Supporting Information for

Organocatalytic [4+2] Cyclizations of *para*-Quinone Methide Derivatives with Isocyanates

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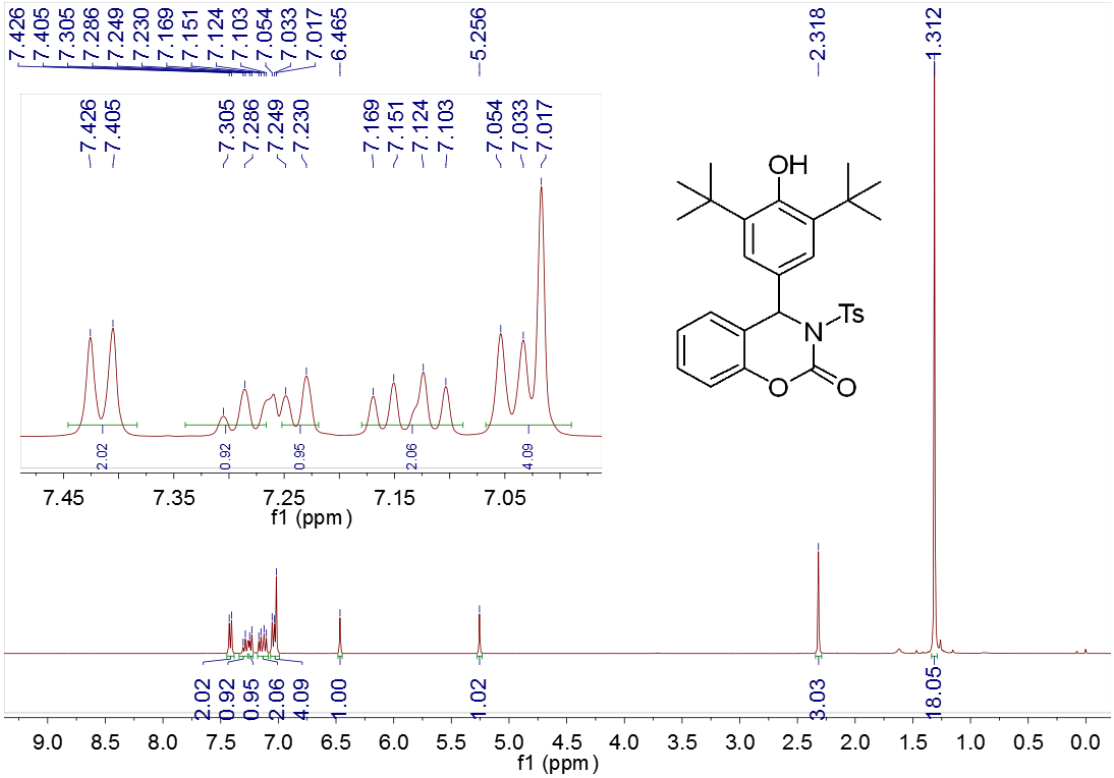
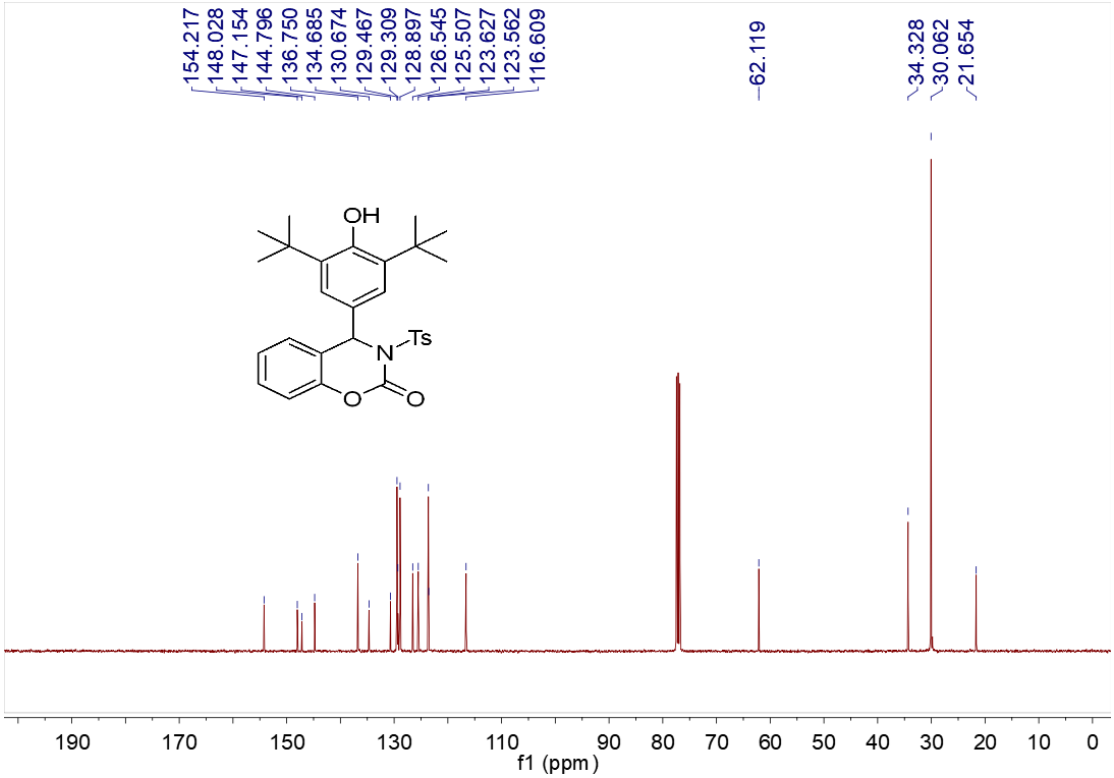
Contents:

1. NMR spectra of products 3 and 6

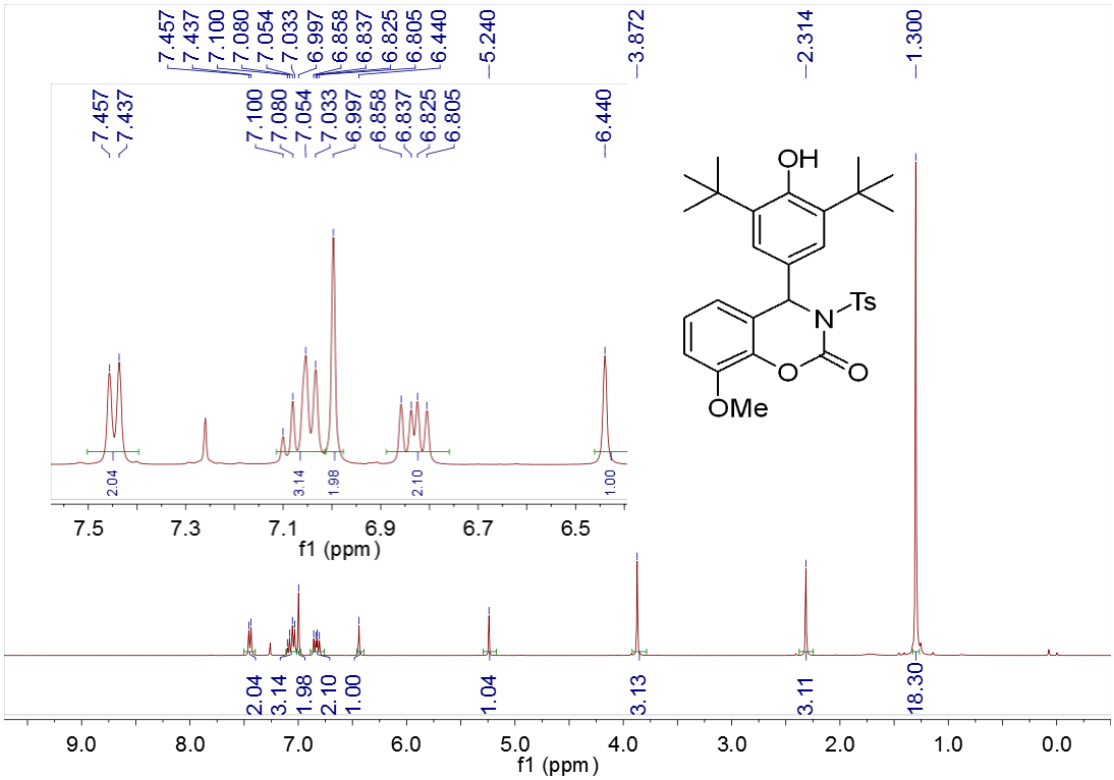
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3a**:



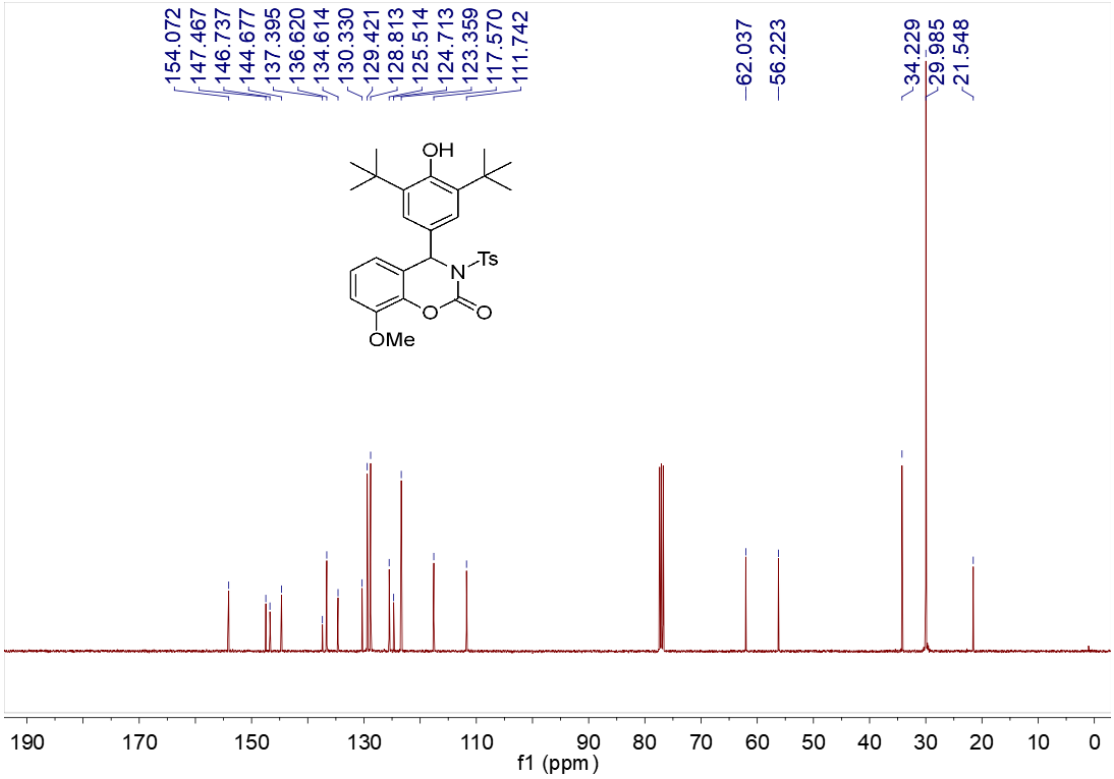
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3a**:



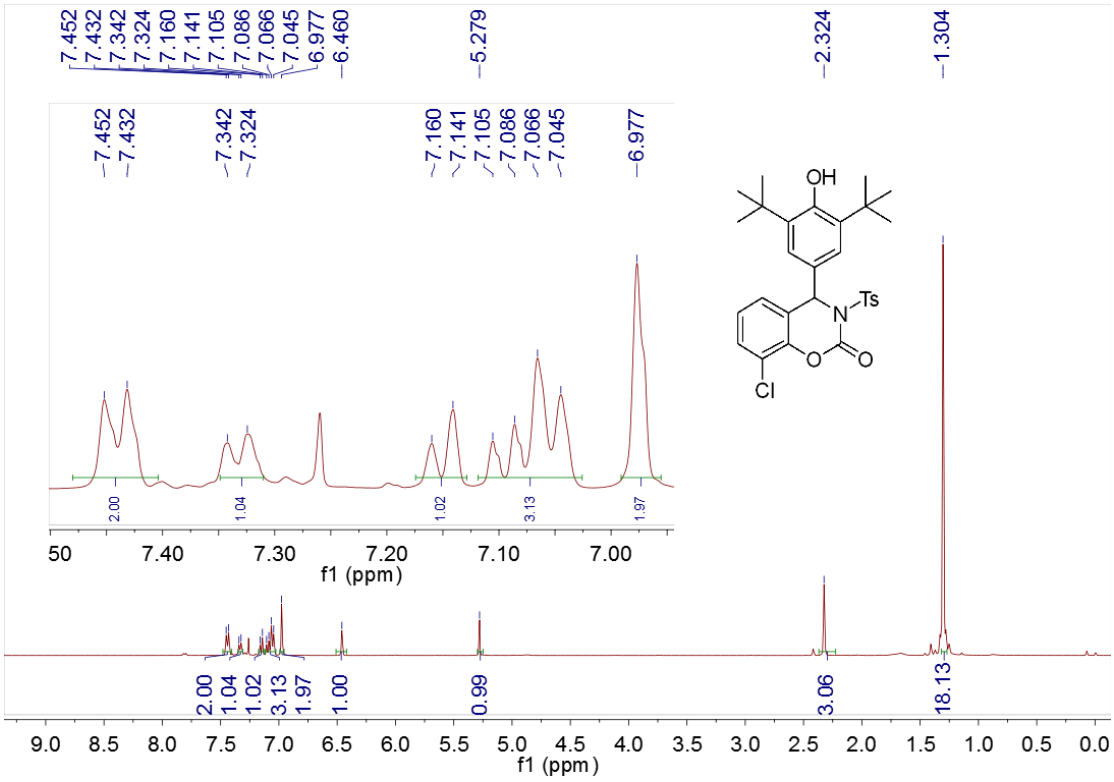
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3b**:



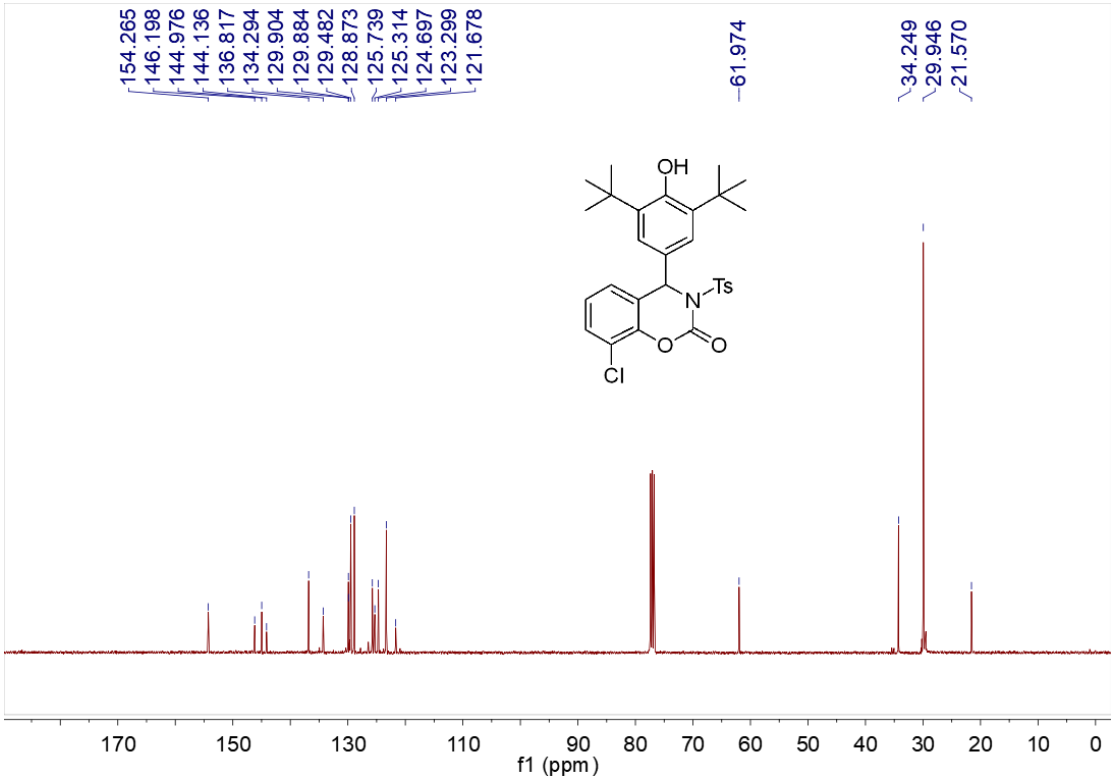
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3b**:



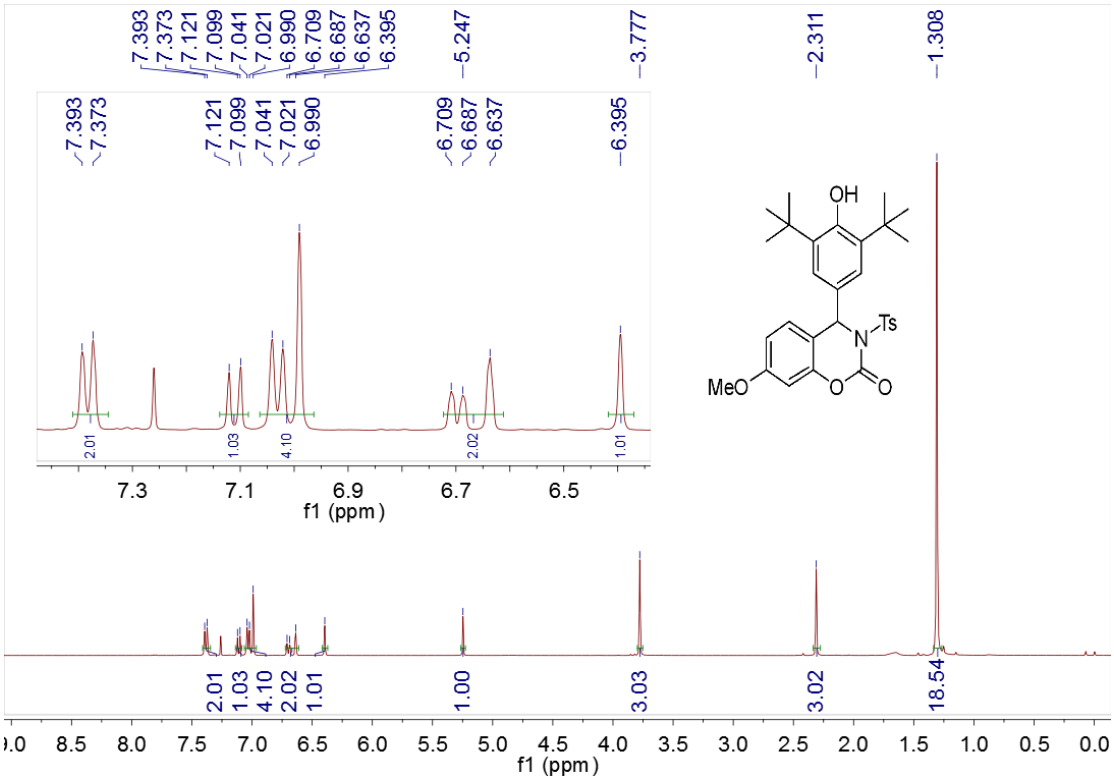
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3c**:



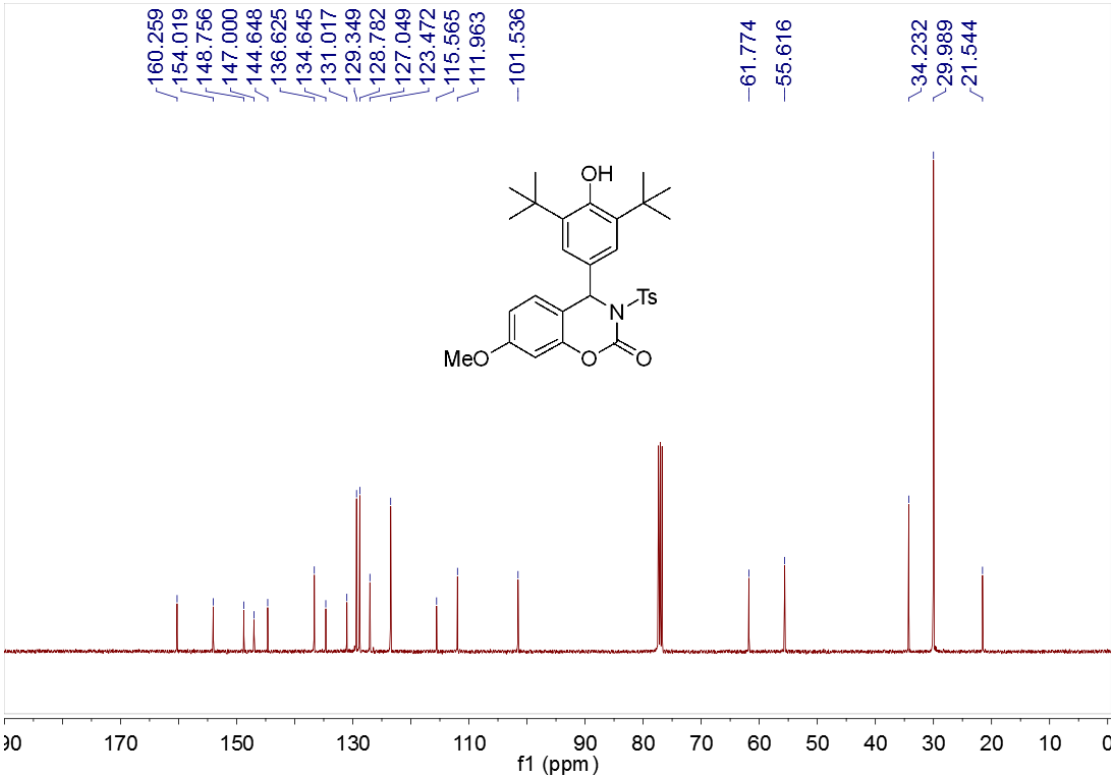
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3c**:



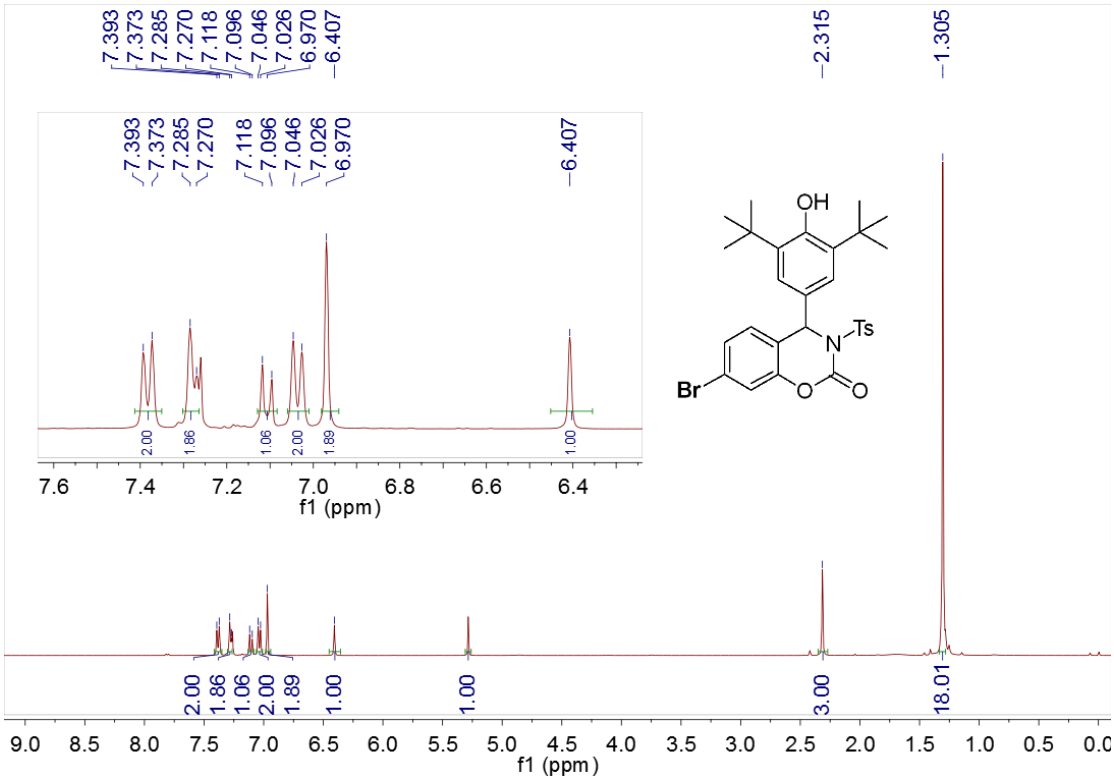
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3d**:



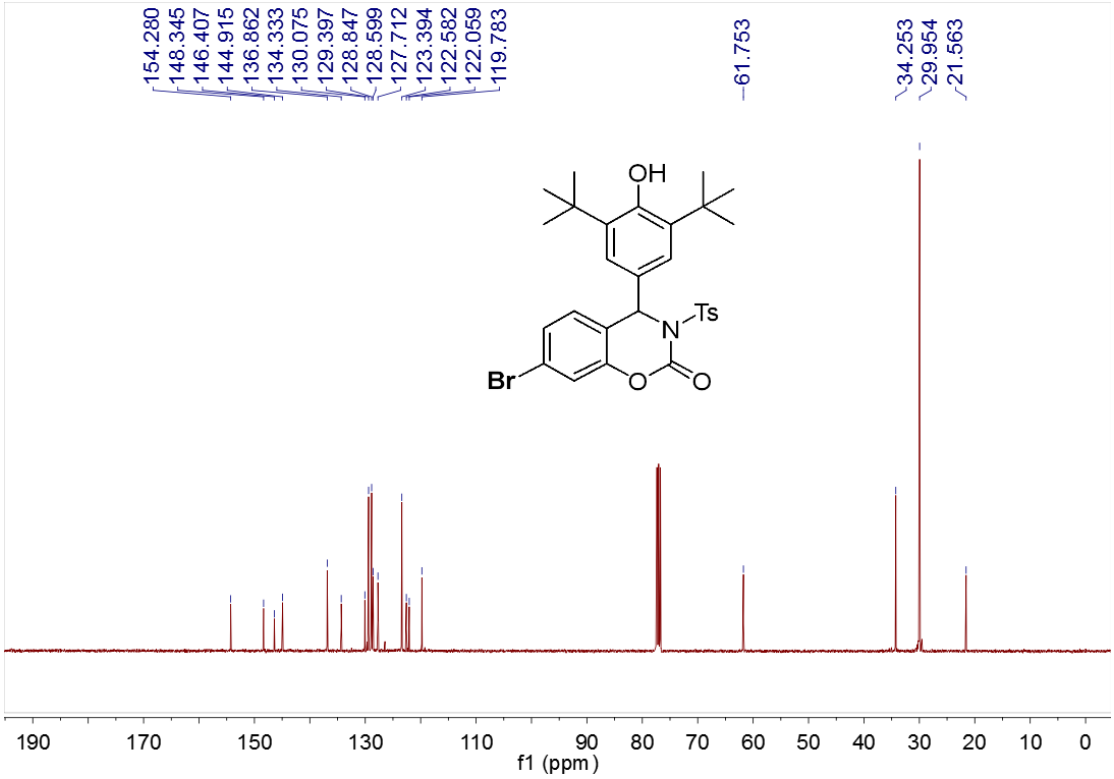
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3d**:



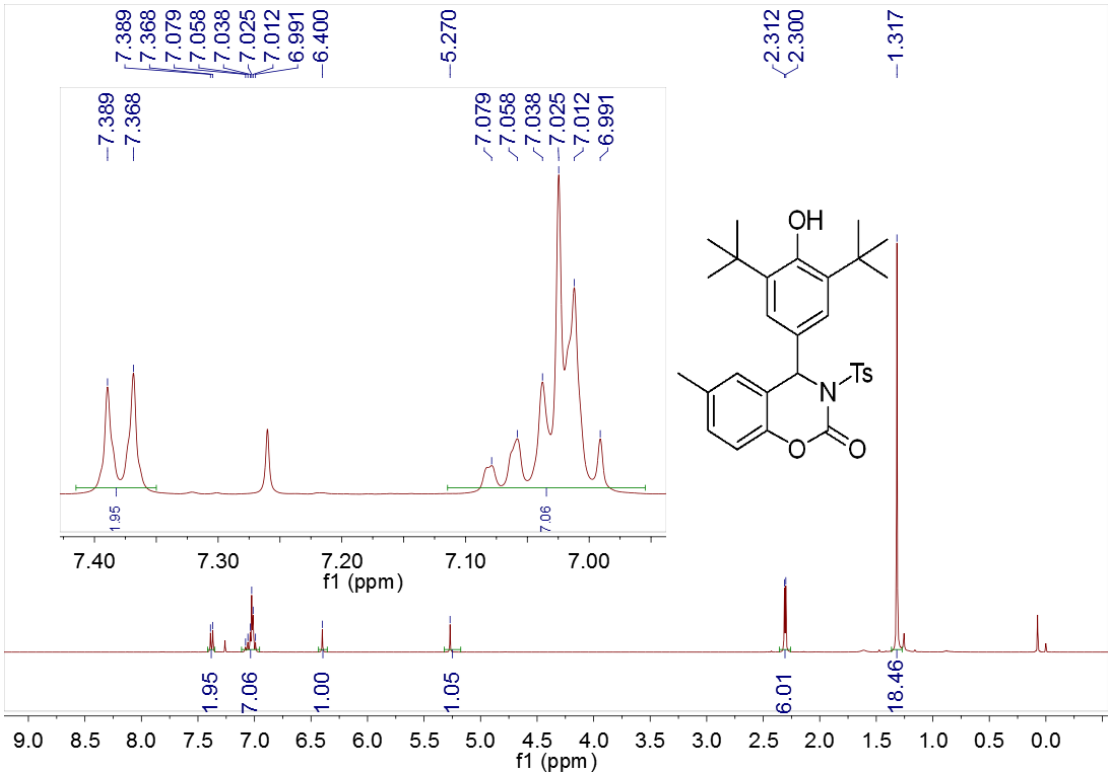
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3e**:



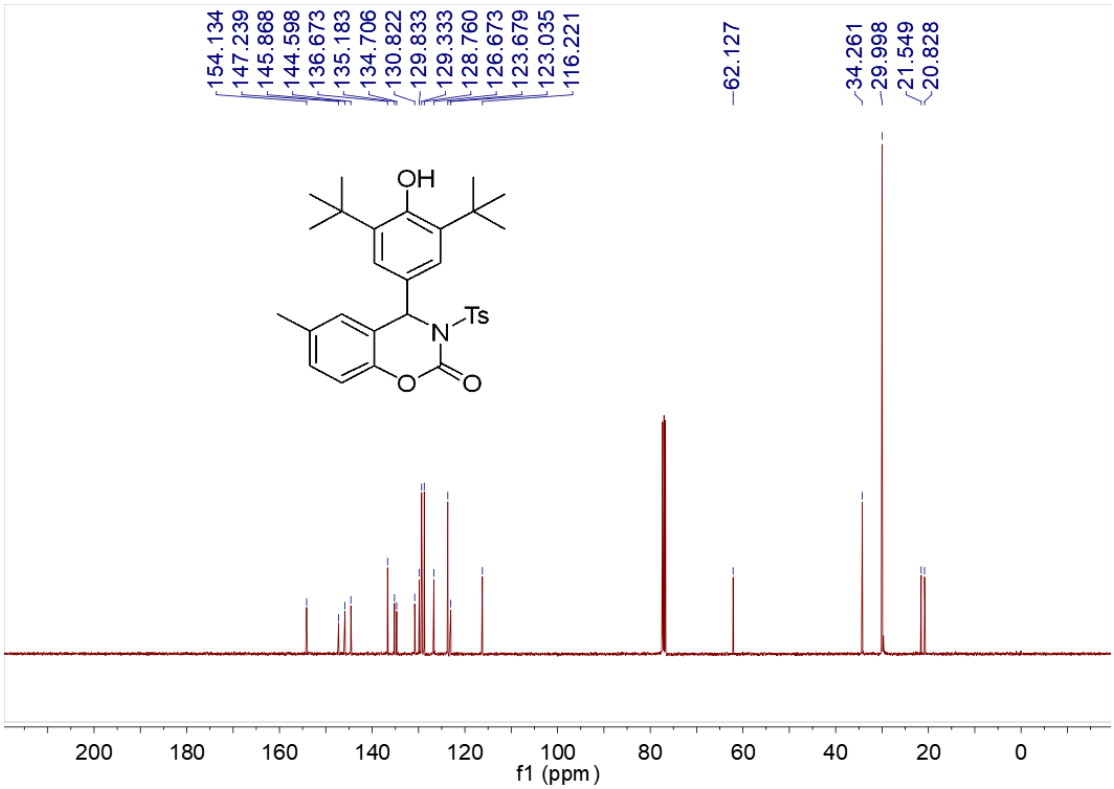
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3e**:



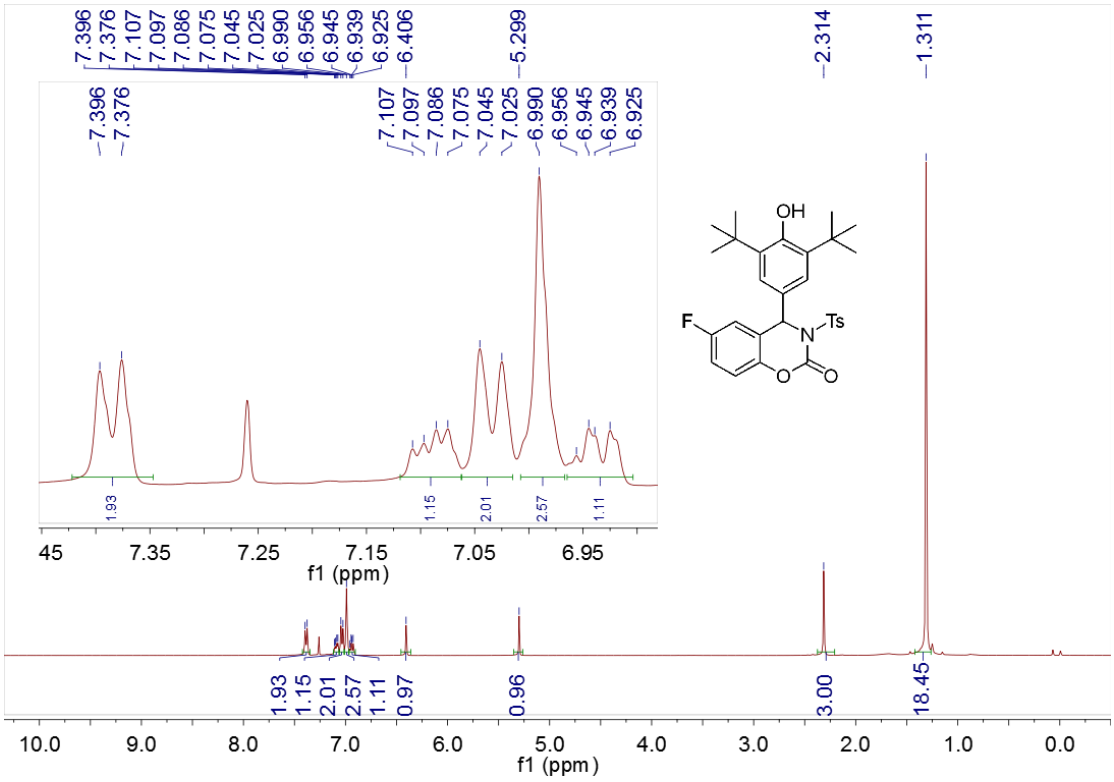
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3f**:



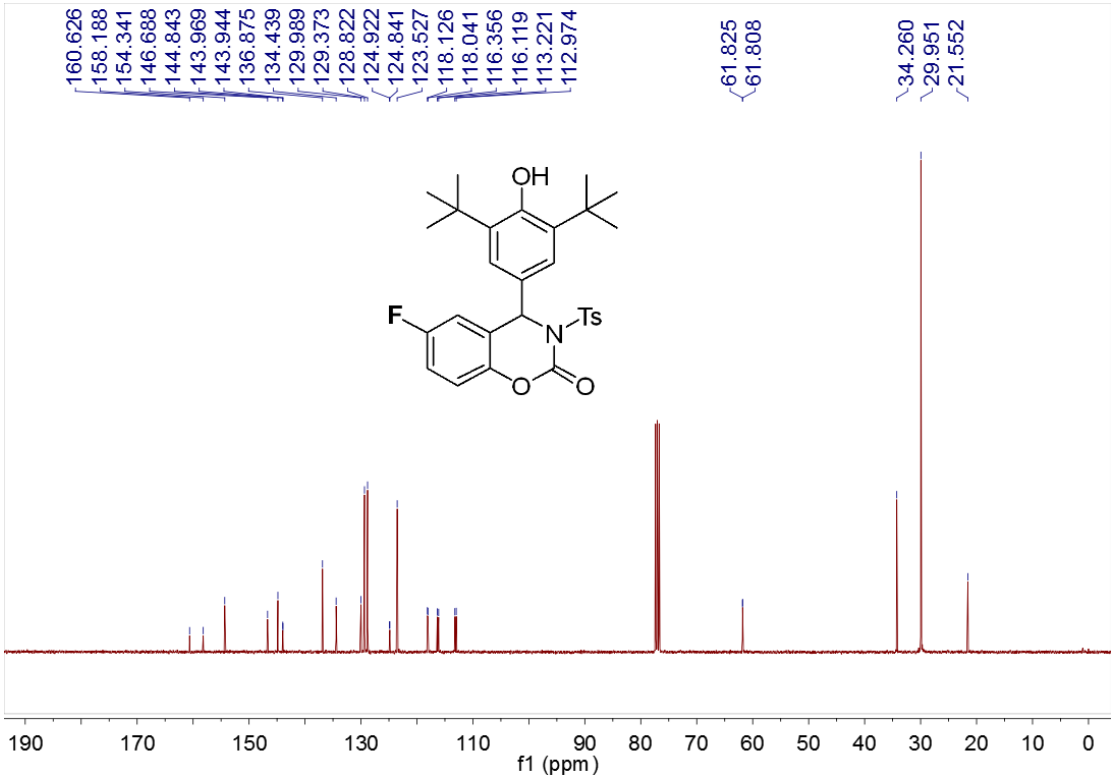
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3f**:



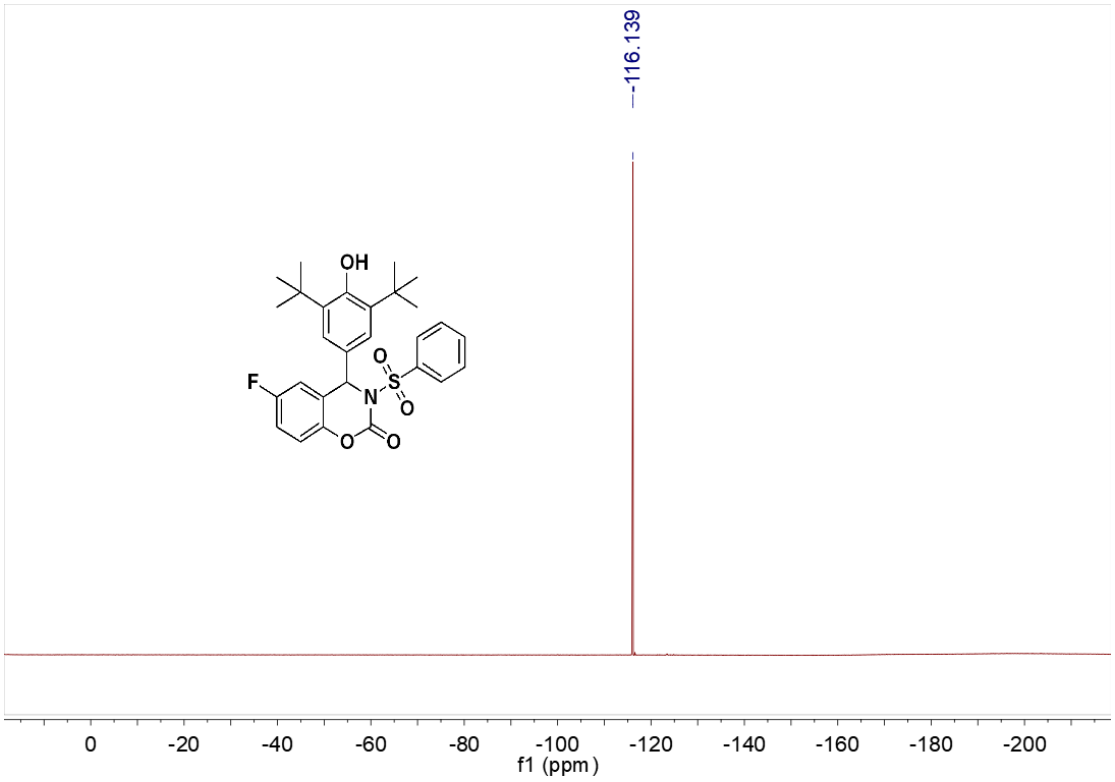
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3g**:



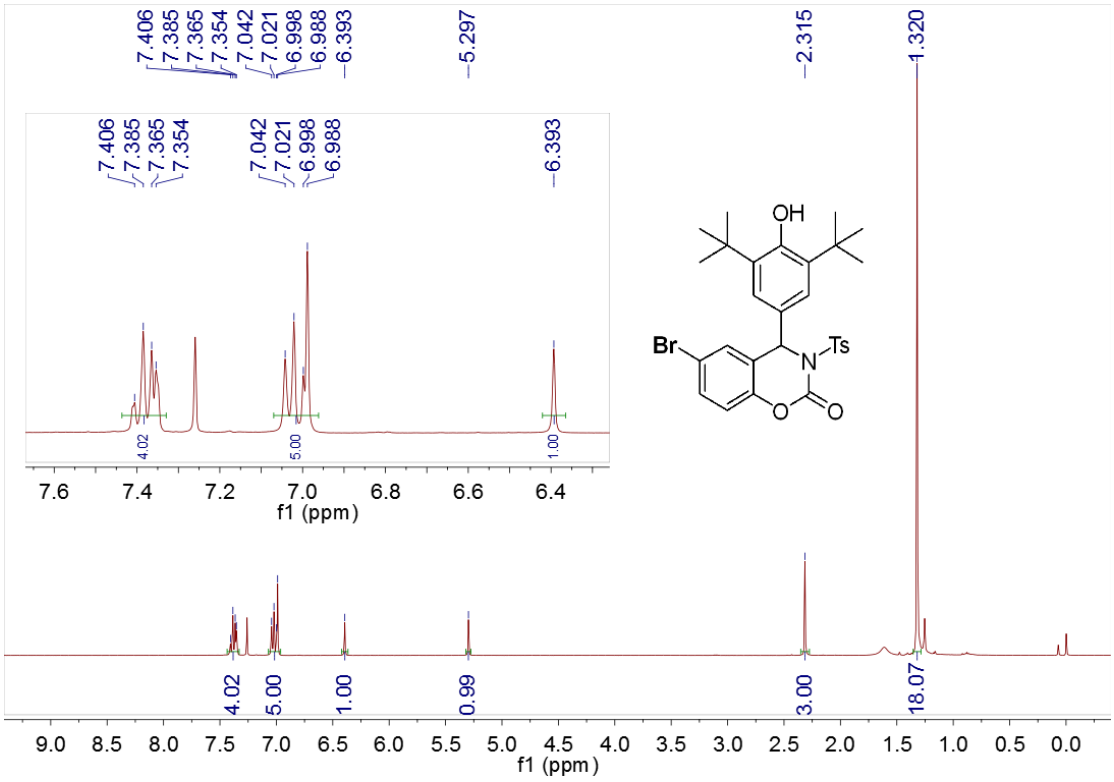
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3g**:



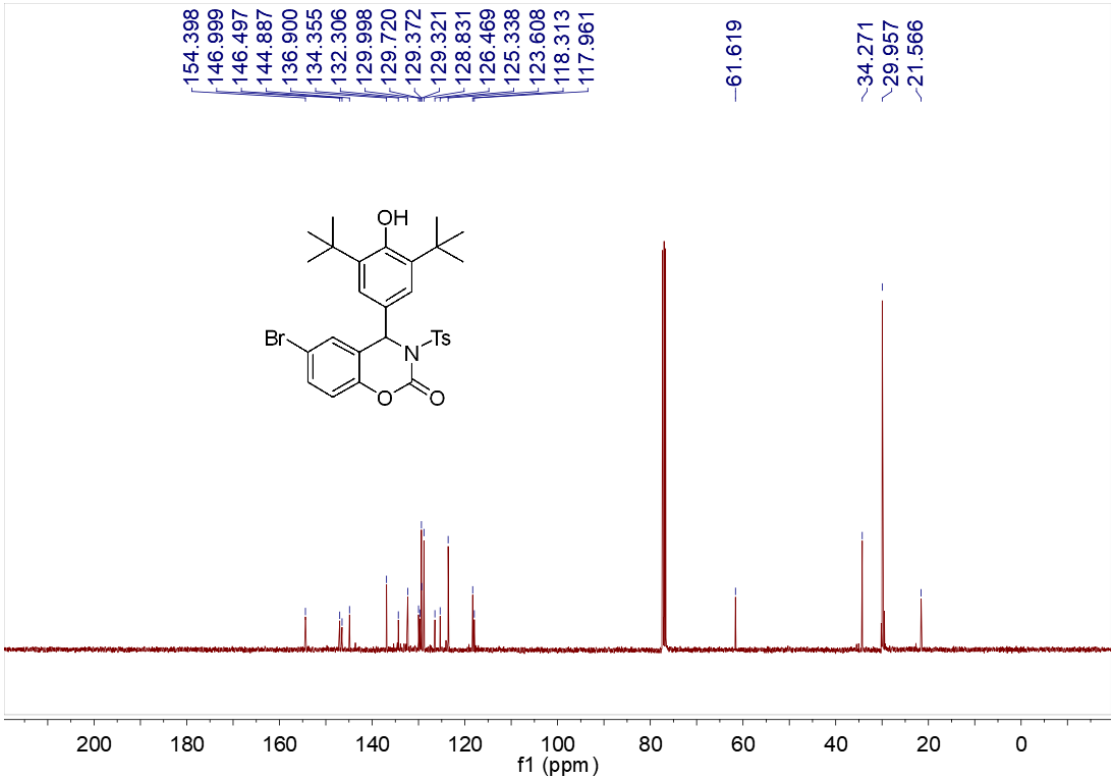
^{19}F NMR (376 MHz, $CDCl_3$) of compound **3g**:



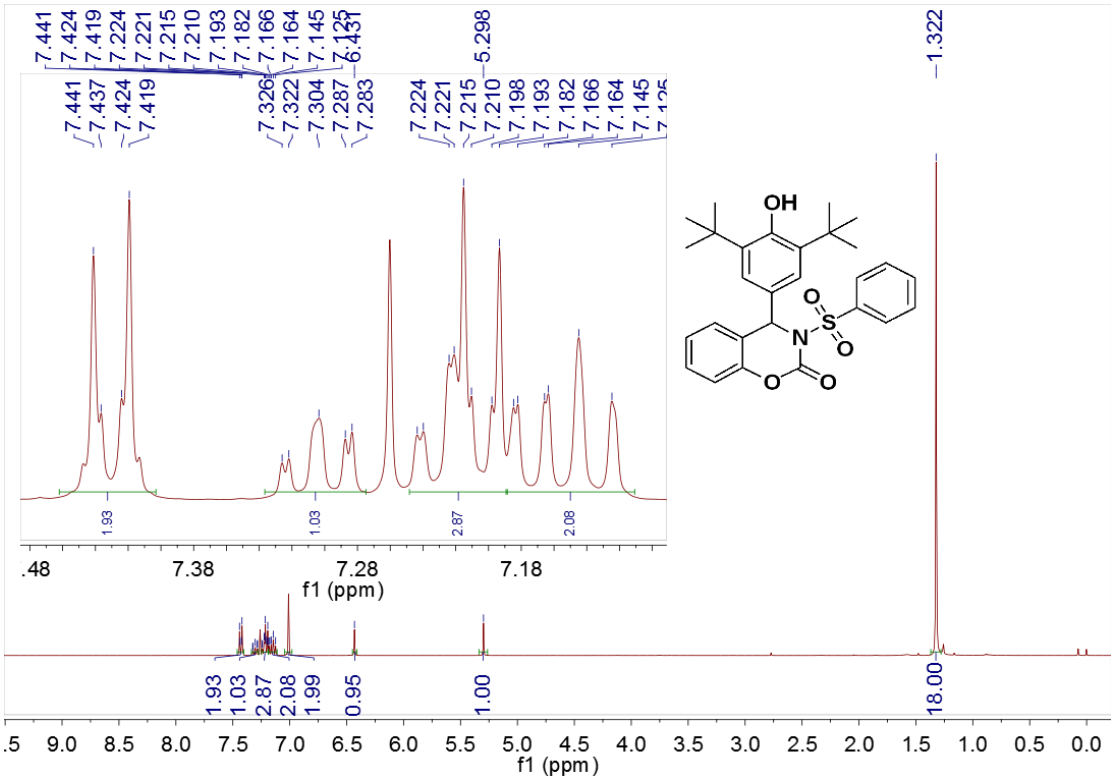
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3h**:



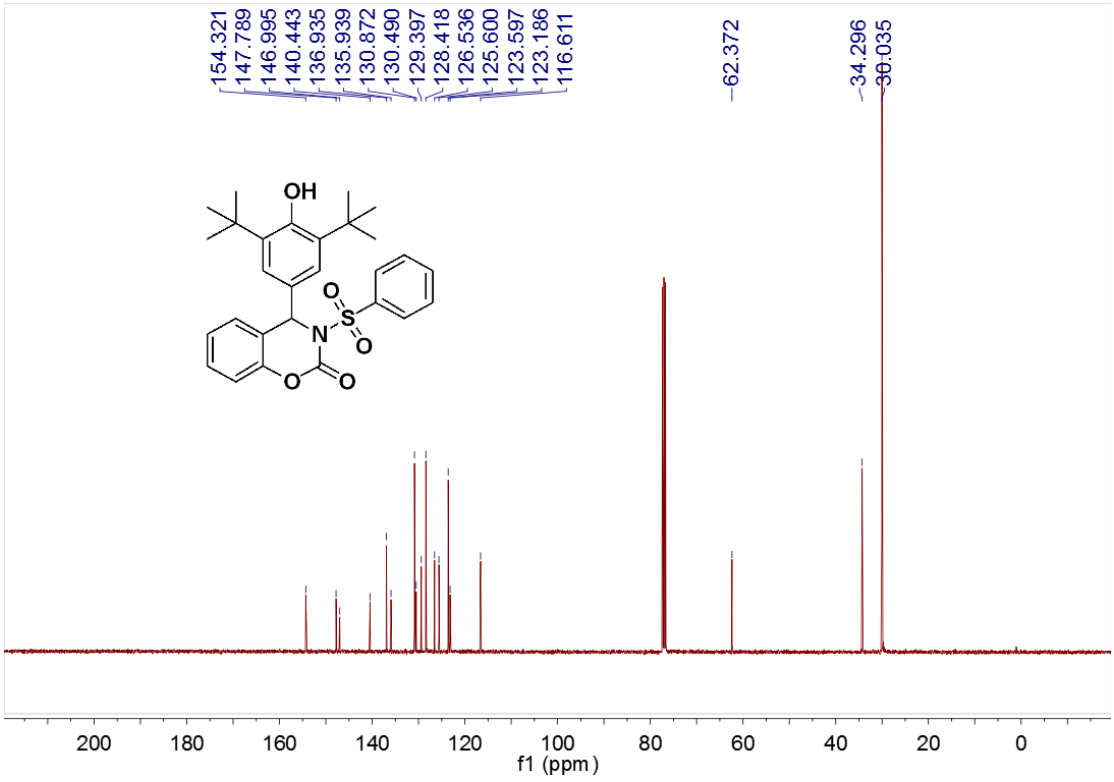
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3h**:



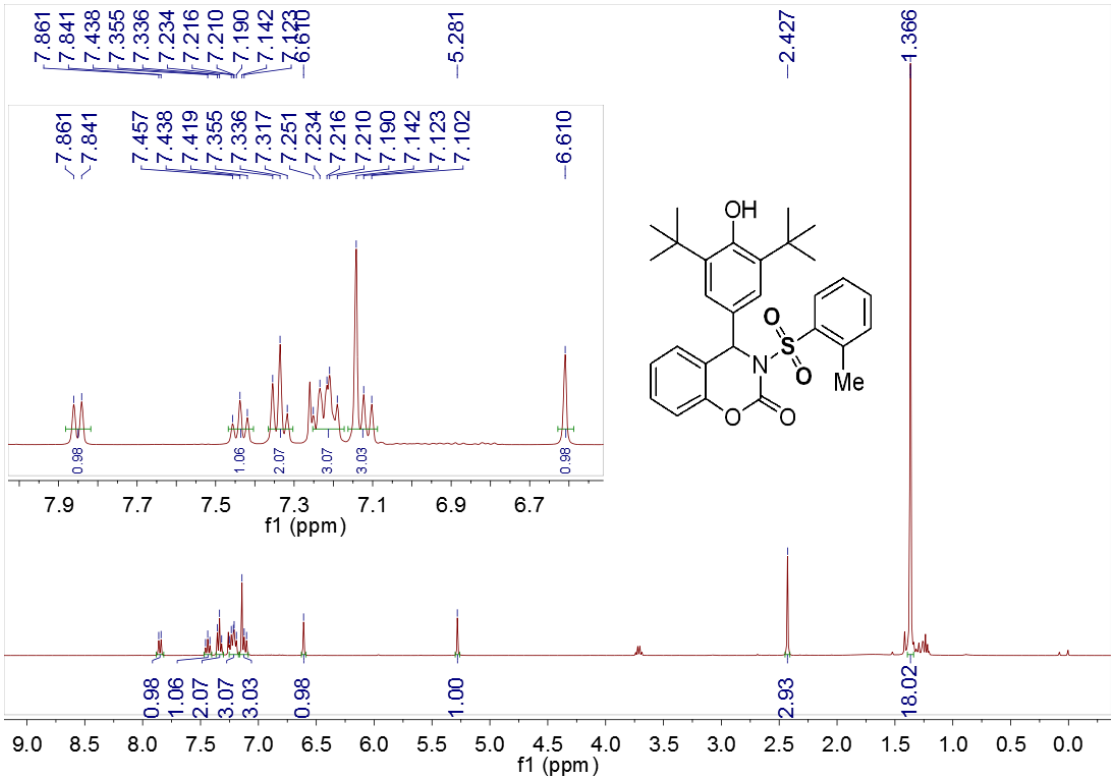
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3i**:



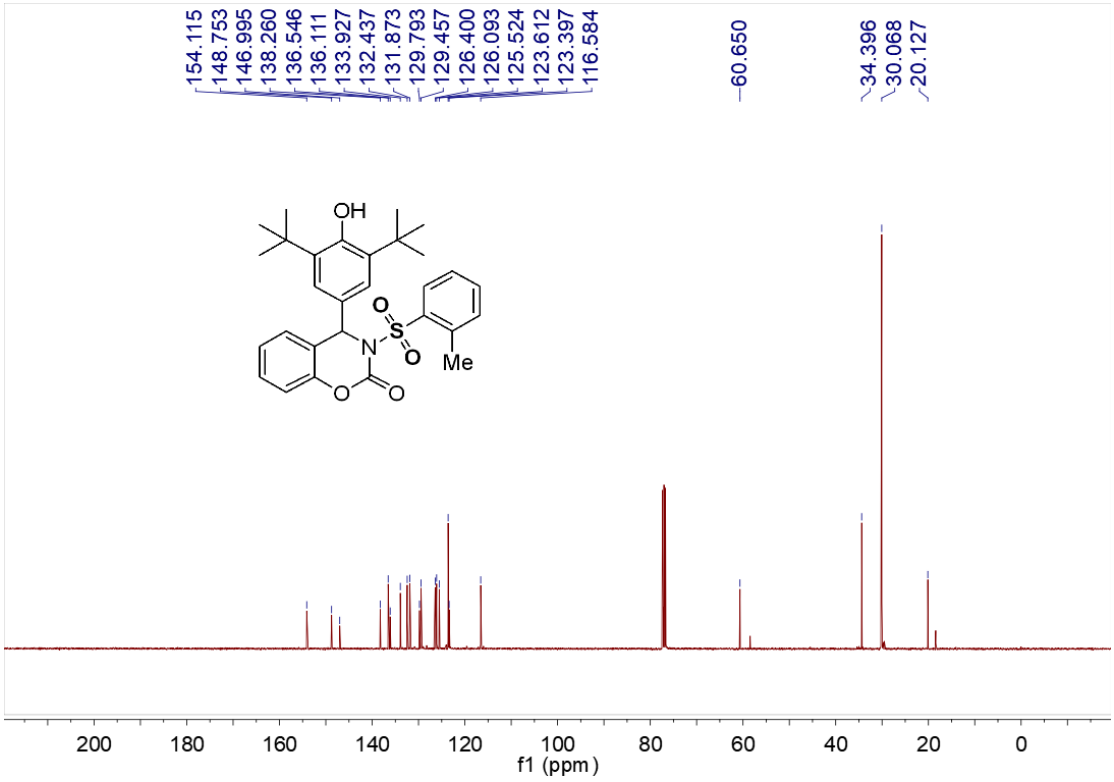
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3i**:



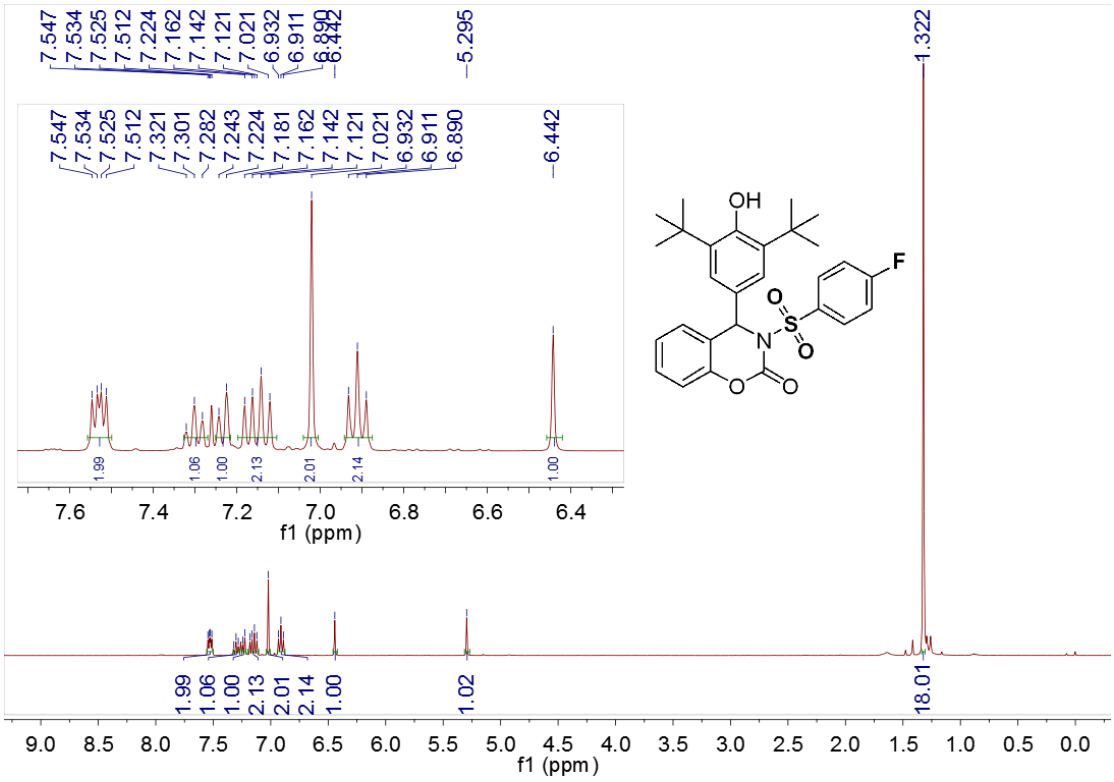
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3j**:



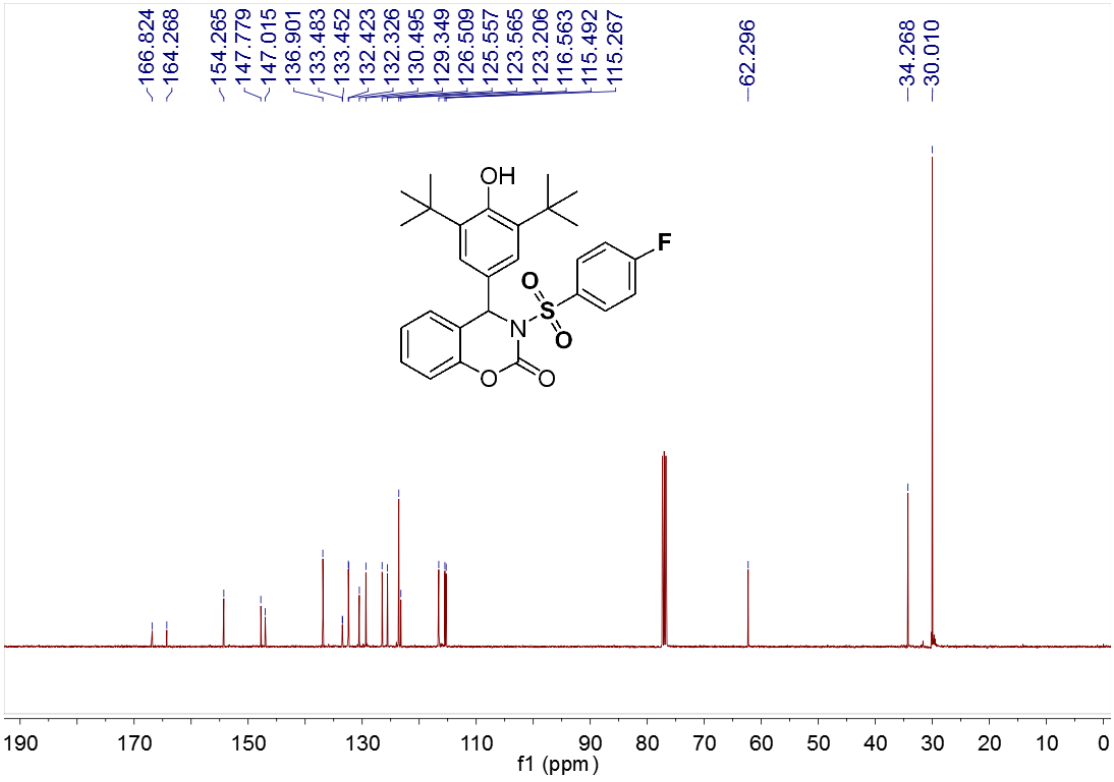
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3j**:



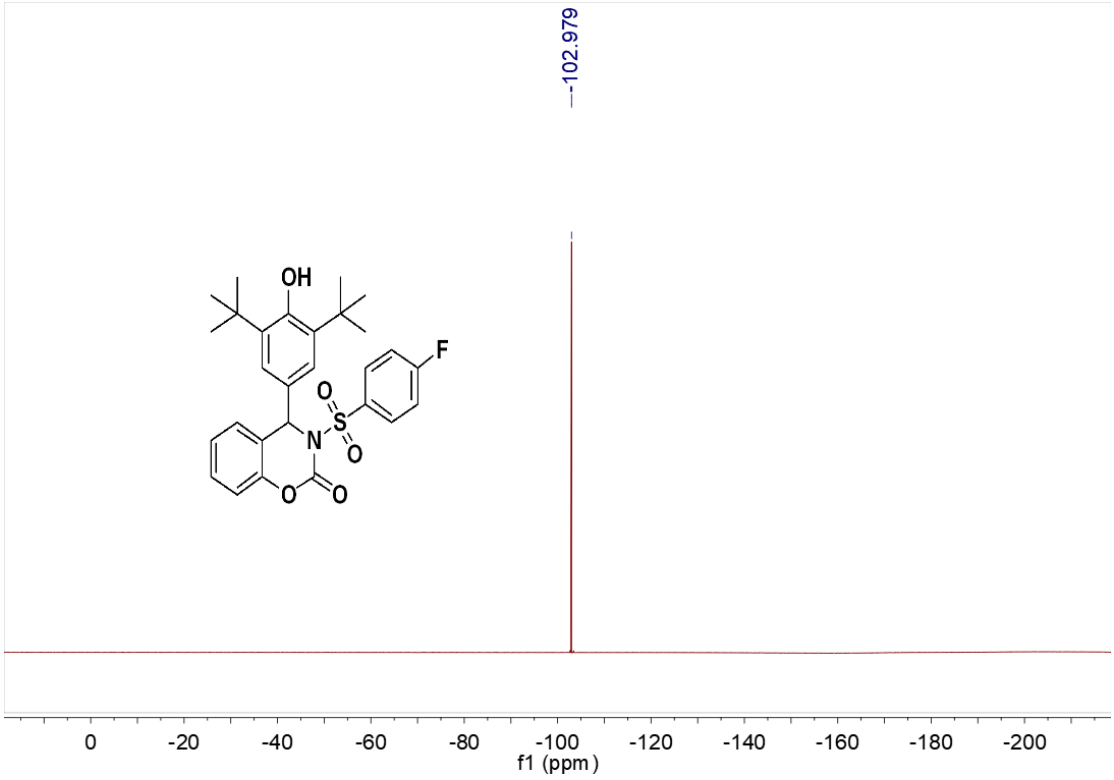
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3k**:



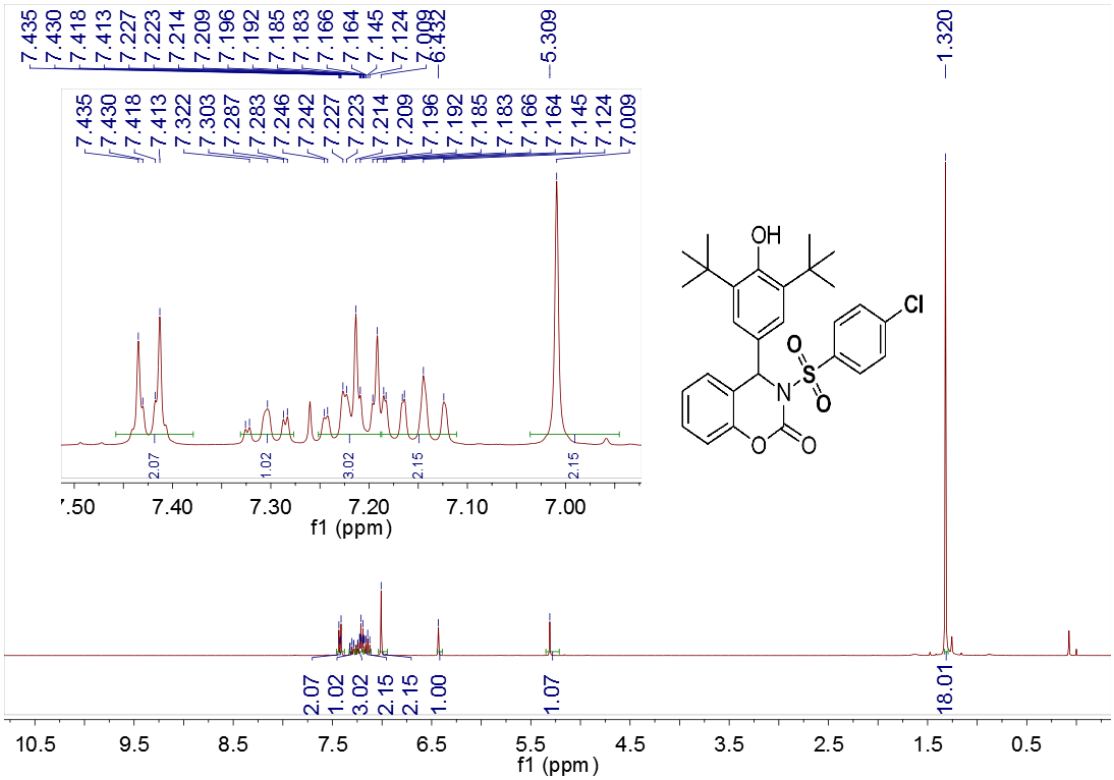
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3k**:



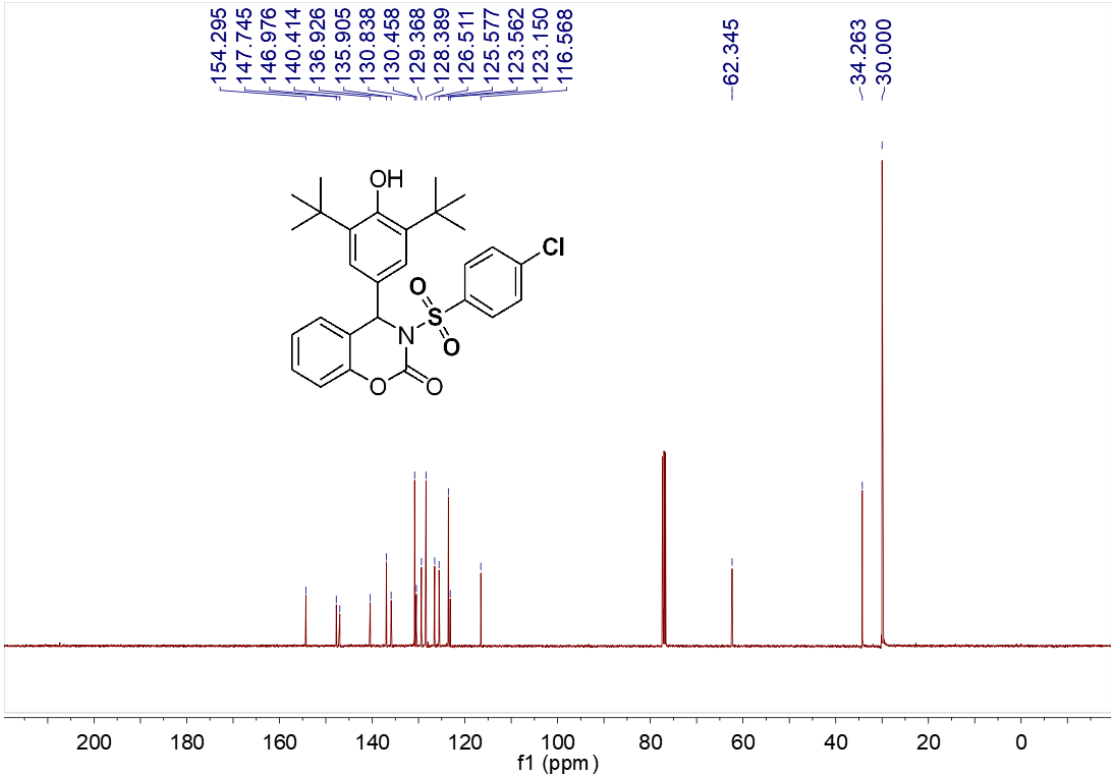
^{19}F NMR (376 MHz, $CDCl_3$) of compound **3k**:



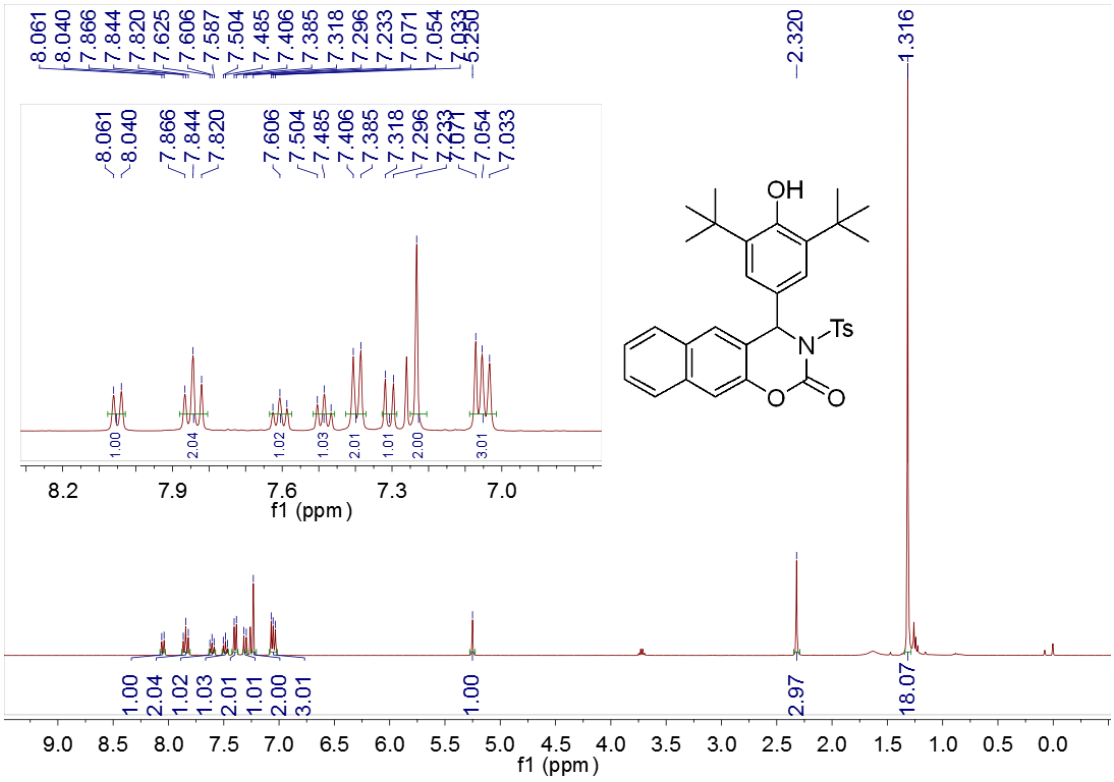
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3l**:



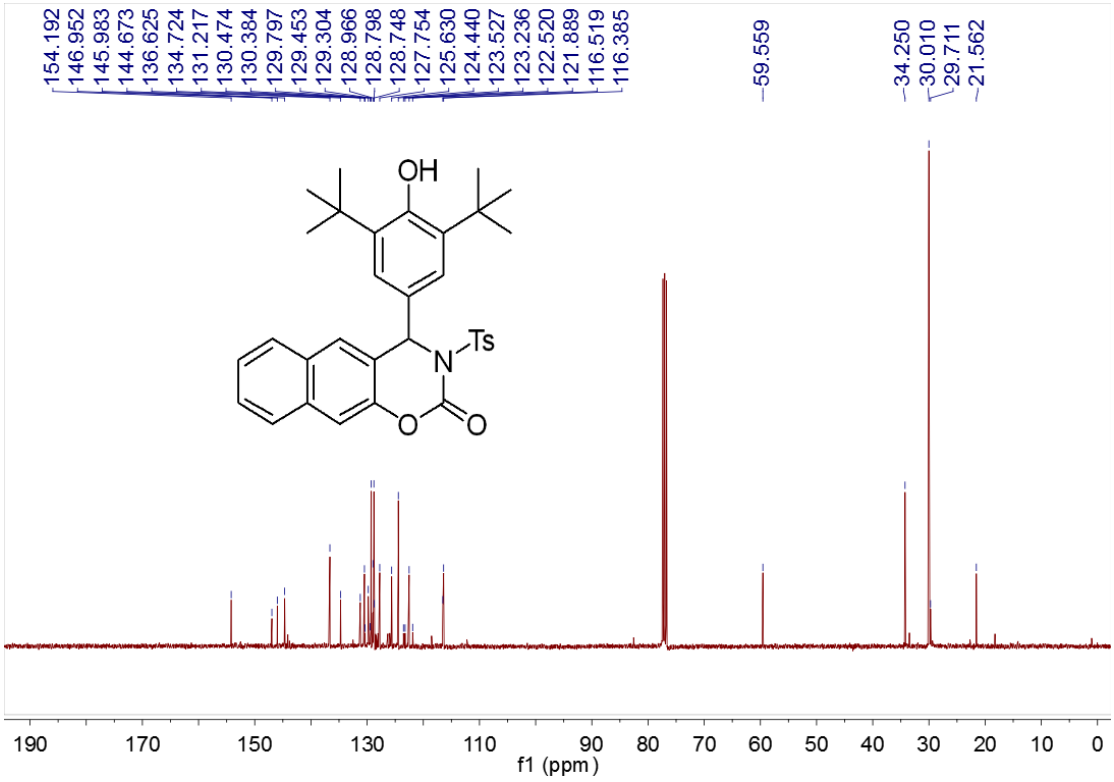
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3l**:



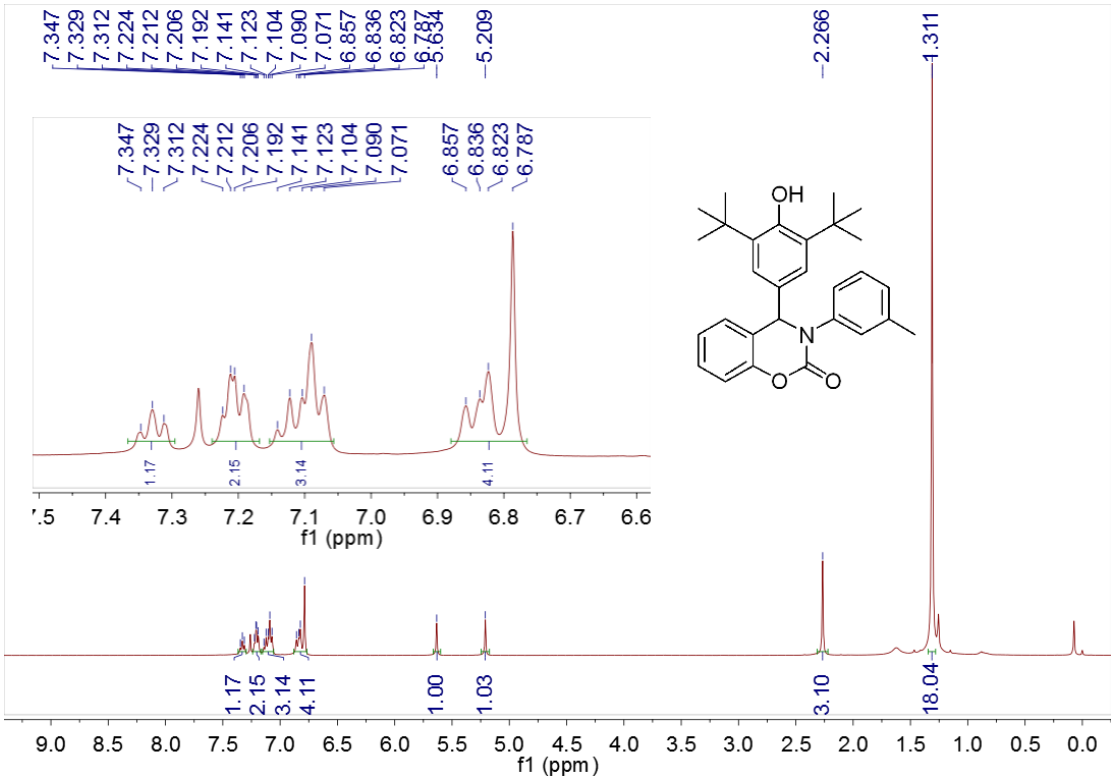
^{1}H NMR (400 MHz, $CDCl_3$) of compound **3m**:



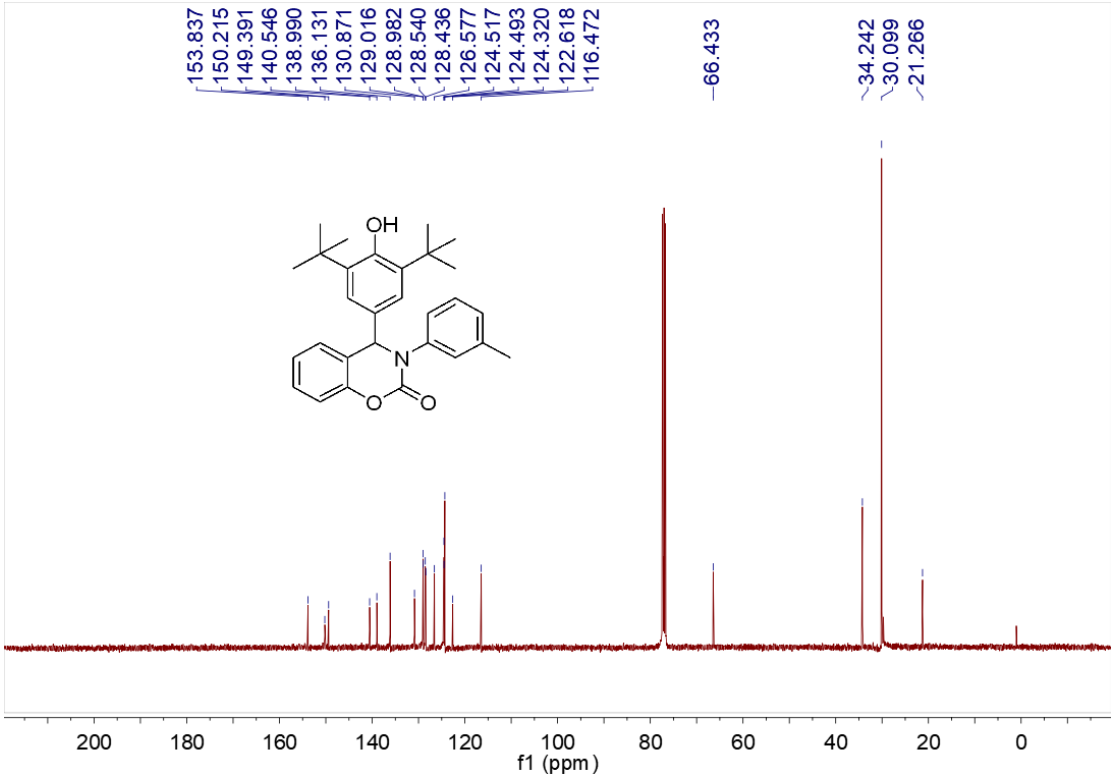
^{13}C NMR (100 MHz, $CDCl_3$) of compound **3m**:



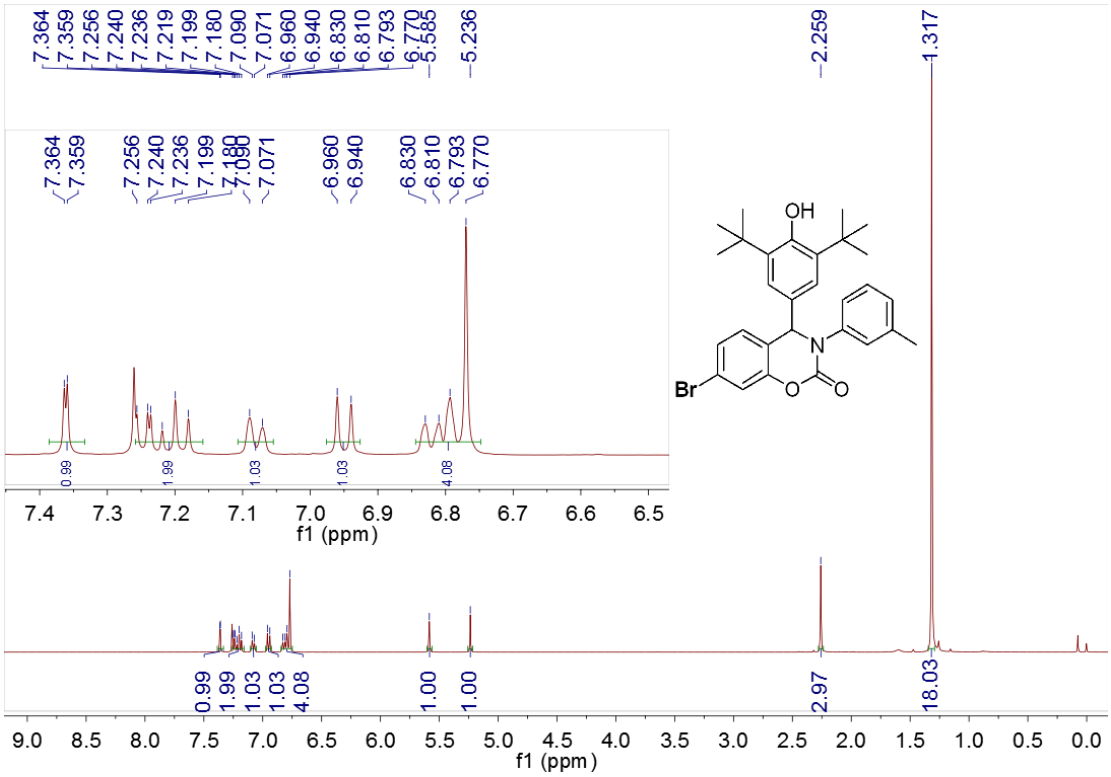
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6a**:



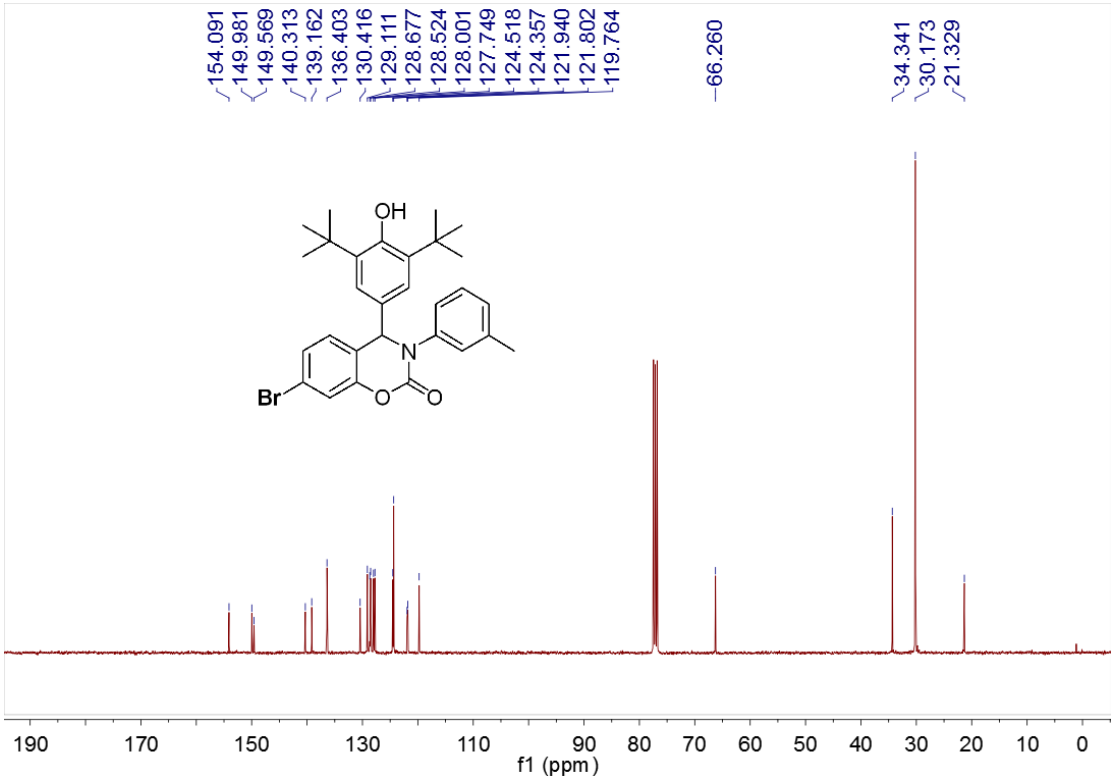
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6a**:



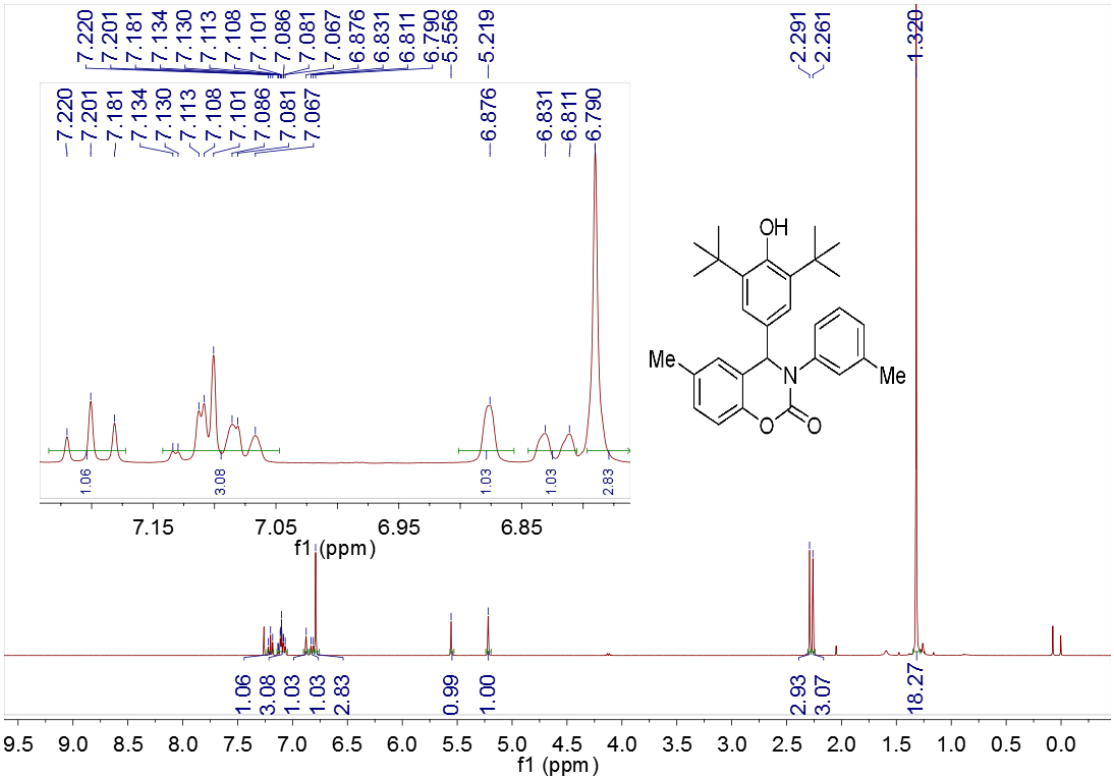
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6b**:



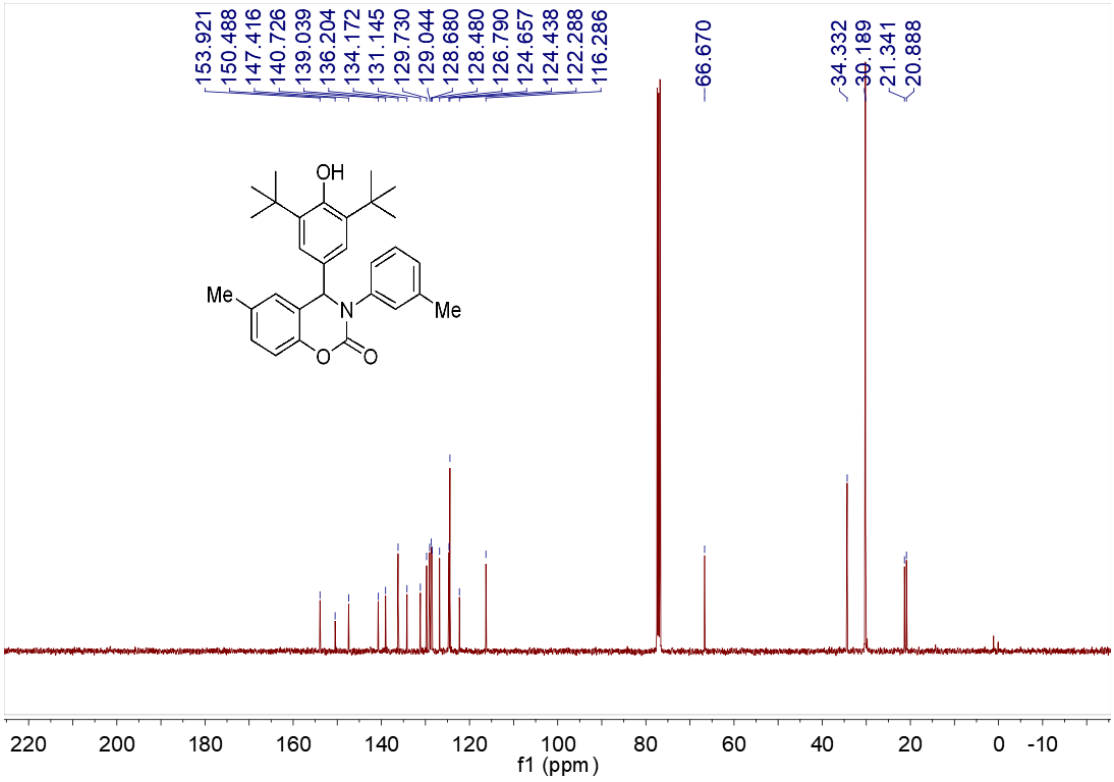
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6b**:



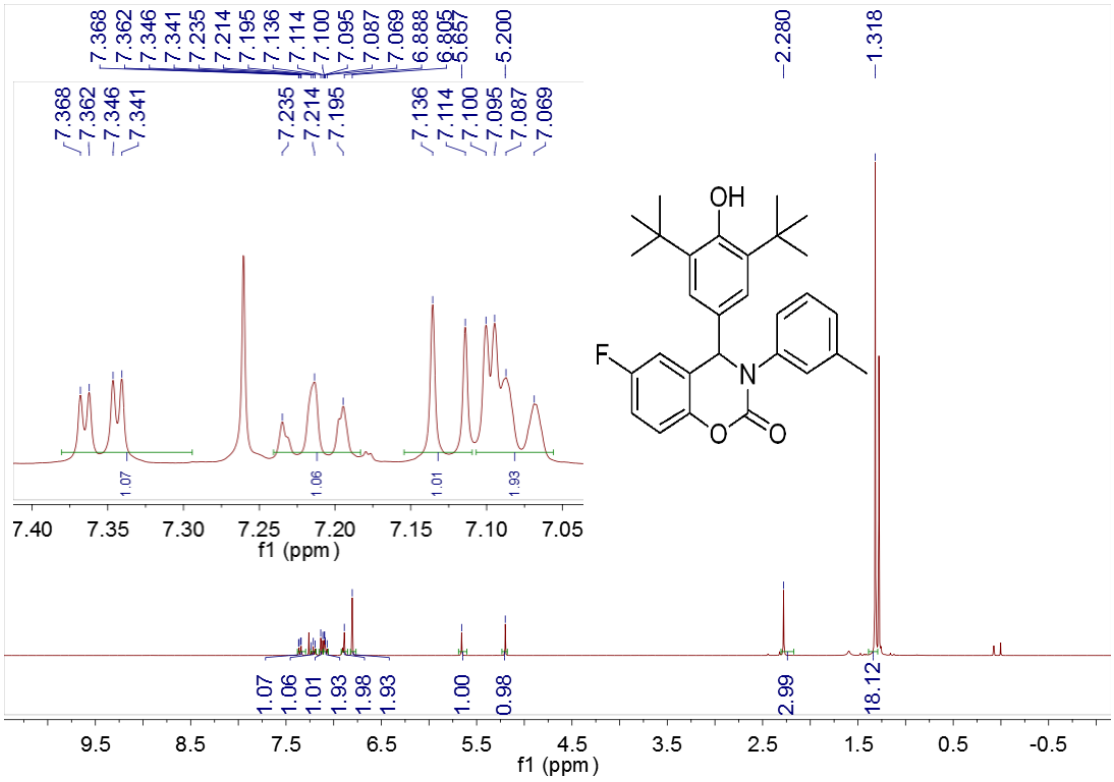
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6c**:



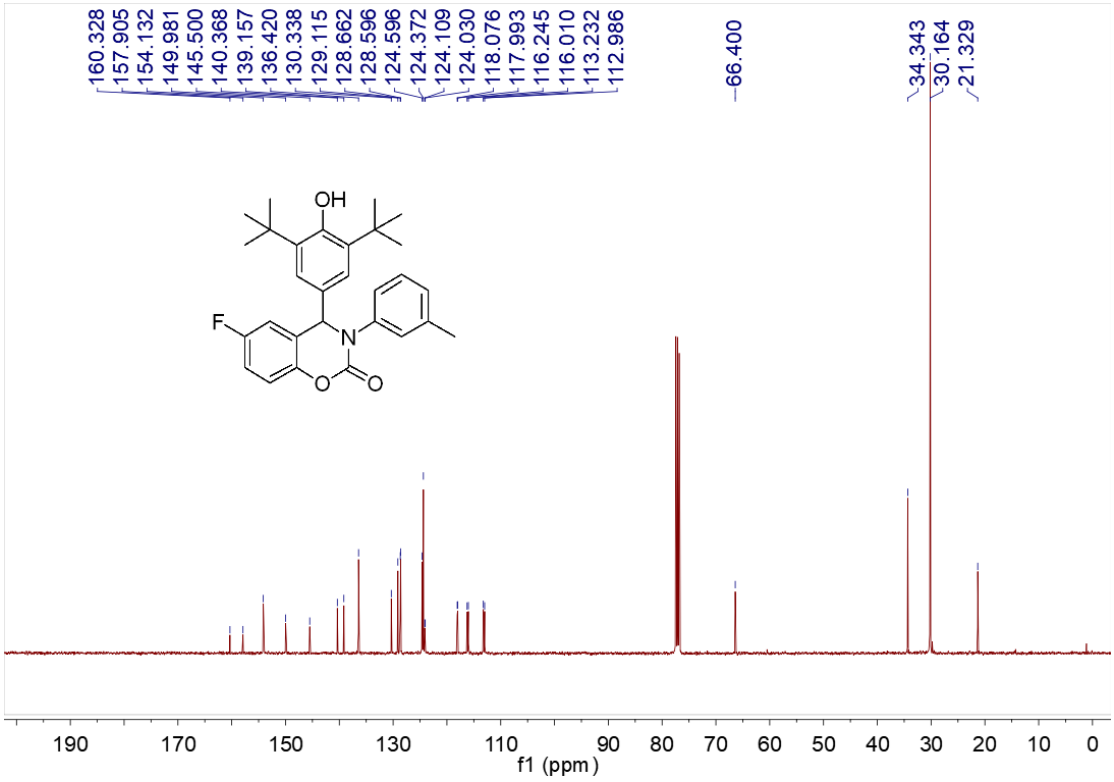
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6c**:



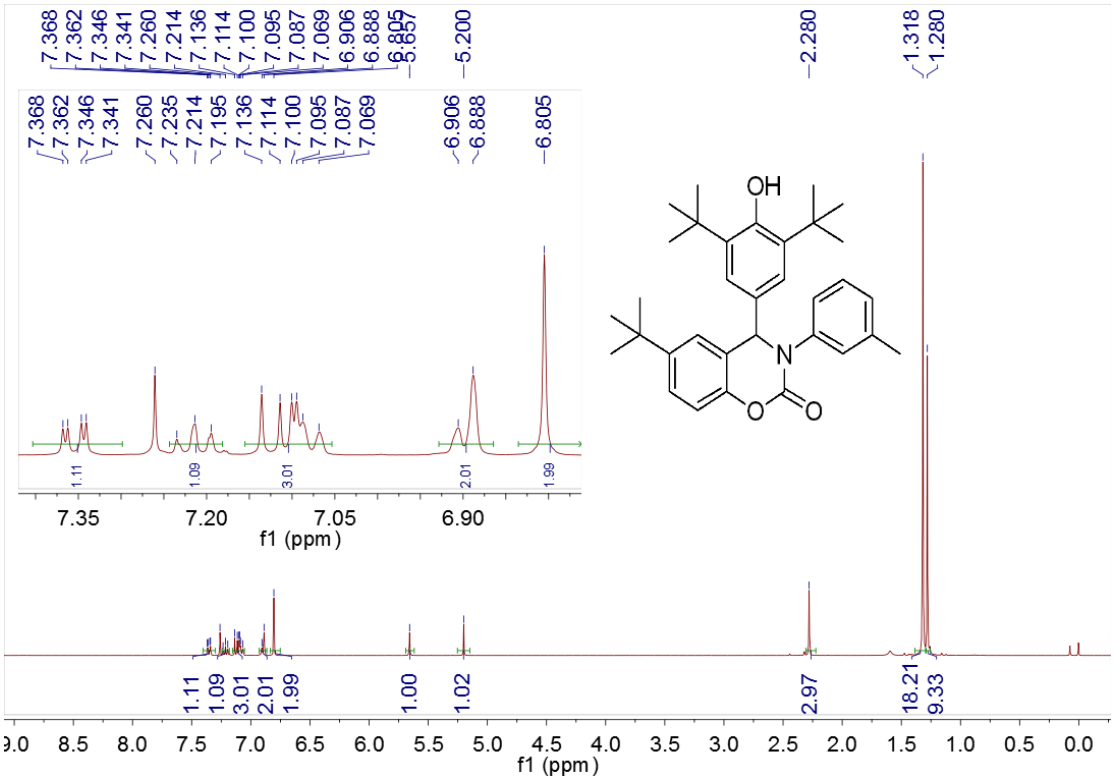
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6d**:



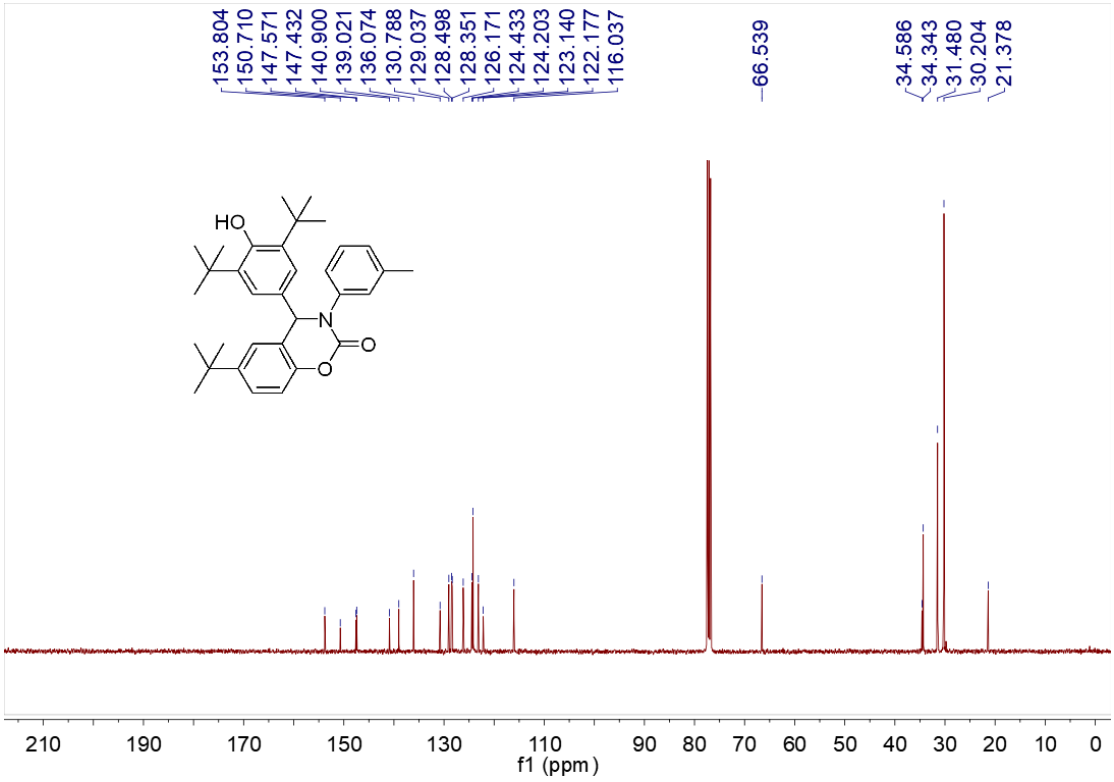
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6d**:



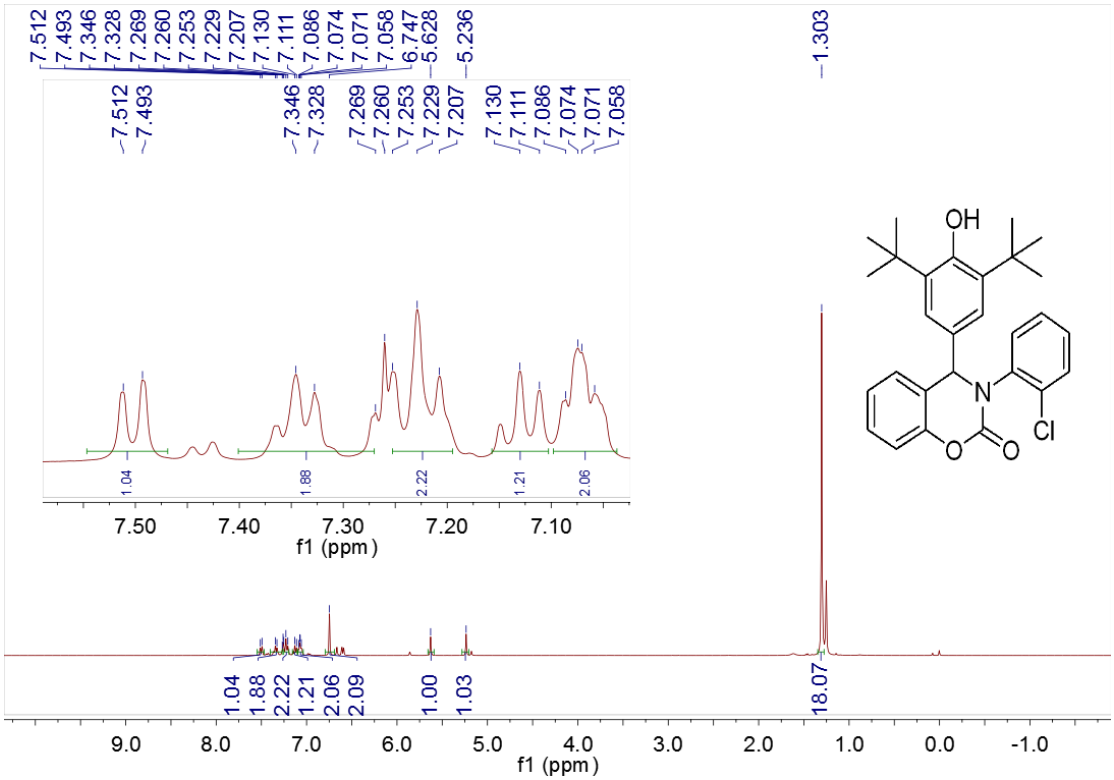
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6e:**



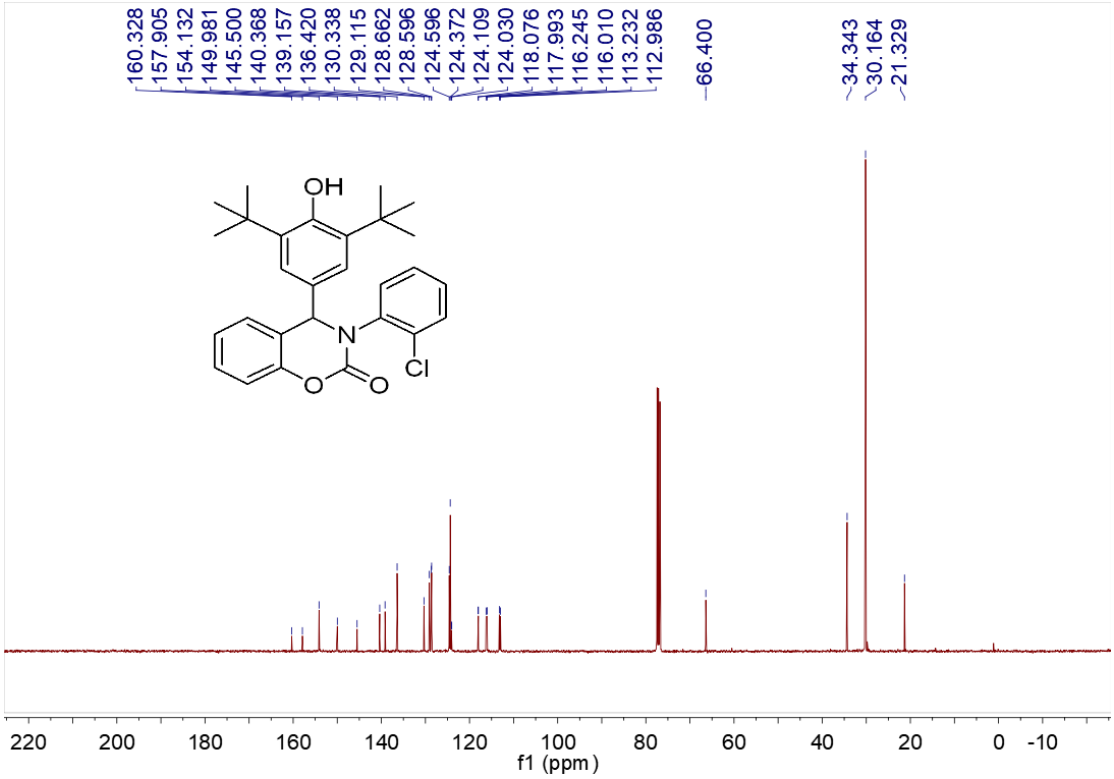
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6e**:



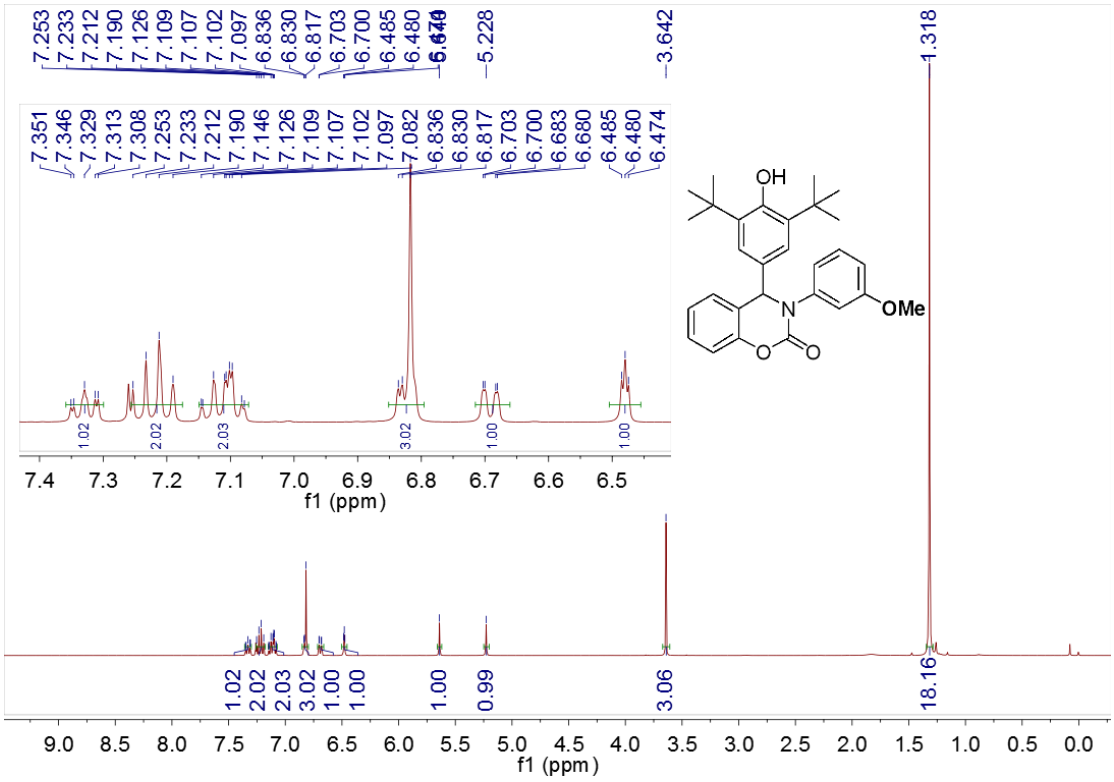
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6f**:



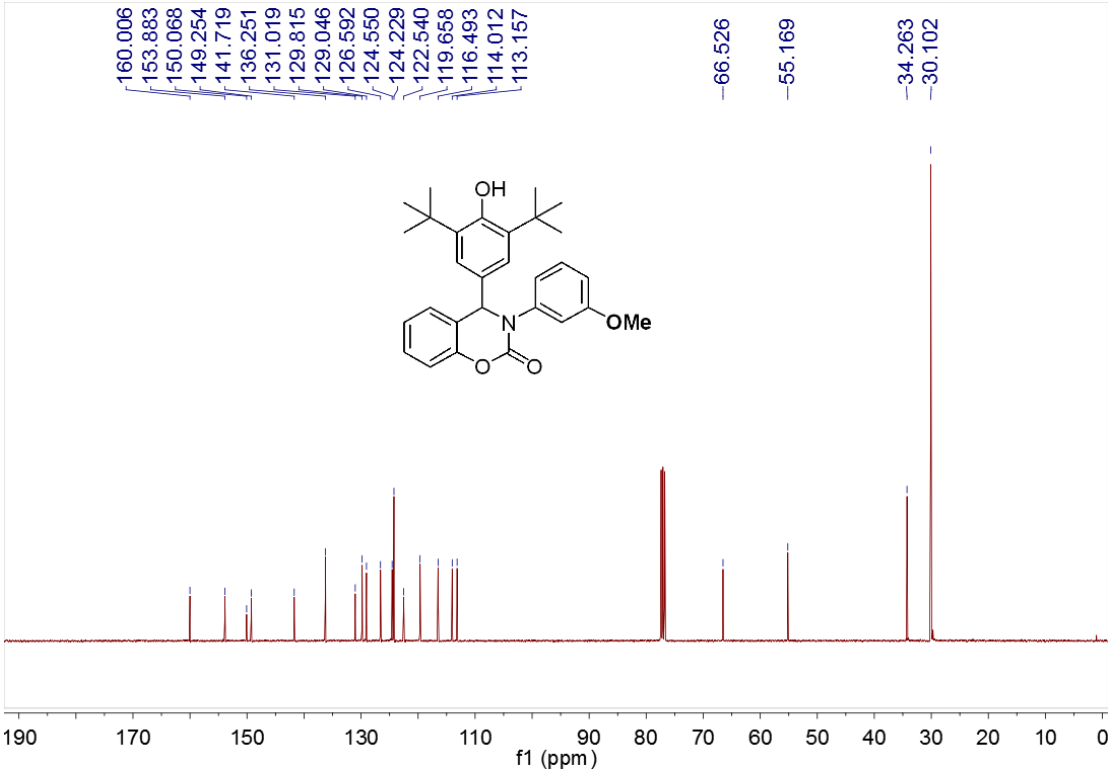
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6f**



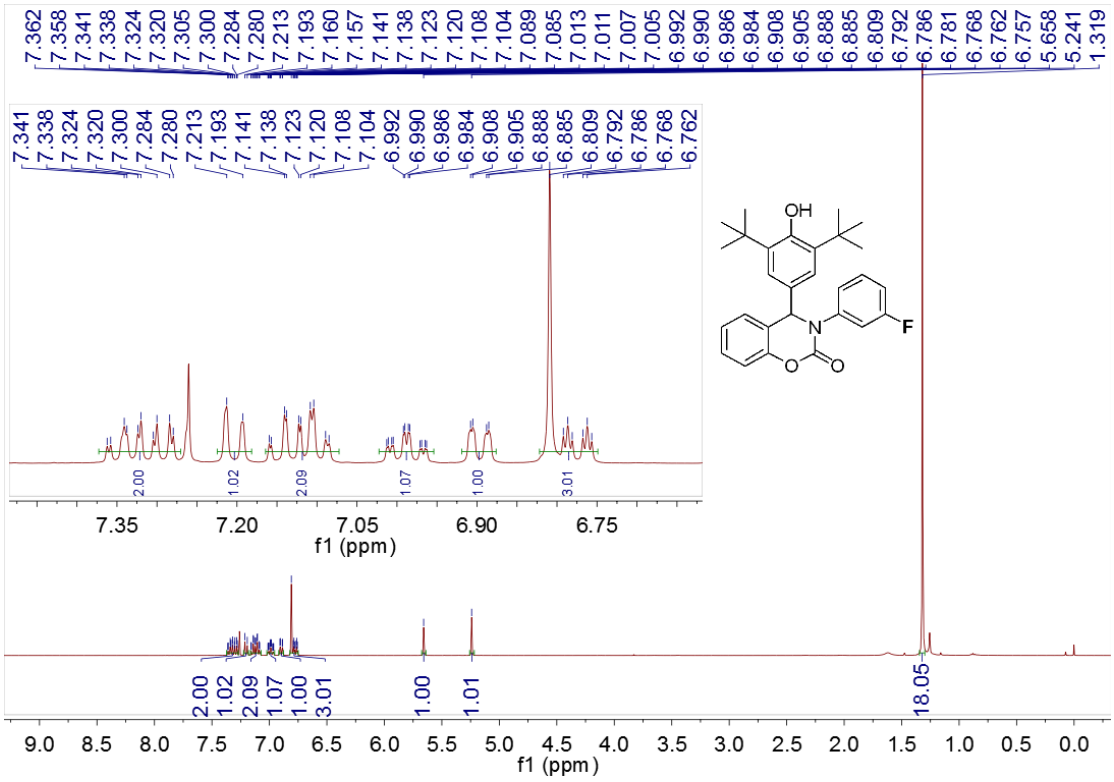
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6g**:



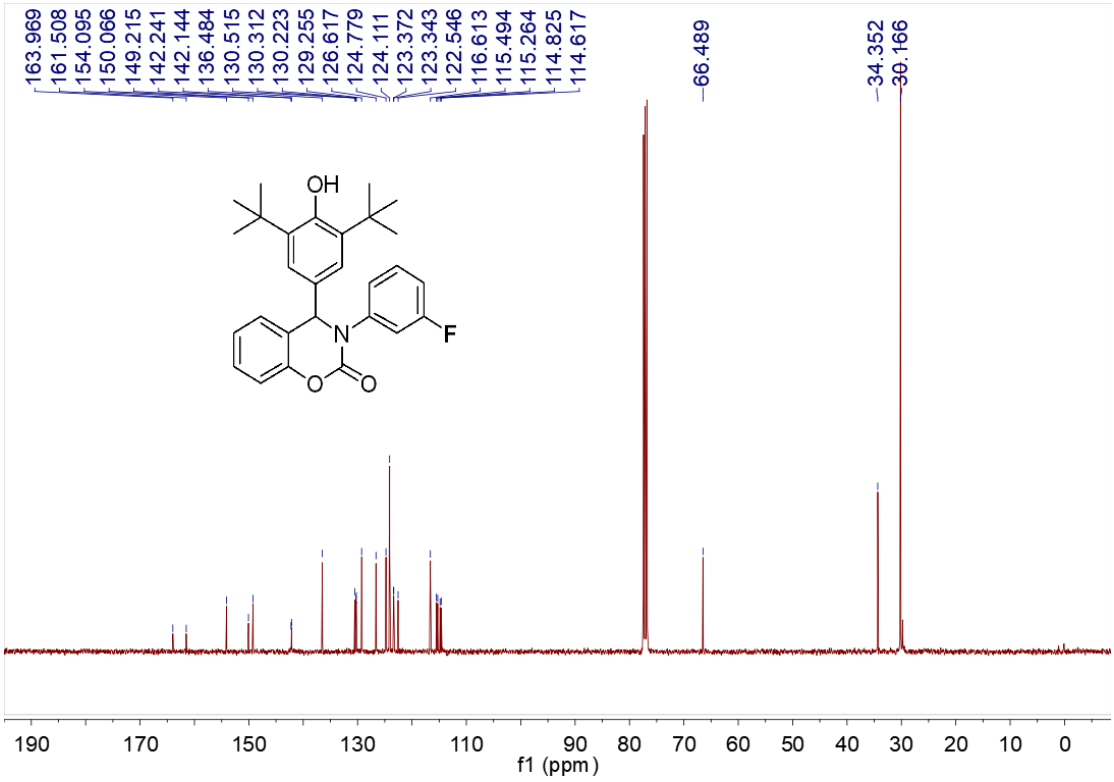
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6g:**



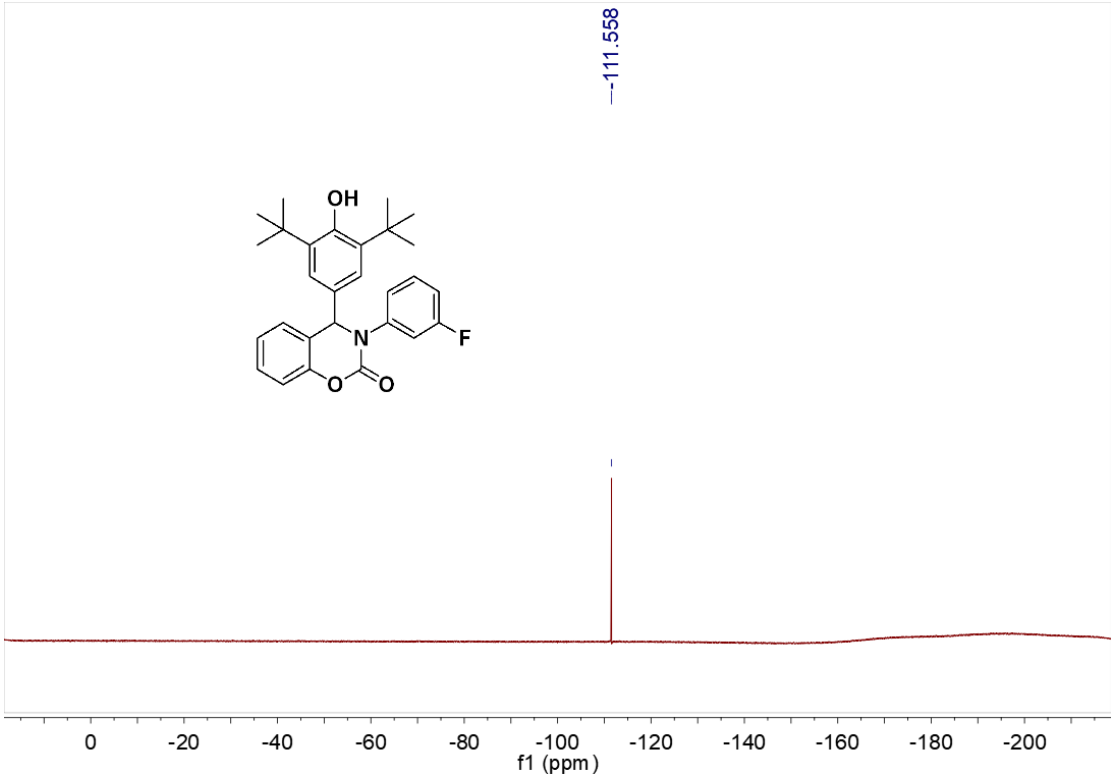
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6h**:



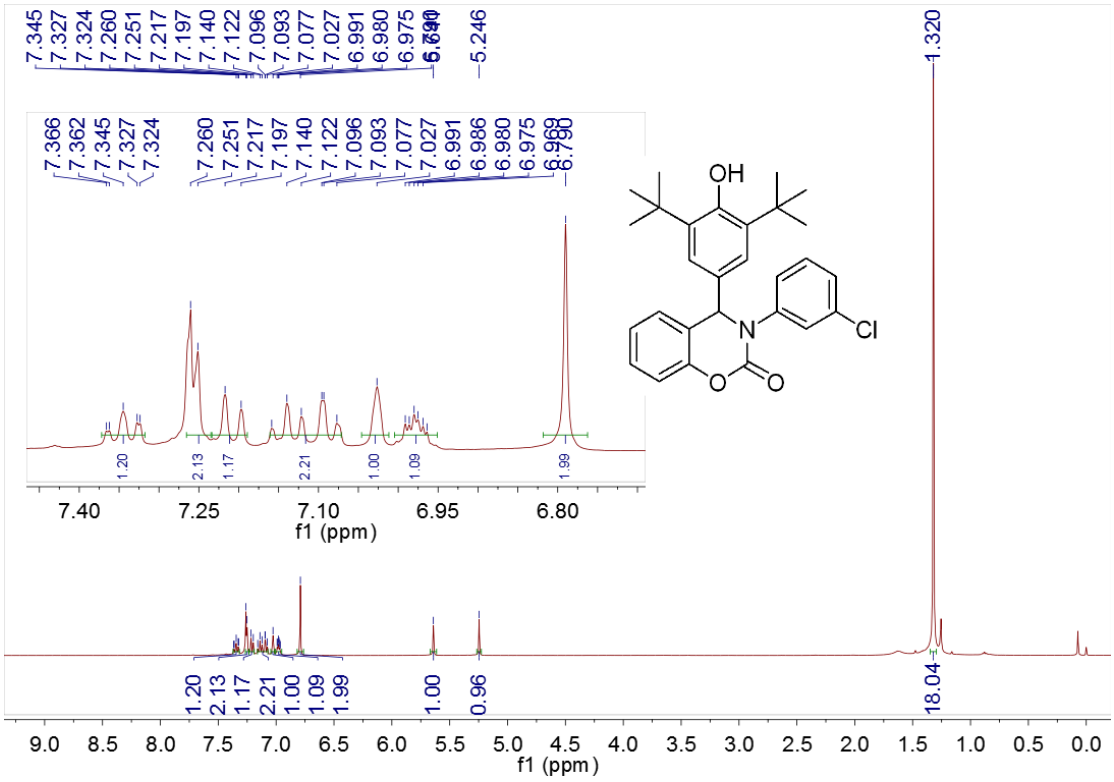
^{13}C NMR (100 MHz, $CDCl_3$) of compound **6h:**



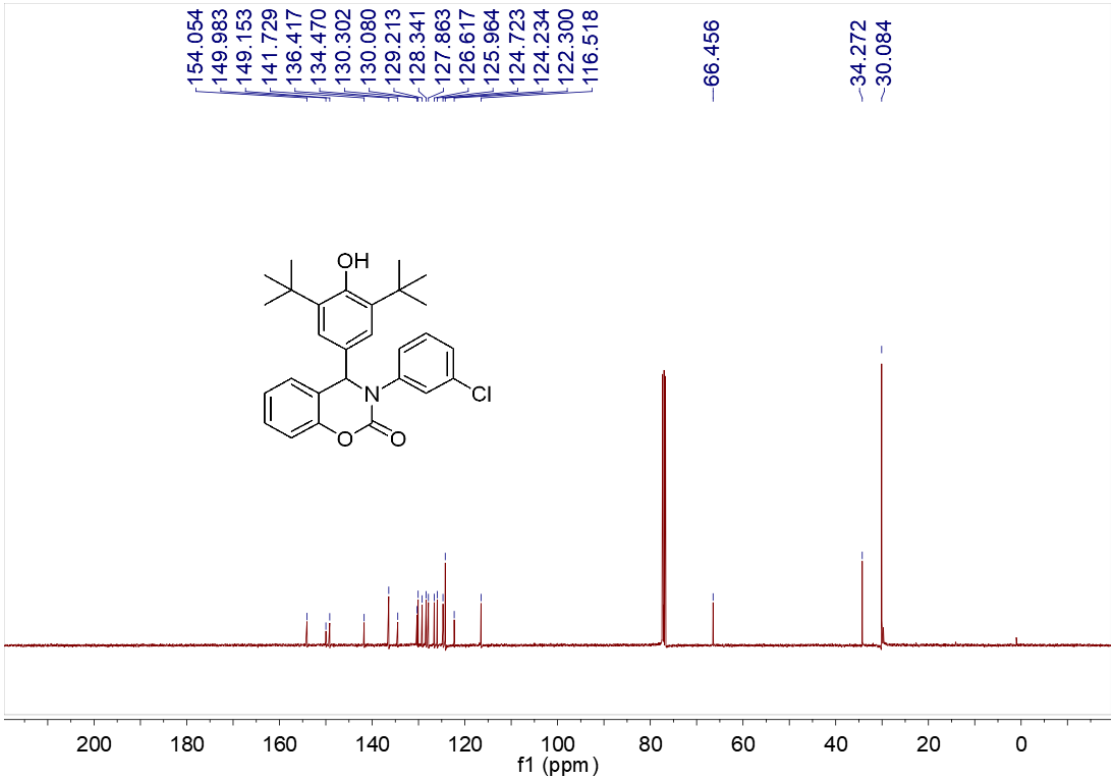
^{19}F NMR (376 MHz, $CDCl_3$) of compound **6h**:



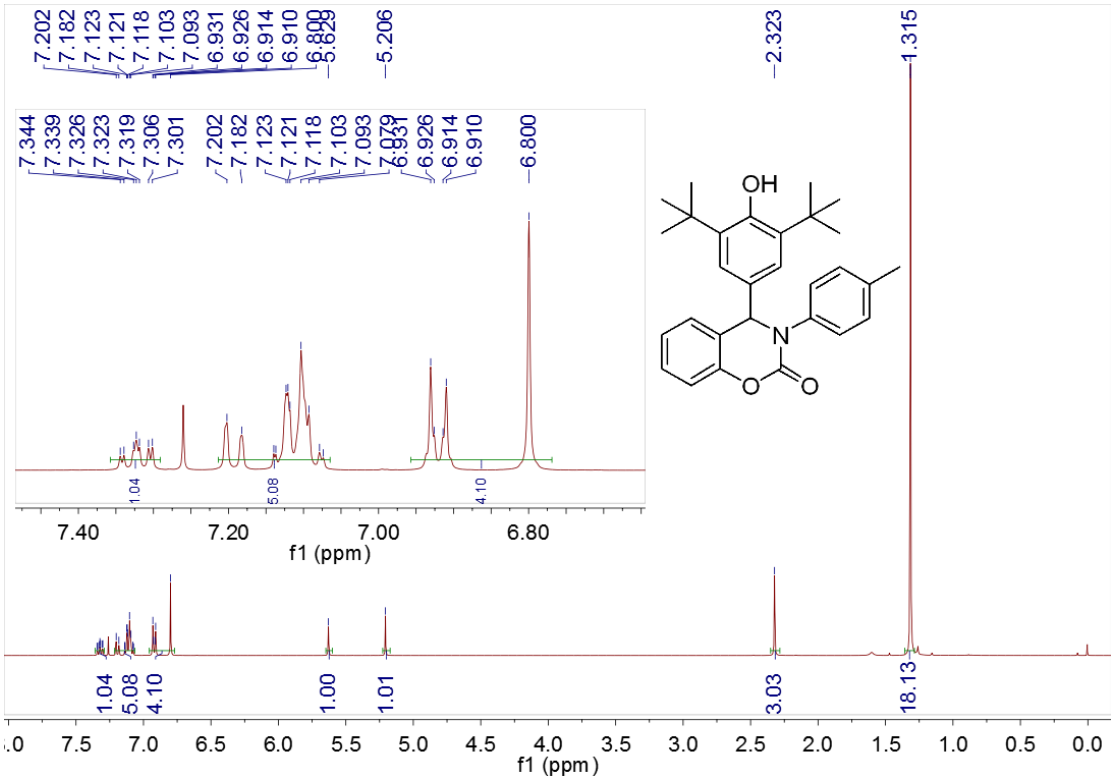
^{1}H NMR (400 MHz, $CDCl_3$) of compound **6i**:



^{13}C NMR (100 MHz, $CDCl_3$) of compound **6i:**



^{1}H NMR (400 MHz, $CDCl_3$) of compound **6j**:



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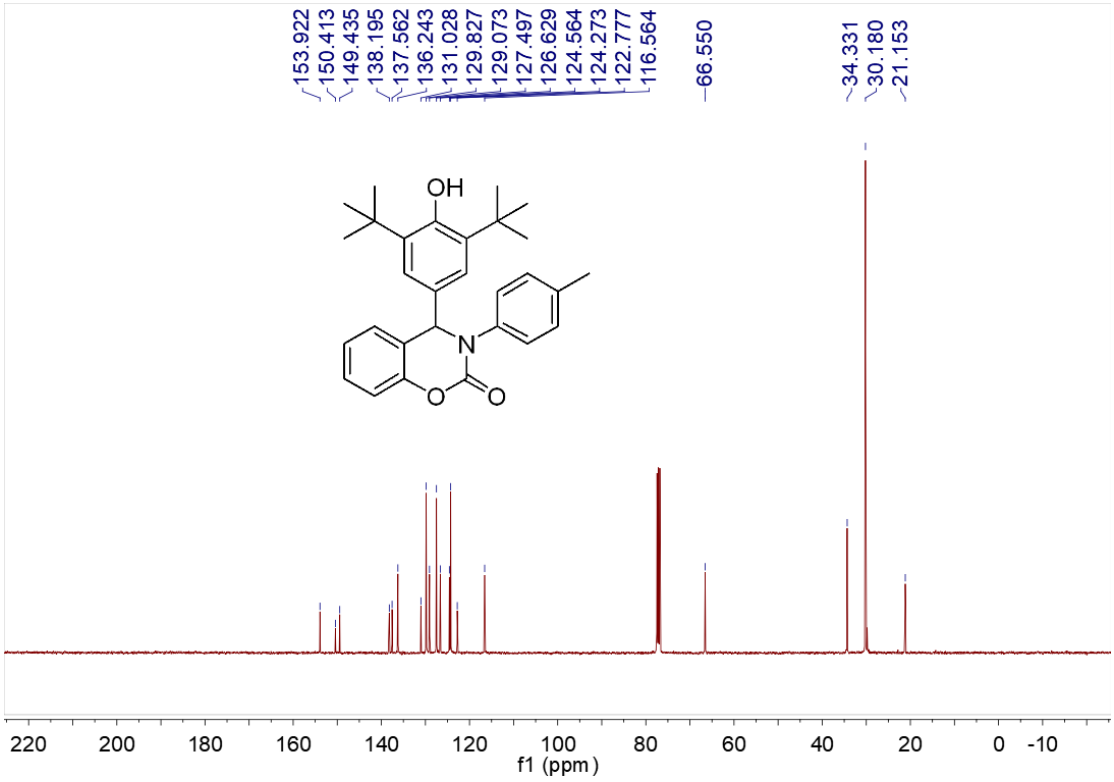
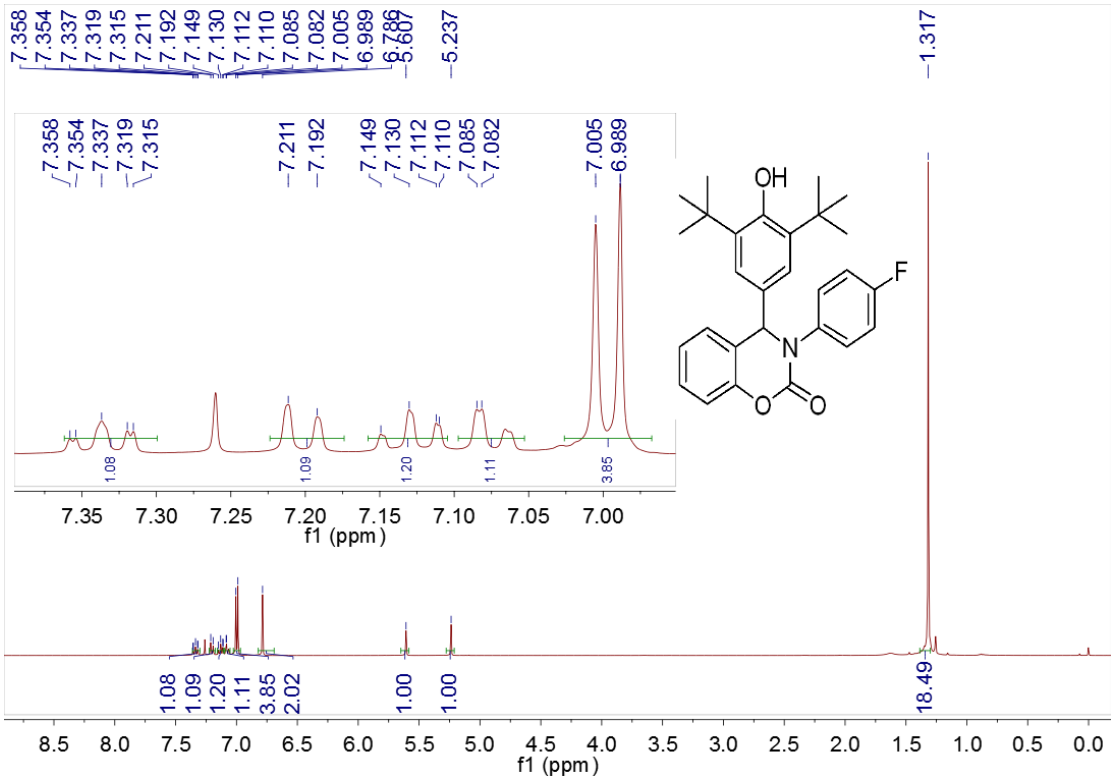


^{1}H NMR (400 MHz, $CDCl_3$) of compound **6k**:



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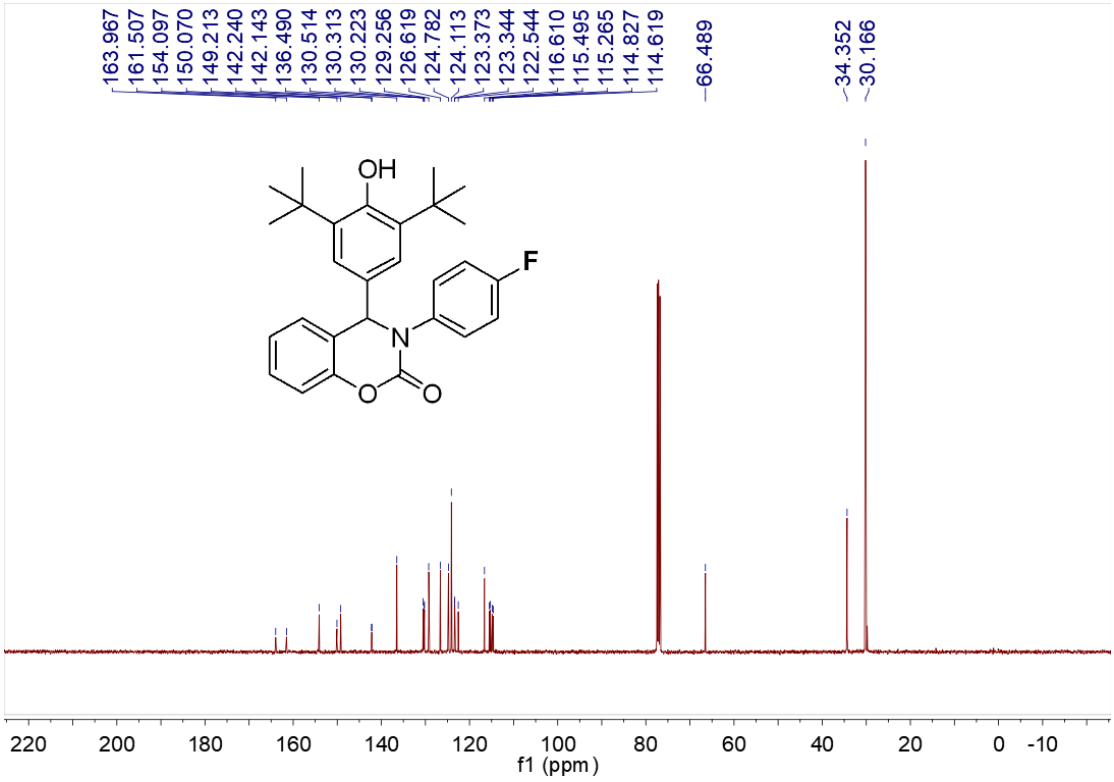
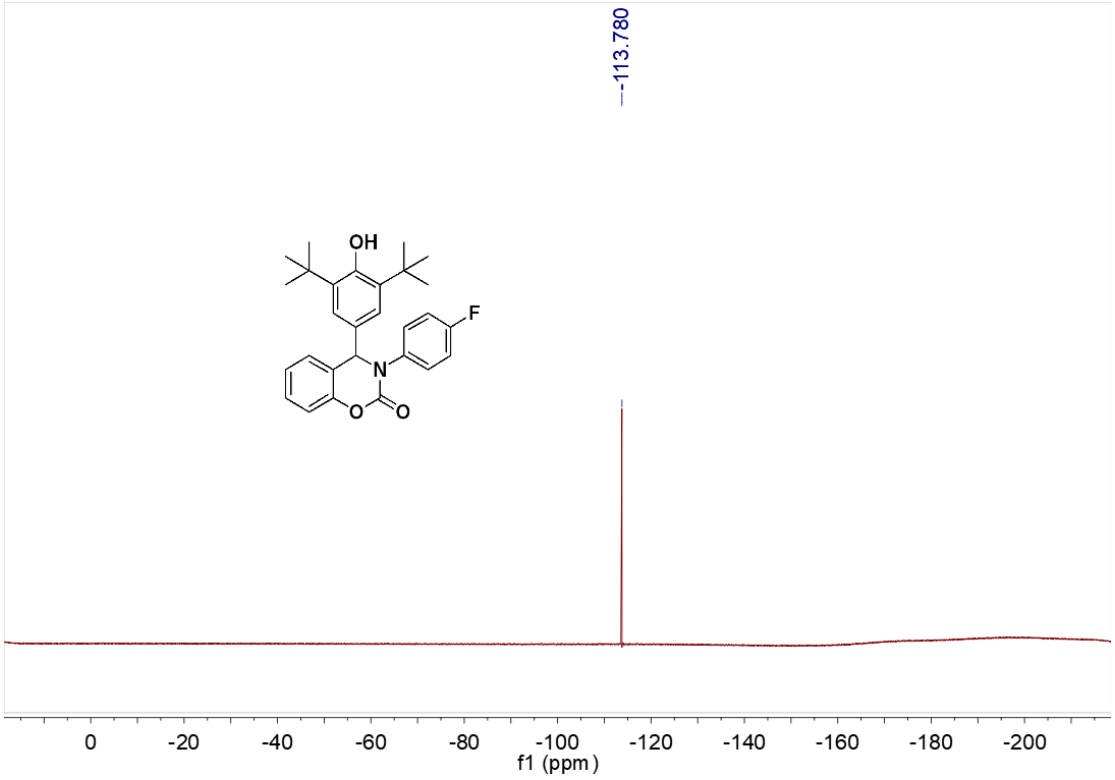
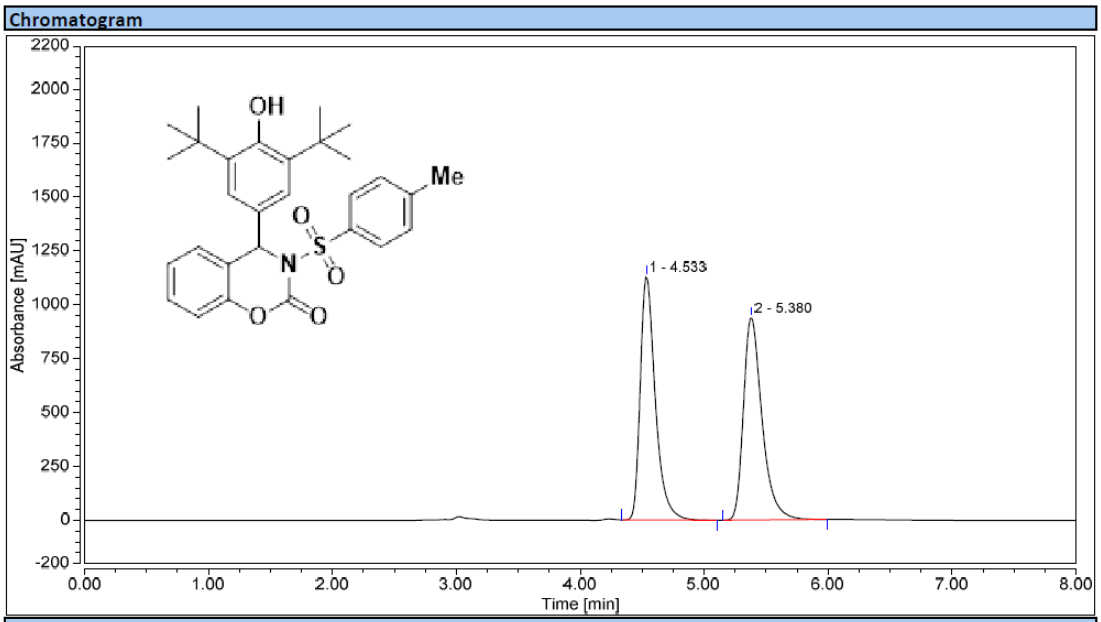


^{19}F NMR (376 MHz, $CDCl_3$) of compound **6k**:



2. HPLC copies of chiral product 3a

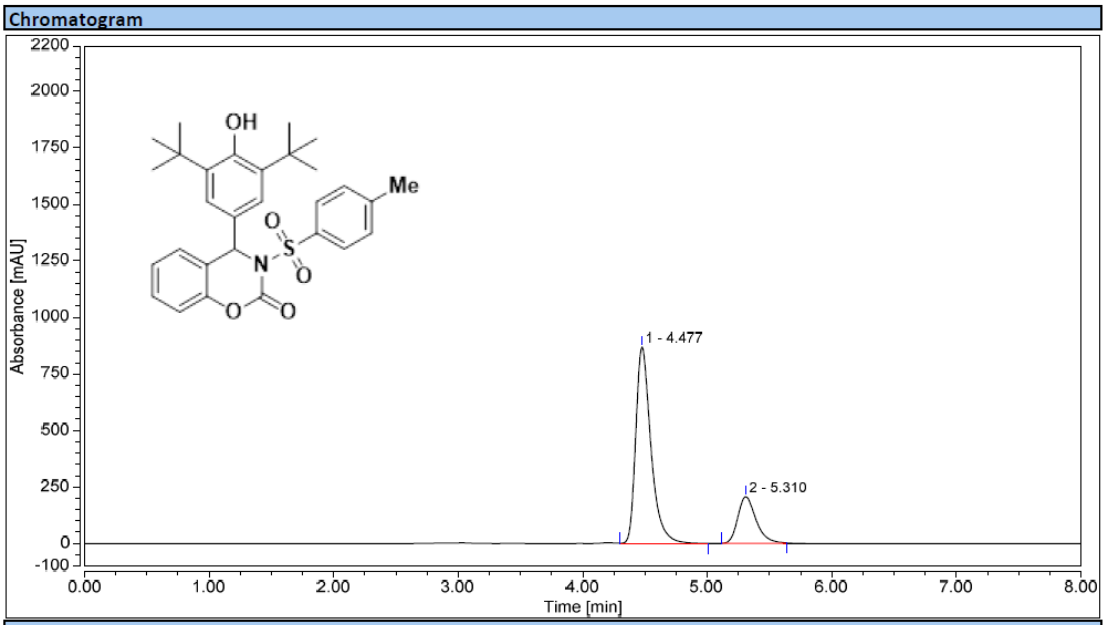
Racemic:



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount n.a.
1		4.533	158.996	1130.236	49.36	54.60	n.a.
2		5.380	163.117	939.644	50.64	45.40	n.a.
Total:			**322.113**	**2069.880**	**100.00**	**100.00**	

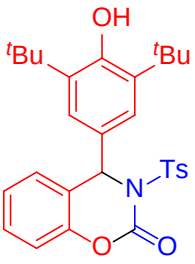
Enantioselective:



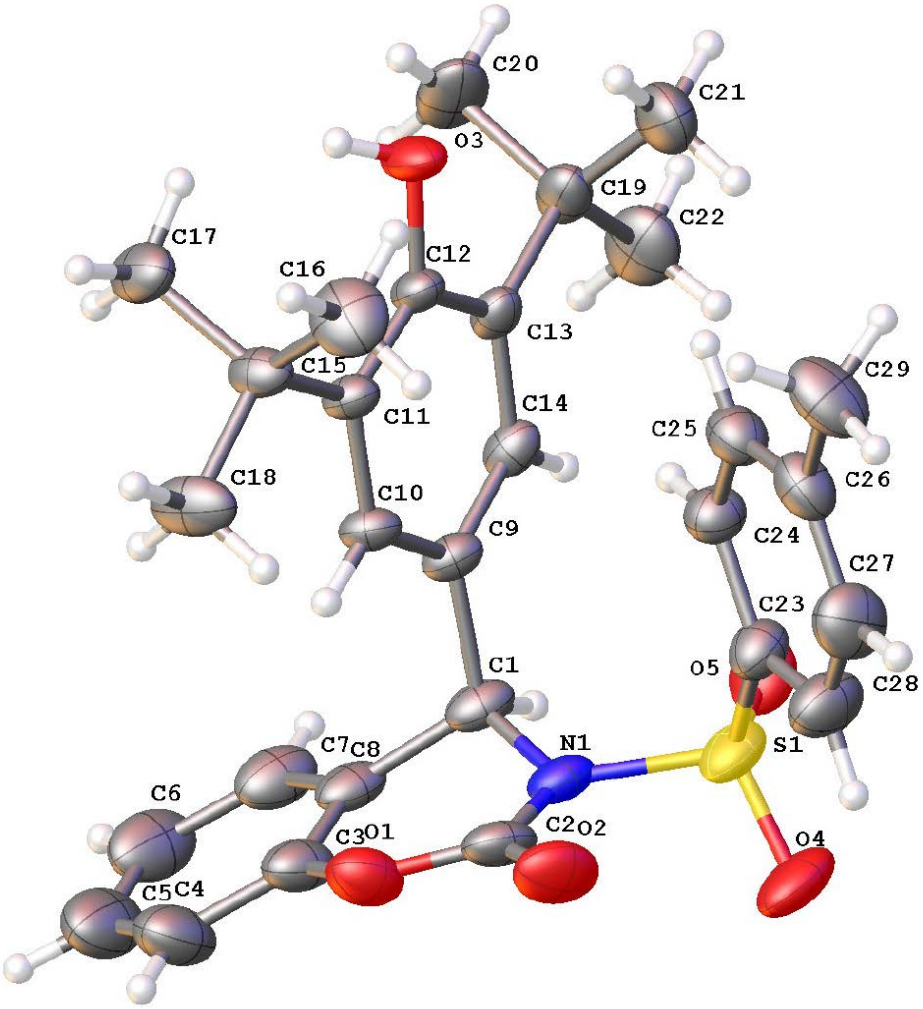
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount n.a.
1		4.477	121.976	866.253	77.69	80.80	n.a.
2		5.310	35.034	205.852	22.31	19.20	n.a.
Total:			**157.010**	**1072.105**	**100.00**	**100.00**	

3. X-ray single crystal data for compound 3a



3a



CCDC 1910017

The thermal ellipsoid was drawn at the 30% probability level.

Empirical formula	C29 H33 N O5 S
Formula weight	507.62
Temperature	296(2) K

Wavelength	0.71073 A
Crystal system, space group	Monoclinic, P2(1)/n
Unit cell dimensions	a = 10.9129(11) A alpha = 90 deg. b = 13.7709(13) A beta = 102.2440(10) deg. c = 18.7714(18) A gamma = 90 deg.
Volume	2756.8(5) A^3
Z, Calculated density	4, 1.223 Mg/m^3
Absorption coefficient	0.155 mm^-1
F(000)	1080
Crystal size	0.60 x 0.50 x 0.50 mm
Theta range for data collection	2.40 to 27.48 deg.
Limiting indices	-14<=h<=11, -15<=k<=17, -17<=l<=24
Reflections collected / unique	16031 / 6186 [R(int) = 0.0247]
Completeness to theta = 27.48	97.8 %
Absorption correction	None
Max. and min. transmission	0.9265 and 0.9127
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	6186 / 1 / 333
Goodness-of-fit on F^2	1.048
Final R indices [I>2sigma(I)]	R1 = 0.0626, wR2 = 0.1737
R indices (all data)	R1 = 0.0910, wR2 = 0.1972
Largest diff. peak and hole	0.322 and -0.731 e.A^-3