Electronic Supplementary Material (ESI) for RSC Advances.

Rhodium (II)-catalyzed direct sulfenylation of diazooxindoles with disulfides

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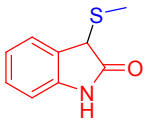
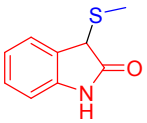
Supplementary Information

Contents

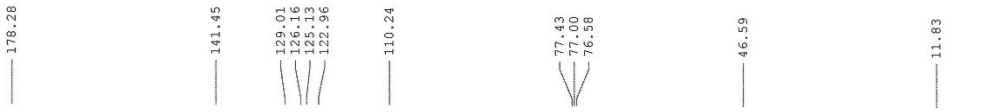
1. Copies of NMR Spectra of Compounds (**3a-3p, 4b-4e, 5a-5d, 6a-6d**, **7a-7l** and **19a-19b**) S2-S43
2. Copies of GC-MS Spectra S44-S45

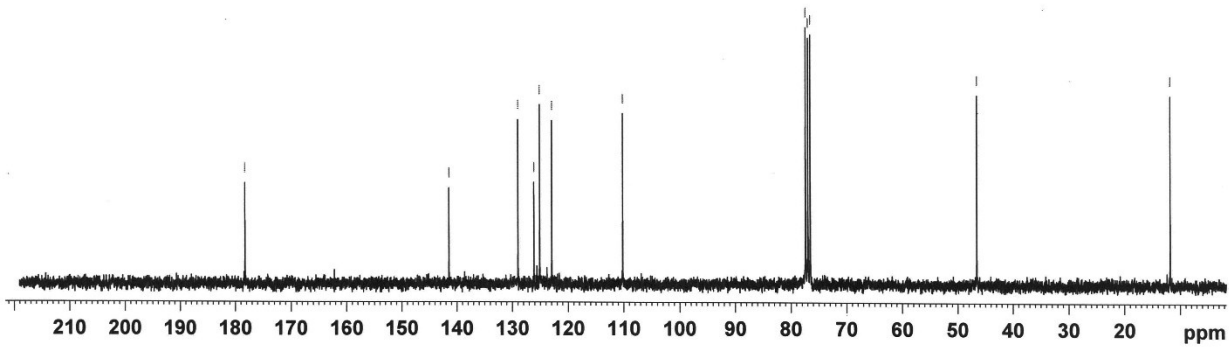


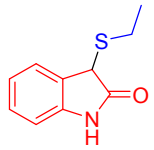
^{1}H NMR of **3a**
(300 MHz, $CDCl_3$)



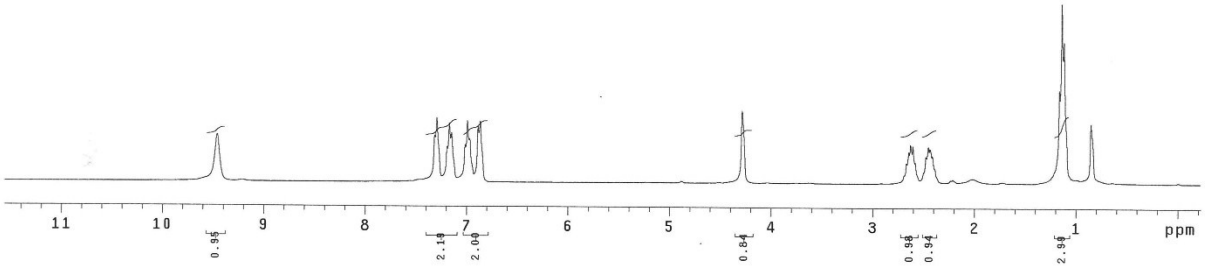
^{13}C NMR of **3a**
(75 MHz, $CDCl_3$)

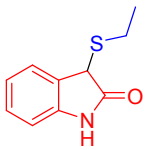




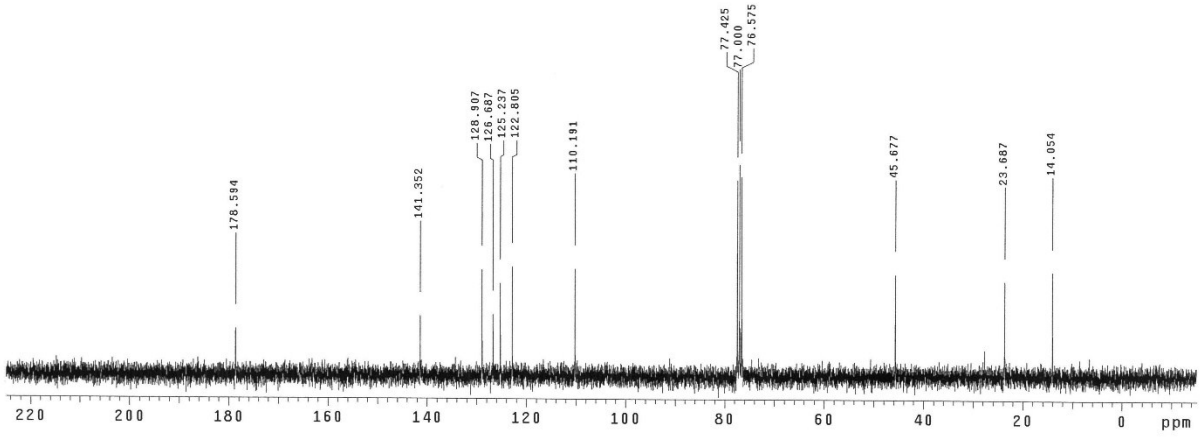


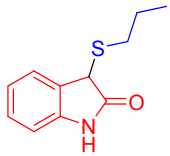
^{1}H NMR of **3b**
(300 MHz, $CDCl_3$)



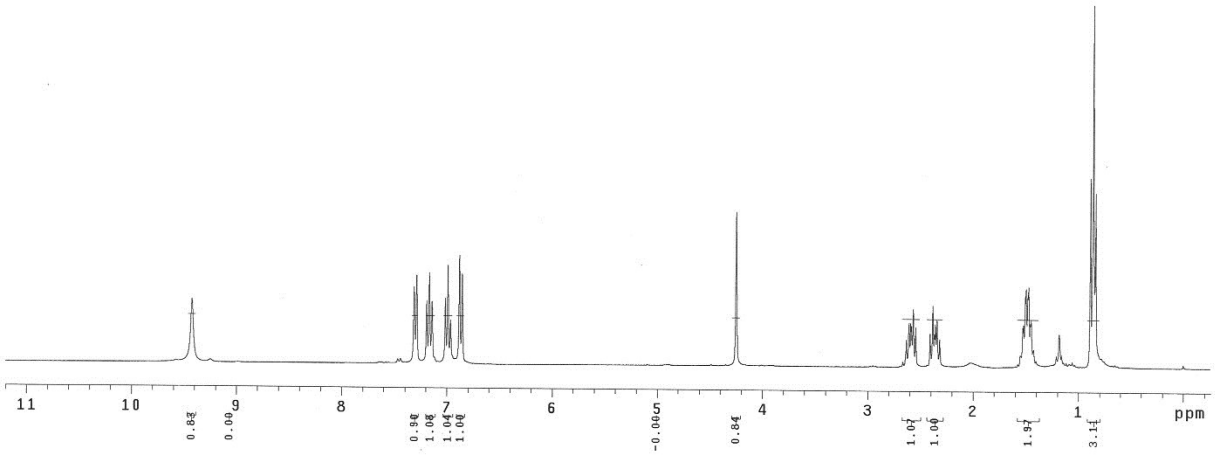


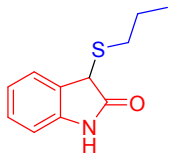
^{13}C NMR of **3b**
(75 MHz, $CDCl_3$)



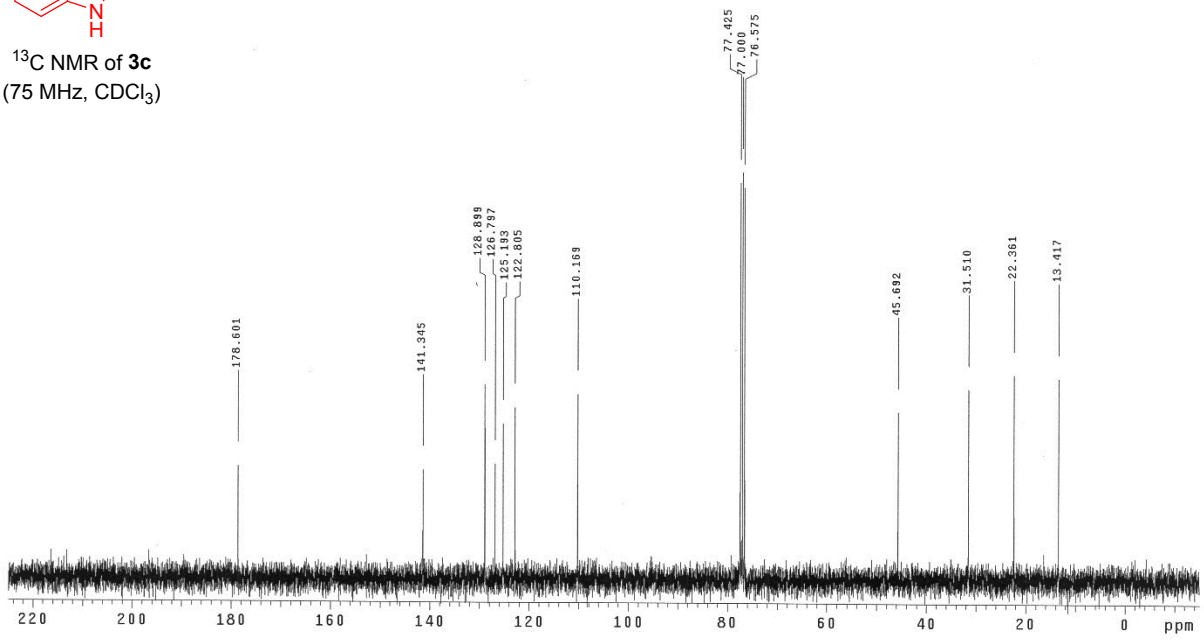


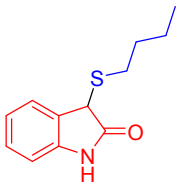
^{1}H NMR of **3c**
(300 MHz, $CDCl_3$)



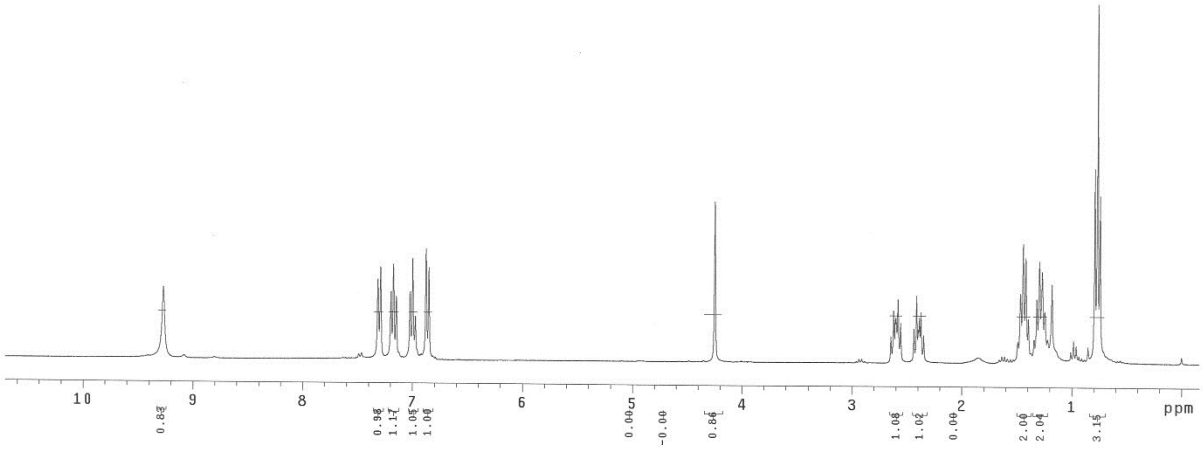


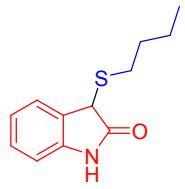
^{13}C NMR of **3c**
(75 MHz, $CDCl_3$)



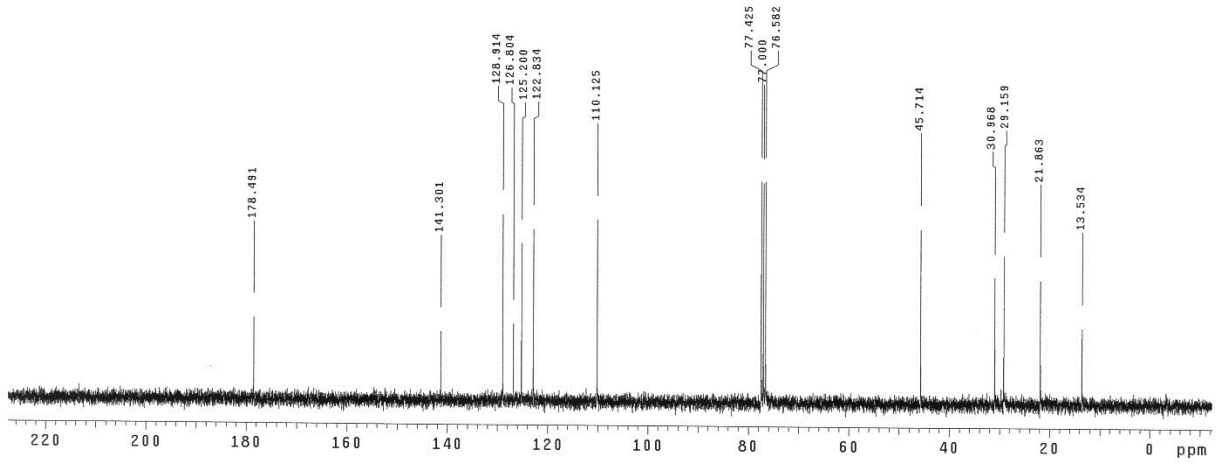


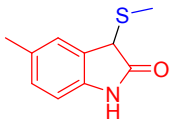
^{1}H NMR of **3d**
(300 MHz, $CDCl_3$)



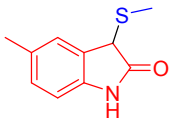


^{13}C NMR of **3d**
(75 MHz, $CDCl_3$)

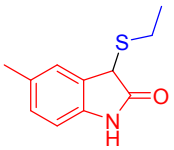




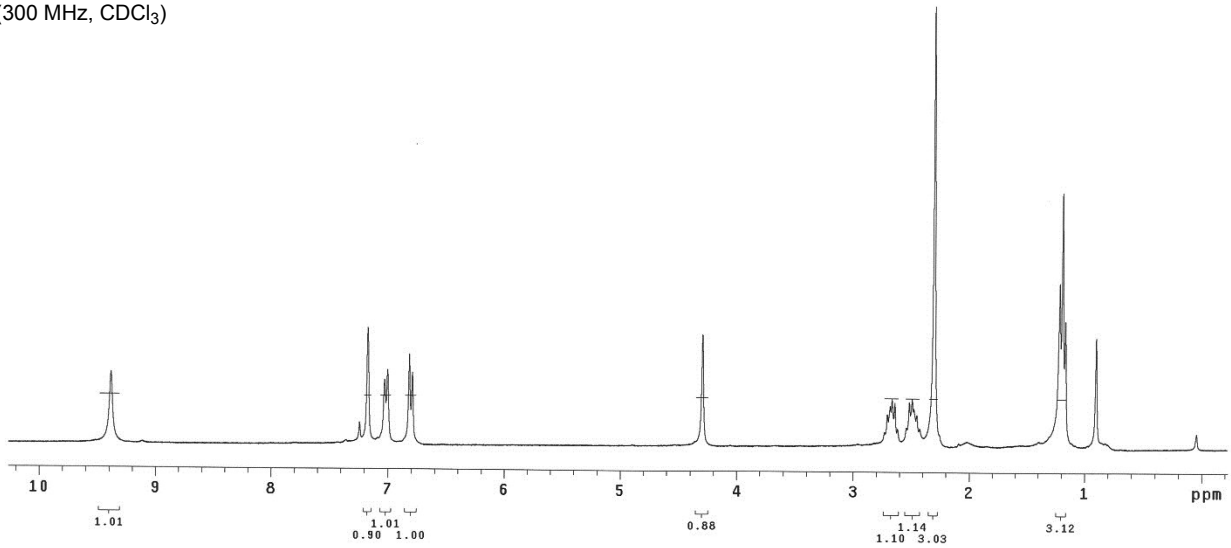
^{1}H NMR of **3e**
(300 MHz, $CDCl_3$)

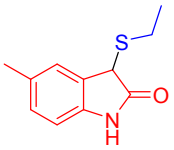


^{13}C NMR of **3e**
(150 MHz, $CDCl_3$)

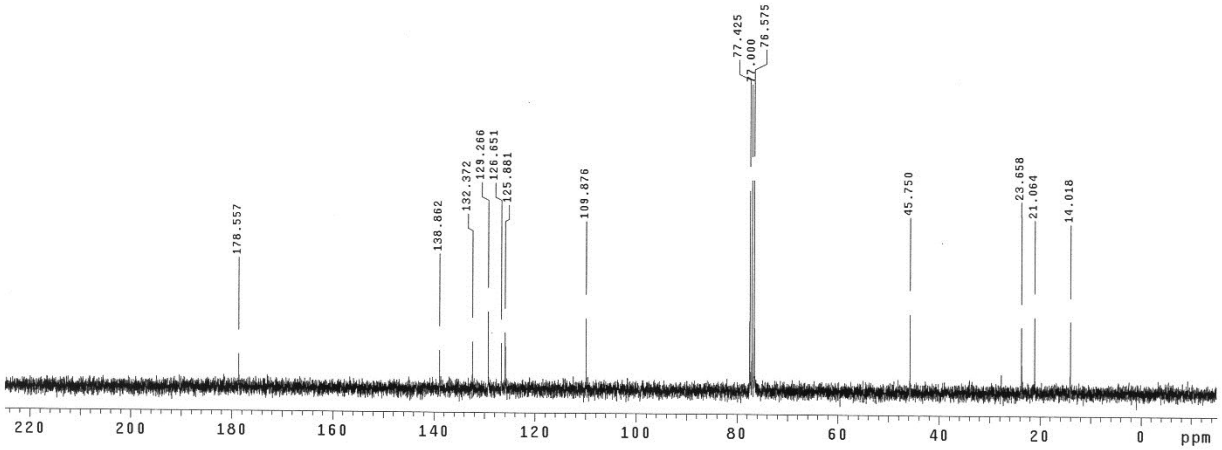


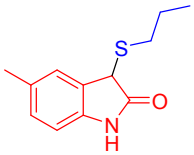
^{1}H NMR of **3f**
(300 MHz, $CDCl_3$)



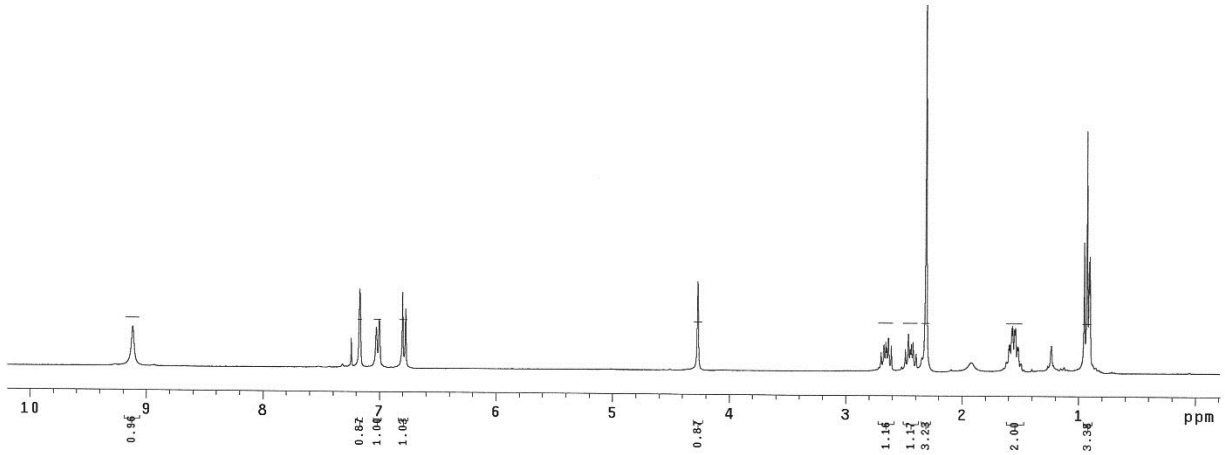


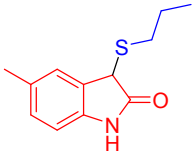
^{13}C NMR of **3f**
(75 MHz, $CDCl_3$)



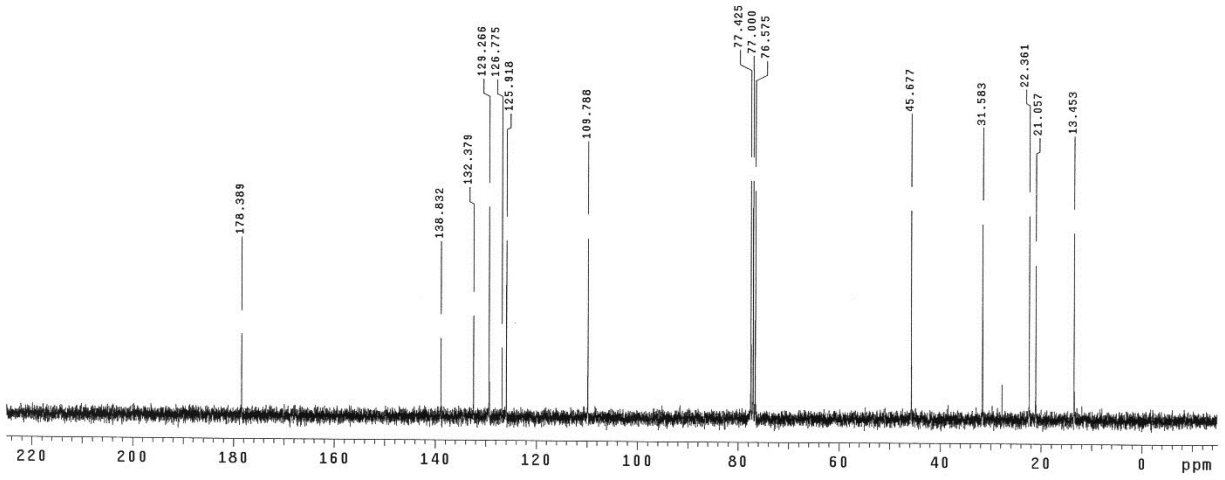


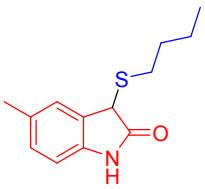
^{1}H NMR of **3g**
(300 MHz, $CDCl_3$)



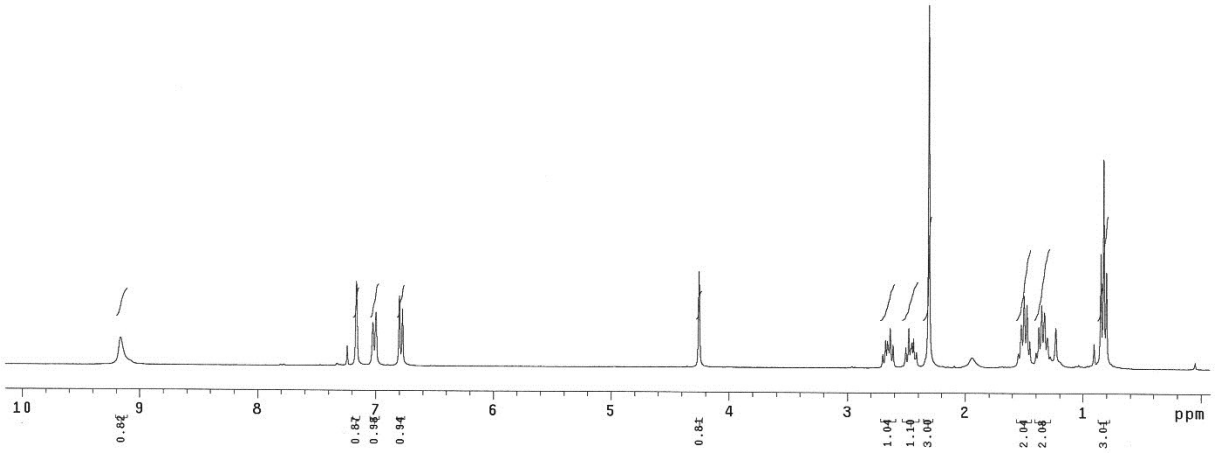


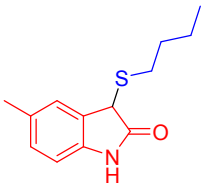
^{13}C NMR of **3g**
(75 MHz, $CDCl_3$)



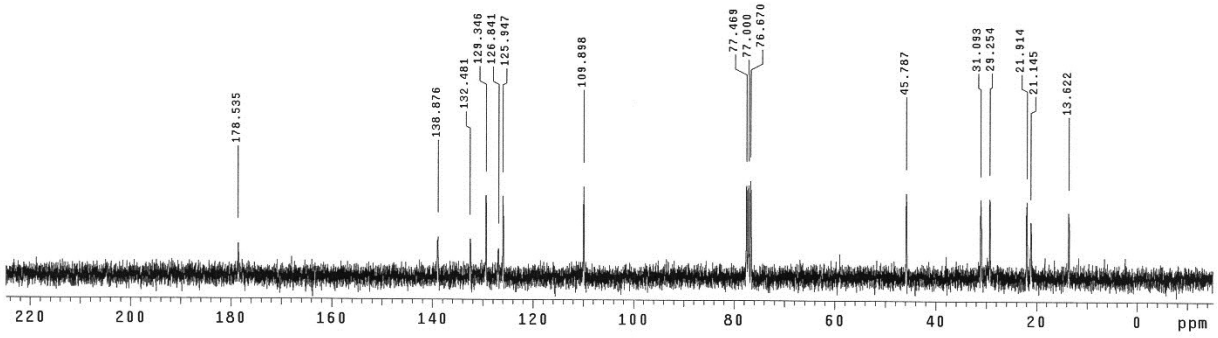


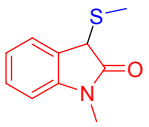
^{1}H NMR of **3h**
(300 MHz, $CDCl_3$)



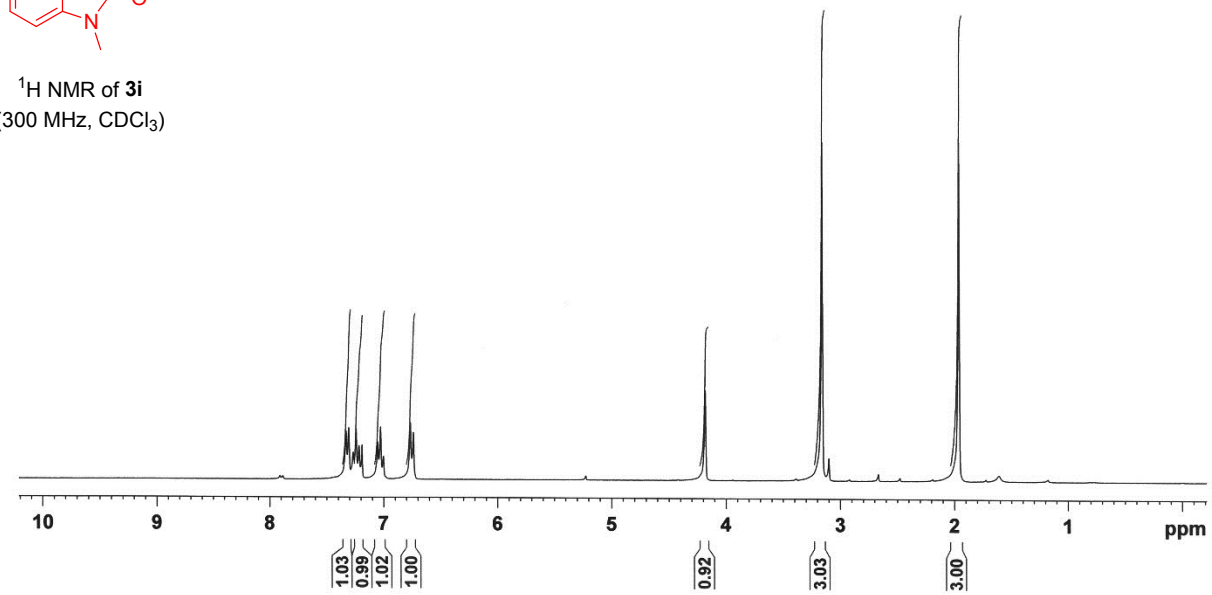


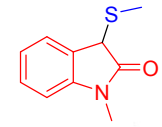
^{13}C NMR of **3h**
(75 MHz, $CDCl_3$)



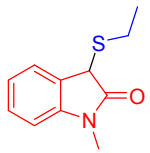


^{1}H NMR of **3i**
(300 MHz, $CDCl_3$)

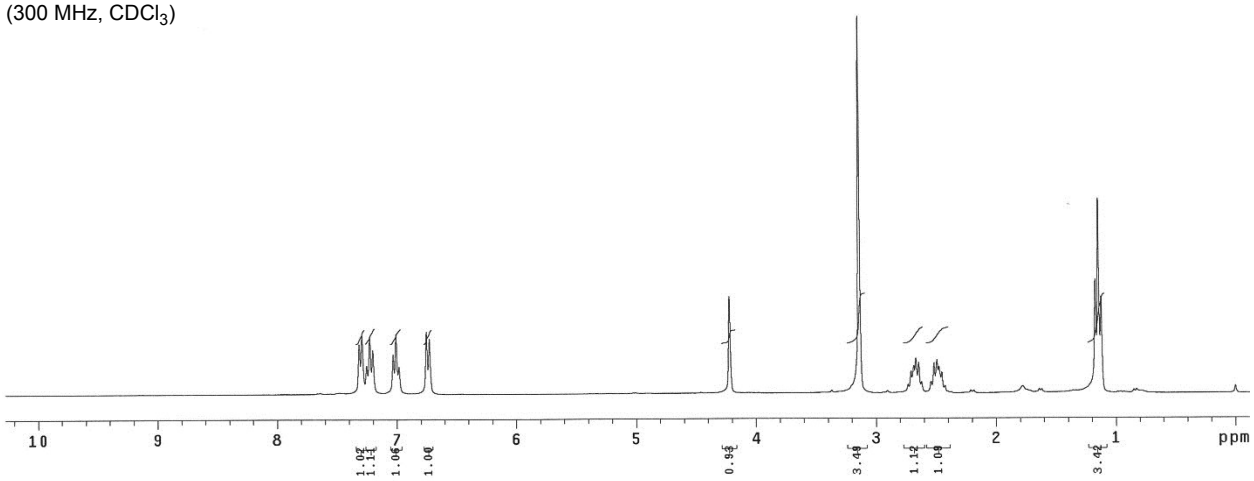


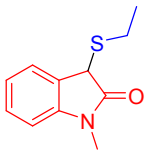


^{13}C NMR of **3i**
(75 MHz, $CDCl_3$)

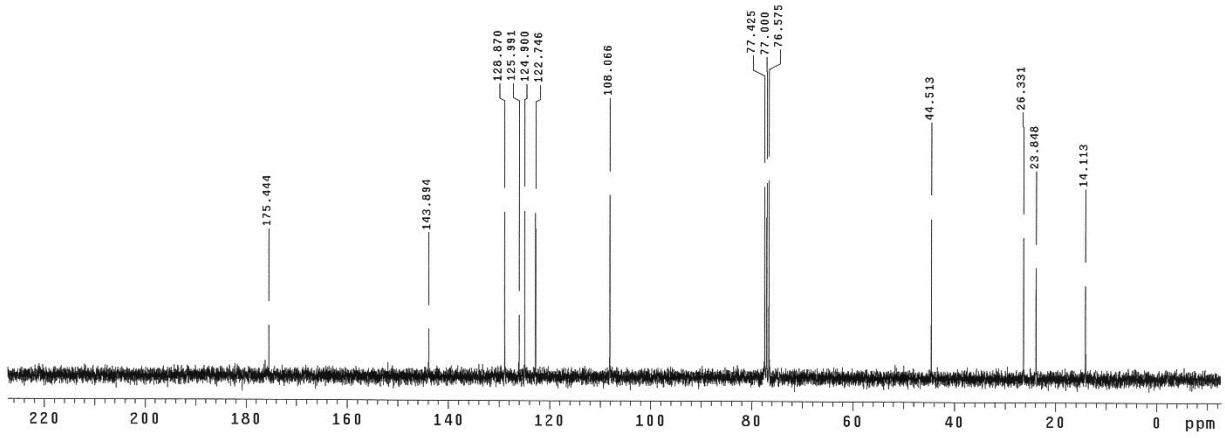


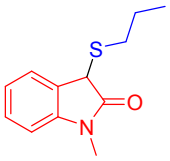
^{1}H NMR of **3j**
(300 MHz, $CDCl_3$)



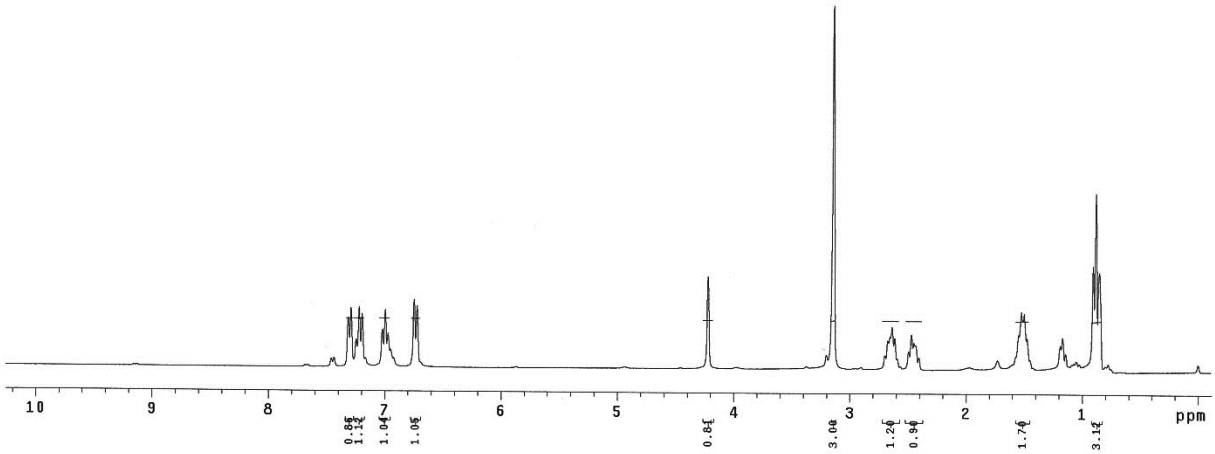


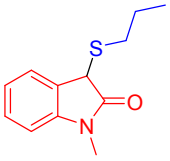
^{13}C NMR of **3j**
(75 MHz, $CDCl_3$)



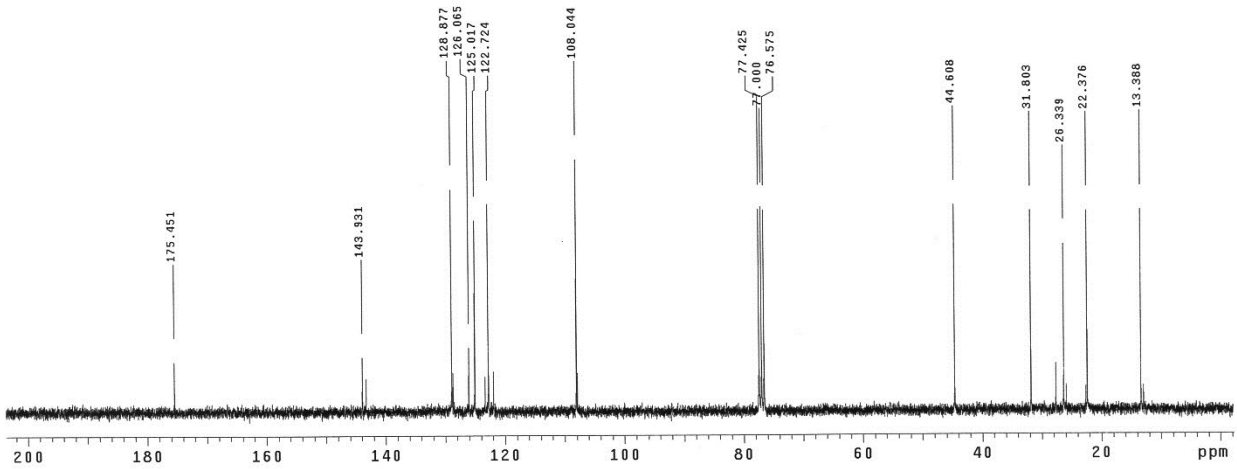


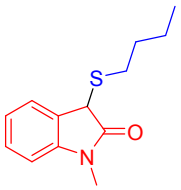
^{1}H NMR of **3k**
(300 MHz, $CDCl_3$)



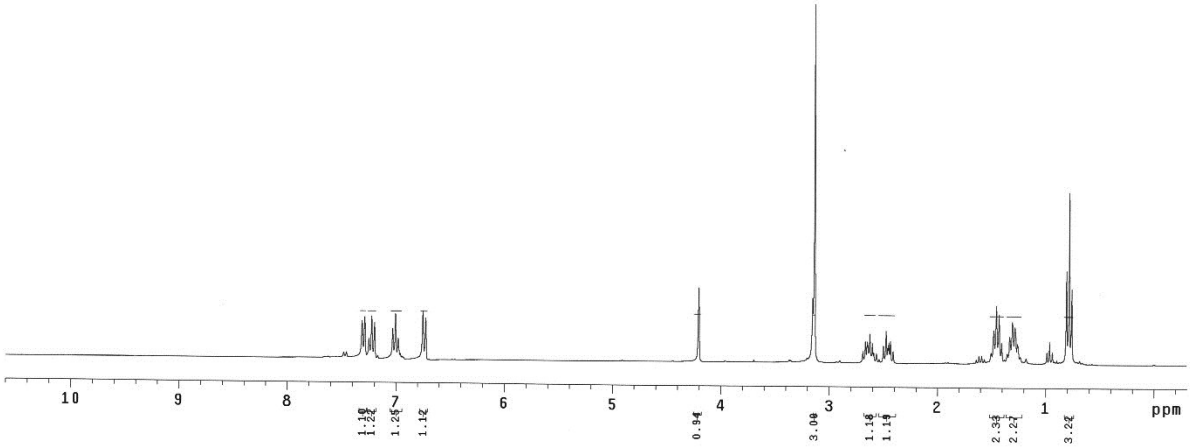


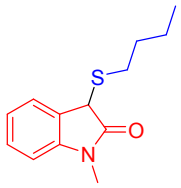
^{13}C NMR of **3k**
(75 MHz, $CDCl_3$)



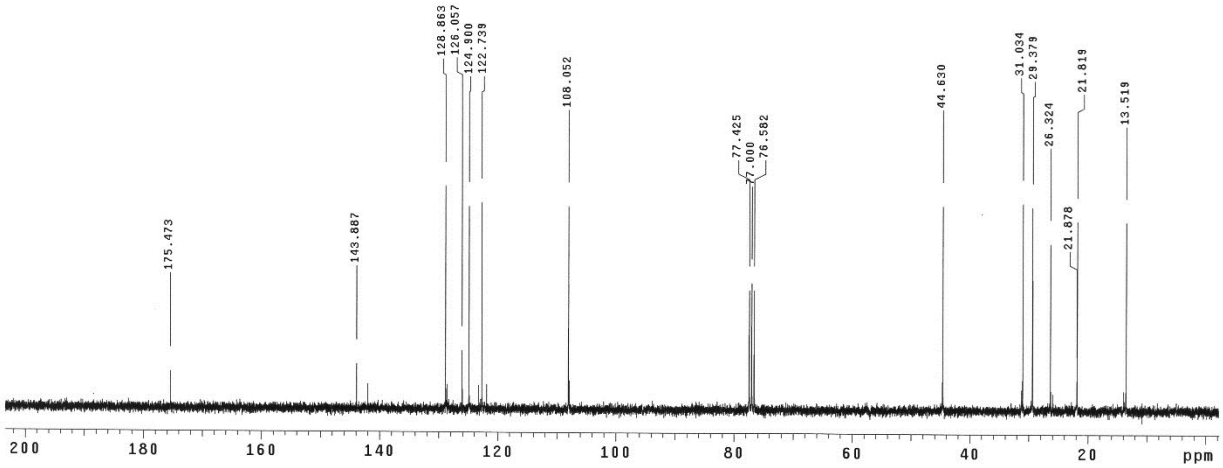


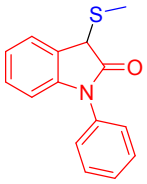
^{1}H NMR of **3l**
(300 MHz, $CDCl_3$)



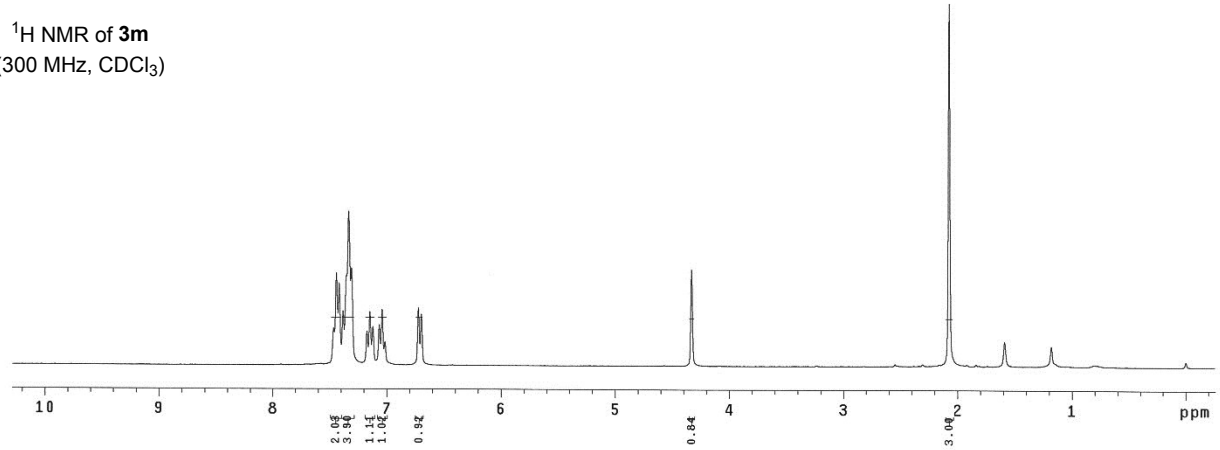


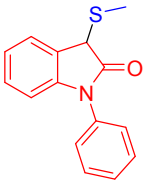
^{13}C NMR of **3l**
(75 MHz, $CDCl_3$)



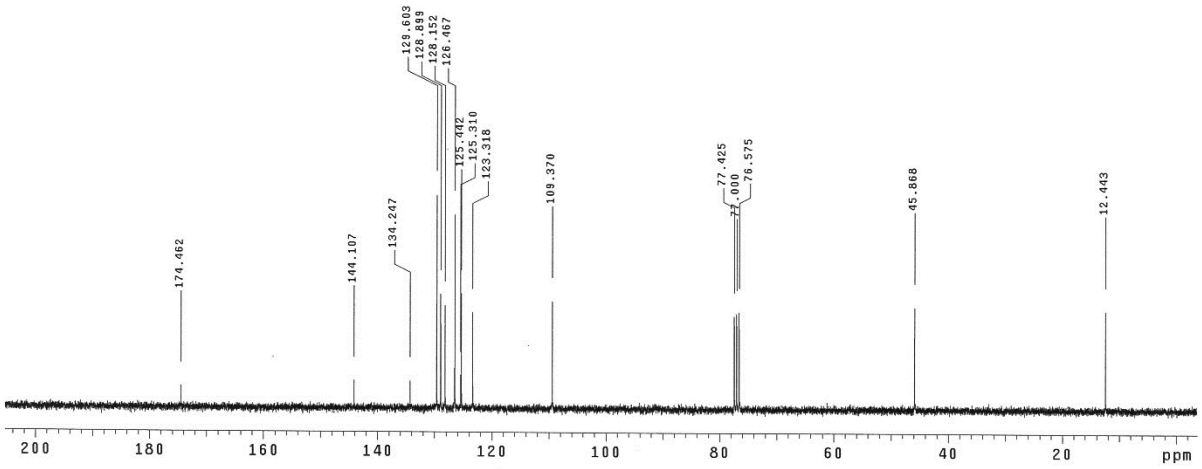


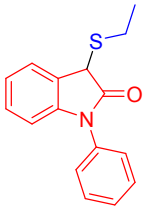
^{1}H NMR of **3m**
(300 MHz, $CDCl_3$)



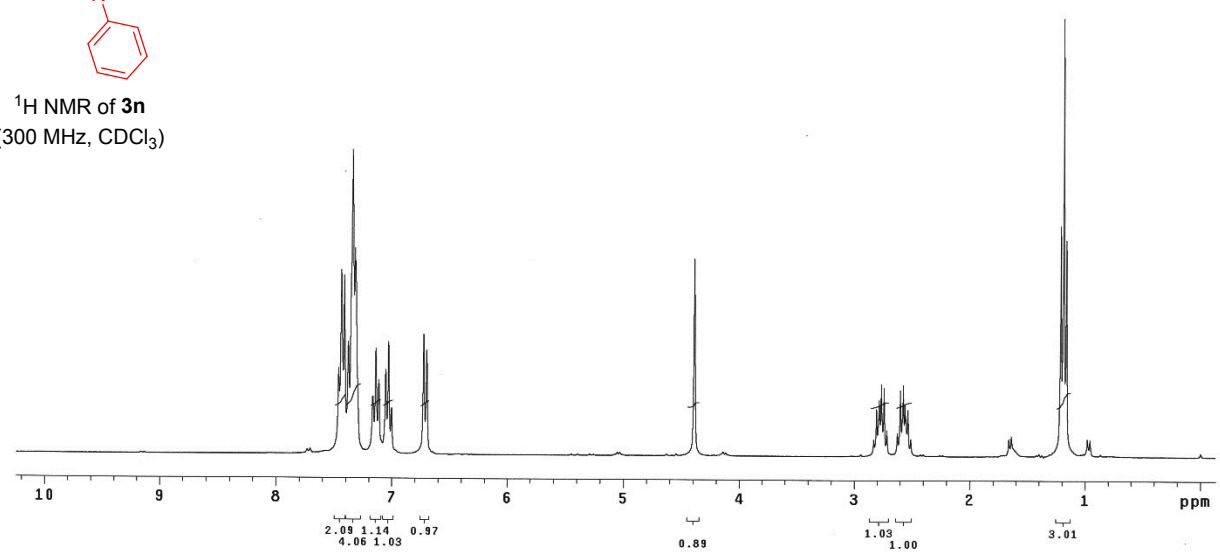


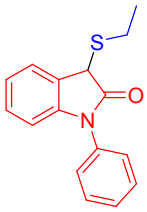
^{13}C NMR of **3m**
(75 MHz, $CDCl_3$)



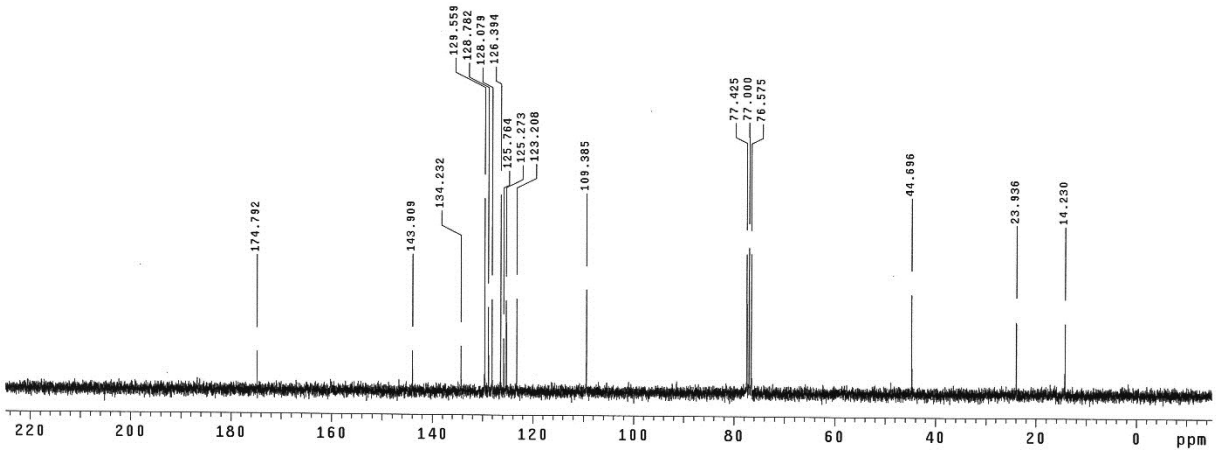


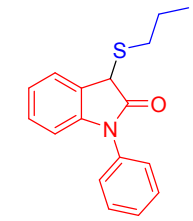
^{1}H NMR of **3n**
(300 MHz, $CDCl_3$)



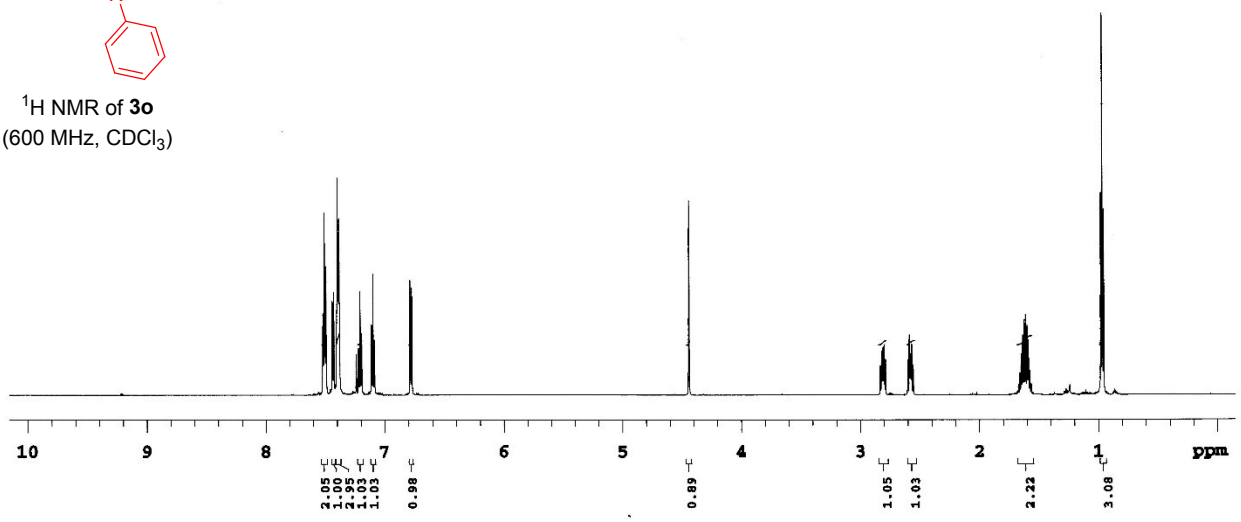


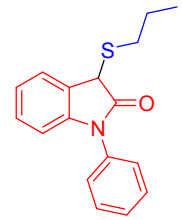
^{13}C NMR of **3n**
(75 MHz, $CDCl_3$)



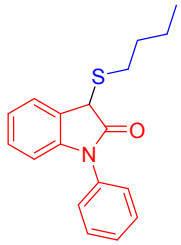


^{1}H NMR of **3o**
(600 MHz, $CDCl_3$)

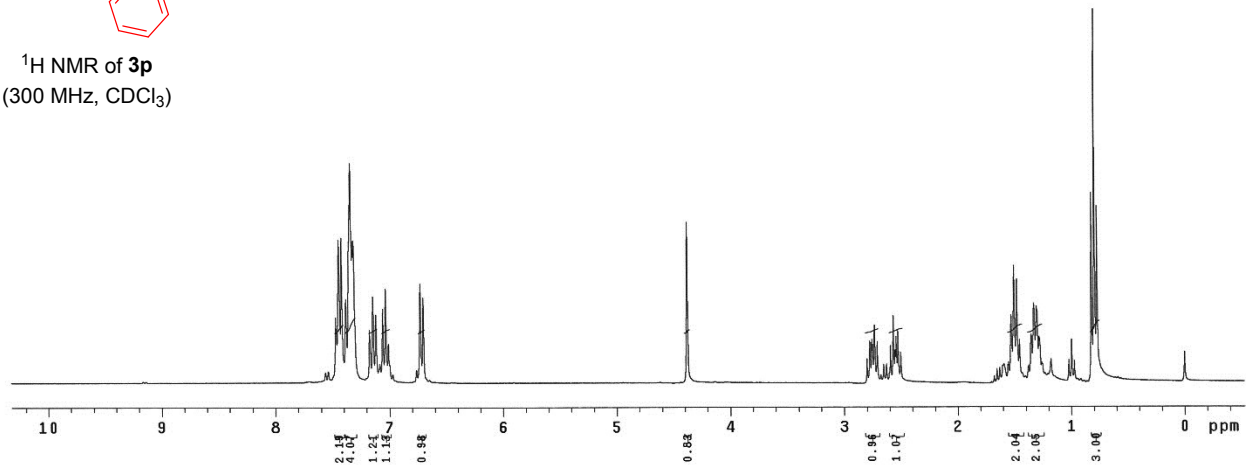


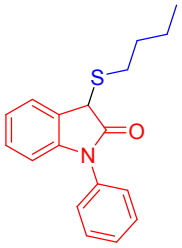


^{13}C NMR of **3o**
(150 MHz, $CDCl_3$)

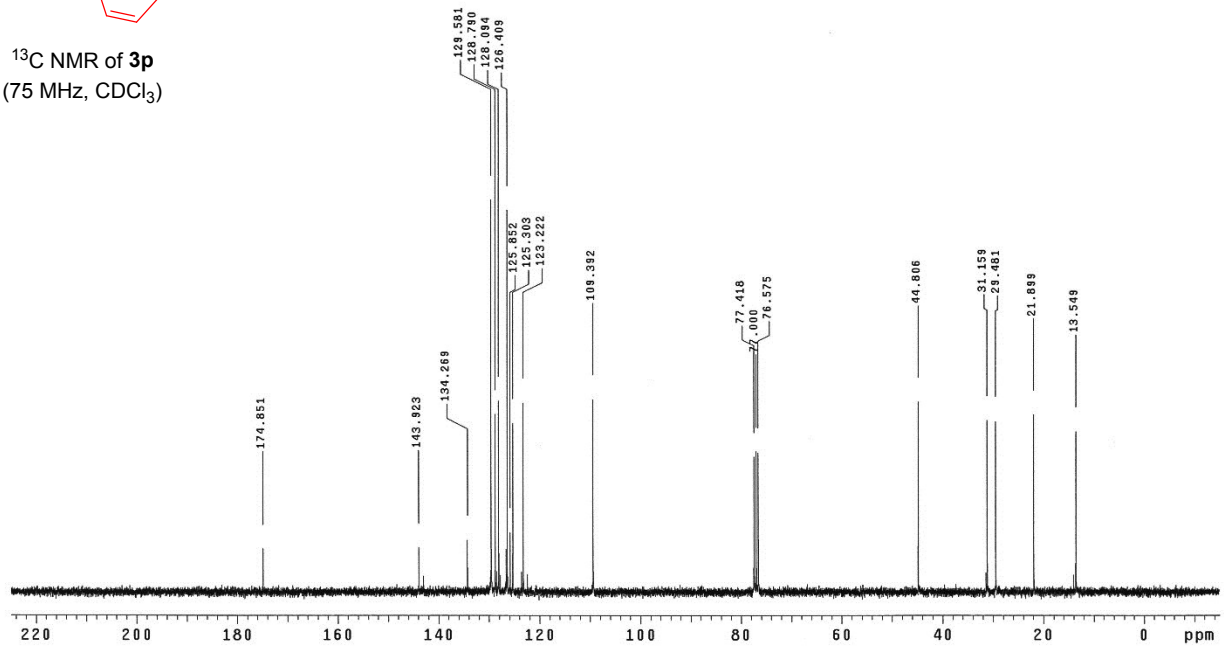


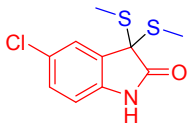
^{1}H NMR of **3p**
(300 MHz, $CDCl_3$)



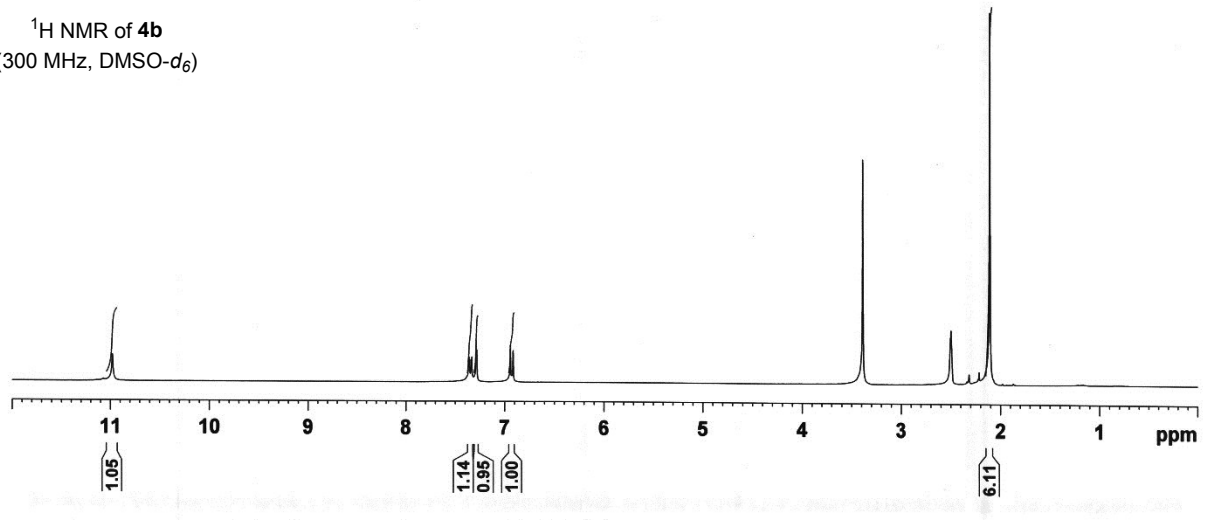


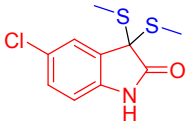
^{13}C NMR of **3p**
(75 MHz, $CDCl_3$)



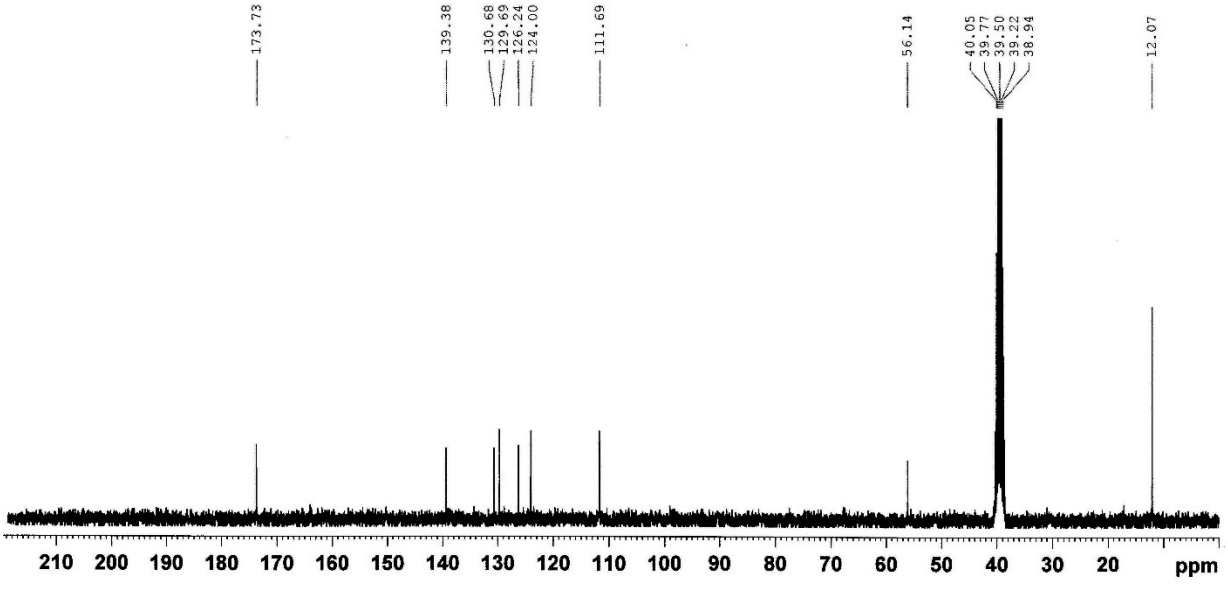


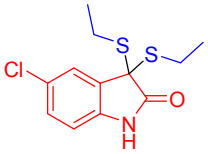
^{1}H NMR of **4b**
(300 MHz, DMSO-d_6)



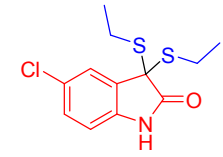


^{13}C NMR of **4b**
(75 MHz, DMSO-d_6)

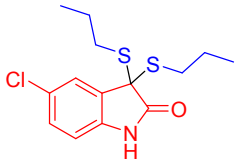




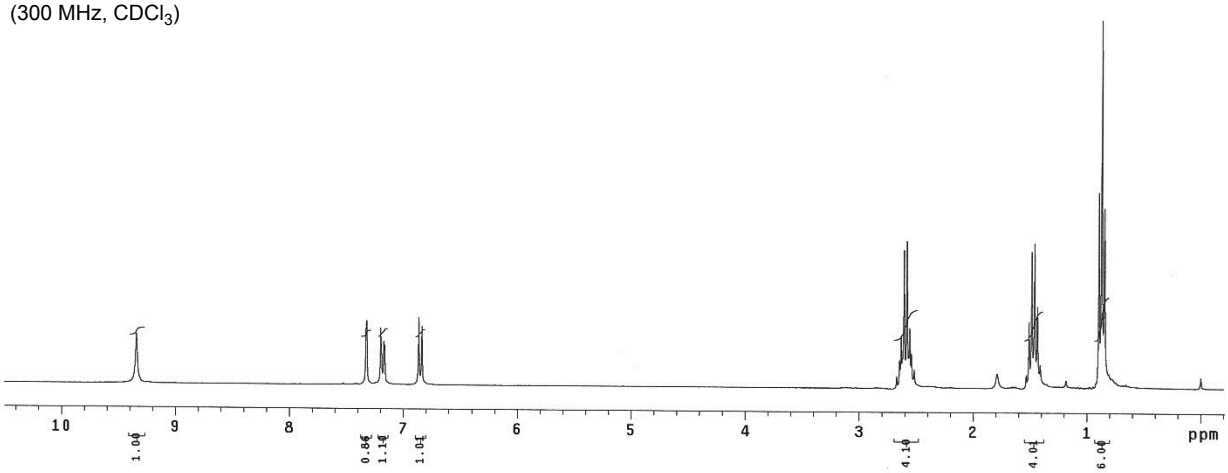
^{1}H NMR of **4c**
(300 MHz, $CDCl_3$)

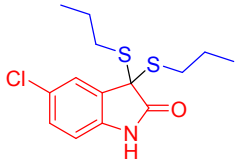


^{13}C NMR of **4c**
(75 MHz, $CDCl_3$)

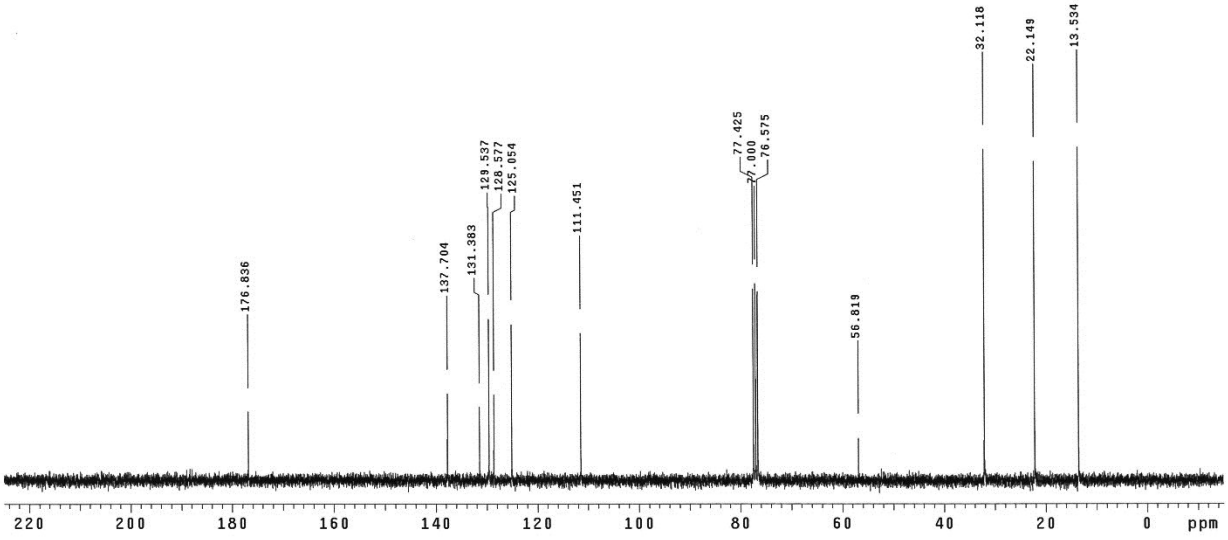


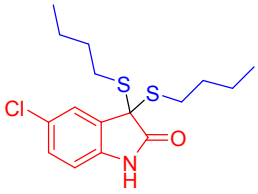
^{1}H NMR of **4d**
(300 MHz, $CDCl_3$)



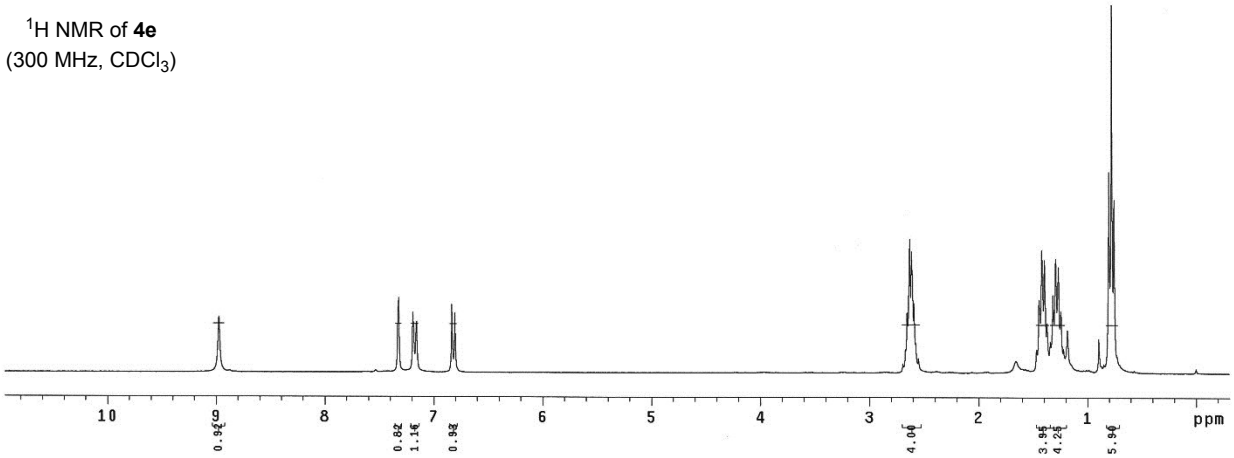


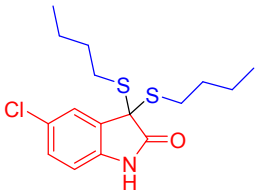
^{13}C NMR of **4d**
(75 MHz, $CDCl_3$)



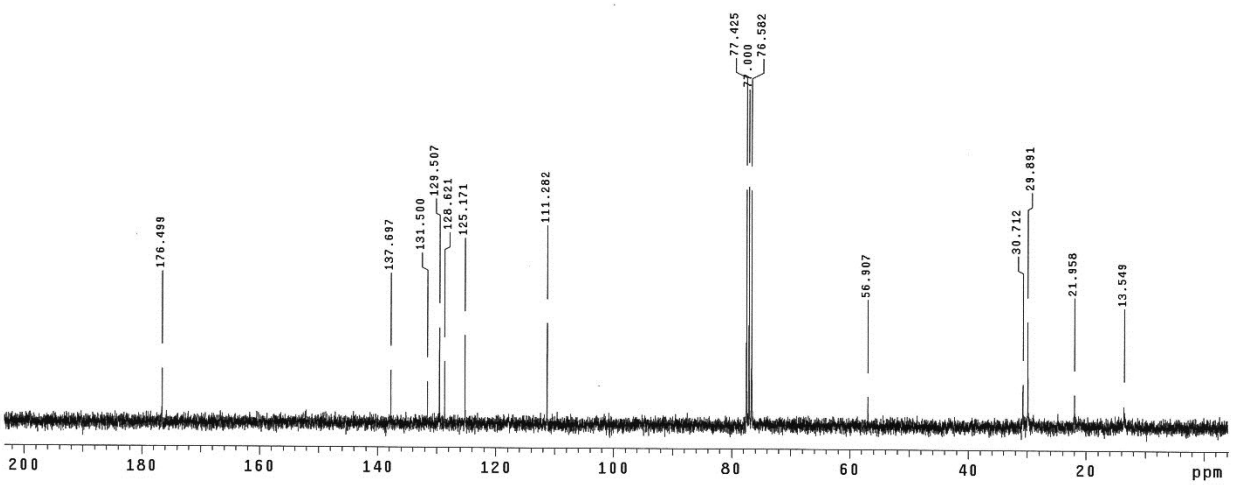


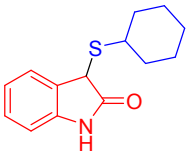
^{1}H NMR of **4e**
(300 MHz, $CDCl_3$)



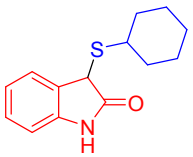


^{13}C NMR of **4e**
(75 MHz, $CDCl_3$)

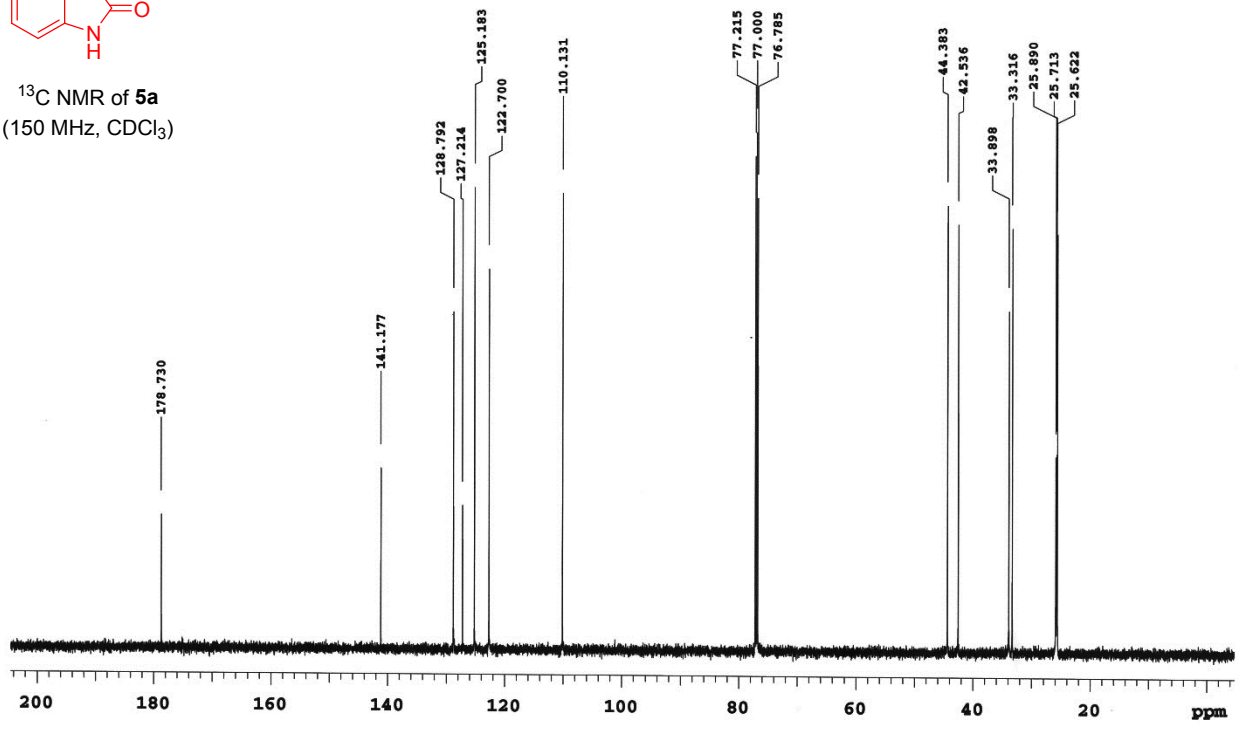


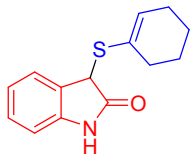


^{1}H NMR of **5a**
(600 MHz, $CDCl_3$)

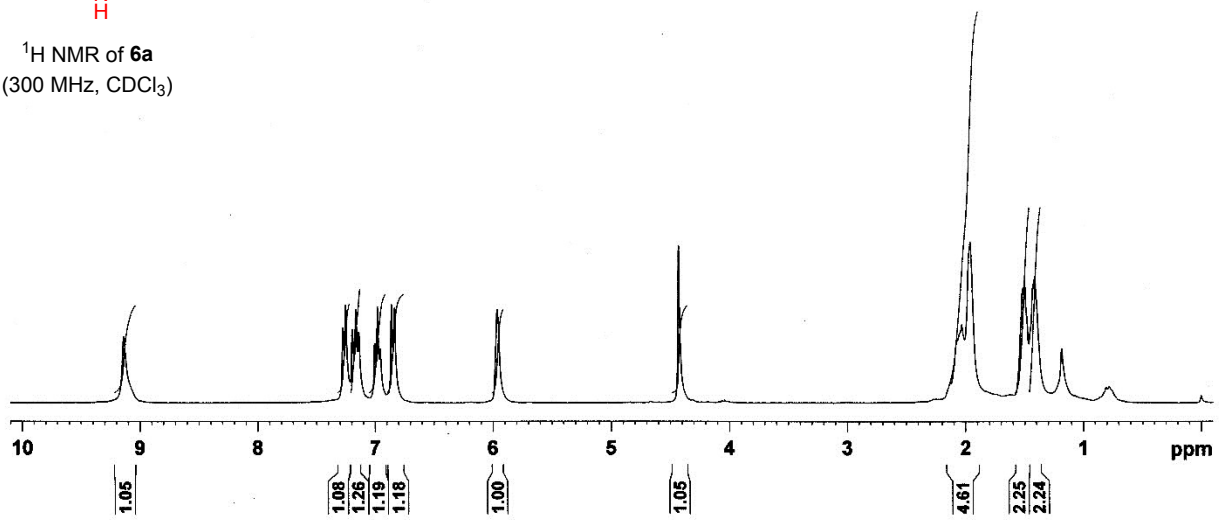


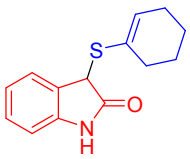
^{13}C NMR of **5a**
(150 MHz, $CDCl_3$)



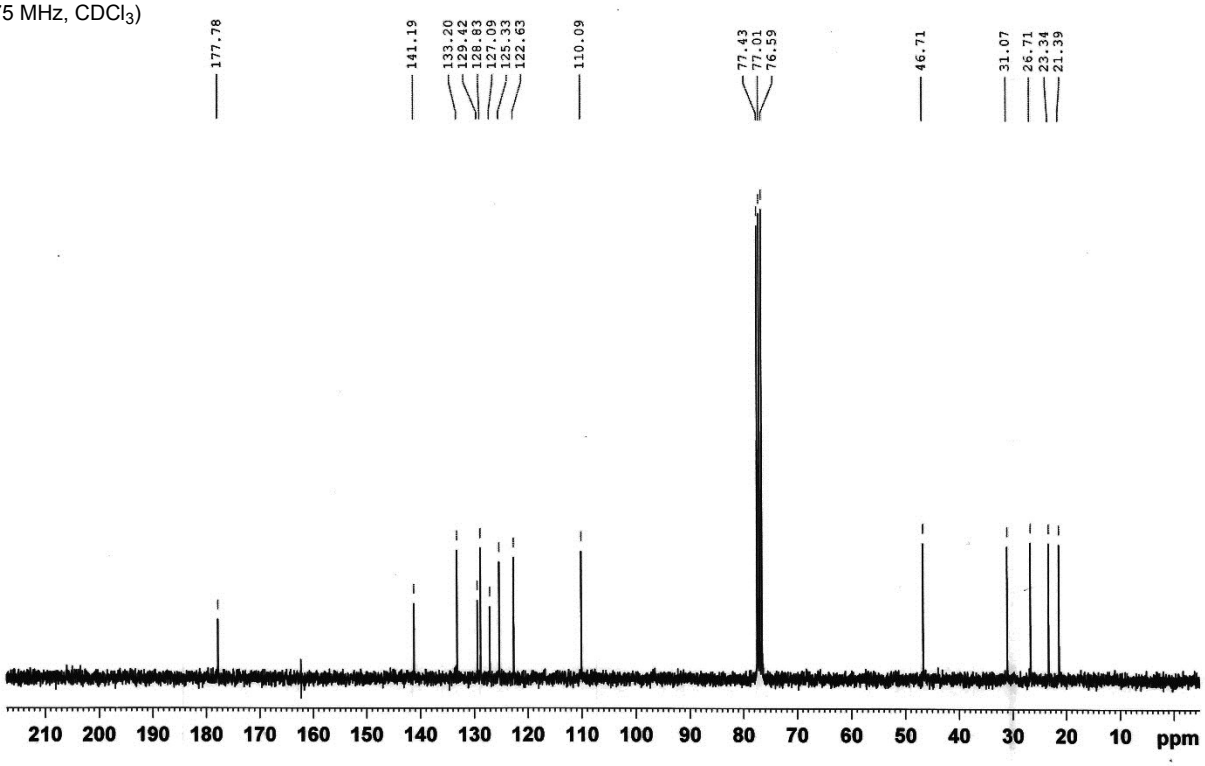


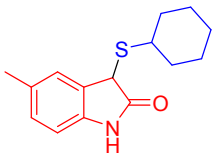
^{1}H NMR of **6a**
(300 MHz, $CDCl_3$)



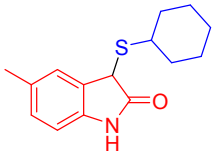


^{13}C NMR of **6a**
(75 MHz, $CDCl_3$)

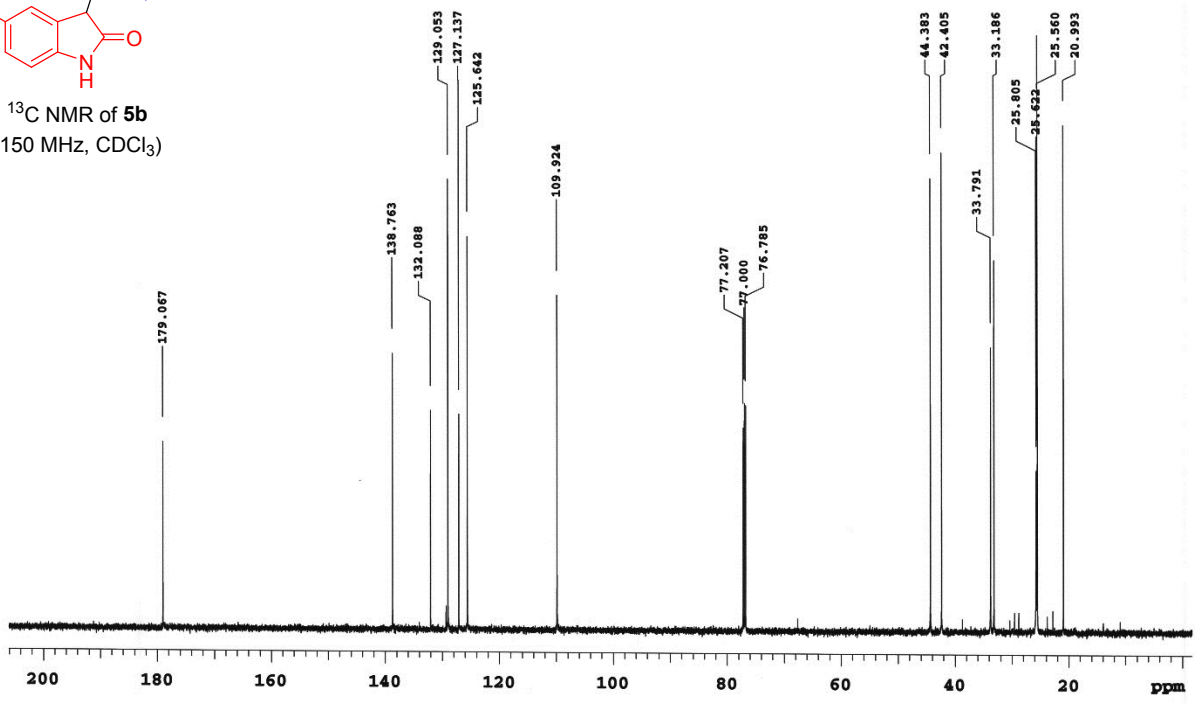


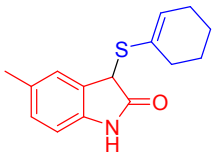


^{1}H NMR of **5b**
(600 MHz, $CDCl_3$)

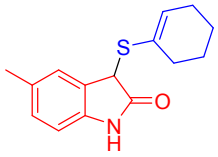


^{13}C NMR of **5b**
(150 MHz, $CDCl_3$)

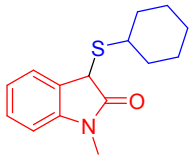




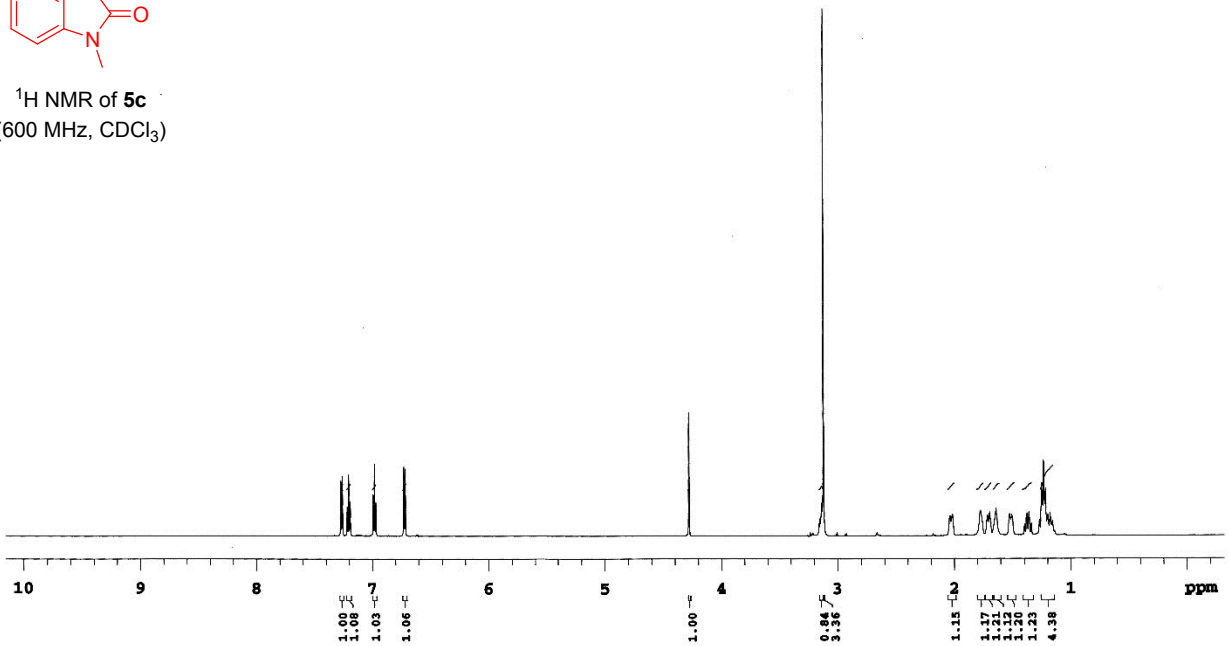
^{1}H NMR of **6b**
(300 MHz, $CDCl_3$)

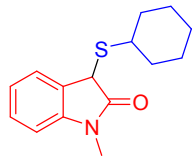


^{13}C NMR of **6b**
(150 MHz, $CDCl_3$)

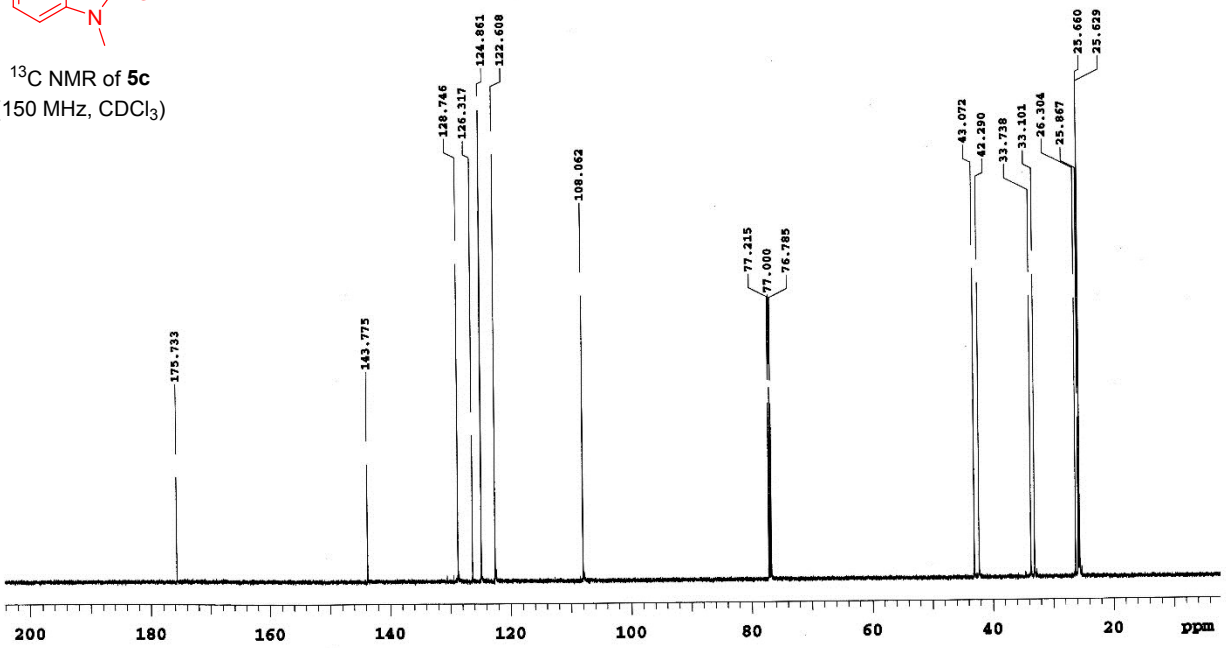


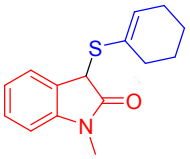
^{1}H NMR of **5c**
(600 MHz, $CDCl_3$)



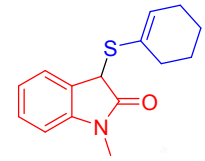


^{13}C NMR of **5c**
(150 MHz, $CDCl_3$)

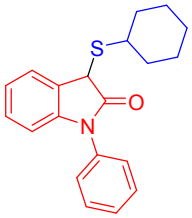




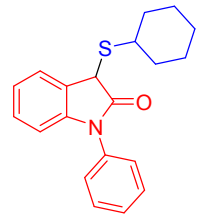
^{1}H NMR of **6c**
(300 MHz, $CDCl_3$)



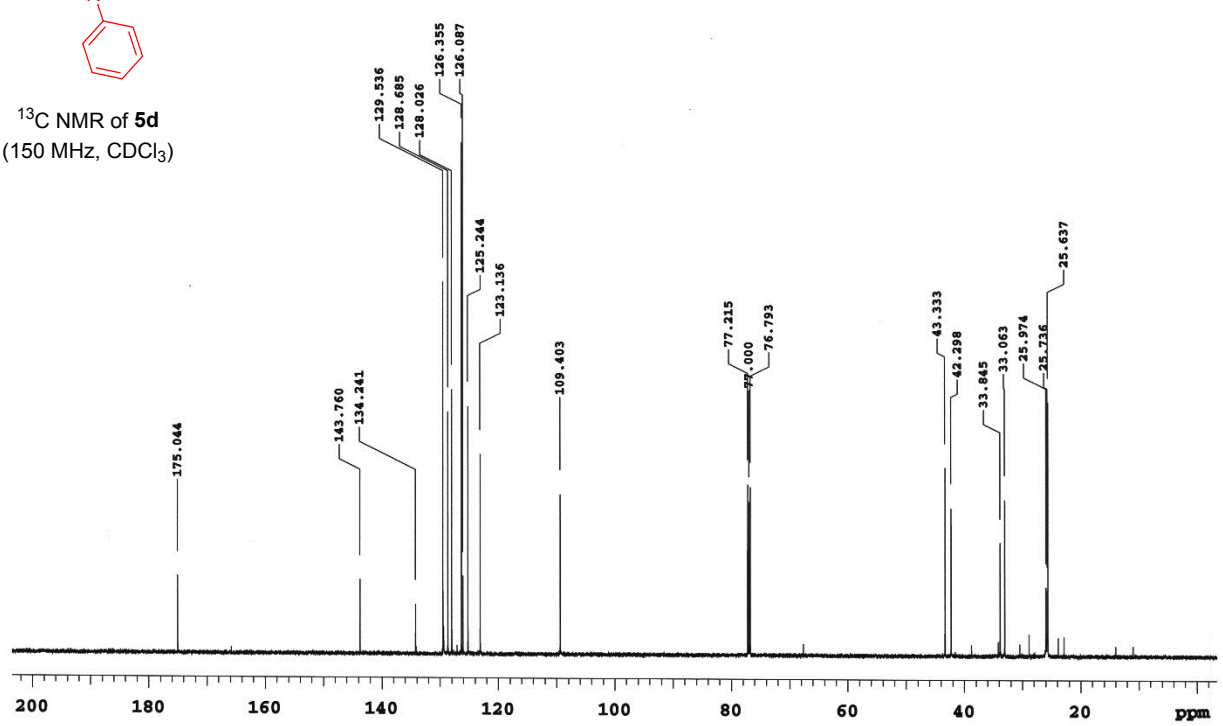
^{13}C NMR of **6c**
(150 MHz, $CDCl_3$)

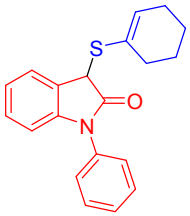


^{1}H NMR of **5d**
(600 MHz, $CDCl_3$)

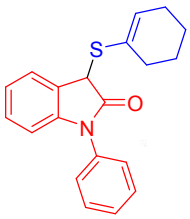


^{13}C NMR of **5d**
(150 MHz, $CDCl_3$)

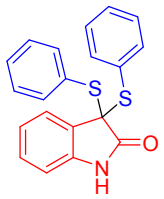




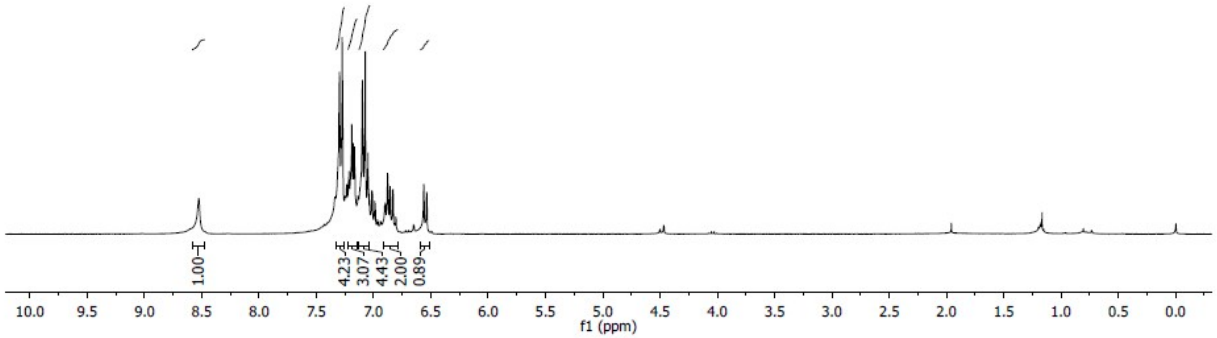
^{1}H NMR of **6d**
(600 MHz, $CDCl_3$)

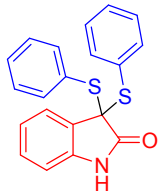


^{13}C NMR of **6d**
(75 MHz, $CDCl_3$)

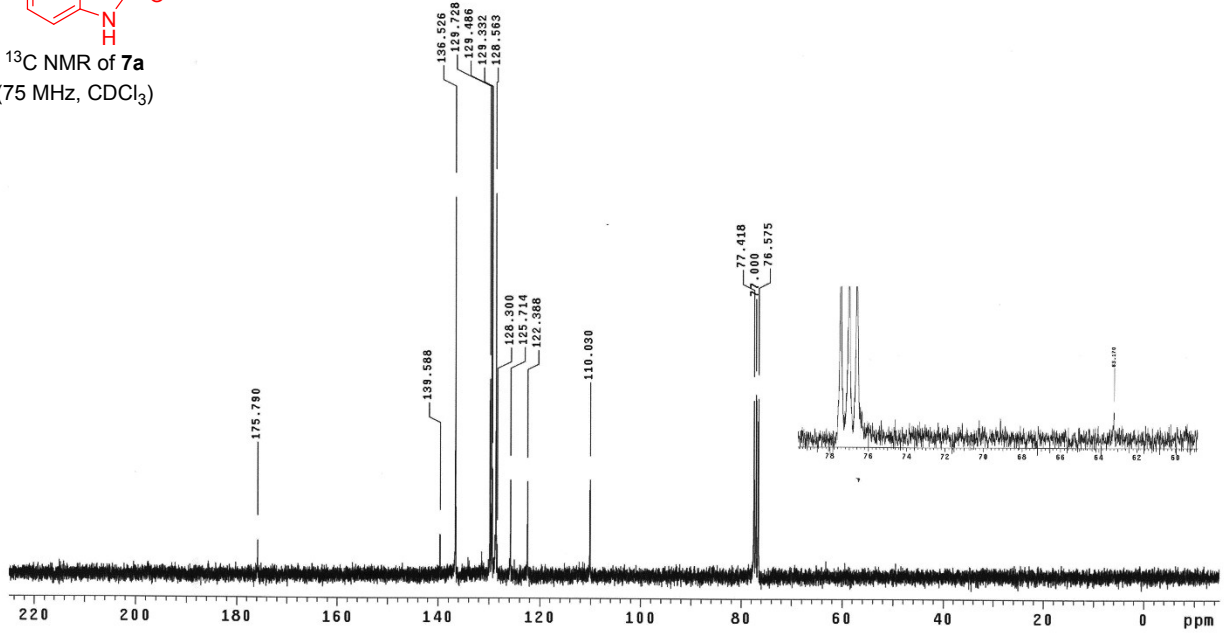


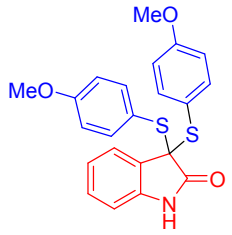
^{1}H NMR of **7a**
(300 MHz, $CDCl_3$)



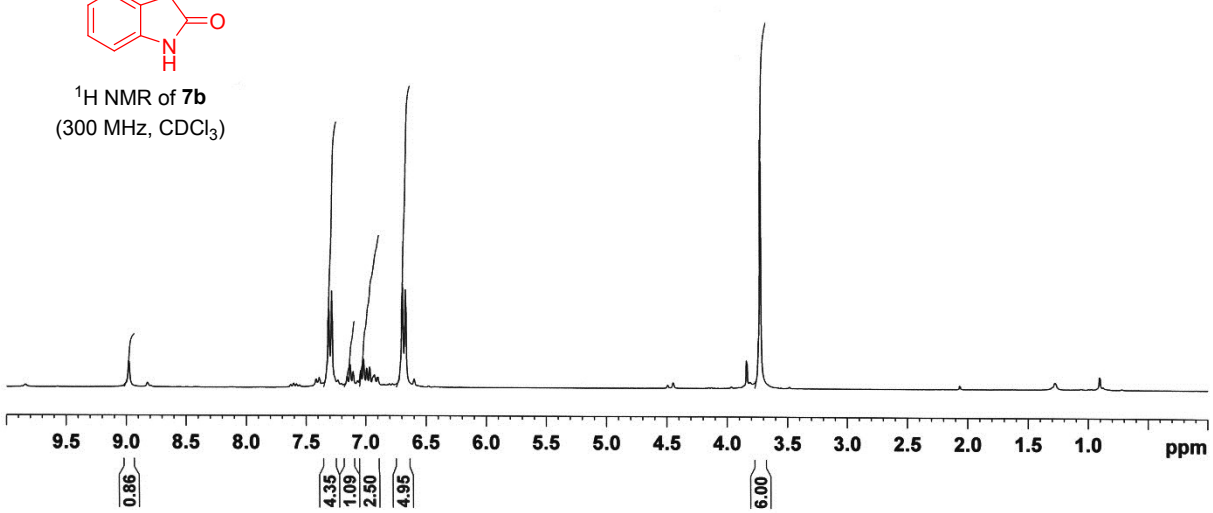


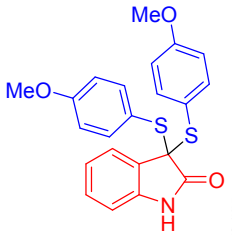
^{13}C NMR of **7a**
(75 MHz, $CDCl_3$)



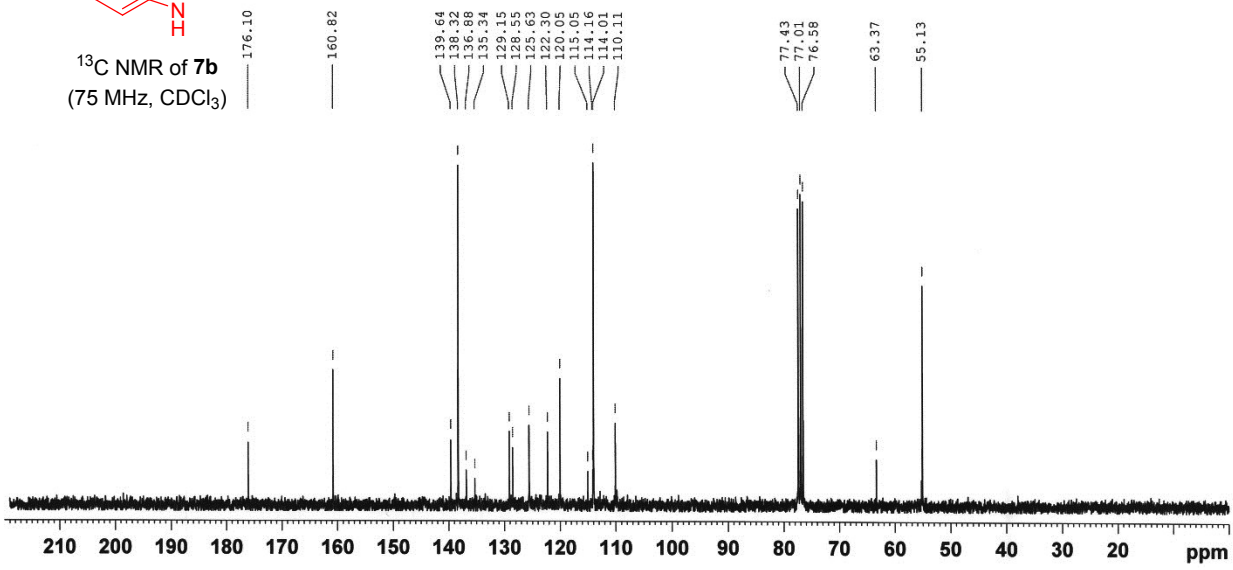


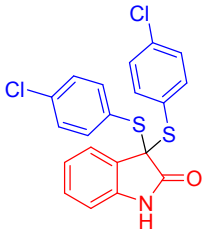
^{1}H NMR of **7b**
(300 MHz, $CDCl_3$)



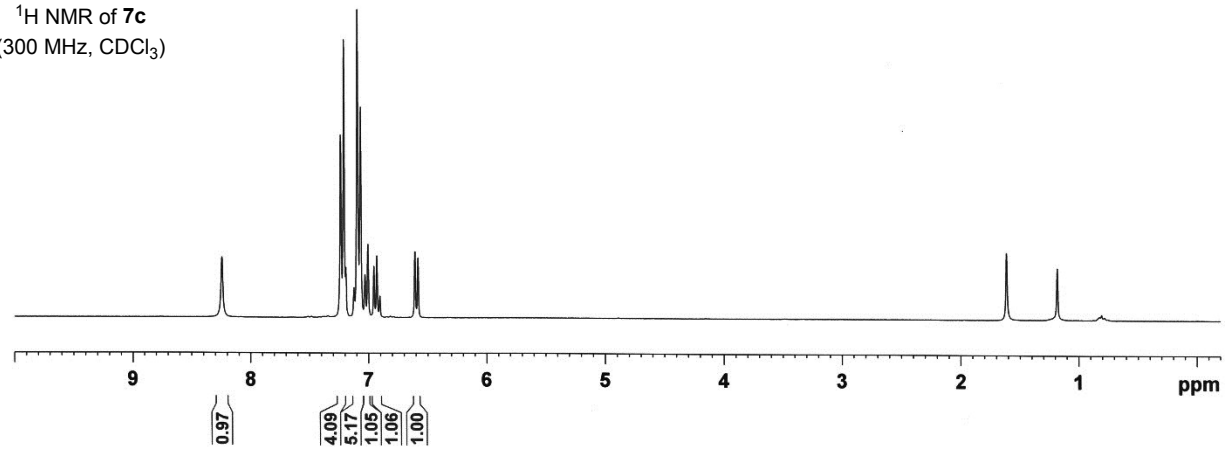


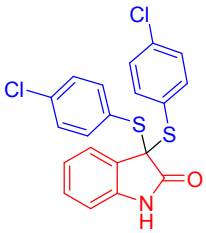
^{13}C NMR of **7b**
(75 MHz, $CDCl_3$)



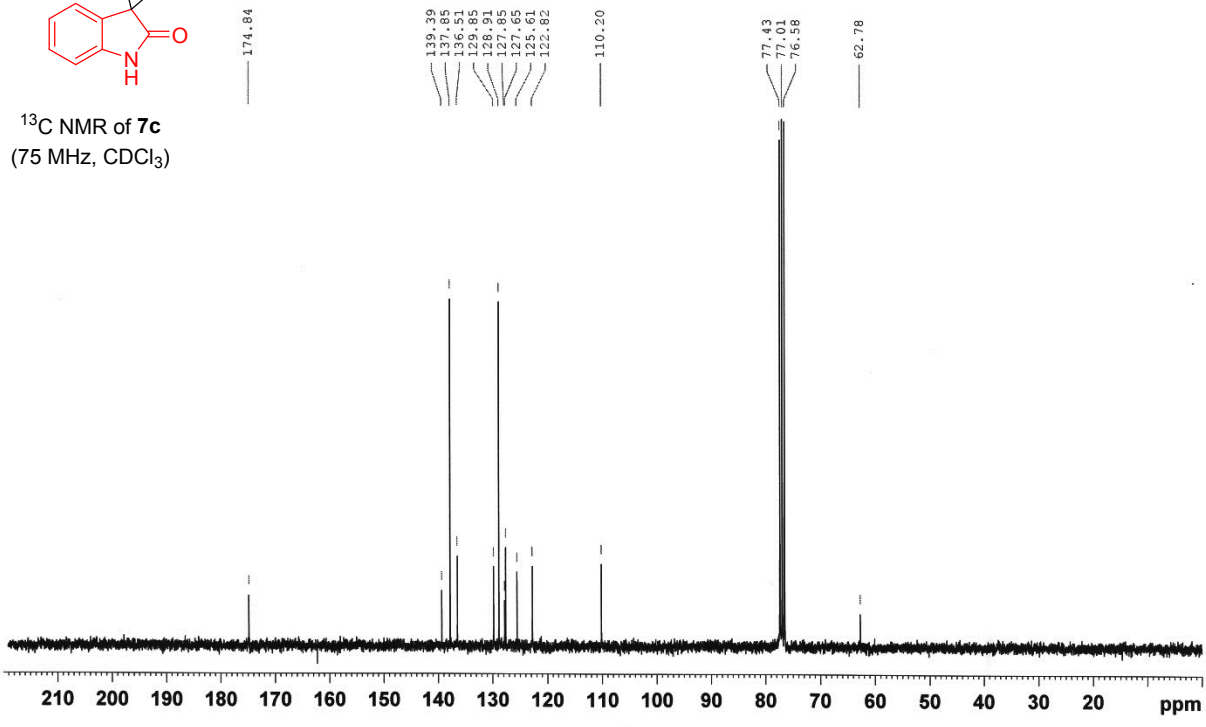


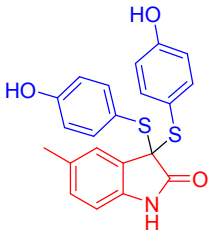
^{1}H NMR of **7c**
(300 MHz, $CDCl_3$)



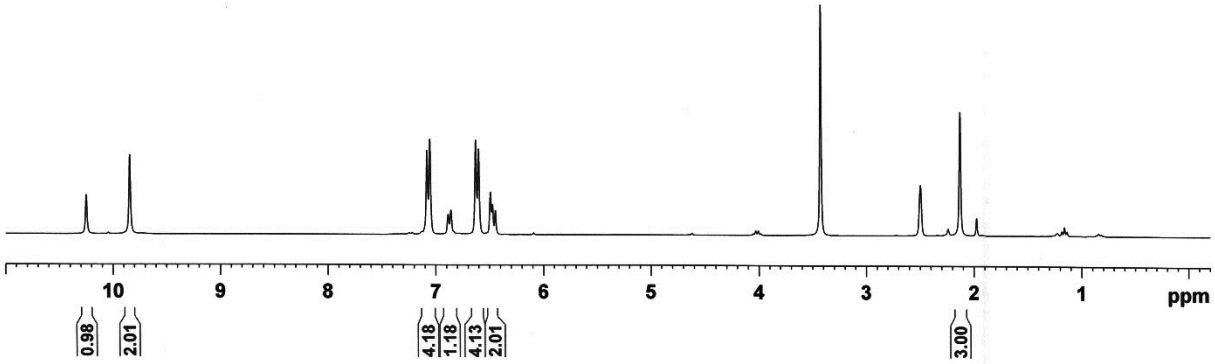


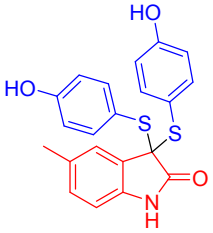
^{13}C NMR of **7c**
(75 MHz, $CDCl_3$)



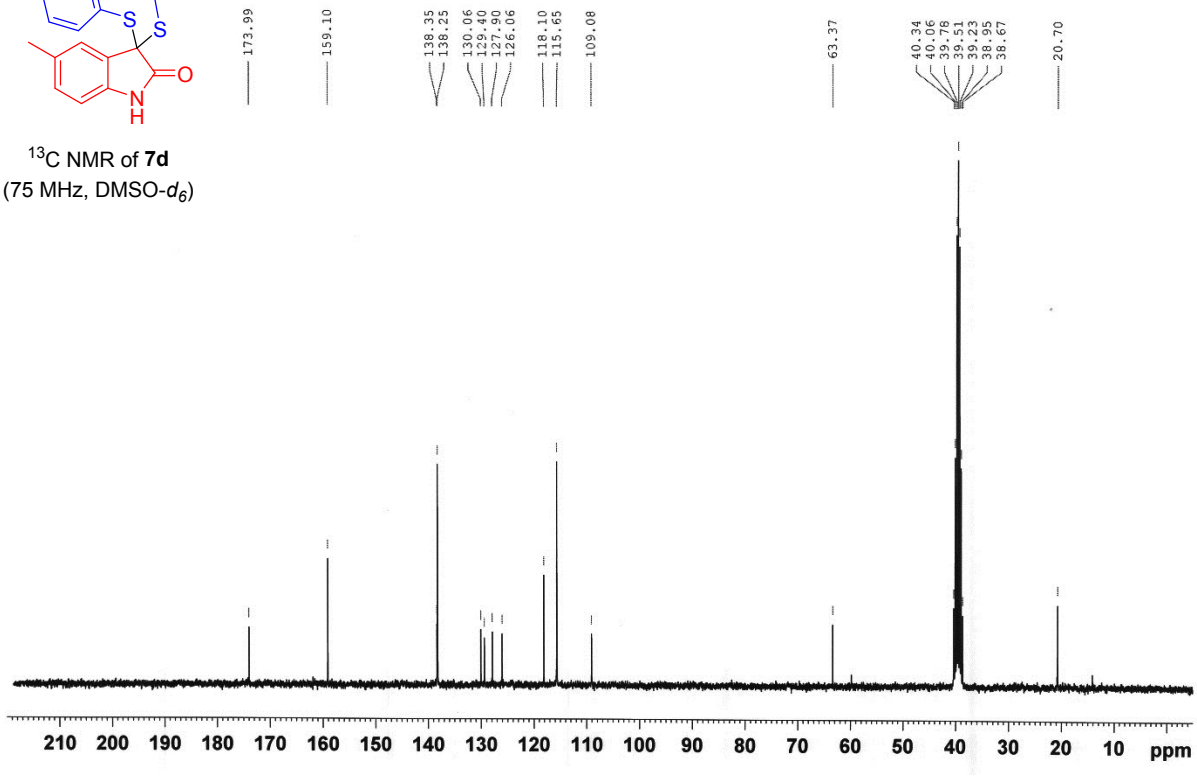


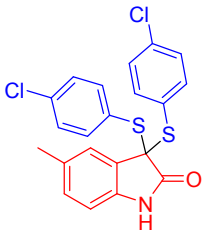
^{1}H NMR of **7d**
(300 MHz, DMSO-d_6)



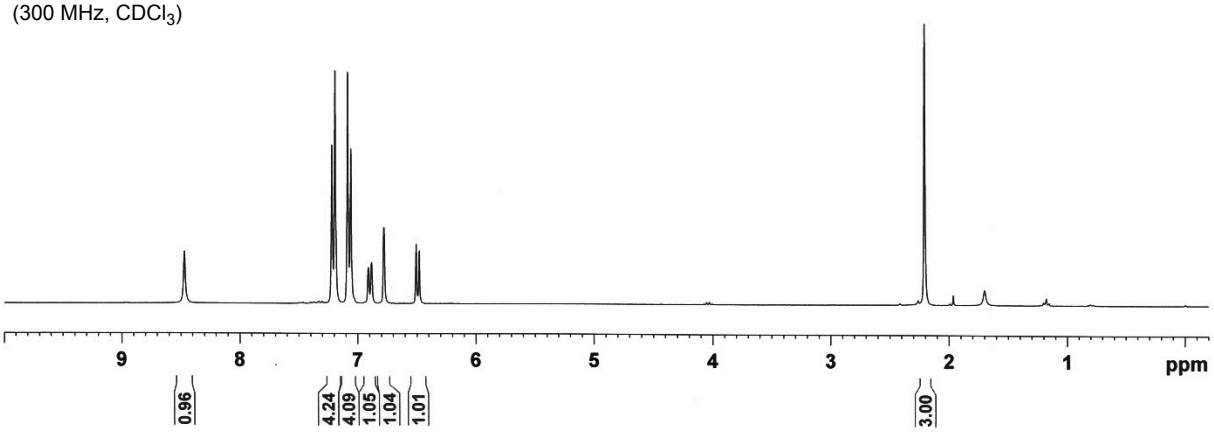


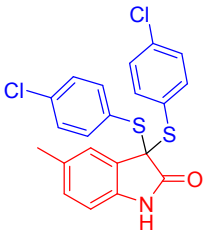
^{13}C NMR of **7d**
(75 MHz, DMSO-d_6)



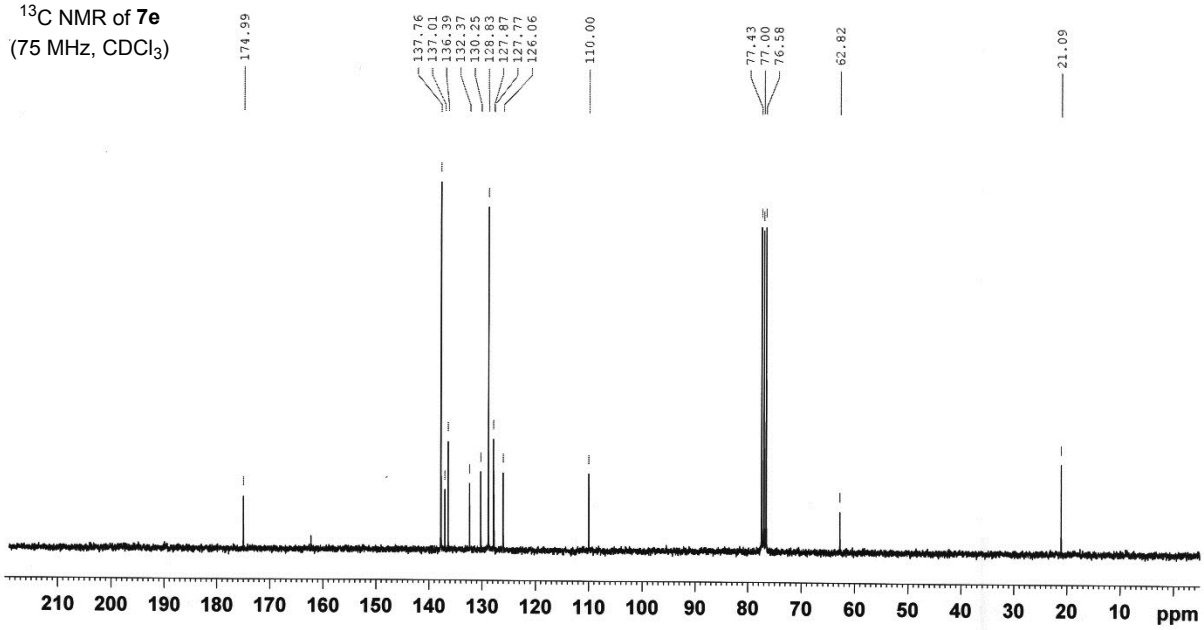


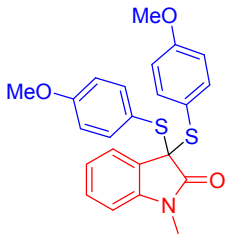
^{1}H NMR of **7e**
(300 MHz, $CDCl_3$)



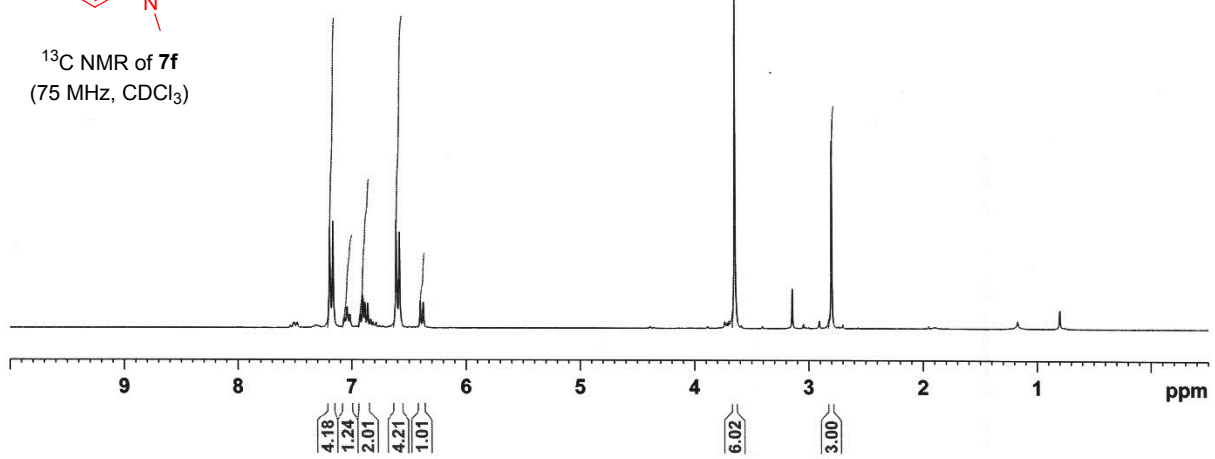


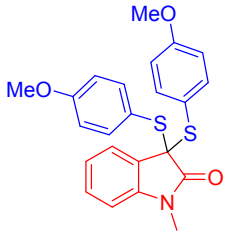
^{13}C NMR of **7e**
(75 MHz, $CDCl_3$)



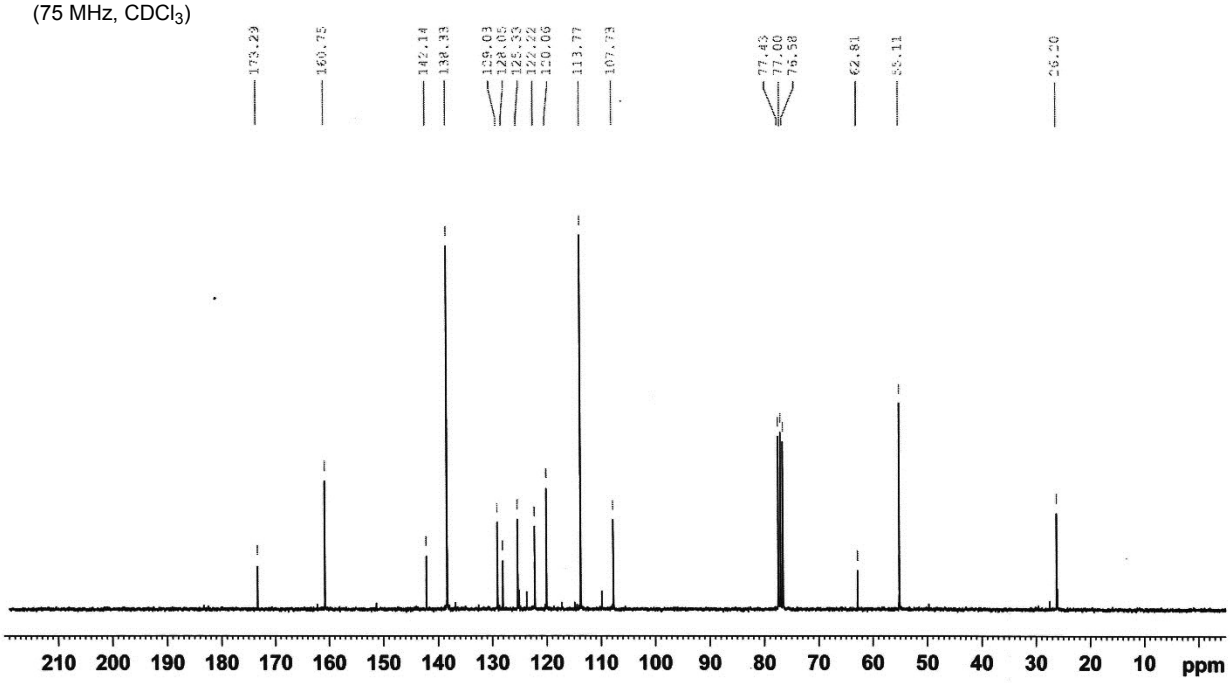


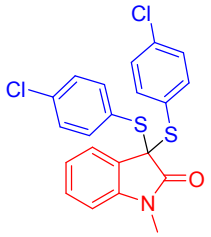
^{13}C NMR of **7f**
(75 MHz, $CDCl_3$)



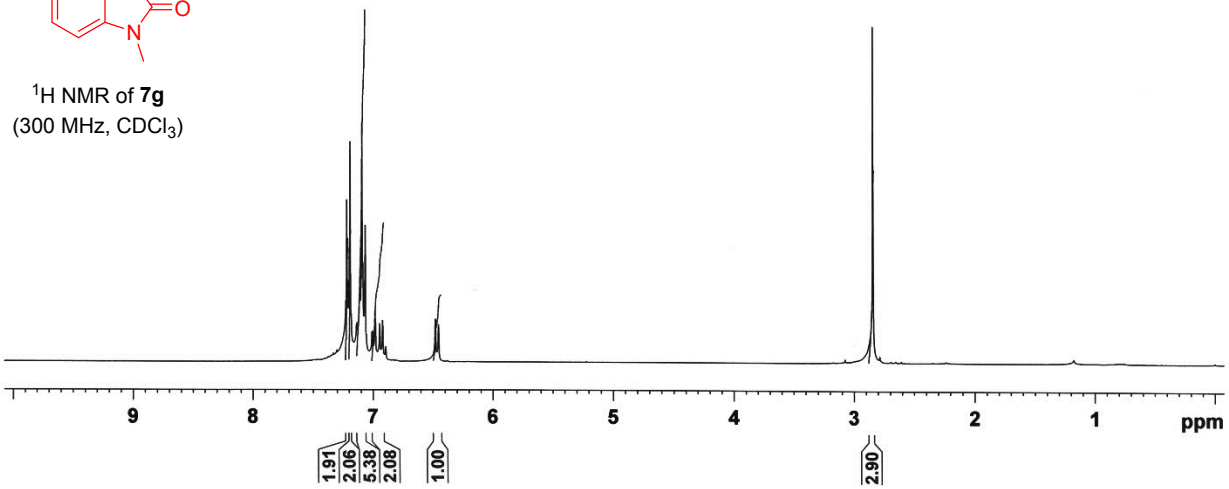


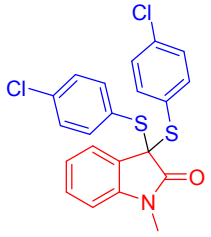
^{13}C NMR of **7f**
(75 MHz, $CDCl_3$)



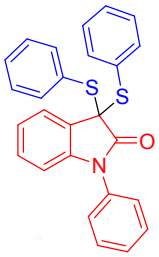


^{1}H NMR of **7g**
(300 MHz, $CDCl_3$)

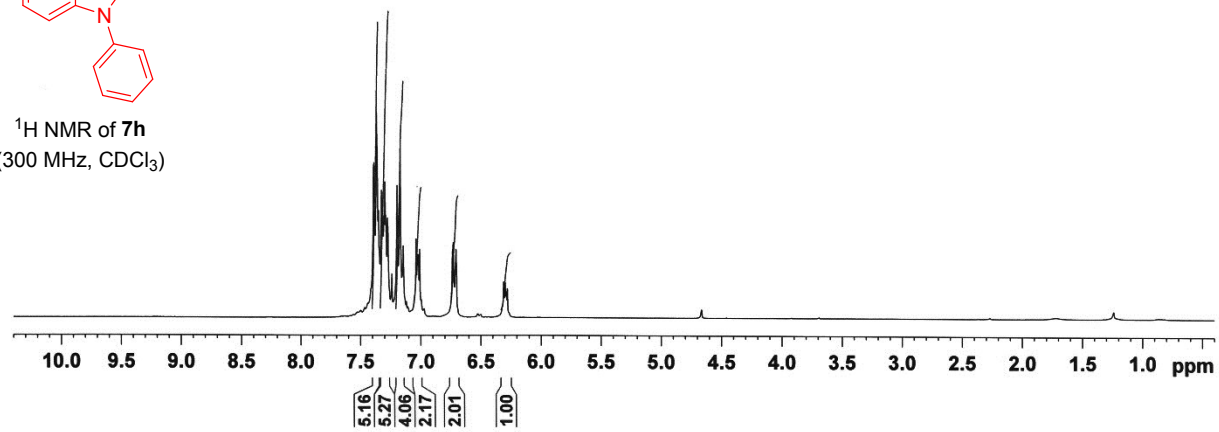


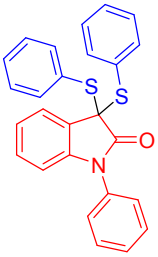


^{13}C NMR of **7g**
(75 MHz, $CDCl_3$)

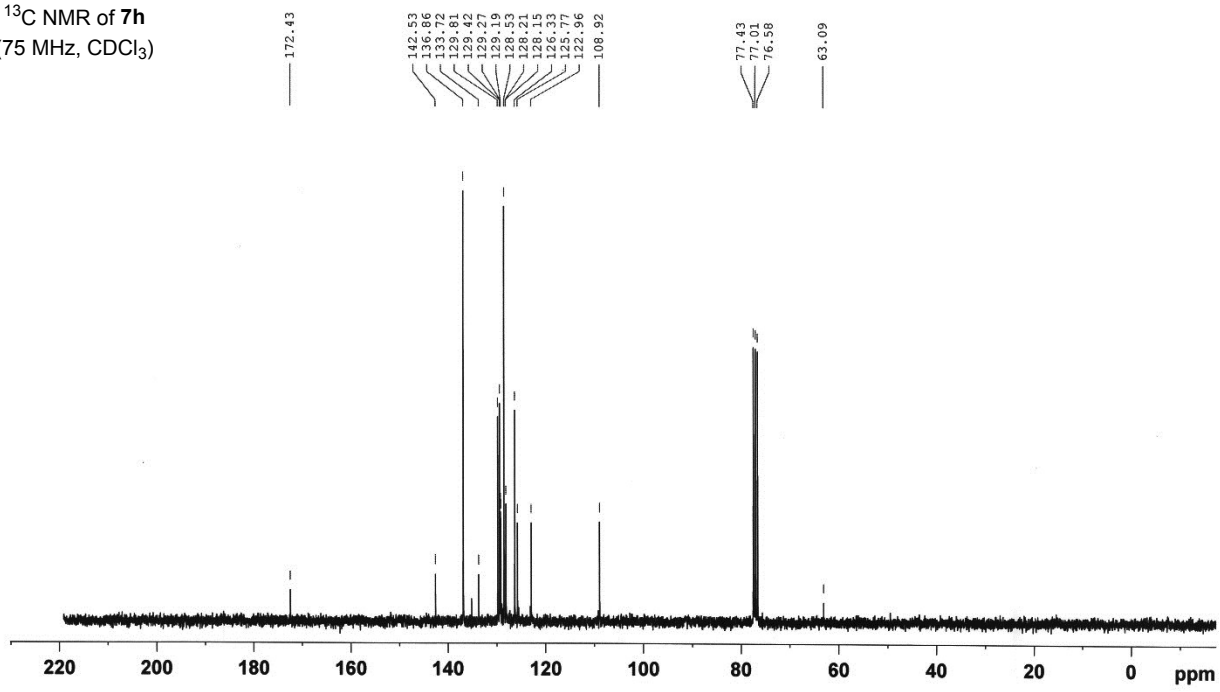


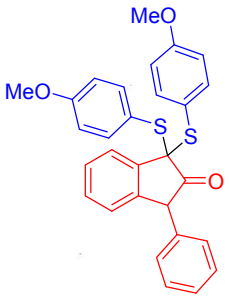
^{1}H NMR of **7h**
(300 MHz, $CDCl_3$)



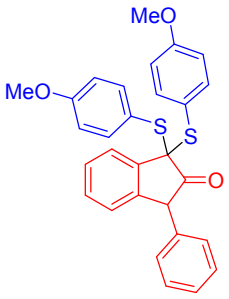


^{13}C NMR of **7h**
(75 MHz, $CDCl_3$)

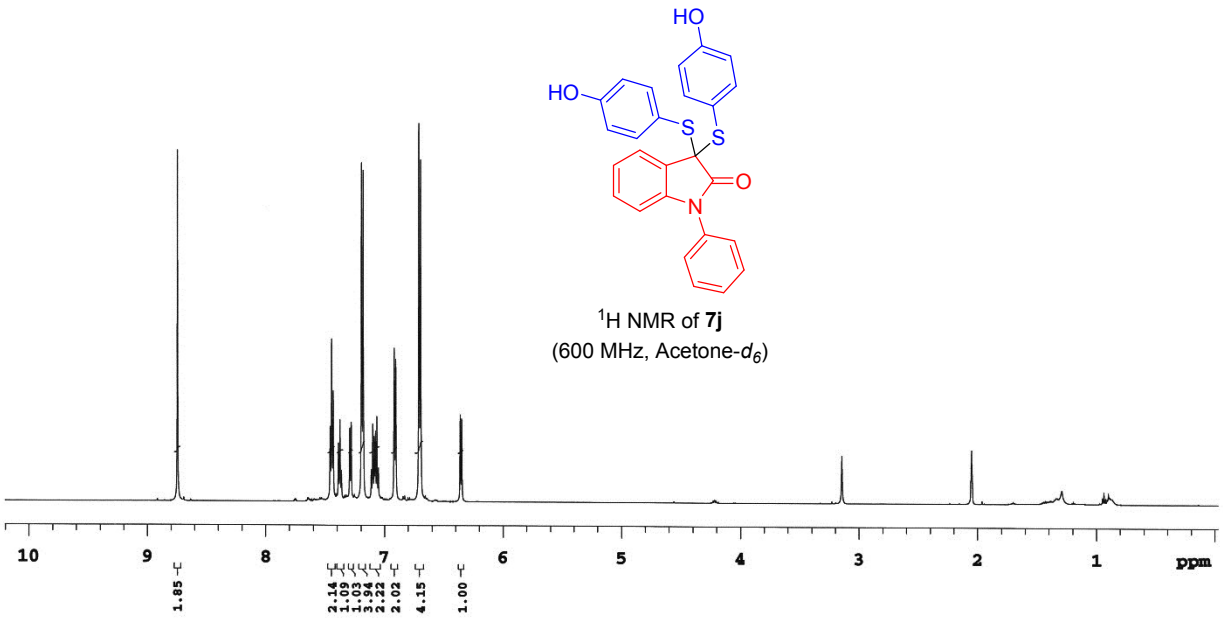




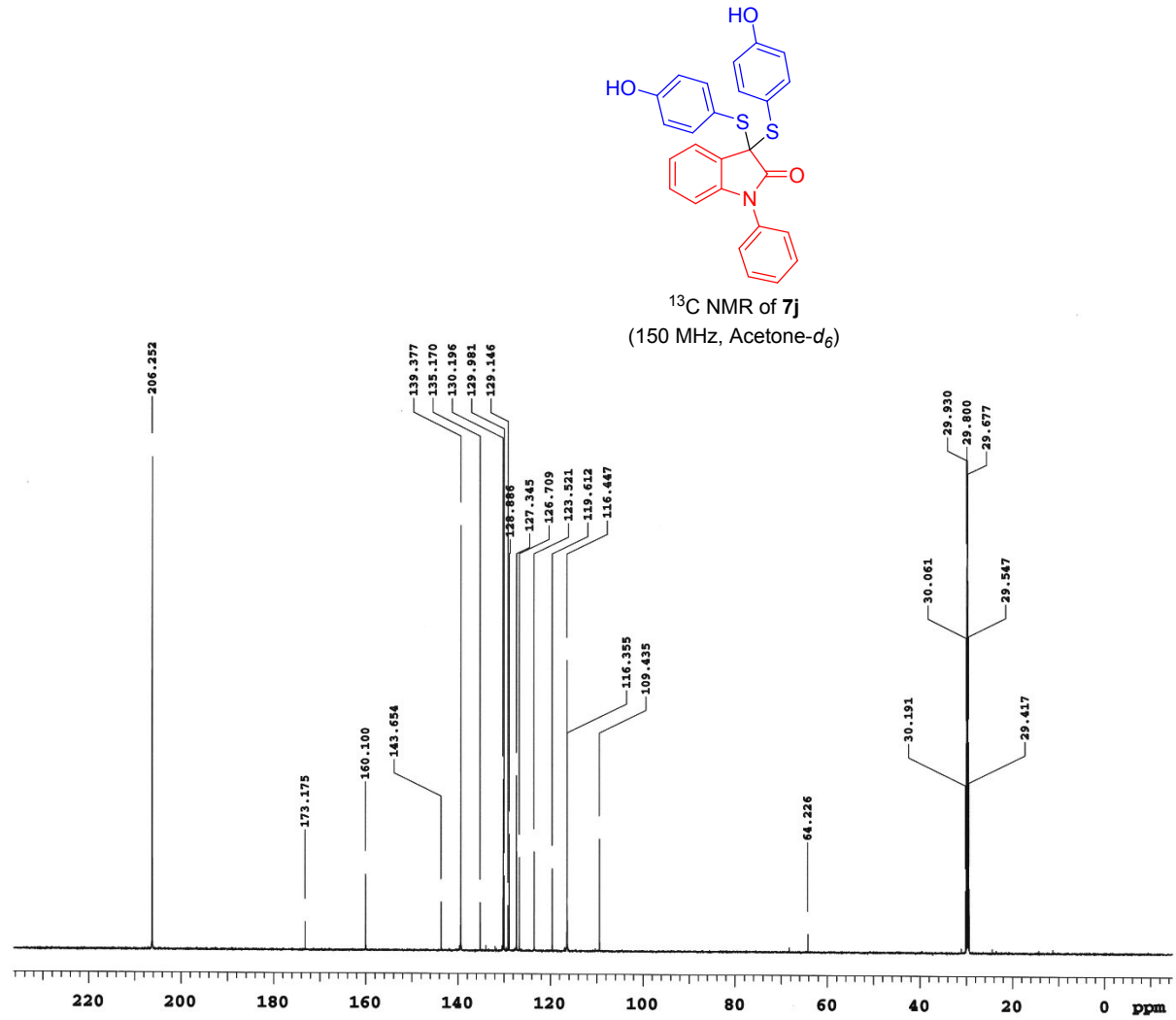
^{1}H NMR of **7i**
(300 MHz, $CDCl_3$)



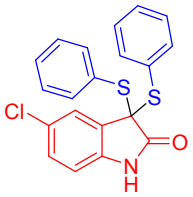
^{13}C NMR of **7i**
(75 MHz, $CDCl_3$)



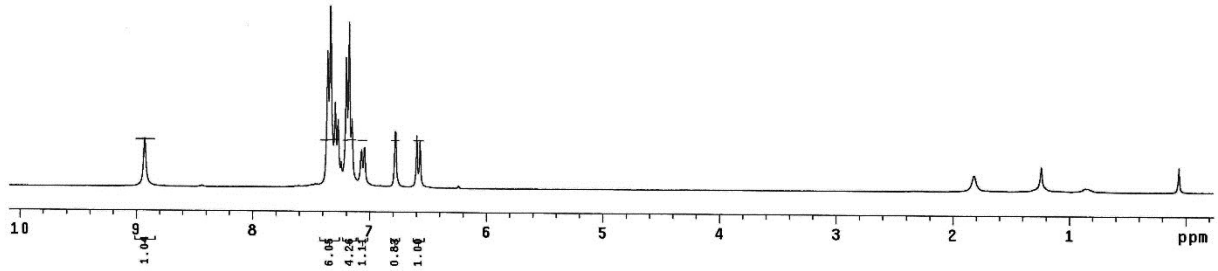
^{1}H NMR of **7j**
(600 MHz, Acetone-d_6)

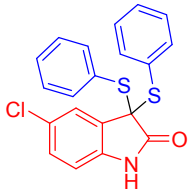


^{13}C NMR of **7j**
(150 MHz, Acetone-d_6)

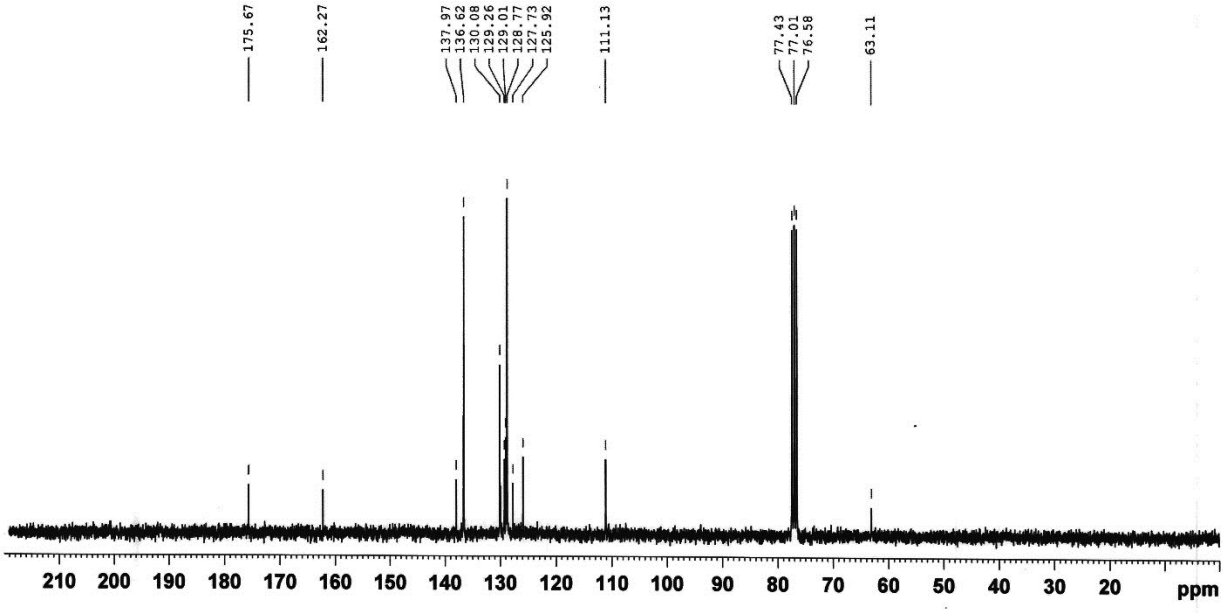


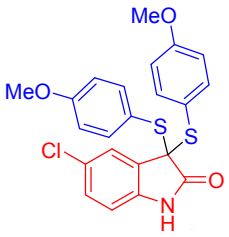
^{1}H NMR of **7k**
(300 MHz, $CDCl_3$)



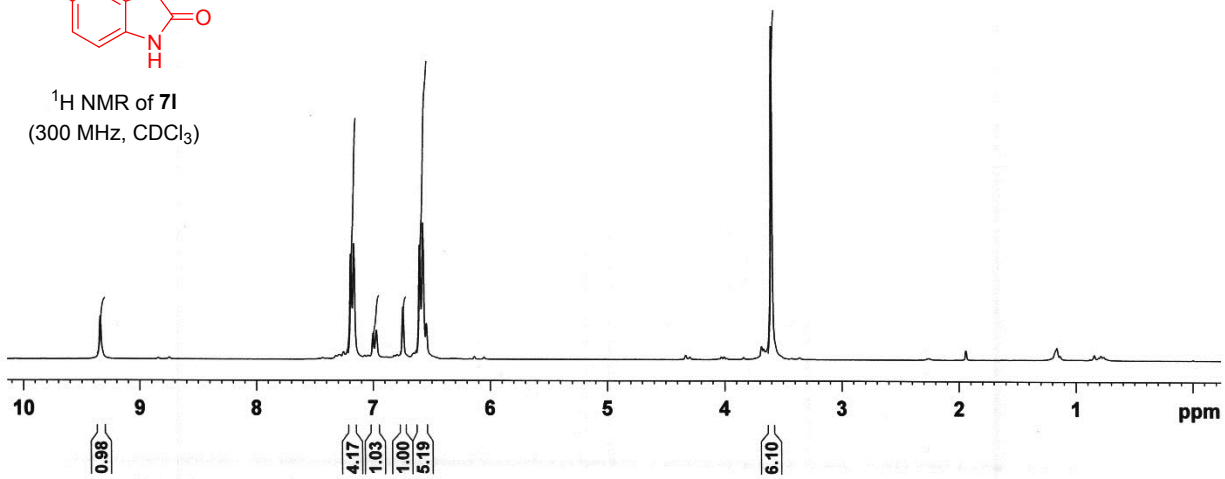


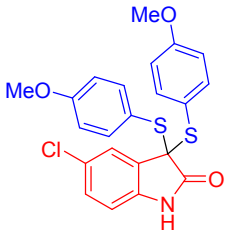
^{13}C NMR of **7k**
(75 MHz, $CDCl_3$)



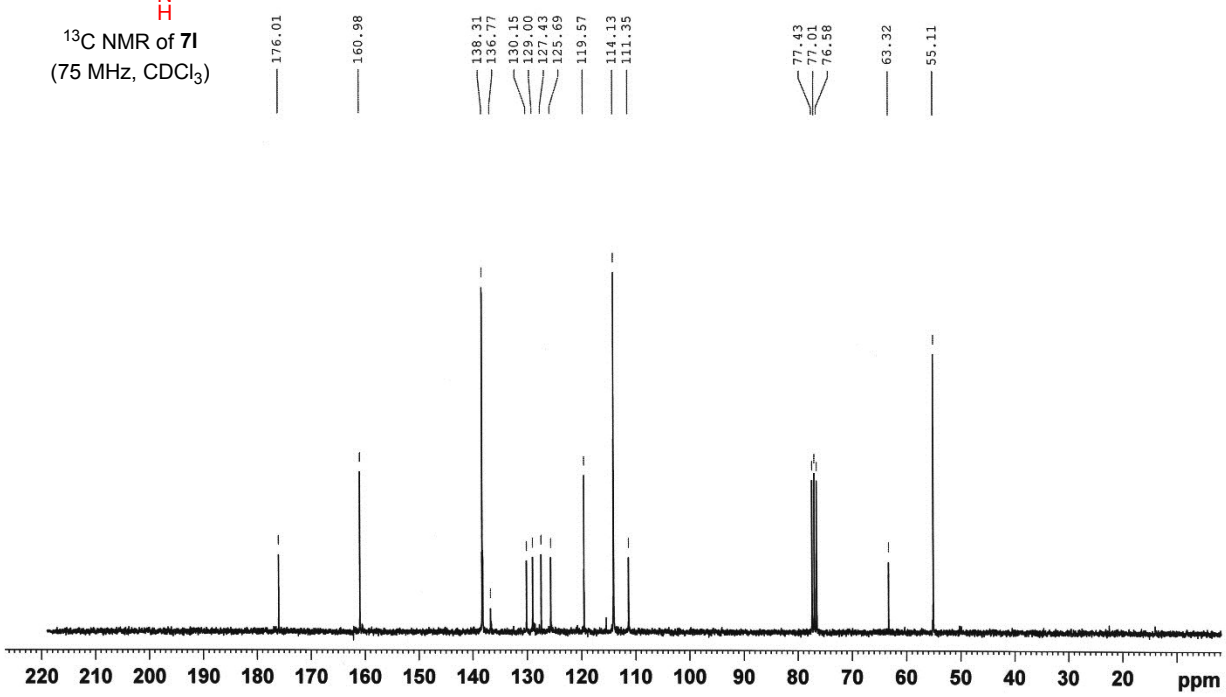


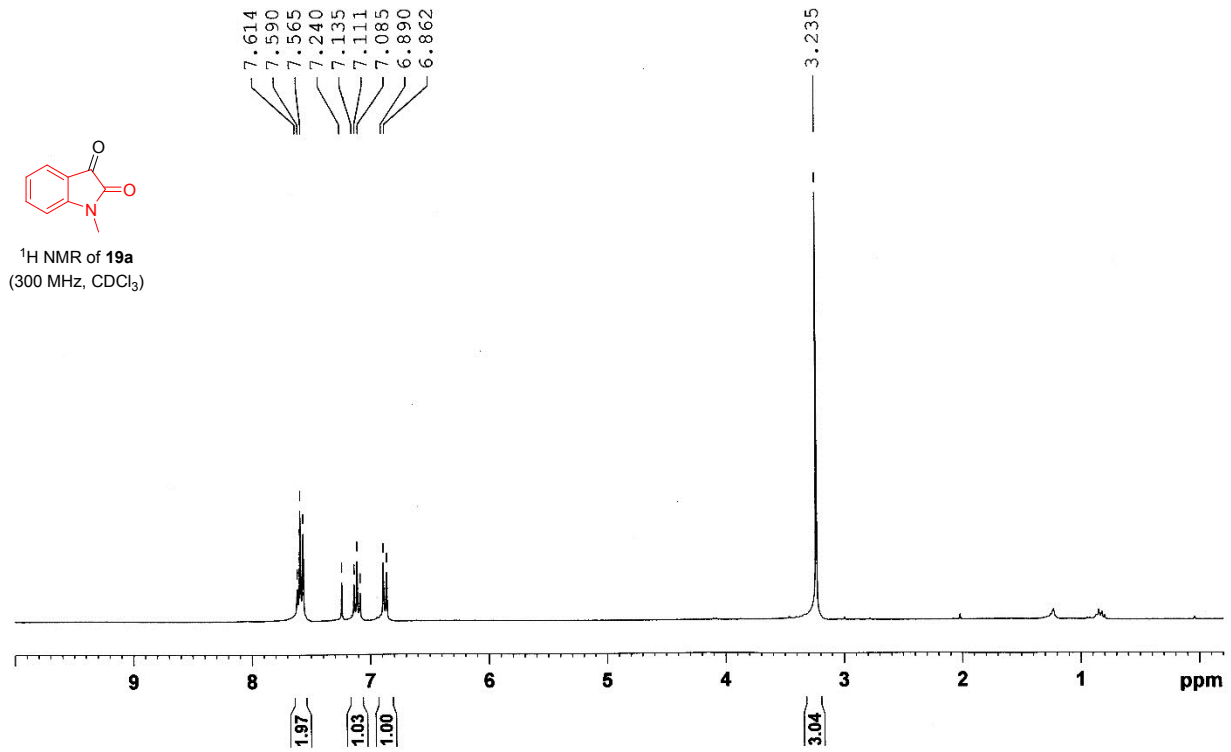
^{1}H NMR of **7l**
(300 MHz, $CDCl_3$)



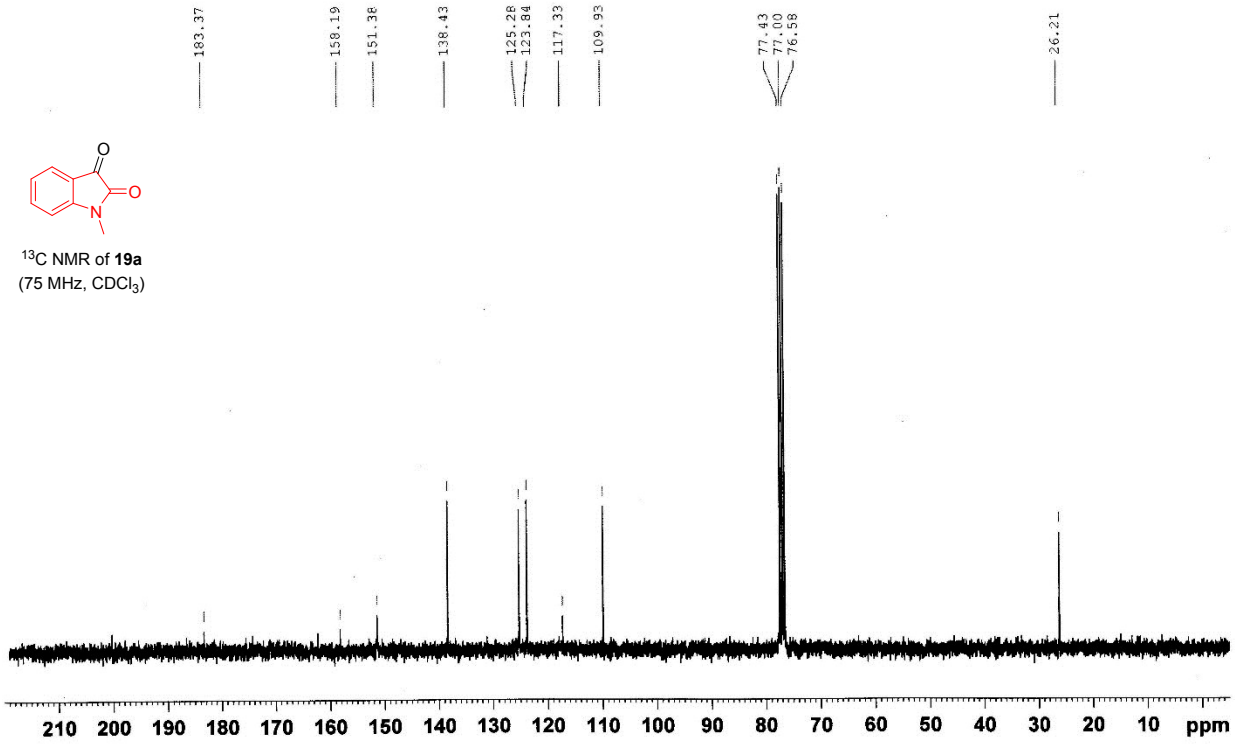


^{13}C NMR of **7l**
(75 MHz, $CDCl_3$)

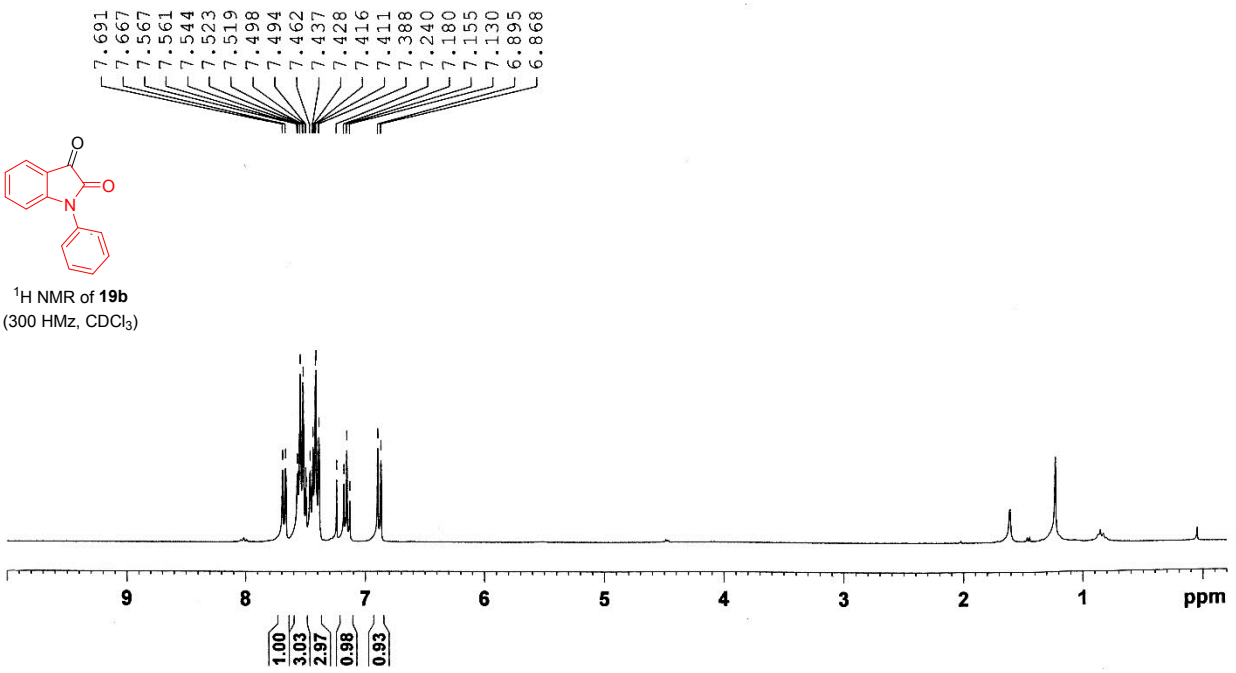




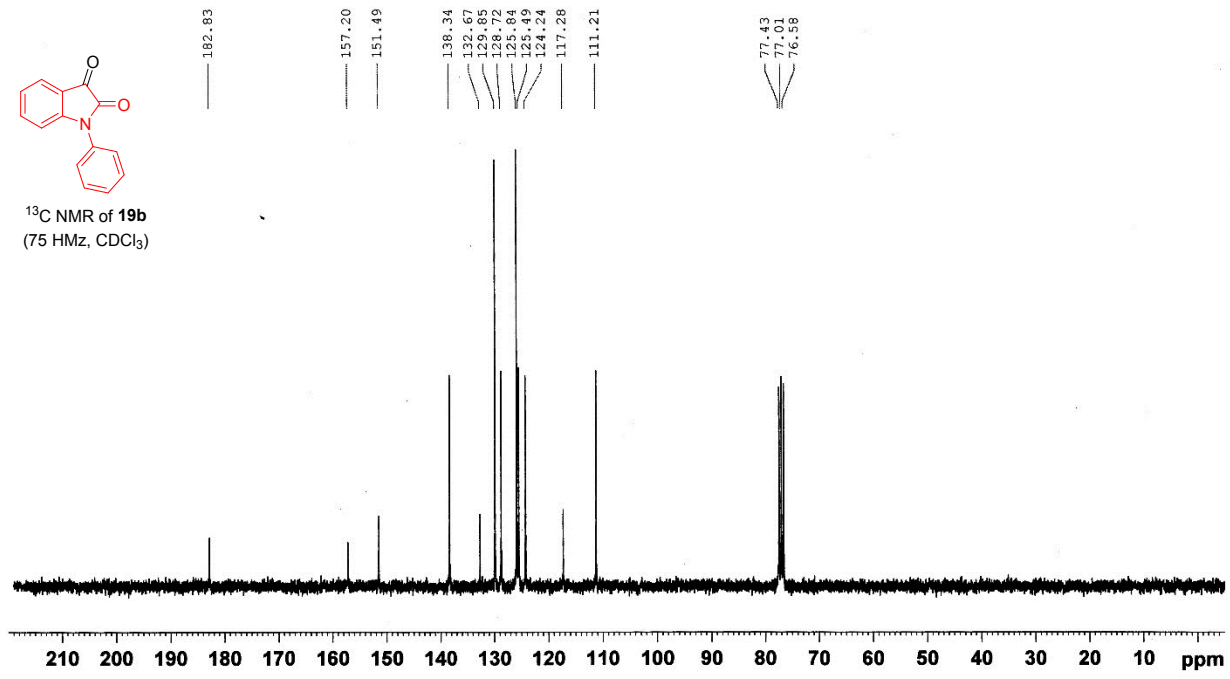
^{1}H NMR of **19a**
(300 MHz, $CDCl_3$)



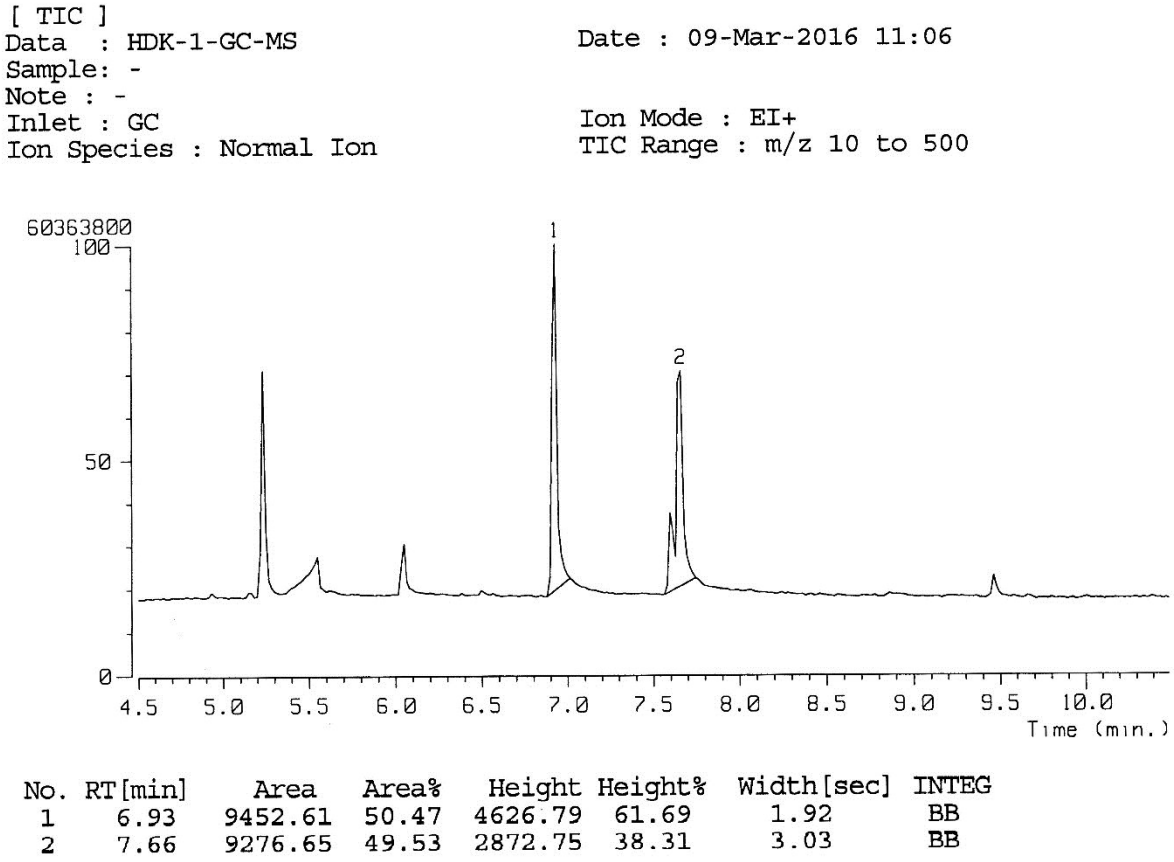
^{13}C NMR of **19a**
(75 MHz, $CDCl_3$)



^{1}H NMR of **19b**
(300 HMz, $CDCl_3$)



^{13}C NMR of **19b**
(75 HMz, $CDCl_3$)



No.	RT[min]	Area	Area%	Height	Height%	Width[sec]	INTEG
1	6.93	9452.61	50.47	4626.79	61.69	1.92	BB
2	7.66	9276.65	49.53	2872.75	38.31	3.03	BB

Figure S1. Gas chromatogram of the final reaction mixture obtained from reaction between **1a** and **2e**.

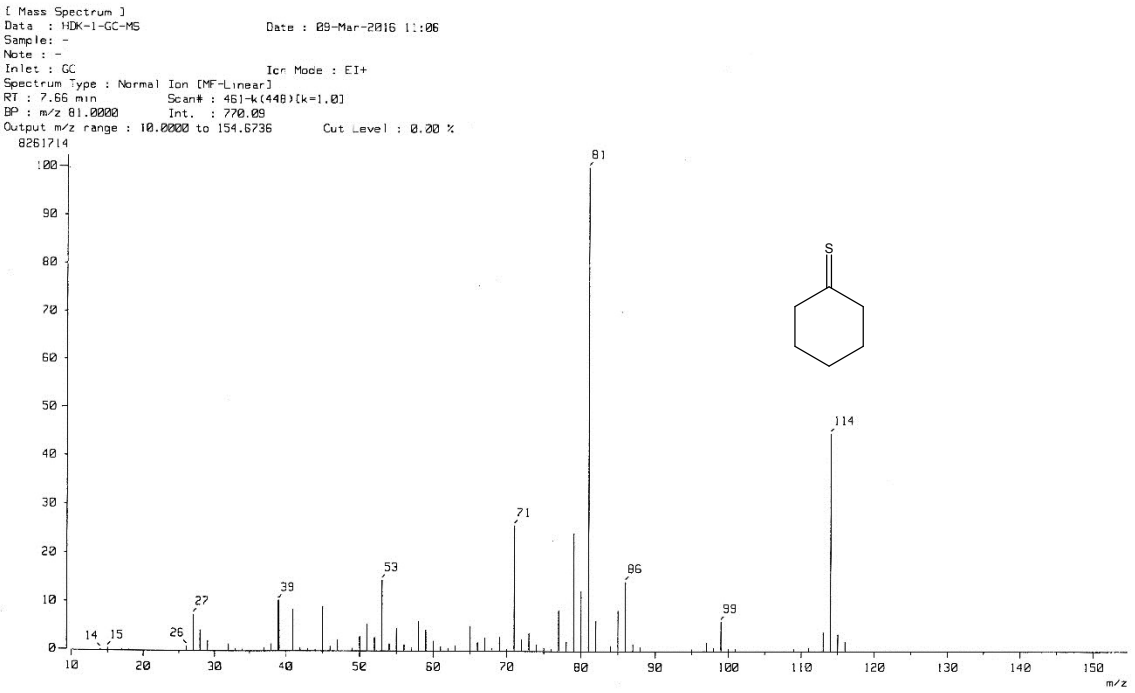


Figure S2. Mass Spectrum of the GC peak at 7.66 min of retention time.

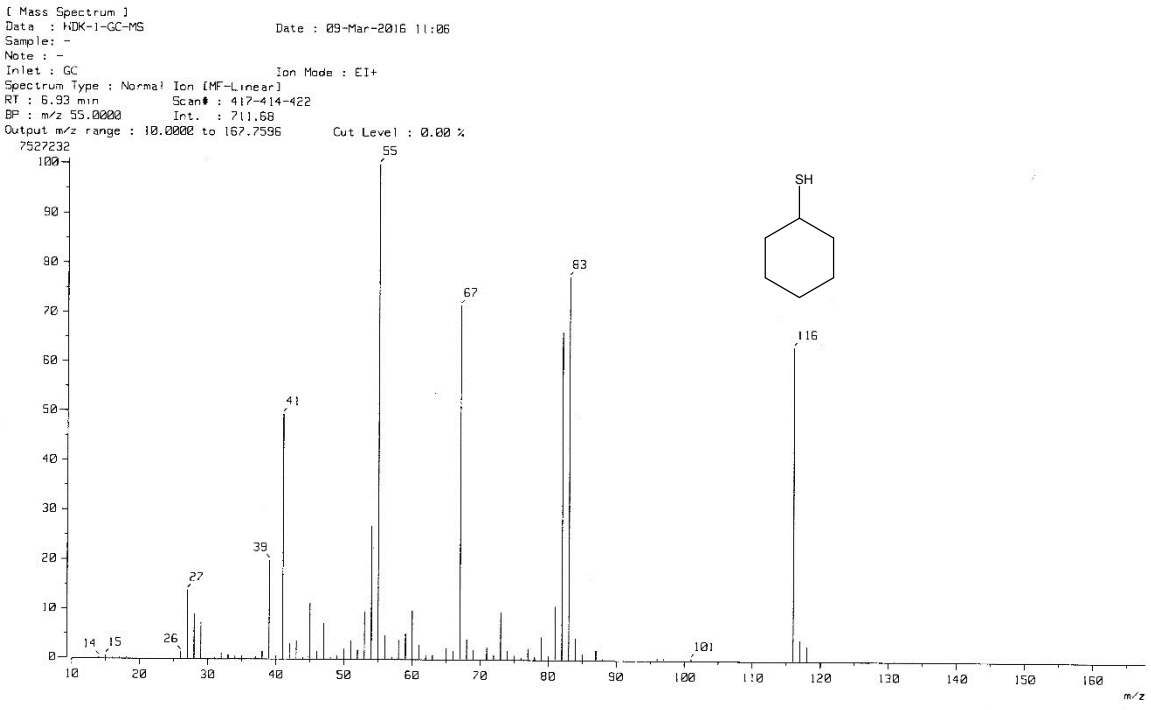


Figure S3. Mass spectrum of GC peak at 6.93 min of retention time.