

Table S1. Selected bond lengths [Å] and angles [°] for [CuL1](ClO₄)₂

A complex		B complex	
Cu(1)-N(4)	1.988(12)	Cu(2)-N(11)	1.976(12)
Cu(1)-N(3)	2.030(12)	Cu(2)-N(10)	2.054(11)
Cu(1)-N(5)	2.032(11)	Cu(2)-N(8)	2.053(12)
Cu(1)-N(1)	2.113(11)	Cu(2)-N(12)	2.069(12)
Cu(1)-N(7)	2.344(12)	Cu(2)-N(9)	2.409(13)
Cu(1)-N(2)	2.465(13)	Cu(2)-N(14)	2.459(11)
A complex		B complex	
N(4)-Cu(1)-N(3)	84.7(5)	N(11)-Cu(2)-N(10)	84.7(5)
N(4)-Cu(1)-N(5)	83.5(5)	N(11)-Cu(2)-N(8)	172.9(6)
N(3)-Cu(1)-N(5)	168.2(5)	N(10)-Cu(2)-N(8)	90.9(5)
N(4)-Cu(1)-N(1)	161.9(5)	N(11)-Cu(2)-N(12)	82.2(6)
N(3)-Cu(1)-N(1)	93.9(5)	N(10)-Cu(2)-N(12)	166.3(6)
N(5)-Cu(1)-N(1)	96.8(4)	N(8)-Cu(2)-N(12)	101.8(5)
N(4)-Cu(1)-N(7)	123.8(5)	N(11)-Cu(2)-N(9)	96.9(6)
N(3)-Cu(1)-N(7)	94.8(5)	N(10)-Cu(2)-N(9)	79.6(5)
N(5)-Cu(1)-N(7)	92.9(4)	N(12)-Cu(2)-N(9)	98.0(6)
N(1)-Cu(1)-N(7)	74.3(5)	N(11)-Cu(2)-N(14)	112.8(5)
N(4)-Cu(1)-N(2)	87.5(5)	N(10)-Cu(2)-N(14)	95.5(5)
N(3)-Cu(1)-N(2)	76.7(6)	N(8)-Cu(2)-N(14)	73.1(5)
N(5)-Cu(1)-N(2)	101.4(5)	N(12)-Cu(2)-N(14)	93.2(5)
N(1)-Cu(1)-N(2)	74.7(5)	N(9)-Cu(2)-N(14)	149.4(5)
N(7)-Cu(1)-N(2)	147.1(5)	N(8)-Cu(2)-N(9)	76.8(6)

Table S2. Selected bond lengths [Å] and angles [°] for [NiL1](ClO₄)₂

Ni(1)-N(1)	2.034(6)
Ni(1)-N(4)	2.026(6)
Ni(1)-N(5)	2.101(6)
Ni(1)-N(3)	2.097(6)
Ni(1)-N(2)	2.219(6)
Ni(1)-N(7)	2.308(6)
N(1)-Ni(1)-N(4)	170.4(3)
N(1)-Ni(1)-N(5)	100.4(2)
N(4)-Ni(1)-N(5)	81.8(3)
N(1)-Ni(1)-N(3)	95.3(3)
N(4)-Ni(1)-N(3)	82.2(3)
N(5)-Ni(1)-N(3)	164.0(2)
N(1)-Ni(1)-N(2)	77.3(3)
N(4)-Ni(1)-N(2)	93.0(3)
N(5)-Ni(1)-N(2)	99.2(3)
N(3)-Ni(1)-N(2)	81.0(3)
N(1)-Ni(1)-N(7)	75.5(2)
N(4)-Ni(1)-N(7)	113.9(3)
N(5)-Ni(1)-N(7)	93.0(2)
N(3)-Ni(1)-N(7)	94.0(2)
N(2)-Ni(1)-N(7)	151.8(2)

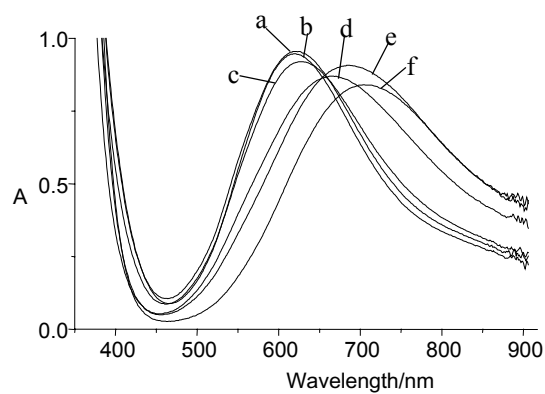


Figure S1. Absorption spectra of the **L2** in the presence of Cu(II) (1:1 molar ratio) in aqueous solution at pH 9.5 (a), 8.2 (b), 7.25 (c), 6.0 (d), 5.2 (e), 4.0 (f). $[\mathbf{L2}] = \text{Cu(II)} = 6.4 \times 10^{-3}$