Electronic Supplementary Information

Manuscript ID NJ-ART-03-2016-000932

Efficient preparation of multimetallic ONO-based Schiff base complexes of nickel(II) and copper(II)

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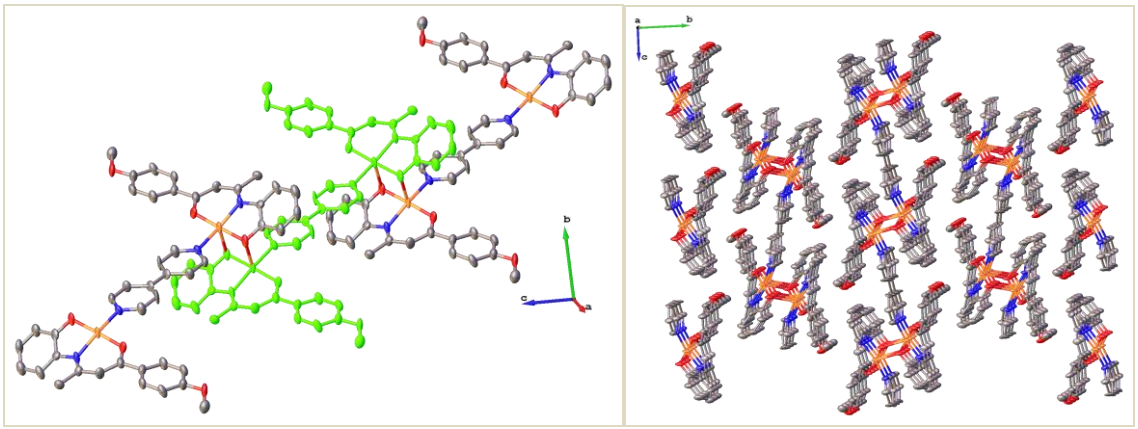

Fig. S1 Growing packing perspective of complex **3** (top), forming a coordination polymer in the crystal lattice (complex unit in green). Packing view of **3** (bottom) showing a perspective through the "a" axis. Hydrogen atoms are omitted for clarity. Thermal ellipsoids are drawn at 70% probability.

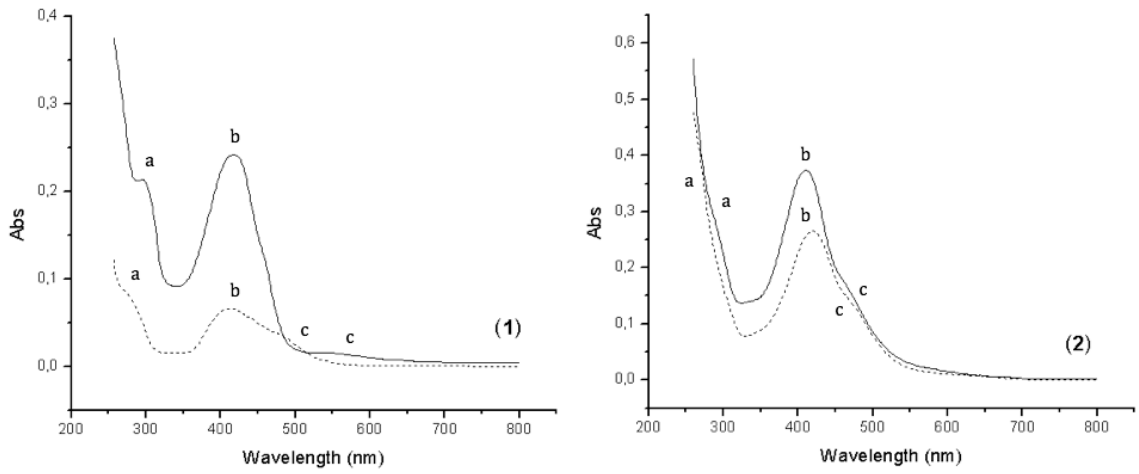

Fig. S2 Experimental electronic spectra registered at 298 K in CH_2Cl_2 (full line) and DMSO (dashed line) of (**1**) (left) and (**2**) (right).

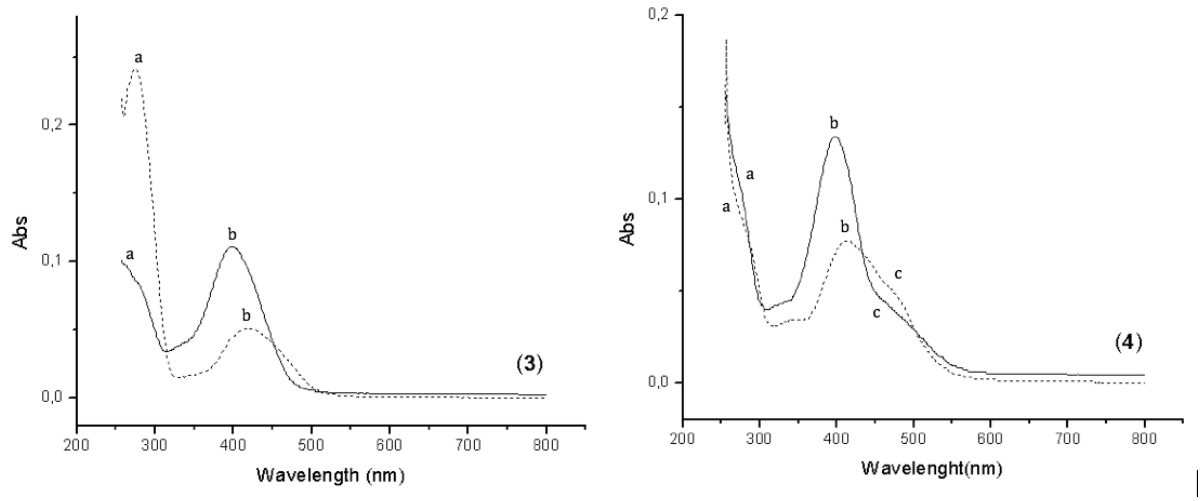

Fig. S3 Experimental electronic spectra registered at 298 K in CH_2Cl_2 (full line) and DMSO (dashed line) of (**3**) (left) and (**4**) (right).

Table S1. Selected bond distances (Å) and angles (°) for compounds **1** and **3**

	1	**3**
Bond distances		
O(1)-C(1)	1.340(5)	1.342(8)
C(1)-C(2)	1.395(6)	1.416(9)
N(1)-C(2)	1.432(5)	1.428(8)
N(1)-C(7)	1.337(5)	1.328(8)
C(7)-C(9)	1.406(5)	1.404(8)
C(9)-C(10)	1.369(4)	1.401(9)
C(10)-O(2)	1.312(5)	1.307(8)
N(2)-C(18)	1.311(5)	1.369(7)
N(2)-C(22)	1.328(5)	1.342(8)
C(20)-C(20')	1.482(8)[#1]	1.500(12)[#2]
Bond angles		
M(1)-O(1)-C(1)	113.8(3)	110.4(4)
M(1)-N(1)-C(2)	110.7(3)	110.8(4)
M(1)-N(1)-C(7)	123.2(3)	123.1(4)
M(1)-O(2)-C(10)	125.4(3)	123.0(4)
N(1)-C(7)-C(9)	122.3(4)	120.6(6)
C(7)-C(9)-C(10)	127.7(4)	128.0(7)
C(9)-C(10)-O(2)	123.6(4)	124.1(6)

M = Ni, **1**; Cu, **3**. *Symmetry transformations used to generate equivalent atoms*: #1 -x+1,-y+2,-z; #2 -x+2,-y,-z+1

Table S2. Selected bond distances (Å) and angles (°) for compound **2**

Bond distances			
O(1)-C(1)	1.330(4)	O(3)-C(31)	1.337(5)
C(1)-C(2)	1.404(5)	C(31)-C(32)	1.409(6)
N(1)-C(2)	1.432(4)	N(3)-C(32)	1.413(5)
N(1)-C(7)	1.331(5)	N(3)-C(37)	1.337(5)
C(7)-C(9)	1.401(5)	C(37)-C(39)	1.414(5)
C(9)-C(10)	1.378(5)	C(39)-C(40)	1.373(5)
C(10)-O(2)	1.307(4)	C(40)-O(4)	1.304(4)
N(2)-C(21)	1.335(4)	N(4)-C(51)	1.359(4)
N(2)-C(25)	1.351(5)	N(4)-C(55)	1.342(5)
C(23)-C(53)	1.488(5)		
Fe(1)-C(Cp)	2.034(4)	Fe(2)-C(Cp)	2.043(4)
Fe(1)-C(Cp')	2.037(4)	Fe(2)-C(Cp')	2.041(4)
Bond angles			
Ni(1)-O(1)-C(1)	112.2(2)	Ni(2)-O(31)-C(32)	112.0(3)
Ni(1)-N(1)-C(2)	110.1(2)	Ni(2)-N(3)-C(32)	110.5(3)
Ni(1)-N(1)-C(7)	110.1(2)	Ni(2)-N(3)-C(37)	124.6(3)
Ni(1)-O(2)-C(10)	124.6(2)	Ni(2)-O(4)-C(40)	125.1(2)
N(1)-C(7)-C(9)	121.9(4)	N(3)-C(37)-C(39)	121.2(4)
C(7)-C(9)-C(10)	125.8(4)	C(37)-C(39)-C(40)	125.3(4)
C(9)-C(10)-O(2)	124.2(4)	C(39)-C(40)-O(4)	124.4(3)

Abbreviations : Cp = C_5H_5, Cp' = C_5H_4

TableS3. Selected bond distances (Å) and angles (°) for compound **5**

5A		**5B**	
Bond distances			
O(1)-C(1)	1.349(3)	O(3)-C(21)	1.341(3)
C(1)-C(2)	1.416(3)	C(21)-C(22)	1.409(3)
N(1)-C(2)	1.420(3)	N(2)-C(22)	1.423(3)
N(1)-C(7)	1.325(3)	N(2)-C(27)	1.327(3)
C(7)-C(9)	1.409(3)	C(27)-C(29)	1.419(3)
C(9)-C(10)	1.384(3)	C(29)-C(30)	1.390(3)
C(10)-O(2)	1.296(3)	C(30)-O(4)	1.295(3)
Cu(1)-Cu(1)$^{\#1}$	3.0369(6)	Cu(2)-Cu(2)$^{\#2}$	3.0096(6)
Fe(1)-C(Cp)	2.050(3)	Fe(2)-C(Cp)	2.042(3)
Fe(1)-C(Cp')	2.047(3)	Fe(2)-C(Cp')	2.038(2)
Bond angles			
Cu(1)-O(1)-Cu(1)$^{\#1}$	103.20(7)	Cu(2)-O(3)-Cu(2)$^{\#2}$	102.43(7)
O(1)-Cu(1)-O(1)$^{\#1}$	76.90(7)	O(3)-Cu(2)-O(3)$^{\#2}$	77.57(7)
Cu(1)-O(1)-C(1)	112.57(14)	Cu(2)-O(3)-C(21)	113.19(14)
Cu(1)-N(1)-C(2)	110.82(14)	Cu(2)-N(2)-C(22)	111.26(14)
Cu(1)-N(1)-C(7)	121.10(16)	Cu(2)-N(2)-C(27)	120.53(15)
Cu(1)-O(2)-C(10)	121.70(14)	Cu(2)-O(4)-C(30)	122.14(14)
N(1)-C(7)-C(9)	122.1(2)	N(2)-C(27)-C(29)	121.8(2)
C(7)-C(9)-C(10)	128.4(2)	C(27)-C(29)-C(30)	127.3(2)
C(9)-C(10)-O(2)	125.7(2)	C(29)-C(30)-O(4)	125.6(2)

Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y+1,-z+1 #2 -x+2,-y,-z+2. Abbreviations : Cp = C_5H_5, Cp' = C_5H_4

Table S4. Metrical parameters of the ferrocenyl units in compounds **2** and **5**

Compd	Fe-Cp_{CNT} (Å)	Fe-Cp'_{CNT} (Å)	Cp_{CNT}-Fe-Cp'_{CNT}(°)	Cp/Cp' (°)
2	1.652, 1.639	1.643, 1.639	178.72, 178.62	1.0(3), 1.7(2)
5A	1.658	1.652	179.41	4.4(2)
5B	1.640	1.648	179.53	3.5(2)

Abbreviations: Cp = C_5H_5, Cp' = C_5H_4, CNT = centroid.