

Electric Supplemental Information for:

A new polyoxovanadate-based metal-organic framework: synthesis, structure and photo-/electro-catalytic properties†

Shaobin Li,^{*a} Li Zhang,^b Borong Lu,^a Eryun Yan,^a Tonghui Wang,^c Li Li,^{*a} Jianxin Wang,^a Yan Yu^a and Qingdi Mu^a

^aKey Laboratory of Polymeric Composite Materials of Heilongjiang Province, College of Materials Science and Engineering, Qiqihar University, Qiqihar 161006, China; E-mail: qqhrslb1022@126.com, qqhrll@163.com.

^bCollege of Chemical and Environmental Engineering, Harbin University of Science and Technology, Harbin 150040, China.

^cDepartment of Materials Science and Engineering, North Carolina State University, USA.

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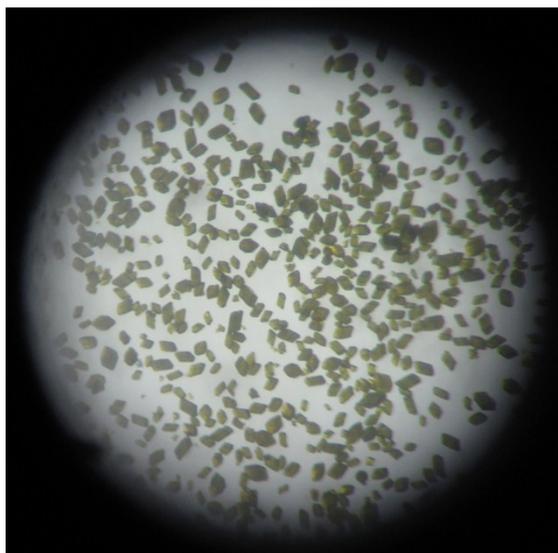


Fig. S1 The image of compound **1** under an optical microscope.

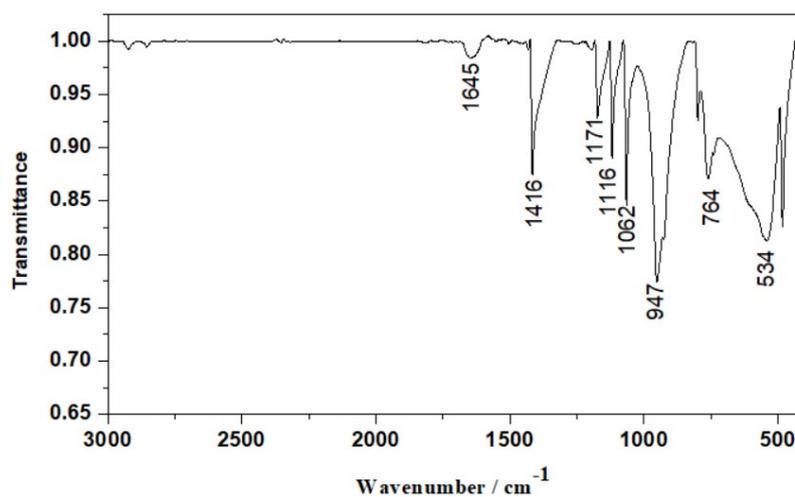


Fig. S2 The IR spectrum of compound **1**.

Table S1 The selected bond lengths (Å) and angles (°) for compound **1**.

Cu(1)-O(3)	2.04(3)	Cu(1)-O(3)#1	2.04(3)
Cu(1)-O(3)#2	2.04(3)	Cu(1)-O(3)#3	2.04(3)
Cu(1)-N(1)	2.05(7)	Cu(1)-N(2)#4	2.07(7)
N(1)-C(1)	1.34(8)	N(1)-C(1)#2	1.34(8)
N(2)-C(2)	1.31(8)	N(2)-C(2)#2	1.31(8)
V(1)-O(3)	1.64(3)	V(1)-O(2)	1.814(18)
V(1)-O(1)	1.89(3)	V(1)-O(1)#5	1.90(3)
V(1)-O(1)#6	2.01(3)	C(2)-C(1)	1.37(10)

O(3)#1-Cu(1)-O(3)#2	91.1(17)	O(3)#1-Cu(1)-O(3)	88.9(17)
O(3)#2-Cu(1)-O(3)	100.6(6)	O(3)#1-Cu(1)-N(1)	90.1(9)
O(3)#1-Cu(1)-N(2)#4	89.9(9)	O(3)-V(1)-O(2)	103.8(17)
O(3)-V(1)-O(1)	109.3(15)	O(2)-V(1)-O(1)	95.2(16)
V(1)-O(3)-Cu(1)	141.2(18)	V(1)-O(2)-V(1)#2	136(3)
N(2)-C(2)-C(1)	124(7)	N(1)-C(1)-C(2)	121(7)

Symmetry transformations used to generate equivalent atoms: #1 $-x,y,z$; #2 $x,y,-z+3/2$; #3 $-x,y,-z+3/2$; #4 $x,y+1,z$; #5 $-x+1/2,y-1/2,z$; #6 $-x+1/2,-y+1/2,-z+1$.

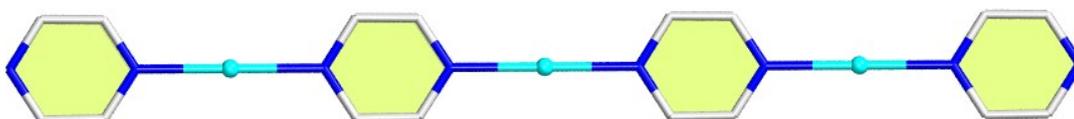


Fig. S3 The 1D Cu-Pz chain in compound **1**.

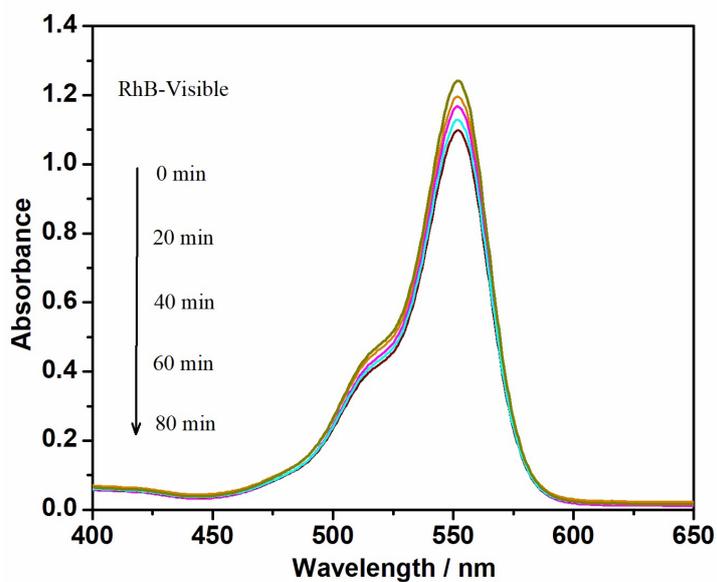


Fig. S4 The Absorption spectra of the RhB solution during the photodegradation under 250 W Xe lamp irradiation without catalyst.

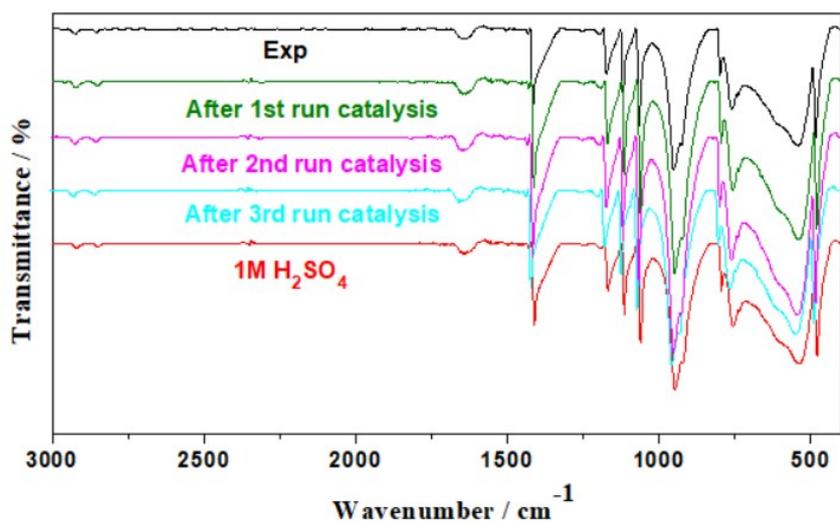


Fig. S5 The IR curves of **1** immersed in 1M H₂SO₄ at room temperature for 48 h and three runs of photocatalytic reaction. **Exp** represents the pattern of as-synthesized samples.

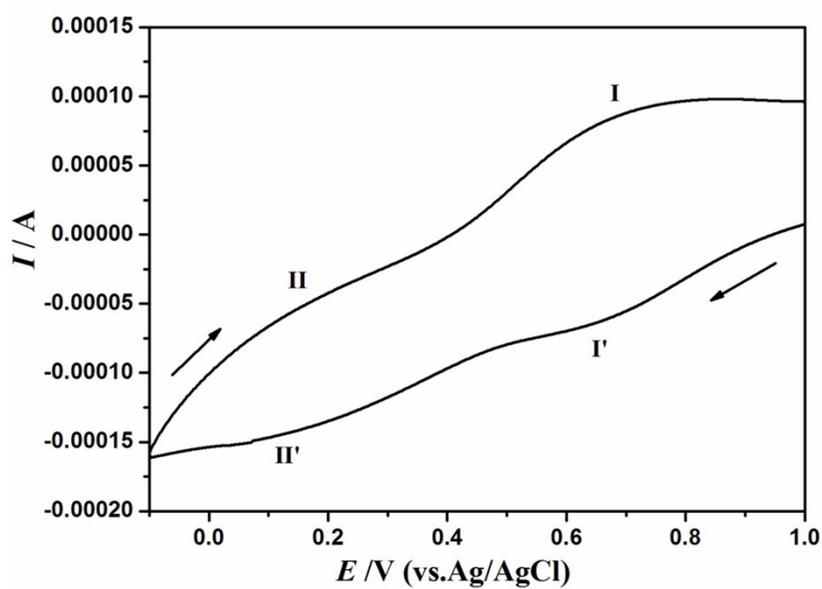


Fig. S6 Cyclic voltammogram for **1**-CPE in 1 M H₂SO₄ solution at scan rates 100 mV·s⁻¹.

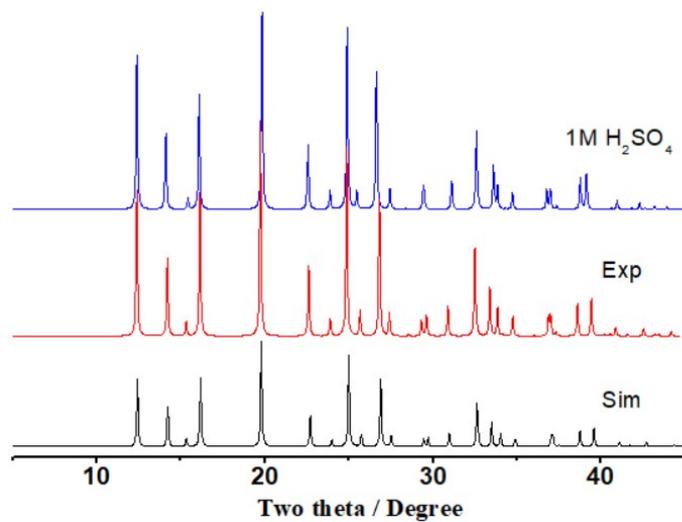


Fig. S7 The PXR D patterns of **1** immersed in 1 M H₂SO₄ solution at room temperature for 48 h. **Sim** represents the simulated pattern and **Exp** represents the pattern of as-synthesized sample, respectively.