

## Supporting information

### **Cu<sub>2</sub>O/CuO@rGO Heterostructure Derived from Metal-Organic-Frameworks as an Advanced Electrocatalyst for a Non-enzymatic Electrochemical H<sub>2</sub>O<sub>2</sub> Sensor**

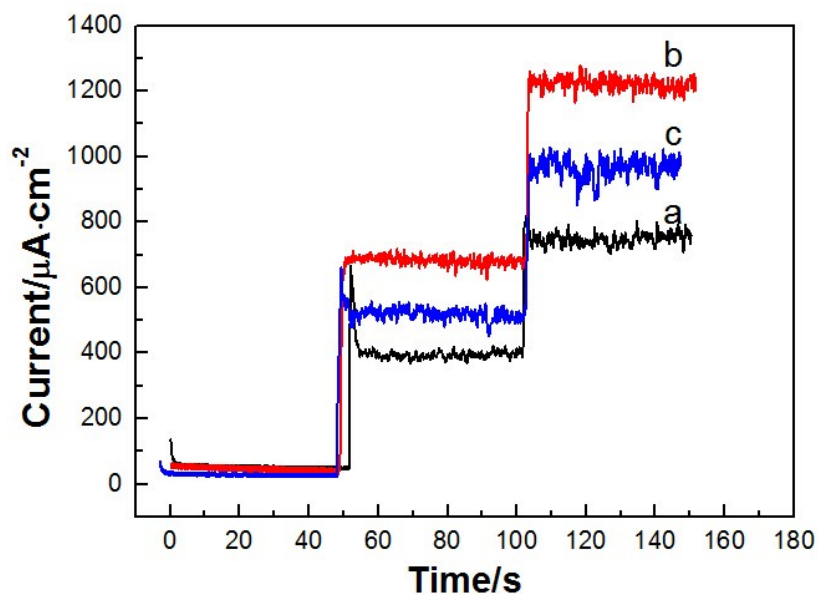
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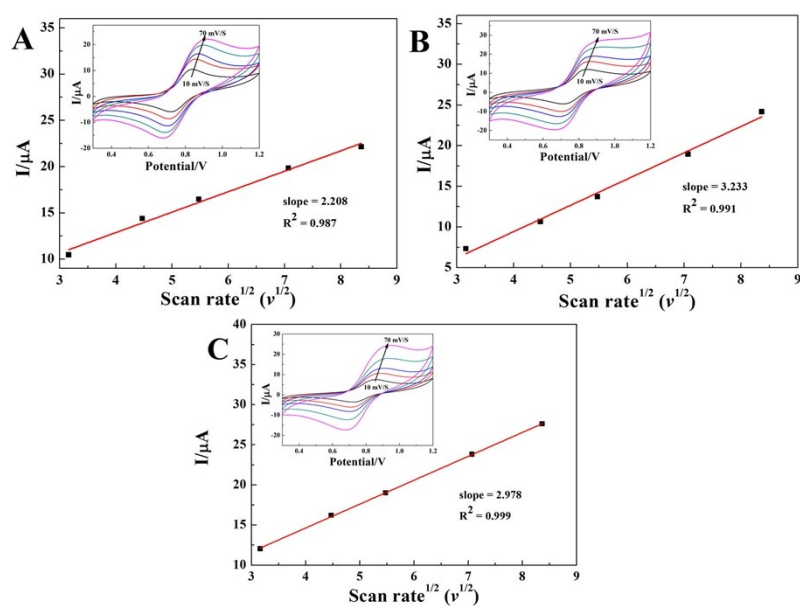
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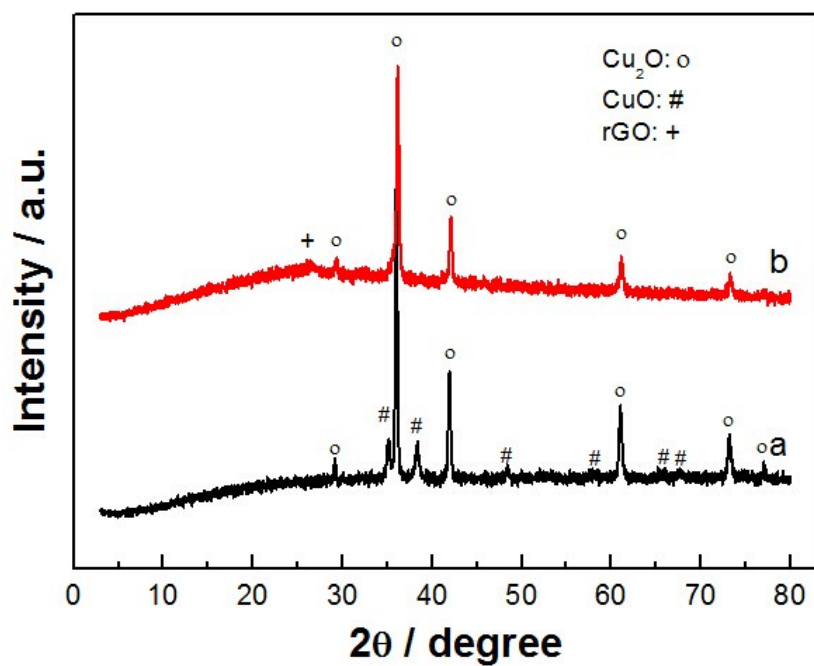
[xucl@lzu.edu.cn](mailto:xucl@lzu.edu.cn), [xucl921chem@163.com](mailto:xucl921chem@163.com)



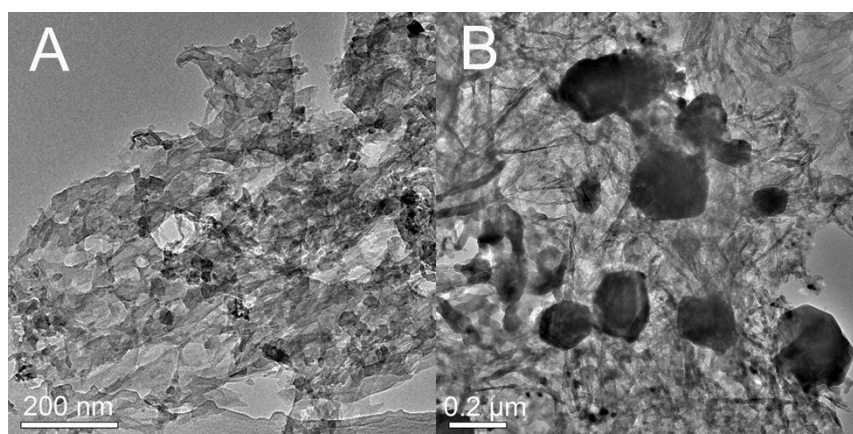
**Fig. S1.** Amperometric responses of the GCE modified by Cu-MOFs/GO-400 (a), Cu-MOFs/GO-600 (b) and Cu-MOFs/GO-800 (c) to 1 mM H<sub>2</sub>O<sub>2</sub> at 0.5 V



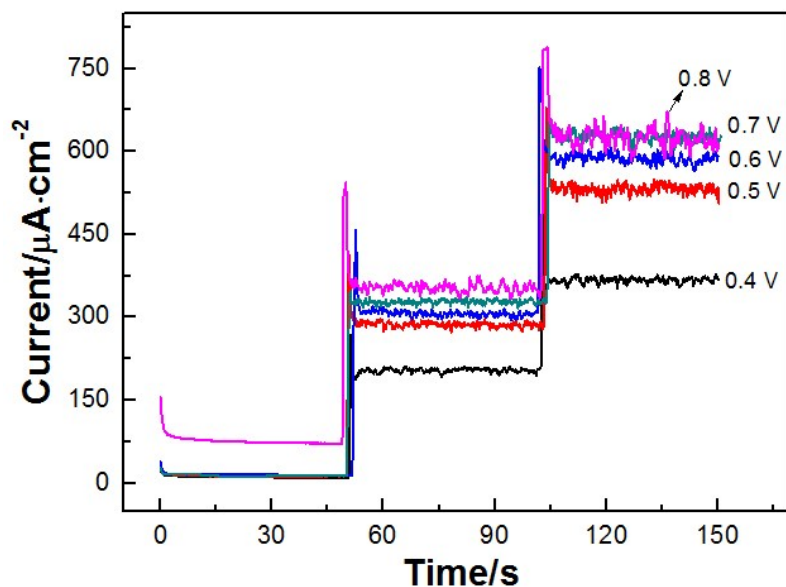
**Fig. S2.** Peak currents vs. the square root of the scan rate ( $\text{v}^{1/2}$ ) for (A) Cu-MOFs/GO-400, (B) Cu-MOFs/GO-600 and (C) Cu-MOFs/GO-800 samples. Insets: cyclic voltammograms (CVs) of the modified electrodes with Cu-MOFs/GO-400, Cu-MOFs/GO-600 and Cu-MOFs/GO-800, respectively, in 5 mM ferricyanide solution containing 0.1 M KCl at different scan rates.



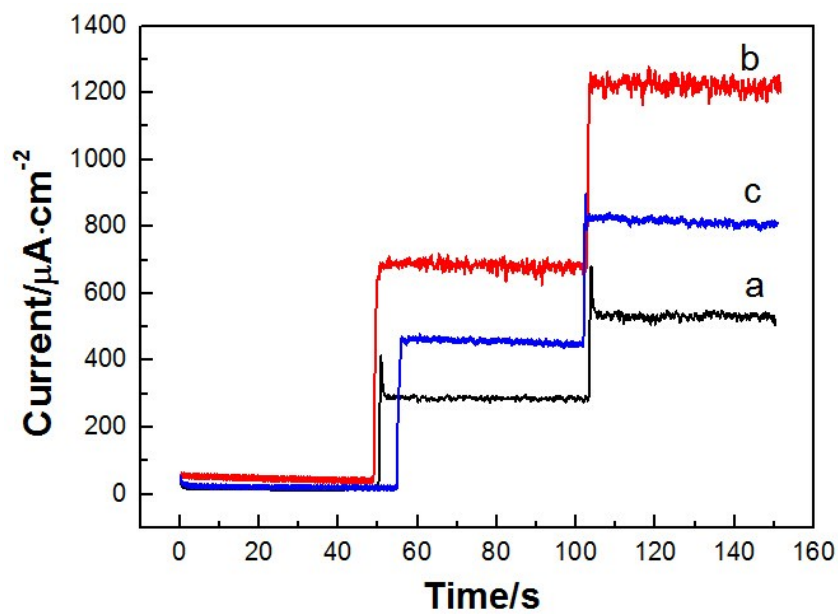
**Fig. S3.** XRD patterns of (a) Cu-MOFs/GO-400 and (b) Cu-MOFs/GO-800 samples



**Fig. S4.** TEM images of (A) Cu-MOFs/GO-400 and (B) Cu-MOFs/GO-800 samples



**Fig. S5.** Amperometric responses of the Cu-MOFs/GO-600 modified GCE at different potentials from 0.4 to 0.8 V with the successive addition of 1 mM  $\text{H}_2\text{O}_2$



**Fig. S6.** Amperometric responses of the GCE modified by Cu-MOFs/GO-600 with different mass loading: (a) 10  $\mu\text{g}$ , (b) 20  $\mu\text{g}$  and (c) 30  $\mu\text{g}$