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Copper(II) complexes derived from naphthalene-based halogenated Schiff bases: Synthesis, structural analysis, DFT computational studies and *in vitro* biological activities

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Supplementary information

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Figure S1: IR Spectrum of L1



Figure S2: IR Spectrum of L2



Figure S3: IR Spectrum of 1



Figure S4: IR Spectrum of 2



Figure S5: ¹H-NMR Spectrum of L1



Figure S6: ¹³C-NMR Spectrum of L1



Figure S7: ¹H-NMR Spectrum of L2



Figure S8: ¹³C-NMR Spectrum of L2



Figure S9: EPR of 2



Figure S10: EPR of 1

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Single M Tolerance = Element pr Number of Monoisotop 2462 formu Elements U	ass Analysi = 5.0 mDa / rediction: Off isotope peaks ic Mass, Even Ia(e) evaluate Jsed:	S DBE: s used f Electror d with 29	min = - or i-FIT l lons results	1.5, ma = 3 within	ax = 50.0 limits (up to 50 closest result	s for each r	nass)							▲ ↓
Mass	Calc. Mass	mDa	PPM	DBE	Formula	i-FIT	i-FIT Norm	Fit Conf %	С	н	N	0	CI	^
316.0290	316.0289	0.1	0.3	2.5	C9 H16 N3 O3 S CI2	708.3	14.909	0.00	9	16	3	3	2	
	316.0288	0.2	0.6	10.5	C16 H14 N S3	712.6	19.145	0.00	16	14	1		3	
	316.0287	-0.3	0.9	16.5	C8 H10 N7 O3 S2	718.1	23.498	0.00	8	10	5	3 4	2	
	316.0296	-0.6	-1.9	11.5	C17 H12 N O CI2	693.4	0.000	100.00	17	12	1	1	2	
	316.0281	0.9	2.8	-1.5	C4 H17 N7 O S CI3	716.2	22.754	0.00	4	17	7	1 1	3	
	316.0280	1.0	3.2	11.5	C15 H10 N O5 S	718.3	24.900	0.00	15	10	1	5		~
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227. 0- 230 For Help, pre-	0742 246.05 240 ss F1	250 264	260	274. 270	1259 280.0521 305 17043 280 290 300	15.9806 310 3	330.188 33 20 330	5 1.1916 347.215 340 35	91 359	.2406	37	377.23 0 3	810 ^{383.1}	2551 4012659 413.2679 429.3181 443.3354 457.3482

Figure S11: Mass spectrum for L1



Figure S12: Mass spectrum for L2



Figure S13: Mass spectrum for complex 1



Figure S14: Mass spectrum for complex 2



Figure S15: Optimized structures for L1, L2, 1 and 2



Figure S16(a): Electronic absorption spectra of 1 and 2 at high concentrations



Figure S16(b): Electronic absorption spectra of 1 and 2 at high concentrations showing the weak $d\rightarrow d$ transition.