SUPPORTING INFORMATION

Application of *N*-acylbenzotriazoles in the synthesis of 5-substituted-2-ethoxy-1,3,4-oxadiazoles as building blocks toward 3,5-disubstituted 1,3,4-oxadiazole-2(3*H*)-ones

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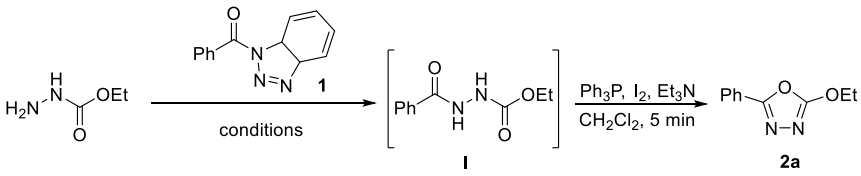
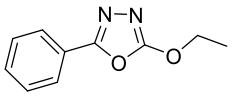
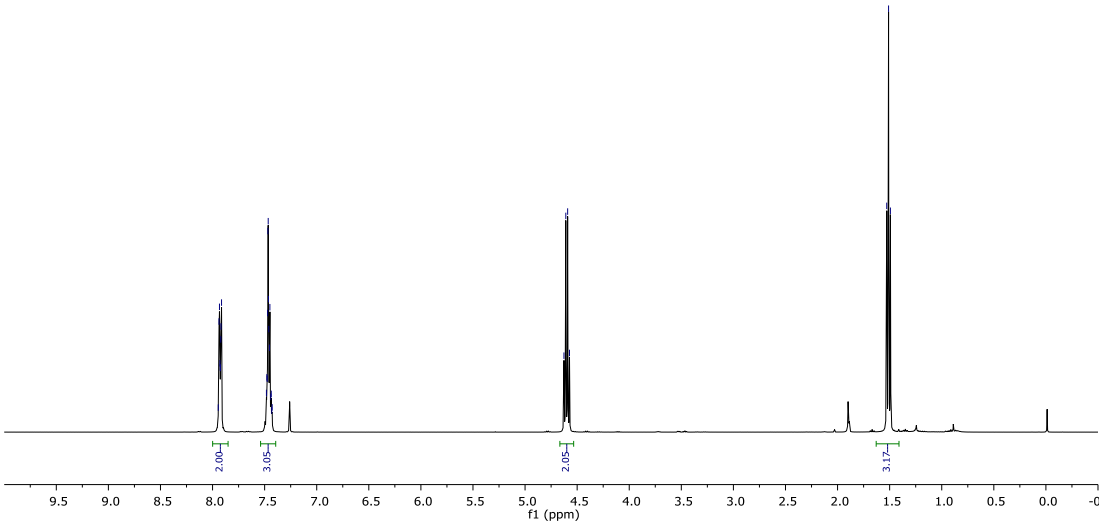
Table S1 Optimization of the reaction conditions



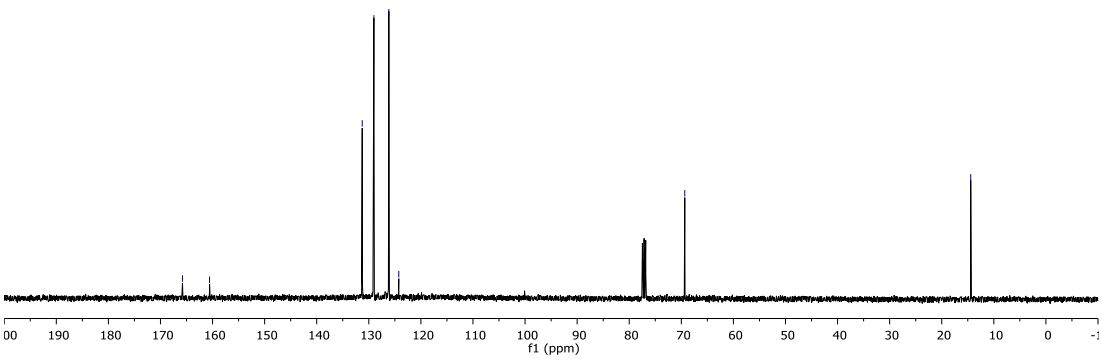
Entry	Conditions	Yield of **I** (%)	Yield of **2a** (%)
1	No base, CH_2Cl_2, sonication, 25 °C, 30 min	40	-
2	Et_3N, CH_2Cl_2, sonication, 25 °C, 30 min	quant.	NR
3	K_2CO_3, CH_2Cl_2, sonication, 25 °C, 30 min	quant.	85
4	K_2CO_3, DMAP, CH_2Cl_2, sonication, 25 °C, 10 min	quant.	86

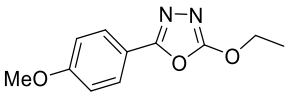


(Scheme 2, **2a**); ^{1}H NMR (400 MHz, $CDCl_3$)

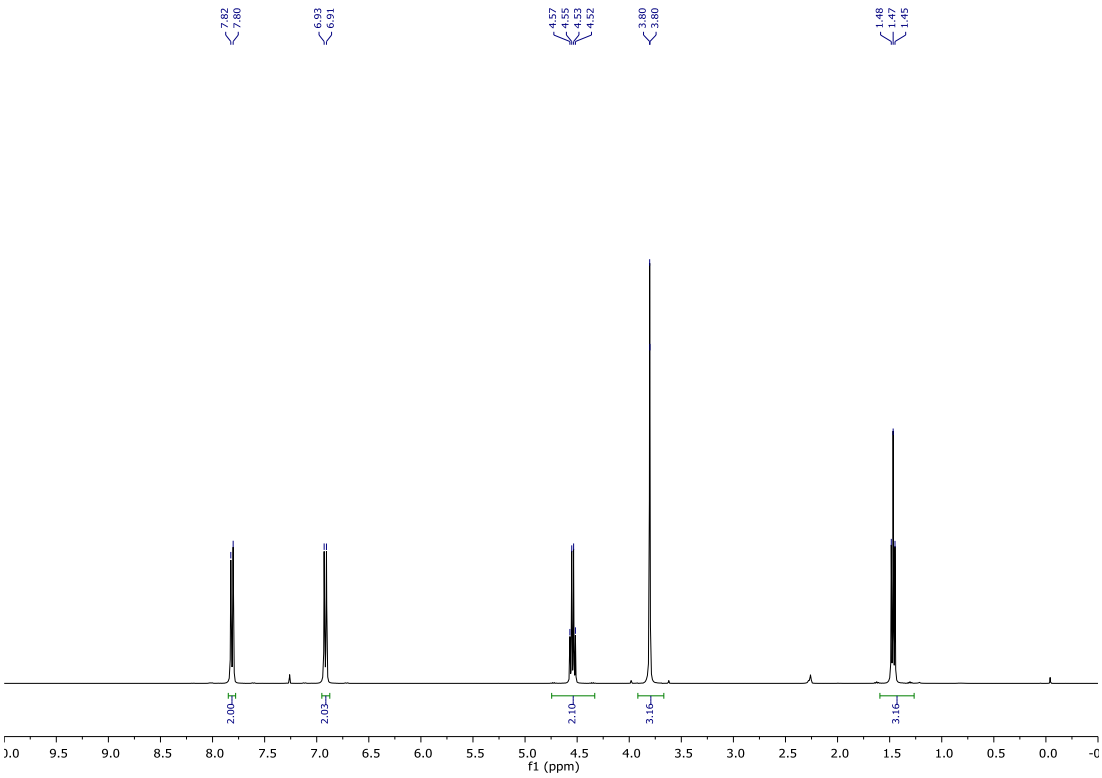


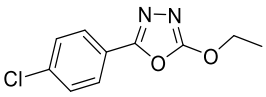
(Scheme 2, **2a**); ^{13}C NMR (100 MHz, $CDCl_3$)



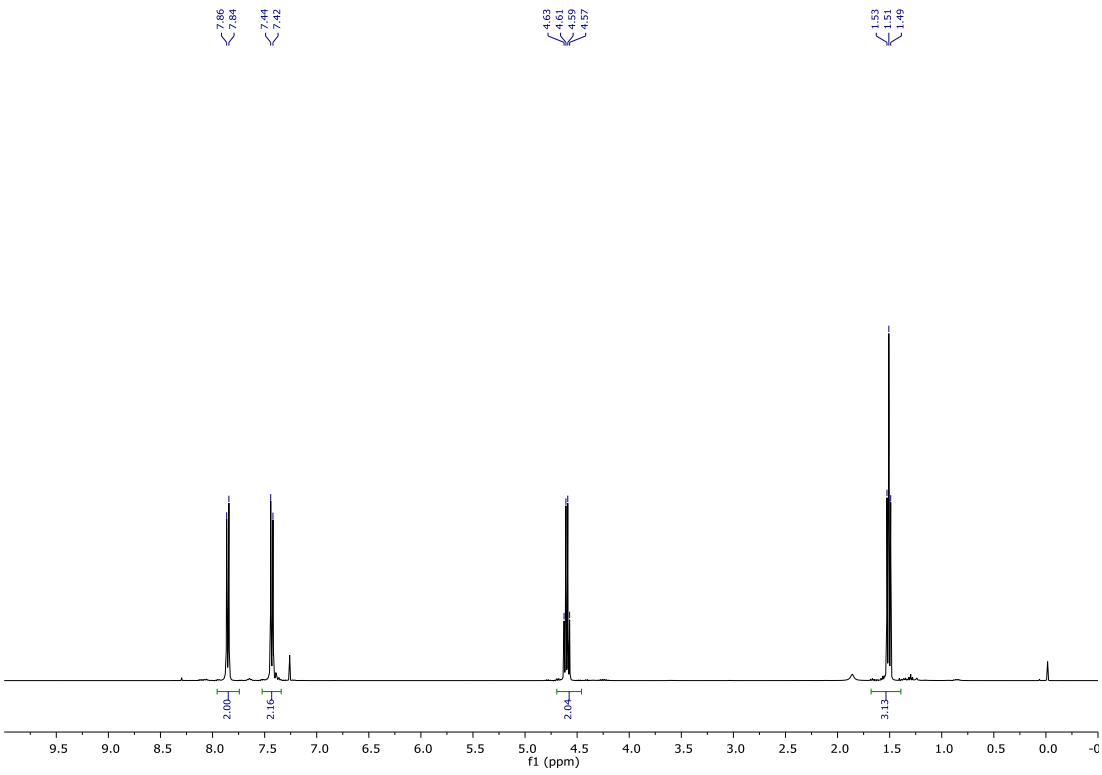


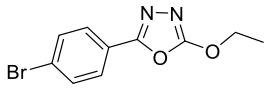
(Scheme 2, **2b**); ^{1}H NMR (400 MHz, $CDCl_3$)



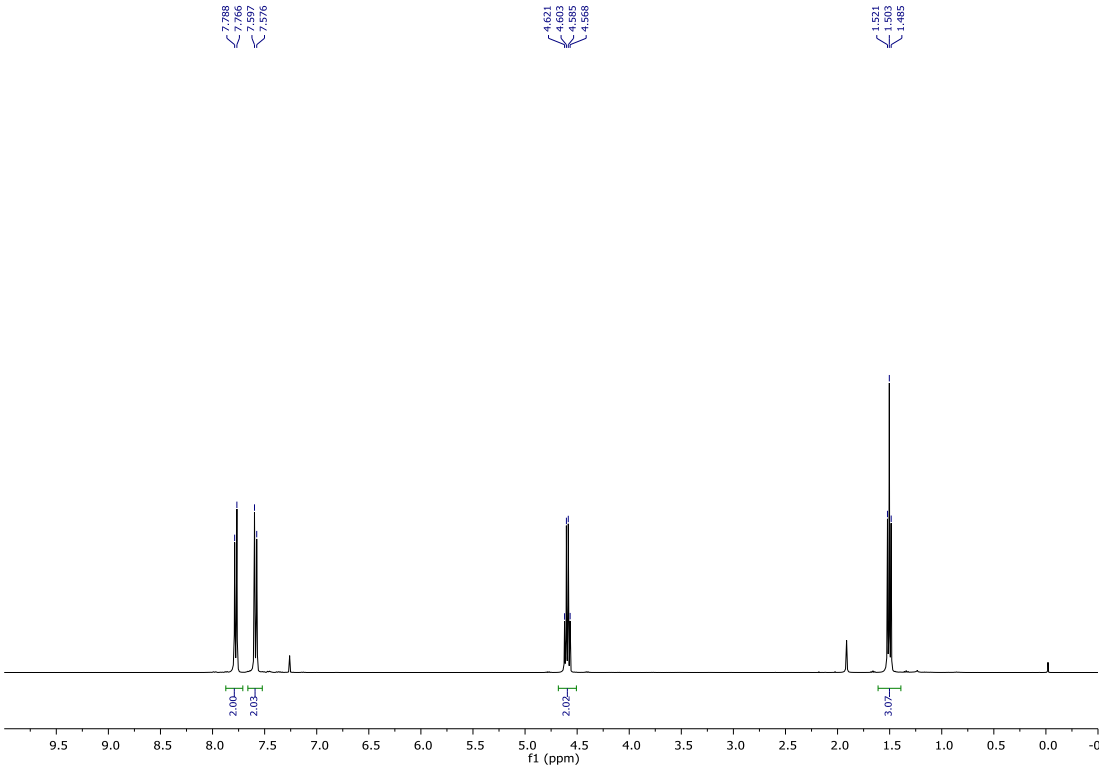


(Scheme 2, **2c**); ^{1}H NMR (400 MHz, $CDCl_3$)

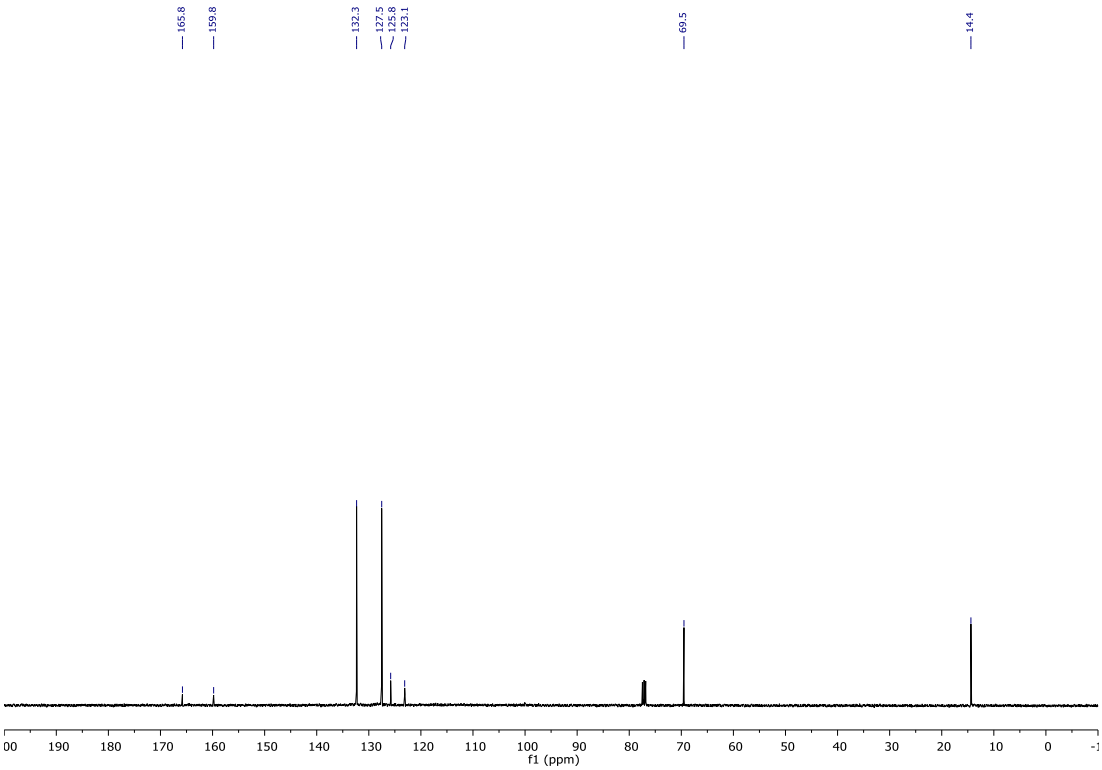


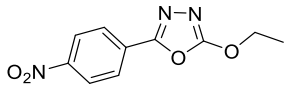


(Scheme 2, **2d**); ^{1}H NMR (400 MHz, $CDCl_3$)

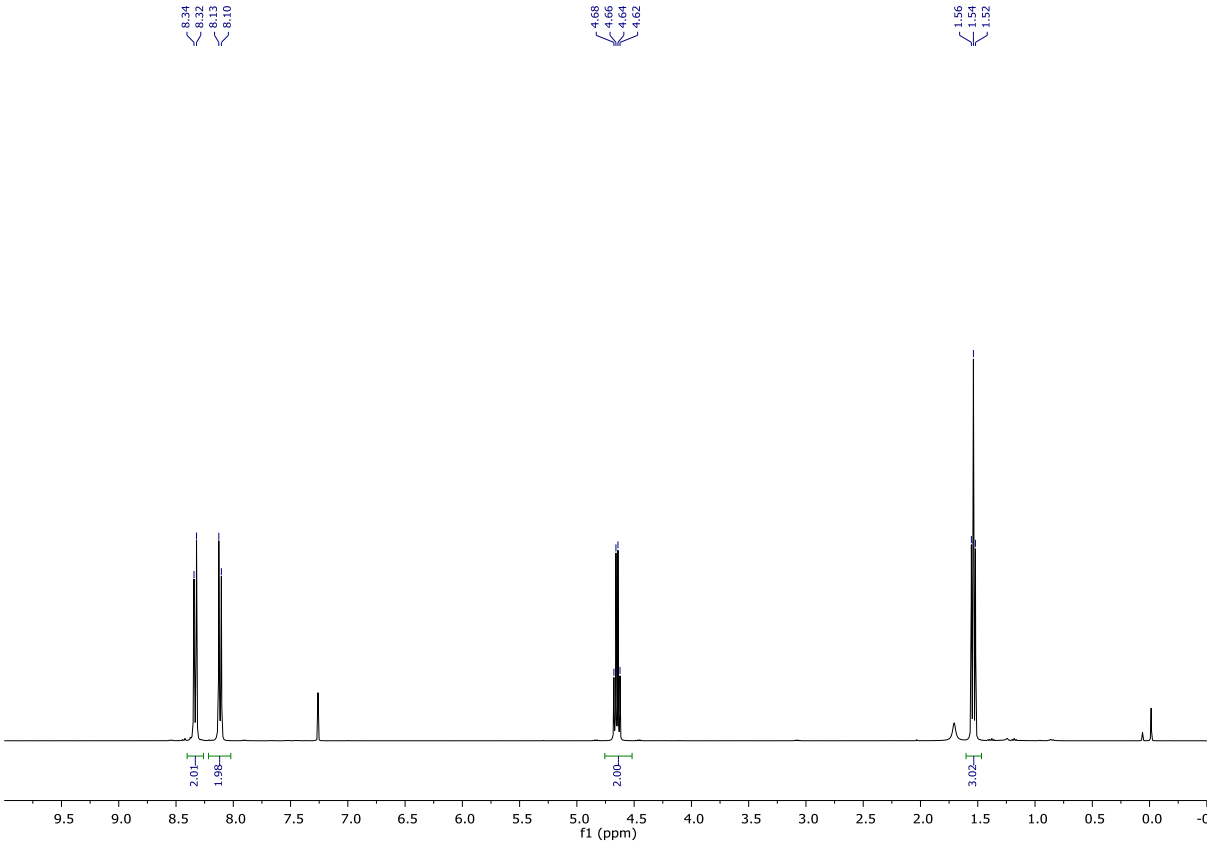


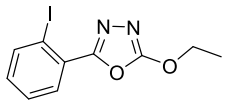
(Scheme 2, **2d**); ^{13}C NMR (100 MHz, $CDCl_3$)



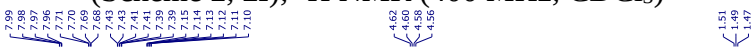


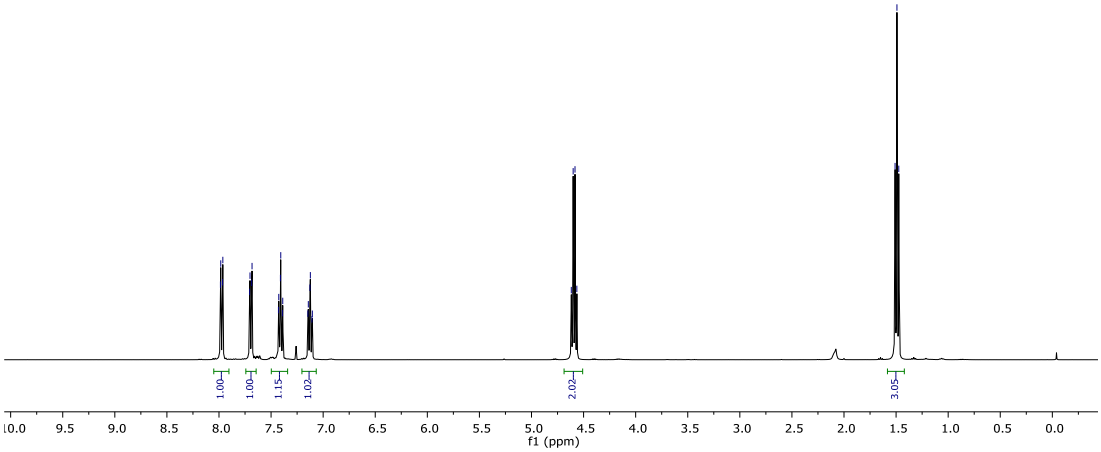
(Scheme 2, **2e**); ^{1}H NMR (400 MHz, $CDCl_3$)



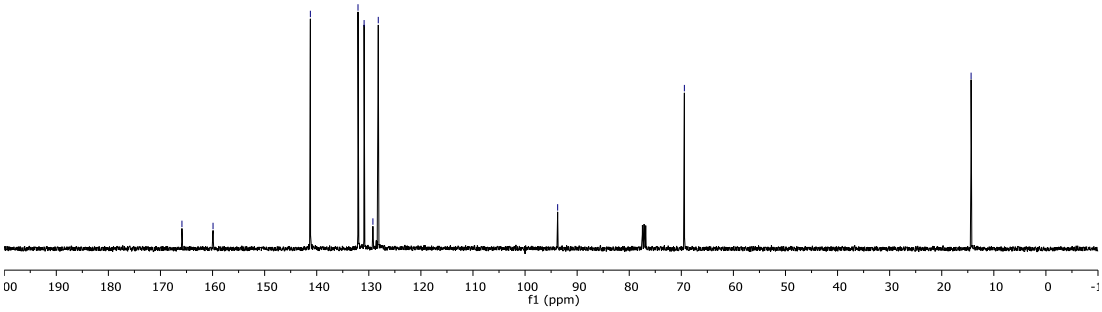


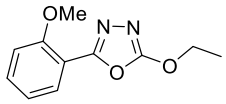
(Scheme 2, **2f**); ^{1}H NMR (400 MHz, $CDCl_3$)



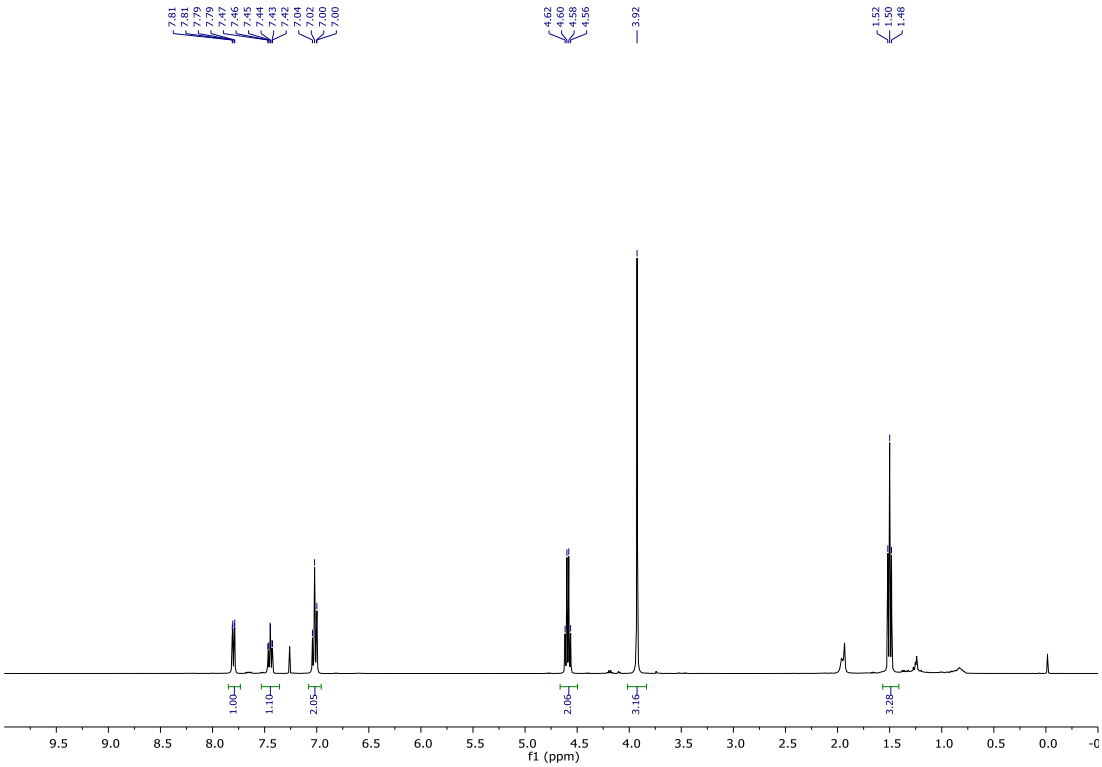


(Scheme 2, **2f**); ^{13}C NMR (100 MHz, $CDCl_3$)

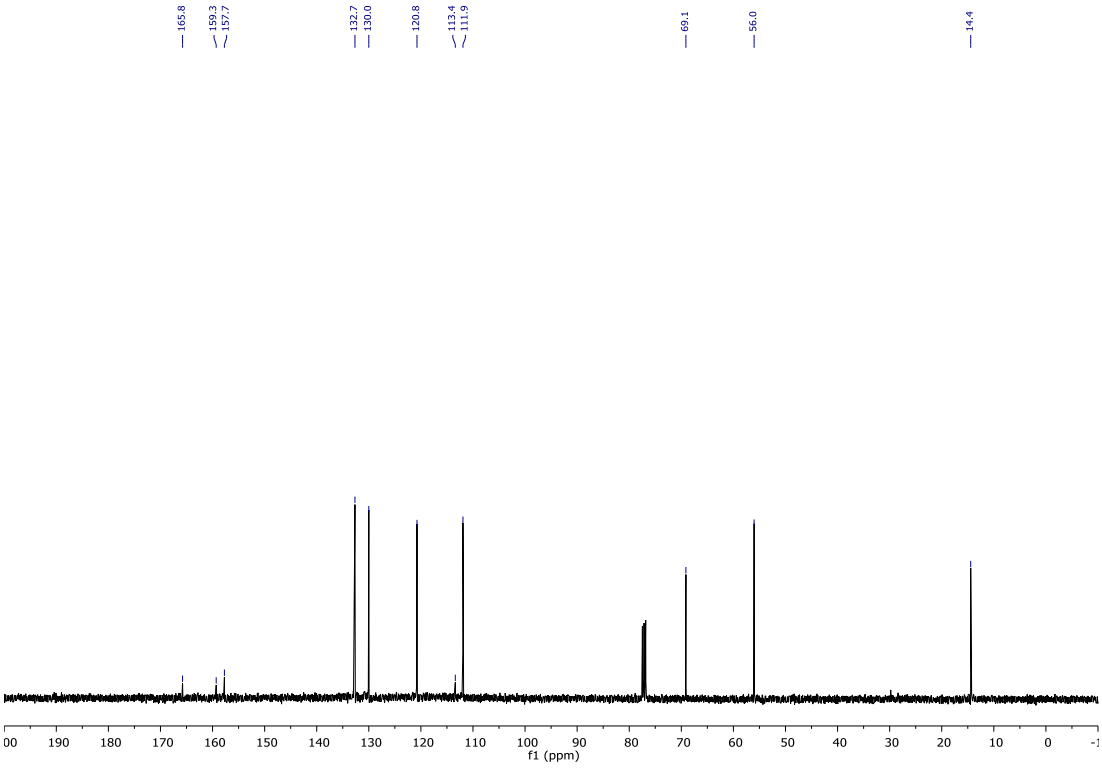


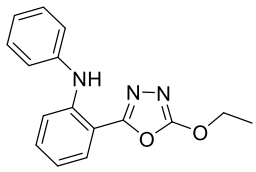


(Scheme 2, **2g**); ^{1}H NMR (400 MHz, $CDCl_3$)

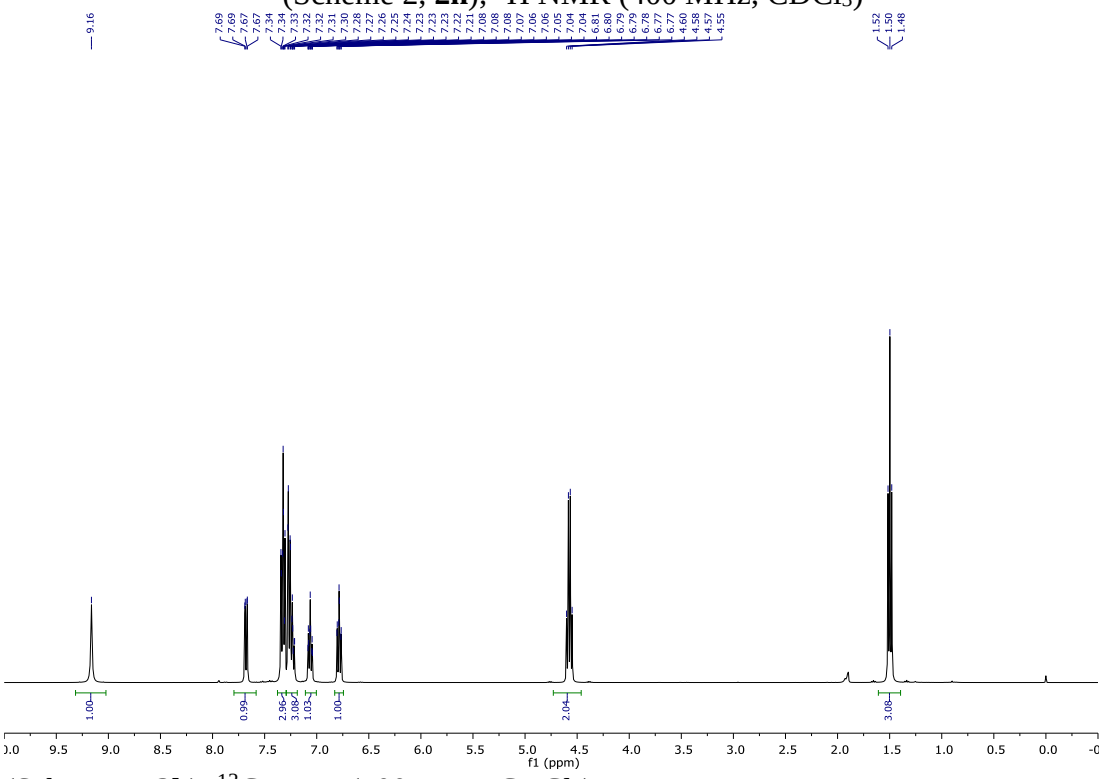


(Scheme 2, **2g**); ^{13}C NMR (100 MHz, $CDCl_3$)

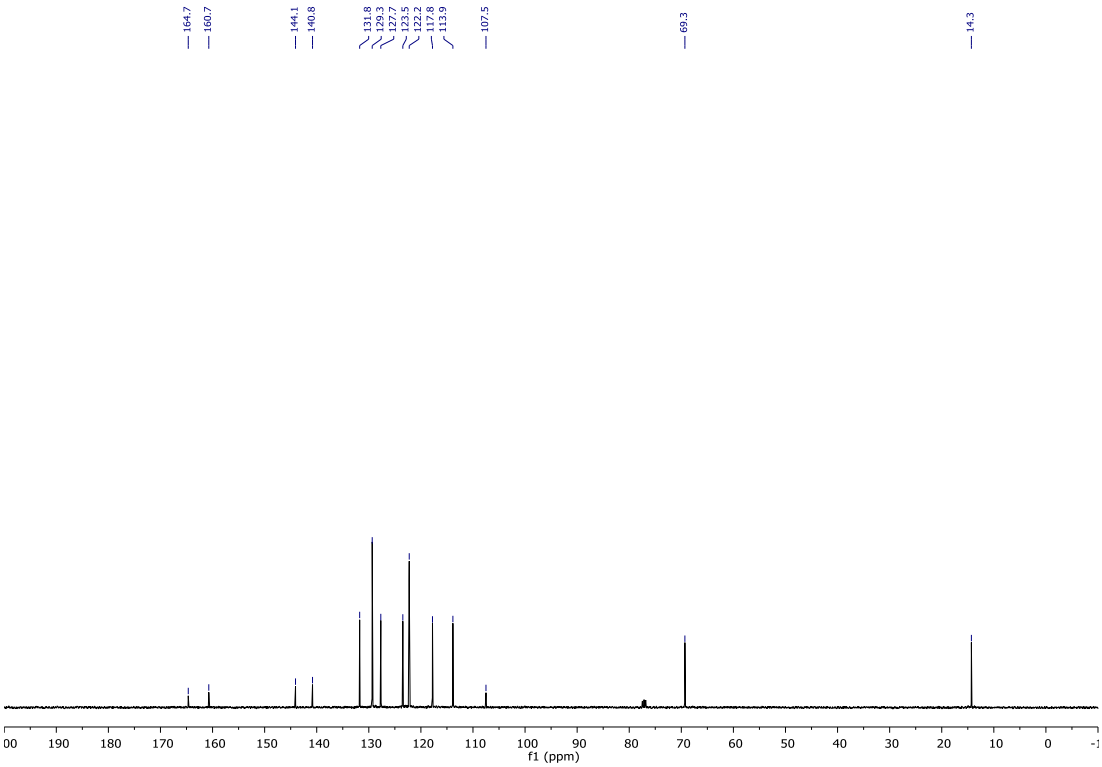


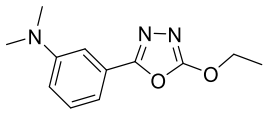


(Scheme 2, **2h**); ^{1}H NMR (400 MHz, $CDCl_3$)

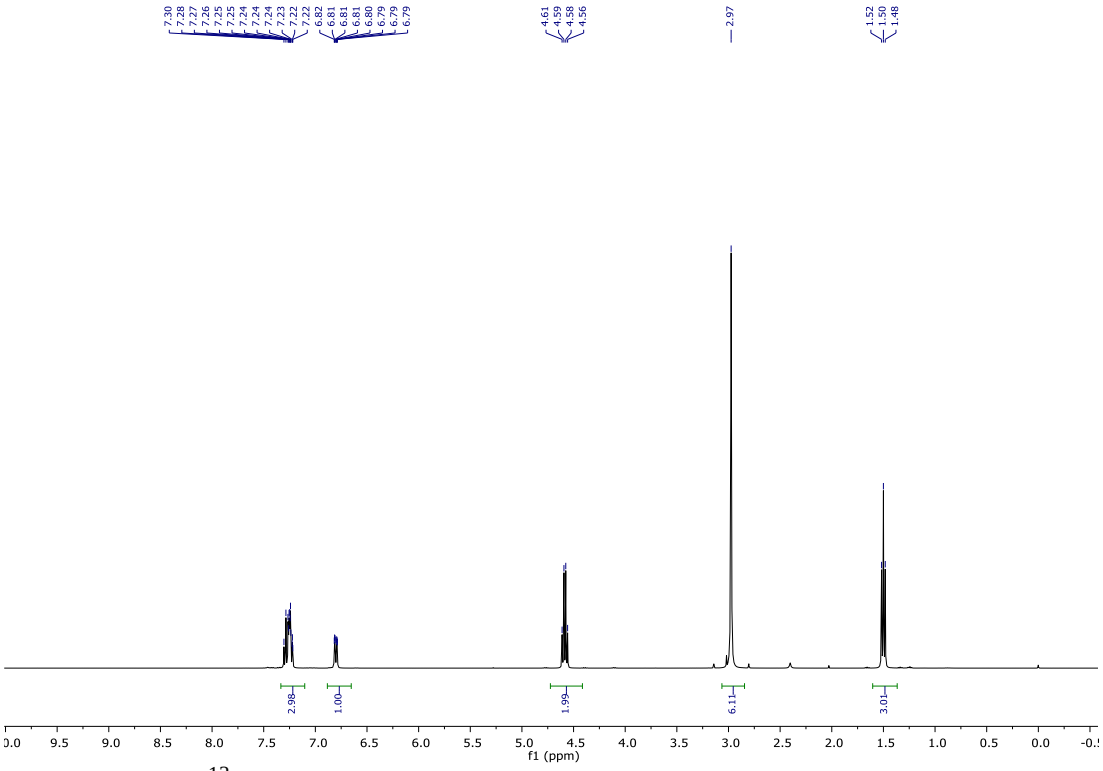


(Scheme 2, **2h**); ^{13}C NMR (100 MHz, $CDCl_3$)

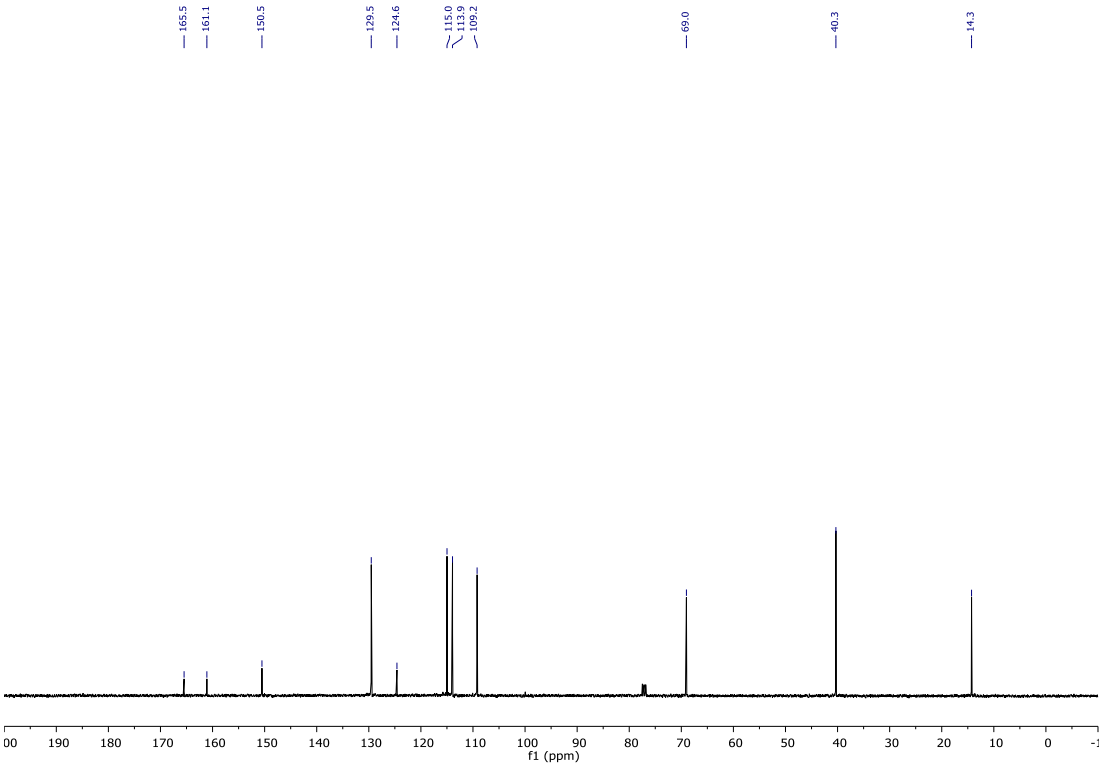


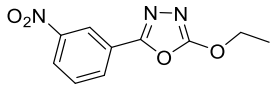


(Scheme 2, **2i**); ^{1}H NMR (400 MHz, $CDCl_3$)

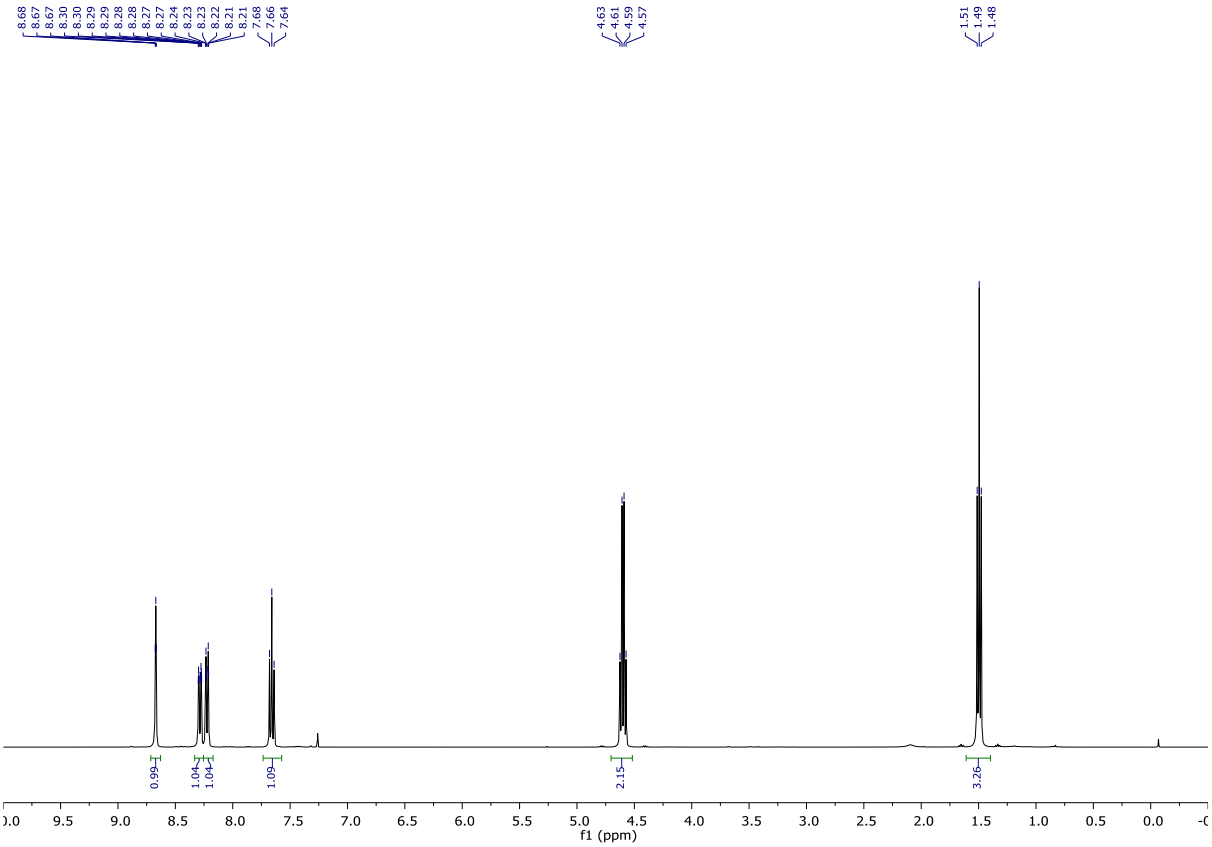


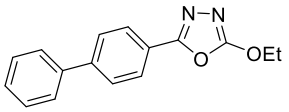
(Scheme 2, **2i**); ^{13}C NMR (100 MHz, $CDCl_3$)



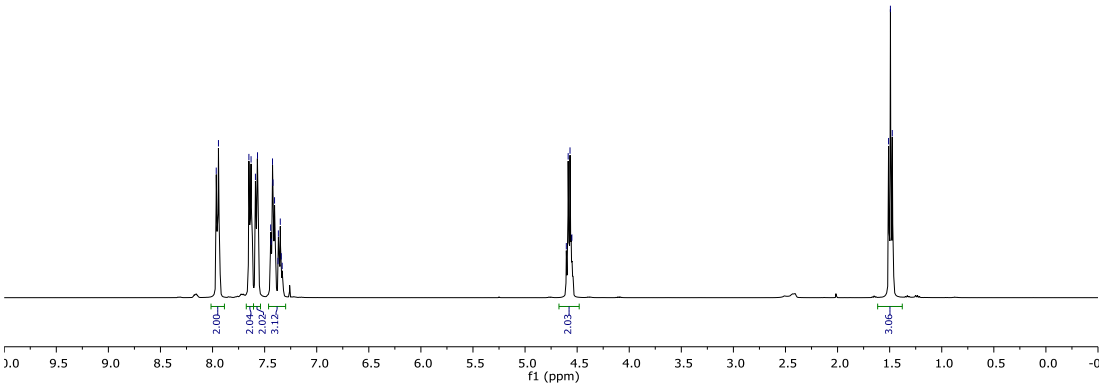


(Scheme 2, **2j**); ^{1}H NMR (400 MHz, $CDCl_3$)

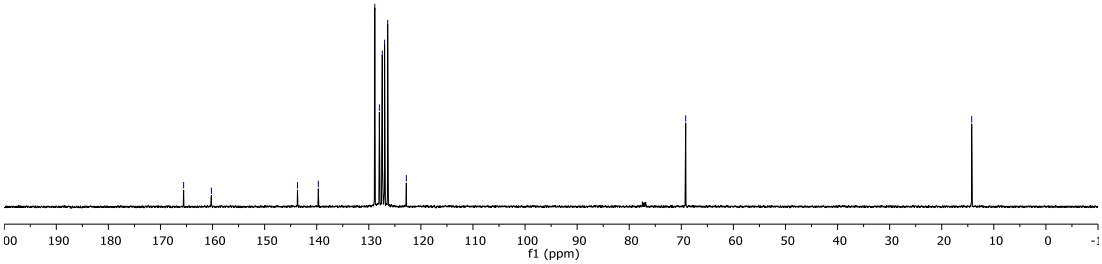


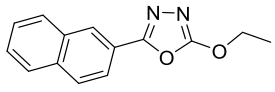


(Scheme 2, **2k**); ^{1}H NMR (400 MHz, $CDCl_3$)

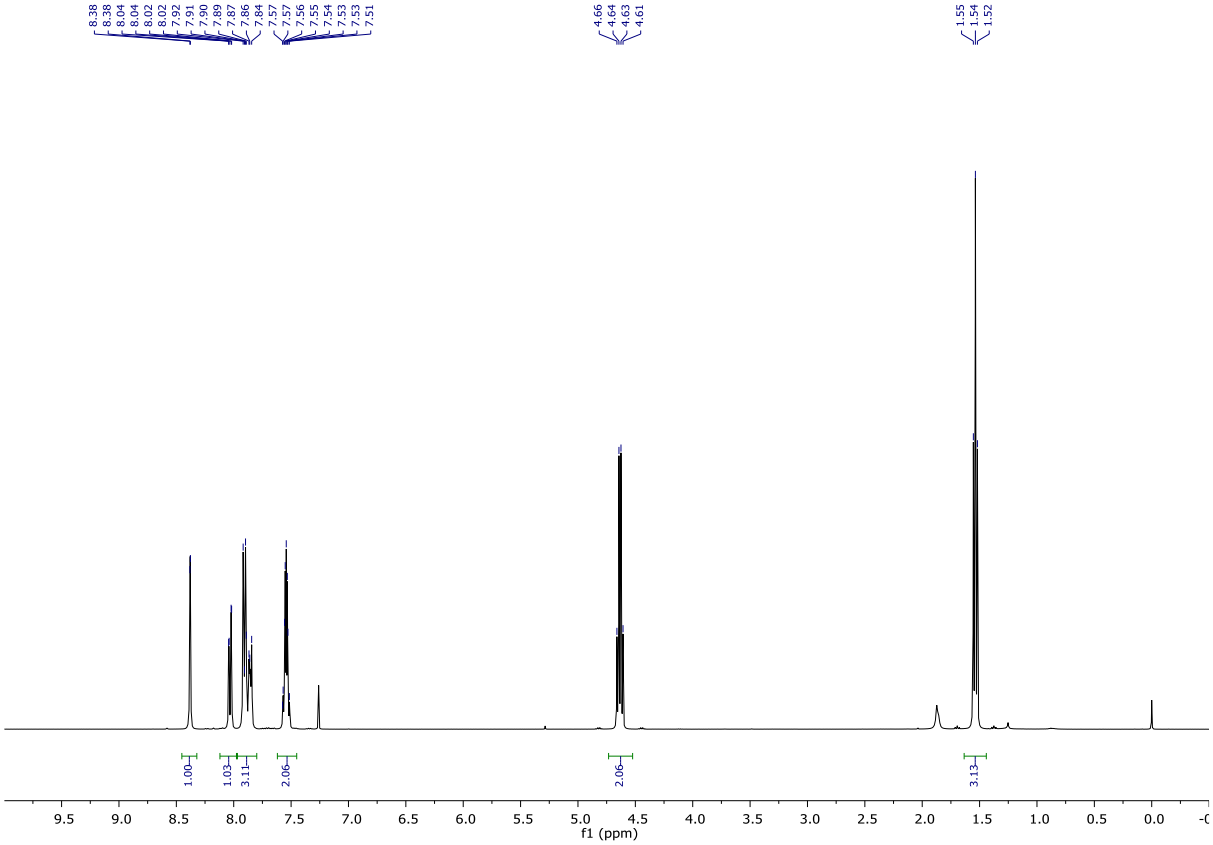


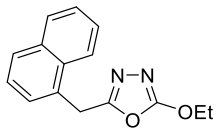
(Scheme 2, **2k**); ^{13}C NMR (100 MHz, $CDCl_3$)



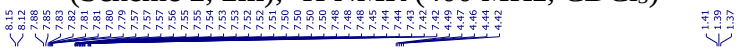


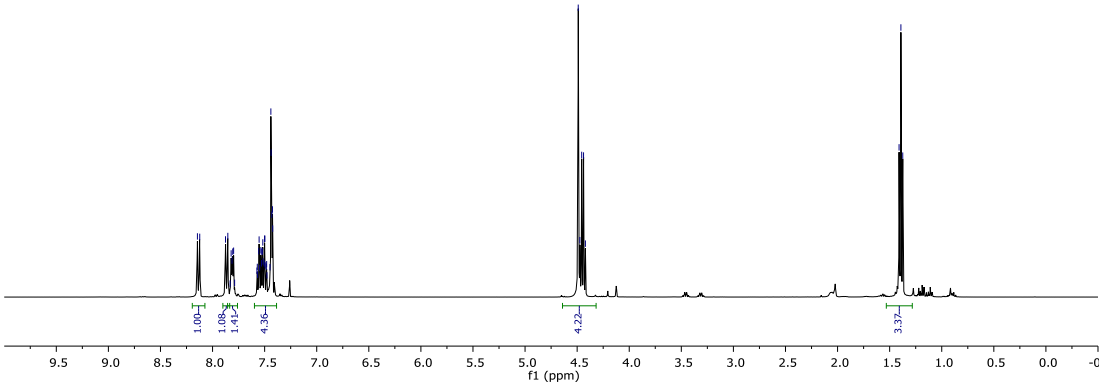
(Scheme 2, **2l**); ^{1}H NMR (400 MHz, $CDCl_3$)



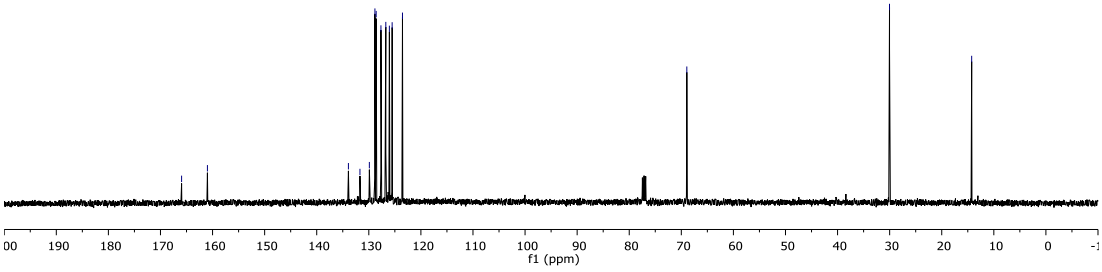


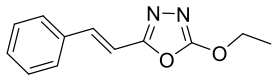
(Scheme 2, **2m**); ^{1}H NMR (400 MHz, $CDCl_3$)



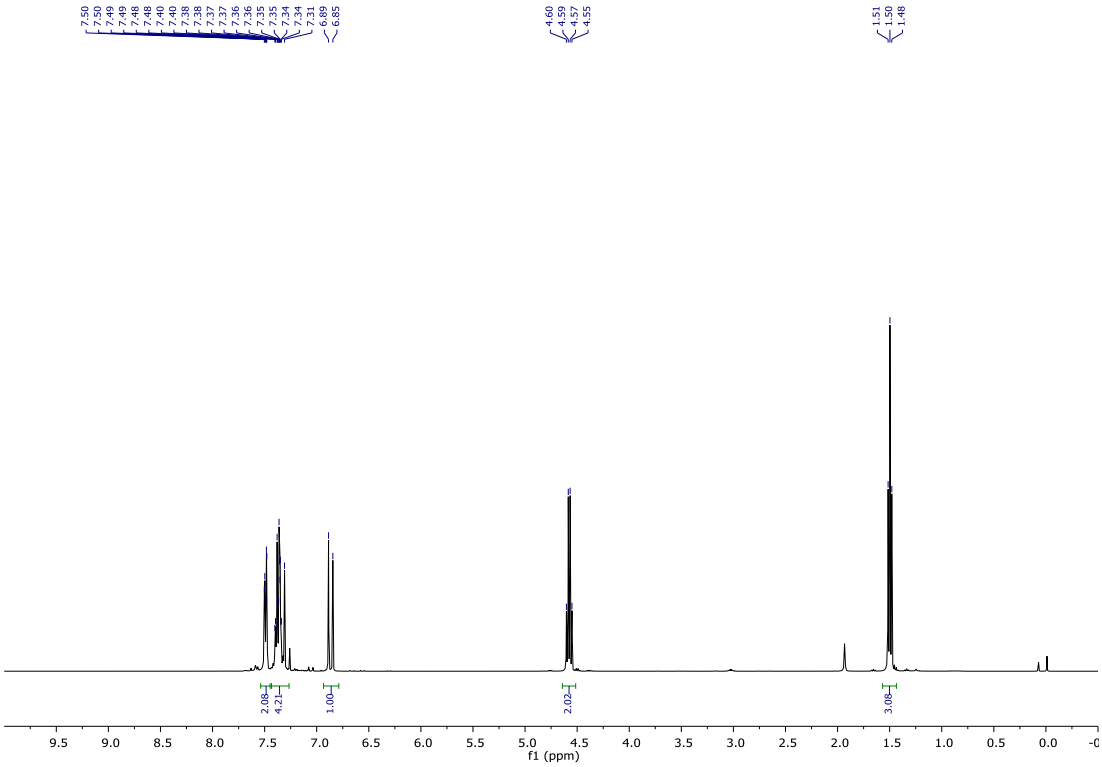


(Scheme 2, **2m**); ^{13}C NMR (100 MHz, $CDCl_3$)

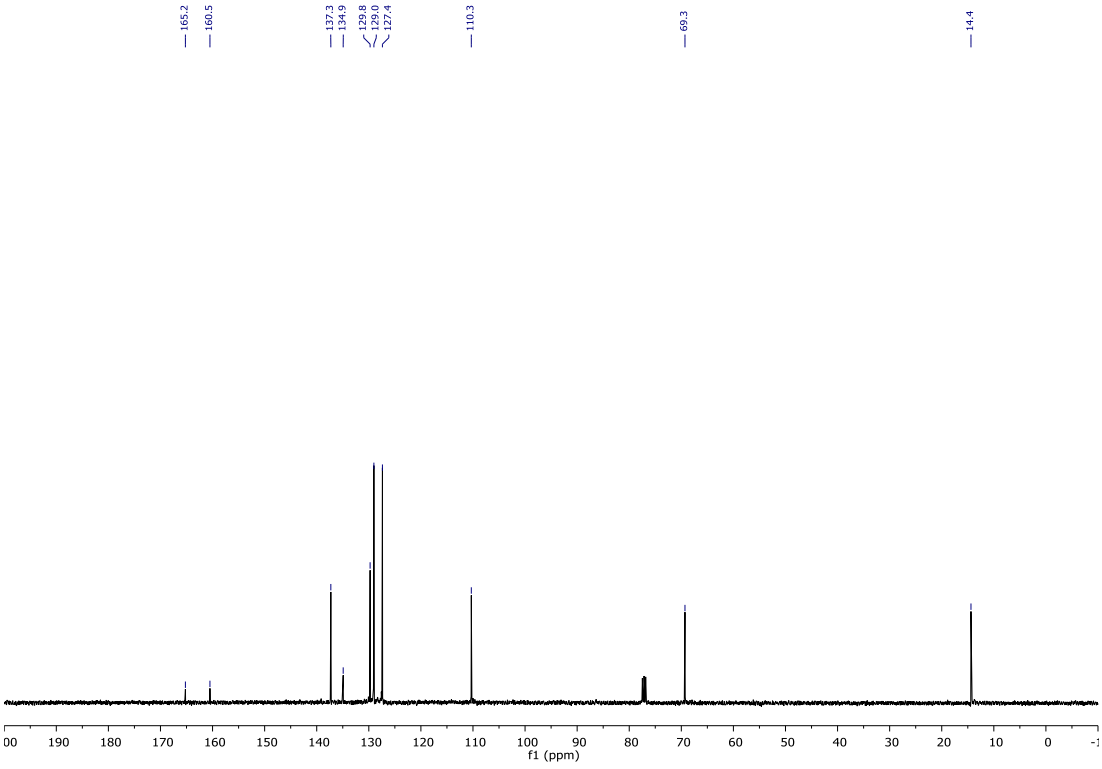


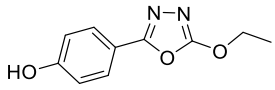


(Scheme 2, **2n**); ^{1}H NMR (400 MHz, $CDCl_3$)

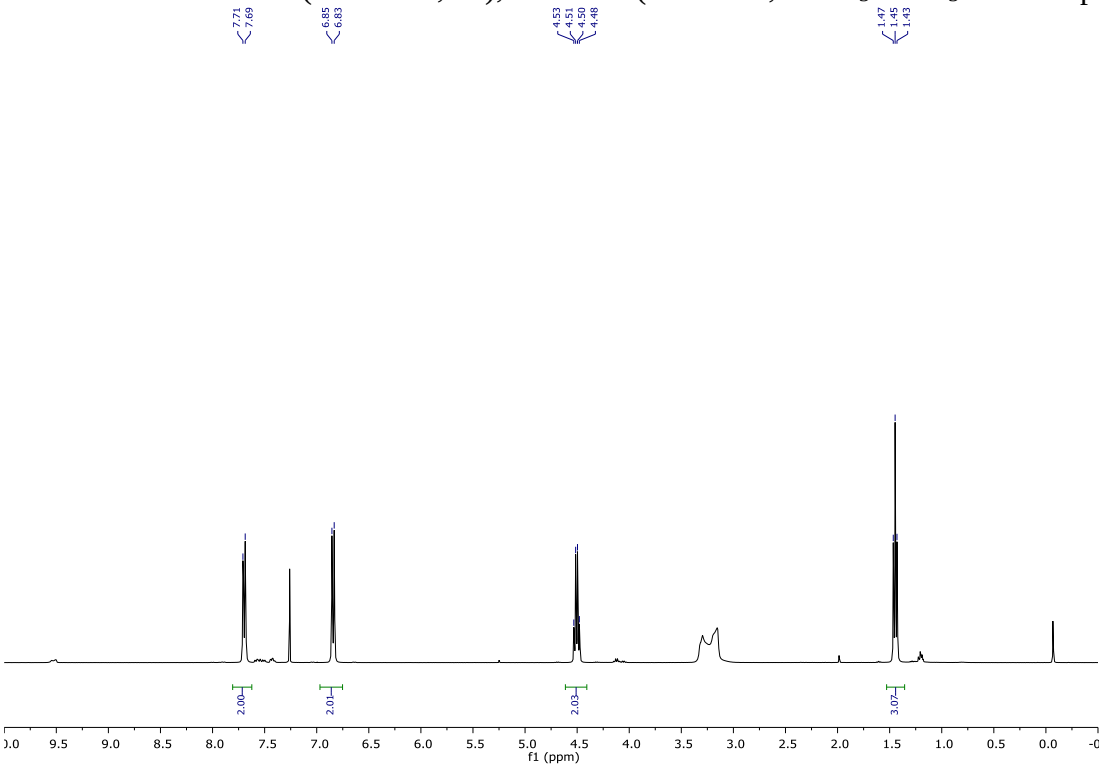


(Scheme 2, **2n**); ^{13}C NMR (100 MHz, $CDCl_3$)

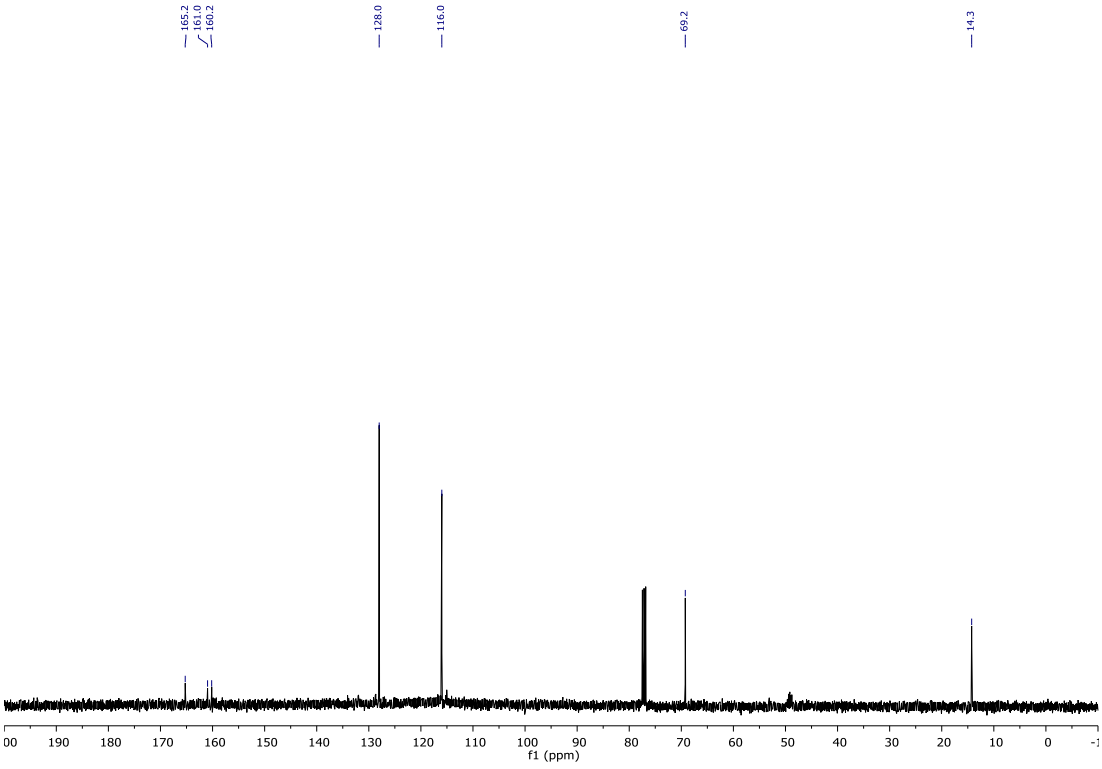


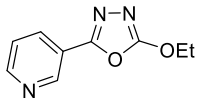


(Scheme 2, **2o**); ^{1}H NMR (400 MHz, $CDCl_3$ + CD_3OD 3 drops)

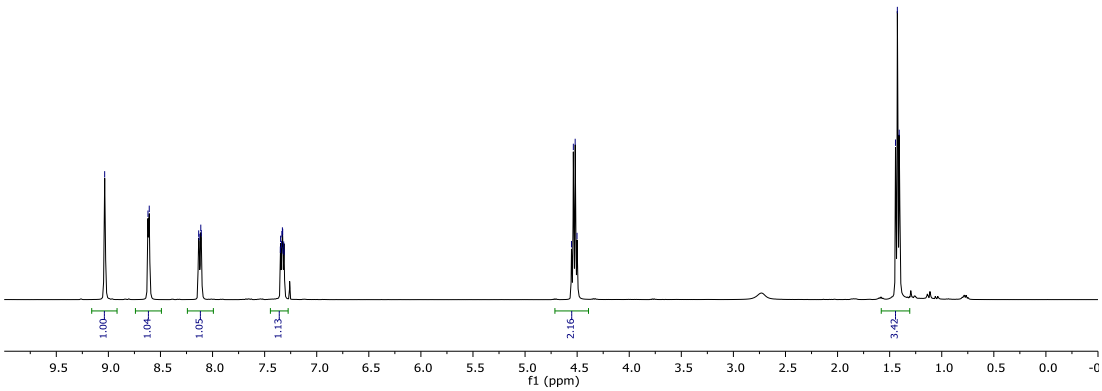


(Scheme 2, **2o**); ^{13}C NMR (100 MHz, $CDCl_3$+ CD_3OD 3 drops)

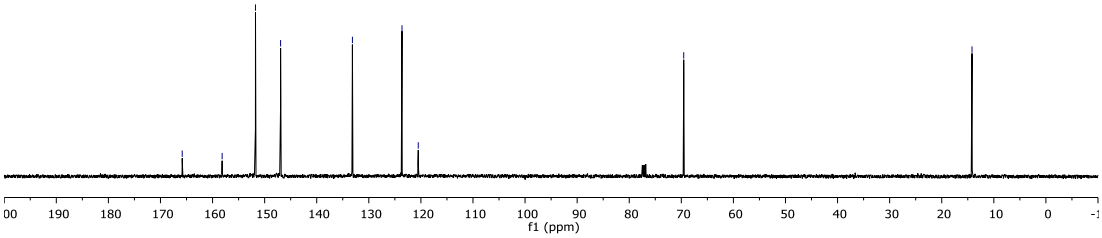


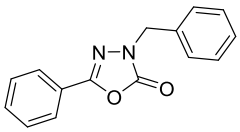


(Scheme 2, **2p**); ^{1}H NMR (400 MHz, $CDCl_3$)

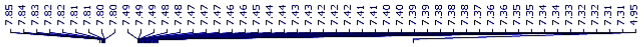


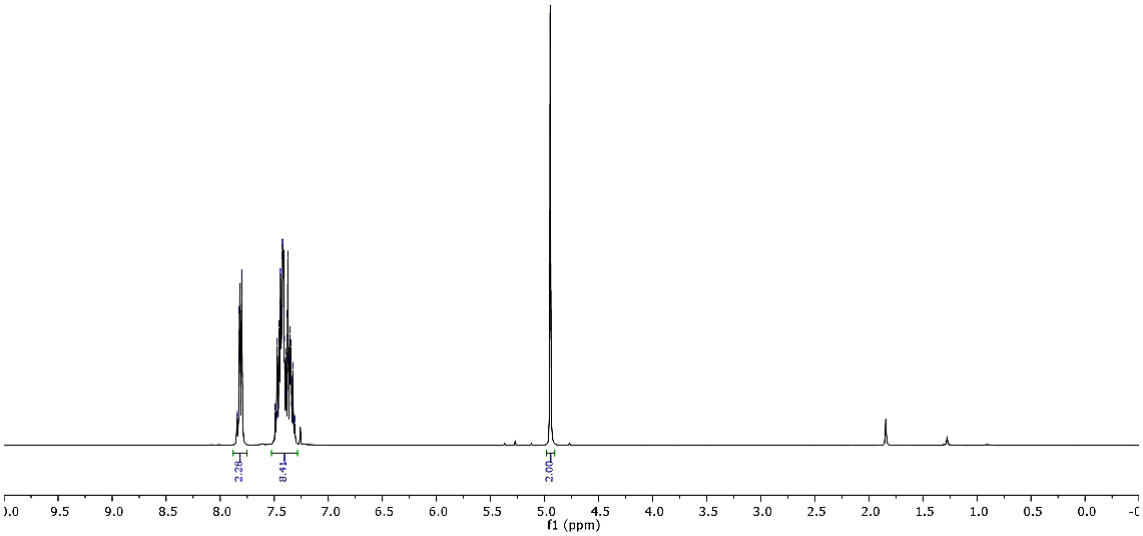
(Scheme 2, **2p**); ^{13}C NMR (100 MHz, $CDCl_3$)

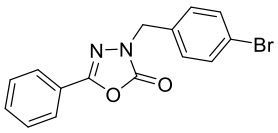




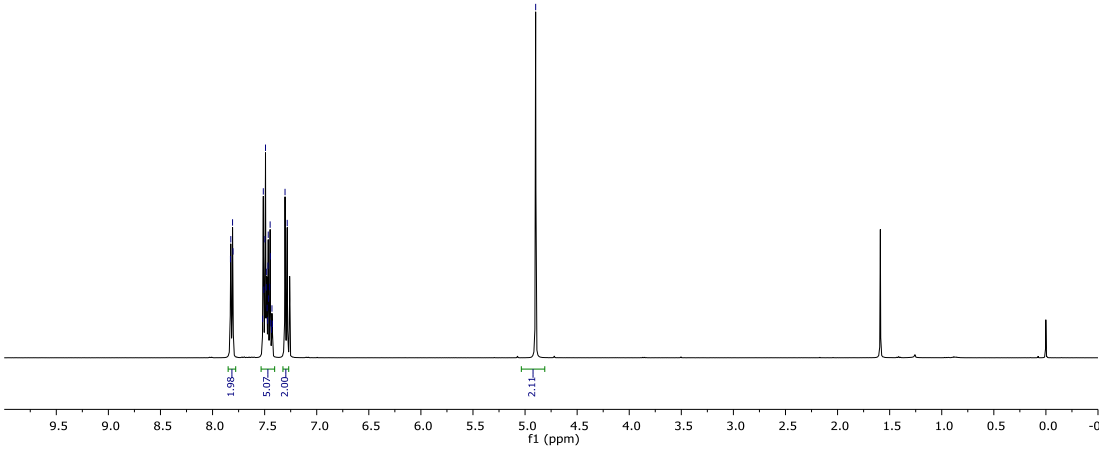
(Scheme 3, **3a**); ^{1}H NMR (400 MHz, $CDCl_3$)



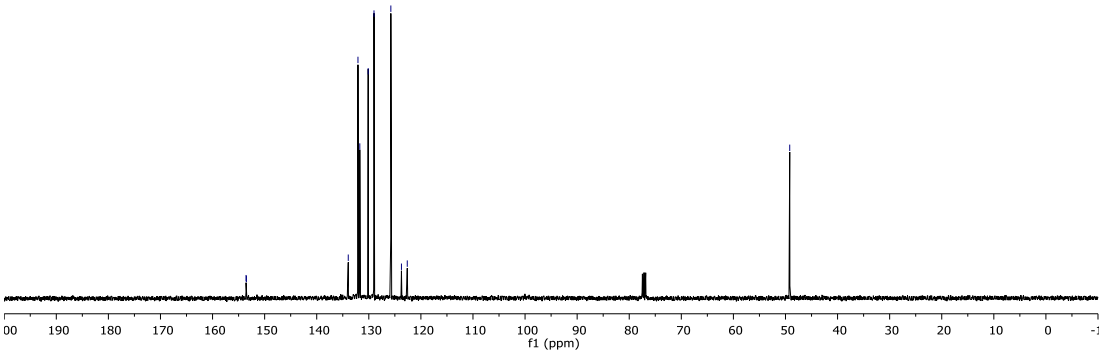


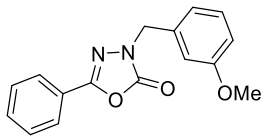


(Scheme 3, **3b**); ^{1}H NMR (400 MHz, $CDCl_3$)

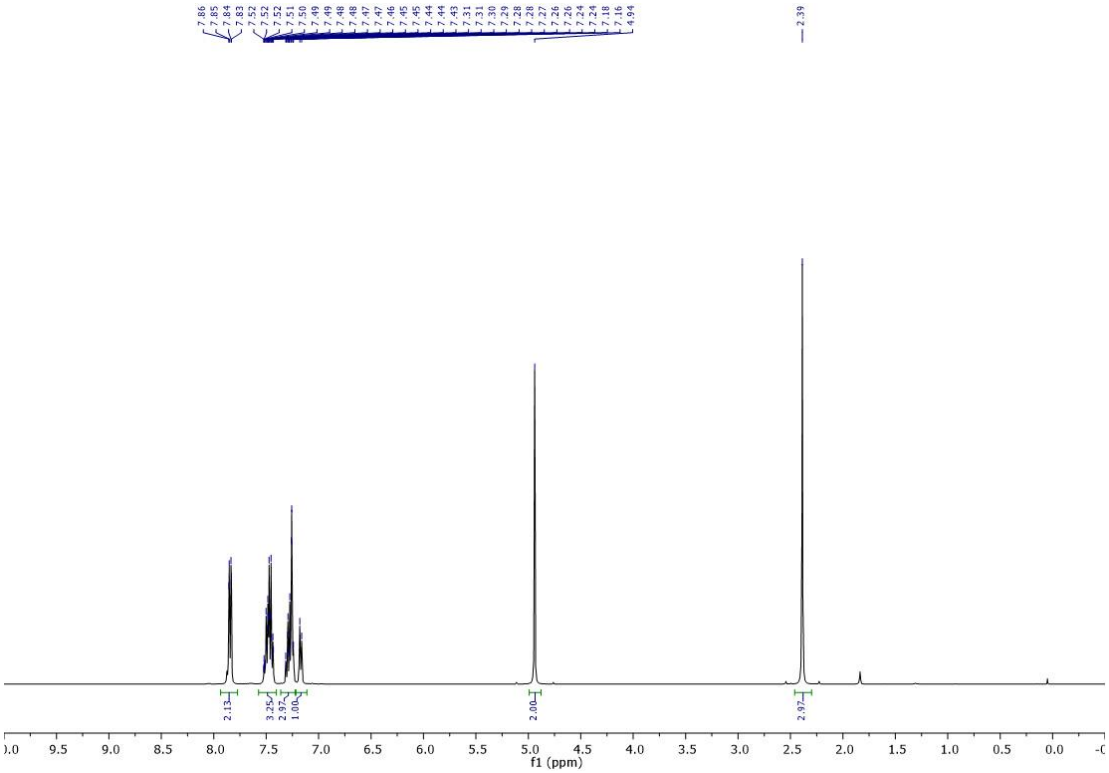


(Scheme 3, **3b**); ^{13}C NMR (100 MHz, $CDCl_3$)

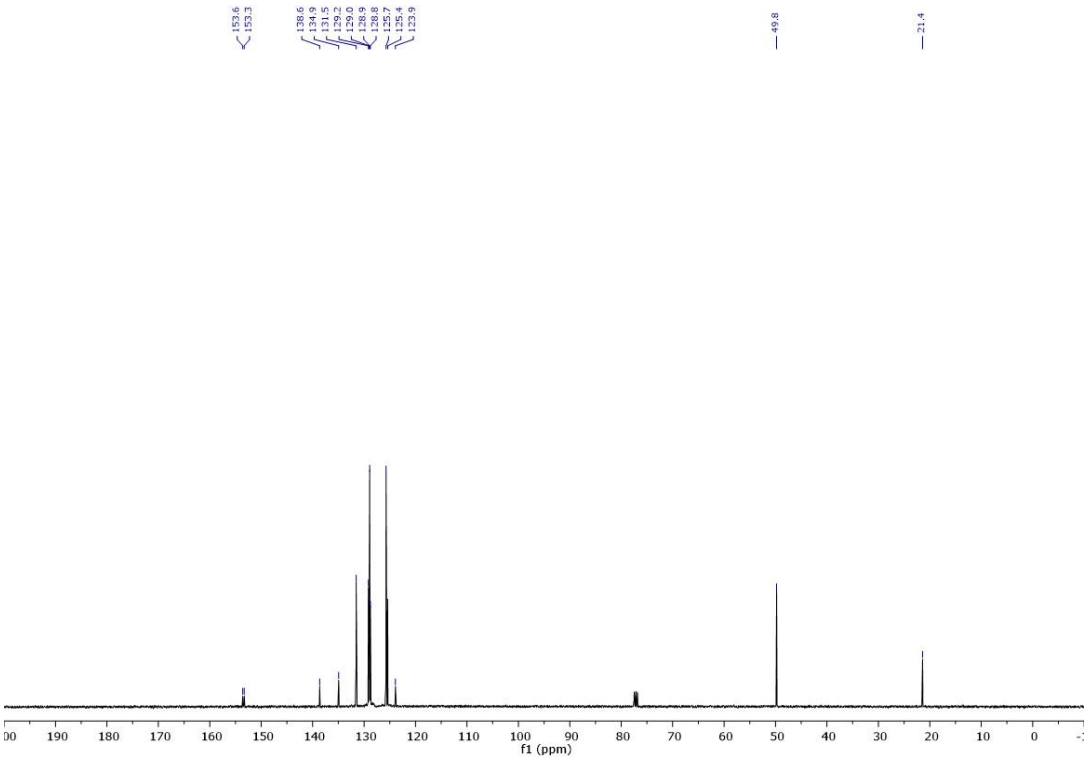


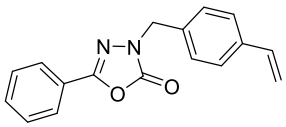


(Scheme 3, **3c**); ^{1}H NMR (400 MHz, $CDCl_3$)

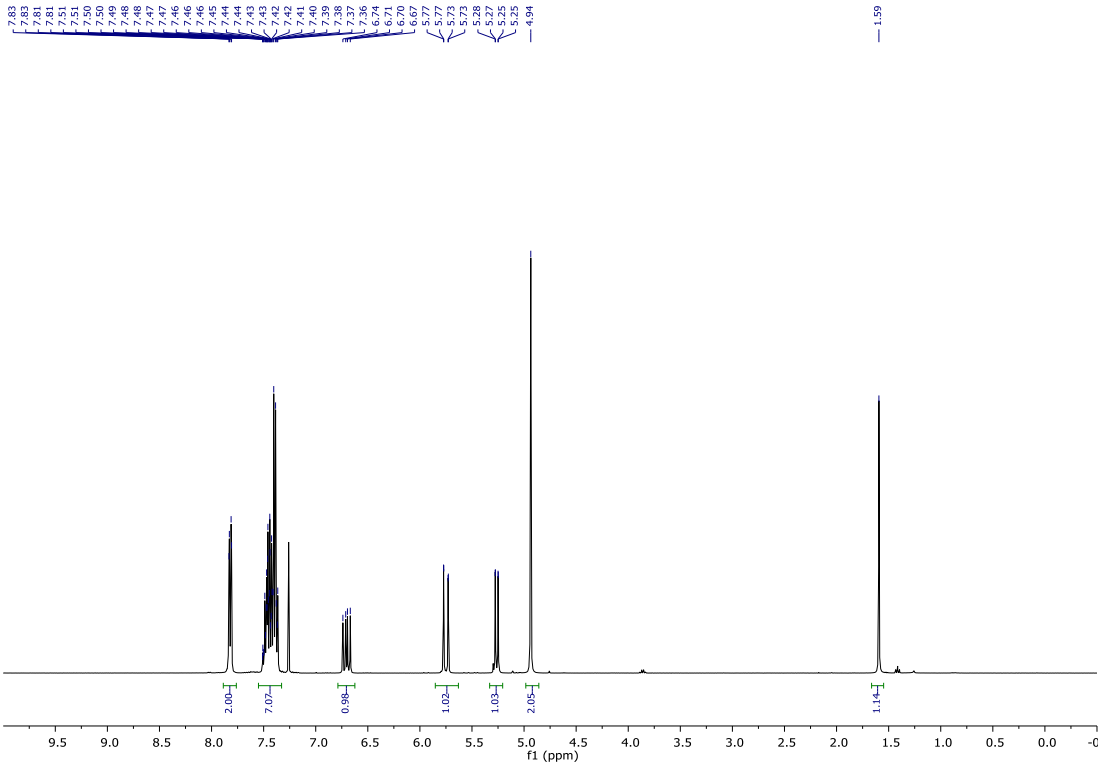


(Scheme 3, **3c**); ^{13}C NMR (100 MHz, $CDCl_3$)

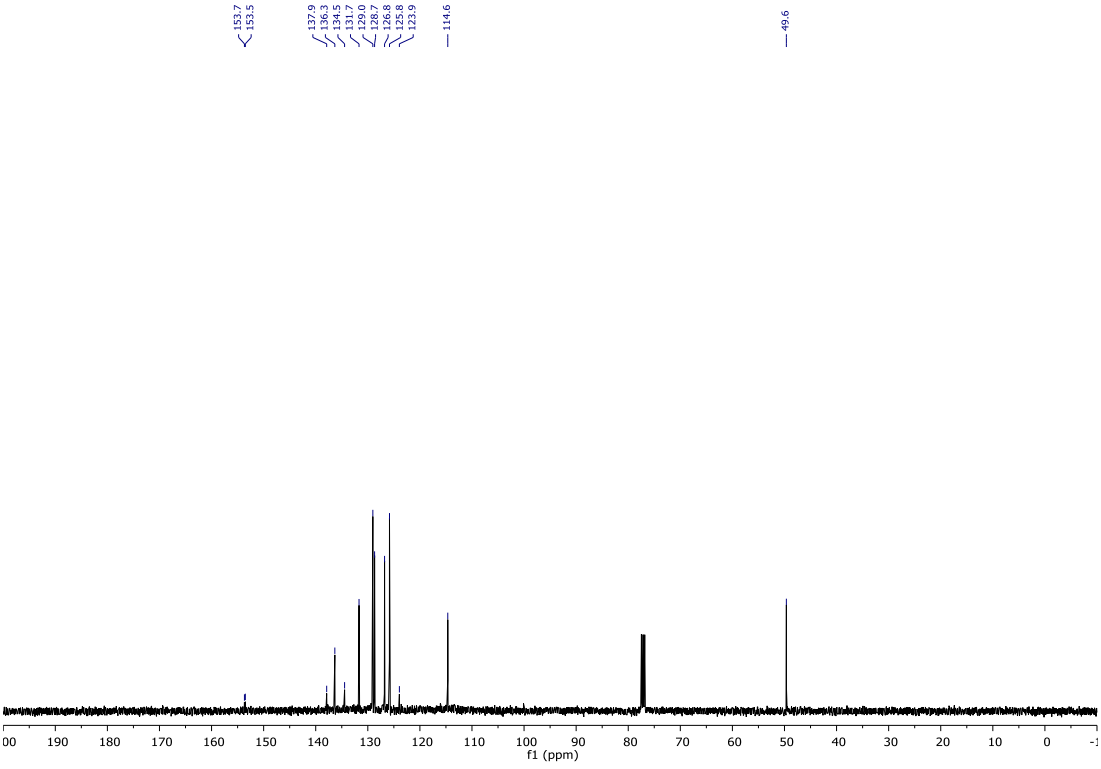


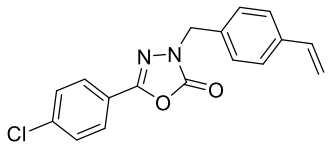


(Scheme 3, **3d**); ^{1}H NMR (400 MHz, $CDCl_3$)

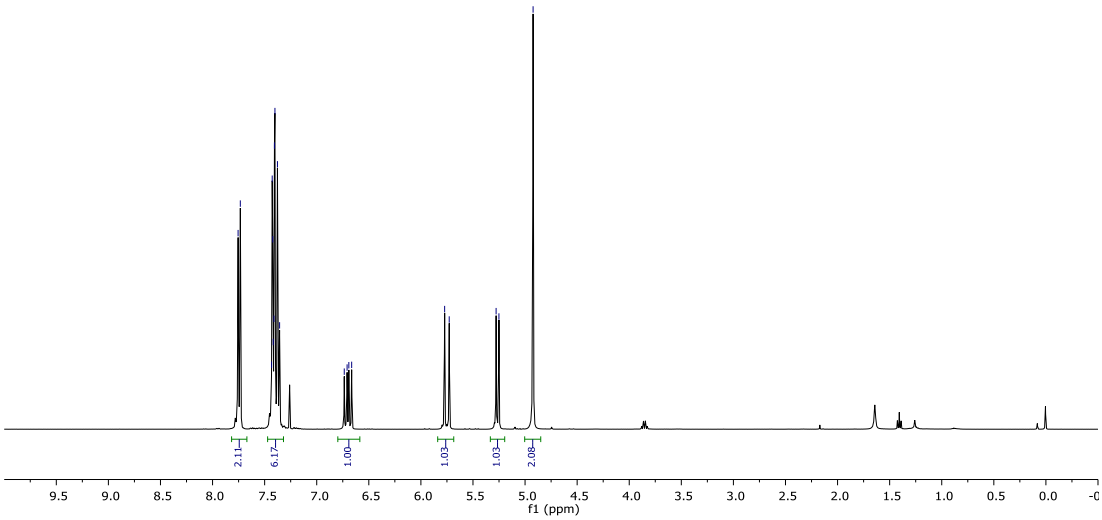


(Scheme 3, **3d**); ^{13}C NMR (100 MHz, $CDCl_3$)

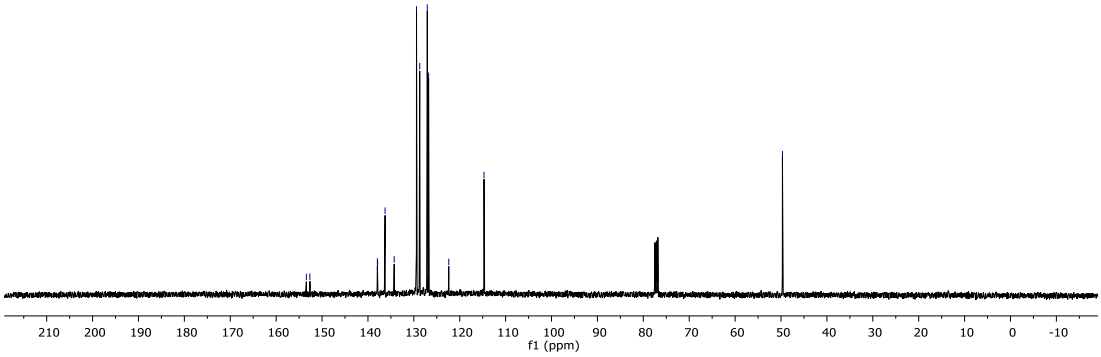


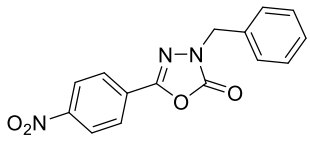


(Scheme 3, **3e**); ^{1}H NMR (400 MHz, $CDCl_3$)

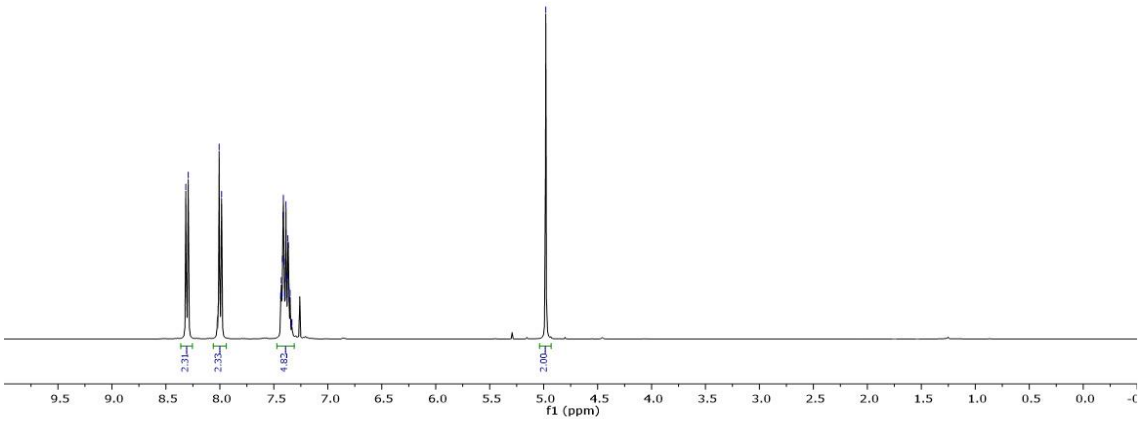


(Scheme 3, **3e**); ^{13}C NMR (100 MHz, $CDCl_3$)

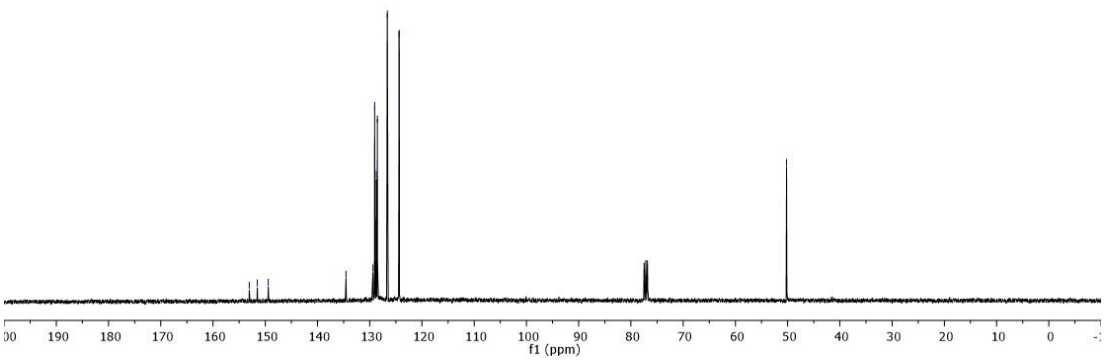


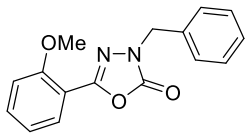


(Scheme 3, **3f**); ^{1}H NMR (400 MHz, $CDCl_3$)

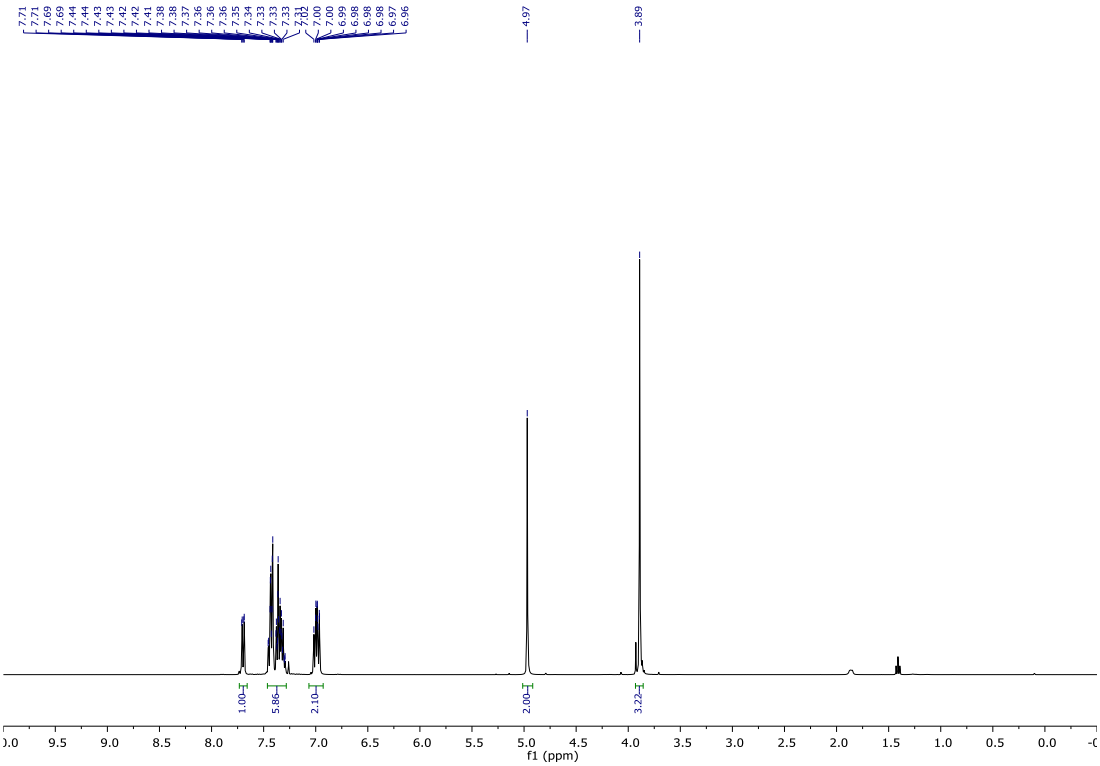


(Scheme 3, **3f**); ^{13}C NMR (100 MHz, $CDCl_3$)

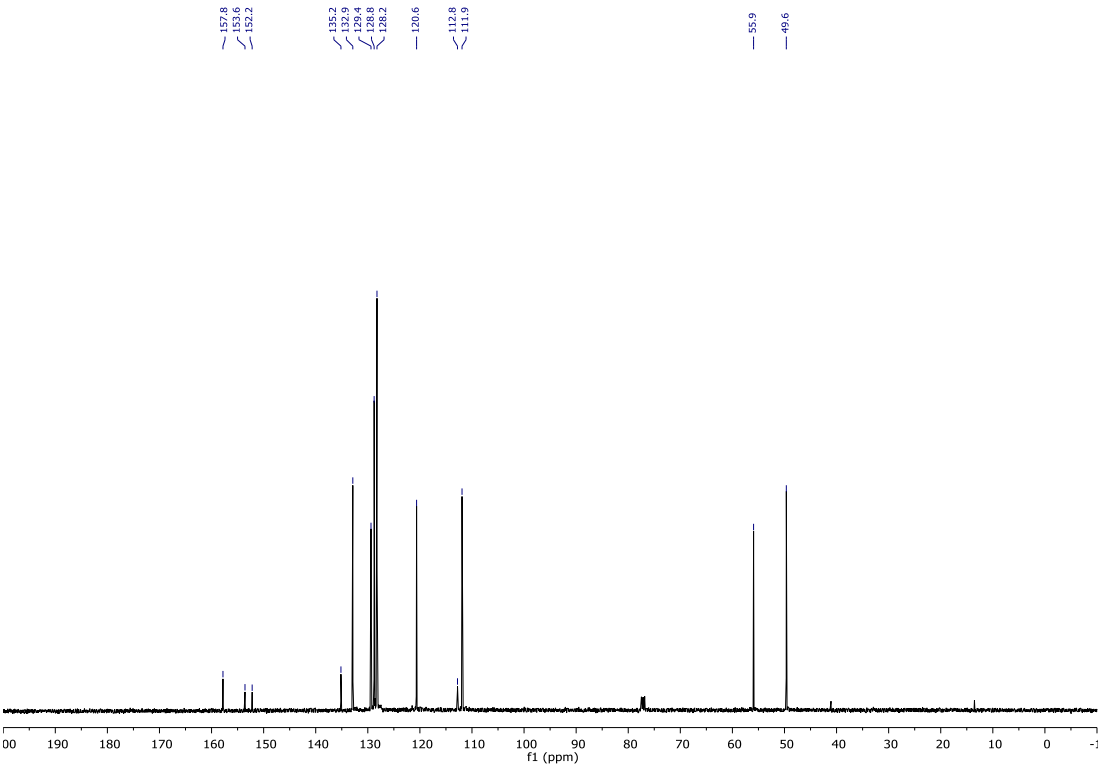


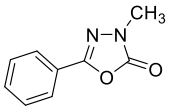


(Scheme 3, **3g**); ^{1}H NMR (400 MHz, $CDCl_3$)

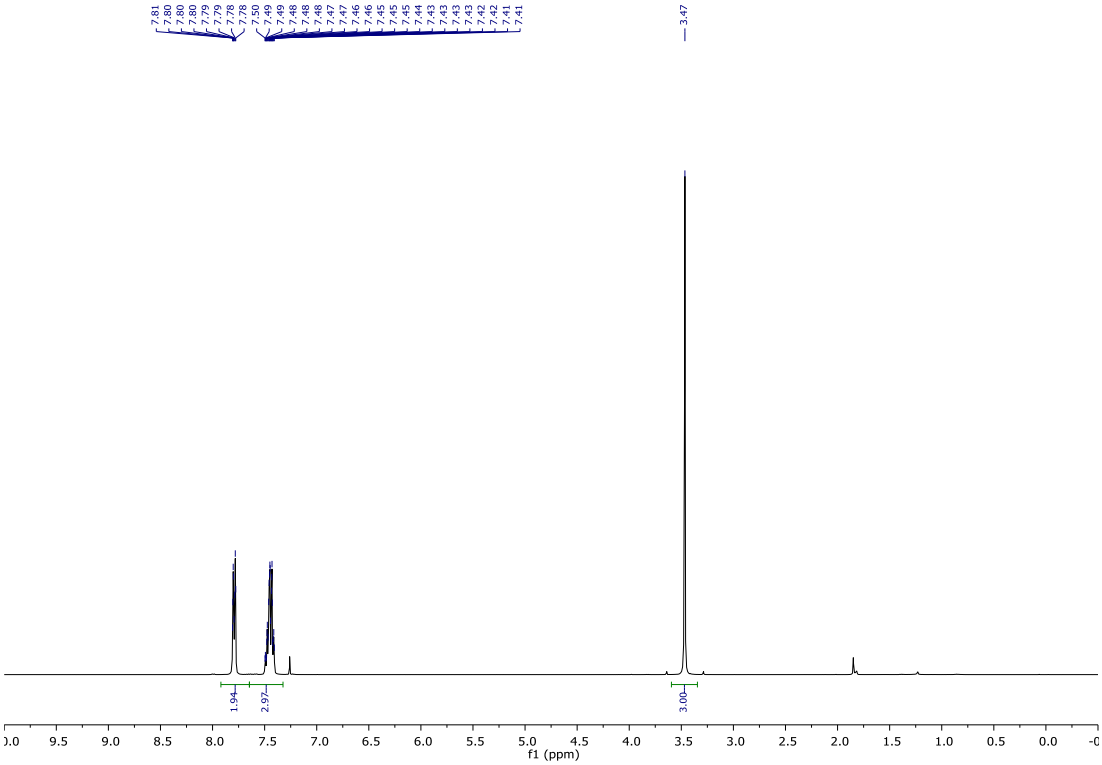


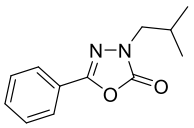
(Scheme 3, **3g**); ^{13}C NMR (100 MHz, $CDCl_3$)



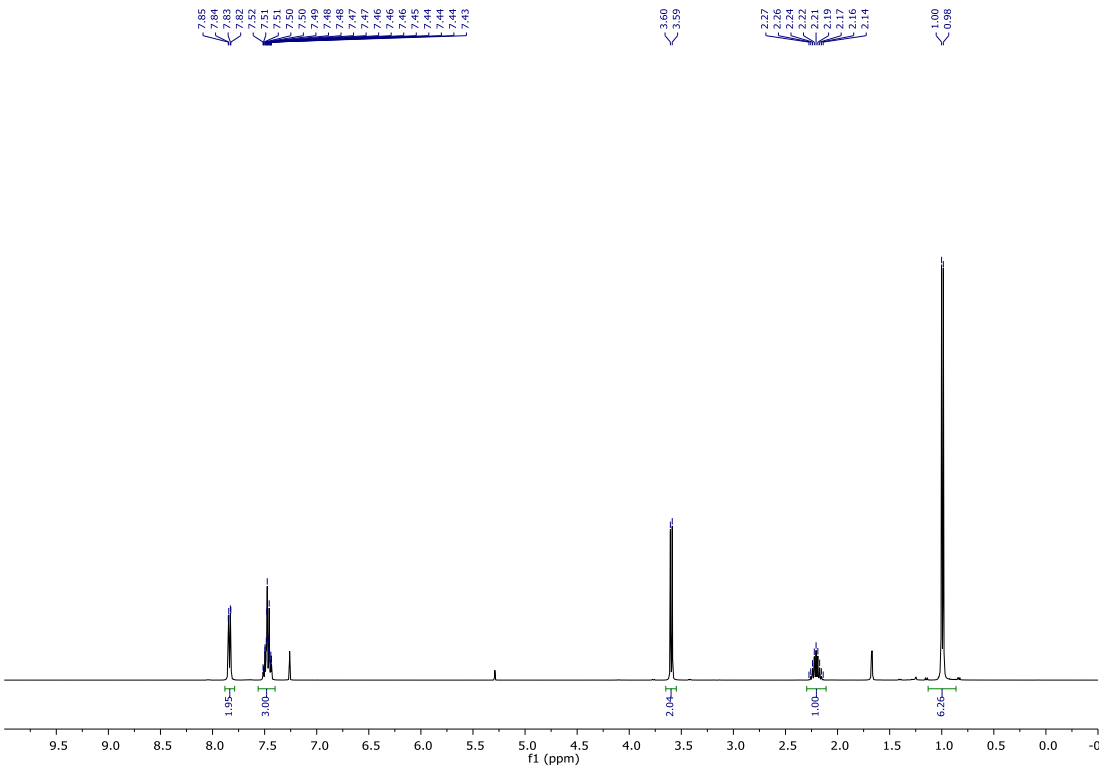


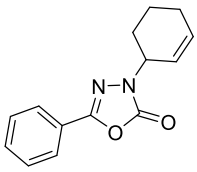
(Scheme 3, **3h**); ^{1}H NMR (400 MHz, $CDCl_3$)



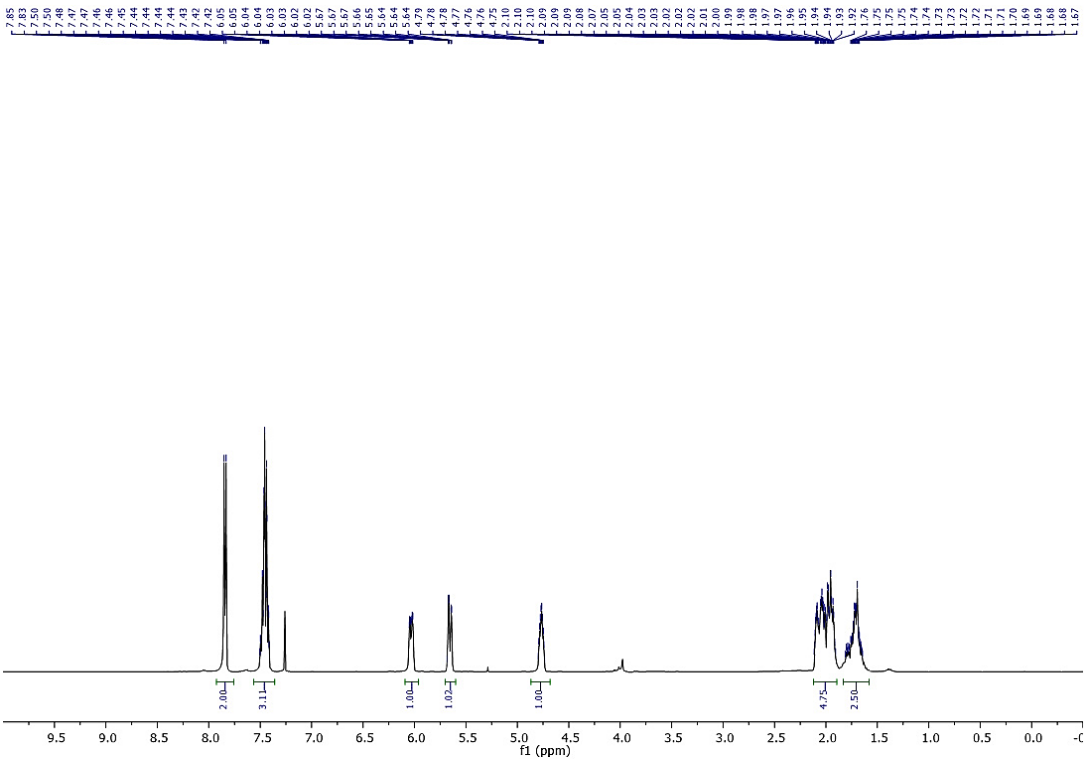


(Scheme, **3i**); ^{1}H NMR (400 MHz, $CDCl_3$)

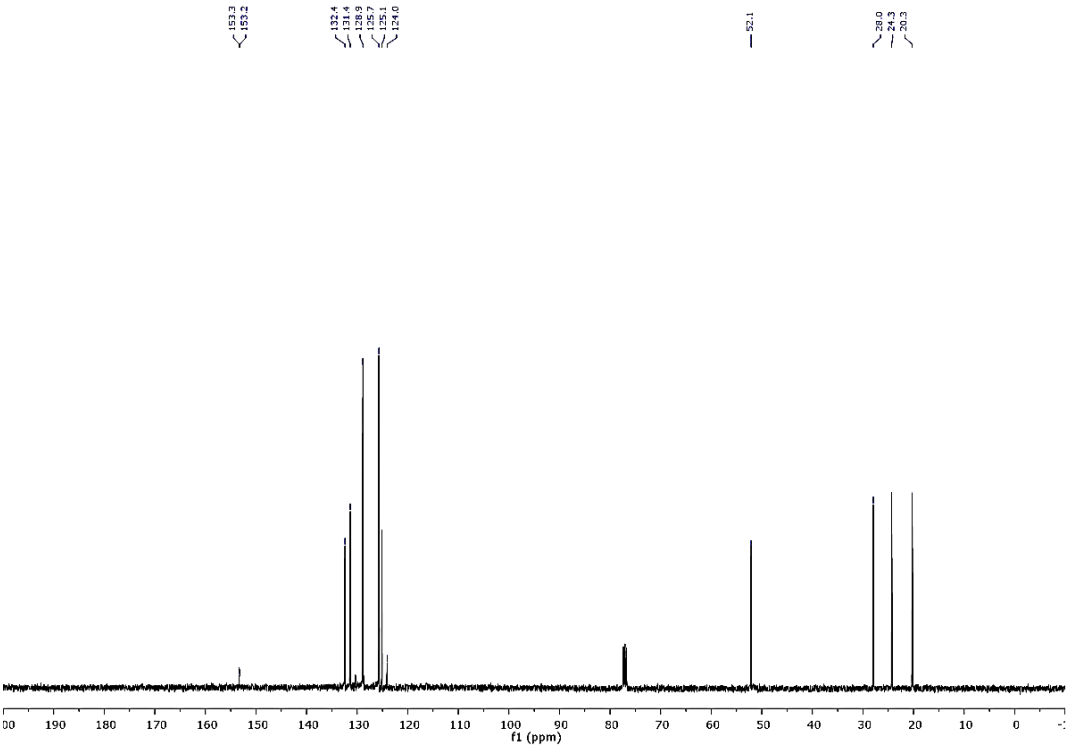


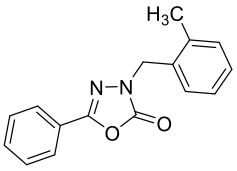


(Scheme 3, **3j**); ^{1}H NMR (400 MHz, $CDCl_3$)

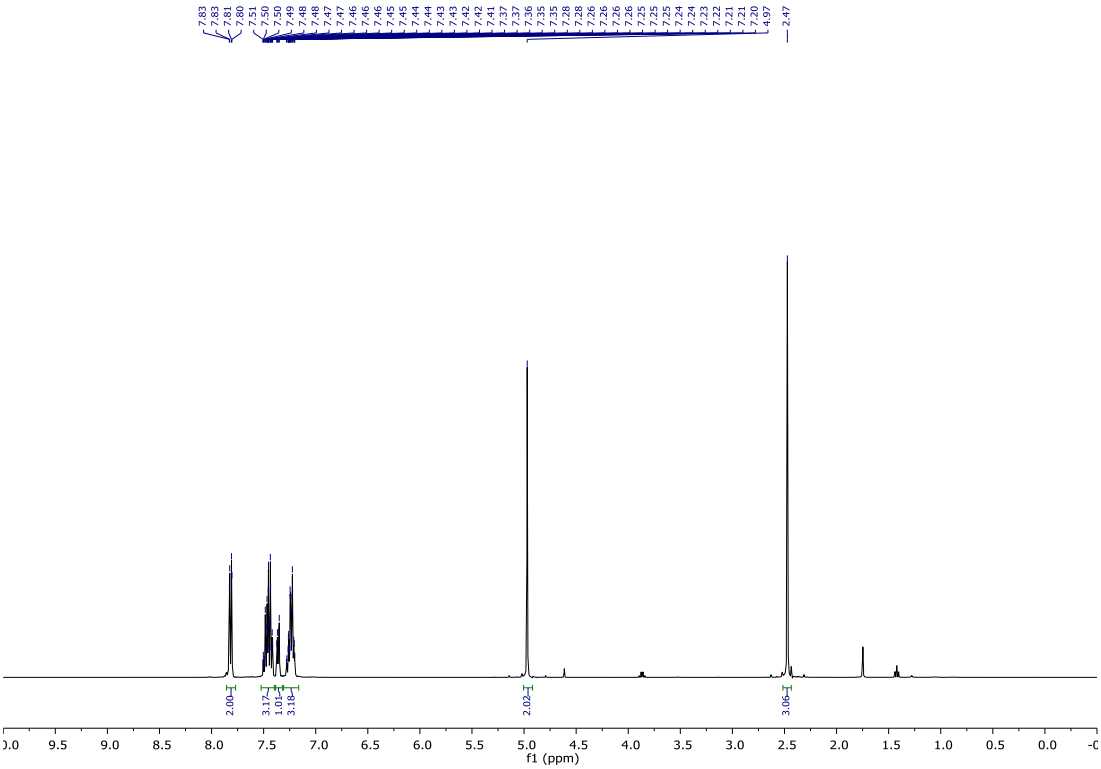


(Scheme 3, **3j**); ^{13}C NMR (100 MHz, $CDCl_3$)

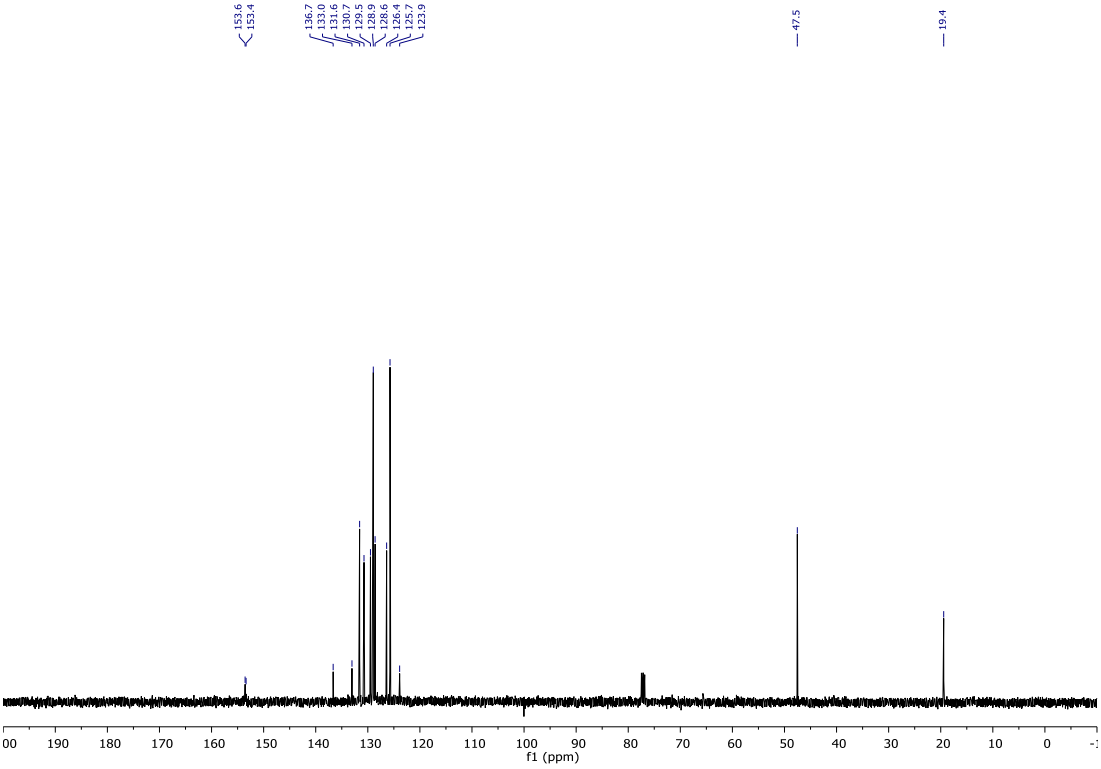


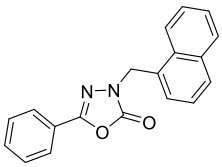


(Scheme 3, **3l**); ^{1}H NMR (400 MHz, $CDCl_3$)

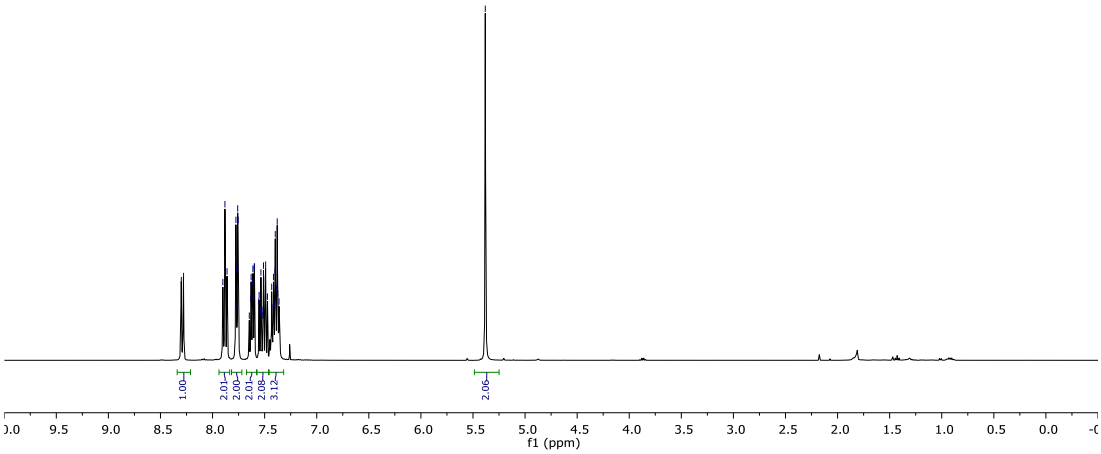


(Scheme 3, **3l**); ^{13}C NMR (100 MHz, $CDCl_3$)

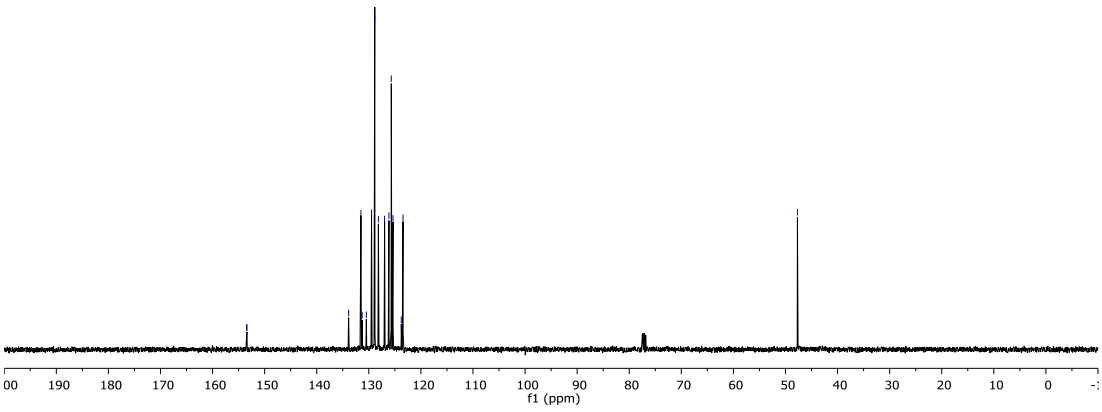


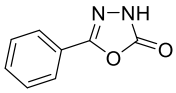


(Scheme 3, **3m**); ^{1}H NMR (400 MHz, $CDCl_3$)

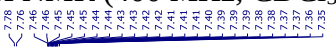


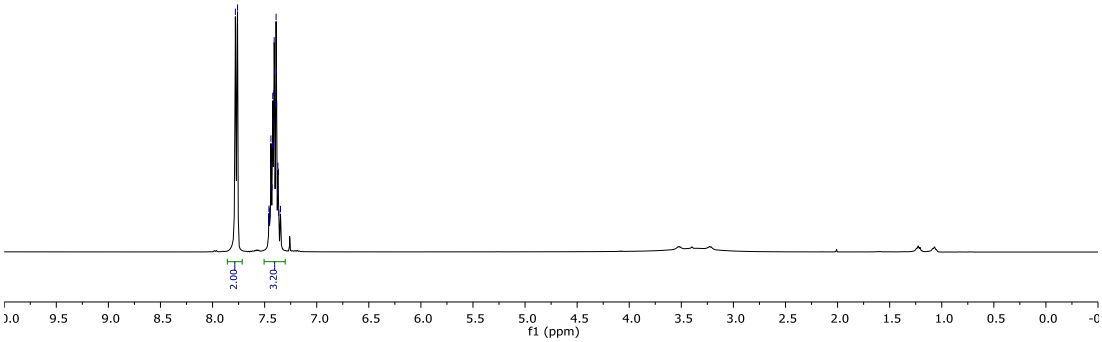
(Scheme 3, **3m**); ^{13}C NMR (100 MHz, $CDCl_3$)



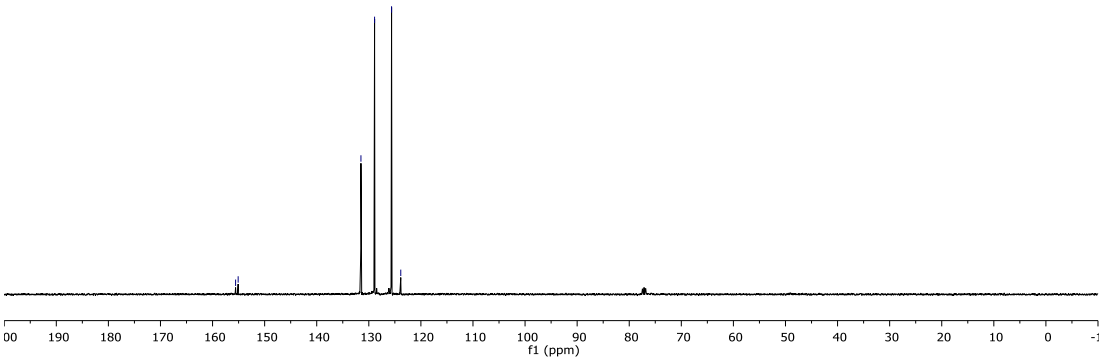


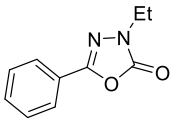
(compound **4**); ^{1}H NMR (400 MHz, $CDCl_3$)



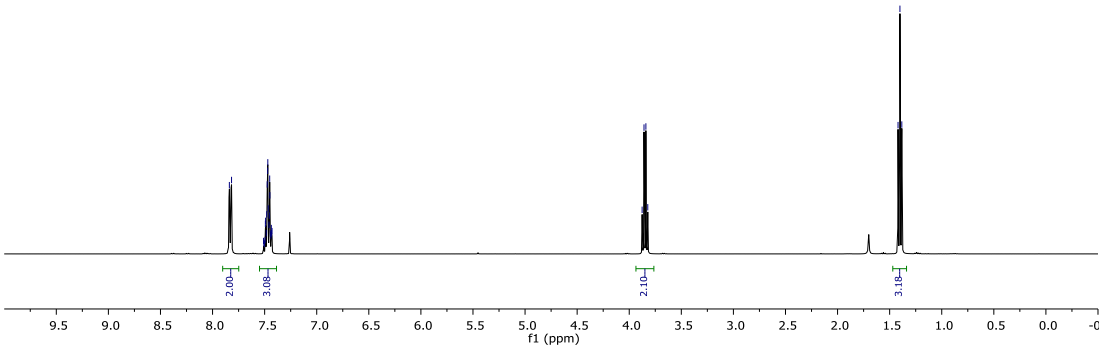


(**4**) ^{13}C NMR (100 MHz, $CDCl_3$)

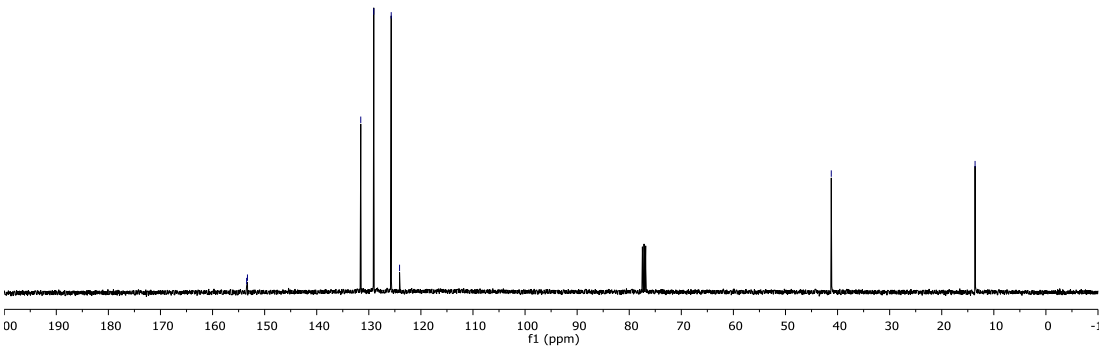




(compound **5**); ^{1}H NMR (400 MHz, $CDCl_3$)



(**5**); ^{13}C NMR (100 MHz, $CDCl_3$)



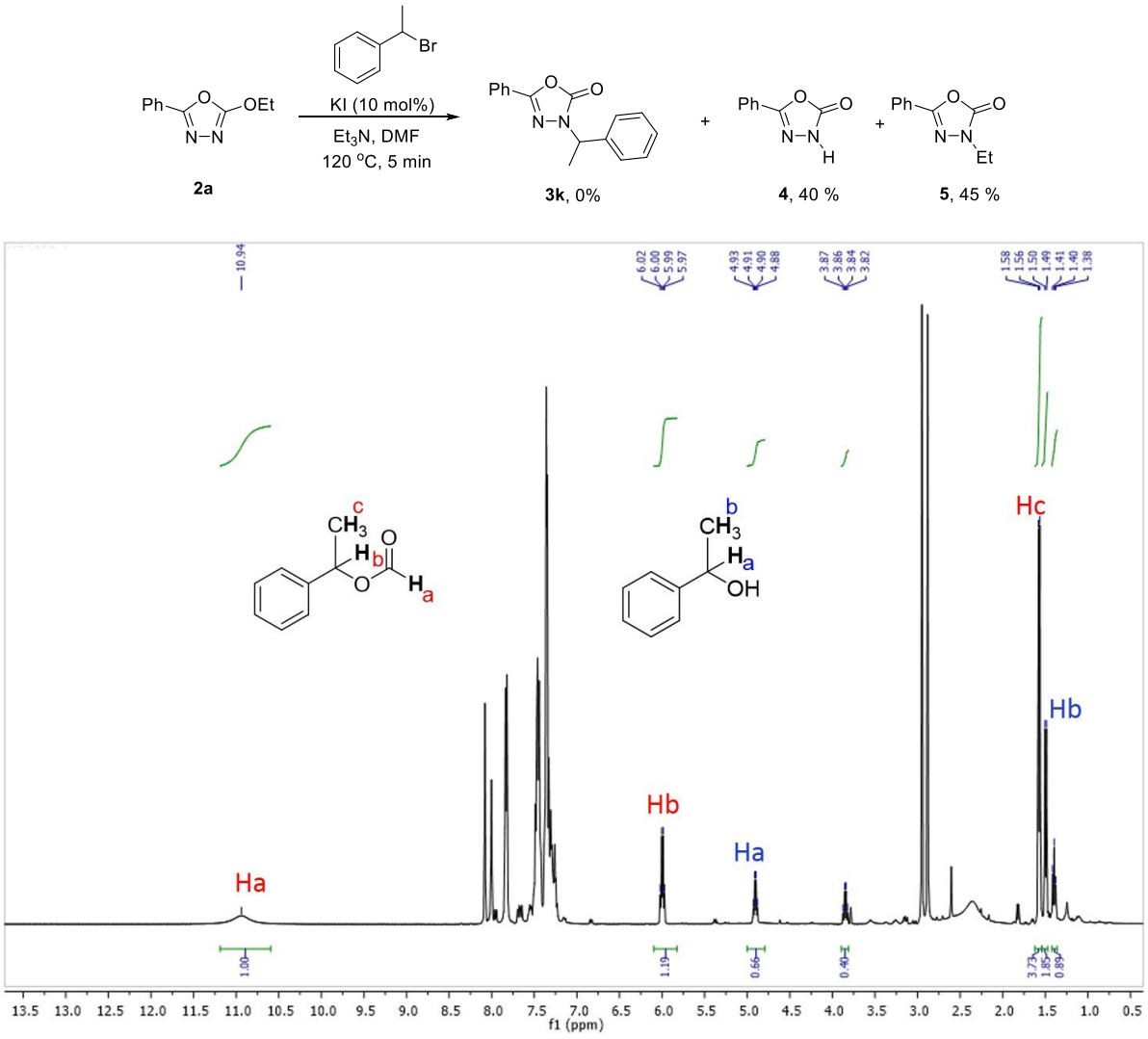


Figure S1 ^{1}H NMR spectrum of crude products from the reaction of **2a** with (1-bromoethyl)benzene after extraction with 1N HCl and CH_2Cl_2.