Supporting Information

6-nitrobenzimidazole ligand modified two new polymolybdate-based metal-organic complexes with excellent capacitive and electrocatalytic performances

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Synthesis of $(NH_4)_6[TeMo_6O_{24}]\cdot 7H_2O$

$(NH_4)_6[TeMo_6O_{24}]\cdot 7H_2O$ was synthesized by dissolving 2.73 g $Na_2TeO_4\cdot 2H_2O$ and 10.5 g $(NH_4)Mo_7O_{24}\cdot 4H_2O$ in 150 mL deionized water, heated and evaporated to 100ml under stirring conditions. After cooling and standing for 5 days, a colorless solid $(NH_4)_6[TeMo_6O_{24}]\cdot 7H_2O$ was obtained[1].

Preparations of 1−2−modified carbon paste electrodes（1−/2−CPE）

The nano-graphite powder (0.1 g) and the complex **1** or **2** (0.015 g) were accurately weighed and mixed thoroughly with grinding in a mortar for 45 min, and an appropriate amount of paraffin oil was added dropwise to the ground powder and stirred to a paste-like mixture. The above substances were transferred to a glass tube with an inner diameter of 3 mm, compacted with a copper rod, and the electrode surface was polished to smooth with a weighing paper.

Table S1 The bond lengths and bond angles of complex **1**

Complex **1**			
Cu1-O1#2	2.382(3)	Cu1-O1W	2.080(3)

Cu1-N2	1.981(3)	Cu1-O2	2.379(2)
Cu1-O3	1.936(2)	Cu1-N1	1.988(3)
O3-Cu1-O1W	90.31(10)	O2-Cu1-O1#2	158.71(9)
O3-Cu1-O2	83.48(9)	N1-Cu1-O1W	176.47(12)
O3-Cu1-O1#2	87.65(10)	N1-Cu1-O2	104.11(11)
O3-Cu1-N1	87.81(11)	N1-Cu1-O1#2	94.80(12)
O3-Cu1-N2	173.87(11)	N2-Cu1-O1W	90.94(12)
O1W-Cu1-O2	78.62(10)	N2-Cu1-O2	90.89(11)
O1W-Cu1-O1#2	82.13(10)	N2-Cu1-O1#2	98.47(11)
		N2-Cu1-N1	91.24(13)

Symmetry code for **1**:#1 1-x,-y,2-z

Table S2 The bond lengths and bond angles of complex **2**

Complex **2**			
Cu1-O1W	1.994(4)	Cu1-O2W	2.372(5)
Cu1-O1	1.974(4)	Cu1-N2	2.006(5)
Cu1-N1	2.004(5)	O1-Cu1-N2	87.68(18)
O1-Cu1-O1W	179.4(2)	O1-Cu1-O2W	86.81(18)
N1-Cu1-N2	172.83(19)	N1-Cu1-O2W	91.7(2)
N2-Cu1-O2W	92.0(2)	O1W-Cu1-N1	94.1(2)
O1W-Cu1-N2	91.8(2)	O1W-Cu1-O2W	93.0(2)
O1-Cu1-N1	86.38(18)		

Symmetry code for **2**: #1 1-x,1-y,1-z

Fig. S1. The IR spectra of complexes **1**–**2**.

Fig. S2 The PXRD patterns of complexes **1**–**2**.

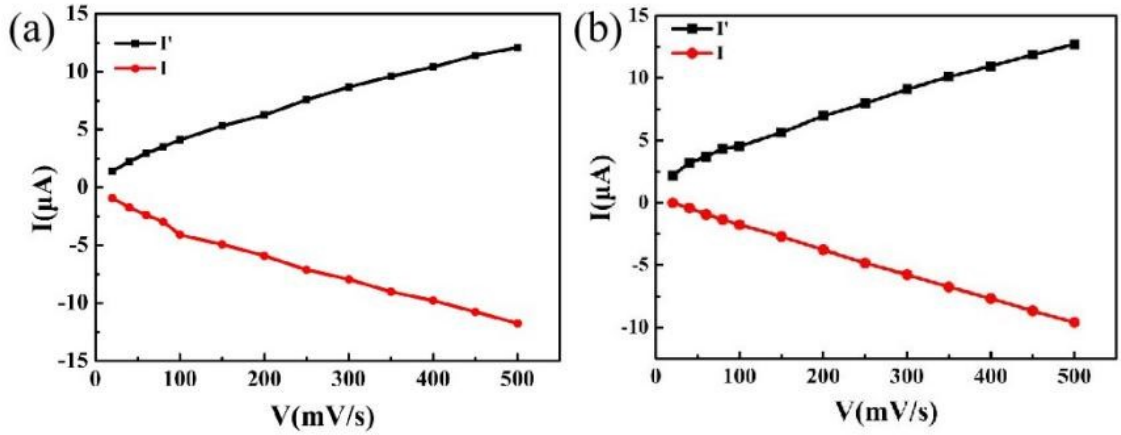

Fig. S3 The plots of peak currents vs. scan rates of complexes **1**–**2**.

1. C. I. Cabello, Botto, I. L., Cabrerizo, F., González, M. G., & Thomas, H. J., *Adsorption Science & Technology,* 2000, **18(7)**, 591-608.