Electronic Supplementary Information for

Effect of *N*-Donor Ancillary Ligands on Structural and Magnetic Properties of Oxalate Copper(II) Complexes

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Table S1. Short intra- and intermolecular contacts detected in the structures **2- 8**.

D—H•••A	D—H [Å]	H•••A [Å]	D•••A [Å]	D—H•••A [°]
2				
N(2)-H(2)···O(5)#1	0.86	2.20	2.992(3)	154.00
N(3)-H(3NA)···O(6)#2	0.92	2.08	2.954(3)	159.00
N(5)-H(5)···O(4)#3	0.86	2.02	2.837(2)	159.00
N(6)-H(6NA)···O(1)#4	0.92	2.01	2.919(3)	167.00
N(6)-H(6NB)···O(6)#4	0.90	2.18	3.039(4)	161.00
O(6)-H(6OA)···O(4)#5	0.85	1.95	2.776(4)	163.00
O(6)-H(6OB)···O(7)#6	0.85	1.95	2.780(4)	165.00
O(7)-H(7OA)···O(5)#7	0.85	2.01	2.847(3)	168.00
O(7)-H(7OB)···N(6)#8	0.85	2.10	2.902(3)	156.0
N(2)-H(2)···N(4)	0.86	2.57	2.986(3)	111.0
N(3)-H(3NB)···O(3)	0.86	1.98	2.804(3)	159.0
O(5)-H(5OA)···O(7)	0.85	2.18	3.000(3)	161.0
O(5)-H(5OB)···O(2)	0.85	2.00	2.832(3)	165.0
C(1)-H(1)···O(2)#1	0.93	2.51	3.299(4)	143.1
3				
N(2)-H(2A)···O(2)#9	0.86	2.56	3.130(3)	125.0
N(2)-H(2A)···O(4)#9	0.86	1.98	2.808(3)	161.0
N(6)-H(6NA)···O(2)#9	0.98	2.49	3.338(4)	145.0
N(3)-H(3NA)···O(5)	0.92	2.31	3.049(3)	138.0
C(2)-H(2)···O(1)#10	0.93	2.44	3.361(4)	171.0
N(5)-H(5)···O(3)#11	0.86	2.15	2.873(3)	141.0
O(5)-H(5OB)···O(4)#11	0.87	1.93	2.802(3)	175.0
O(5)-H(5OA)···N(3)#12	0.86	2.16	3.013(3)	174.0
N(6)-H(6NB)···O(2)#6	0.89	2.56	3.397(4)	157.0
4				
N(2)-H(2A)···O(4)	0.86	2.44	2.997(3)	122.9
C(5)-H(5)···O(1)	0.93	2.50	2.919(3)	107.7
N(2)-H(2A)···O(2)#13	0.86	1.94	2.768(3)	160.6
N(4)-H(4)···O(3)#14	0.86	2.12	2.894(3)	150.3
C(1)-H(1)···O(4)#15	0.93	2.52	3.303(3)	141.6
5				
N(2)-H(2N)··· O(2)#16	0.86	1.99	2.752(4)	147.8
6				
O(11)-H(22A)···O(6)#3	0.90	2.00	2.891(7)	169.6
O(11)-H(22B)···O(10)	0.85	1.99	2.728(12)	144.1
O(10)-H(21B)···O(12)#17	0.89	2.14	3.010(11)	165.3
O(9)- H(20B)···O(1)	0.85	1.96	2.811(6)	173.9
C(3)-H(3)···O(4)#18	0.93	2.54	3.289(6)	137.9
C(11)-H(11B)···O(8)	0.97	2.47	3.236(5)	135.4
7				
O(5)-H(5OA)···O(3)#18	0.94	1.83	2.754(3)	166.00
N(2)-H(2A)···O(3)#19	0.90	2.05	2.878(3)	153.0
N(2)-H(2B)···O(2)#20	0.90	2.46	3.271(3)	150.0
O(5)-H(5OB)···O(2)	0.91	2.05	2.858(3)	147.0
C(6)-H(6B)···O(4)	0.97	2.56	3.367(4)	140.0
C(1)-H(1A)···O(1)	0.93	2.53	3.052(3)	116.0
8				
N(2)-H(2A)···O(8)	0.90	2.27	3.080(3)	149.0
O(7)-H(7OB)···O(8)	0.88	1.92	2.790(4)	175.0
N(2)-H(2B)···O(5)#3	0.90	2.19	3.018(3)	152.0
O(8)-H(8OA)···O(2)#22	0.86	1.95	2.807(3)	178.0
O(8)-H(8OB)···O(6)#23	0.96	2.05	2.977(3)	161.0
C(1)-H(1)···O(6)#4	0.93	2.52	2.974(3)	110.0
C(2)-H(2)···O(3)#24	0.93	2.42	3.305(3)	158.0
C(7)-H(7B)···O(4)#25	0.97	2.59	3.494(4)	155.0
9				

N(2)-H(2A)···Cl(1)	0.90	2.57	3.449(4)	165.0
N(4)-H(4B)···Cl(1)#6	0.90	2.55	3.273(4)	138.0
N(2)-H(2B)···O(4)#26	0.90	2.22	3.089(5)	161.0
N(4)-H(4A)···O(1)#6	0.90	2.54	3.202(5)	160.0
O(5)-H(5A)···Cl(1)	0.87	2.25	3.111(4)	171.0
O(5)-H(5B)···Cl(1)#27	0.87	2.62	3.120(4)	118.0
C(1)-H(1)···O(6)	0.93	2.52	3.002(6)	112.0
C(4)-H(4)···Cl(1)#19	0.93	2.72	3.630(4)	165.0
C(8)-H(8)···O(2)	0.93	2.29	2.915(5)	124.0
C(10)-H(10)···O(7)#4	0.93	2.51	3.227(5)	134.0

Symmetry transformations used to generate equivalent atoms:
#1: x, y, 1+z; #2: -x, 2-y, 1-z; #3: -x, 1-y, 1-z; #4: 1-x, 1-y, 1-z; #5: 1+x, y, z; #6: x, 1+y, z; #7: 1-x, 1-y, -z; #8: x, y, -1+z; #9: 1-x, -y, -z; #10: 3/2-x, ½+y, z; #11: 1-x, y, ½-z,; #12: 3/2-x, -1/2+y, z; #13: -1/2-x,-1/2+y,1/2-z, #14: ½-x,-1/2+y,1/2-z; #15: ½-x,1/2+y,1/2-z; #16: x,1-y,-1/2+z; #17: x, 1+y,1+z; #18: -x,-y,1-z, #18: -1/2-x,-1/2+y, z; #19: -x,-1/2+y,1/2-z; #20: ½+x, y, ½-z; #21: -1/2+x, y, ½-z; #22: -x,1-y,-z, #23: -x,1-y,1-z, #24: 1+x,1+y,z, #25:-x,1-y,-z #26: x,-1+y, z; #27: 1-x,1/2+y,1/2-z.

Table S2. The selected bond lengths [Å] and angles[°] for **1**

Bond lengths		Bond angles	
Cu (1)-N(1)	1.983(3)	N(1)-Cu(1)-O(2)#1	93.28(10)
Cu (1)-O(1)	1.959(2)	N(1)-Cu(1)-O(3)	89.10(10)
Cu (1)-O(2)#1	2.340(2)	N(1)-Cu(1)-O(4)#2	173.04(10)
Cu (1)-O(3)	1.985(2)	O(1)-Cu(1)-N(1)	94.68(10)
Cu (1)-O(4)#2	1.984(2)	O(1)-Cu(1)-O(2)#1	77.61(7)
Cu (1)-O(2)#3	2.498(2)	O(1)-Cu(1)-O(3)	175.61(7)
O(1)-C(4)	1.262(3)	O(1)-Cu(1)-O(4)#2	92.10(7)
C(4)-O(2)	1.242(3)	O(3)-Cu(1)-O(2)#1	99.99(7)
		O(4)#2-Cu(1)-O(2)#1	89.66(7)
		O(4)#2-Cu(1)-O(3)	84.17(7)

Symmetry transformations used to generate equivalent atoms:
#1 –x,-y,-z; #2 –x,-y+1,-z ; #3 -x,1/2+y,1/2-z.

Table S3. The selected bond lengths [Å] and angles [°] for **2**.

Bond lengths		Bond angles	
Cu(1)-N(1)	2.004(2)	N(1)-Cu(1)-N(3)#1	95.06(7)
Cu(1)-N(3B)#1	2.429(2)	N(4)-Cu(1)-N(1)	92.81(8)
Cu(1)-N(4)	1.977(2)	N(4)-Cu(1)-N(3)#1	92.29(7)
Cu(1)-O(1)	1.983(2)	N(4)-Cu(1)-O(1)	91.39(8)
Cu(1)-O(2A)	2.922(2)	O(1)-Cu(1)-N(1)	168.99(8)
Cu (1)-O(3)	1.955(2)	O(1)-Cu(1)-N(3)#1	94.94(7)
O(1)-C(7)	1.283(3)	O(3)-Cu(1)-N(1)	92.20(8)
O(2)-C(7)	1.230(3)	O(3)-Cu(1)-N(3)#1	92.37(7)
O(3)-C(8)	1.274(3)	O(3)-Cu(1)-N(4)	172.83(9)
O(4)-C(8)	1.228(3)	O(3)-Cu(1)-O(1)	82.79(8)
C(7)-C(8)	1.543(4)	O(2A)-Cu(1)-N(1)	94.13(7)
		O(2A)-Cu(1)-N(3B)#1	170.81(6)
		O(2A)-Cu(1)-N(4)	87.40(7)
		O(2A)-Cu(1)-O(1)	75.89(7)
		O(2A)-Cu(1)-O(3)	87.13(7)
		O(2)-C(7)-O(1)	126.3(3)
		O(4)-C(8)-O(3)	125.9(3)

Symmetry transformations used to generate equivalent atoms: #1: -x,-y+2,-z+1 #2: -x,1-y,1-z

Table S4. The selected bond lengths [Å] and angles [°] for **3**.

Bond lengths		Bond angles	
Cu(1)-N(1)	1.991(2)	N(1)-Cu(1)-O(5)	93.90(8)
Cu(1)-N(4)	1.974(2)	N(4)-Cu(1)-N(1)	92.96(9)
Cu(1)-O(1)	1.962(9)	N(4)-Cu(1)-O(5)	91.47(8)
Cu(1)-O(2)#1	2.913(2)	O(1)-Cu(1)-N(1)	94.71(9)
Cu(1)-O(3)	1.972(2)	O(1)-Cu(1)-N(4)	170.13(8)
Cu(1)-O(5)	2.403(2)	O(1)-Cu(1)-O(3)	83.12(8)
O(1)-C(9)	1.272(3)	O(1)-Cu(1)-O(5)	94.20(7)
O(2)-C(9)	1.227(4)	O(3)-Cu(1)-N(1)	174.02(9)
O(3)-C(10)	1.261(3)	O(3)-Cu(1)-N(4)	88.64(8)
O(4)-C(10)	1.229(3)	O(3)-Cu(1)-O(5)	91.82(7)
		O(1)-Cu(1)-O(2A)	76.63(7)
		O(2A)-Cu(1)-O(3)#1	88.13(7)
		O(2A)-Cu(1)-O(5)#1	170.77(7)

Symmetry transformations used to generate equivalent atoms: #1: 1-x,-y,-z

Table S5. The selected bond lengths [Å] and angles [°] for **4**

Bond lengths		Bond angles	
Cu (1)-N(1)	1.971(2)	N(1)-Cu(1)-N(3)	94.55(8)
Cu(1)-N(3)	1.977(2)	N(1)-Cu(1)-O(4)	88.82(7)
Cu(1)-O(1)	1.935(2)	N(2)-N(1)-Cu(1)	124.13(15)
Cu(1)-O(3)	1.965(2)	N(3)-Cu(1)-O(4)	109.76(8)
Cu(1)-O(4)	2.416(2)	O(1)-Cu(1)-N(1)	175.03(7)
O(3)-C(9)	1.277(3)	O(1)-Cu(1)-N(3)	89.82(7)
O(4)-C(9)#1	1.221(3)	O(1)-Cu(1)-O(3)	84.17(7)
O(1)-C(10)	1.267(3)	O(1)-Cu(1)-O(4)	91.94(7)
O(2)-C(10)	1.219(3)	O(3)-Cu(1)-N(1)	90.96(7)
C(9)-C(10)	1.554(3)	O(3)-Cu(1)-N(3)	161.81(8)
		O(3)-Cu(1)-O(4)	87.65(7)
		N(4)-N(3)-Cu(1)	127.56(15)
		C(1)-N(1)-Cu(1)	129.37(17)
		C(5)-N(3)-Cu(1)	127.63(17)
		C(9)-O(3)-Cu(1)	112.25(14)
		C(9)#1-O(4)-Cu(1)	177.04(18)
		C(10)-O(1)-Cu(1)	113.24(15)

Symmetry transformations used to generate equivalent atoms: #1 -x-1/2,y-1/2,-z+1/2, #2 -x-1/2,y+1/2,-z+1/2

Table S6. The selected bond lengths [Å] and angles [°] for **5**.

Bond lengths		Bond angles	
Cu(1)-N(1)	2.025(2)	N(1)#1-Cu(1)-N(1)	92.92(10)
Cu(1)-O(1)	1.994(1)	N(1)-Cu(1)-O(2)#2	99.26(7)
Cu(1)-O(2)#2	2.305(2)	N(1)-Cu(1)-O(2)#3	95.79(7)
O(1)-C(8)	1.252(3)	O(1)-Cu(1)-N(1)	89.41(7)
O(2)-C(8)	1.242(3)	O(1)-Cu(1)-N(1)#1	176.15(7)
		O(1)-Cu(1)-O(1)#1	88.42(9)
		O(1)-Cu(1)-O(2)#2	86.84(6)
		O(1)-Cu(1)-O(2)#3	77.45(6)
		O(2)#2-Cu(1)-O(2)#3	158.09(8)

Symmetry transformations used to generate equivalent atoms:
#1 -x,y,-z+1/2 #2 x,-y+1,z-1/2 #3 -x,-y+1,-z+1,

Table S7. The selected bond lengths [Å] and angles [°] for **6**.

Bond lengths		Bond angles	
Cu (1)-N(1)	2.025(4)	N(1)-Cu(1)-N(3)	89.74(16)
Cu(1)-N(3)	2.037(4)	N(1)-Cu(1)-O(2)	96.98(14)
Cu(1)-O(1)	2.006(3)	N(1)-Cu(1)-O(5)	96.92(14)
Cu(1)-O(2)	2.202(3)	N(3)-Cu(1)-O(2)	96.56(13)
Cu(1)-O(5)	2.273(3)	N(3)-Cu(1)-O(5)	94.01(12)
Cu(1)-O(6)	2.014(3)	O(1)-Cu(1)-N(1)	175.70(13)
Cu(2)-N(5)	2.023(4)	O(1)-Cu(1)-N(3)	93.27(15)
Cu(2)-N(7)	2.069(4)	O(1)-Cu(1)-O(2)	79.63(12)
Cu(2)-O(3)	2.285(3)	O(1)-Cu(1)-O(5)	85.94(12)
Cu(2)-O(4)	1.977(3)	O(1)-Cu(1)-O(6)	87.68(15)
Cu(2)-O(7)	2.025(3)	O(2)-Cu(1)-O(5)	162.54(11)
Cu(2)-O(8)	2.265(3)	O(6)-Cu(1)-N(1)	89.78(15)
C(15)-O(1)	1.264(5)	O(6)-Cu(1)-N(3)	171.77(13)
C(15)-O(3)	1.230(5)	O(6)-Cu(1)-O(2)	91.66(12)
C(16)-O(2)	1.238(5)	O(6)-Cu(1)-O(5)	77.89(11)
C(16)-O(4)	1.258(5)	N(5)-Cu(2)-N(7)	89.49(14)
C(17)-O(7)	1.259(5)	N(5)-Cu(2)-O(3)	95.31(12)
C(17)-O(8)#1	1.234(5)	N(5)-Cu(2)-O(7)	89.41(13)
C(18)-O(5)#2	1.234(5)	N(5)-Cu(2)-O(8)	93.26(13)
C(18)-O(6)	1.256(5)	N(7)-Cu(2)-O(3)	99.37(13)
C(15)-C(16)	1.567(6)	N(7)-Cu(2)-O(8)	95.41(13)
C(17)-C(17)#1	1.572(8)	O(4)-Cu(2)-N(5)	173.45(12)
C(18)-C(18)#2	1.558(8)	O(4)-Cu(2)-N(7)	89.27(14)
		O(4)-Cu(2)-O(3)	78.55(11)
		O(4)-Cu(2)-O(7)	92.54(14)
		O(4)-Cu(2)-O(8)	93.26(13)
		O(7)-Cu(2)-N(7)	173.48(12)
		O(7)-Cu(2)-O(3)	87.13(11)
		O(7)-Cu(2)-O(8)	78.25(11)
		O(8)-Cu(2)-O(3)	162.96(11)

Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y,-z #2 -x,-y+1,-z+1

Table S8. The experimental bond lengths [Å] and angles [°] for **7.**

Bond lengths		Bond angles	
Cu(1)-N(1)	1.976(2)	N(1)-Cu(1)-N(2)	83.47(7)
Cu(1)-N(2)	1.987(2)	O(1)-Cu(1)-N(1)	95.59(7)
Cu(1)-O(1)	1.943(2)	O(1)-Cu(1)-N(2)	173.17(9)
Cu(1)-O(2)	1.955(2)	O(1)-Cu(1)-O(2)	84.23(7)
Cu(1)-O(4)#1	2.832(2)	O(2)-Cu(1)-N(1)	178.10(8)
O(1)-C(7)	1.267(3)	O(2)-Cu(1)-N(2)	96.48(7)
O(2)-C(8)	1.283(3)	C(1)-N(1)-Cu(1)	124.94(16)
O(3)-C(7)	1.223(3)	C(5)-N(1)-Cu(1)	115.40(15)
O(4)-C(8)	1.216(3)	C(6)-N(2)-Cu(1)	112.21(15)
C(7)-C(8)	1.554(3)	C(7)-O(1)-Cu(1)	113.39(16)
		C(8)-O(2)-Cu(1)	113.12(15)
		O(1)-Cu(1)-O(4)#1	84.91(7)
		O(2)-Cu(1)-O(4)#1	86.38(6)
		O(4)#1-Cu(1)-O(5)	170.85(6)
		O(4)#1-Cu(1)-N(1)	91.72(7)
		O(4)#1-Cu(1)-N(2)	88.35(7)

Symmetry transformations used to generate equivalent atoms: #1: 1/2+x,y,1/2-z

Table S9. The selected bond lengths [Å] and angles [°] for **8**.

Bond lengths		Bond angles	
Cu(1)-N(1)	2.014(2)	N(1)-Cu(1)-O(1)	176.55(8)
Cu(1)-N(2)	1.988(2)	N(1)-Cu(1)-O(2)	99.63(8)
Cu(1)-O(1)	2.0336(17)	N(1)-Cu(1)-O(9)	94.27(8)
Cu(1)-O(2)	2.351(2)	N(2)-Cu(1)-N(1)	93.43(9)
Cu(1)-O(9)	2.2996(19)	N(2)-Cu(1)-O(1)	86.68(9)
Cu(1)-O(10)#1	2.0104(17)	N(2)-Cu(1)-O(2)	94.50(9)
Cu(2)-O(3)	1.946(2)	N(2)-Cu(1)-O(9)	99.22(9)
Cu(2)-O(3)#2	1.946(2)	N(2)-Cu(1)-O(10)#1	174.48(8)
Cu(2)-O(4)	1.9556(18)	O(1)-Cu(1)-O(2)	76.93(7)
Cu(2)-O(4)#2	1.9556(18)	O(1)-Cu(1)-O(9)	89.12(7)
Cu(2)-O(98)	2.531(3)	O(9)-Cu(1)-O(2)	159.83(7)
Cu(2)-O(98)#2	2.531(3)	O(10)#1-Cu(1)-N(1)	91.15(7)
C(8)-O(2)	1.234(3)	O(10)#1-Cu(1)-O(1)	88.93(7)
C(8)-O(4)	1.257(3)	O(10)#1-Cu(1)-O(2)	87.77(8)
C(9)-O(1)	1.232(3)	O(10)#1-Cu(1)-O(9)	77.34(7)
C(9)-O(3)	1.264(3)	O(3)#2-Cu(2)-O(3)	180.00(16)
C(8)-C(9)	1.554(4)	O(3)-Cu(2)-O(4)	84.70(8)
C(10)-C(10)#1	1.557(5)	O(3)-Cu(2)-O(4)#2	95.30(8)
		O(3)#2-Cu(2)-O(4)	95.30(8)
		O(3)#2-Cu(2)-O(4)#2	84.70(8)
		O(3)#2-Cu(2)-O(98)	89.34(10)
		O(3)#2-Cu(2)-O(98)#2	90.66(10)
		O(4)-Cu(2)-O(4)#2	180.00(6)
		O(4)-Cu(2)-O(98)#2	90.78(9)
		O(4)#2-Cu(2)-O(98)	90.78(9)
		O(4)#2-Cu(2)-O(98)#2	89.22(9)
		C(10)-O(10)-Cu(1)#1	118.49(16)

Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y+1,-z+1; #2 -x,-y,-z

Table S10. The experimental bond lengths [Å] and angles [°] for **9**.

Bond lengths		Bond angles	
Cu(1)-N(1)	2.027(4)	N(1)-Cu(1)-O(1)	166.58(12)
Cu(1)-N(2)	1.995(3)	N(1)-Cu(1)-O(3)	90.21(11)
Cu(1)-O(1)	2.088(3)	N(1)-Cu(1)-O(7)	95.92(11)
Cu(1)-O(3)	2.362(3)	N(2)-Cu(1)-N(1)	93.66(14)
Cu(1)-O(6)	1.986(3)	N(2)-Cu(1)-O(1)	86.46(13)
Cu(1)-O(7)	2.273(3)	N(2)-Cu(1)-O(3)	101.14(12)
Cu(2)-N(3)	2.034(4)	N(2)-Cu(1)-O(7)	94.87(12)
Cu(2)-N(4)	1.978(4)	O(1)-Cu(1)-O(3)	76.63(10)
Cu(2)-O(2)	1.989(3)	O(1)-Cu(1)-O(7)	97.44(10)
Cu(2)-O(4)	1.971(3)	O(7)-Cu(1)-O(3)	162.47(10)
Cu(2)-O(5)	2.246(4)	O(6)-Cu(1)-N(2)	171.77(13)
O(1)-C(16)	1.247(5)	O(6)-Cu(1)-N(1)	91.49(12)
O(2)-C(16)	1.258(5)	O(6)-Cu(1)-O(1)	90.02(11)
O(3)-C(15)	1.224(5)	O(6)-Cu(1)-O(3)	85.25(11)
O(4)-C(15)	1.274(6)	O(6)-Cu(1)-O(7)	78.20(11)
O(6)-C(17)	1.257(5)	N(3)-Cu(2)-O(5)	92.81(13)
O(7)-C(17)#1	1.247(5)	N(4)-Cu(2)-N(3)	95.00(15)
C(15)-C(16)	1.550(6)	N(4)-Cu(2)-O(2)	164.74(14)
C(17)-C(17)#1	1.550(5)	N(4)-Cu(2)-O(5)	98.31(16)
		O(2)-Cu(2)-N(3)	93.63(13)
		O(2)-Cu(2)-O(5)	93.81(14)
		O(4)-Cu(2)-N(3)	173.45(13)
		O(4)-Cu(2)-N(4)	87.24(14)
		O(4)-Cu(2)-O(2)	82.89(11)
		O(4)-Cu(2)-O(5)	92.96(13)

Symmetry transformations used to generate equivalent atoms: #1 -x,-y+1,-z+1

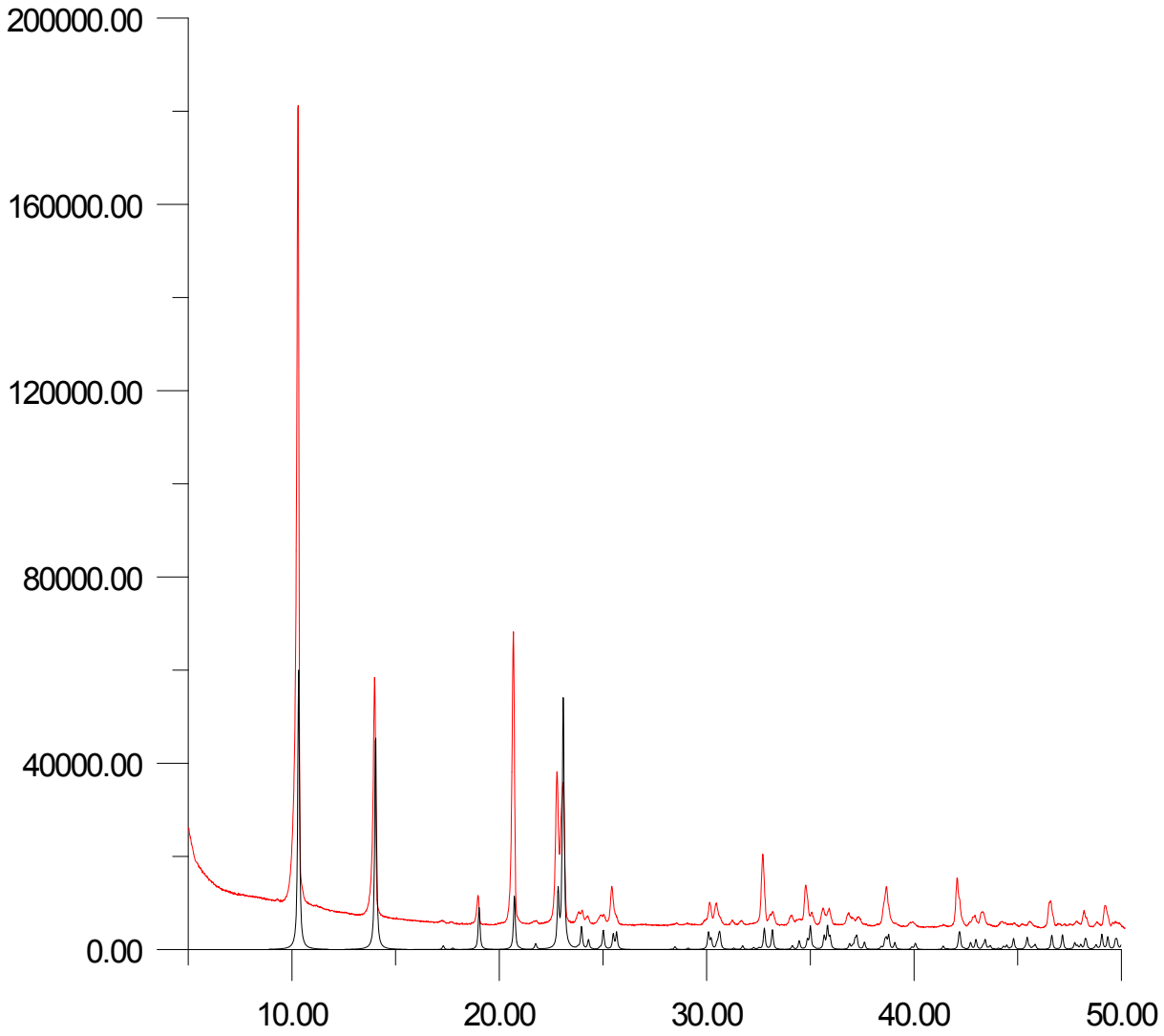


Figure S1. The powder XRD pattern of compound **1** (experimental - red) and the simulation of the powder pattern of **1** from the crystal structure (black).

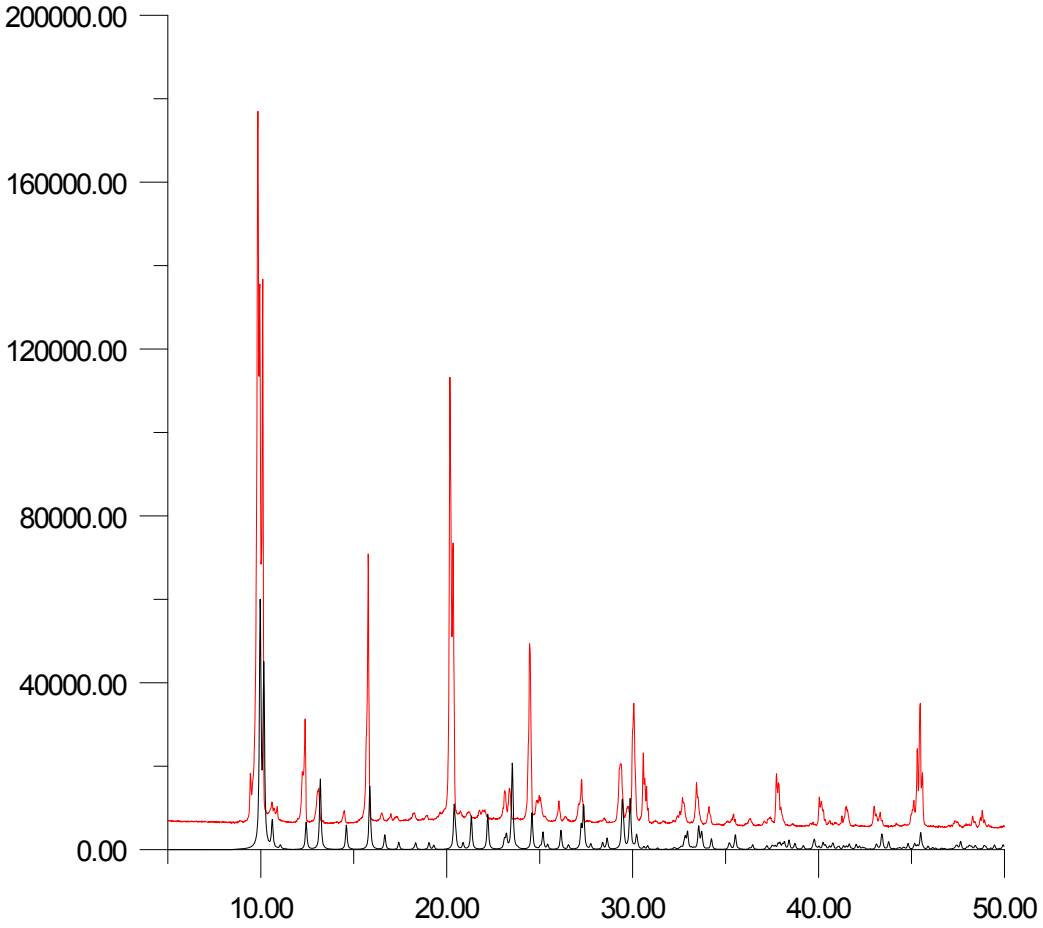


Figure S2. The powder XRD pattern of compound **2** (experimental - red) and the simulation of the powder pattern of **2** from the crystal structure (black).

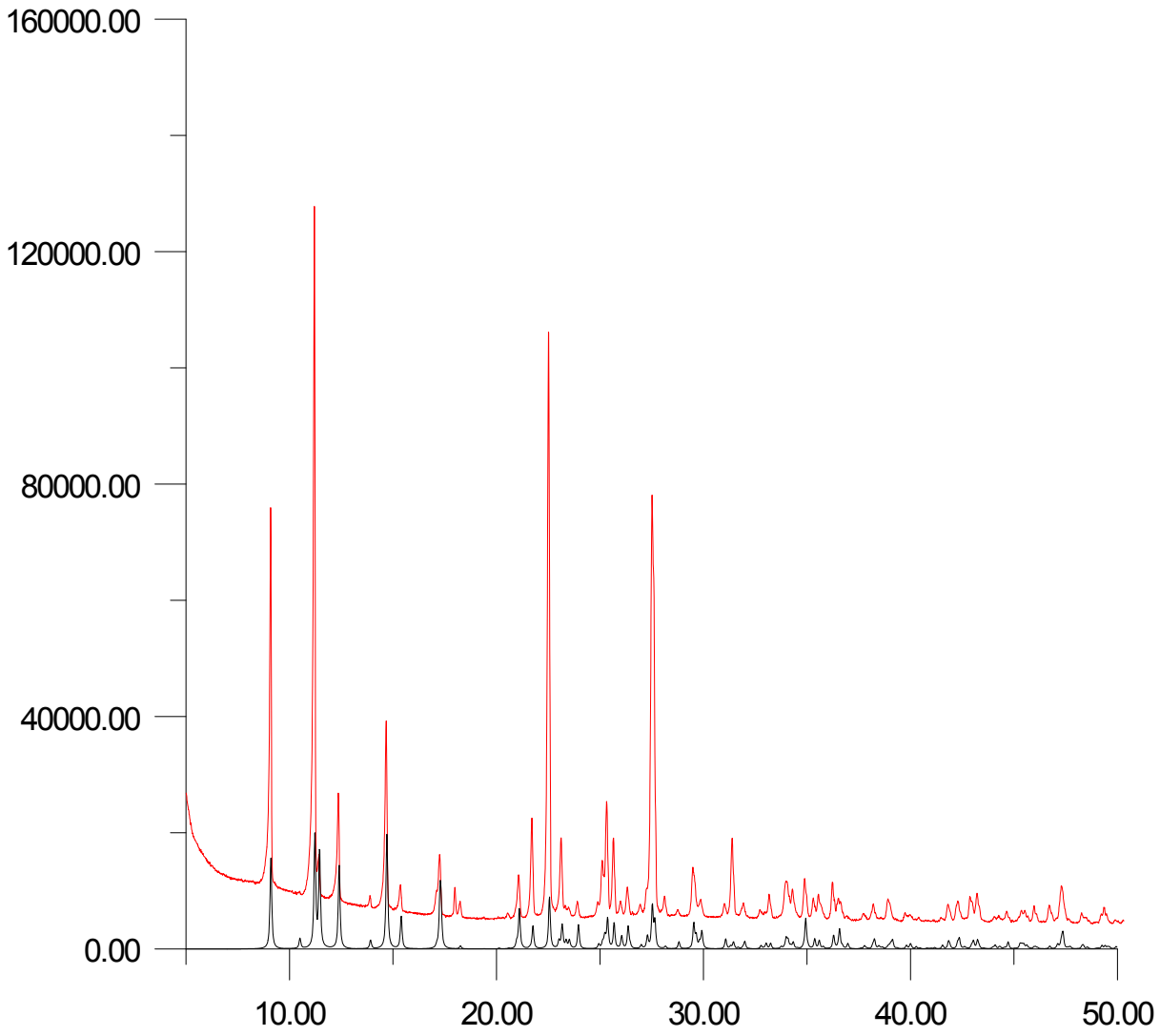


Figure S3. The powder XRD pattern of compound **3** (experimental - red) and the simulation of the powder pattern of **3** from the crystal structure (black).

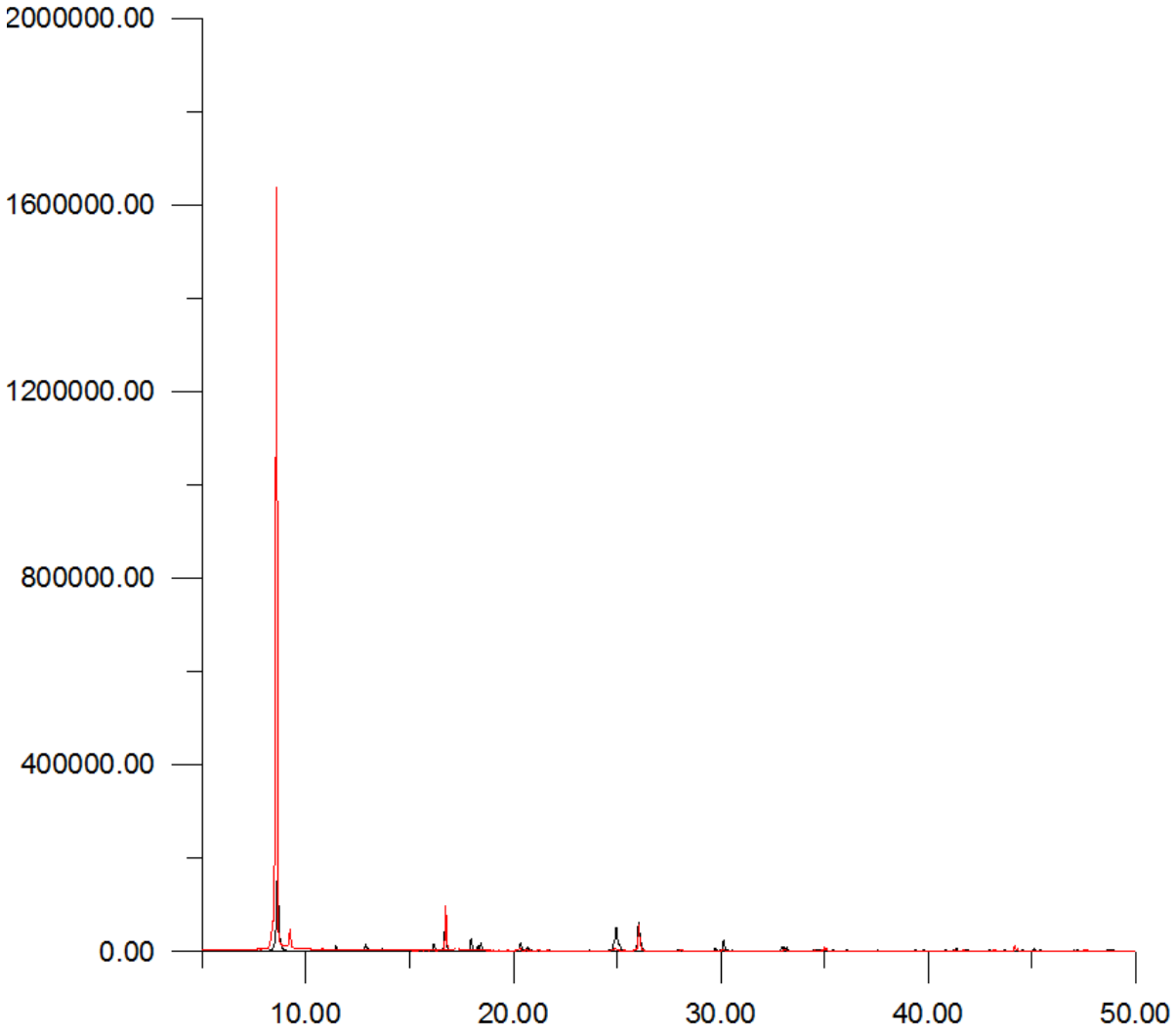


Figure S4. The powder XRD pattern of compound **4** (experimental - red) and the simulation of the powder pattern of **4** from the crystal structure (black).

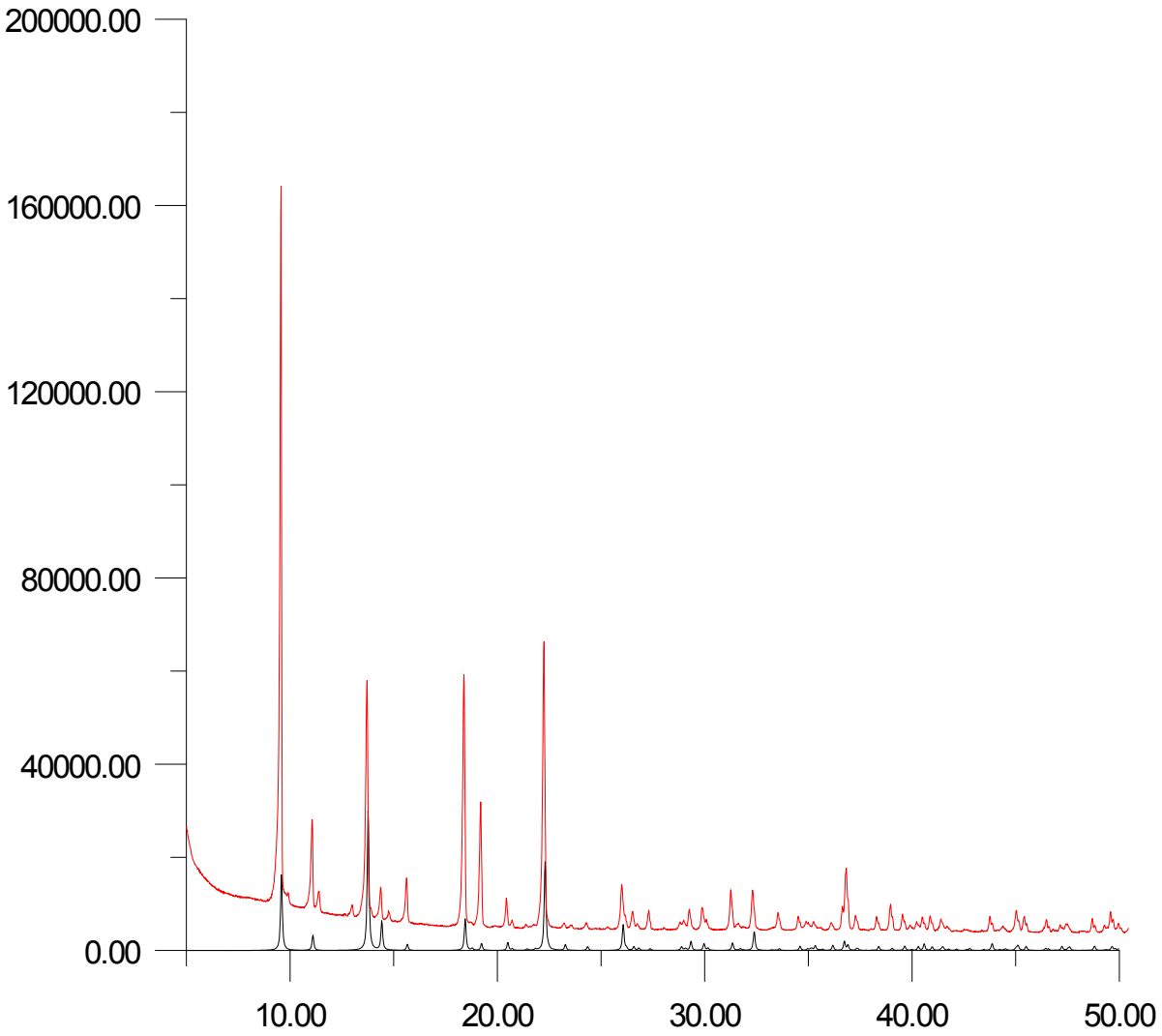


Figure S5. The powder XRD pattern of compound **5** (experimental - red) and the simulation of the powder pattern of **5** from the crystal structure (black).

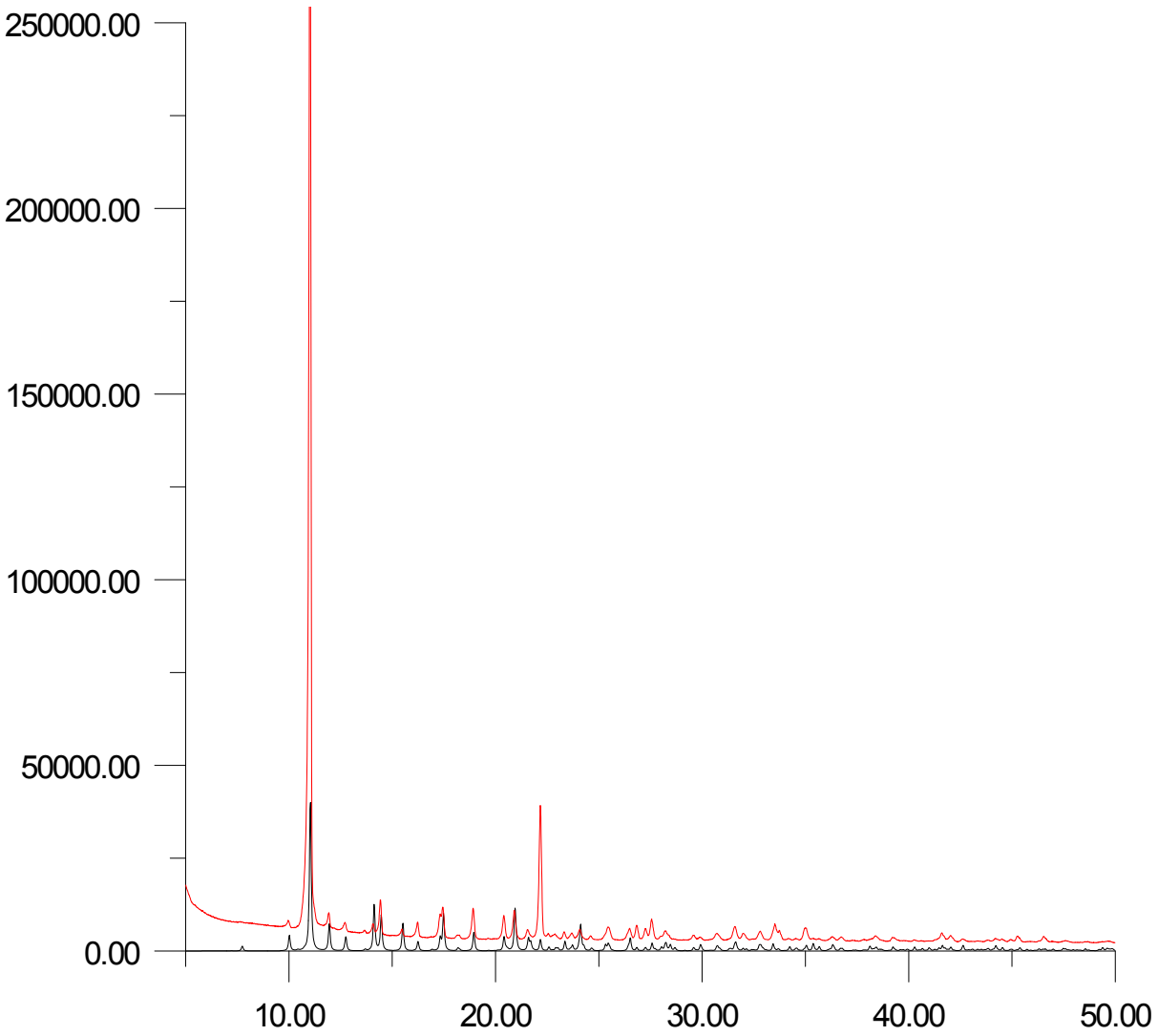


Figure S6. The powder XRD pattern of compound **6** (experimental - red) and the simulation of the powder pattern of **6** from the crystal structure (black).

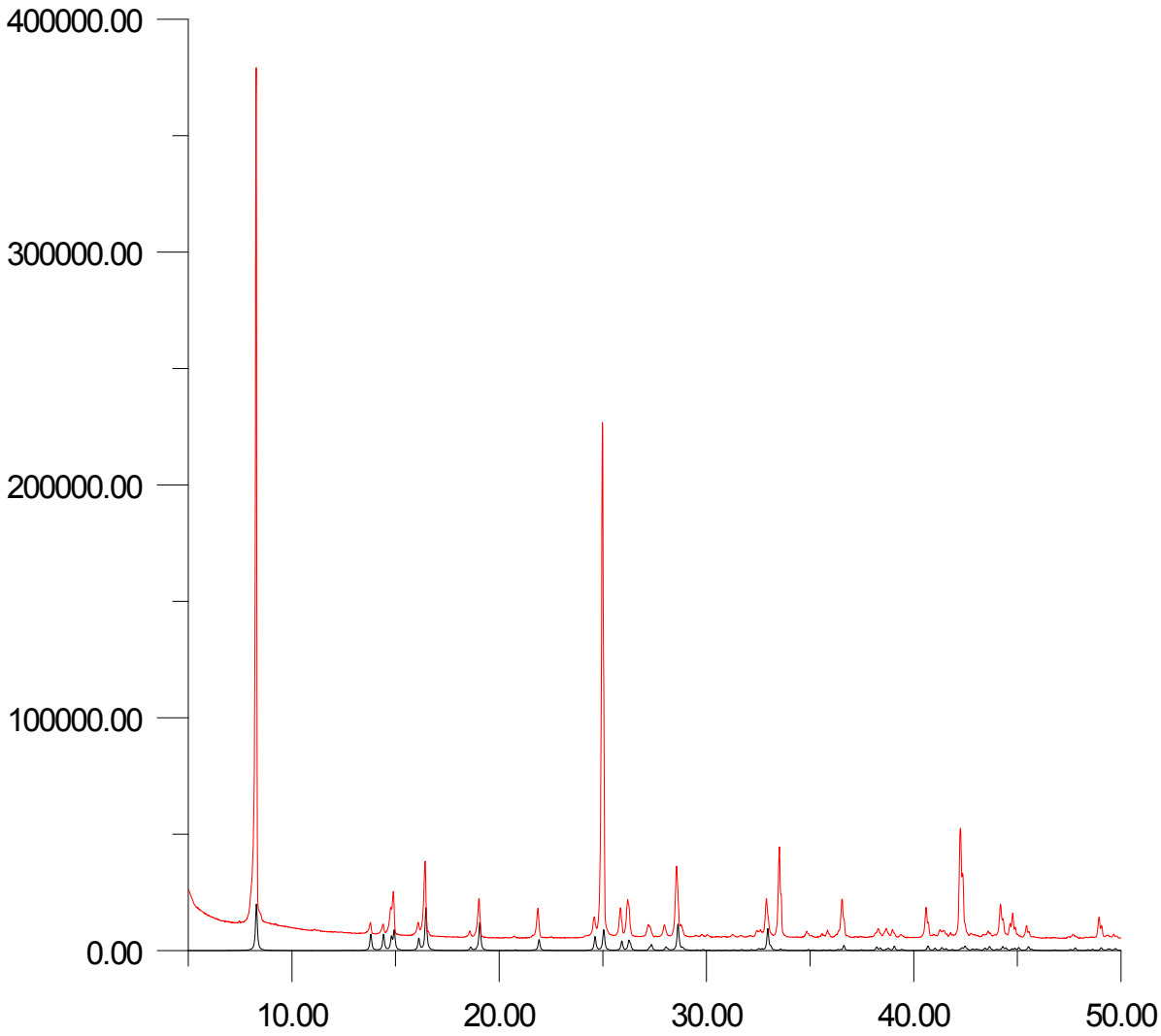


Figure S7. The powder XRD pattern of compound **7** (experimental - red) and the simulation of the powder pattern of **7** from the crystal structure (black).

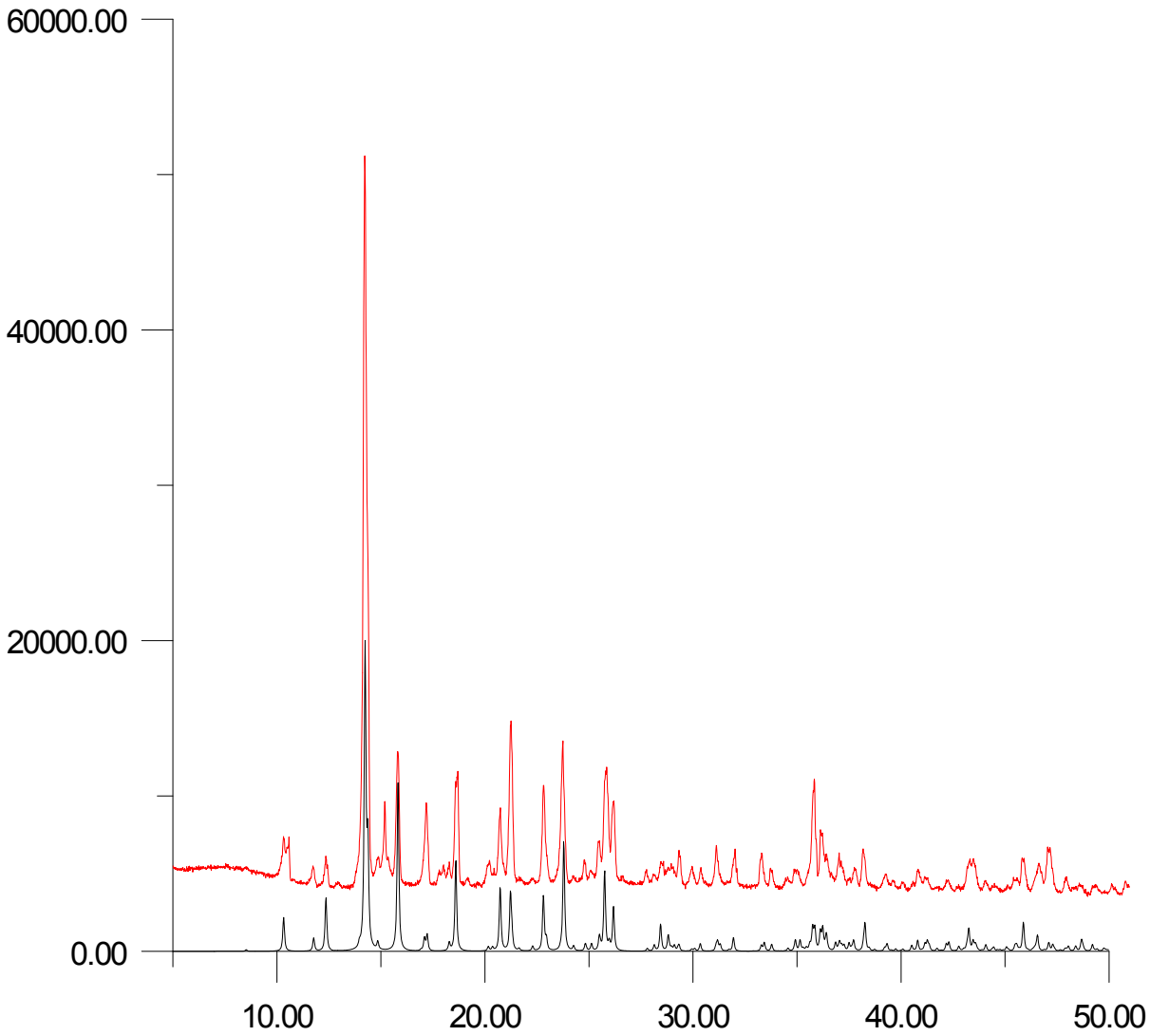


Figure S8. The powder XRD pattern of compound **8** (experimental - red) and the simulation of the powder pattern of **8** from the crystal structure (black).

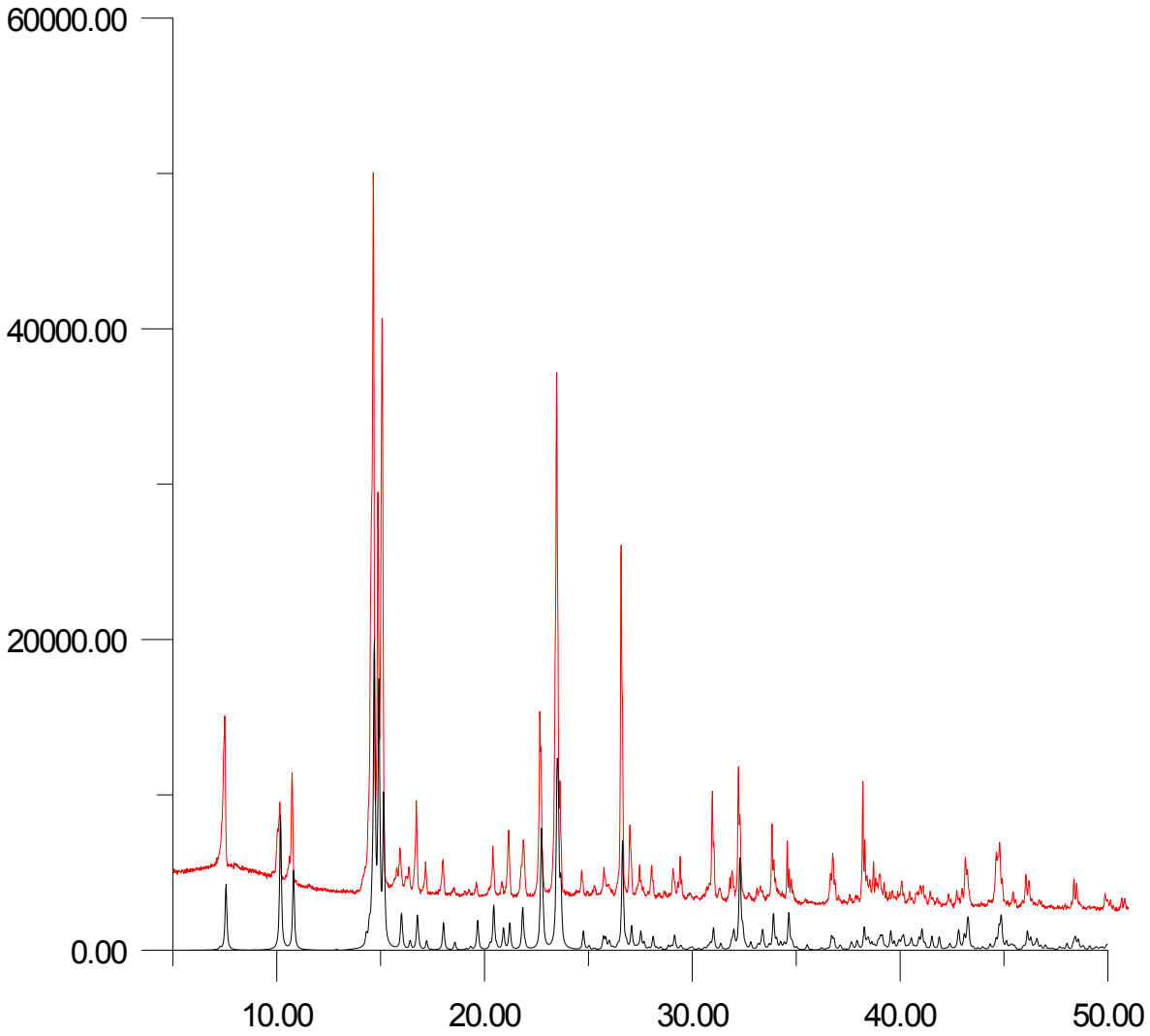
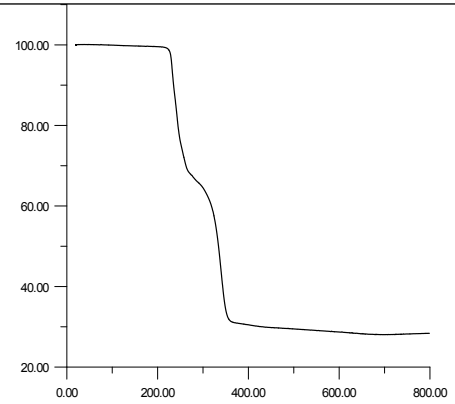
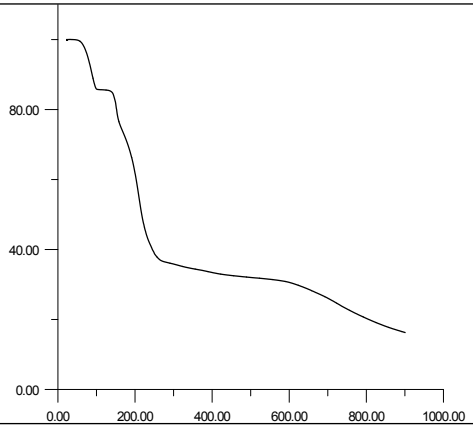


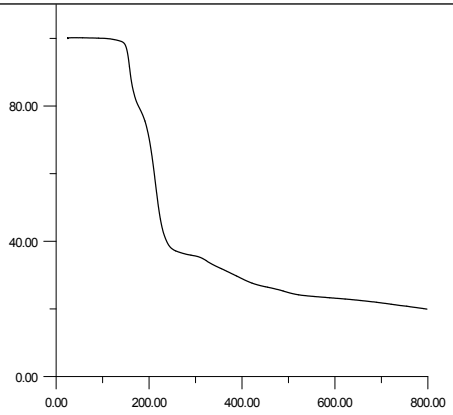
Figure S9. The powder XRD pattern of compound **9** (experimental - red) and the simulation of the powder pattern of **9** from the crystal structure (black).



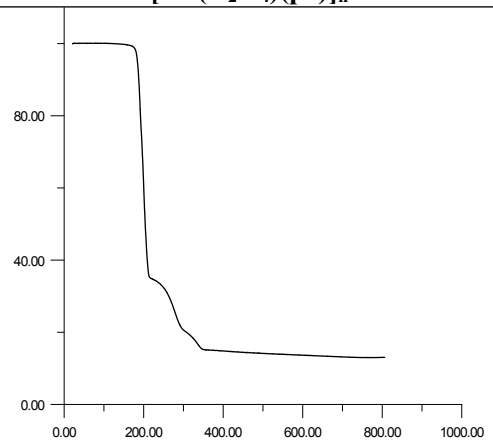
$[Cu(C_2O_4)(pz)]_n$



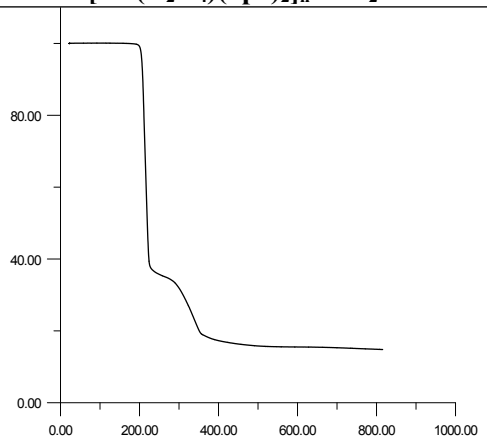
$[Cu(C_2O_4)(apz)_2]_n{\cdot}3nH_2O$



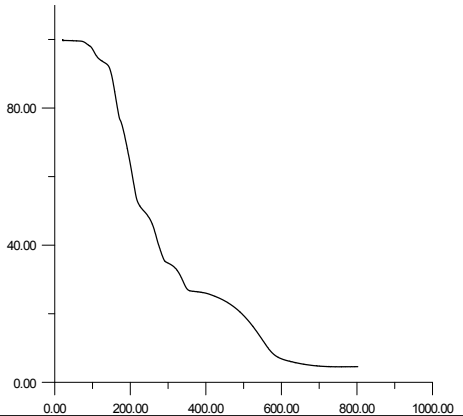
$[Cu_2(\mu\text{-}C_2O_4)_2(H_2O)_2(ampz)_4]$



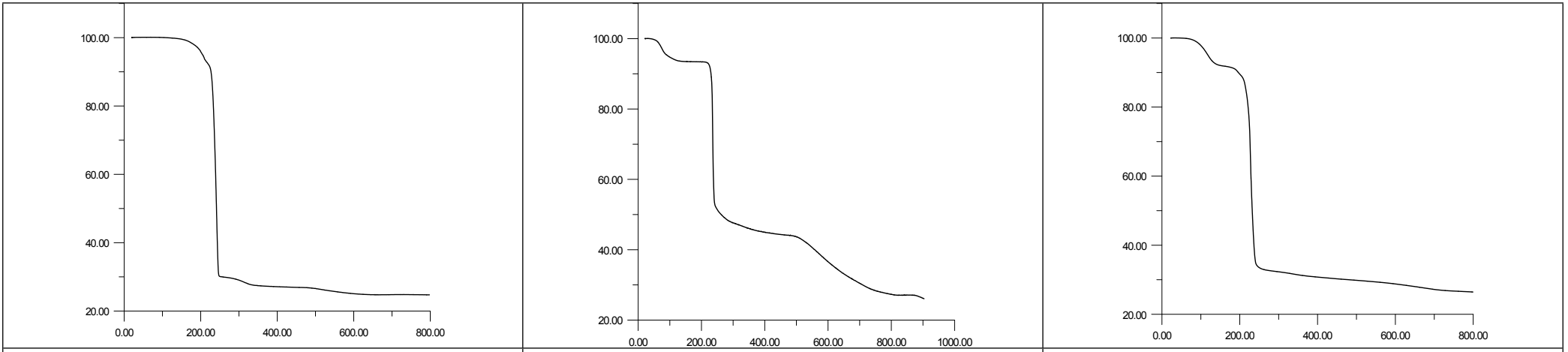
$[Cu(C_2O_4)(mpz)_2]_n$



$[Cu(C_2O_4)(aind)_2]_n$



$[Cu_2(C_2O_4)_2(bpzm)_2]_n{\cdot}(3.5H_2O)_n$



$[Cu(C_2O_4)(ampy)(H_2O)]_n$	$\{[Cu_2(\mu C_2O_4)(aepy)_2][Cu(C_2O_4)_2(H_2O)_2]\}_n \cdot 2nH_2O$	$[Cu_4(\mu\text{-}C_2O_4)_3(aepy)_4(H_2O)_2]Cl_2$

Figure S10. TG curves for complexes **1**−**9**.

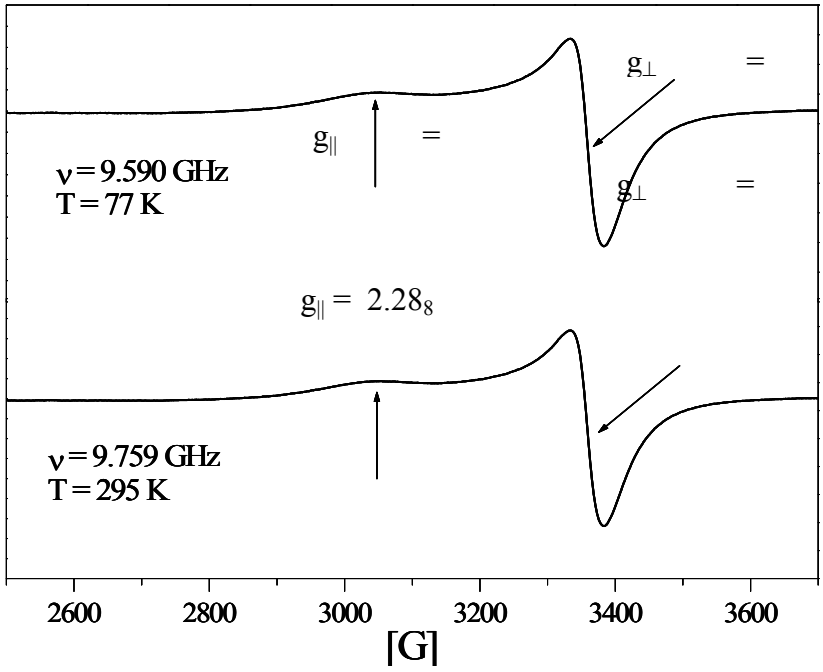


Figure S11. The powder EPR spectra of compound **2**.

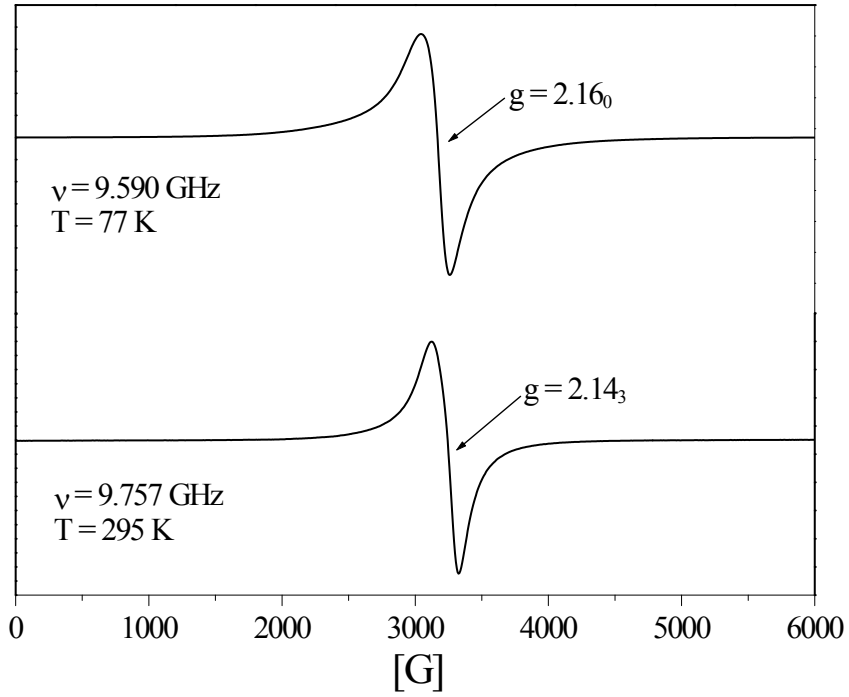


Figure S12. The powder EPR spectra of compound **4**.

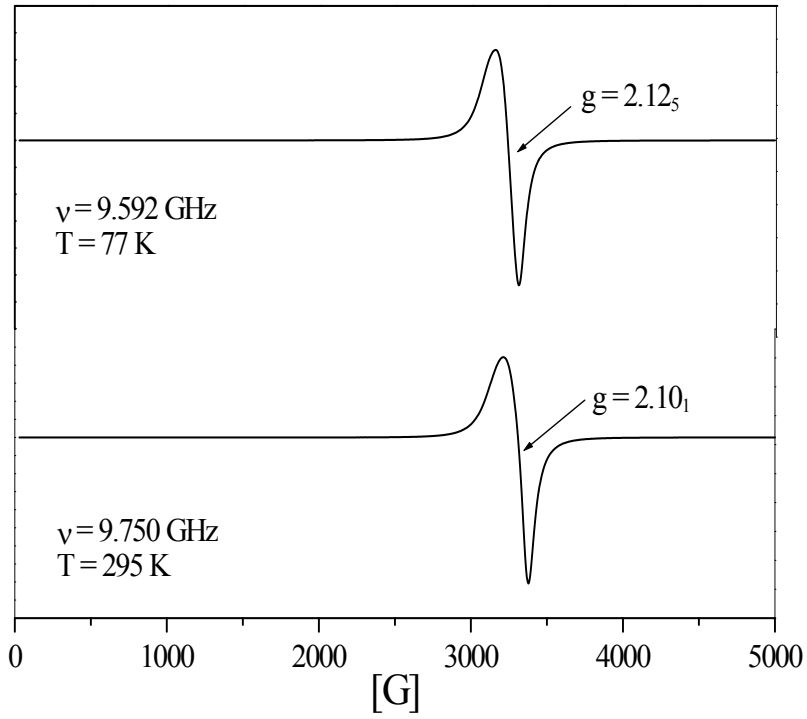


Figure S13. The powder EPR spectra of compound **7**.

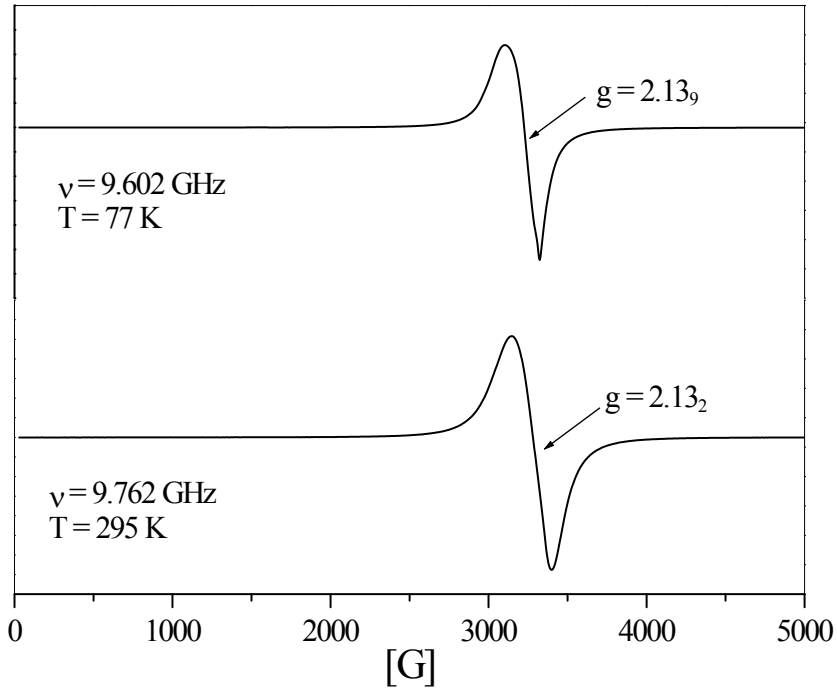


Figure S14. The powder EPR spectra of compound **8**.