Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

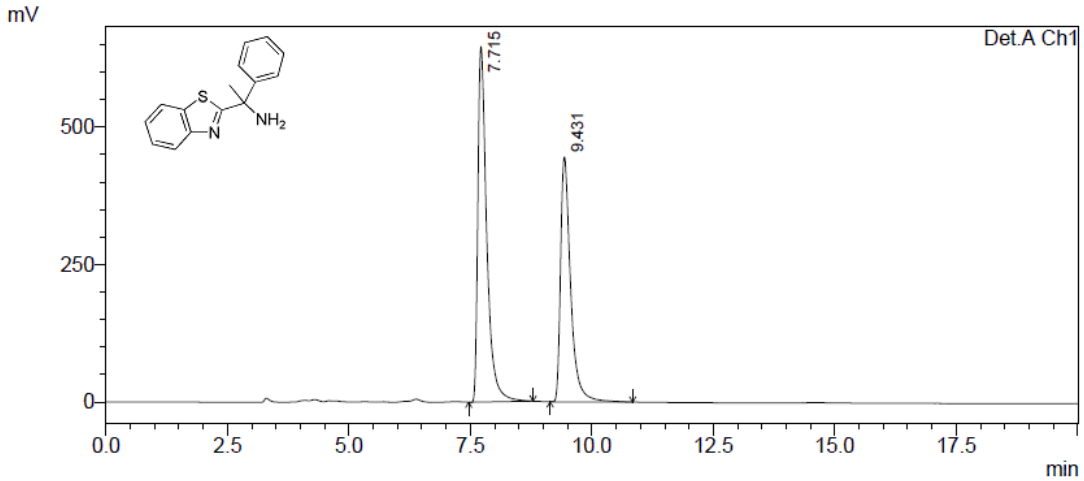
Asymmetric synthesis of amino-benzothiazol derivatives by additions of 2-lithiated benzothiazoles to (*S*)-*N*-*t*-butylsulfinyl-ketimines

Yanling Dai, Chen Xie, Lingmin Wu, Haibo Mei,* Vadim A. Soloshonok, Jianlin Han,* and Yi Pan

1. HPLC spectra of compounds 10

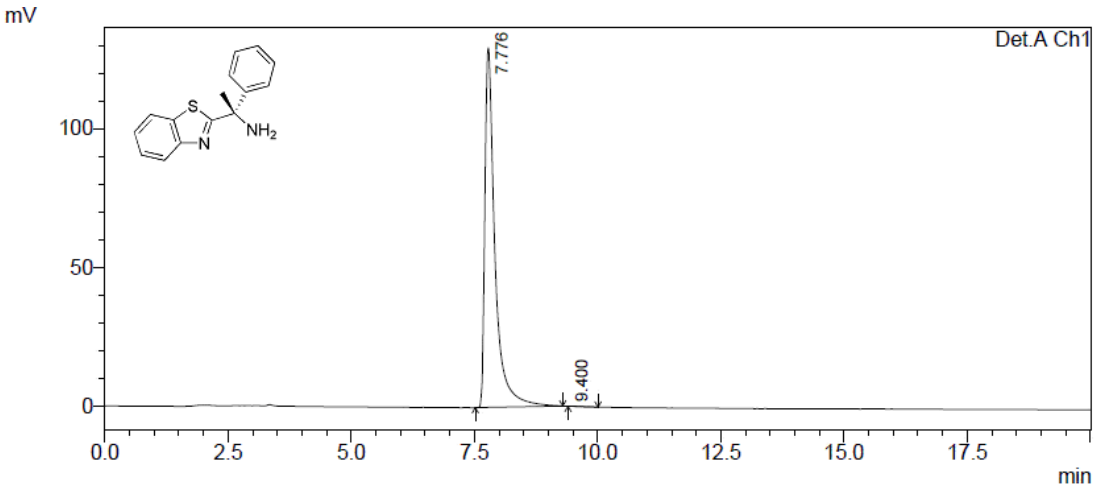
HPLC condition: The enantiomeric ratio was determined by HPLC with a Daicel Chiralpak IA column (Hexane: *i*-PrOH = 90:10, 1.0 mL/min, 254 nm, t_R (major) = 7.7 min, t_R (minor) = 9.4 min.)

HPLC spectrum of racemic **10**



Peak#	Ret. Time	Area	Height	Area %	Height %
1	7.715	8255613	646552	56.313	59.199
2	9.431	6404495	445624	43.687	40.801
Total		14660108	1092176	100.000	100.000

HPLC spectrum of (*S*)-**10**

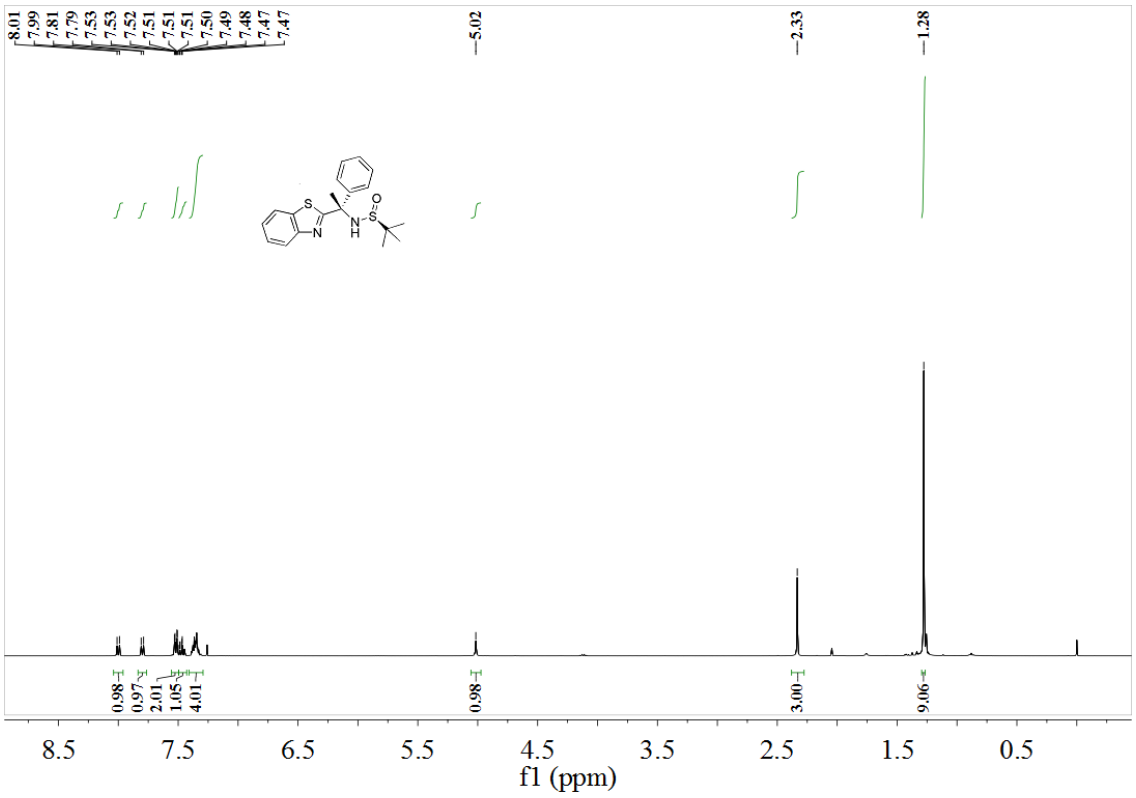


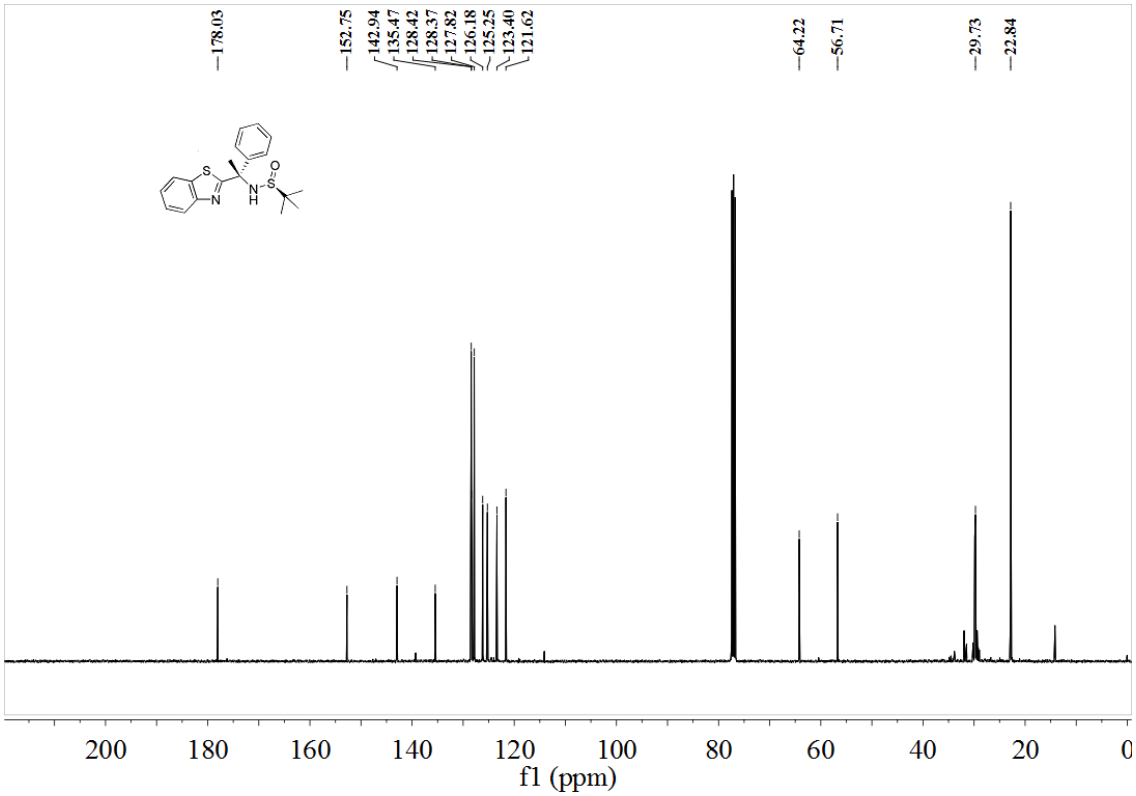
Peak#	Ret. Time	Area	Height	Area %	Height %
1	7.776	1846671	129648	100.021	100.000
2	9.400	-380	0	-0.021	0.000
Total		1846291	129648	100.000	100.000

The 100% ee was found of **(*S*)-10**

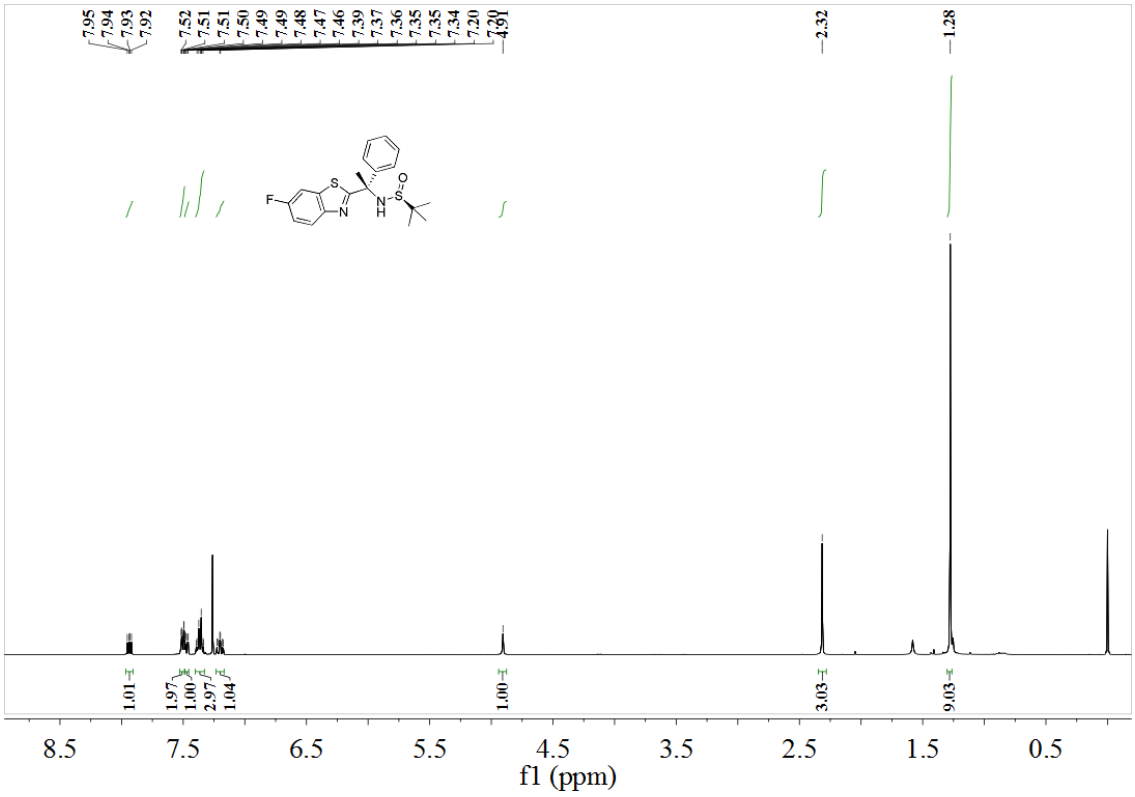
2. NMR spectra of compounds 8, 9 and 10

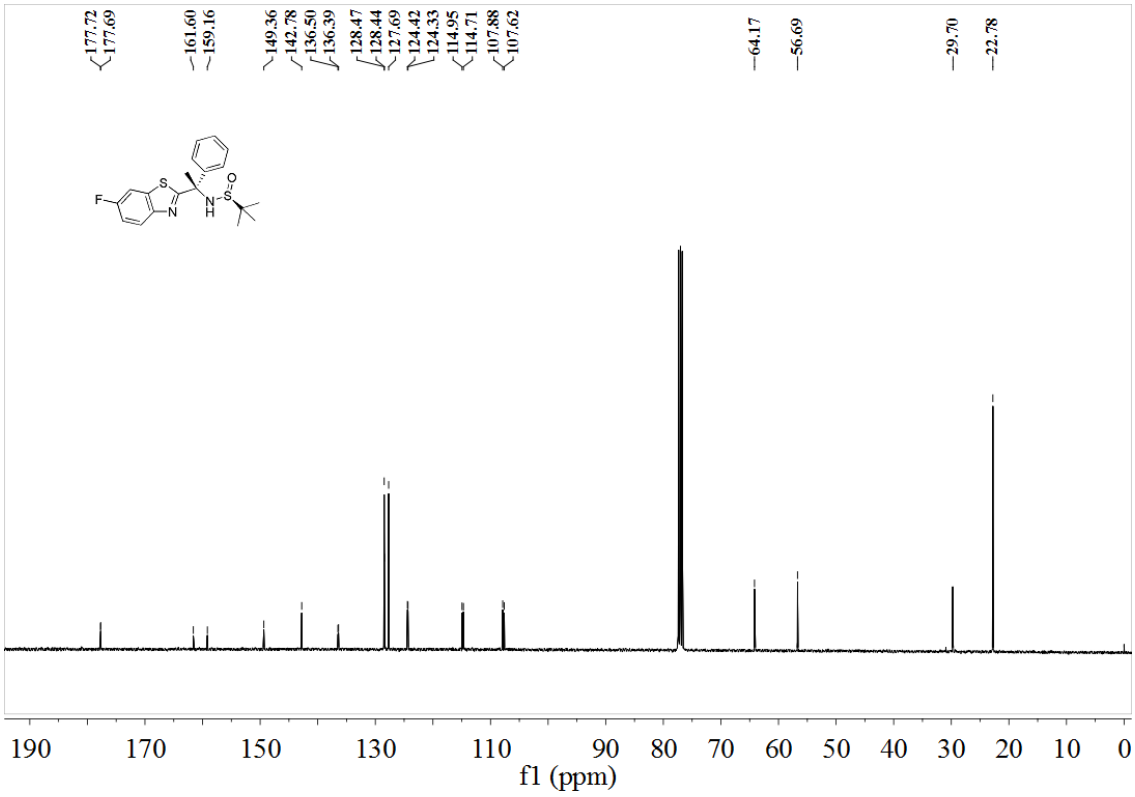
^{1}H NMR and ^{13}C NMR R of **8a**

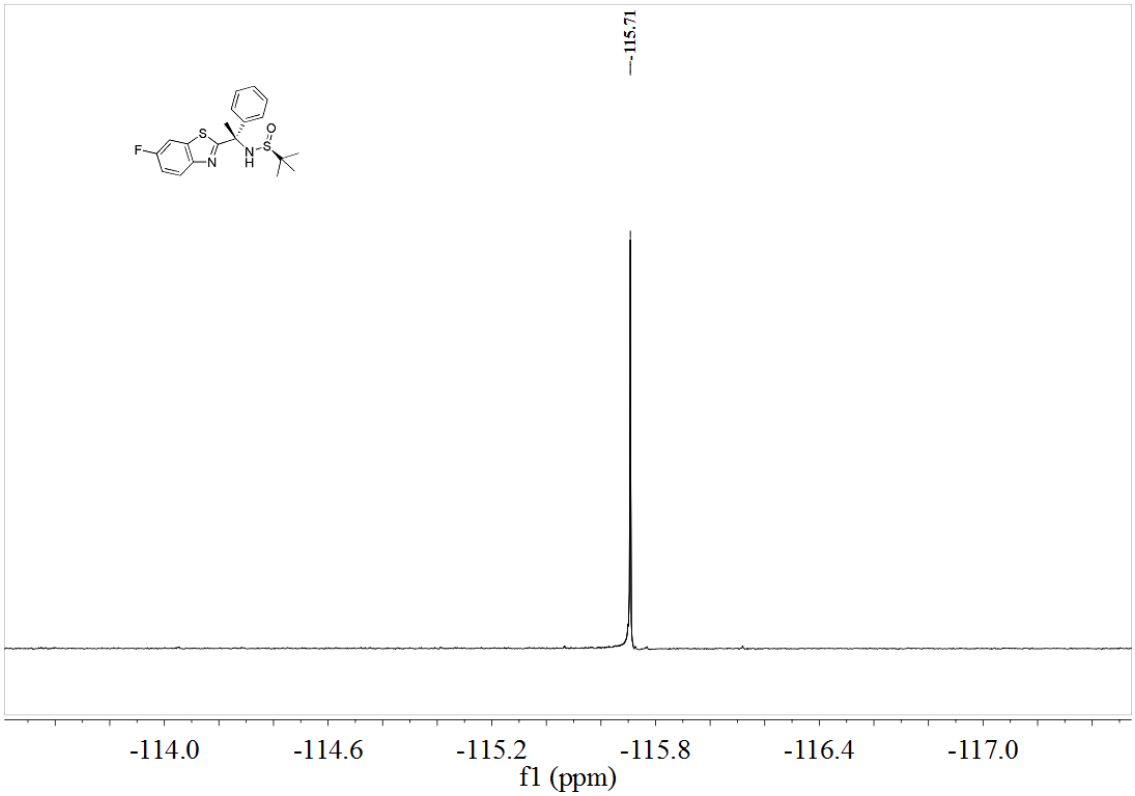




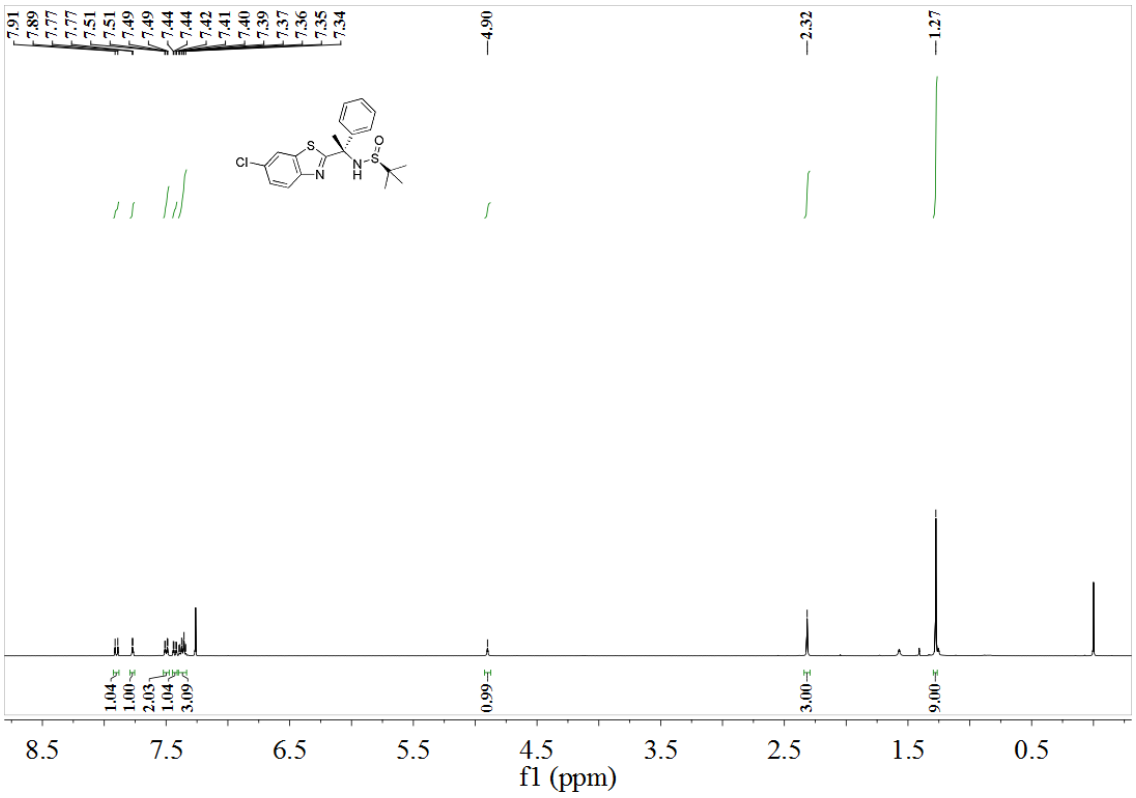
^{1}H NMR, ^{13}C NMR and ^{19}F NMR of **8b**

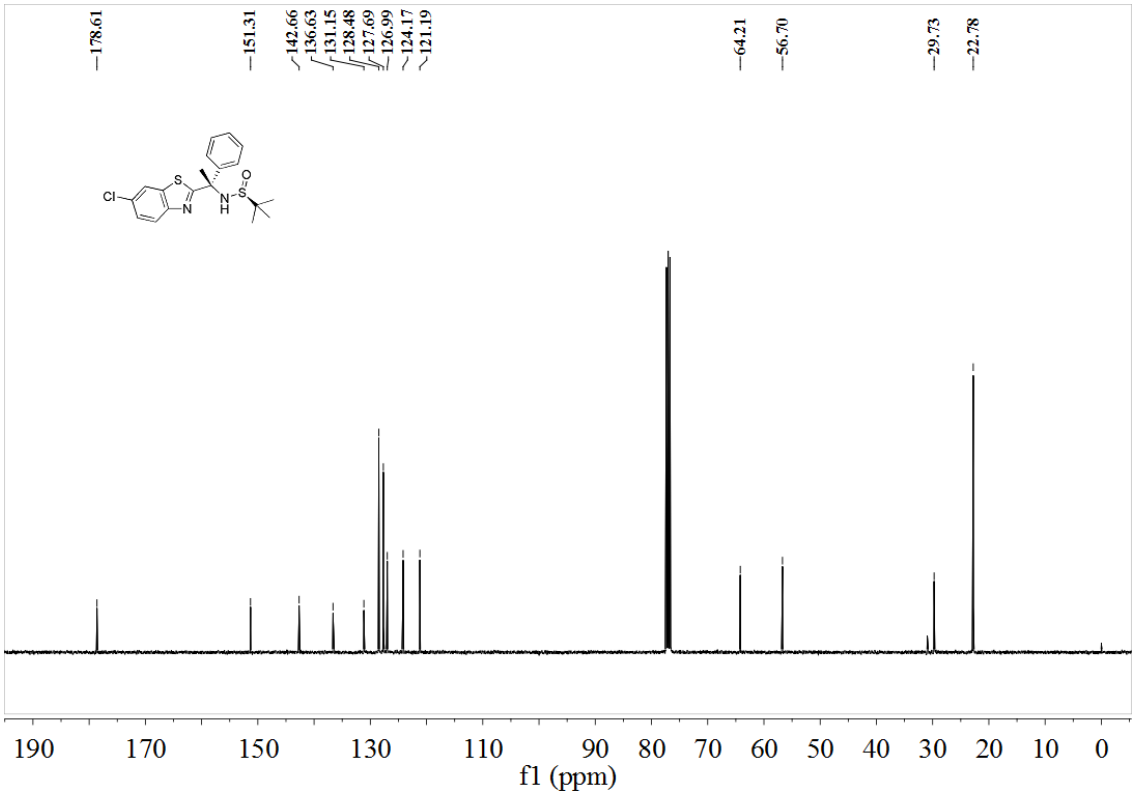




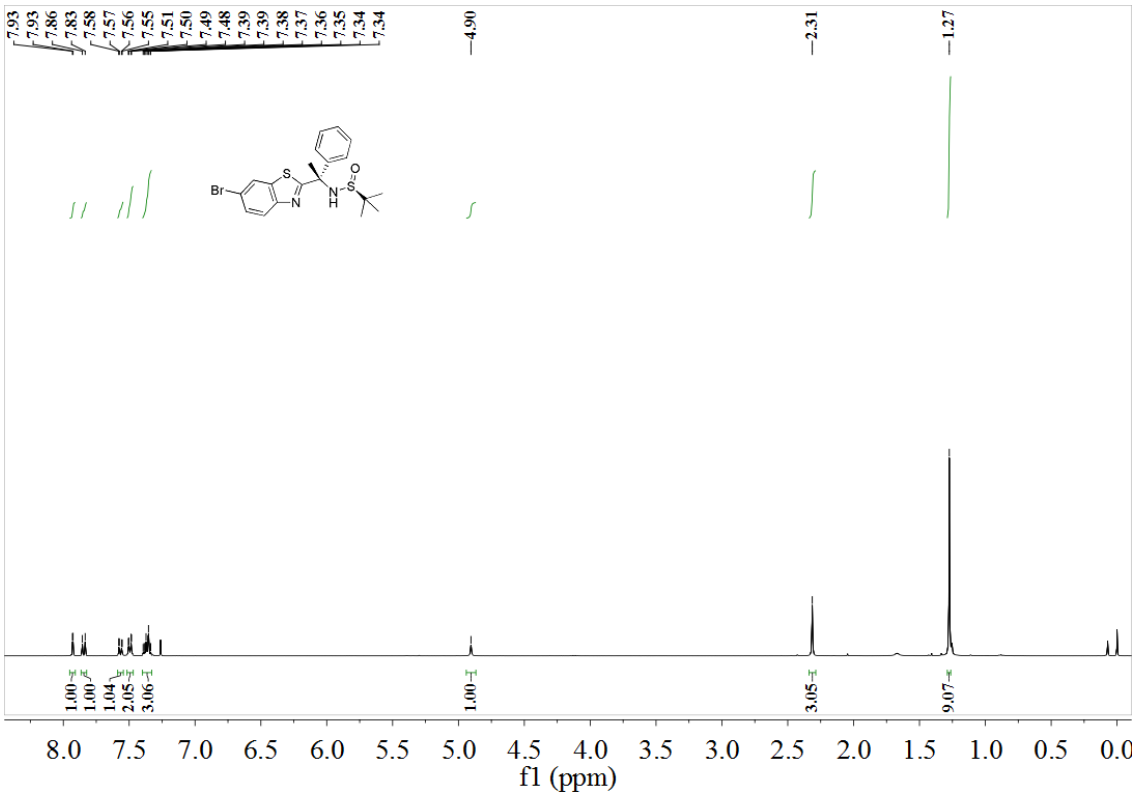

-115.71
F
S
N
N
H
O
S
-114.0
-114.6
-115.2
-115.8
-116.4
-117.0
f1 (ppm)

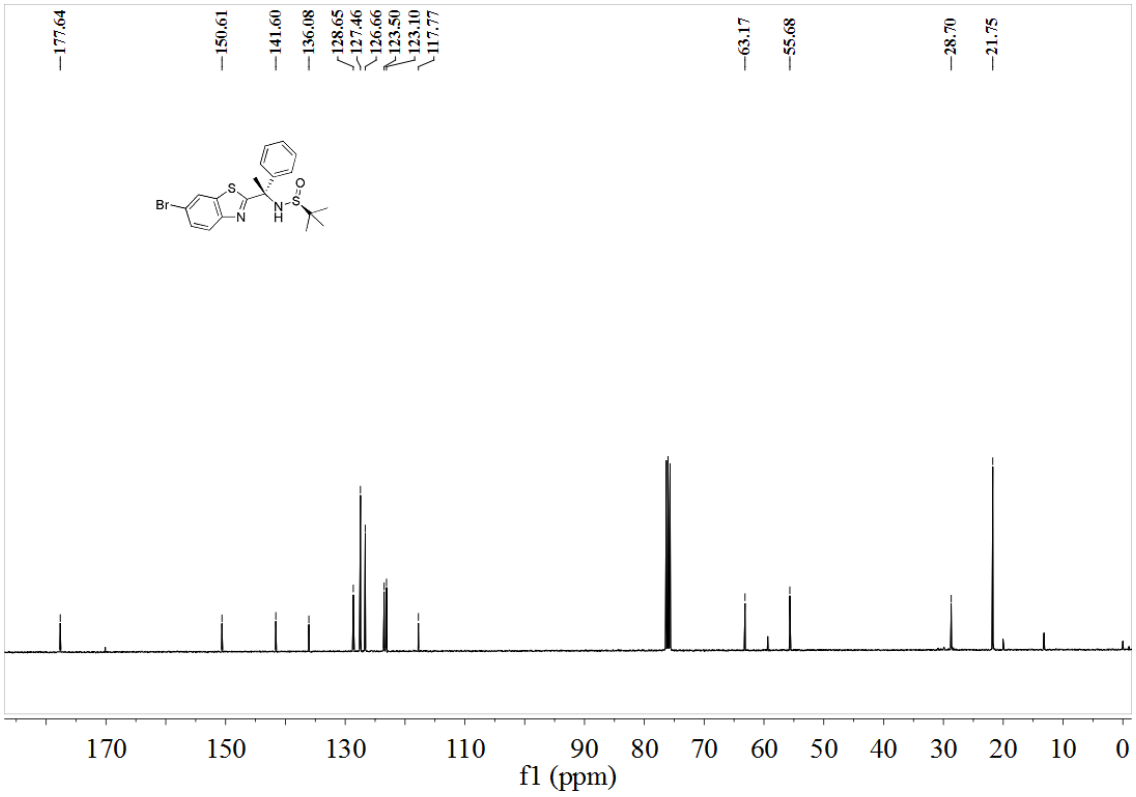
^{1}H NMR and ^{13}C NMR of **8c**



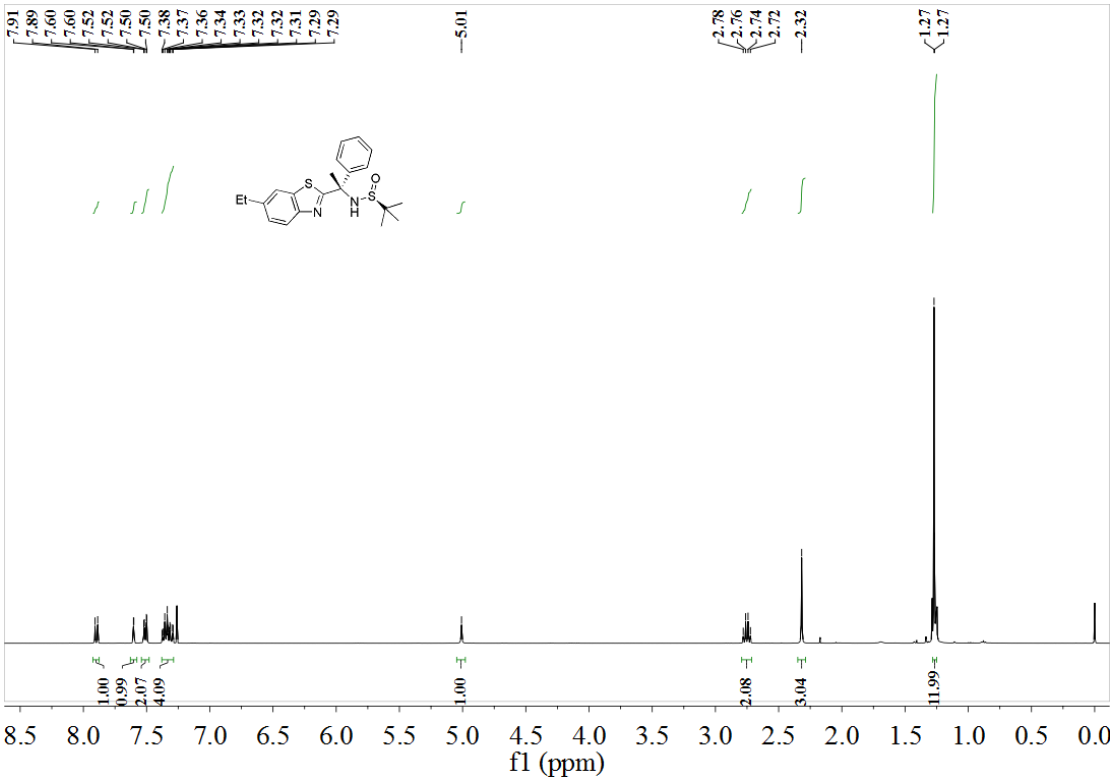


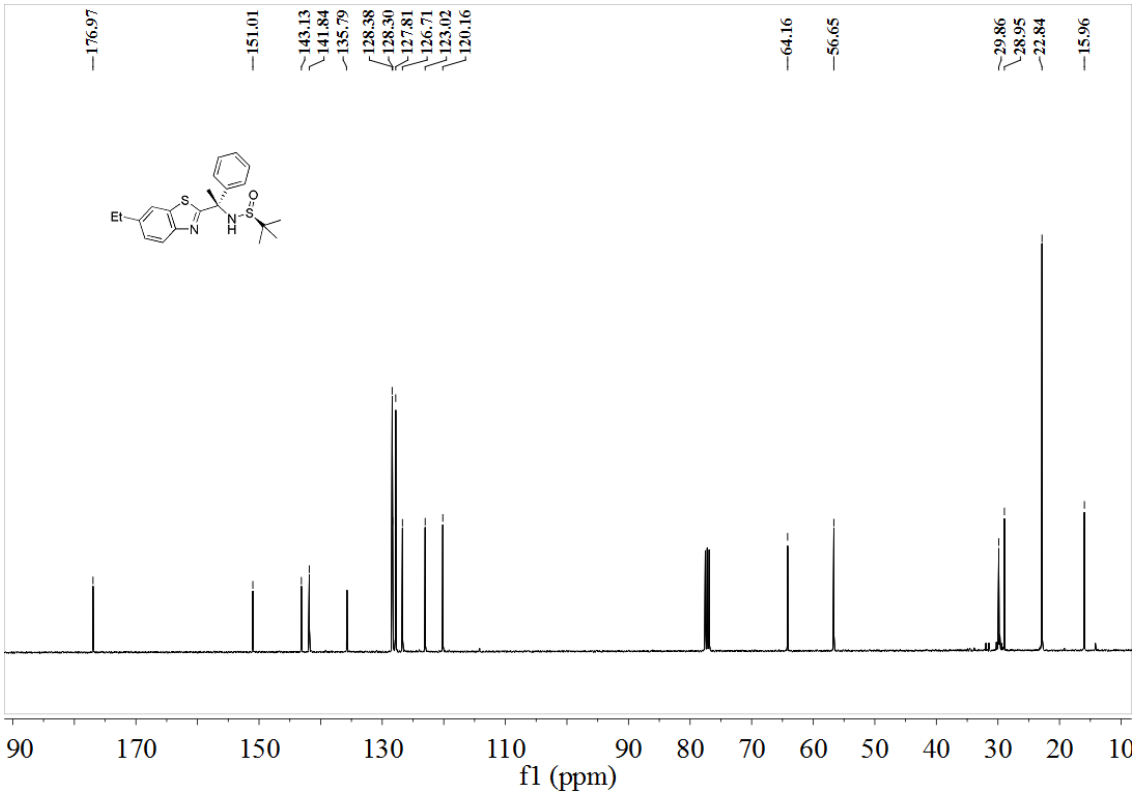
^{1}H NMR and ^{13}C NMR of **8d**



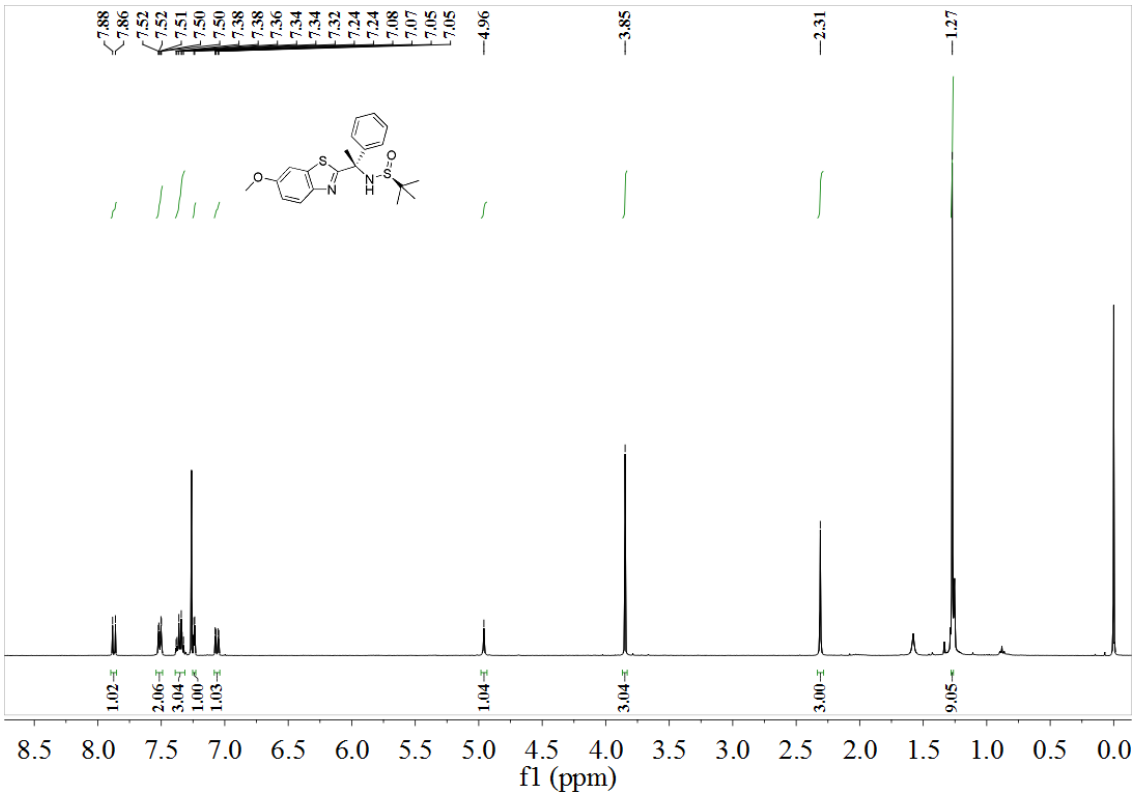


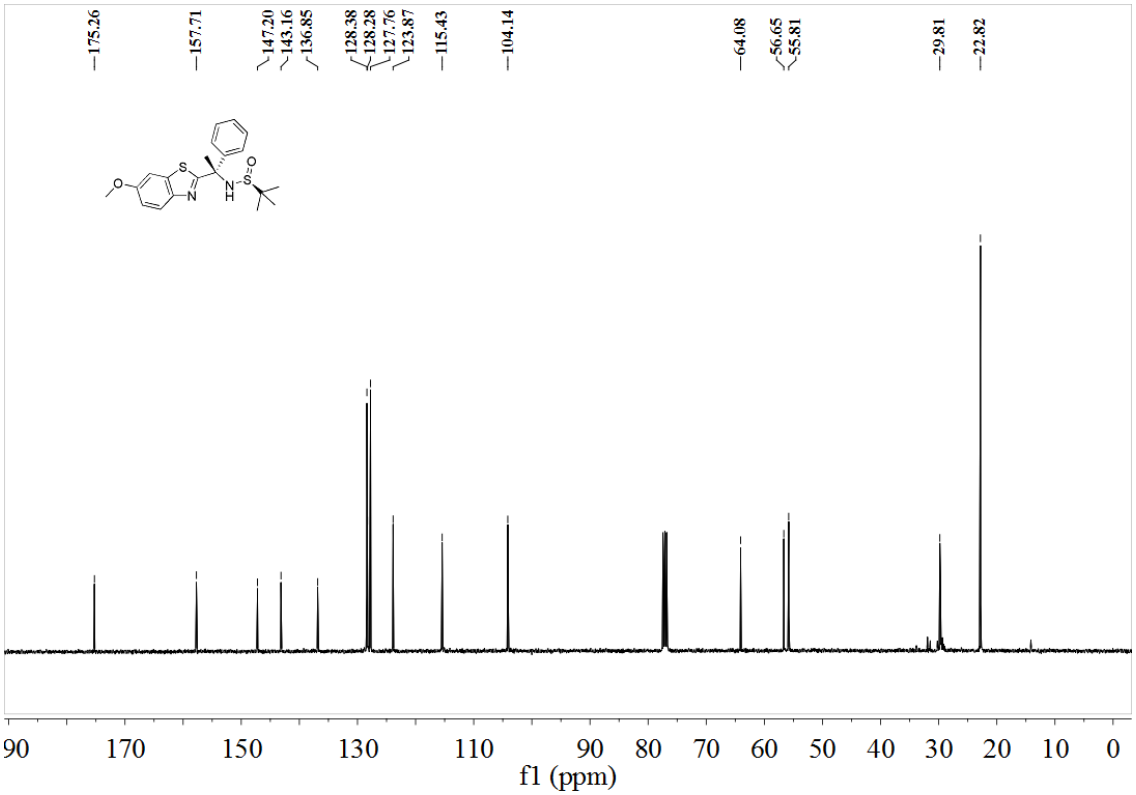
^{1}H NMR and ^{13}C NMR of **8e**



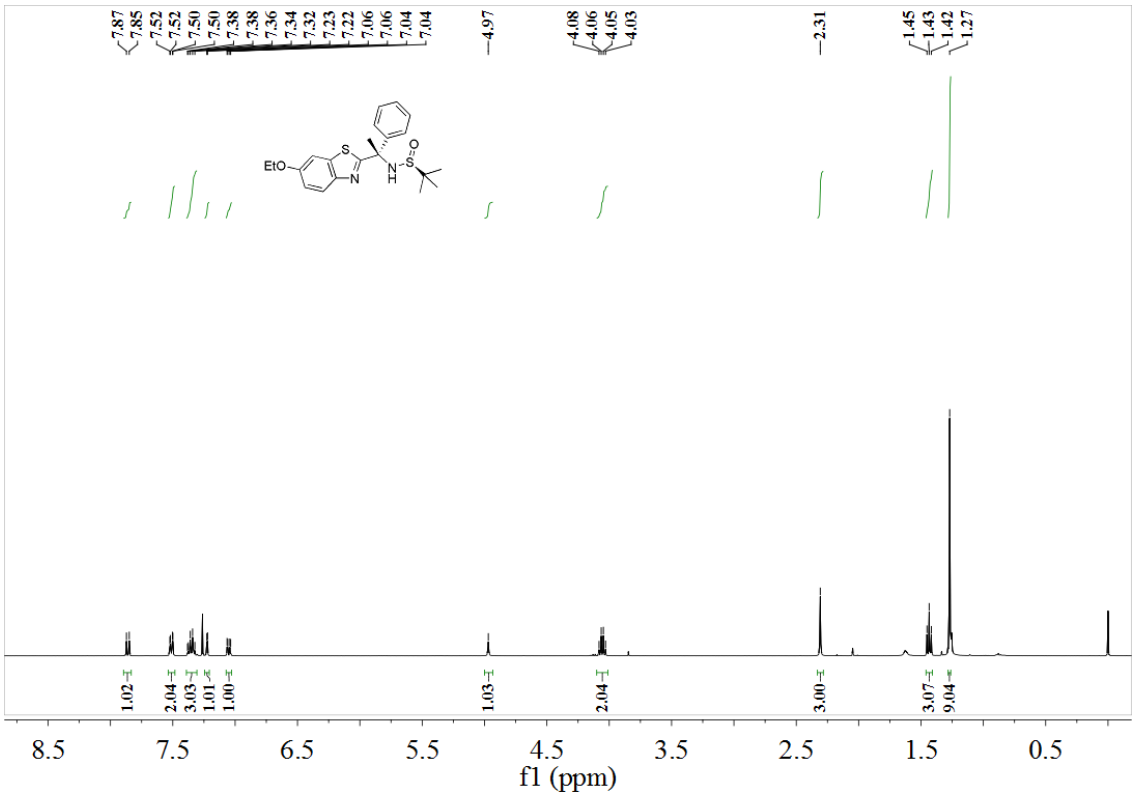


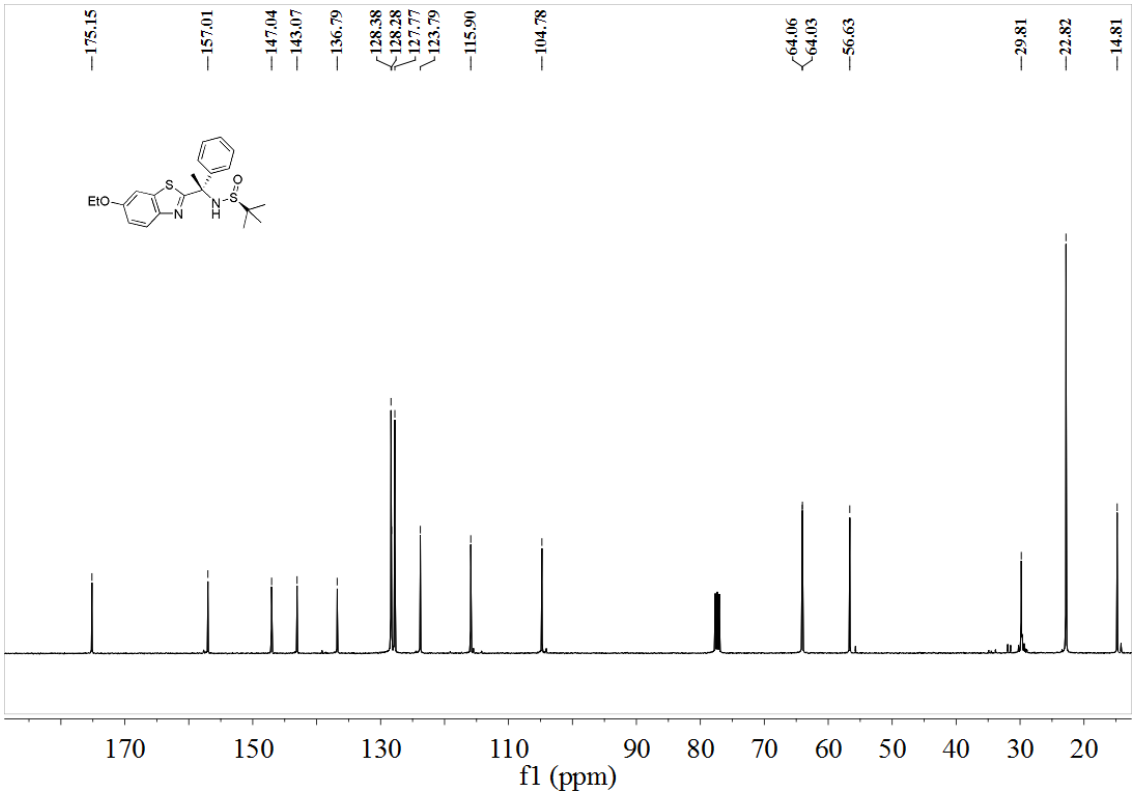
^{1}H NMR and ^{13}C NMR of **8f**



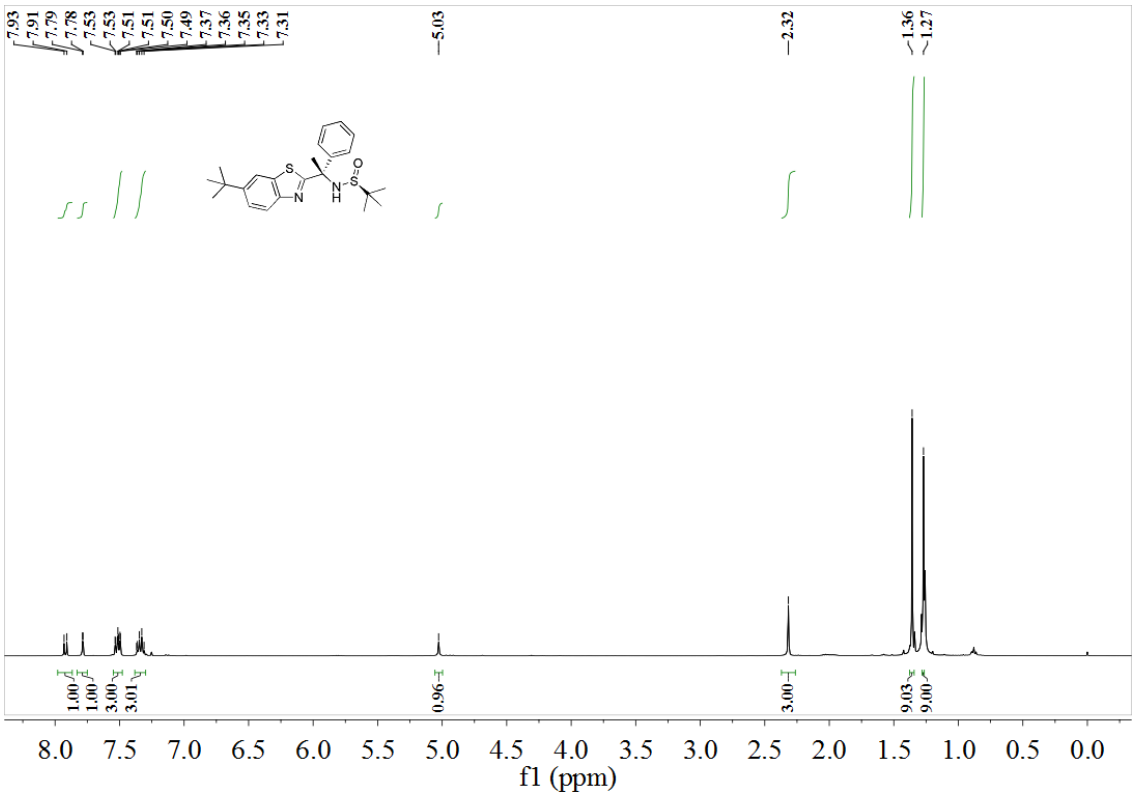


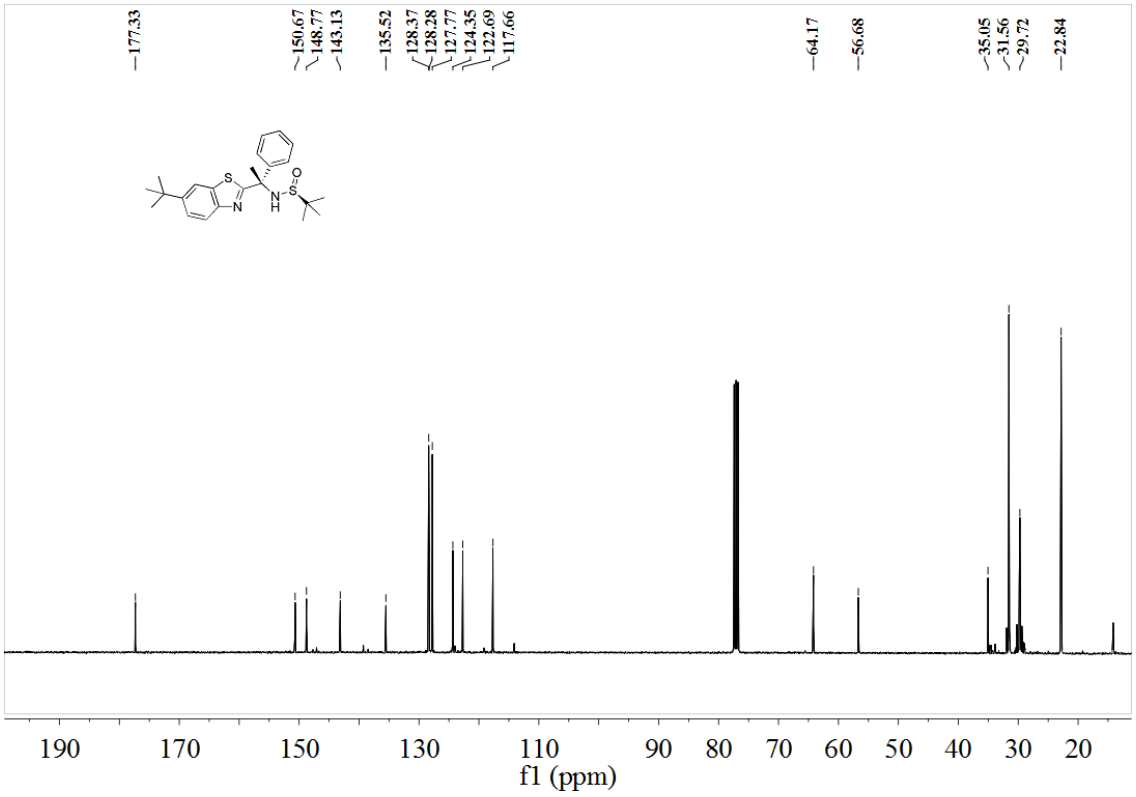
^{1}H NMR and ^{13}C NMR of **8g**



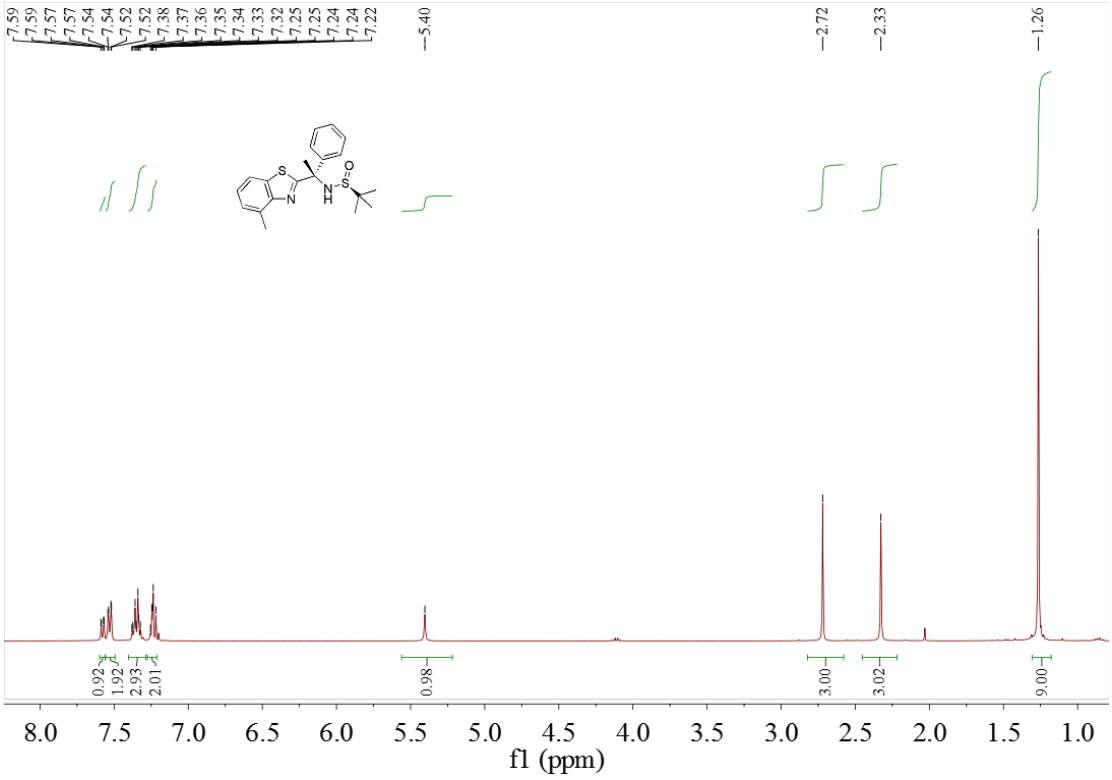


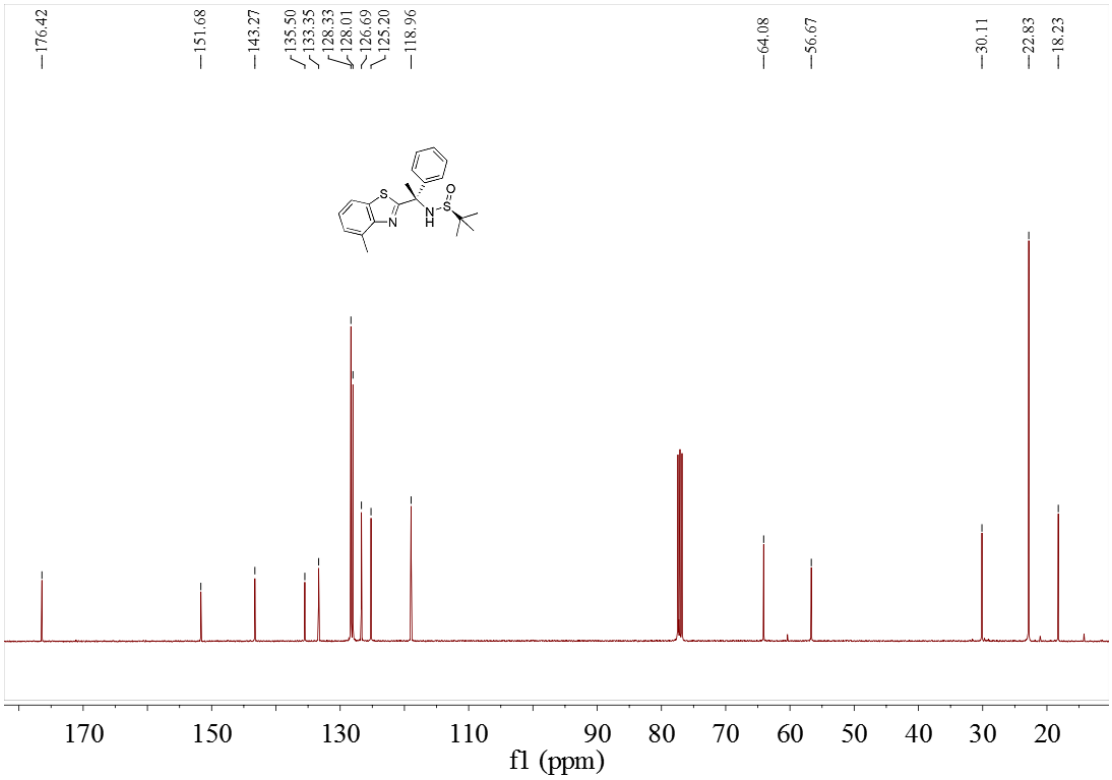
^{1}H NMR and ^{13}C NMR of **8h**



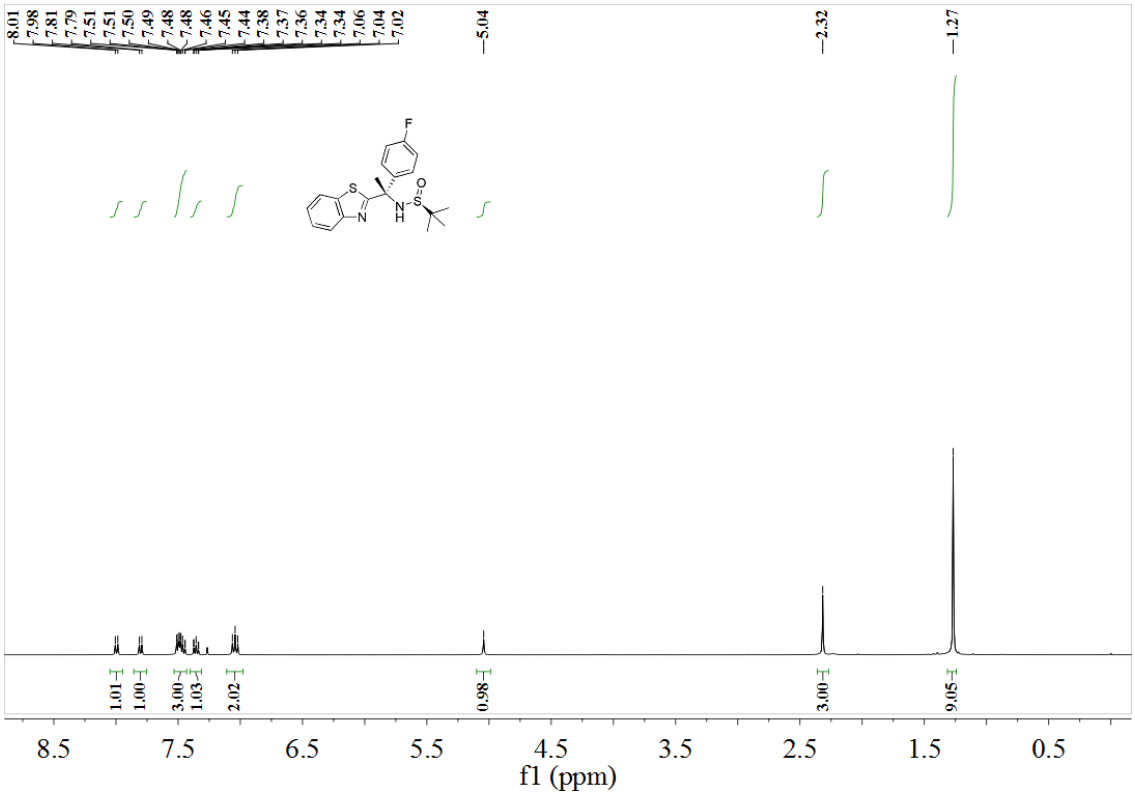


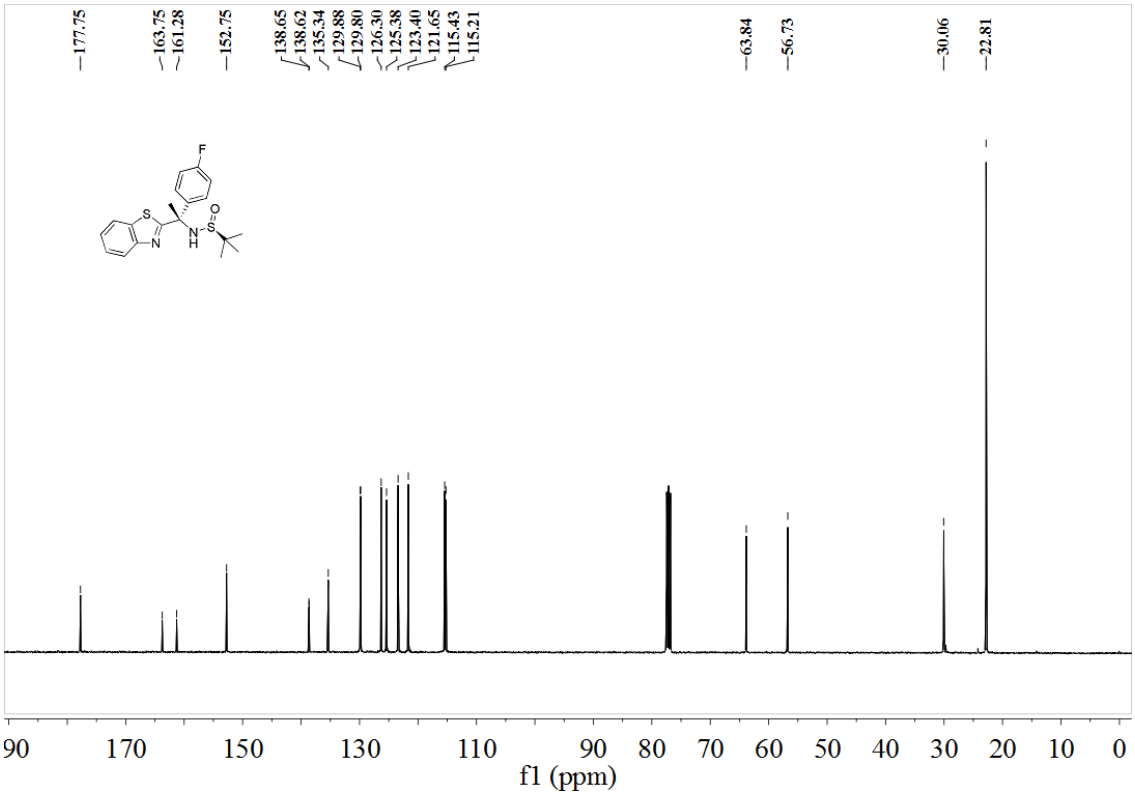
^{1}H NMR and ^{13}C NMR R of **8i**

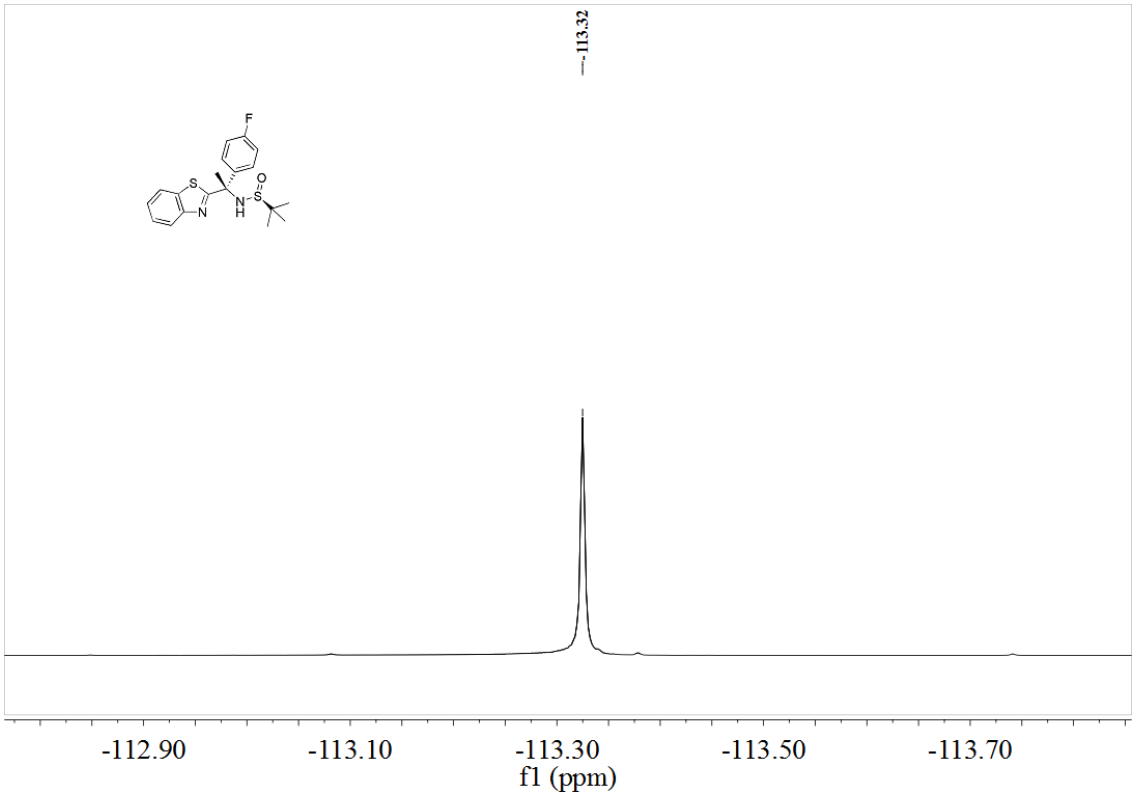




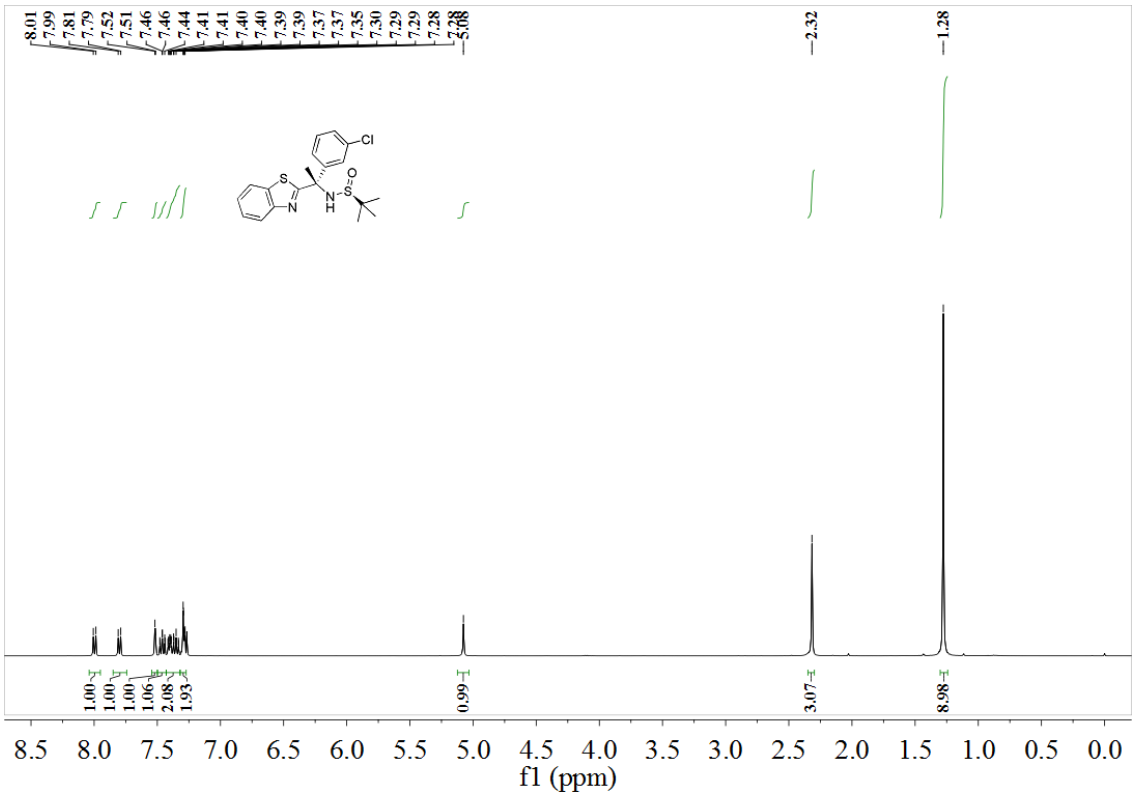
^{1}H NMR, ^{13}C NMR and ^{19}F NMR of **9b**

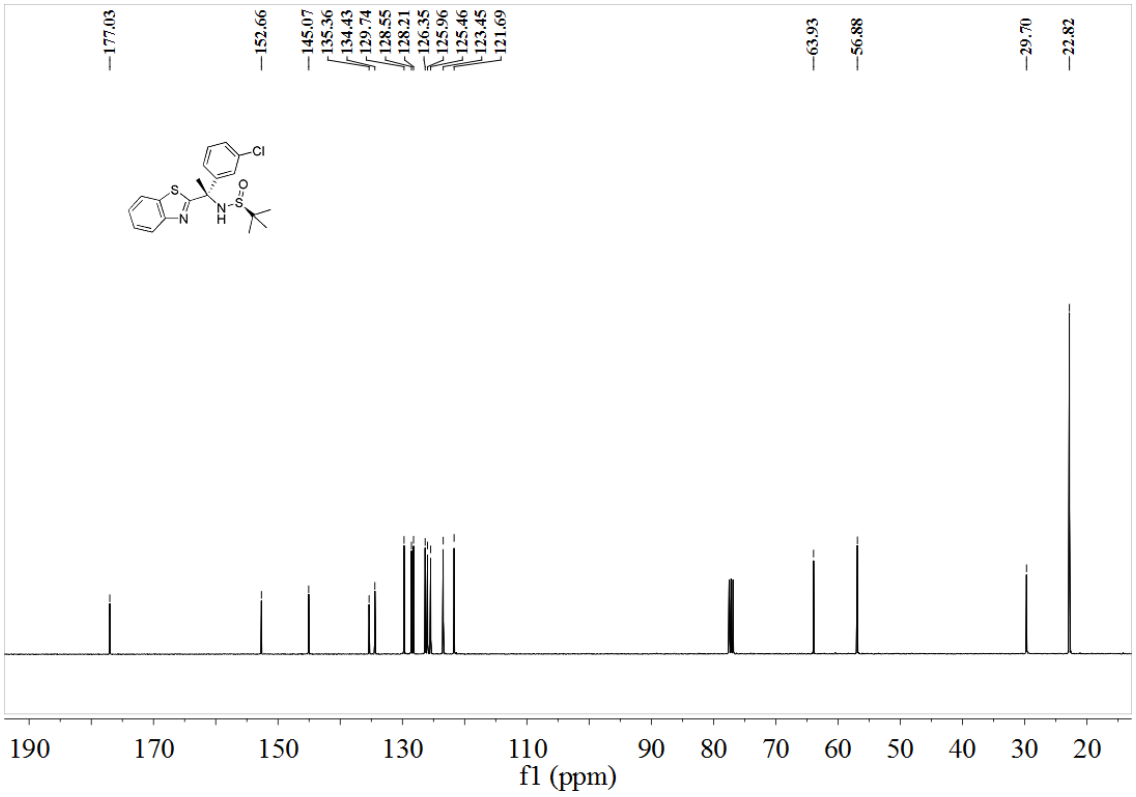




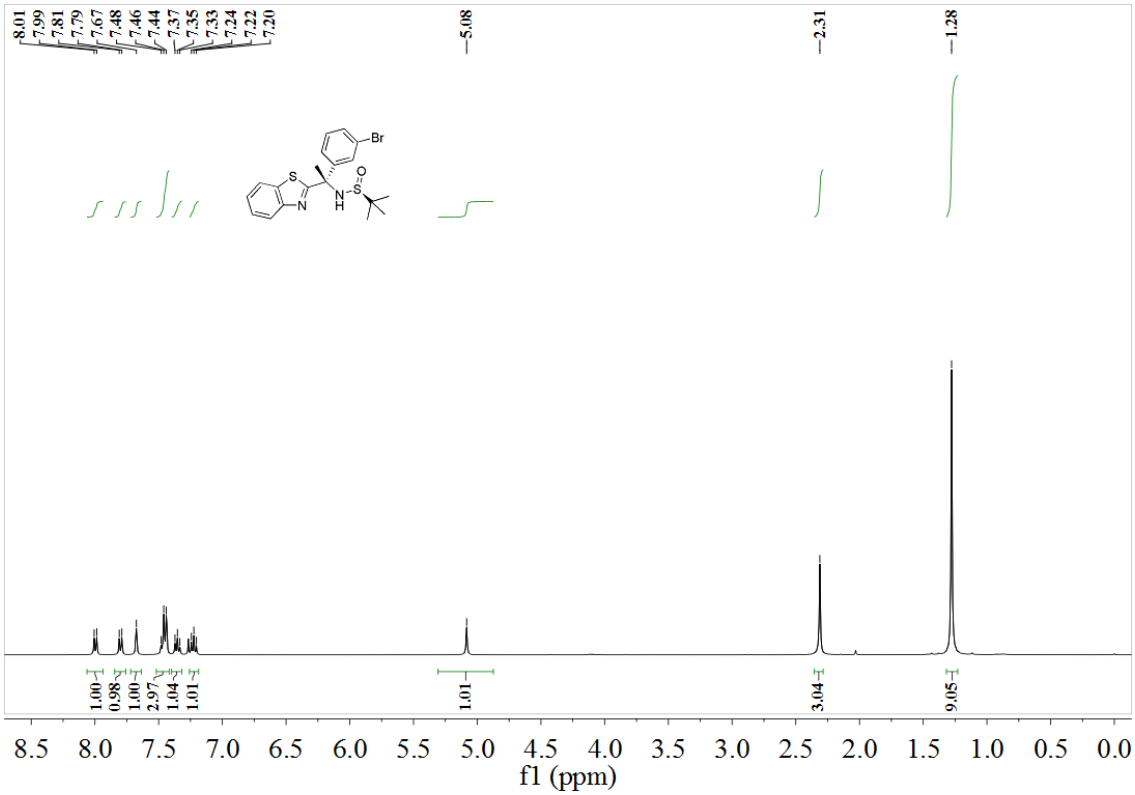

-113.32
F
S
N
H
O
S
-112.90
-113.10
-113.30
-113.50
-113.70
f1 (ppm)

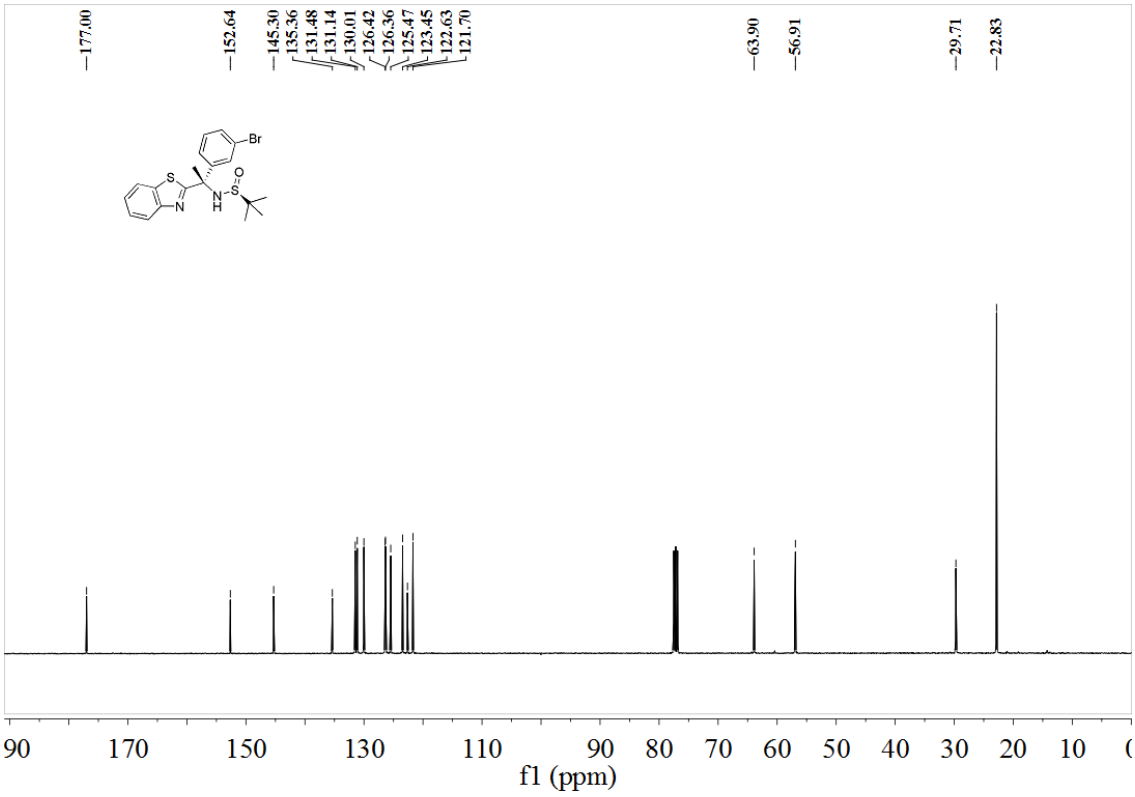
^{1}H NMR and ^{13}C NMR of **9c**



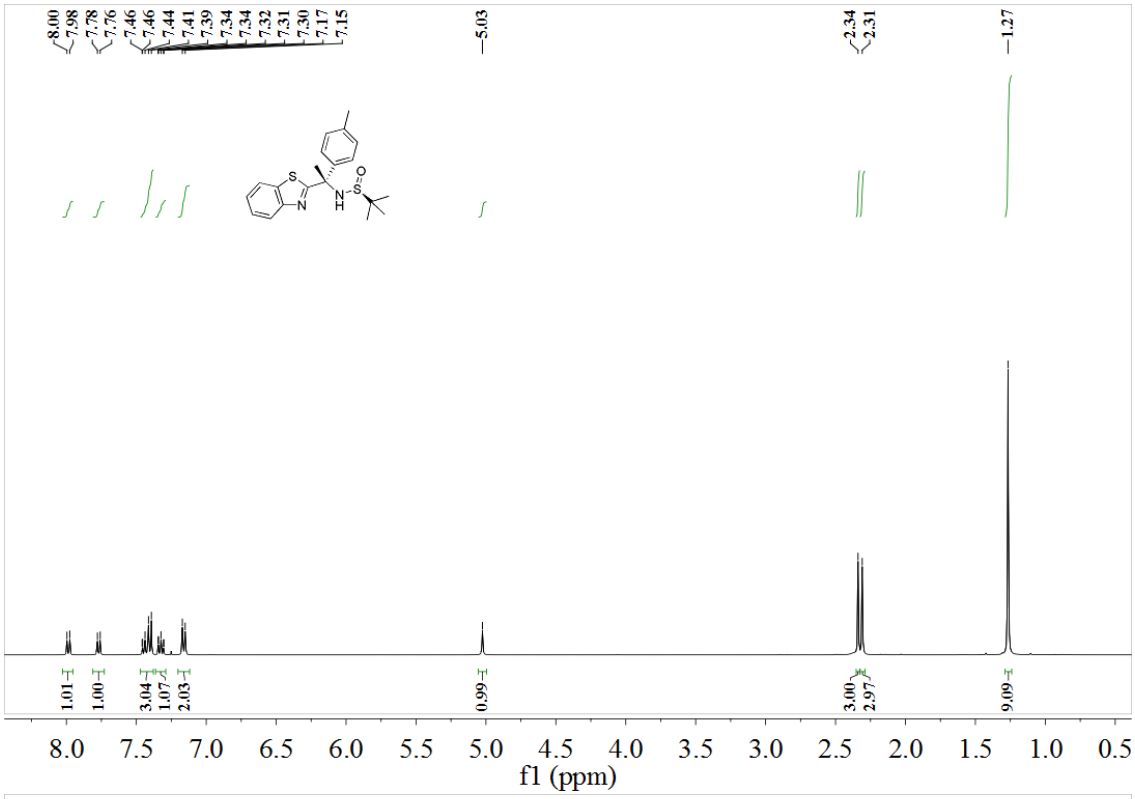


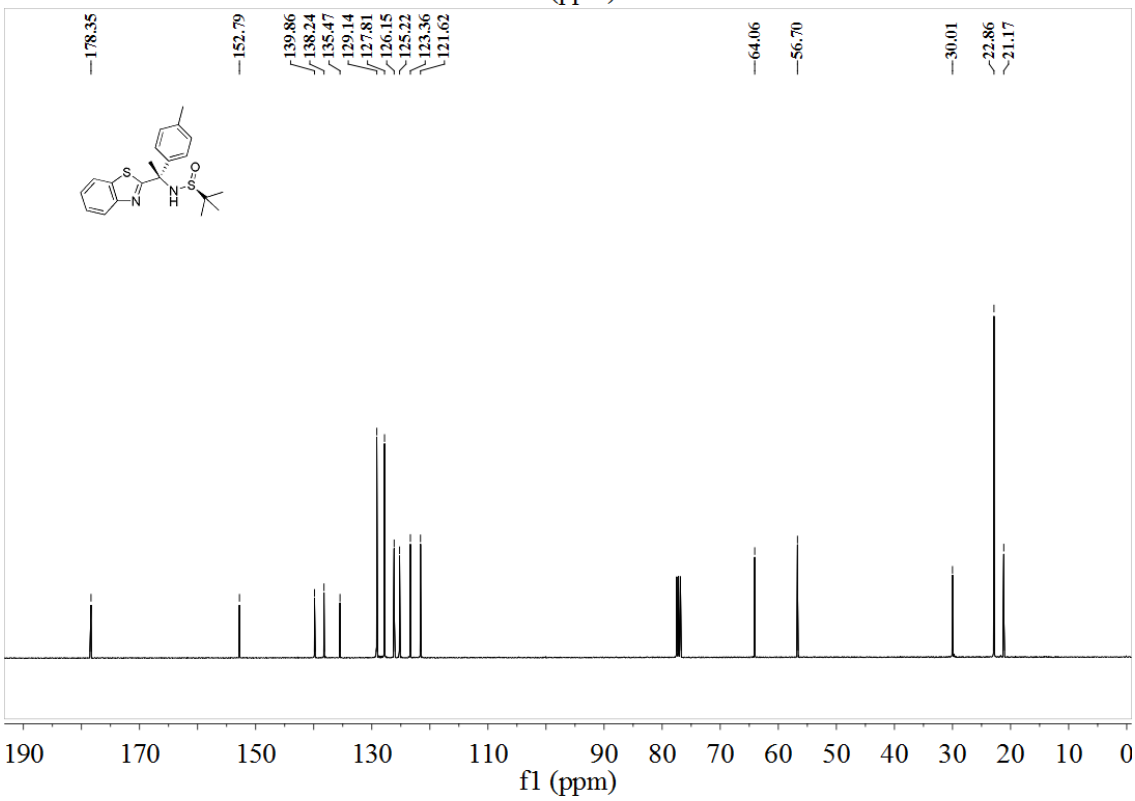
^{1}H NMR and ^{13}C NMR of **9d**



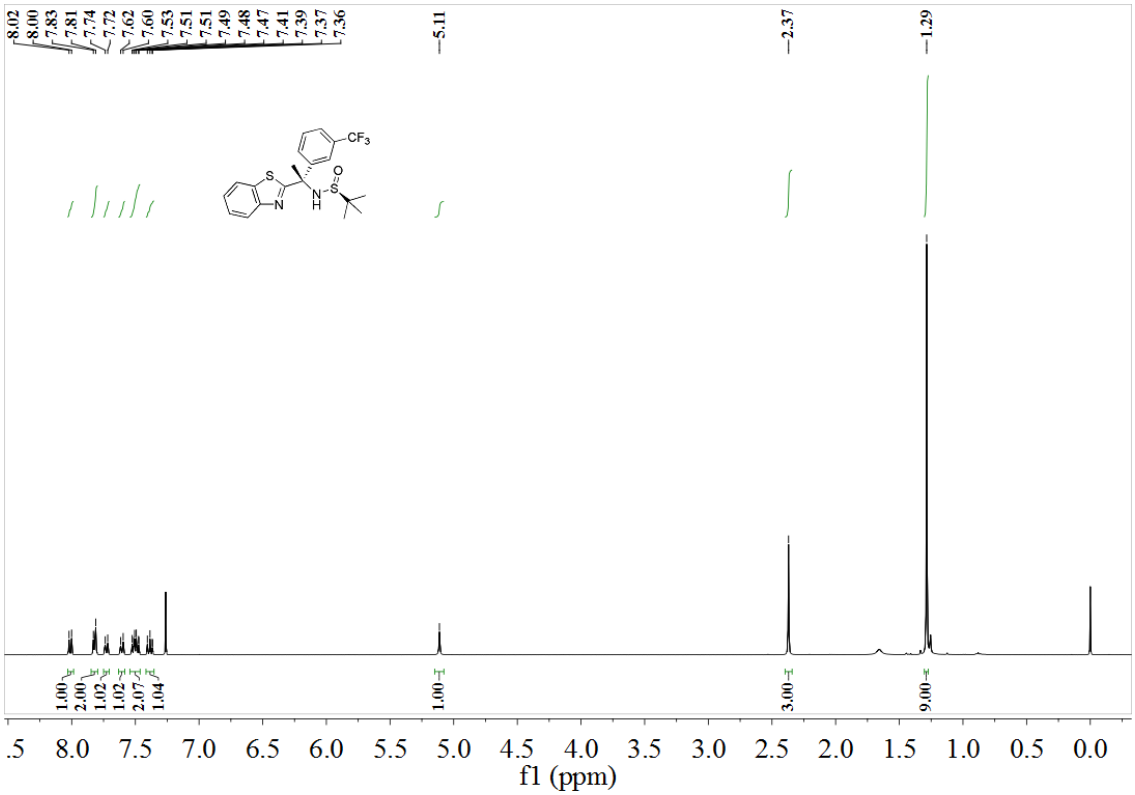


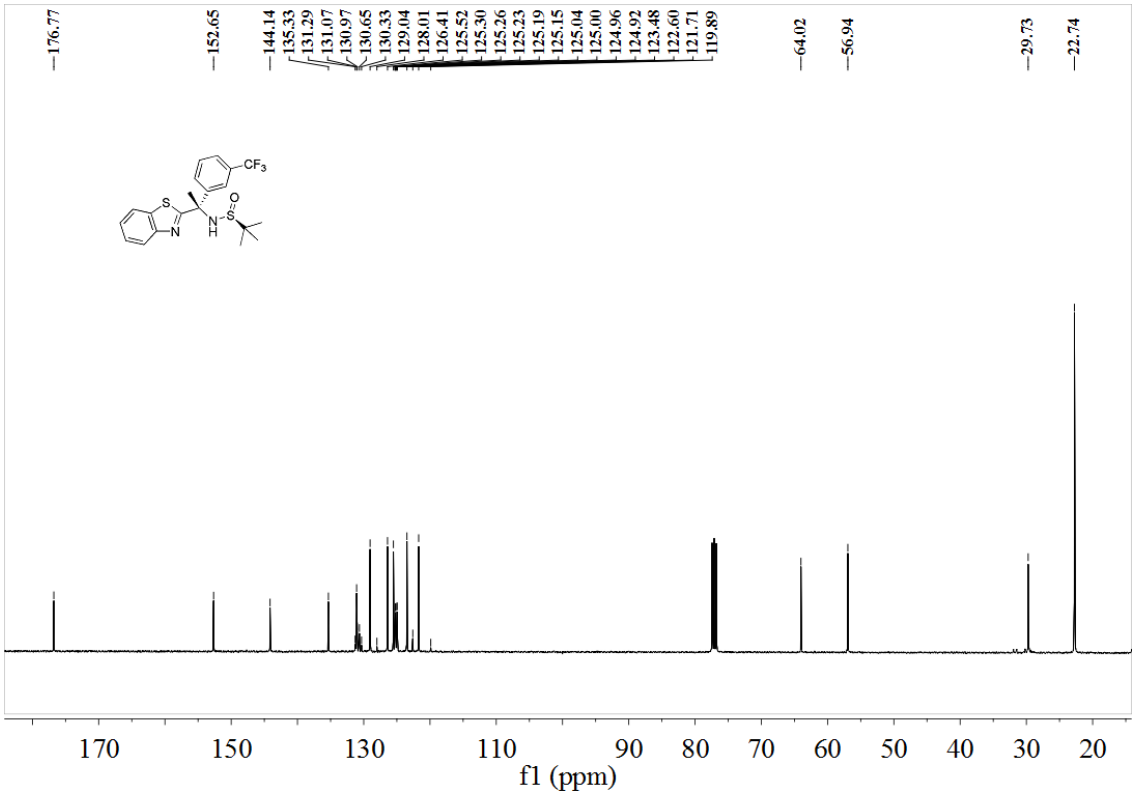
^{1}H NMR and ^{13}C NMR of **9e**

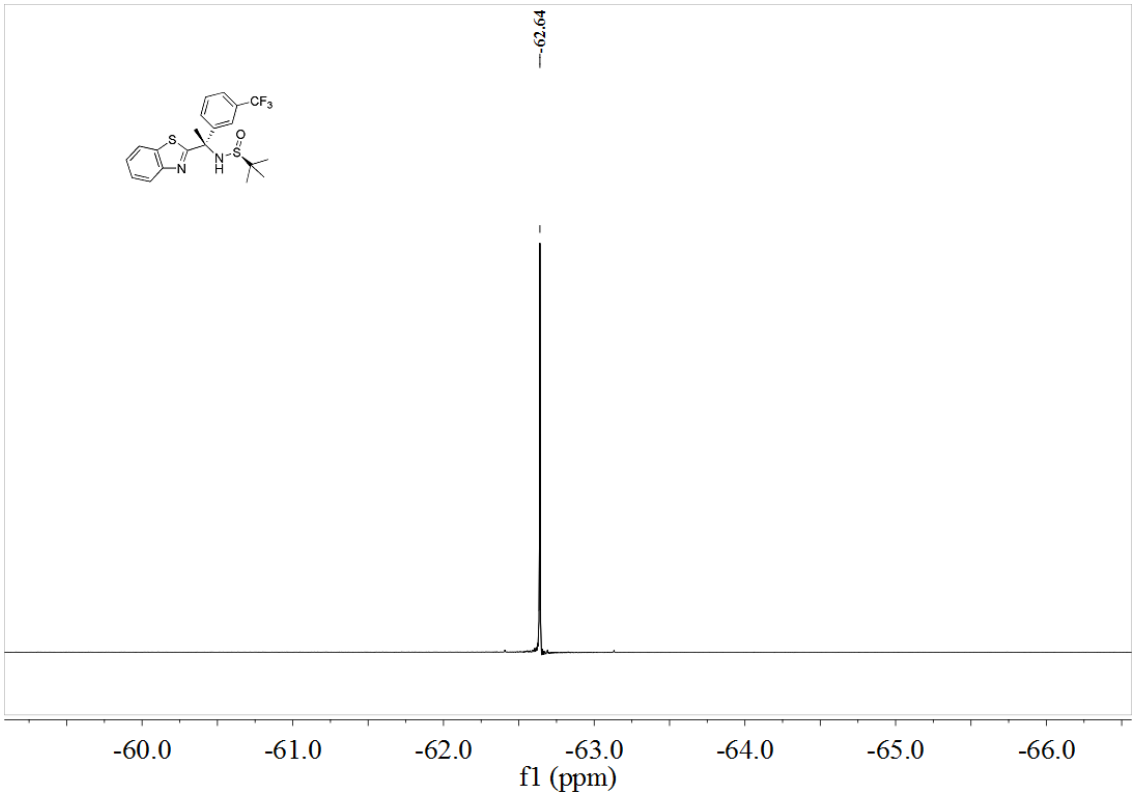




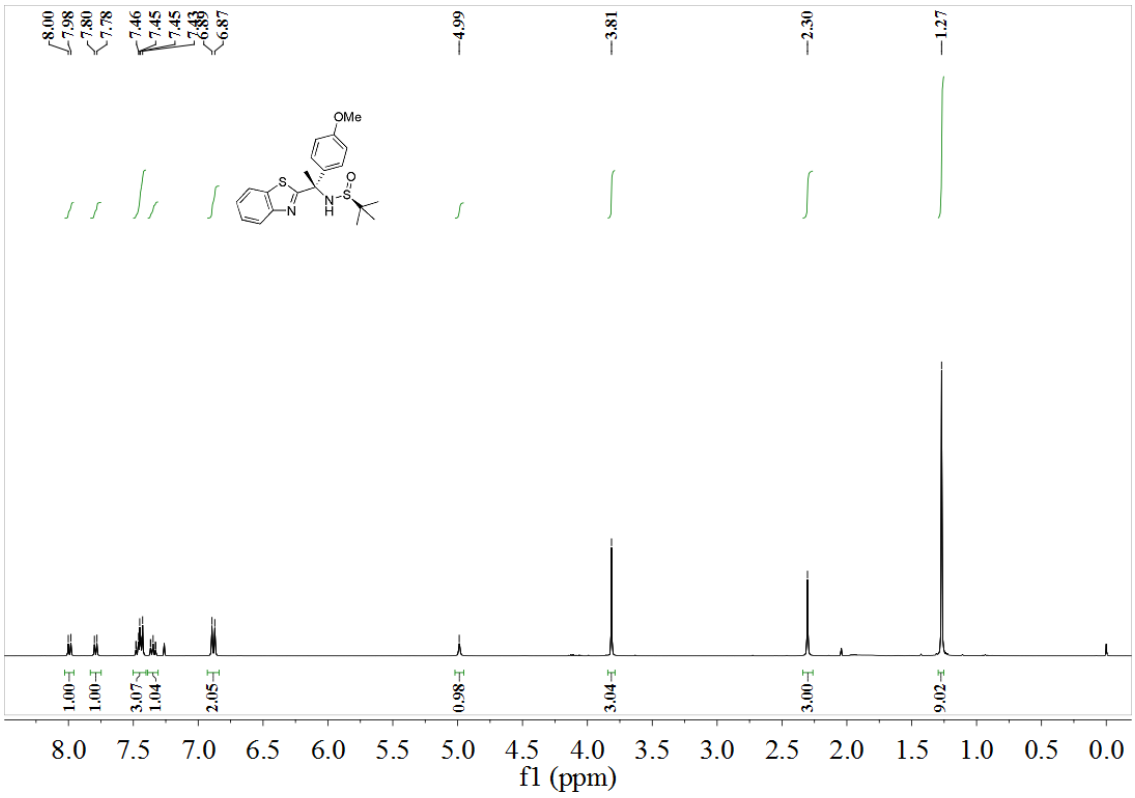
^{1}H NMR, ^{13}C NMR and ^{19}F NMR of **9f**

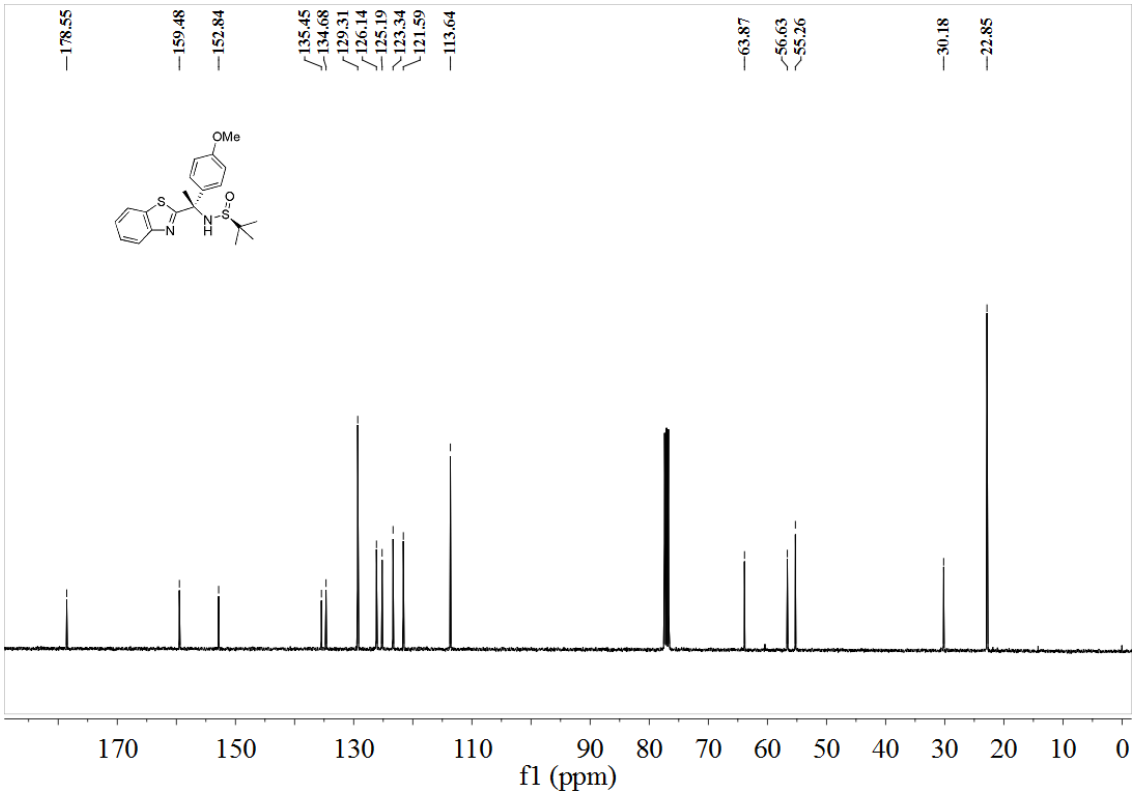




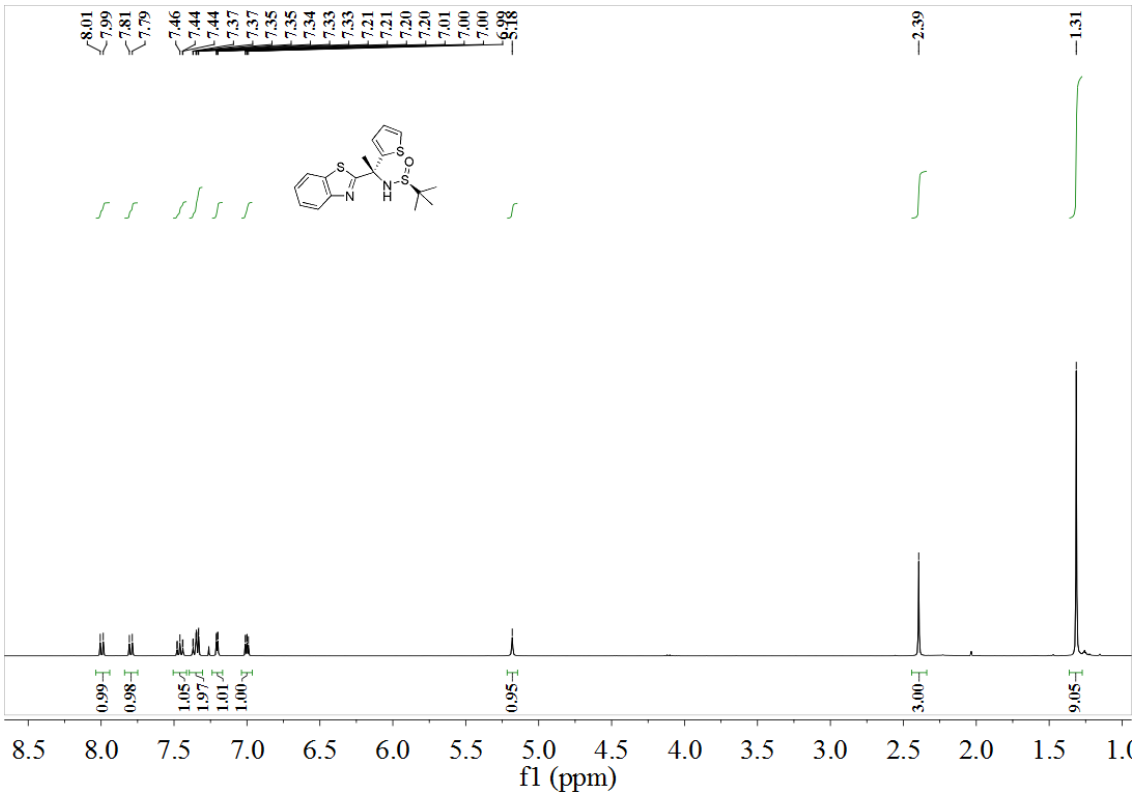

-62.64
CF3
S
N
O
N
H
S
-60.0
-61.0
-62.0
-63.0
-64.0
-65.0
-66.0
f1 (ppm)

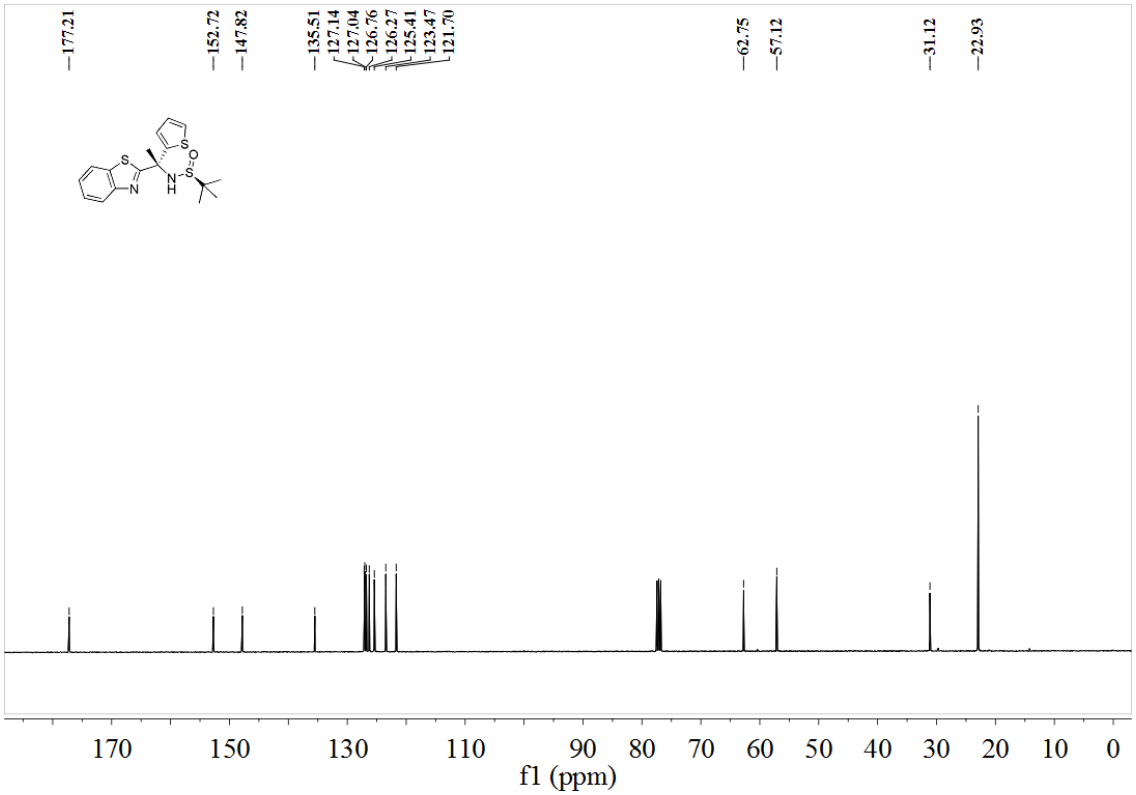
^{1}H NMR and ^{13}C NMR of **9g**



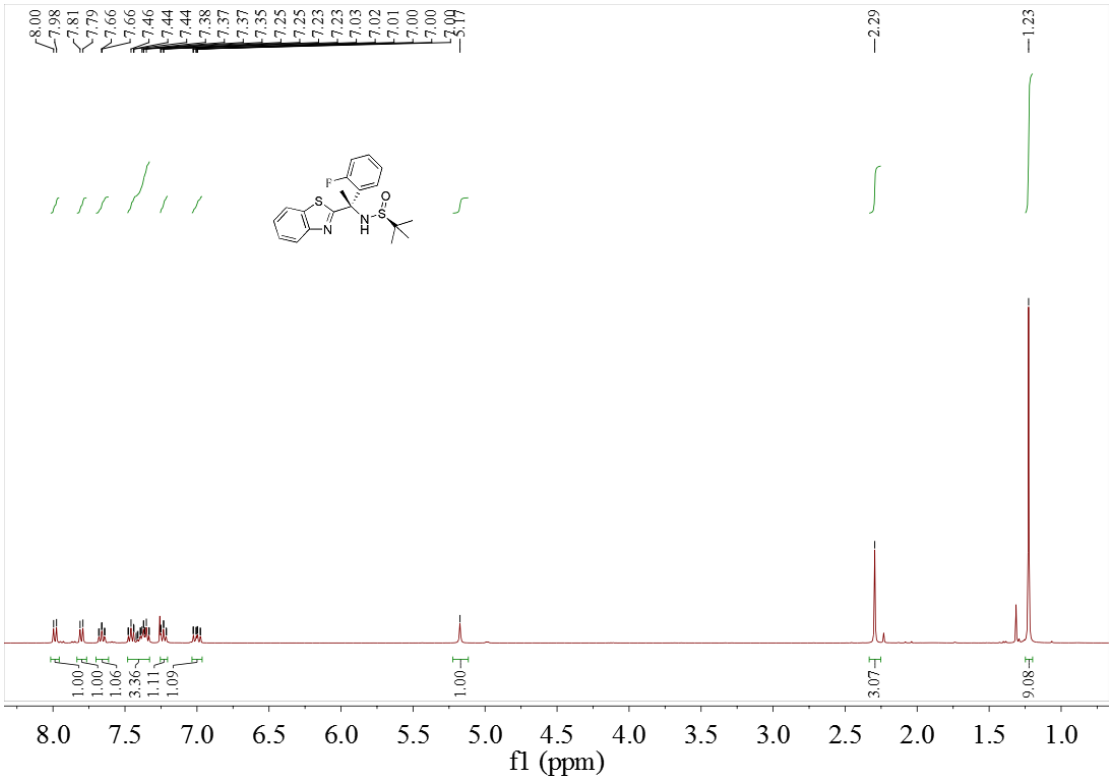


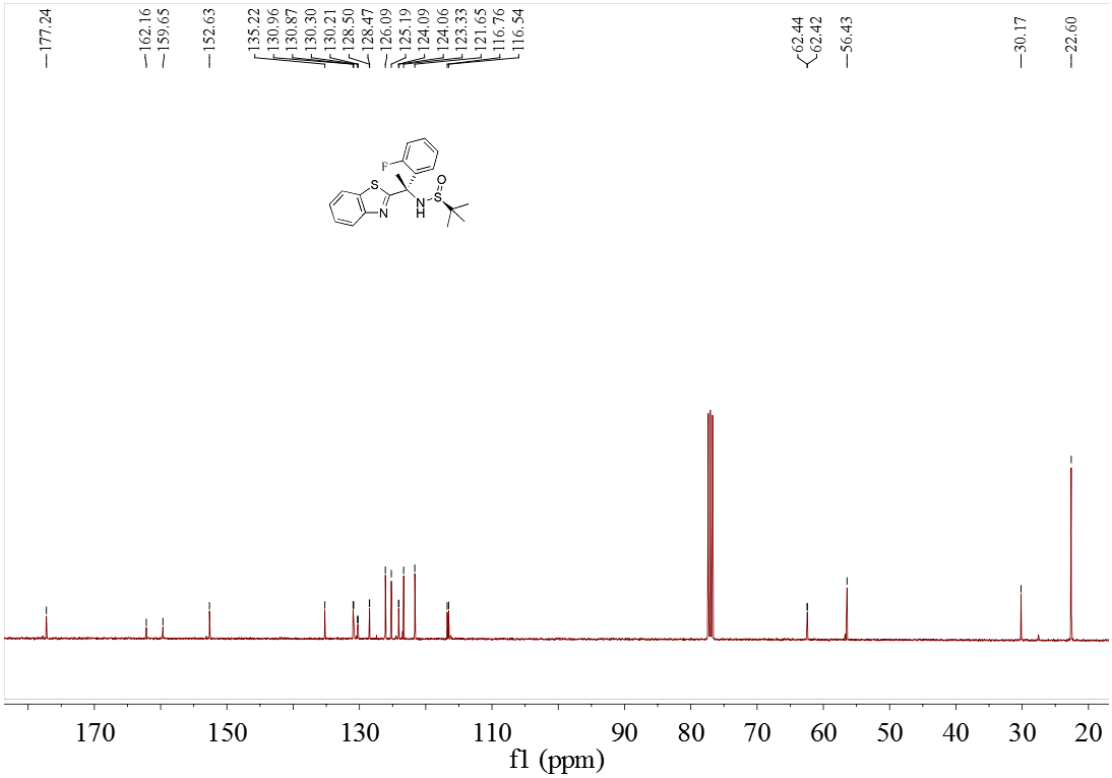
^{1}H NMR and ^{13}C NMR of **9h**

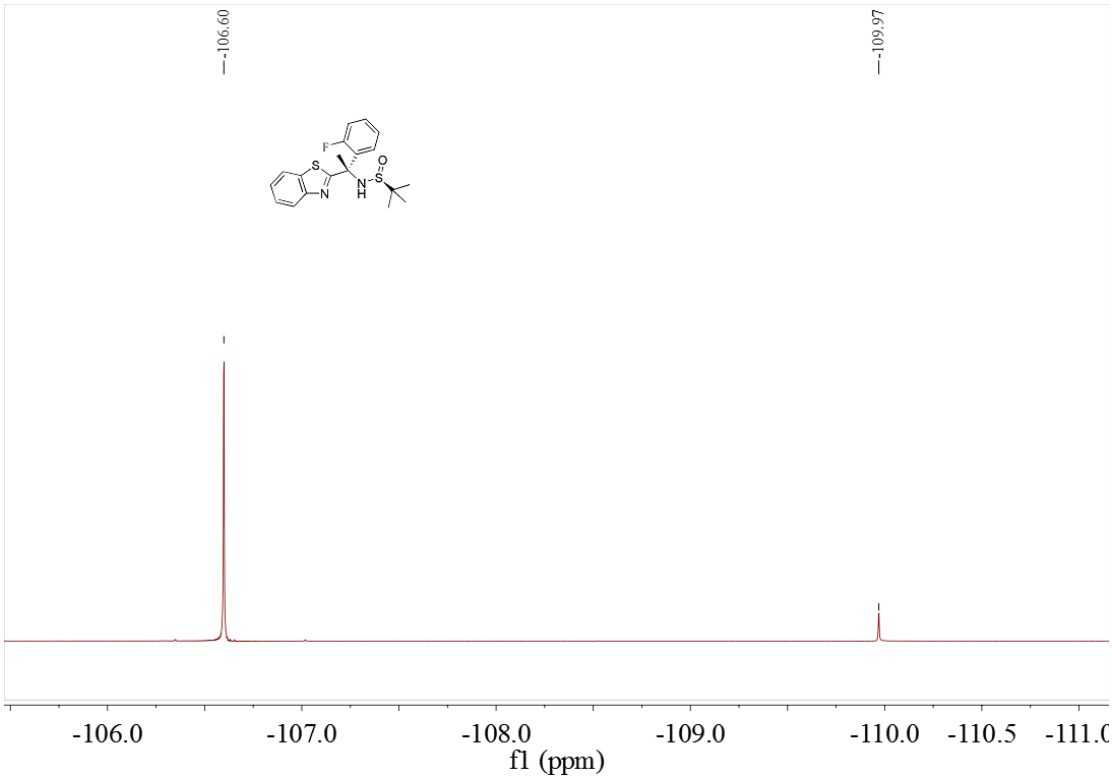




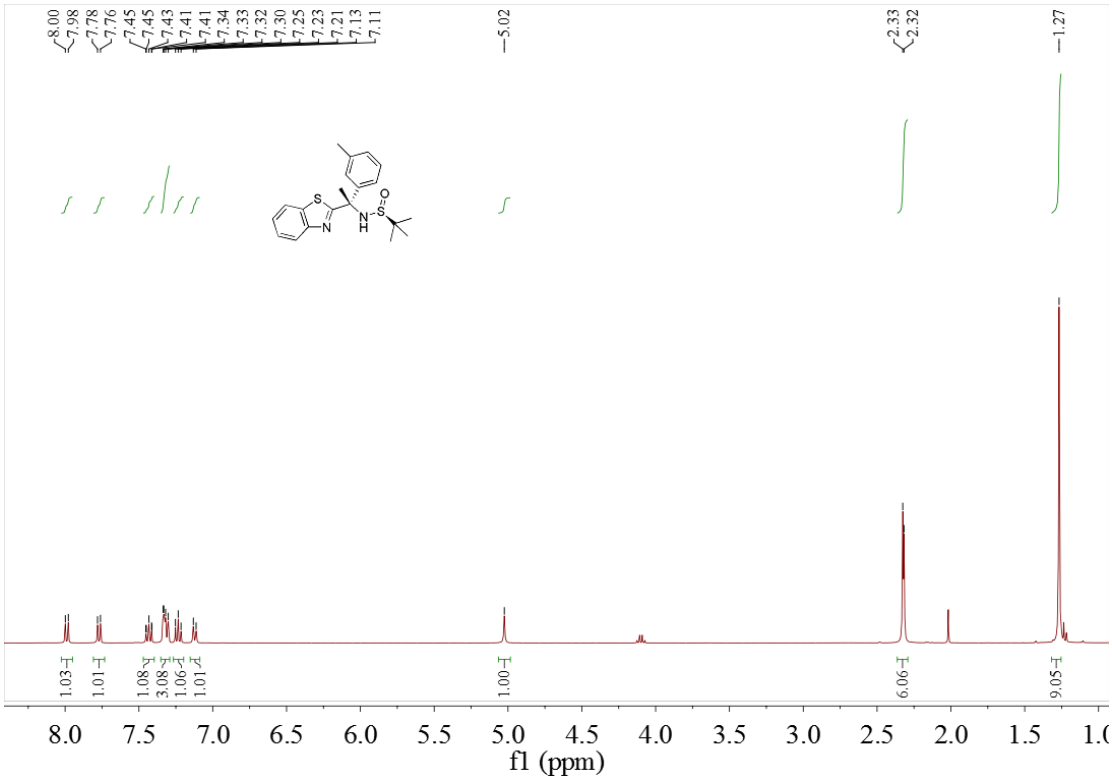
^{1}H NMR, ^{13}C NMR and ^{19}F NMR of **9i**

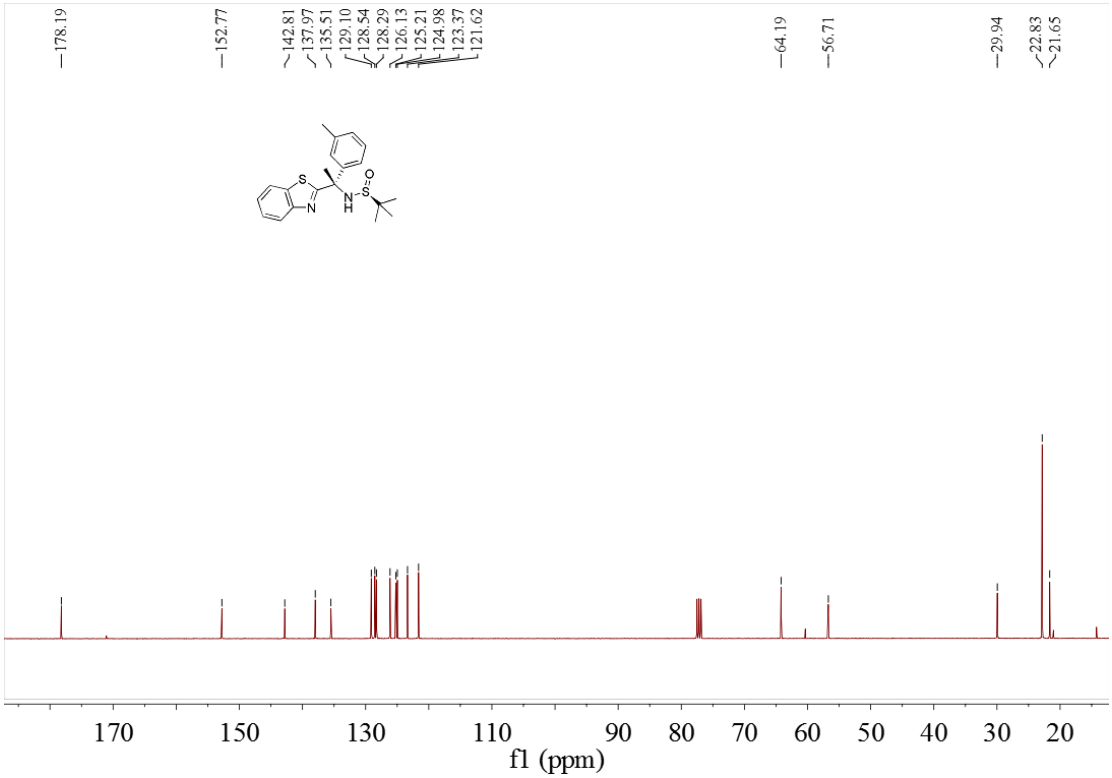





-106.60
-109.97
F
S
N
H
O
S
-106.0
-107.0
-108.0
-109.0
-110.0
-110.5
f1 (ppm)

^{1}H NMR and ^{13}C NMR R of **9j**





^{1}H NMR and ^{13}C NMR of **10**