Supplementary Information

Synthesis, Structure and Evaluation of the *N*-(2-Acetyl-4-(styryl)phenyl)-4-benzenesulfonamide Derivatives for Anticholinesterase and Antioxidant Activities

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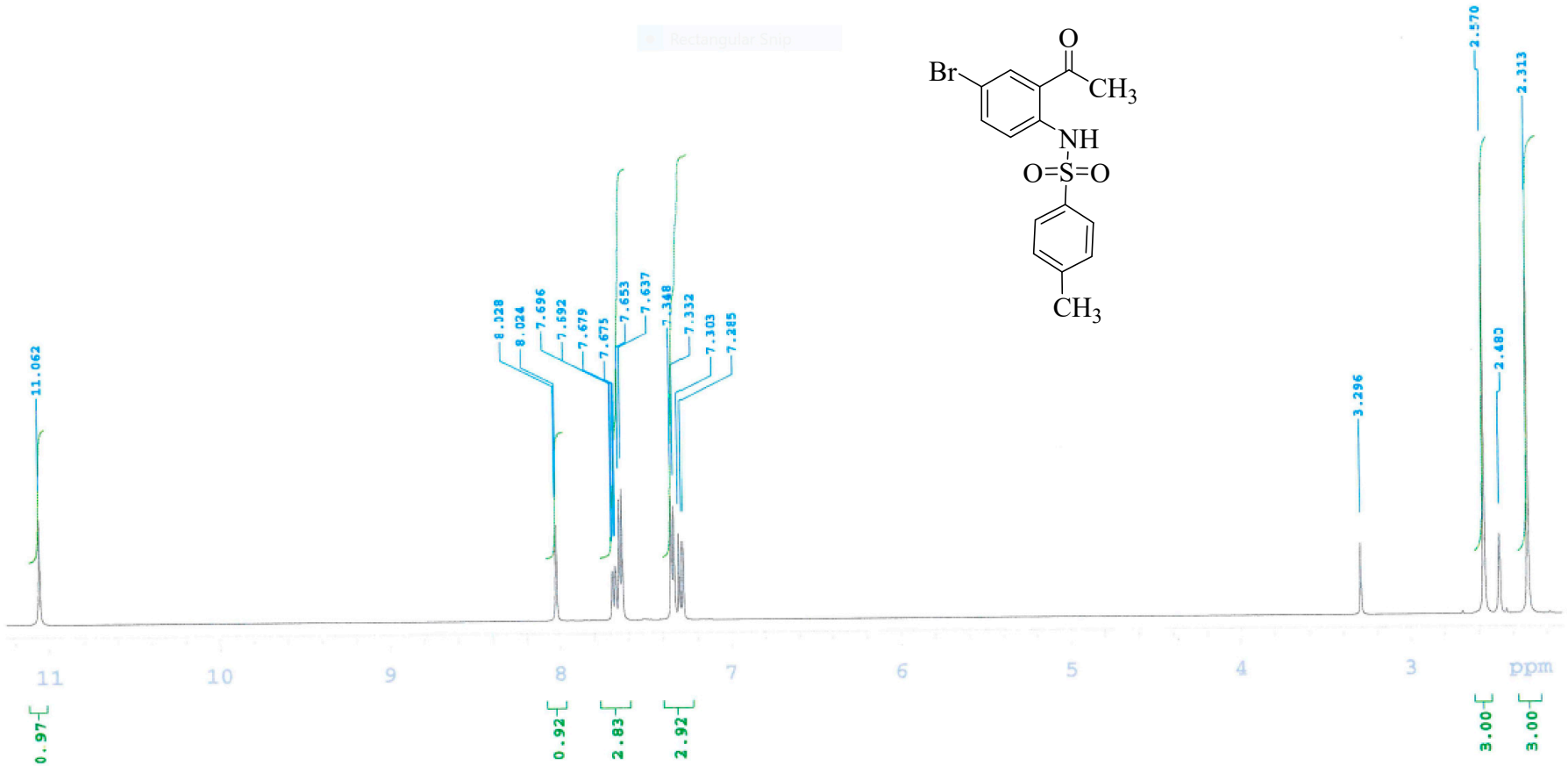
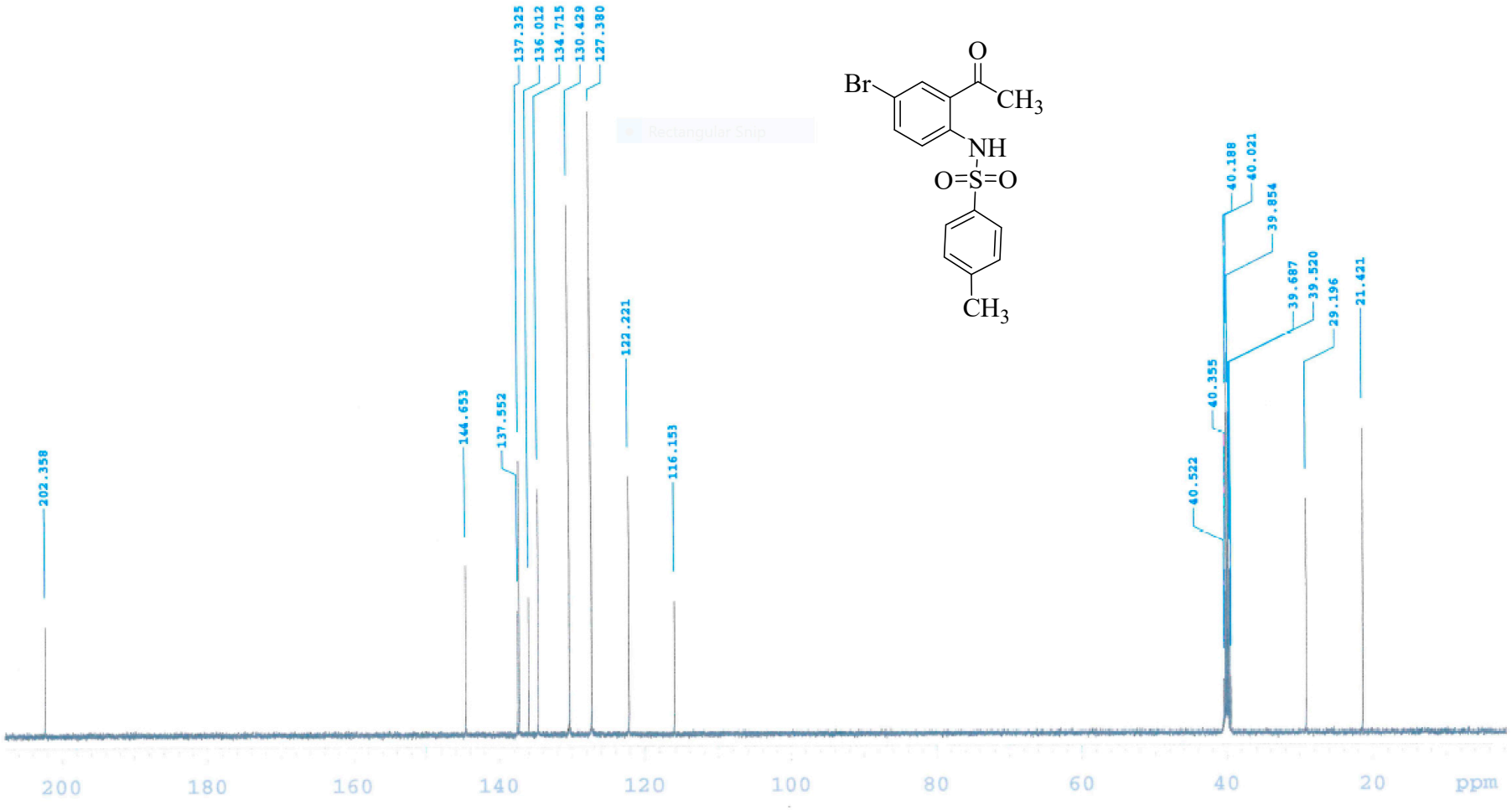
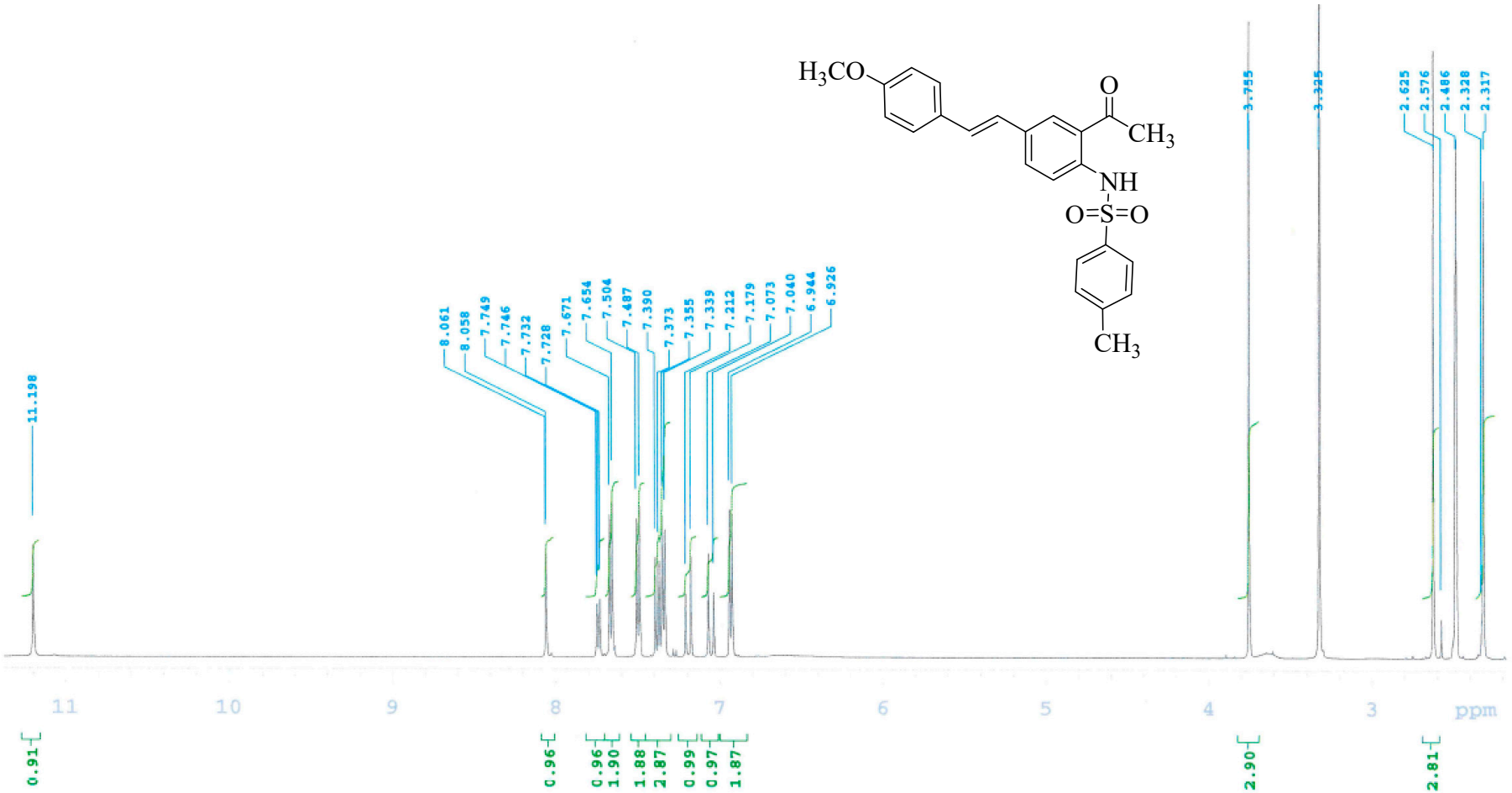

Br
O
CH3
NH
O=S=O
CH3
11.062
8.028
8.024
7.696
7.692
7.679
7.675
7.653
7.637
7.348
7.332
7.303
7.285
3.296
2.570
2.483
2.313
11
10
9
8
7
6
5
4
3
ppm
0.97
0.92
2.83
2.92
3.00
3.00

(**a**)

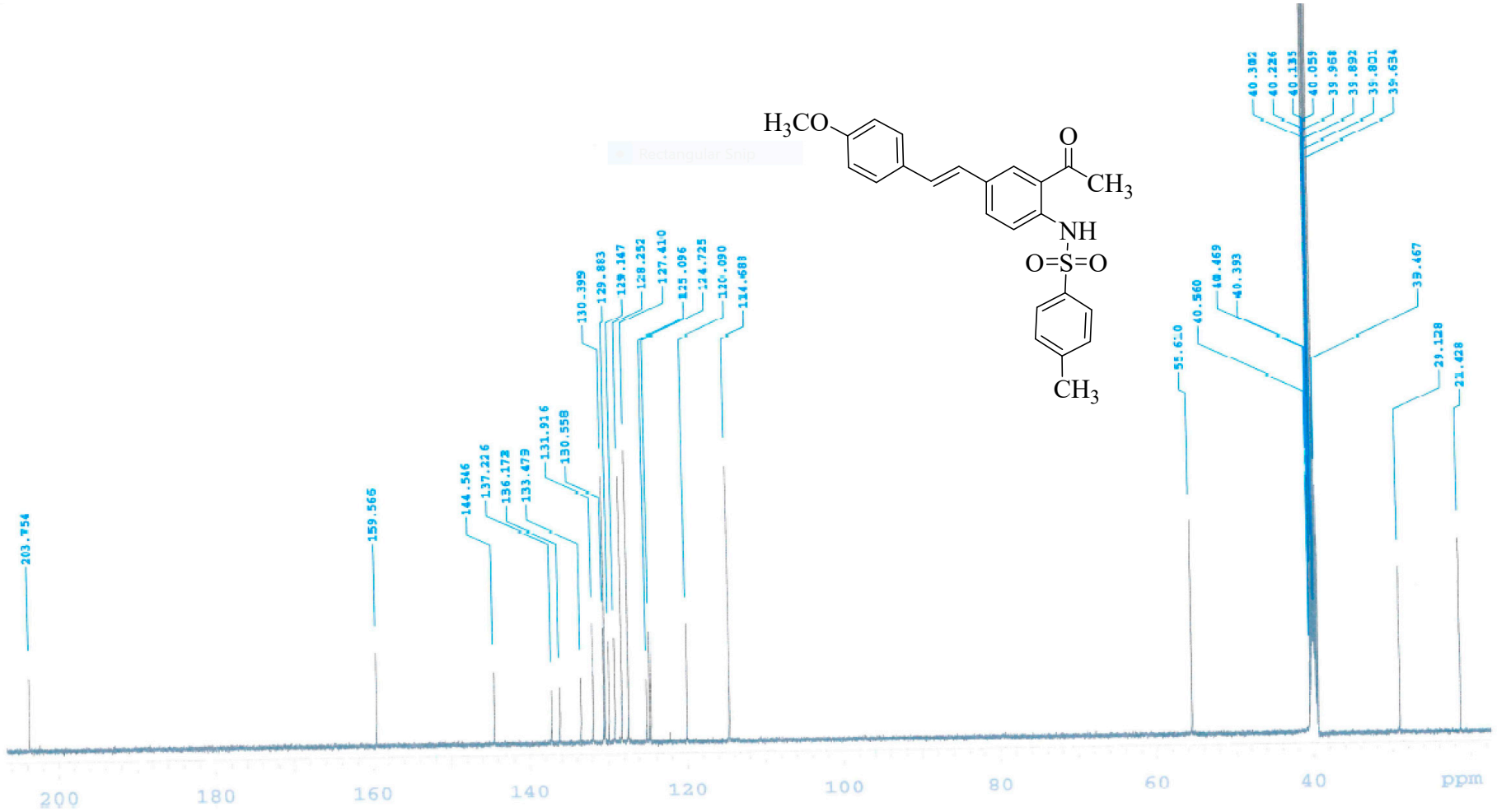


(**b**)

Figure S1.1: ^{1}H-NMR and ^{13}C-NMR spectra of **2** in DMSO-d_6 at 500 MHz (a) and 125 MHz (b), respectively.

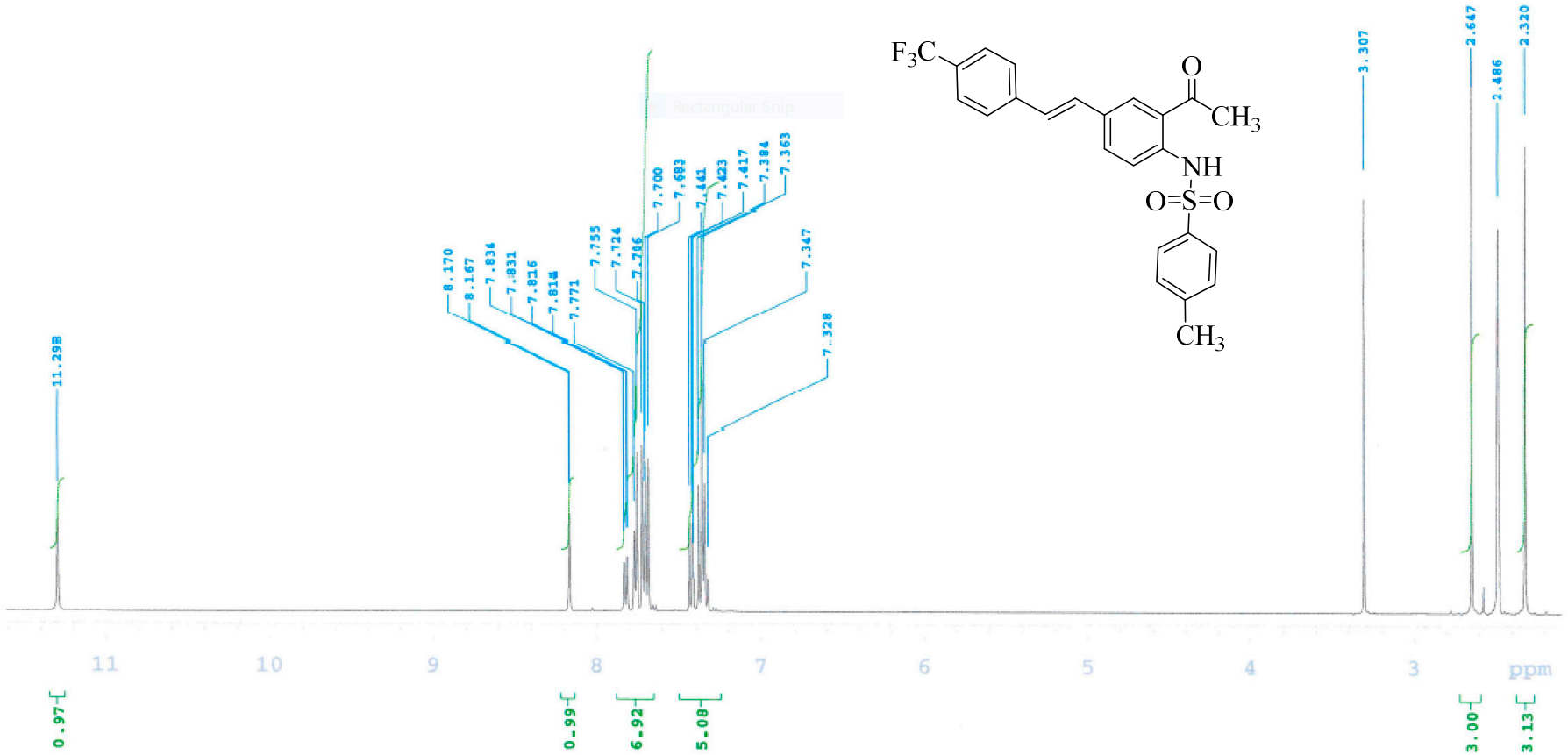

H3CO
O
CH3
NH
O=S=O
CH3
11.198
8.061
8.058
7.749
7.746
7.732
7.728
7.671
7.654
7.504
7.487
7.390
7.373
7.355
7.339
7.212
7.179
7.073
7.040
6.944
6.926
3.755
3.325
2.625
2.576
2.486
2.328
2.317
11
10
9
8
7
6
5
4
3
ppm
0.91
0.96
0.96
1.90
1.88
2.87
0.99
0.97
1.87
2.90
2.81

(**a**)

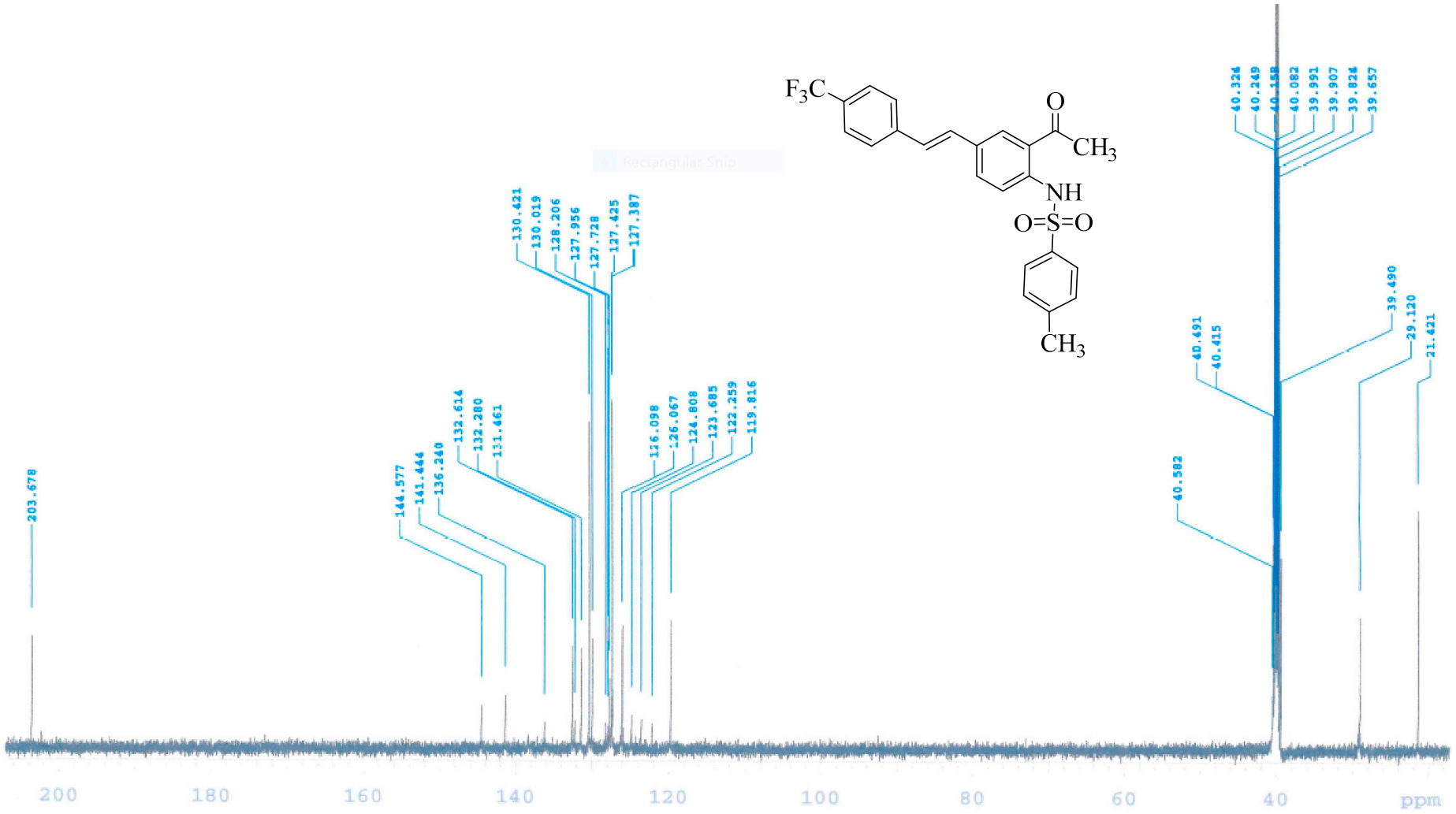


(**b**)

Figure S1.2: ^{1}H-NMR and ^{13}C-NMR spectra of **3a** in DMSO-d_6 at 500 MHz (a) and 125 MHz (b), respectively.


11.298
8.170
8.167
7.836
7.831
7.816
7.814
7.771
7.755
7.724
7.706
7.700
7.693
7.441
7.423
7.417
7.384
7.363
7.347
7.328
3.307
2.647
2.486
2.320
F3C
O
CH3
NH
O=S=O
CH3
11
10
9
8
7
6
5
4
3
ppm
0.97
0.99
6.92
5.08
3.00
3.13

(**a**)



(**b**)

Figure S1.3: ^{1}H-NMR and ^{13}C-NMR spectra of **3b** in DMSO-d_6 at 500 MHz (a) and 125 MHz (b), respectively.

Table S1. Crystal data and structure refinement for compounds **2**, **3a** and **3b**

	2	**3a**	**3b**
CCDC Number	2052332	2049355	2053922
Formula	$C_{15}H_{14}BrNO_3S$	$C_{24}H_{23}NO_4S$	$C_{24}H_{20}F_3NO_3S$
Formula weight	368.24	421.49	459.47
Temperature/K	173(2)	173(2)	173(2)
Wavelength/Å	0.71073	0.71073	0.71073
Crystal system	Monoclinic	Triclinic	Monoclinic
Space group	*C*2/*c*	*P*–1	*P*21/*c*
a/Å	14.850(5)	9.1167(3)	15.0928(5)
b/Å	12.946(4)	9.5453(4)	16.8950(5)
c/Å	17.285(7)	13.0035(5)	8.4500(2)
α/°	90	102.595(2)	90
β/°	115.439(13)	102.9960(10)	98.2020
γ/°	90	96.1970(10)	90
V/Å^3	3000.9(18)	1496.50(7)	2132.65(11)
Z	8	2	4
d_{calc} (g.cm^{-3})	1.630	1.319	1.431
Absorption coefficient (mm^{-1})	2.887	0.183	0.205
F(000)	1488	444	952
Crystal size (mm^3)	0.591 x 0.465 x 0.345	0.523 x 0.500 x 0.280	0.644 x 0.140 x 0.041
θ range for data collection	2.610 to 27.995°	2.936 to 25.499°	1.363 to 25.499
Index ranges	-19<=h<=19, -17<=k<=17, -22<=l<=22	-11<=h<=11, -11<=k<=11, -15<=l<=15	-15<=h<=18, -20<=k<=20, -10<=l<=10
Reflections collected	61908	37494	33149

Independent reflections, R_{int}	3610, 0.0288	3911, 0.0375	3978, 0.0337
Data/restraints/parameters	3610 / 0 / 196	3911 / 0 / 278	3978 / 0 / 295
Goodness of fit on F^2	1.029	1.066	1.047
Final R indices [$I > 2s(I)$]	$R1$ = 0.0204, w$R2$ = 0.0554	$R1$ = 0.0351, w$R2$ = 0.0882	$R1$ = 0.0493, $wR2$ = 0.1235
R indices (all data)	$R1$ = 0.0230, w$R2$ = 0.0573	$R1$ = 0.0444, w$R2$ = 0.0973	$R1$ = 0.0606, $wR2$ = 0.1305

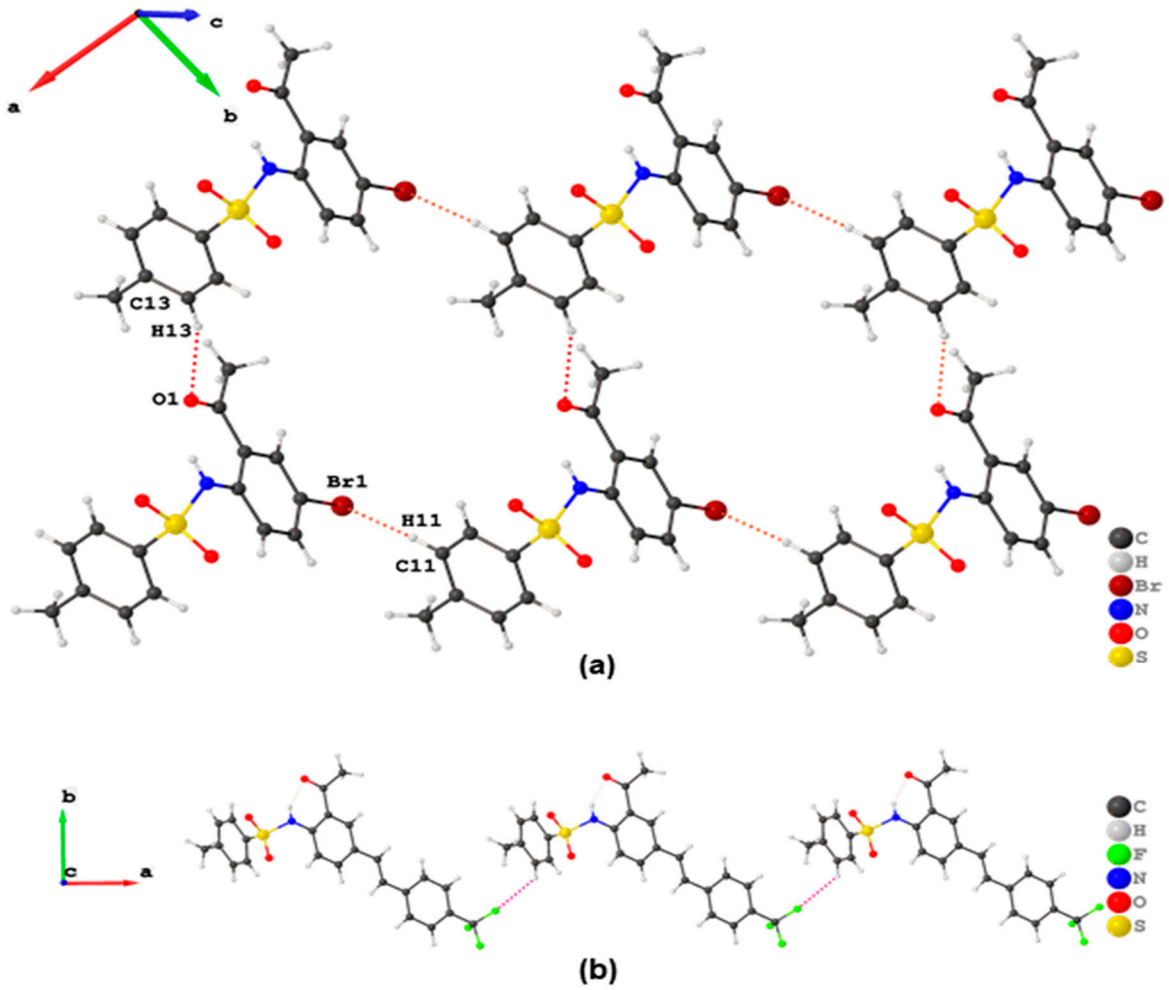


Figure S2: Intermolecular C—H···O and C—H···Br hydrogen bonds in **2** (a) and C—H···F hydrogen boning patterns in **3b**