Supplimentary Material

Synthesis and evaluation of new coumarin derivatives as antioxidant, antimicrobial, and anti-inflammatory agents

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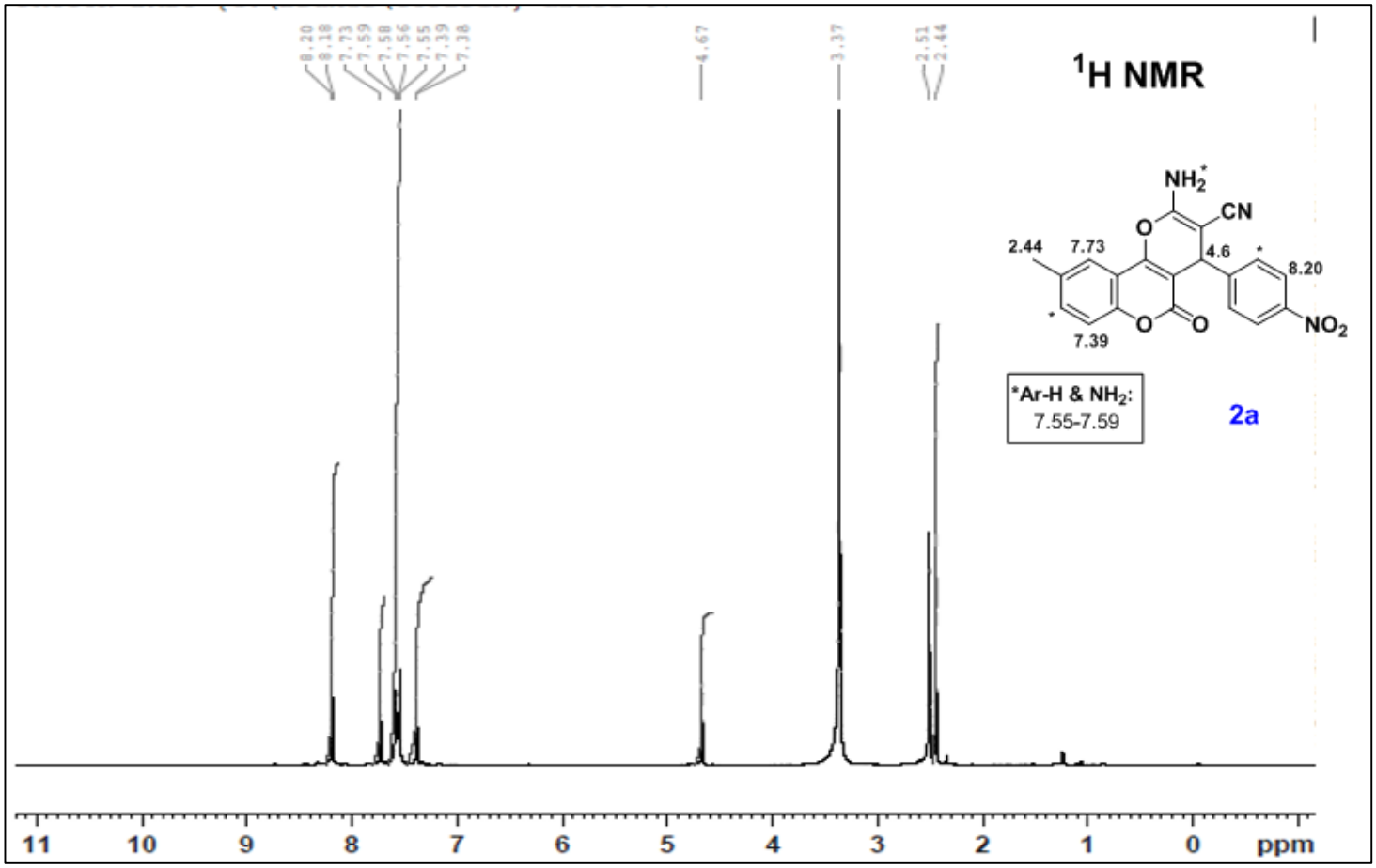

Figure S1: ^{1}H-NMR spectrum of compound **2a** in DMSO-d_6 (700 MHz).

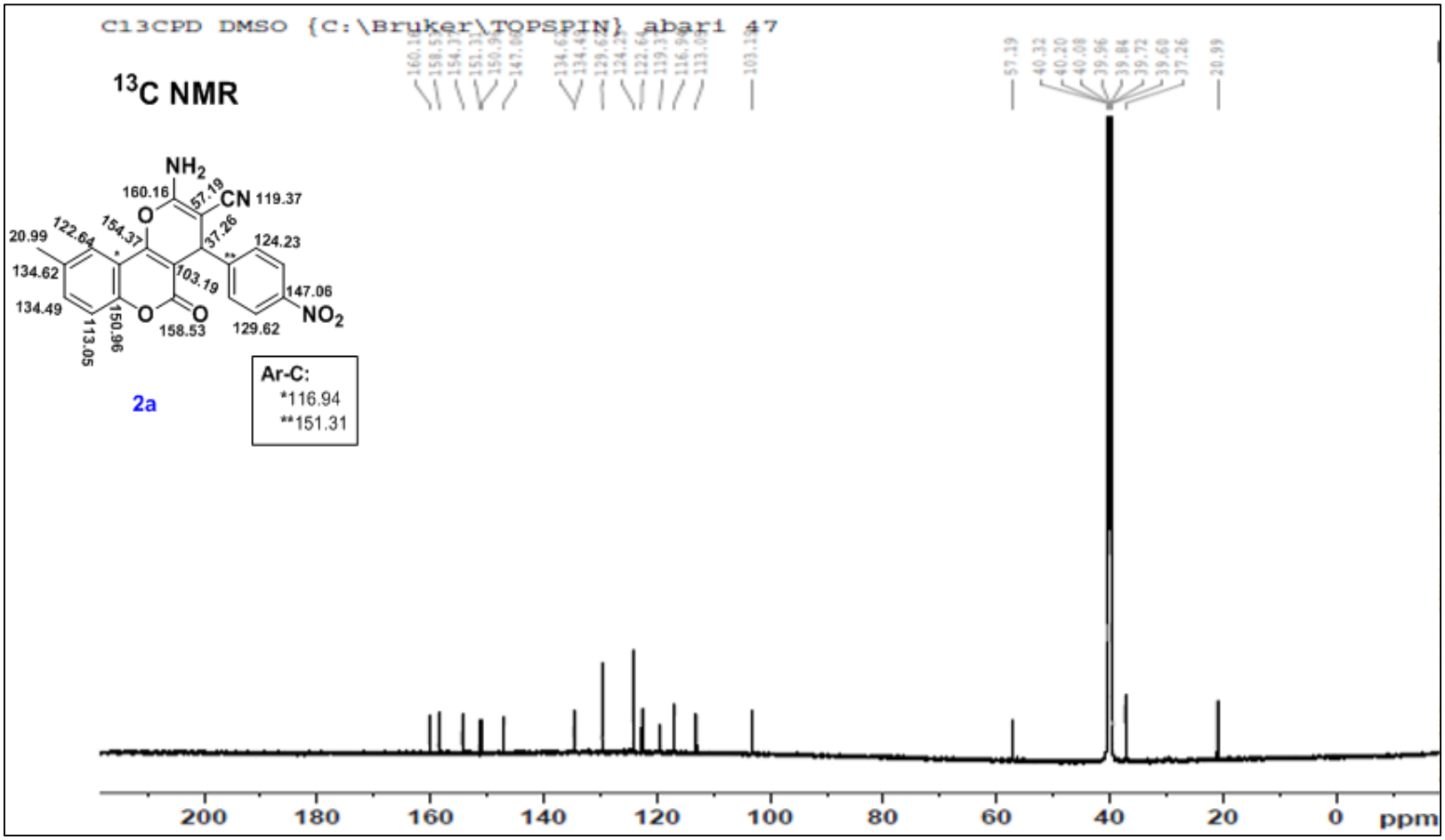

Figure S2: ^{13}C-NMR spectrum of compound **2a** in DMSO-d$_6$ (176 MHz).

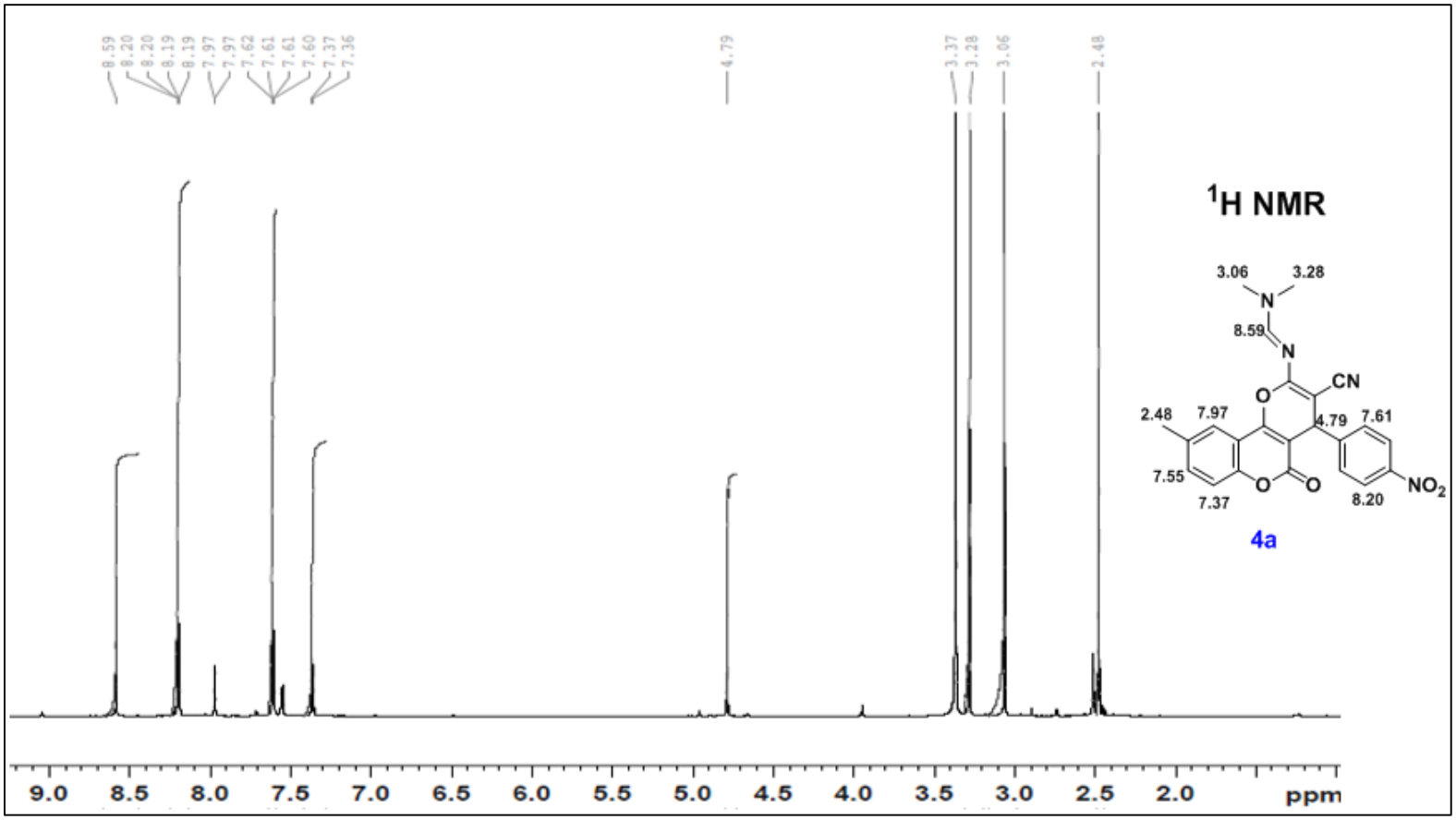

Figure S3: [1]H-NMR spectrum of compound **4a** in DMSO-d_6 (700 MHz).

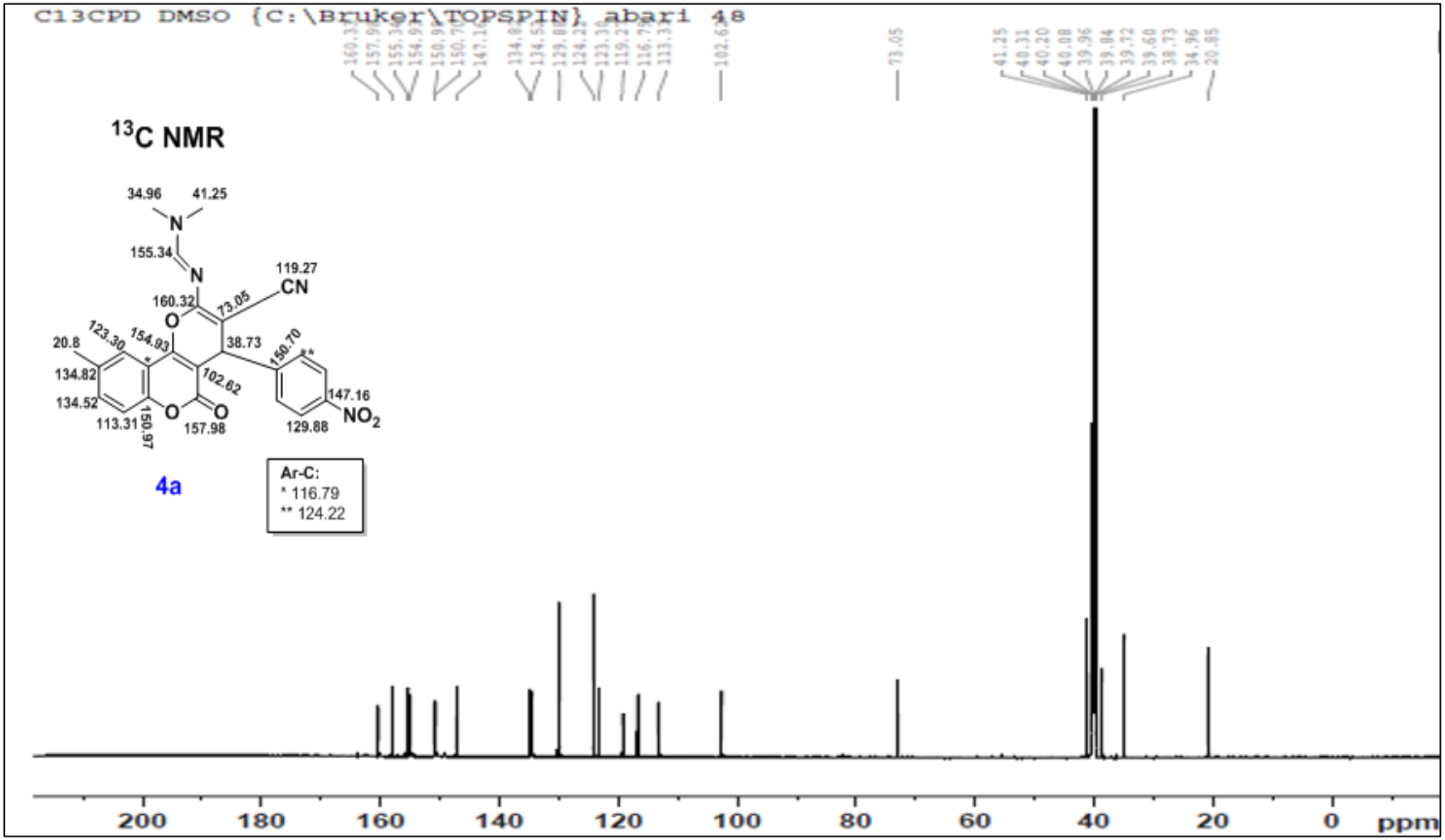

Figure S4: ^{13}C-NMR spectrum of compound **4a** in DMSO-d$_6$ (176 MHz).

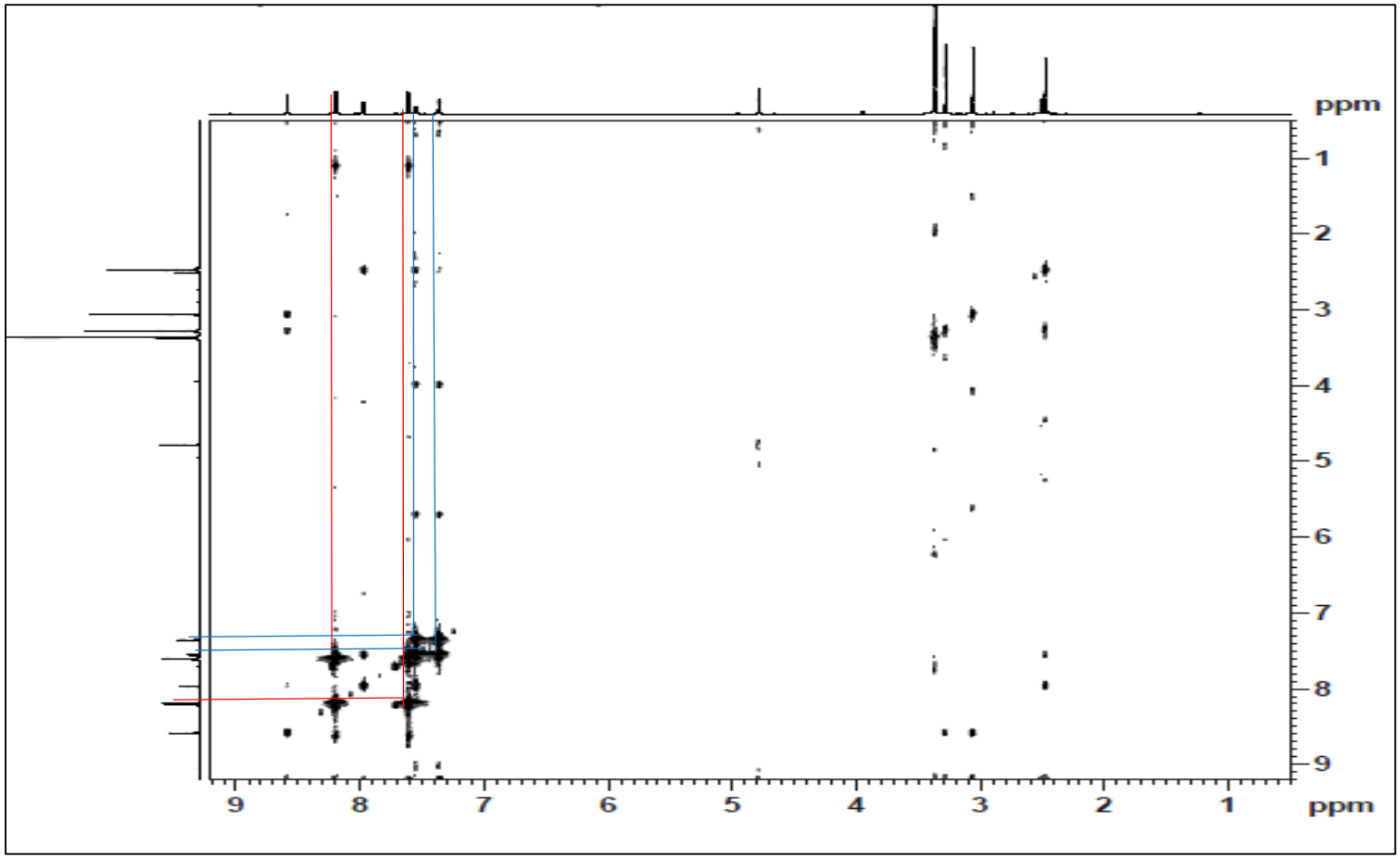

Figure S5: ^{1}H-^{1}H-Homonuclear COSY NMR spectrum of compound **4a** in DMSO-d_6 (700 MHz).

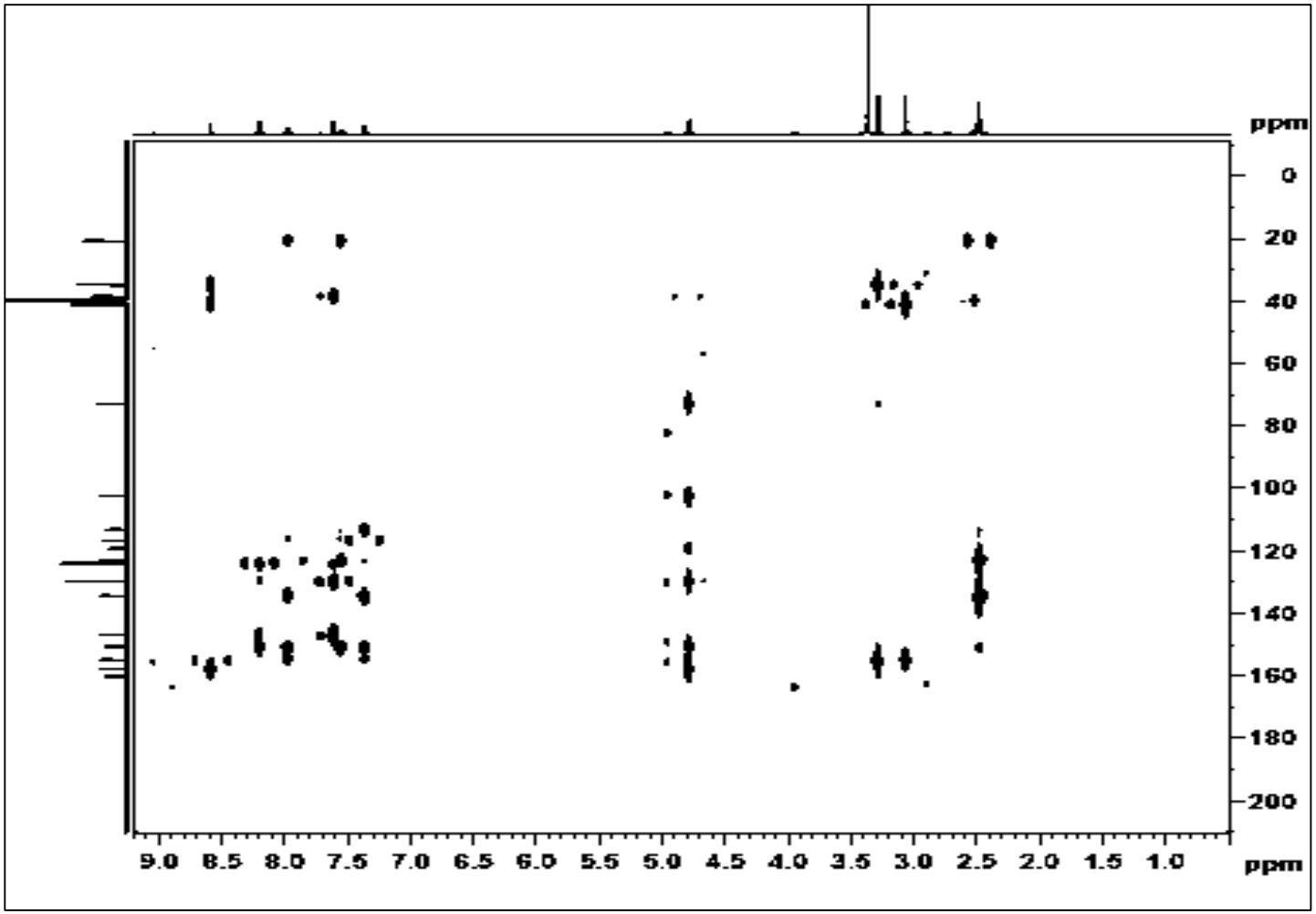

Figure S6: ^{1}H-^{13}C-Heteronuclear COSY (HMBC) NMR spectrum of compound **4a** in DMSO-d_6 (700/176 MHz).

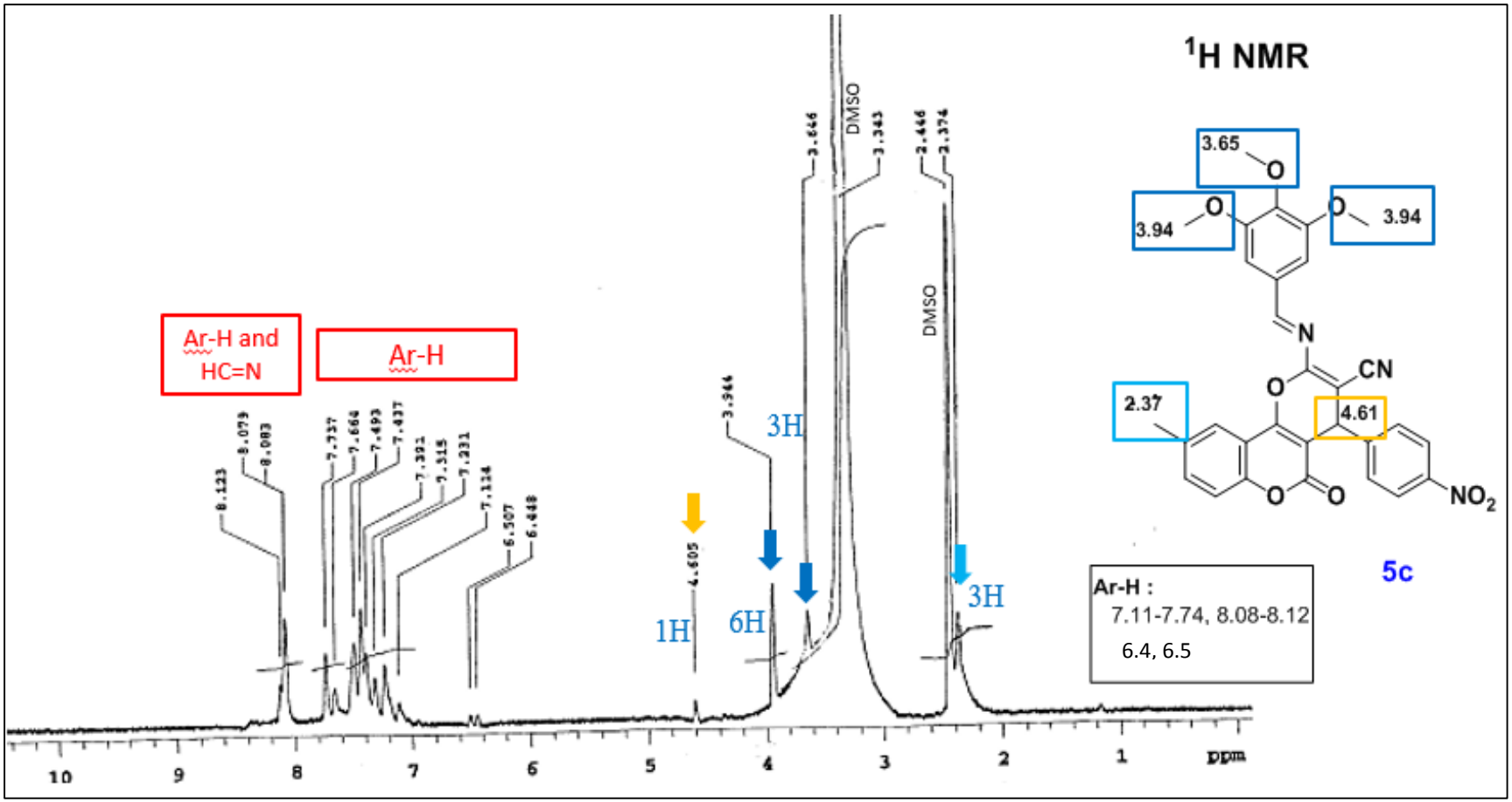

Figure S7: ^{1}H-NMR spectrum of compound **5c** in DMSO-d_6 (600 MHz).

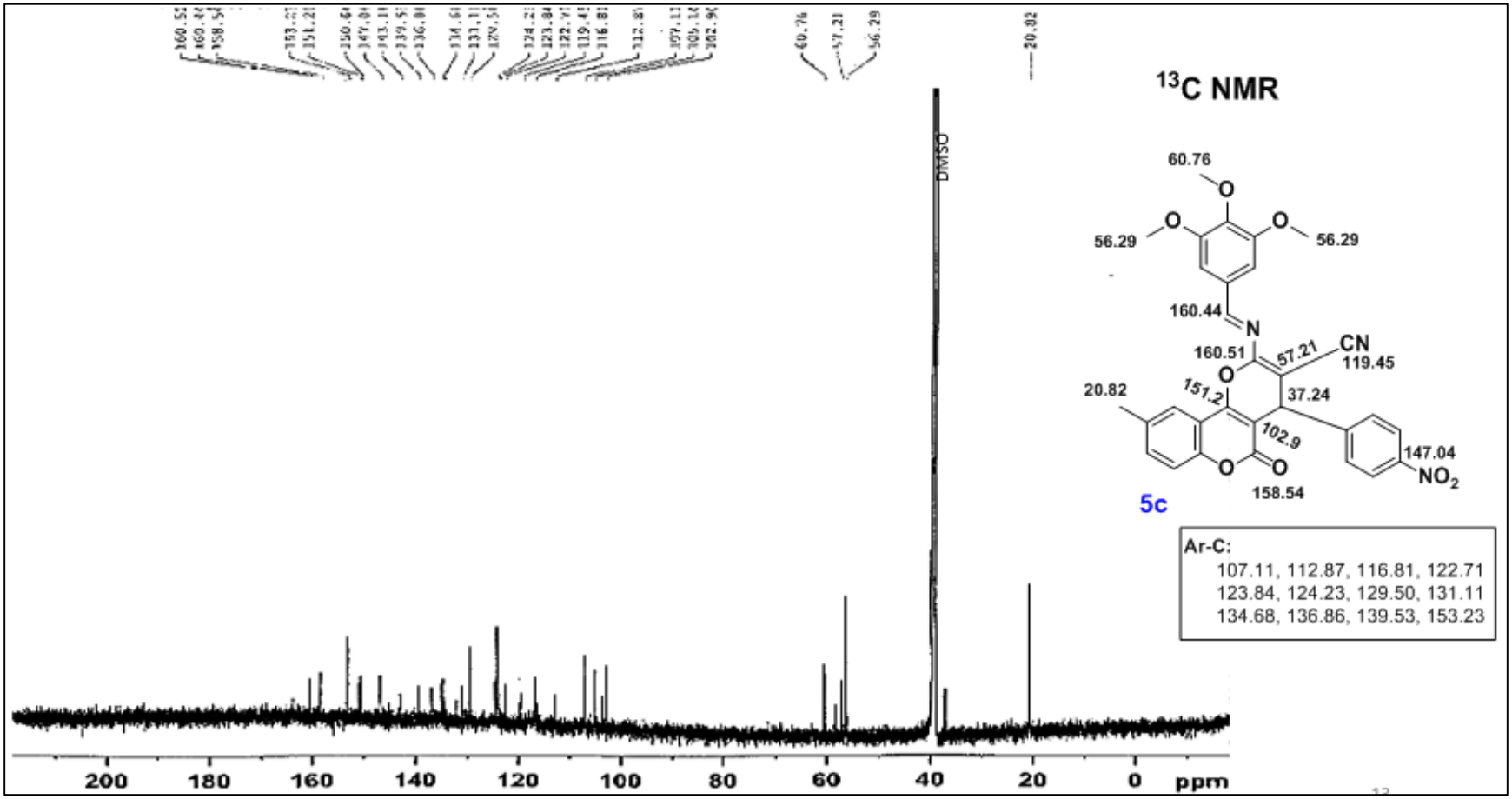

Figure S8: ^{13}C-NMR spectrum of compound **5c** in DMSO-d$_6$ (176 MHz).

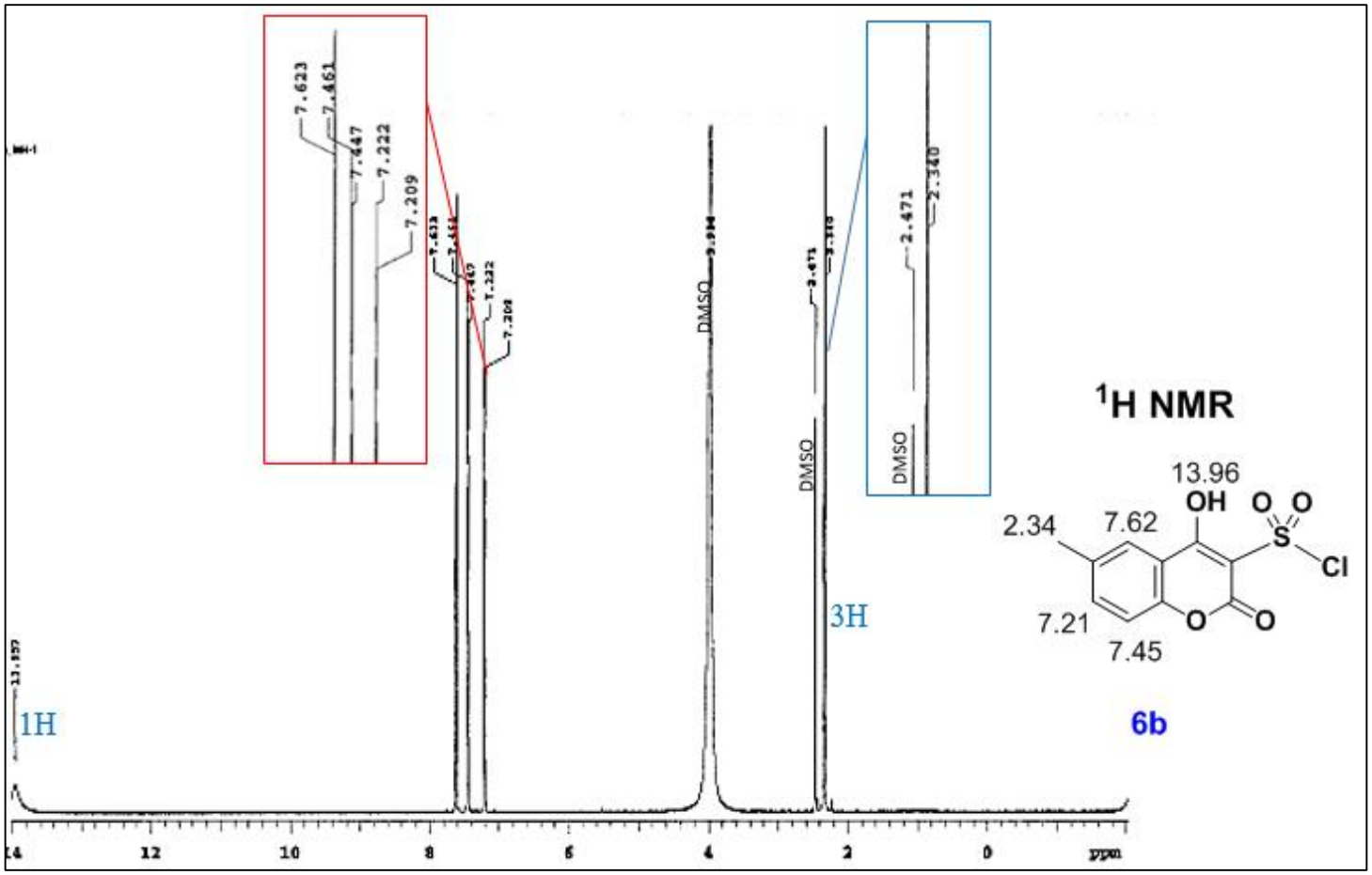

Figure S9: [1]H-NMR spectrum of compound **6b** in DMSO-d_6 (600 MHz).

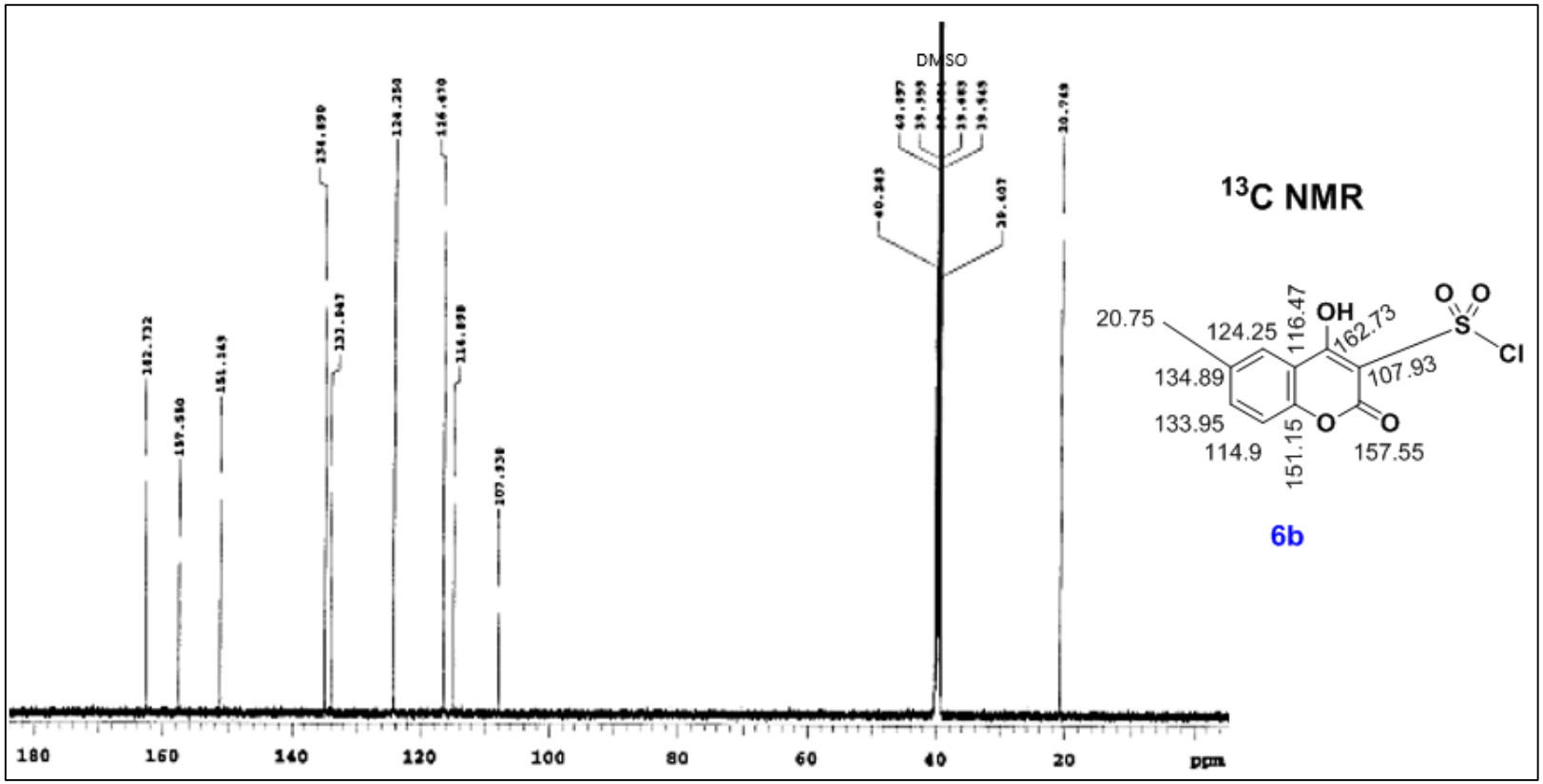

Figure S10a: ^{13}C-NMR spectrum of compound **6b** in DMSO-d_6 (154 MHz).

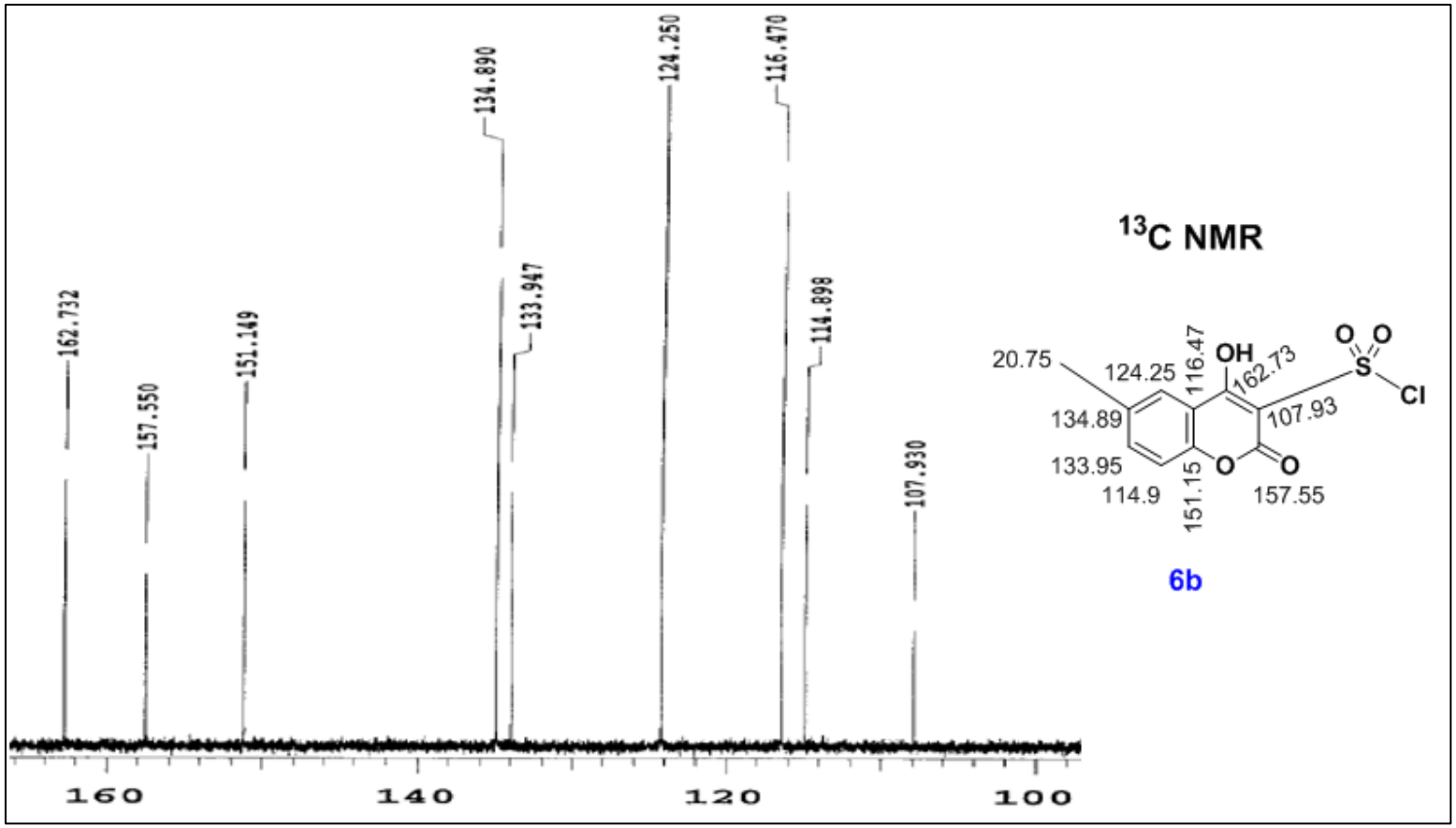

Figure S10b: ^{13}C-NMR spectrum of compound **6b** in DMSO-d_6 (154 MHz).

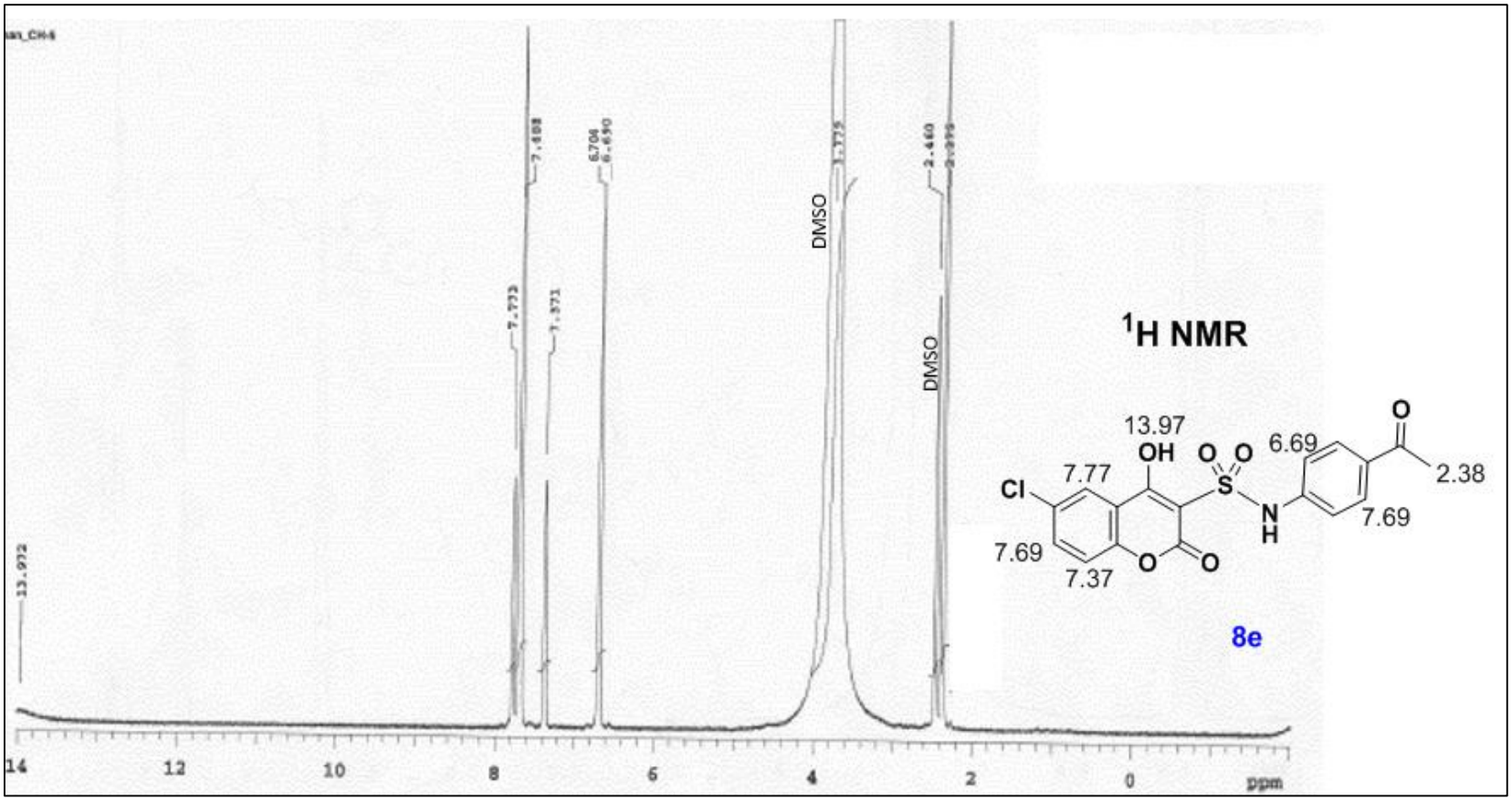

Figure S11: ^{1}H-NMR spectrum of compound **8e** in DMSO-d_6 (600 MHz).

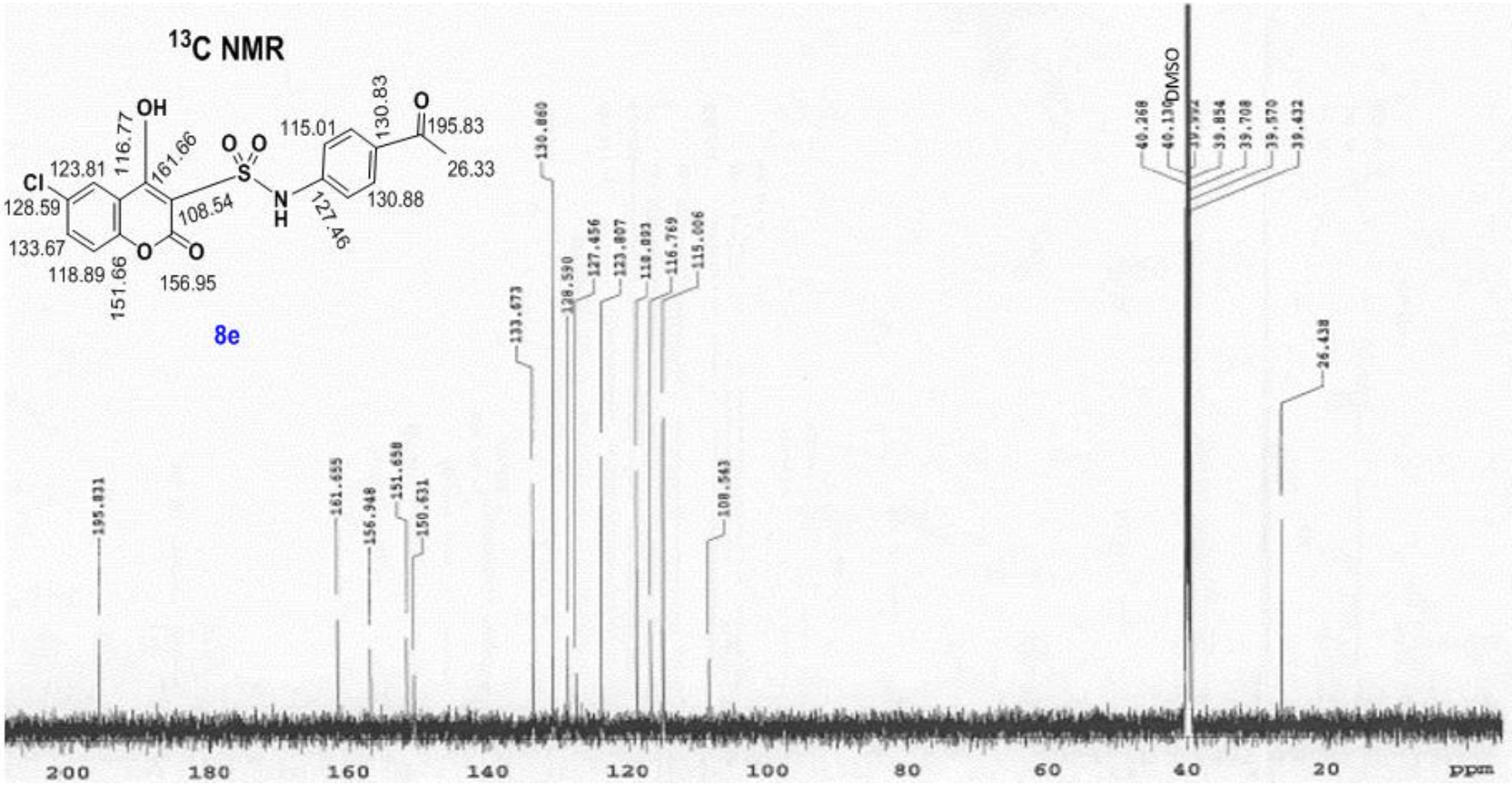

Figure S12: ^{13}C-NMR spectrum of compound **8e** in DMSO-d_6 (154 MHz).

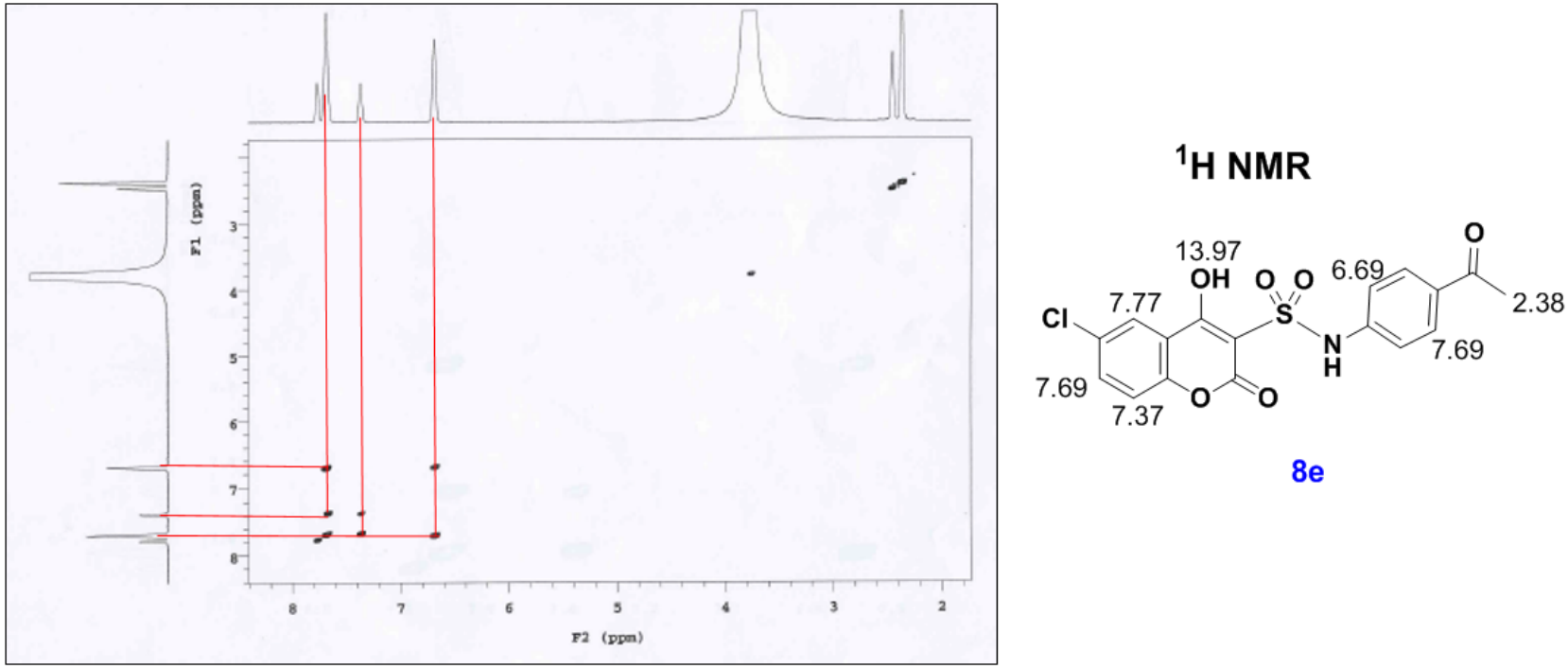

Figure S13: ^{1}H-^{1}H-Homonuclear COSY NMR spectrum of compound **8e** in DMSO-d_6 (600 MHz).

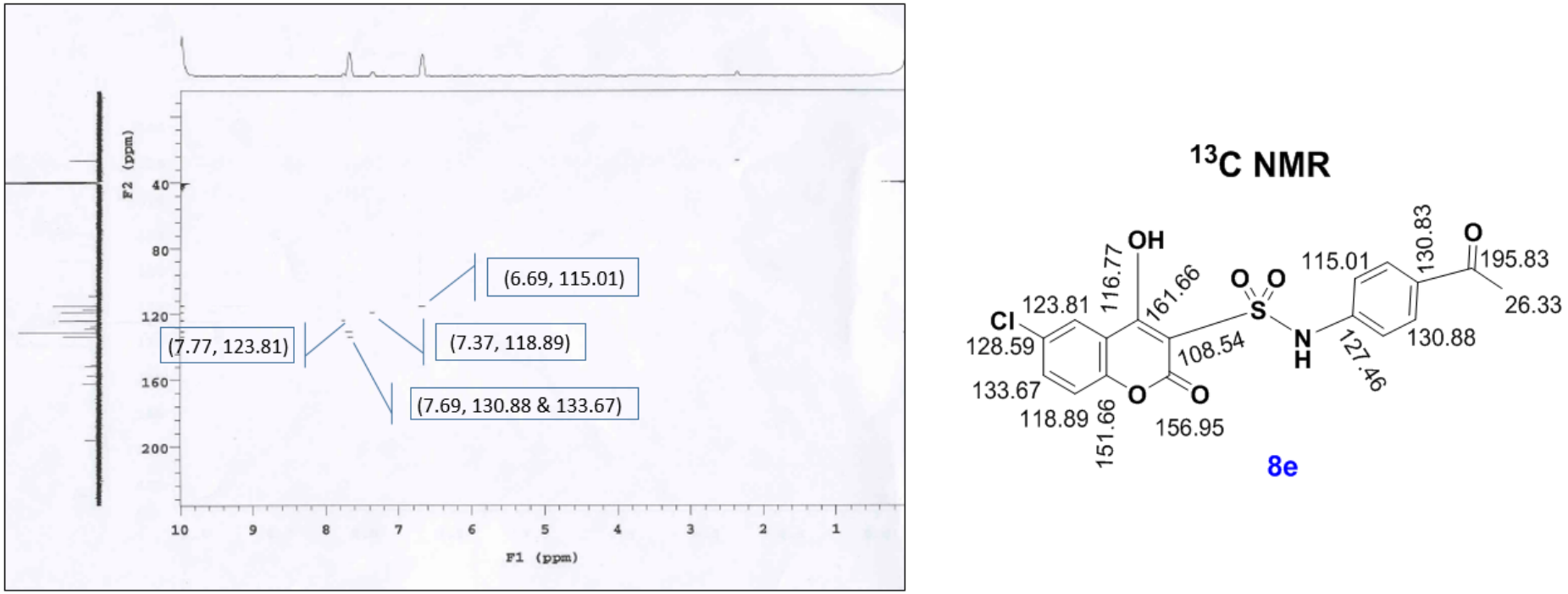

Figure S14: ^{1}H-^{13}C-Heteronuclear COSY NMR spectrum of compound **8e** in DMSO-d_6 (600/154 MHz).

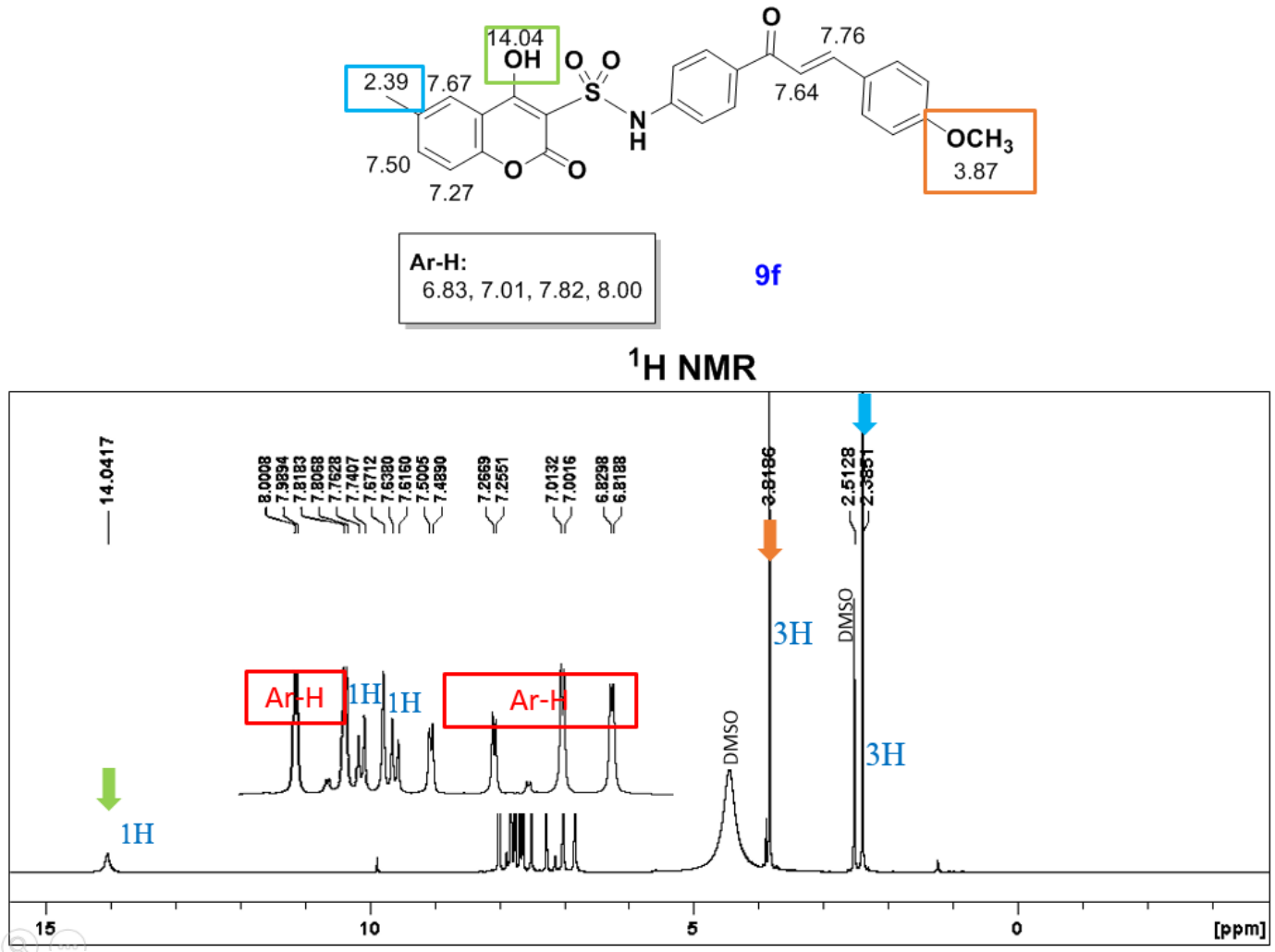

Figure S15: ^{1}H-NMR spectrum of compound **9f** in DMSO-d$_6$ (700 MHz).

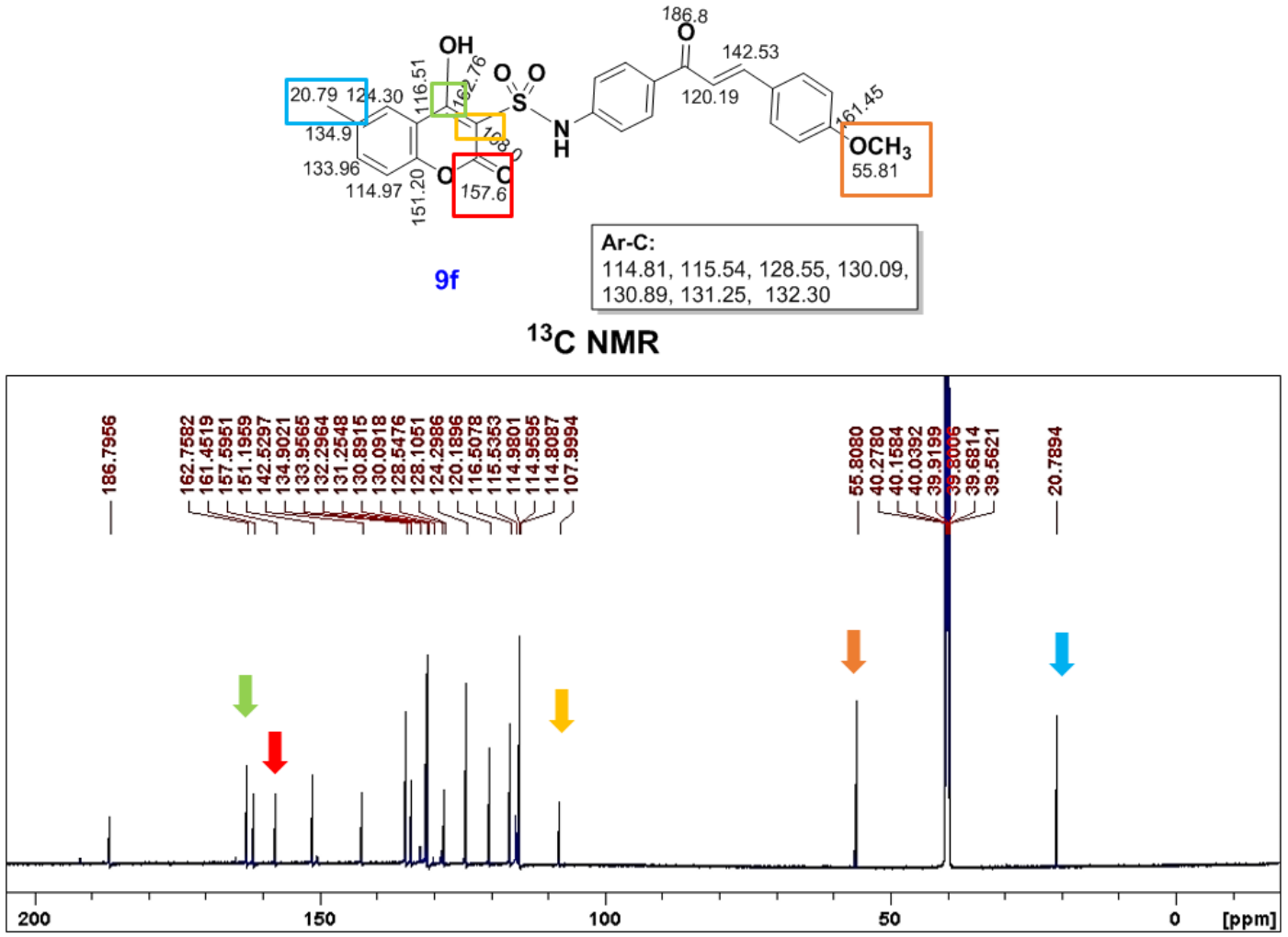

Figure S16: ^{13}C-NMR spectrum of compound **9f** in DMSO-d$_6$ (176 MHz).

Table S1: X-ray Crystallographic data of Compound **2a**: Bond precision: C-C = 0.0020 Å, Wavelength=0.71073, Cell: a=6.1640(4) b=20.1792(14) c=13.4613(9) ◎=90, ◎ =95.956(2), ◎ =90, Temperature: 123 K, Correction method= # Reported T Limits: Tmin=0.721 Tmax=0.746, AbsCorr = MULTI-SCAN, Data completeness= 1.000, Theta(max)= 29.998, R(reflections)= 0.0478(3442), wR2(reflections)= 0.1142(4853), S = 1.017, Npar= 262.

	Calculated	**Reported**
Volume	1665.34(19)	1665.34(19)
Space group	P 21/n	P 21/n
Hall group	-P 2yn	-P 2yn
Moiety formula	C_{20} H_{13} N_3 O_5	C_{20} H_{13} N_3 O_5
Sum formula	C_{20} H_{13} N_3 O_5	C_{20} H_{13} N_3 O_5
Mr	375.33	375.33
Dx,g cm-3	1.497	1.497
Z	4	4
Mu (mm-1)	0.110	0.110
F000	776.0	776.0
F000′	776.41	
h,k,lmax	8,28,18	8,28,18
Nref	4855	4853
Tmin,Tmax	0.991,0.995	0.721,0.746
Tmin′	0.970	