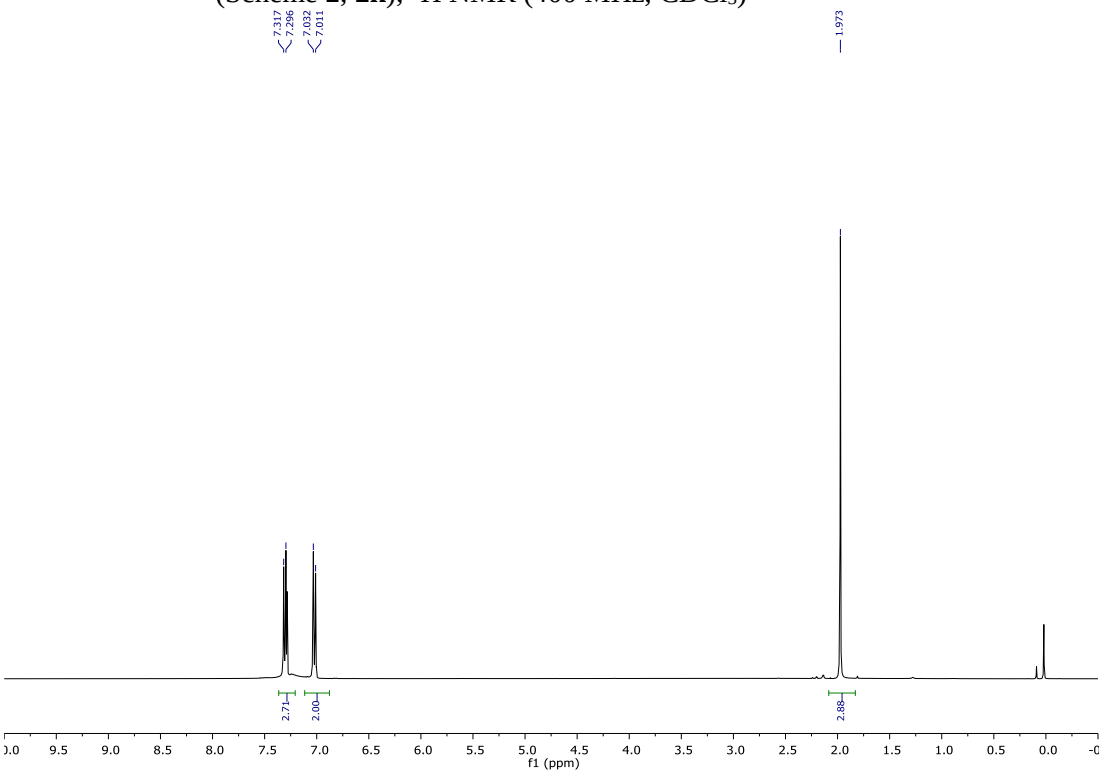


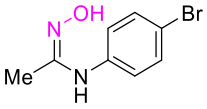
(Scheme 2, **2j**); ^{1}H NMR (400 MHz, $CDCl_3$)



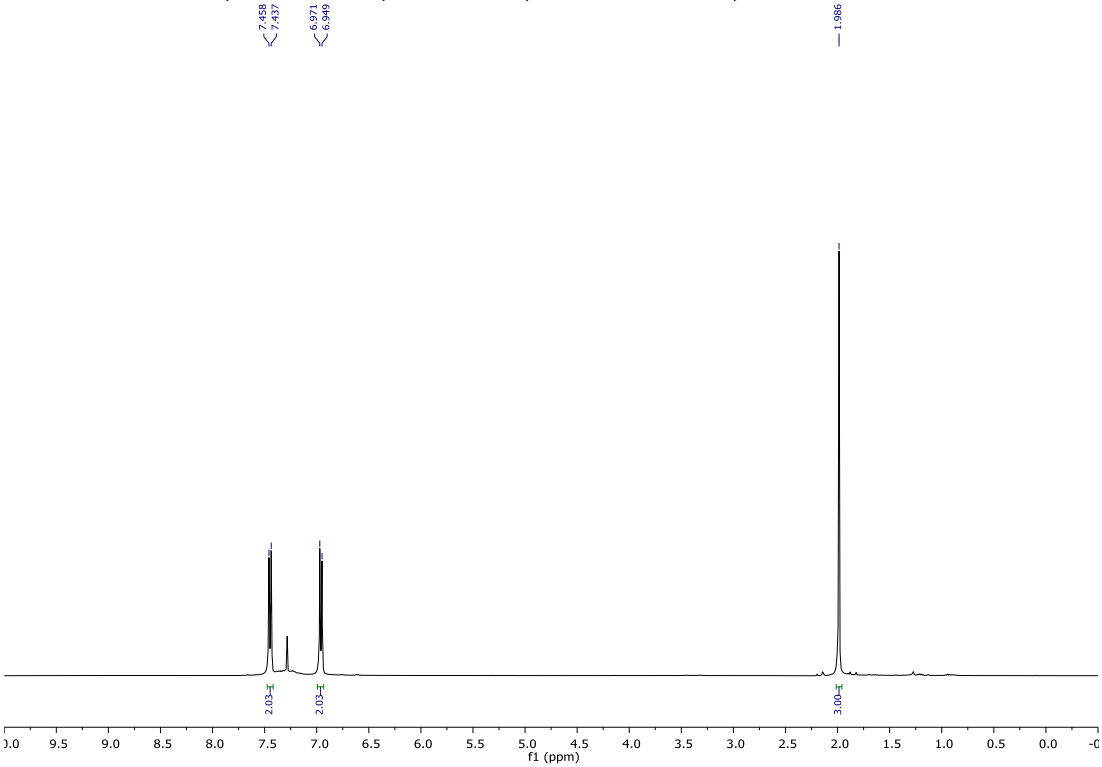


(Scheme 2, **2k**); ^{1}H NMR (400 MHz, $CDCl_3$)

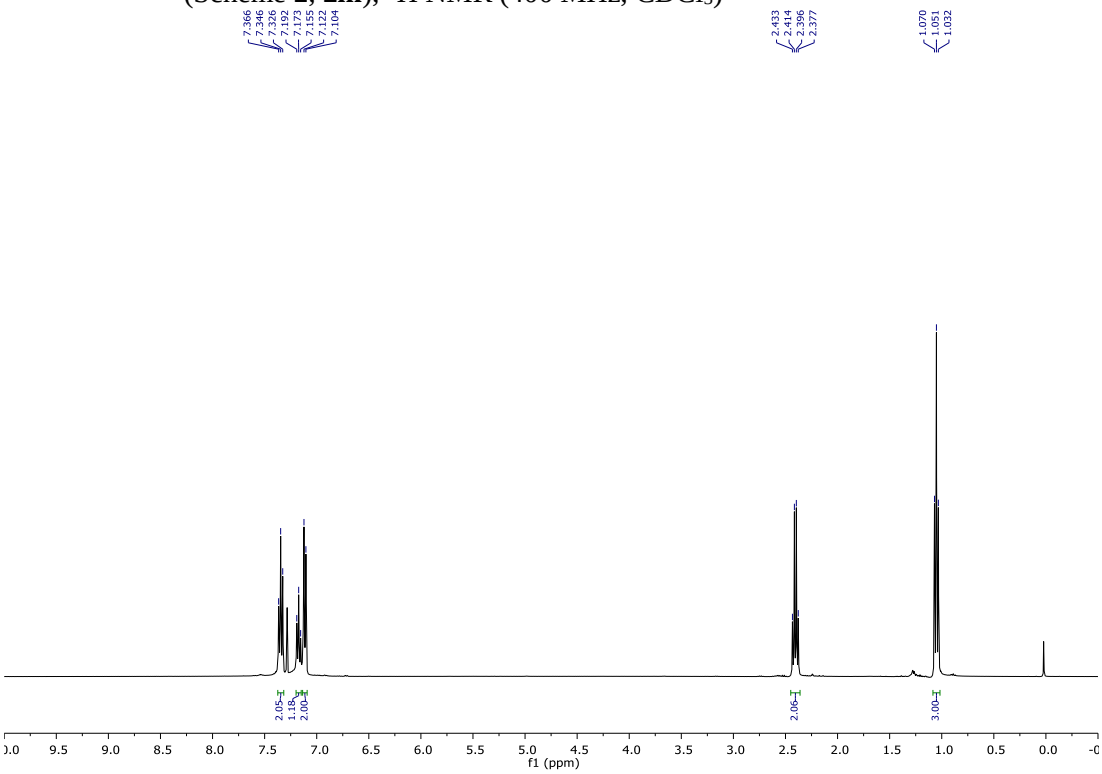


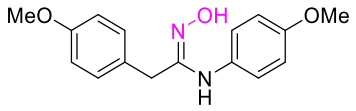


(Scheme 2, **2l**); ^{1}H NMR (400 MHz, $CDCl_3$)

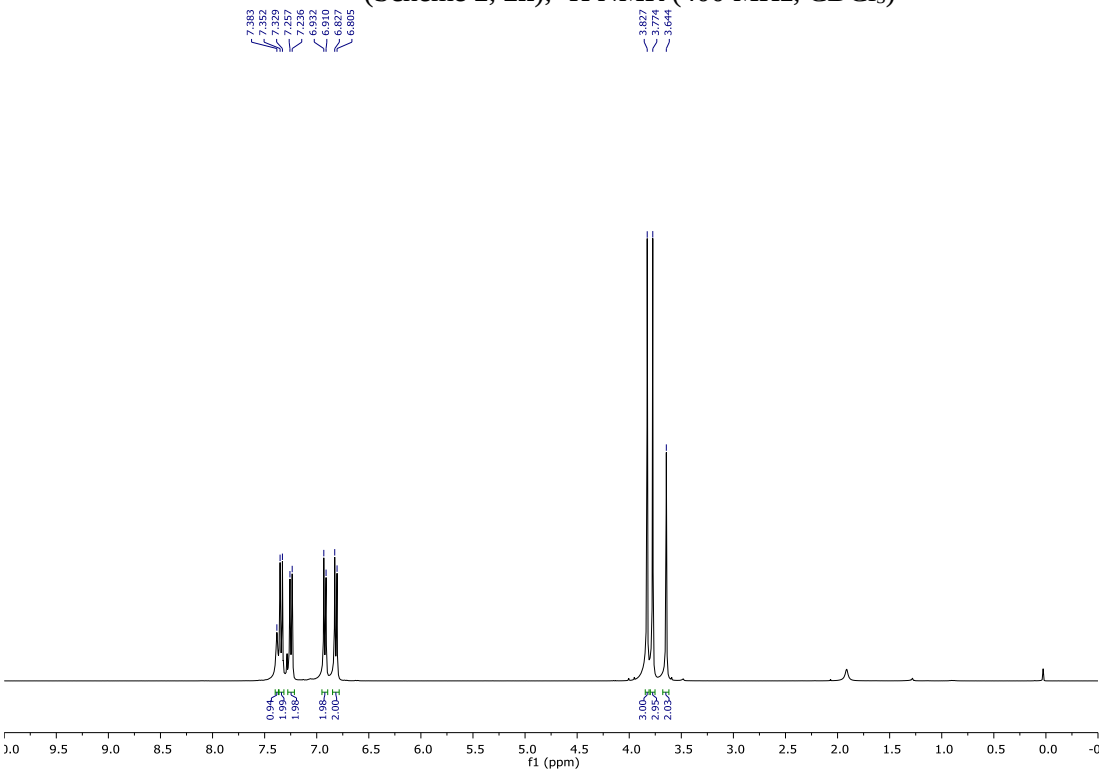


(Scheme 2, **2m**); ^{1}H NMR (400 MHz, $CDCl_3$)

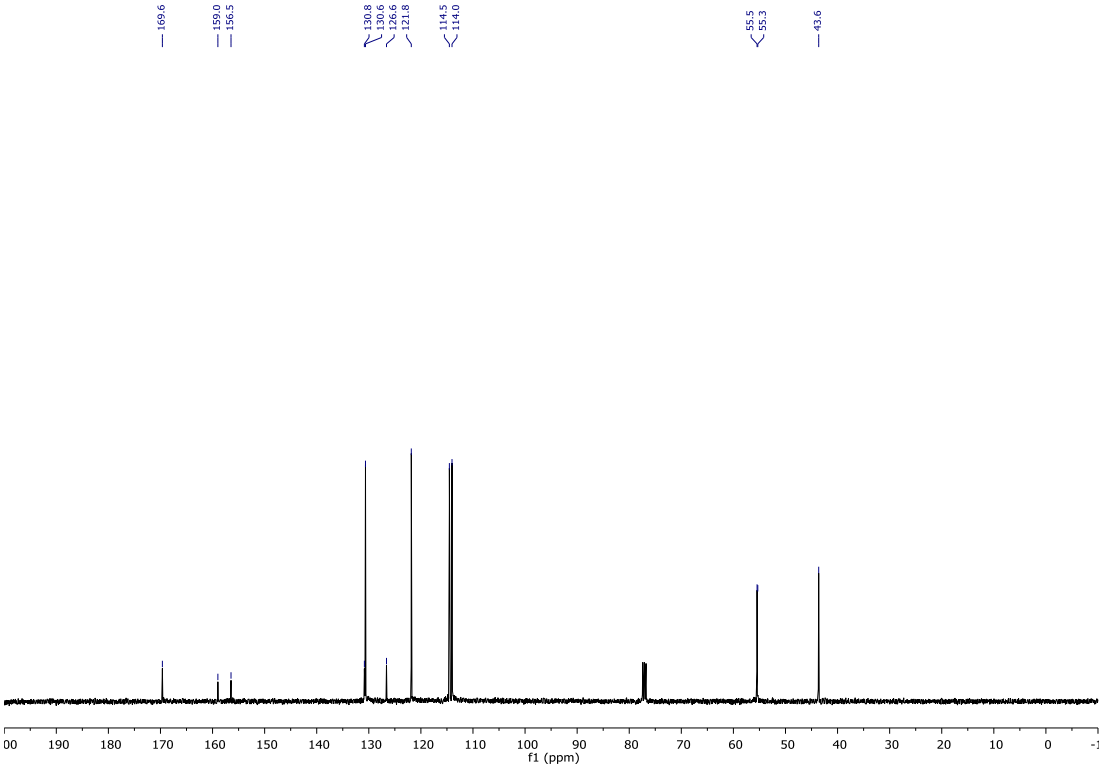


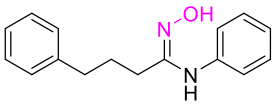


(Scheme 2, **2n**); ^{1}H NMR (400 MHz, $CDCl_3$)

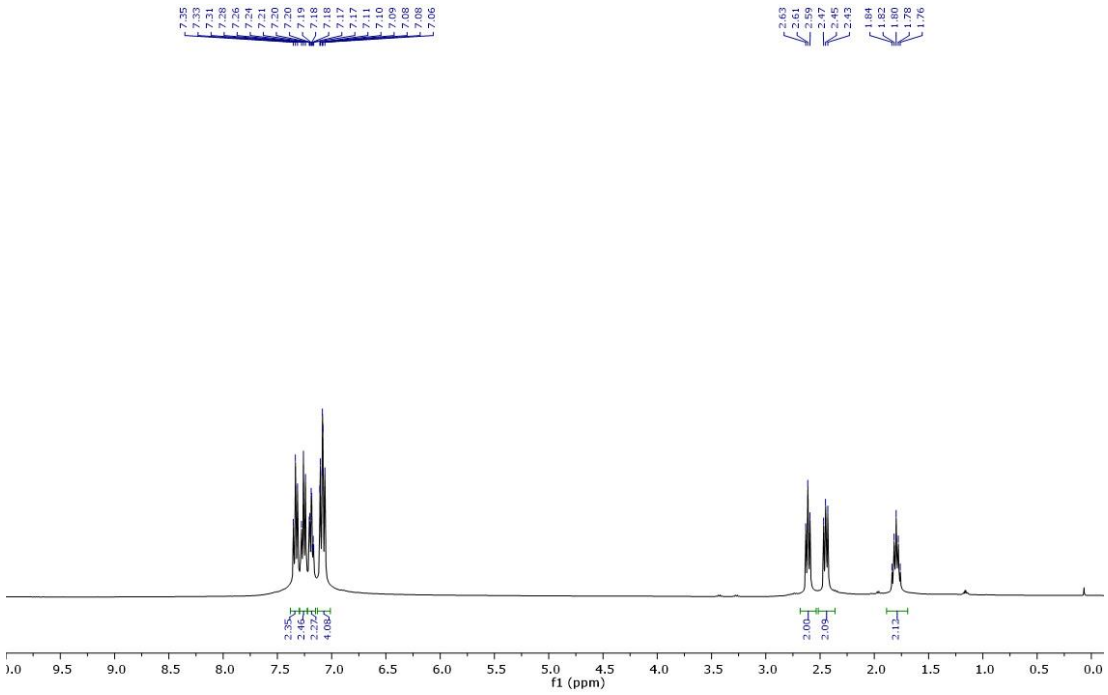


^{13}C NMR (400 MHz, $CDCl_3$)

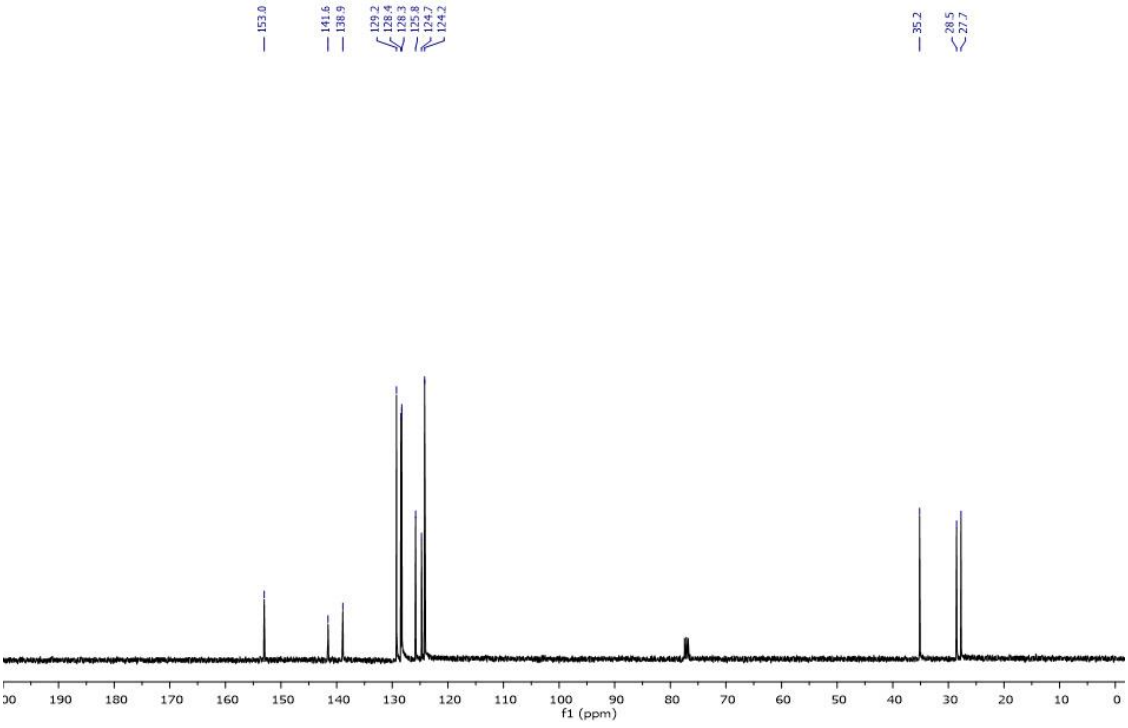


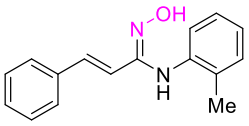


(Scheme 2, **2o**); ^{1}H NMR (400 MHz, $CDCl_3$)

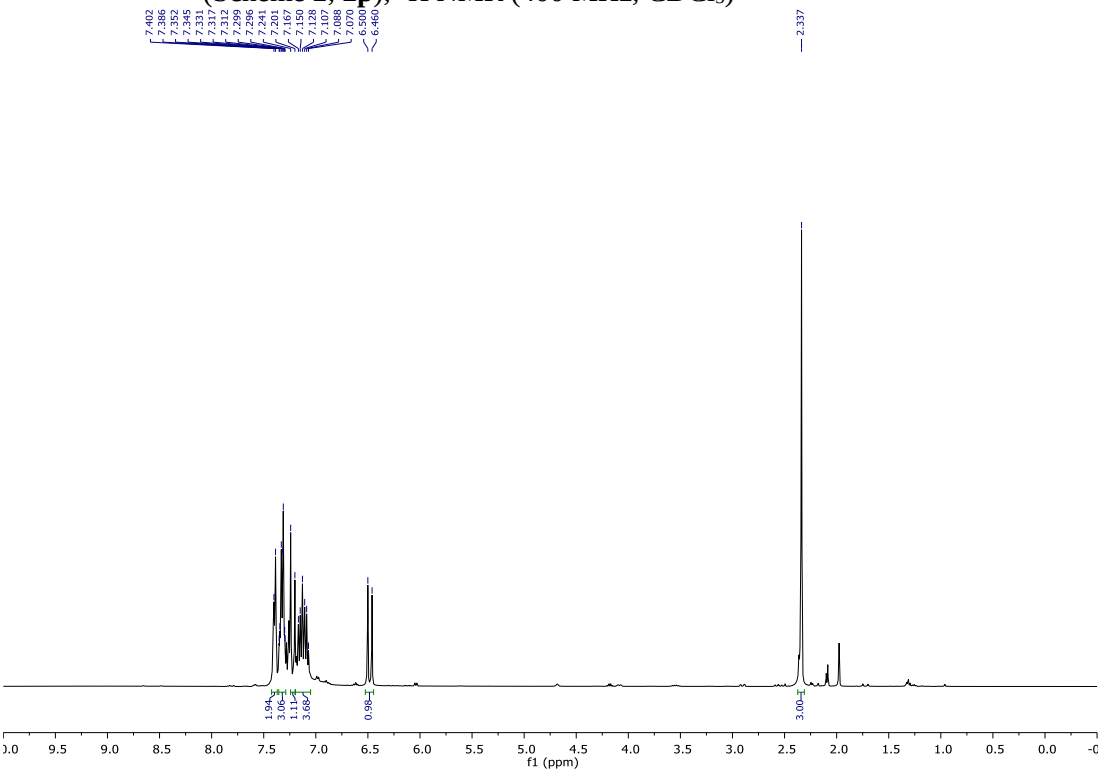


^{13}C NMR (400 MHz, $CDCl_3$)

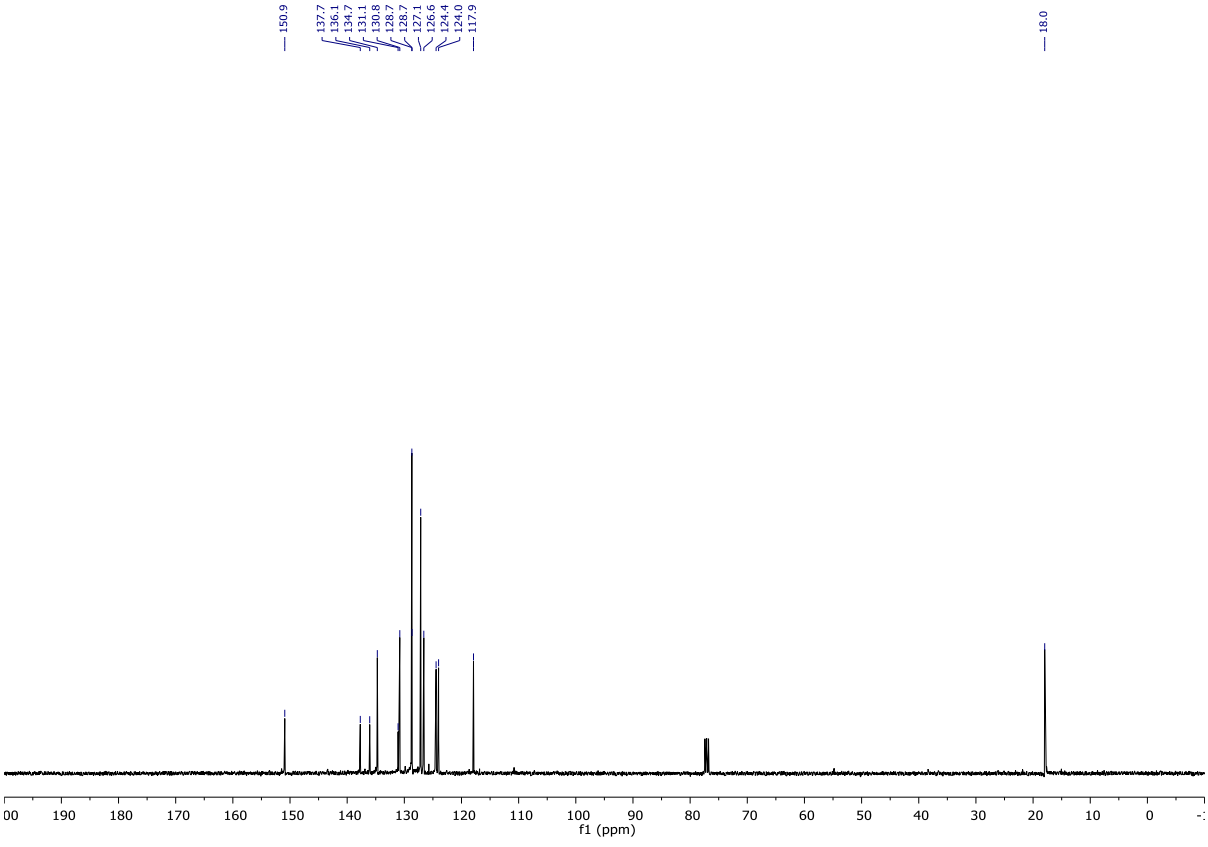


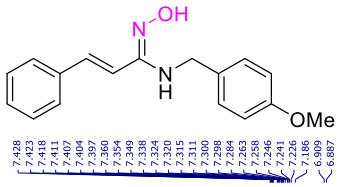


(Scheme 2, **2p**); ^{1}H NMR (400 MHz, $CDCl_3$)

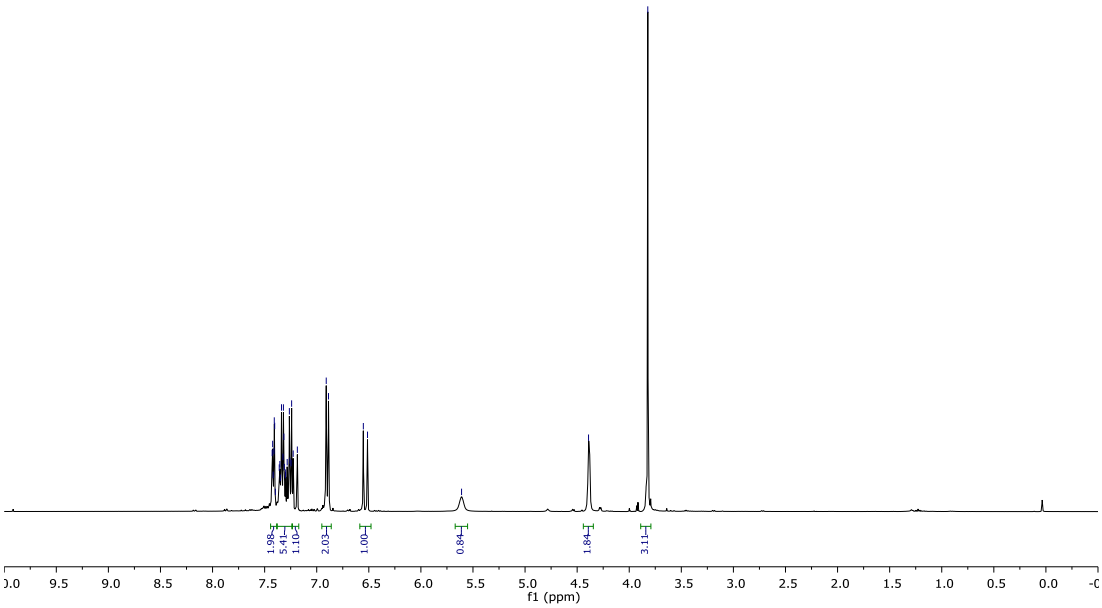


^{13}C NMR (400 MHz, $CDCl_3$)

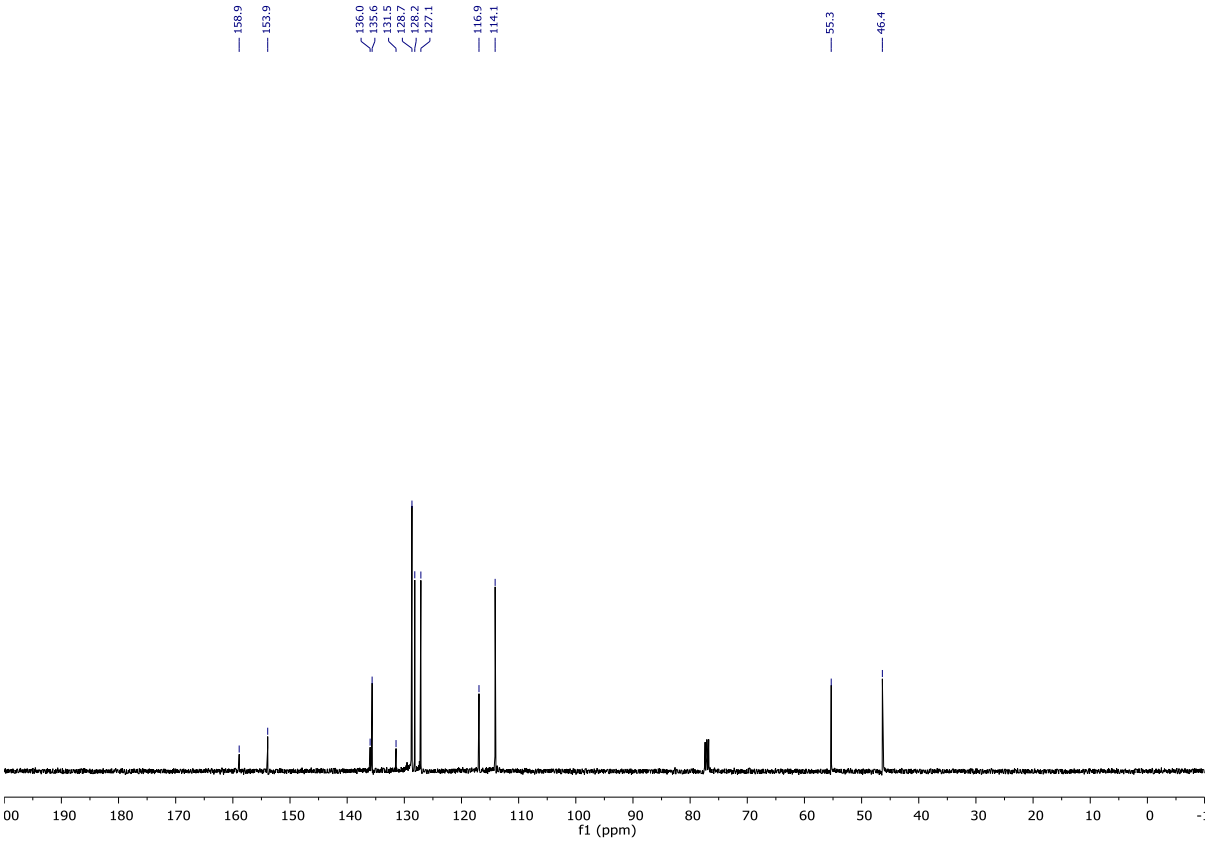


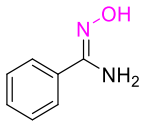


(Scheme 2, **2q**); ^{1}H NMR (400 MHz, $CDCl_3$)

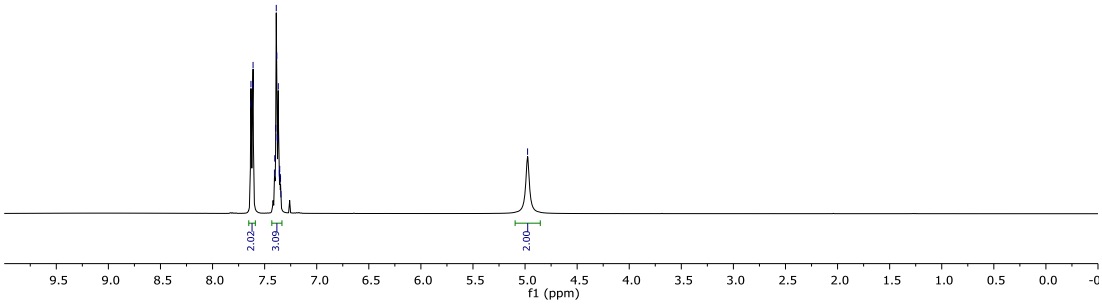


^{13}C NMR (400 MHz, $CDCl_3$)

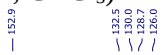


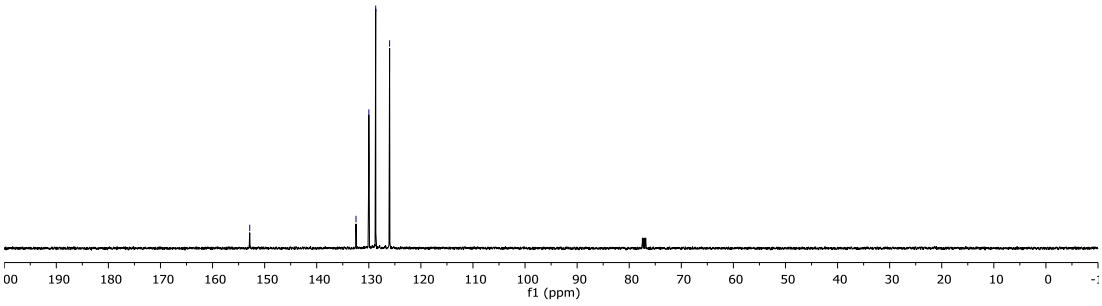


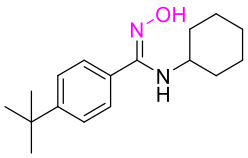
(Scheme 2, **2r**); ^{1}H NMR (400 MHz, $CDCl_3$)



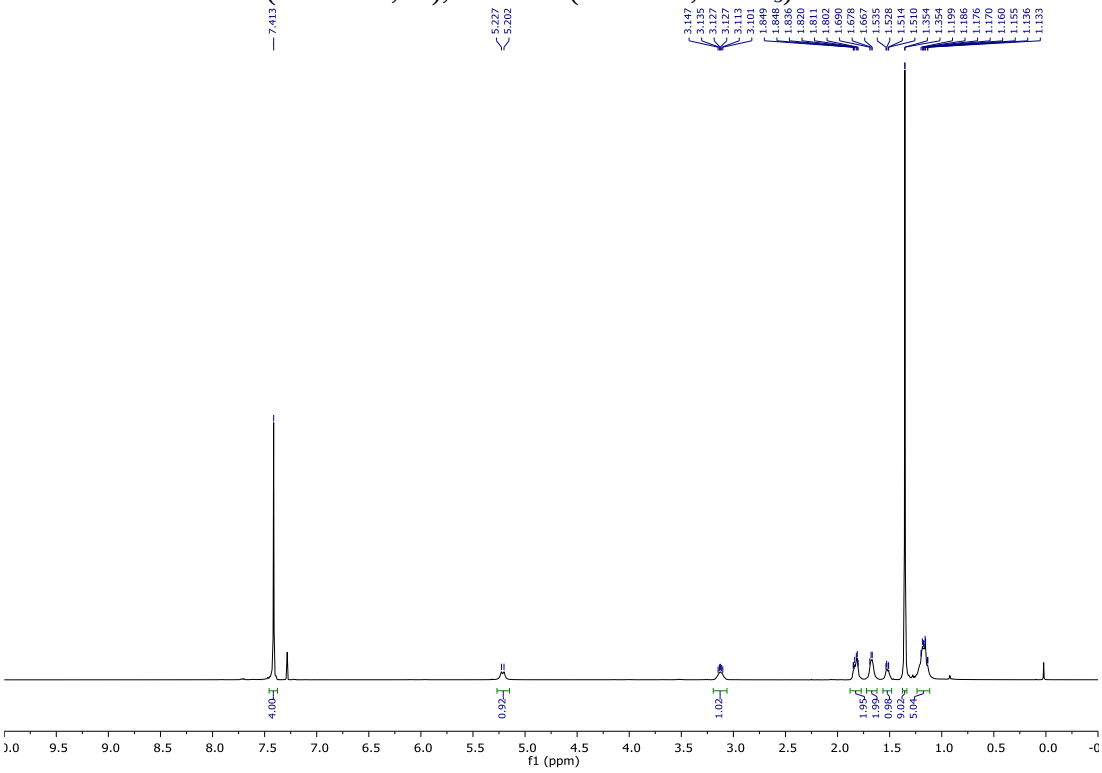
^{13}C NMR (400 MHz, $CDCl_3$)

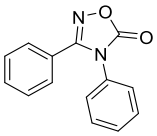




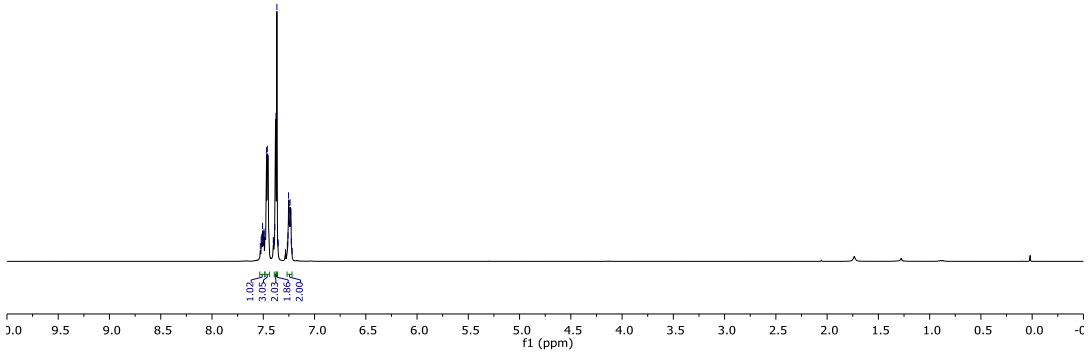


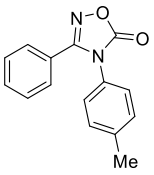
(Scheme 3, **2s**); ^{1}H NMR (400 MHz, $CDCl_3$)



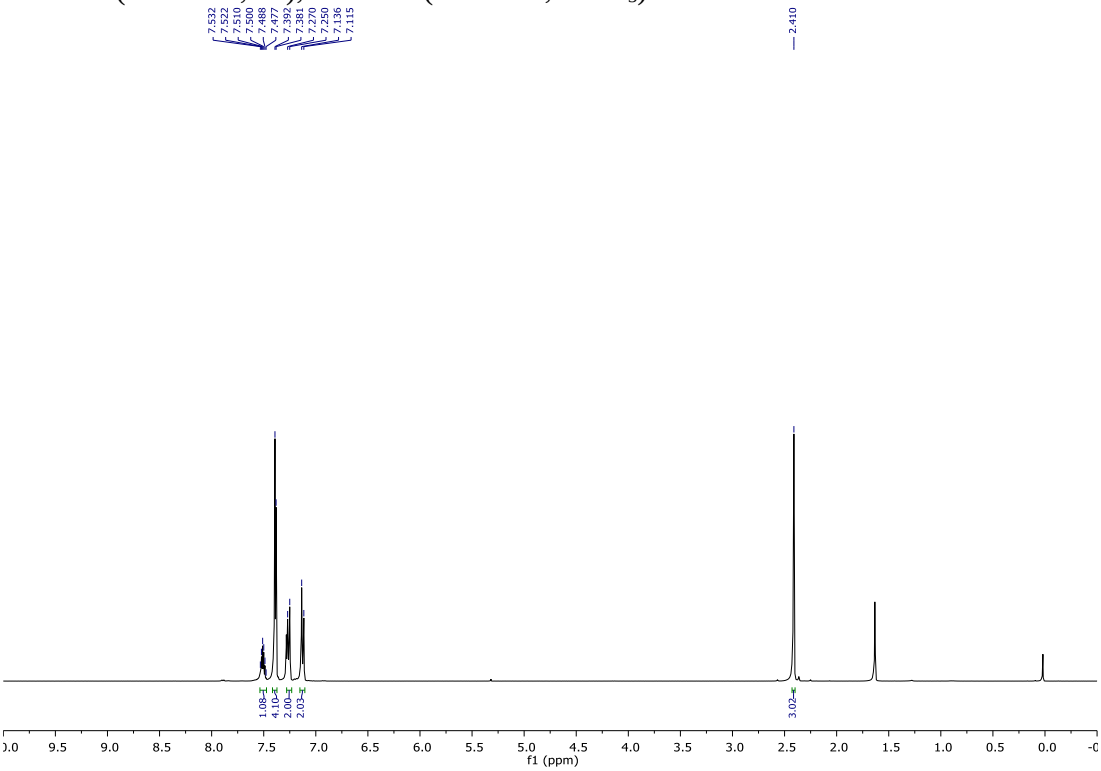


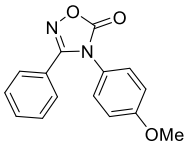
(Scheme 5, **3a**); ^{1}H NMR (400 MHz, $CDCl_3$)



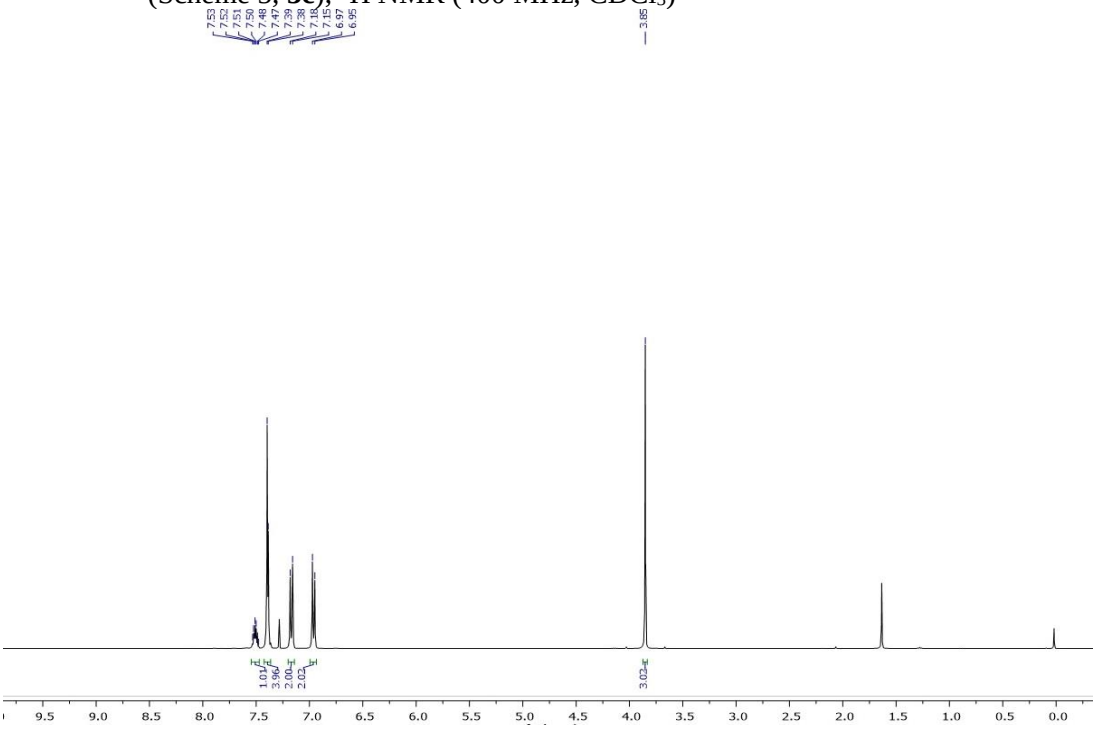


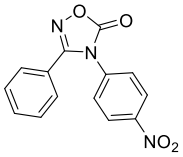
(Scheme 5, **3b**); ^{1}H NMR (400 MHz, $CDCl_3$)



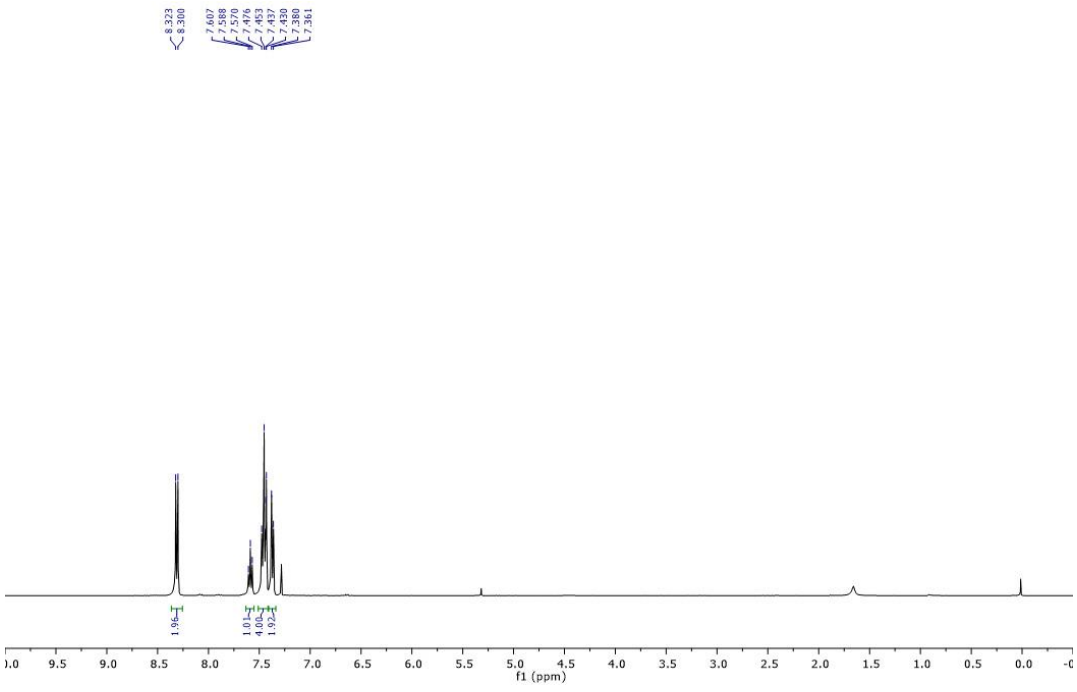


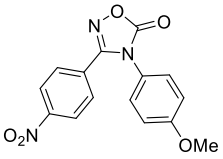
(Scheme 5, **3c**); ^{1}H NMR (400 MHz, $CDCl_3$)



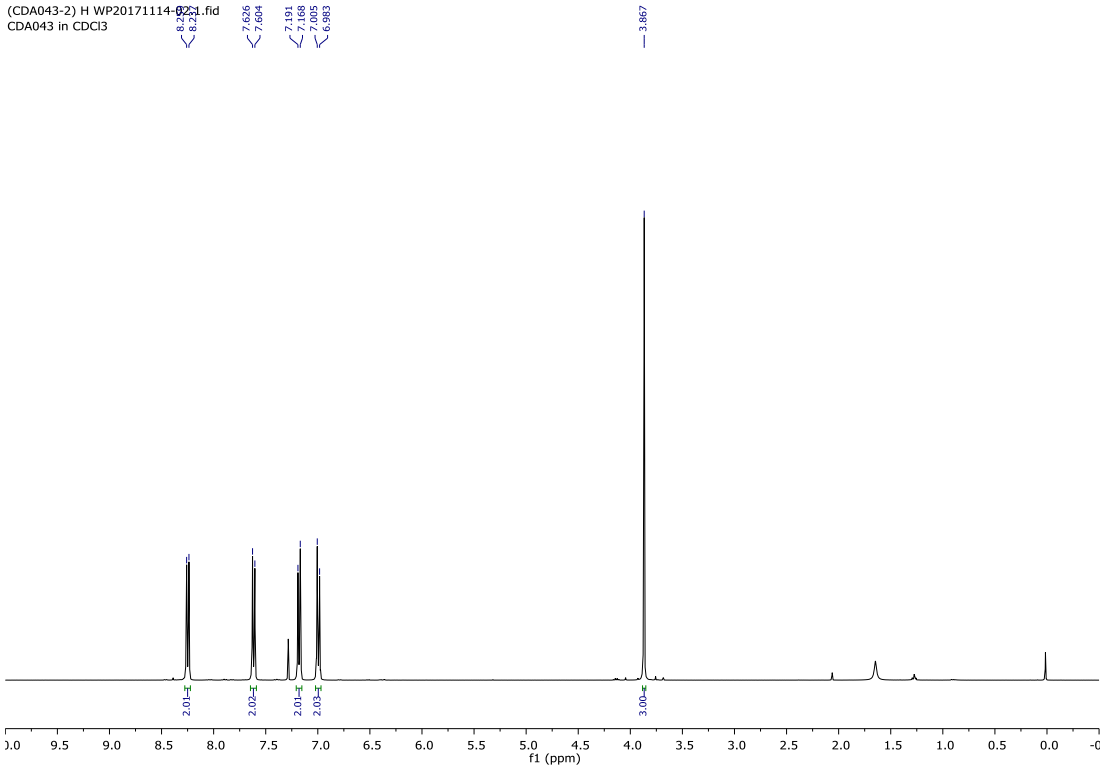


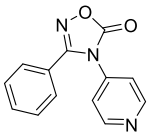
(Scheme 5, **3d**); ^{1}H NMR (400 MHz, $CDCl_3$)



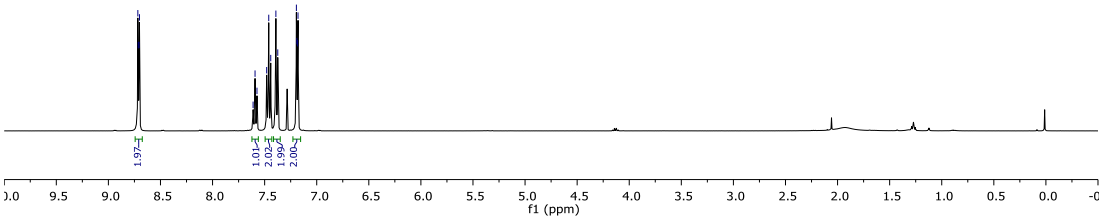


(Scheme 5, **3e**); ^{1}H NMR (400 MHz, $CDCl_3$)

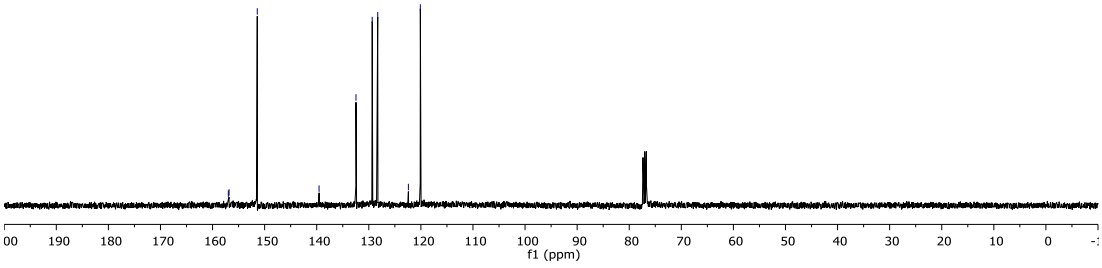


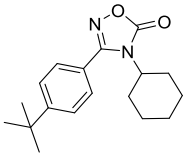


(Scheme 5, **3f**); ^{1}H NMR (400 MHz, $CDCl_3$)

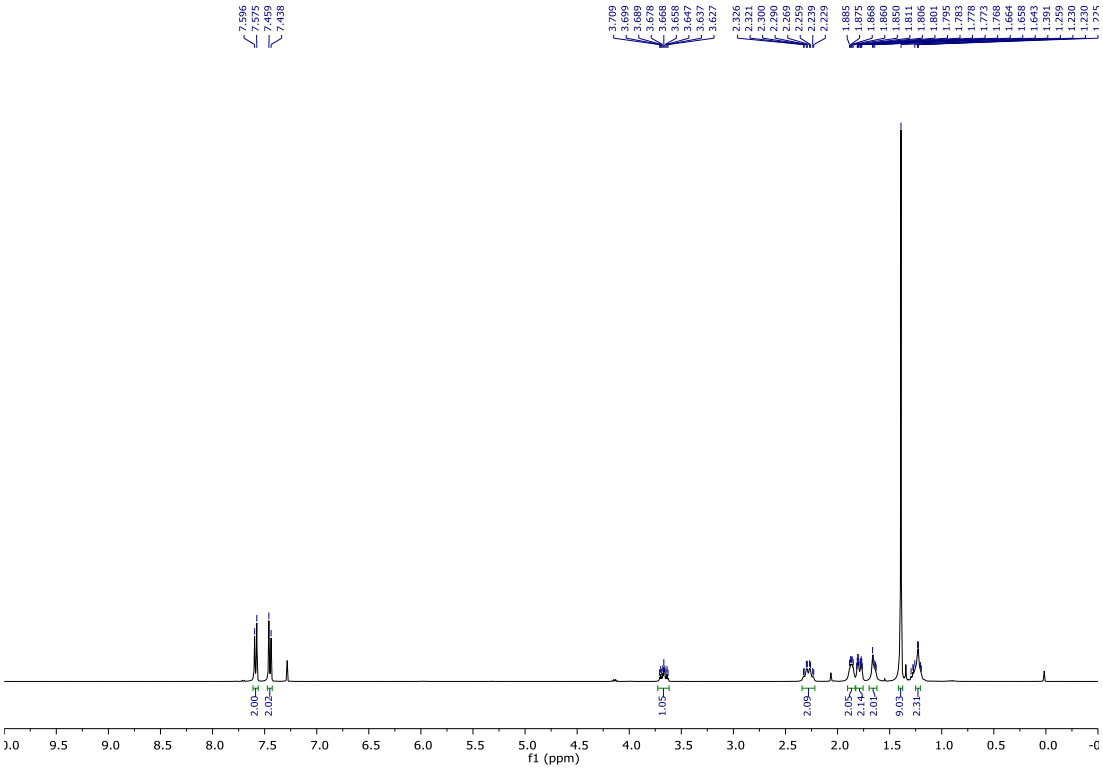


^{13}C NMR (100 MHz, $CDCl_3$)

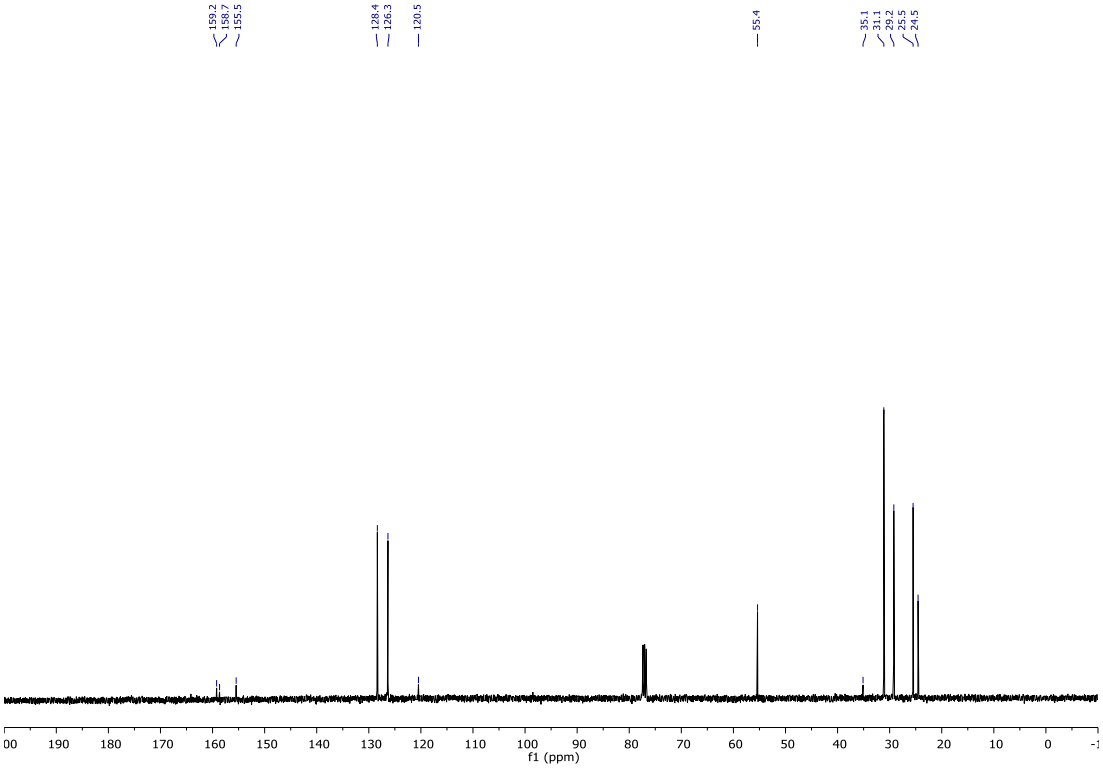


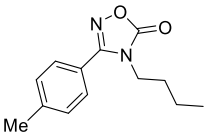


(Scheme 5, **3g**); ^{1}H NMR (400 MHz, $CDCl_3$)

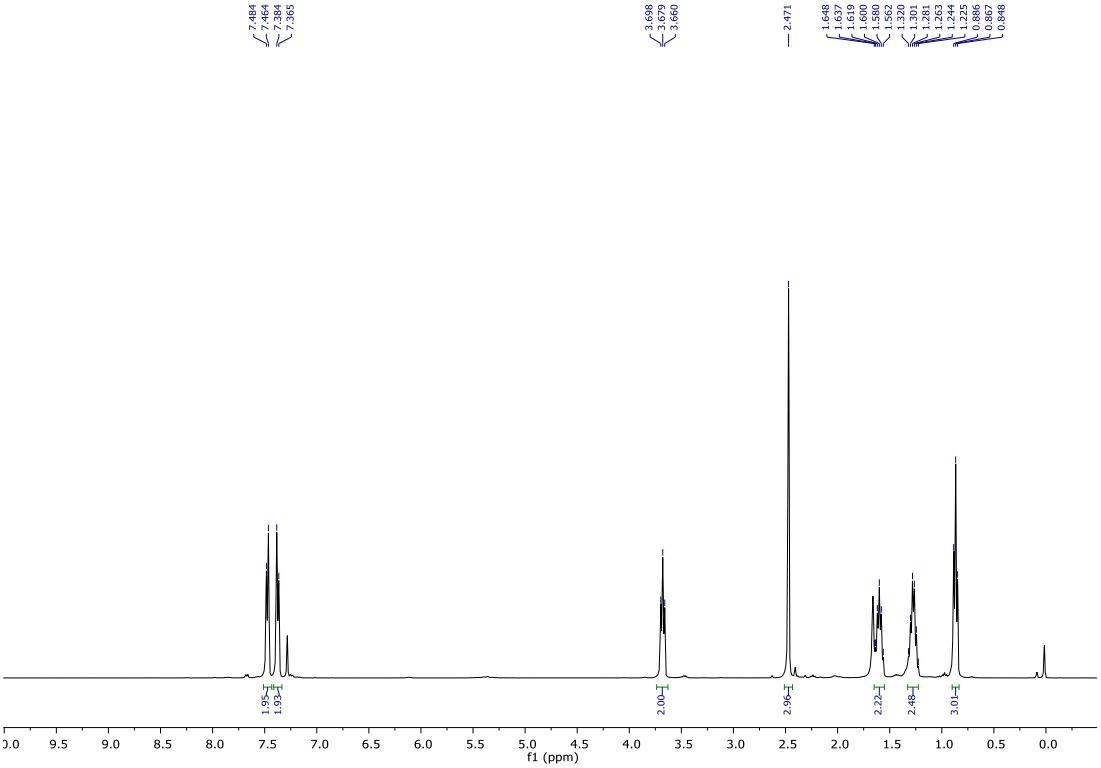


^{13}C NMR (100 MHz, $CDCl_3$)

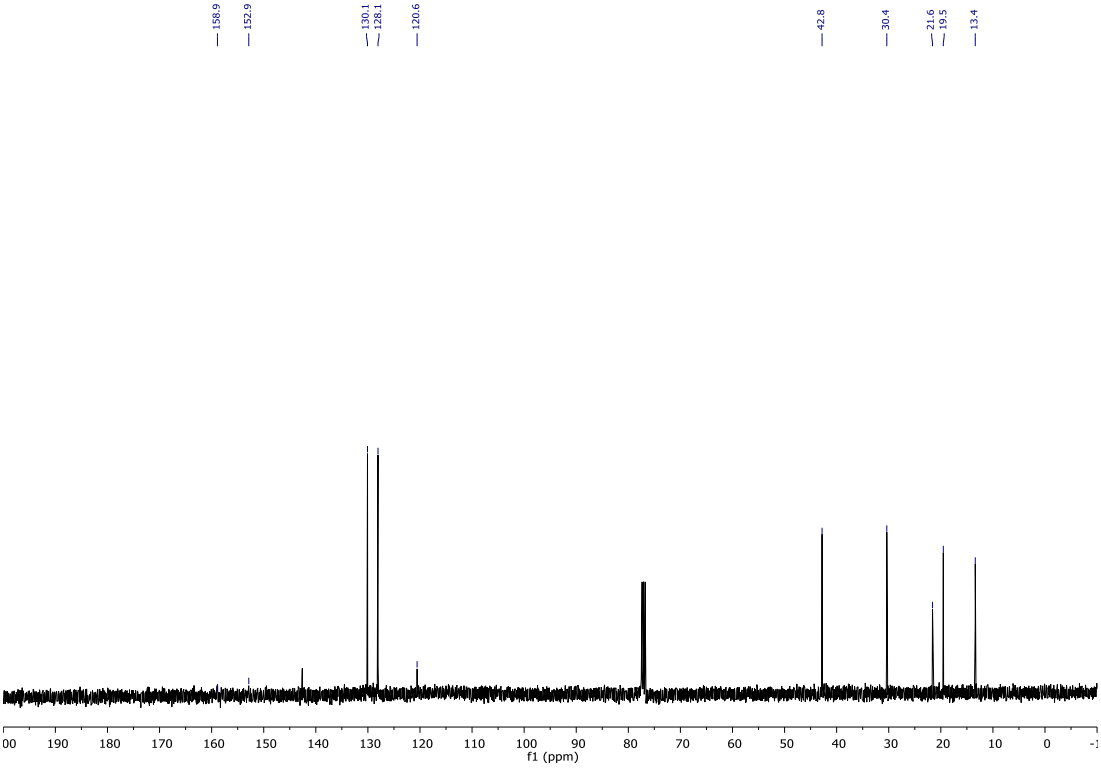


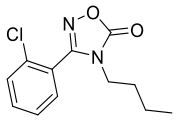


(Scheme 5, **3h**); ^{1}H NMR (400 MHz, $CDCl_3$)

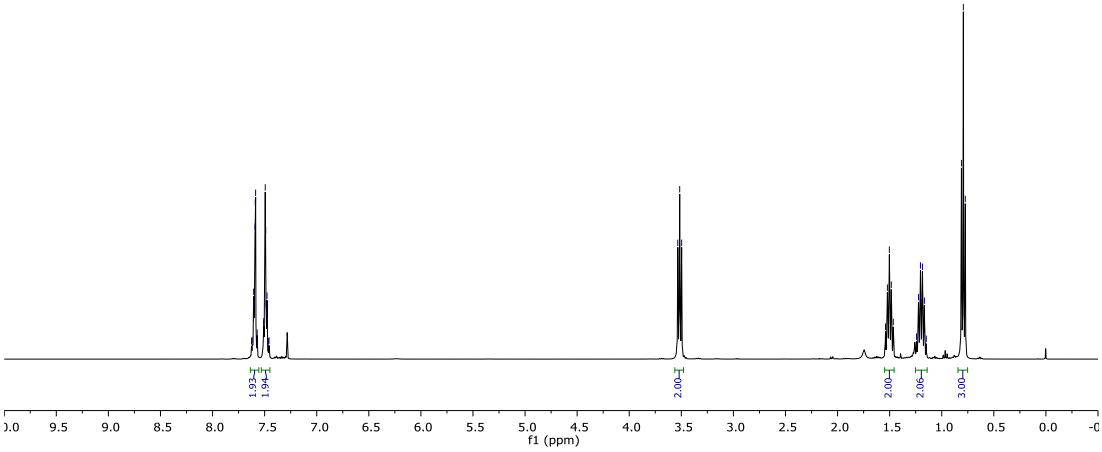


^{13}C NMR (100 MHz, $CDCl_3$)

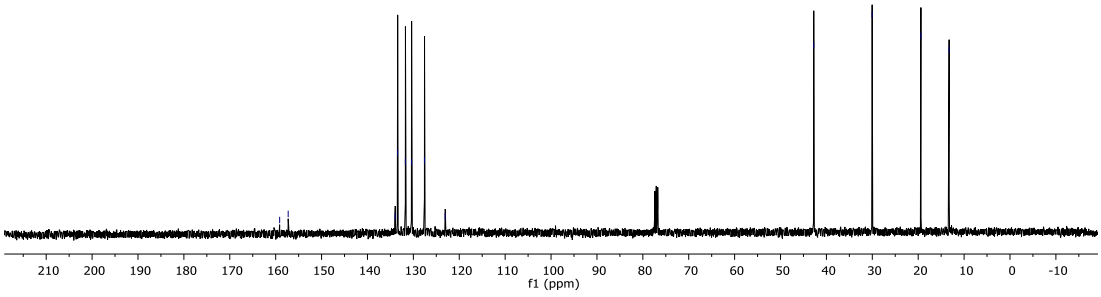


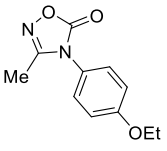


(Scheme 5, **3i**); ^{1}H NMR (400 MHz, $CDCl_3$)

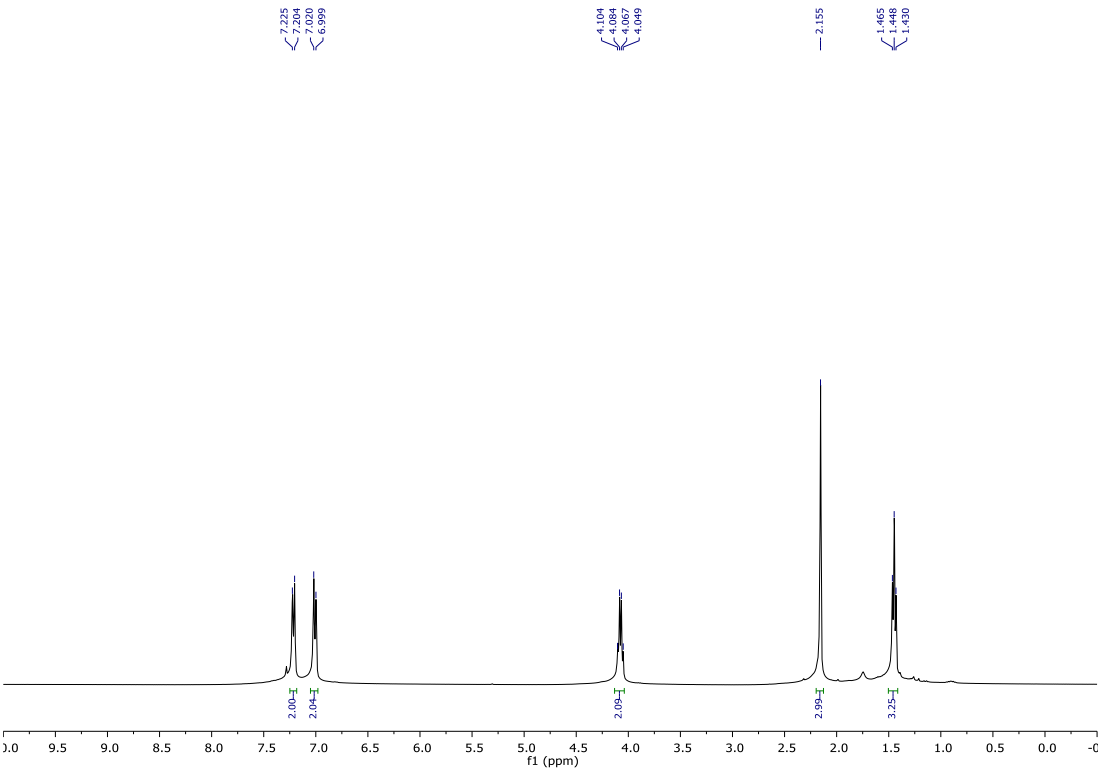


^{13}C NMR (100 MHz, $CDCl_3$)

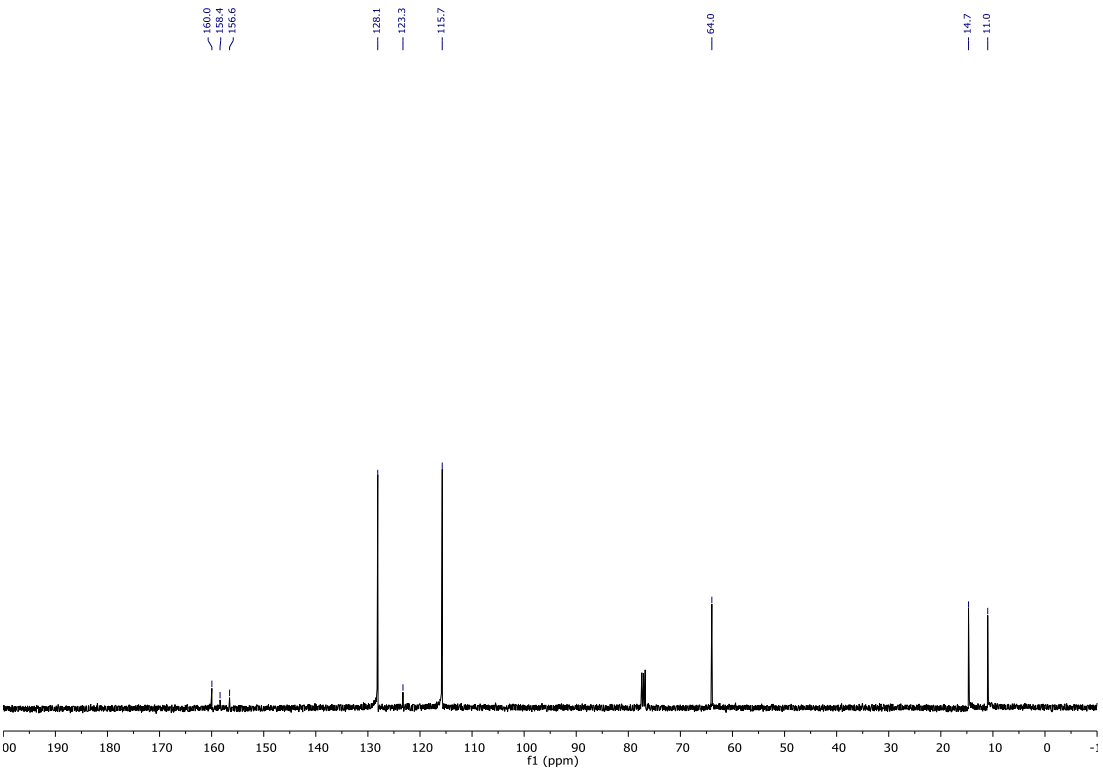


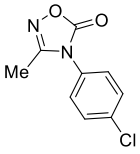


(Scheme 5, **3j**); ^{1}H NMR (400 MHz, $CDCl_3$)

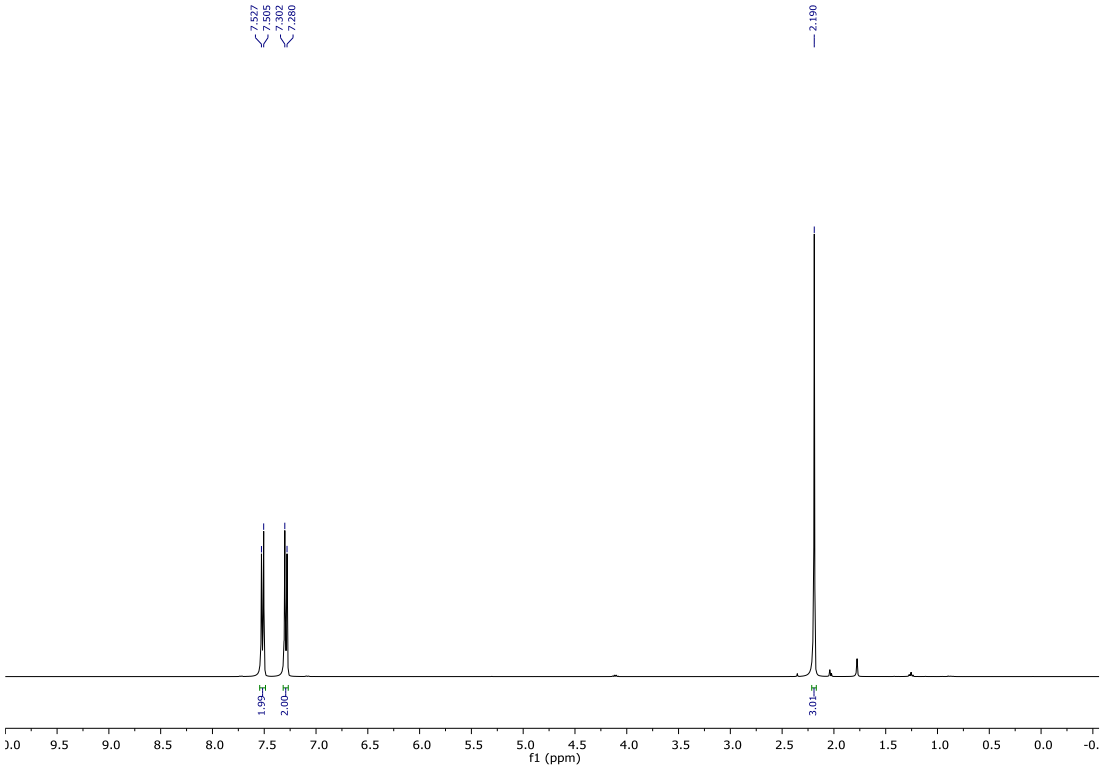


^{13}C NMR (100 MHz, $CDCl_3$)

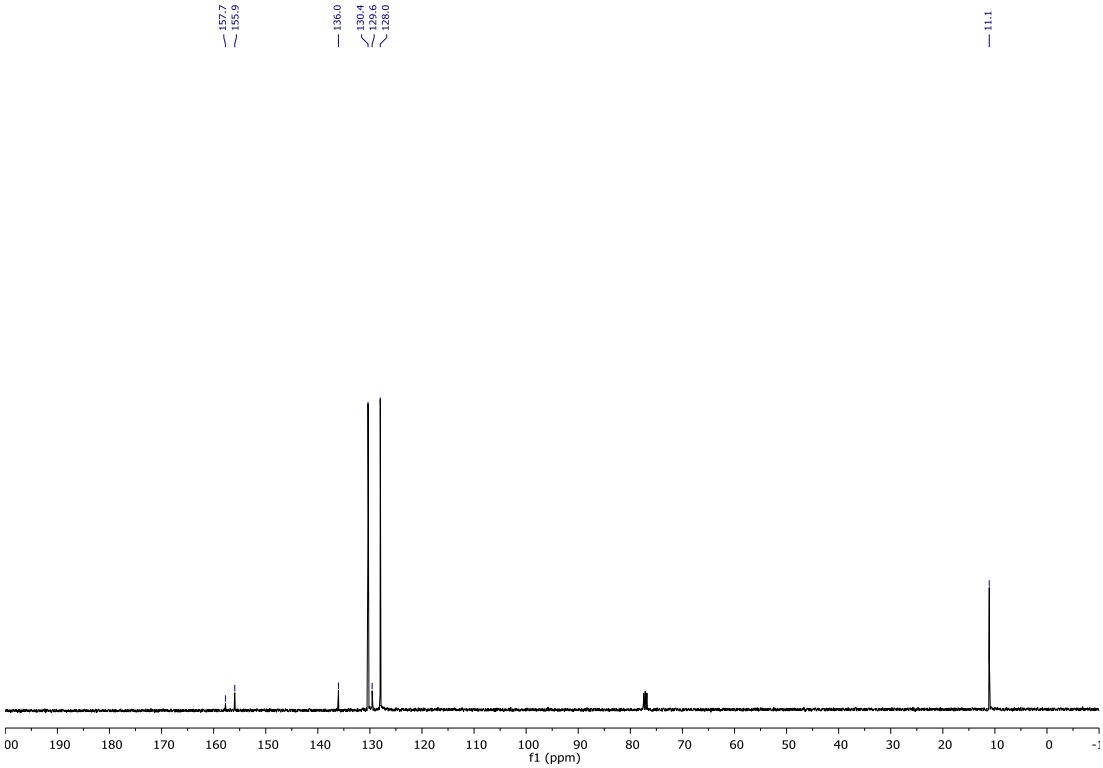


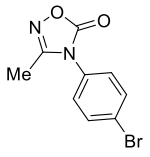


(Scheme 5, **3k**); ^{1}H NMR (400 MHz, $CDCl_3$)

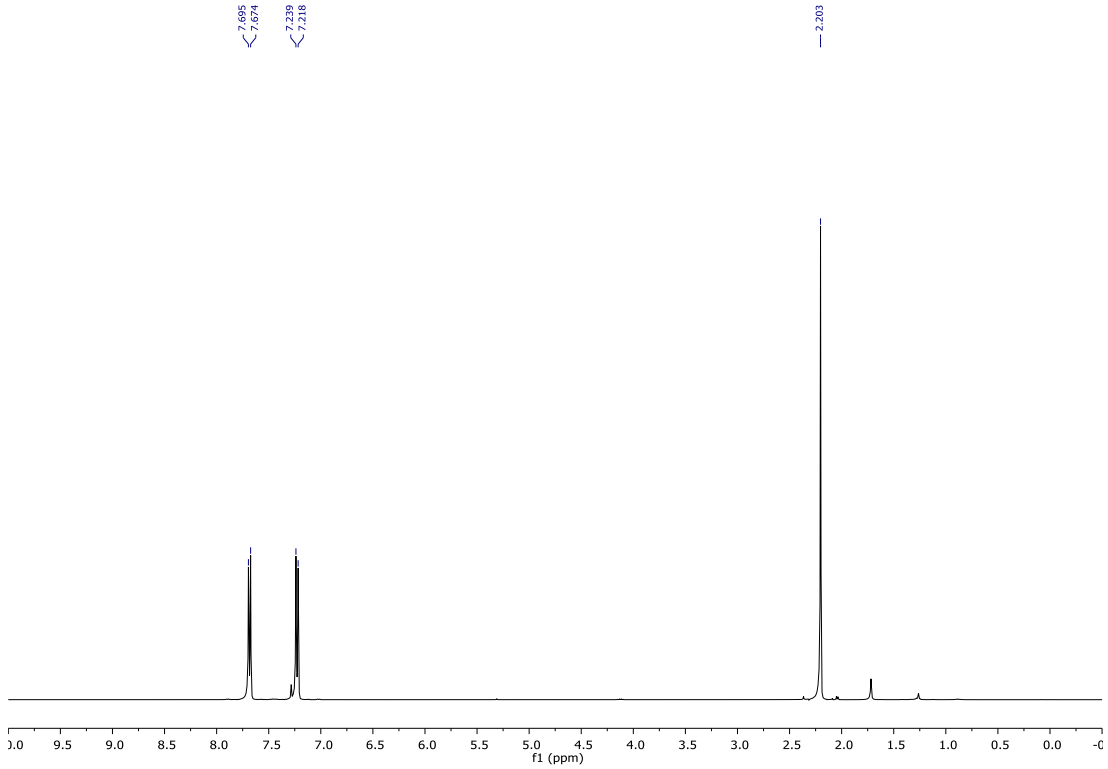


^{13}C NMR (100 MHz, $CDCl_3$)

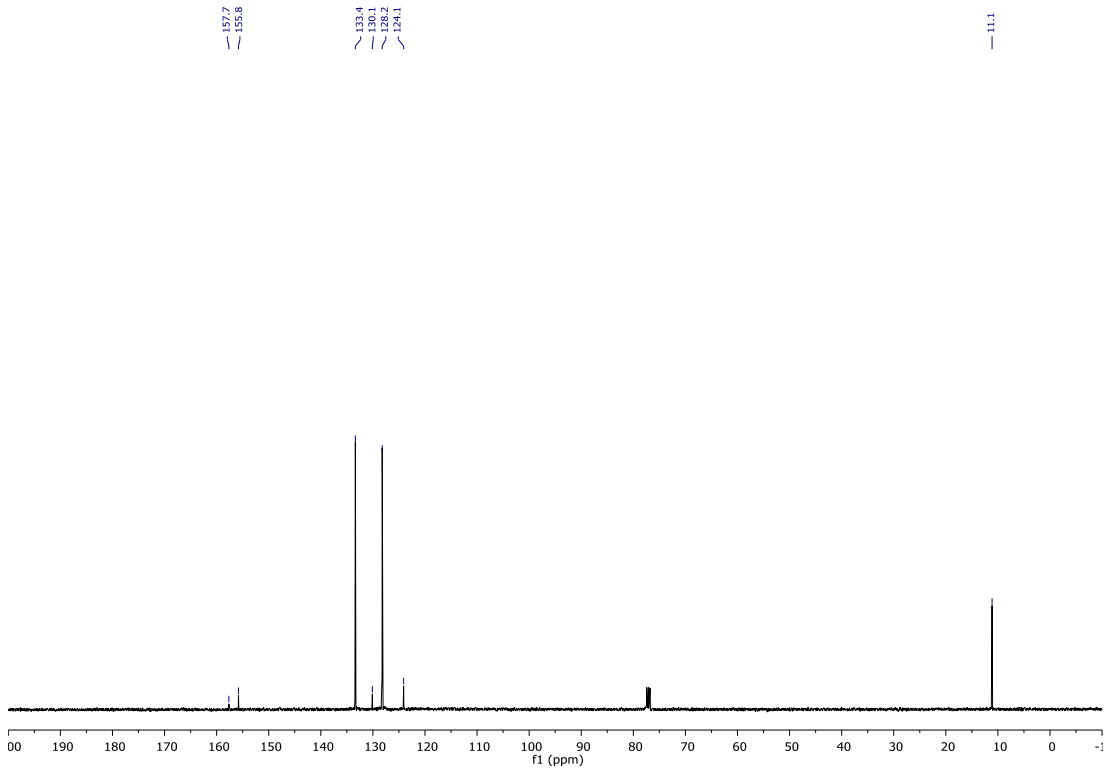


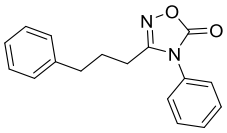


(Scheme 5, **3l**); ^{1}H NMR (400 MHz, $CDCl_3$)

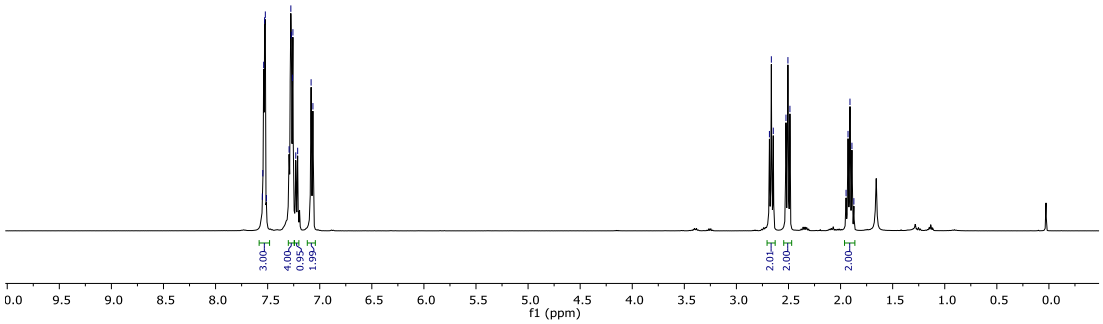


^{13}C NMR (100 MHz, $CDCl_3$)

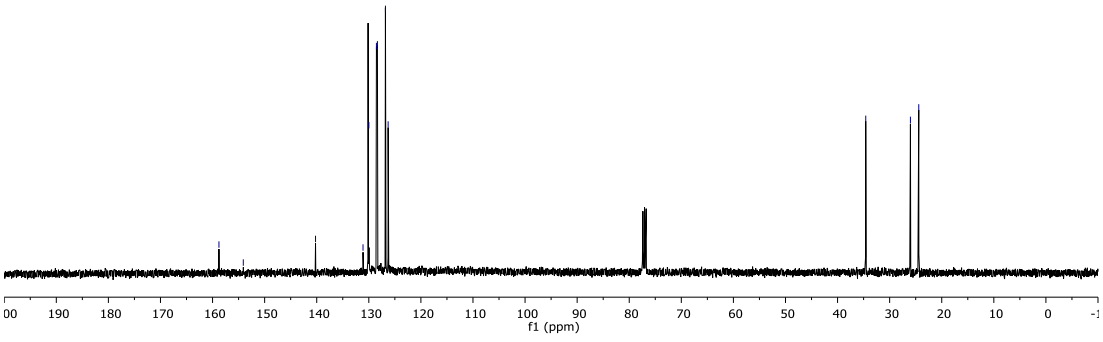


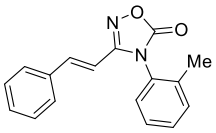


(Scheme 5, **3m**); ^{1}H NMR (400 MHz, $CDCl_3$)

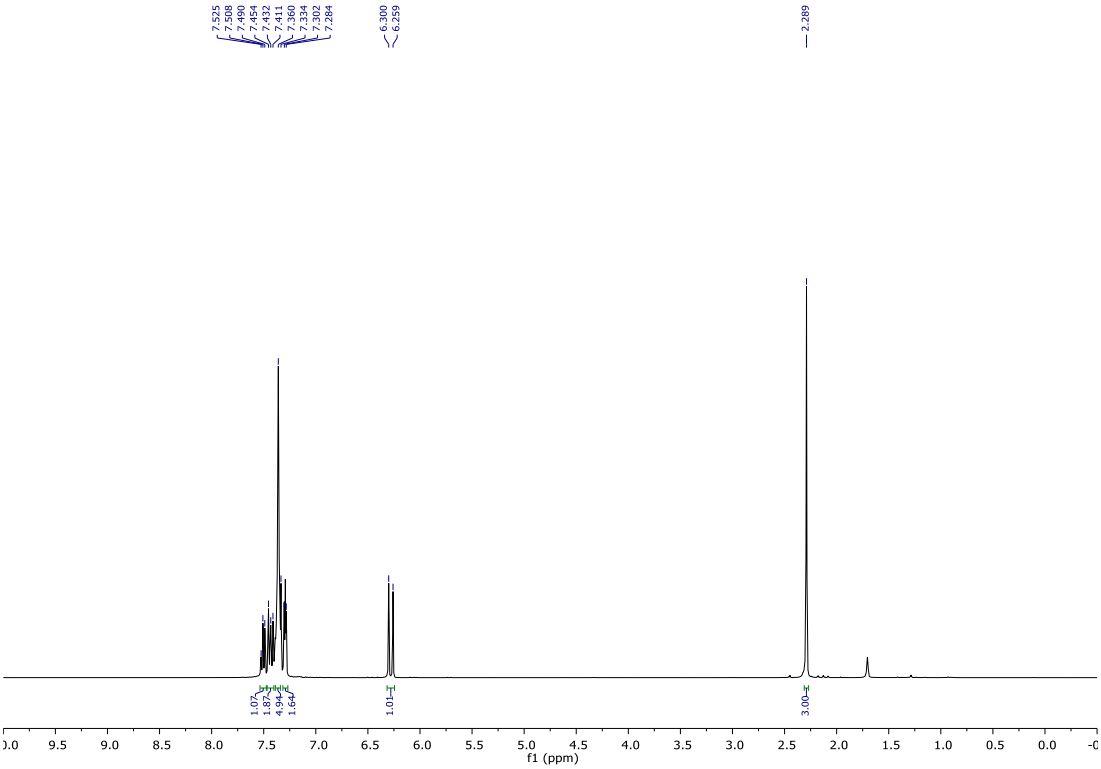


^{13}C NMR (100 MHz, $CDCl_3$)

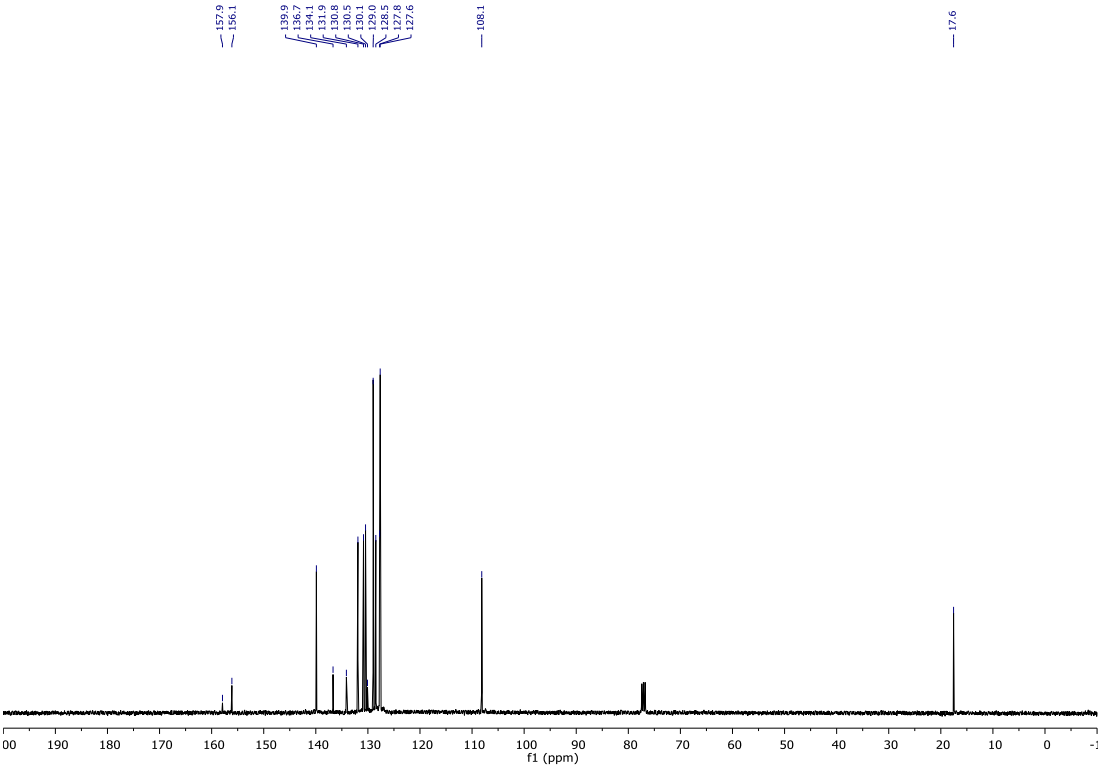


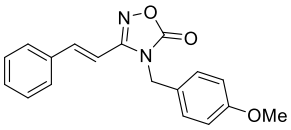


(Scheme 5, **3n**); ^{1}H NMR (400 MHz, $CDCl_3$)

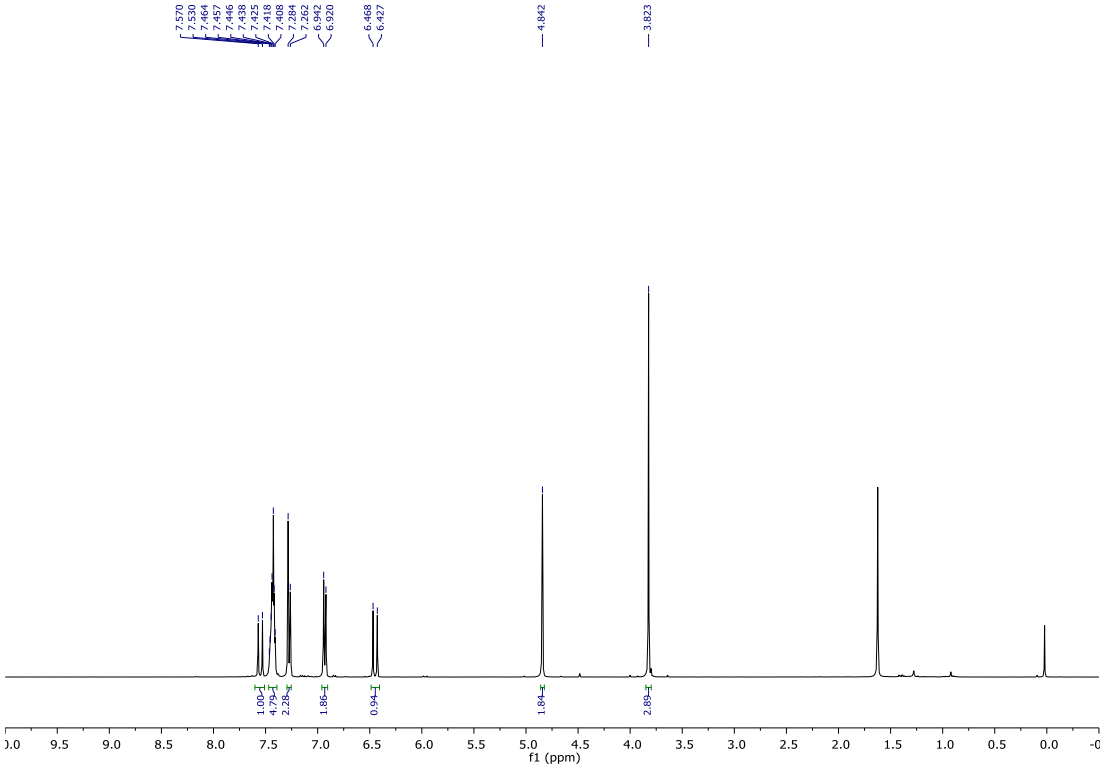


^{13}C NMR (100 MHz, $CDCl_3$)

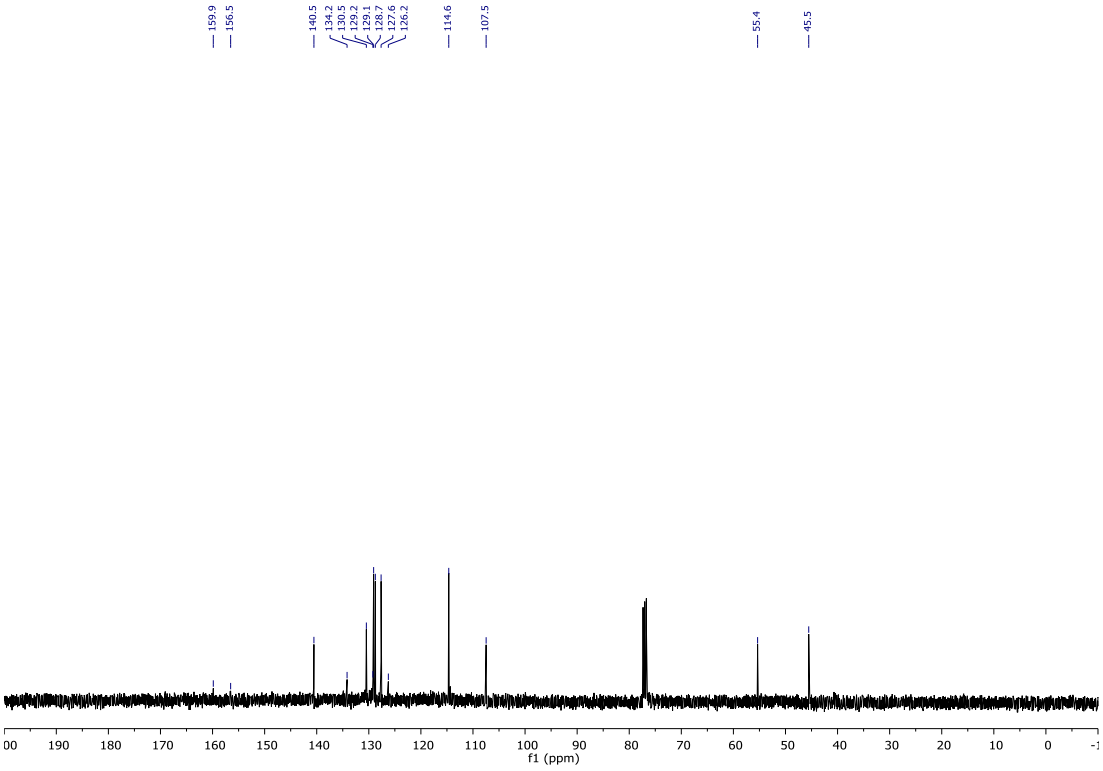


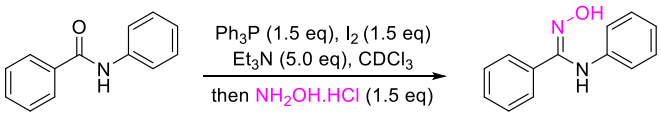


(Scheme 5, **3o**); ^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (100 MHz, $CDCl_3$)





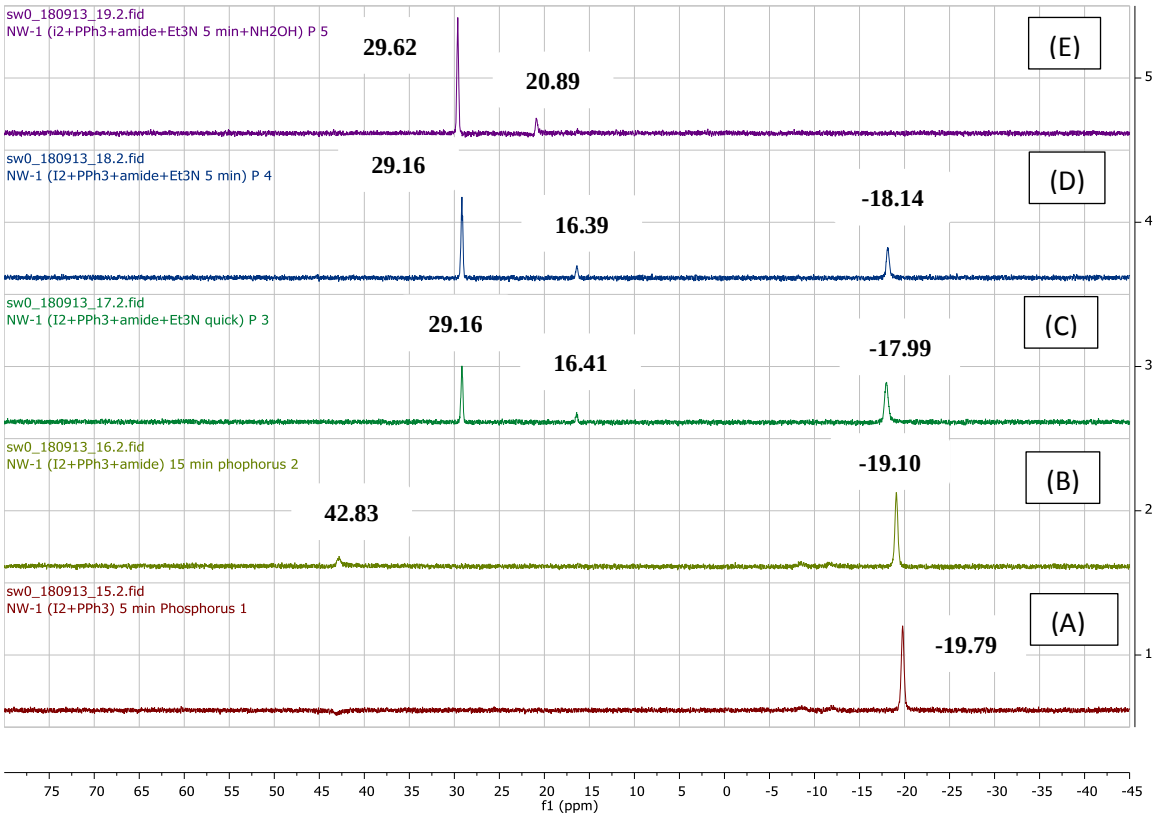
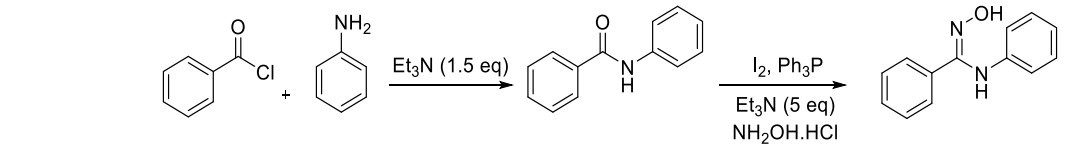


FIGURE S1. $^{31}P\{^{1}H\}$ NMR monitoring the progress of the reaction between *N*-phenylbenzamide and hydroxylamine hydrochloride in the presence of Ph_3P, I_2, and Et_3N in $CDCl_3$: (A) 5 min after mixing a stoichiometric amount of I_2 with Ph_3P at rt; (B) 15 min after addition of the amide; (C) 1 min after addition of Et_3N; (D) solution (C) after mixing for 5 min; (E) 30 min after addition of $NH_2OH.HCl$.



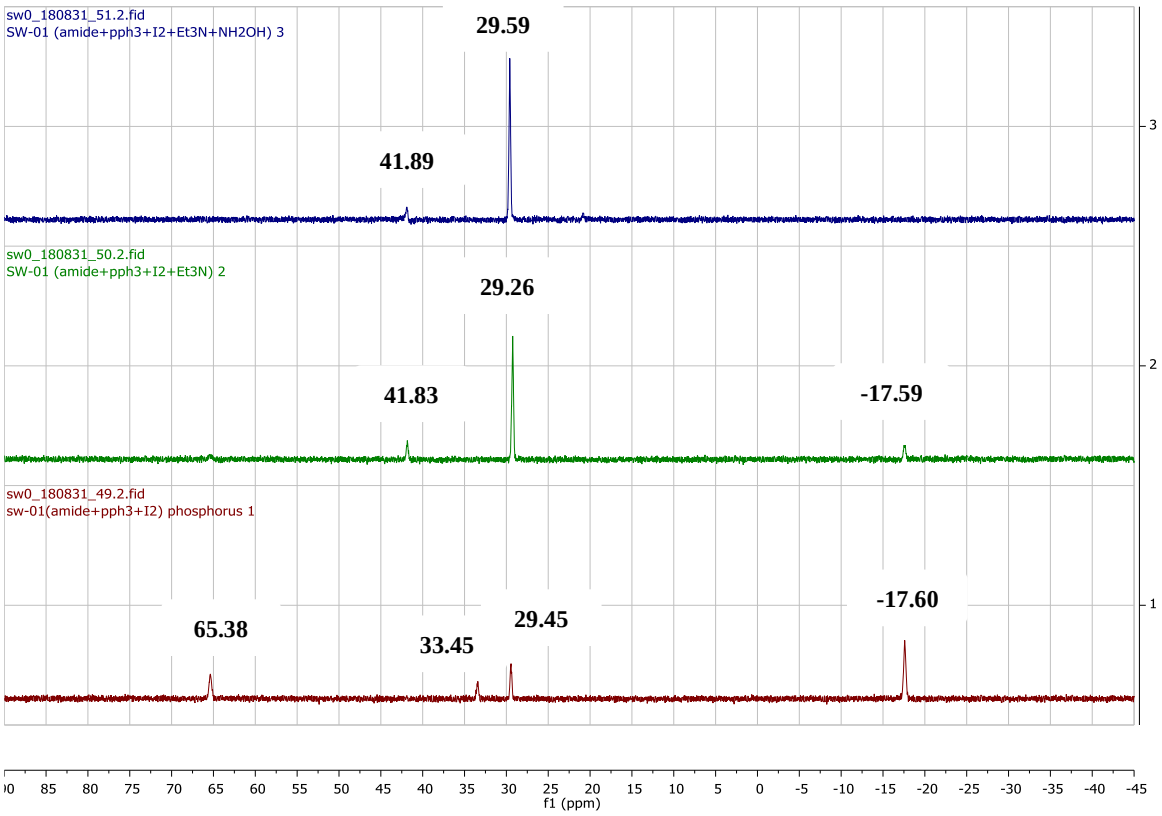


FIGURE S2. $^{31}P\{^{1}H\}$ NMR monitoring the progress of the reaction between benzoyl chloride, aniline, and hydroxylamine hydrochloride in the presence of Ph_3P, I_2, and Et_3N in $CDCl_3$: (A) 5 min after mixing preformed *N*-phenylbenzamide with a stoichiometric amount of I_2 with Ph_3P at rt; (B) 5 min after addition of Et_3N; (C) 30 min after addition of $NH_2OH.HCl$.