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New copper complexes with *N*-(5,6-dihydro-4*H*-1,3-thiazin-2-yl)benzamide ligand

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Table S1. Crystal data and structure refinement for complex **1**.

Identification code	(**1**)	
Empirical formula	C22 H22 Cu N4 O2 S2	
Formula weight	502.09	
Temperature	295(2) K	
Wavelength	1.54186 Å	
Crystal system	Monoclinic	
Space group	P 21/n	
Unit cell dimensions	a = 6.8403(4) Å	α= 90°.
	b = 13.5674(6) Å	β= 97.162(4)°.
	c = 11.5670(6) Å	γ = 90°.
Volume	1065.10(10) Å ^{3}	
Z	2	
Density (calculated)	1.566 Mg/m^3	
Absorption coefficient	3.512 mm^{-1}	
F(000)	518	
Crystal size	.21 x .16 x .12 mm^3	
Theta range for data collection	5.048 to 70.374°.	
Index ranges	-8<=h<=4, -16<=k<=16, -11<=l<=14	
Reflections collected	7812	
Independent reflections	1963 [R(int) = 0.0410]	
Completeness to theta = 67.686°	97.0 %	
Refinement method	Full-matrix least-squares on F^2	
Data / restraints / parameters	1963 / 0 / 143	
Goodness-of-fit on F^2	0.977	
Final R indices [I>2sigma(I)]	R1 = 0.0322, wR2 = 0.0840	
R indices (all data)	R1 = 0.0428, wR2 = 0.0873	
Extinction coefficient	0.0050(5)	
Largest diff. peak and hole	0.333 and -0.400 e. Å $^{-3}$	

Table S2. Bond lengths [Å] and angles [°] for complex **1**

Cu(1)-O(1)#1	1.9081(15)
Cu(1)-O(1)	1.9081(15)
Cu(1)-N(1)	1.9847(18)
Cu(1)-N(1)#1	1.9848(18)
S(1)-C(5)	1.765(2)
S(1)-C(4)	1.799(2)
O(1)-C(6)	1.277(2)
N(1)-C(5)	1.303(3)
N(1)-C(2)	1.483(3)
N(2)-C(6)	1.308(3)
N(2)-C(5)	1.361(3)
C(2)-C(3)	1.491(3)
C(2)-H(2A)	0.9700
C(2)-H(2B)	0.9700
C(3)-C(4)	1.515(3)
C(3)-H(3A)	0.9700
C(3)-H(3B)	0.9700
C(4)-H(4A)	0.9700
C(4)-H(4B)	0.9700
C(6)-C(7)	1.491(3)
C(7)-C(12)	1.391(3)
C(7)-C(8)	1.392(3)
C(8)-C(9)	1.374(3)
C(8)-H(8)	0.9300
C(9)-C(10)	1.373(4)
C(9)-H(9)	0.9300
C(10)-C(11)	1.374(4)
C(10)-H(10)	0.9300
C(11)-C(12)	1.382(3)
C(11)-H(11)	0.9300
C(12)-H(12)	0.9300
O(1)#1-Cu(1)-O(1)	180.0
O(1)#1-Cu(1)-N(1)	90.20(7)
O(1)-Cu(1)-N(1)	89.80(7)
O(1)#1-Cu(1)-N(1)#1	89.80(7)
O(1)-Cu(1)-N(1)#1	90.20(7)
N(1)-Cu(1)-N(1)#1	180.0
C(5)-S(1)-C(4)	104.08(11)
C(6)-O(1)-Cu(1)	126.81(14)
C(5)-N(1)-C(2)	120.01(19)
C(5)-N(1)-Cu(1)	121.74(16)
C(2)-N(1)-Cu(1)	117.50(13)
C(6)-N(2)-C(5)	122.37(18)
N(1)-C(2)-C(3)	116.1(2)
N(1)-C(2)-H(2A)	108.3
C(3)-C(2)-H(2A)	108.3
N(1)-C(2)-H(2B)	108.3
C(3)-C(2)-H(2B)	108.3
H(2A)-C(2)-H(2B)	107.4

C(2)-C(3)-C(4)	111.6(2)
C(2)-C(3)-H(3A)	109.3
C(4)-C(3)-H(3A)	109.3
C(2)-C(3)-H(3B)	109.3
C(4)-C(3)-H(3B)	109.3
H(3A)-C(3)-H(3B)	108.0
C(3)-C(4)-S(1)	110.18(17)
C(3)-C(4)-H(4A)	109.6
S(1)-C(4)-H(4A)	109.6
C(3)-C(4)-H(4B)	109.6
S(1)-C(4)-H(4B)	109.6
H(4A)-C(4)-H(4B)	108.1
N(1)-C(5)-N(2)	128.0(2)
N(1)-C(5)-S(1)	126.67(17)
N(2)-C(5)-S(1)	105.32(14)
O(1)-C(6)-N(2)	127.8(2)
O(1)-C(6)-C(7)	115.69(19)
N(2)-C(6)-C(7)	116.56(18)
C(12)-C(7)-C(8)	118.3(2)
C(12)-C(7)-C(6)	120.81(19)
C(8)-C(7)-C(6)	120.9(2)
C(9)-C(8)-C(7)	120.6(2)
C(9)-C(8)-H(8)	119.7
C(7)-C(8)-H(8)	119.7
C(10)-C(9)-C(8)	120.7(2)
C(10)-C(9)-H(9)	119.6
C(8)-C(9)-H(9)	119.6
C(9)-C(10)-C(11)	119.5(2)
C(9)-C(10)-H(10)	120.3
C(11)-C(10)-H(10)	120.3
C(10)-C(11)-C(12)	120.5(2)
C(10)-C(11)-H(11)	119.8
C(12)-C(11)-H(11)	119.8
C(11)-C(12)-C(7)	120.4(2)
C(11)-C(12)-H(12)	119.8
C(7)-C(12)-H(12)	119.8

Symmetry transformations used to generate equivalent atoms:

#1 -x+2,-y+1,-z+1

Table S3. Torsion angles [°] for complex **1**.

C(5)-N(1)-C(2)-C(3)	28.9(3)
Cu(1)-N(1)-C(2)-C(3)	-160.75(19)
N(1)-C(2)-C(3)-C(4)	-63.5(3)
C(2)-C(3)-C(4)-S(1)	59.9(3)
C(5)-S(1)-C(4)-C(3)	-27.8(2)
C(2)-N(1)-C(5)-N(2)	-174.7(2)
Cu(1)-N(1)-C(5)-N(2)	15.4(3)
C(2)-N(1)-C(5)-S(1)	3.4(3)
Cu(1)-N(1)-C(5)-S(1)	-166.52(12)
C(6)-N(2)-C(5)-N(1)	-0.2(4)
C(6)-N(2)-C(5)-S(1)	-178.66(18)
C(4)-S(1)-C(5)-N(1)	-2.8(2)
C(4)-S(1)-C(5)-N(2)	175.60(16)
Cu(1)-O(1)-C(6)-N(2)	-8.2(3)
Cu(1)-O(1)-C(6)-C(7)	172.17(14)
C(5)-N(2)-C(6)-O(1)	-4.4(4)
C(5)-N(2)-C(6)-C(7)	175.23(19)
O(1)-C(6)-C(7)-C(12)	0.8(3)
N(2)-C(6)-C(7)-C(12)	-178.9(2)
O(1)-C(6)-C(7)-C(8)	-179.1(2)
N(2)-C(6)-C(7)-C(8)	1.2(3)
C(12)-C(7)-C(8)-C(9)	-0.9(4)
C(6)-C(7)-C(8)-C(9)	179.0(2)
C(7)-C(8)-C(9)-C(10)	0.9(4)
C(8)-C(9)-C(10)-C(11)	0.1(4)
C(9)-C(10)-C(11)-C(12)	-1.1(4)
C(10)-C(11)-C(12)-C(7)	1.1(4)
C(8)-C(7)-C(12)-C(11)	-0.1(4)
C(6)-C(7)-C(12)-C(11)	180.0(2)

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

Table S4 Crystal data and structure refinement for complex **2**.

Identification code	(**2**)	
Empirical formula	$C_{22}H_{24}Cl_3Cu_2N_4O_2S_2$	
Formula weight	674.00	
Temperature	295(2) K	
Wavelength	1.54186 Å	
Crystal system	Triclinic	
Space group	P -1	
Unit cell dimensions	a = 8.6885(7) Å	α= 81.014(7)°.
	b = 12.8230(9) Å	β= 87.864(6)°.
	c = 12.8264(9) Å	γ = 70.607(7)°.
Volume	1331.24(18) $Å^3$	
Z	2	
Density (calculated)	1.681 Mg/m^3	
Absorption coefficient	6.444 mm^{-1}	
F(000)	682	
Theta range for data collection	3.489 to 66.370°.	
Index ranges	-10<=h<=10, -15<=k<=15, -5<=l<=14	
Reflections collected	9012	
Independent reflections	4392 [R(int) = 0.0498]	
Completeness to theta = 66.370°	93.8 %	
Refinement method	Full-matrix least-squares on F^2	
Data / restraints / parameters	4392 / 0 / 325	
Goodness-of-fit on F^2	0.906	
Final R indices [I>2sigma(I)]	R1 = 0.0466, wR2 = 0.1044	
R indices (all data)	R1 = 0.0820, wR2 = 0.1134	
Extinction coefficient	0.00084(16)	
Largest diff. peak and hole	0.461 and -0.728 e $Å^{-3}$	

Table S5. Bond lengths [Å] and angles [°] for complex **2**.

Cu(1)-N(1B)	1.956(3)
Cu(1)-N(1A)	1.958(3)
Cu(1)-O(1A)	2.055(3)
Cu(1)-O(1B)	2.062(3)
Cu(1)-Cl(1)	2.2958(11)
Cu(2)-Cl(2)	2.0893(17)
Cu(2)-Cl(3)	2.0911(17)
S(1A)-C(5A)	1.742(4)
S(1A)-C(4A)	1.811(5)
O(1A)-C(6A)	1.235(5)
N(1A)-C(5A)	1.283(5)
N(1A)-C(2A)	1.476(5)
N(2A)-C(6A)	1.357(5)
N(2A)-C(5A)	1.398(5)
N(2A)-H(2A)	0.75(4)
C(2A)-C(3A)	1.501(6)
C(2A)-H(2A1)	0.9700
C(2A)-H(2A2)	0.9700
C(3A)-C(4A)	1.494(6)
C(3A)-H(3A1)	0.9700
C(3A)-H(3A2)	0.9700
C(4A)-H(4A1)	0.9700
C(4A)-H(4A2)	0.9700
C(6A)-C(7A)	1.477(6)
C(7A)-C(12A)	1.389(6)
C(7A)-C(8A)	1.394(6)
C(8A)-C(9A)	1.385(6)
C(8A)-H(8A)	0.9300
C(9A)-C(10A)	1.366(7)
C(9A)-H(9A)	0.9300
C(10A)-C(11A)	1.371(7)
C(10A)-H(10A)	0.9300
C(11A)-C(12A)	1.372(6)
C(11A)-H(11A)	0.9300
C(12A)-H(12A)	0.9300
S(1B)-C(5B)	1.751(4)
S(1B)-C(4B)	1.811(5)
O(1B)-C(6B)	1.234(5)
N(1B)-C(5B)	1.267(5)
N(1B)-C(2B)	1.480(5)
N(2B)-C(6B)	1.374(5)
N(2B)-C(5B)	1.404(5)
N(2B)-H(2B)	0.84(5)
C(2B)-C(3B)	1.503(5)
C(2B)-H(2B1)	0.9700
C(2B)-H(2B2)	0.9700
C(3B)-C(4B)	1.493(7)
C(3B)-H(3B1)	0.9700
C(3B)-H(3B2)	0.9700
C(4B)-H(4B1)	0.9700

C(4B)-H(4B2)	0.9700
C(6B)-C(7B)	1.471(6)
C(7B)-C(12B)	1.383(6)
C(7B)-C(8B)	1.384(6)
C(8B)-C(9B)	1.375(6)
C(8B)-H(8B)	0.9300
C(9B)-C(10B)	1.377(7)
C(9B)-H(9B)	0.9300
C(10B)-C(11B)	1.369(7)
C(10B)-H(10B)	0.9300
C(11B)-C(12B)	1.391(6)
C(11B)-H(11B)	0.9300
C(12B)-H(12B)	0.9300

N(1B)-Cu(1)-N(1A)	176.78(13)
N(1B)-Cu(1)-O(1A)	91.43(12)
N(1A)-Cu(1)-O(1A)	87.07(12)
N(1B)-Cu(1)-O(1B)	86.94(13)
N(1A)-Cu(1)-O(1B)	90.67(13)
O(1A)-Cu(1)-O(1B)	104.59(12)
N(1B)-Cu(1)-Cl(1)	92.38(10)
N(1A)-Cu(1)-Cl(1)	90.82(10)
O(1A)-Cu(1)-Cl(1)	122.59(9)
O(1B)-Cu(1)-Cl(1)	132.81(9)
Cl(2)-Cu(2)-Cl(3)	177.05(7)
C(5A)-S(1A)-C(4A)	102.1(2)
C(6A)-O(1A)-Cu(1)	125.1(3)
C(5A)-N(1A)-C(2A)	120.6(3)
C(5A)-N(1A)-Cu(1)	126.5(3)
C(2A)-N(1A)-Cu(1)	112.6(3)
C(6A)-N(2A)-C(5A)	127.5(4)
C(6A)-N(2A)-H(2A)	117(3)
C(5A)-N(2A)-H(2A)	115(3)
N(1A)-C(2A)-C(3A)	113.4(4)
N(1A)-C(2A)-H(2A1)	108.9
C(3A)-C(2A)-H(2A1)	108.9
N(1A)-C(2A)-H(2A2)	108.9
C(3A)-C(2A)-H(2A2)	108.9
H(2A1)-C(2A)-H(2A2)	107.7
C(4A)-C(3A)-C(2A)	111.3(4)
C(4A)-C(3A)-H(3A1)	109.4
C(2A)-C(3A)-H(3A1)	109.4
C(4A)-C(3A)-H(3A2)	109.4
C(2A)-C(3A)-H(3A2)	109.4
H(3A1)-C(3A)-H(3A2)	108.0
C(3A)-C(4A)-S(1A)	113.6(3)
C(3A)-C(4A)-H(4A1)	108.8
S(1A)-C(4A)-H(4A1)	108.8
C(3A)-C(4A)-H(4A2)	108.8
S(1A)-C(4A)-H(4A2)	108.8
H(4A1)-C(4A)-H(4A2)	107.7
N(1A)-C(5A)-N(2A)	121.7(4)

N(1A)-C(5A)-S(1A)	128.3(3)
N(2A)-C(5A)-S(1A)	110.0(3)
O(1A)-C(6A)-N(2A)	122.7(4)
O(1A)-C(6A)-C(7A)	119.0(4)
N(2A)-C(6A)-C(7A)	118.3(4)
C(12A)-C(7A)-C(8A)	119.4(4)
C(12A)-C(7A)-C(6A)	117.7(4)
C(8A)-C(7A)-C(6A)	122.9(4)
C(9A)-C(8A)-C(7A)	119.5(5)
C(9A)-C(8A)-H(8A)	120.3
C(7A)-C(8A)-H(8A)	120.3
C(10A)-C(9A)-C(8A)	120.2(5)
C(10A)-C(9A)-H(9A)	119.9
C(8A)-C(9A)-H(9A)	119.9
C(9A)-C(10A)-C(11A)	120.7(5)
C(9A)-C(10A)-H(10A)	119.6
C(11A)-C(10A)-H(10A)	119.6
C(10A)-C(11A)-C(12A)	120.1(5)
C(10A)-C(11A)-H(11A)	120.0
C(12A)-C(11A)-H(11A)	120.0
C(11A)-C(12A)-C(7A)	120.2(5)
C(11A)-C(12A)-H(12A)	119.9
C(7A)-C(12A)-H(12A)	119.9
C(5B)-S(1B)-C(4B)	102.6(2)
C(6B)-O(1B)-Cu(1)	124.4(3)
C(5B)-N(1B)-C(2B)	118.8(3)
C(5B)-N(1B)-Cu(1)	126.6(3)
C(2B)-N(1B)-Cu(1)	114.4(3)
C(6B)-N(2B)-C(5B)	126.4(4)
C(6B)-N(2B)-H(2B)	118(3)
C(5B)-N(2B)-H(2B)	116(3)
N(1B)-C(2B)-C(3B)	112.2(3)
N(1B)-C(2B)-H(2B1)	109.2
C(3B)-C(2B)-H(2B1)	109.2
N(1B)-C(2B)-H(2B2)	109.2
C(3B)-C(2B)-H(2B2)	109.2
H(2B1)-C(2B)-H(2B2)	107.9
C(4B)-C(3B)-C(2B)	111.8(4)
C(4B)-C(3B)-H(3B1)	109.3
C(2B)-C(3B)-H(3B1)	109.3
C(4B)-C(3B)-H(3B2)	109.3
C(2B)-C(3B)-H(3B2)	109.3
H(3B1)-C(3B)-H(3B2)	107.9
C(3B)-C(4B)-S(1B)	113.2(3)
C(3B)-C(4B)-H(4B1)	108.9
S(1B)-C(4B)-H(4B1)	108.9
C(3B)-C(4B)-H(4B2)	108.9
S(1B)-C(4B)-H(4B2)	108.9
H(4B1)-C(4B)-H(4B2)	107.8
N(1B)-C(5B)-N(2B)	122.4(4)
N(1B)-C(5B)-S(1B)	128.3(3)
N(2B)-C(5B)-S(1B)	109.3(3)

O(1B)-C(6B)-N(2B)	122.2(4)
O(1B)-C(6B)-C(7B)	121.2(4)
N(2B)-C(6B)-C(7B)	116.6(4)
C(12B)-C(7B)-C(8B)	119.6(4)
C(12B)-C(7B)-C(6B)	117.3(4)
C(8B)-C(7B)-C(6B)	123.1(4)
C(9B)-C(8B)-C(7B)	120.0(4)
C(9B)-C(8B)-H(8B)	120.0
C(7B)-C(8B)-H(8B)	120.0
C(8B)-C(9B)-C(10B)	120.7(5)
C(8B)-C(9B)-H(9B)	119.6
C(10B)-C(9B)-H(9B)	119.6
C(11B)-C(10B)-C(9B)	119.5(5)
C(11B)-C(10B)-H(10B)	120.3
C(9B)-C(10B)-H(10B)	120.3
C(10B)-C(11B)-C(12B)	120.6(5)
C(10B)-C(11B)-H(11B)	119.7
C(12B)-C(11B)-H(11B)	119.7
C(7B)-C(12B)-C(11B)	119.5(5)
C(7B)-C(12B)-H(12B)	120.2
C(11B)-C(12B)-H(12B)	120.2

Symmetry transformations used to generate equivalent atoms:

Table S6. Torsion angles [°] for complex **2**.

C(5A)-N(1A)-C(2A)-C(3A)	37.5(5)
Cu(1)-N(1A)-C(2A)-C(3A)	-136.3(3)
N(1A)-C(2A)-C(3A)-C(4A)	-65.1(5)
C(2A)-C(3A)-C(4A)-S(1A)	55.2(5)
C(5A)-S(1A)-C(4A)-C(3A)	-21.3(4)
C(2A)-N(1A)-C(5A)-N(2A)	176.2(4)
Cu(1)-N(1A)-C(5A)-N(2A)	-11.0(5)
C(2A)-N(1A)-C(5A)-S(1A)	-2.3(6)
Cu(1)-N(1A)-C(5A)-S(1A)	170.5(2)
C(6A)-N(2A)-C(5A)-N(1A)	-16.8(6)
C(6A)-N(2A)-C(5A)-S(1A)	161.9(3)
C(4A)-S(1A)-C(5A)-N(1A)	-5.4(4)
C(4A)-S(1A)-C(5A)-N(2A)	175.9(3)
Cu(1)-O(1A)-C(6A)-N(2A)	15.5(6)
Cu(1)-O(1A)-C(6A)-C(7A)	-165.4(2)
C(5A)-N(2A)-C(6A)-O(1A)	13.7(6)
C(5A)-N(2A)-C(6A)-C(7A)	-165.5(4)
O(1A)-C(6A)-C(7A)-C(12A)	27.0(6)
N(2A)-C(6A)-C(7A)-C(12A)	-153.8(4)
O(1A)-C(6A)-C(7A)-C(8A)	-150.5(4)
N(2A)-C(6A)-C(7A)-C(8A)	28.7(6)
C(12A)-C(7A)-C(8A)-C(9A)	1.8(6)
C(6A)-C(7A)-C(8A)-C(9A)	179.2(4)
C(7A)-C(8A)-C(9A)-C(10A)	-1.9(7)
C(8A)-C(9A)-C(10A)-C(11A)	1.4(8)

C(9A)-C(10A)-C(11A)-C(12A)	-0.9(8)
C(10A)-C(11A)-C(12A)-C(7A)	0.9(7)
C(8A)-C(7A)-C(12A)-C(11A)	-1.3(6)
C(6A)-C(7A)-C(12A)-C(11A)	-178.9(4)
C(5B)-N(1B)-C(2B)-C(3B)	42.5(5)
Cu(1)-N(1B)-C(2B)-C(3B)	-133.1(3)
N(1B)-C(2B)-C(3B)-C(4B)	-69.2(5)
C(2B)-C(3B)-C(4B)-S(1B)	50.6(5)
C(5B)-S(1B)-C(4B)-C(3B)	-12.3(4)
C(2B)-N(1B)-C(5B)-N(2B)	178.1(3)
Cu(1)-N(1B)-C(5B)-N(2B)	-6.9(5)
C(2B)-N(1B)-C(5B)-S(1B)	-0.7(5)
Cu(1)-N(1B)-C(5B)-S(1B)	174.29(19)
C(6B)-N(2B)-C(5B)-N(1B)	-20.9(6)
C(6B)-N(2B)-C(5B)-S(1B)	158.1(3)
C(4B)-S(1B)-C(5B)-N(1B)	-13.8(4)
C(4B)-S(1B)-C(5B)-N(2B)	167.3(3)
Cu(1)-O(1B)-C(6B)-N(2B)	19.7(5)
Cu(1)-O(1B)-C(6B)-C(7B)	-158.2(3)
C(5B)-N(2B)-C(6B)-O(1B)	13.0(6)
C(5B)-N(2B)-C(6B)-C(7B)	-169.0(4)
O(1B)-C(6B)-C(7B)-C(12B)	25.7(5)
N(2B)-C(6B)-C(7B)-C(12B)	-152.4(4)
O(1B)-C(6B)-C(7B)-C(8B)	-156.8(4)
N(2B)-C(6B)-C(7B)-C(8B)	25.2(5)
C(12B)-C(7B)-C(8B)-C(9B)	2.3(6)
C(6B)-C(7B)-C(8B)-C(9B)	-175.1(4)
C(7B)-C(8B)-C(9B)-C(10B)	0.0(6)
C(8B)-C(9B)-C(10B)-C(11B)	-1.7(7)
C(9B)-C(10B)-C(11B)-C(12B)	1.1(7)
C(8B)-C(7B)-C(12B)-C(11B)	-3.0(6)
C(6B)-C(7B)-C(12B)-C(11B)	174.6(4)
C(10B)-C(11B)-C(12B)-C(7B)	1.3(7)

Symmetry transformations used to generate equivalent atoms:

Table S7. Hydrogen bonds for complex **2** [Å and °].

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
C(2A)-H(2A1)...Cl(2)#1	0.97	2.87	3.663(5)	140.0
C(2A)-H(2A2)...S(1B)#2	0.97	3.03	3.943(4)	158.2
N(2A)-H(2A)...Cl(1)#3	0.75(4)	2.70(4)	3.434(4)	167(4)
N(2B)-H(2B)...Cl(1)#2	0.84(5)	2.54(5)	3.356(4)	165(4)

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

Experimental

LETDI (Laser-Induced Electron Transfer Desorption/Ionization)-method

The scheme of the mass spectrometric setup was described in detail in a previous publication [S1]. The time-of-flight mass spectrometer was assembled as a linear circuit with a free path of 0.65 m and accelerating gap of 14 mm. A laser system based on a diode-pumped Nd:YAG-laser (RL-02.355, manufactured by ELS-94, Russia) operating at a repetition frequency of 300 Hz, with pulse duration of 0.37 ns and the maximum energy per pulse of 30 μJ, was used as the radiation source. Silicon substrates for ion emitters were used; the substrates were pretreated with a 5% solution of HF, washed with distilled water, and placed into the ion source.

MTT-assay. The method is based on the ability of dehydrogenases present in living cells to convert 3-(4,5-dimethythiazol-2-yl)-2,5-diphenyl-2*H*-tetrazolium bromide (MTT) to insoluble formazan crystals. After extraction into isopropyl alcohol, the produced formazan was determined by spectrometry using a Microplate Reader 550 (Bio´Rad) at λ = 550 nm. The method was described in detail previously [S2,S3]. Normal lymphocytes (mononuclear cells) and *Jurkat* cells were used. At least five experiments were carried out for each cell line. The results were treated according to the Mann—Whitney U-test ($p < 0.05$).

References

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[S3] M. A. Orlova, E. Yu. Osipova, S. A. Roumiantsev, *Br. J. Med. Med. Res*., 2012, **2,** 21.

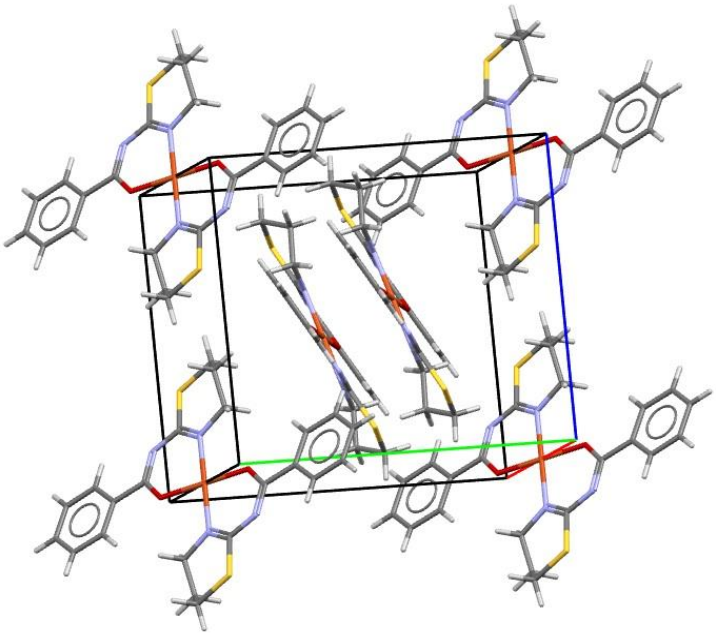

Figure S1 Complex **1** unit.

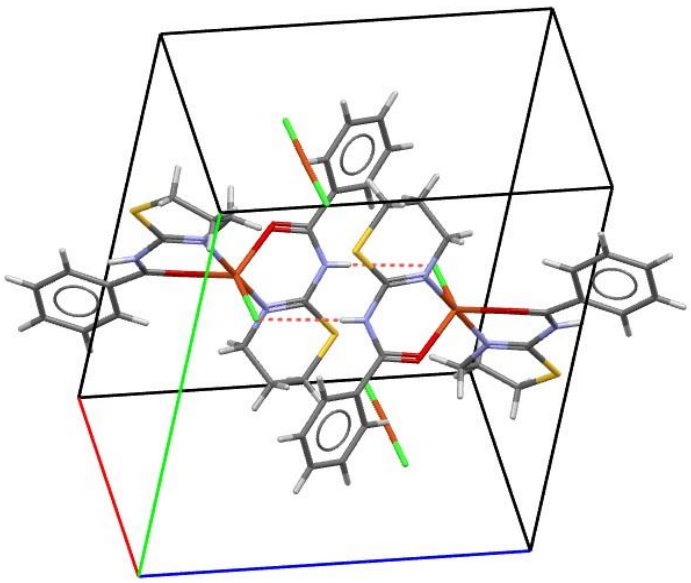

Figure S2 Complex **2** unit.