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Supporting information

3D flower-like Co/Ni bimetallic organic framework as excellent

materials for electrochemical determination of quercetin

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The bare GCE was scanned in the above suspension at a scan rate of 100 mV s⁻¹ in the potential range between -1.6 V and 1.5 V using cyclic voltammetry (CV) obtain the CoNi-MOF/GCE. Cyclic voltammetry curves were shown in Fig S1, the voltammetric profile has redox peaks, verified that the material was attached to the electrode. It may be redox peaks of Ni²⁺/Ni³⁺ and Co²⁺/Co³⁺. Moreover, the SEM images of the surface of bare GCE and CoNi-MOF/GCE was given in the Fig S2, At the bare GCE a uniform and smooth surface appeared (Fig. S2a). At the CoNi-MOF/GCE (Fig. S2b), the three-dimensional film appeared with increased roughness, indicating that CoNi-MOF was successfully modified on the electrode surface with increase of the effective area.

In addition, the SEM images of the surface of CoNi-MOF/GCE before (b) and after (c) detection of Qu was given in the Fig S2, 3D flower-like cluster also found at the modified electrode (Fig. S2c) after detection of Qu. And the EDX element of CoNi-MOF/GCE before (d) and after (e) detection of Qu was depicted in Fig. S2, the elements Co and Ni were detected in the CoNi-MOF/GCE before and after detection. Those results verified the stability for long-term usages of the CoNi-MOF/GCE.

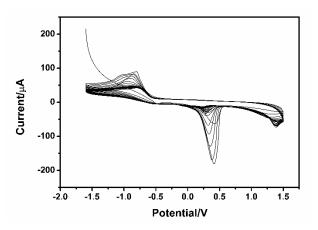


Fig. S1. Voltammetric profile of the CoNi-MOF containing 0.1 mol L^{-1} NaNO₃; 25 cycles between -1.6 V and 1.5 V at 50 mV s⁻¹.

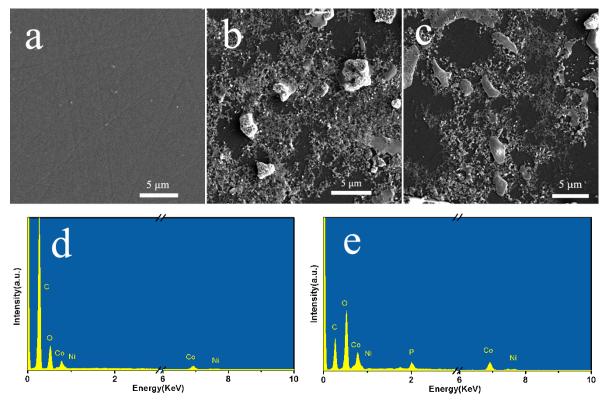


Fig. S2. SEM image of bare GCE (a), CoNi-MOF/GCE before (b) and after (c) detection of Qu, EDX element of CoNi-MOF/GCE before (d) and after (e) detection of Qu

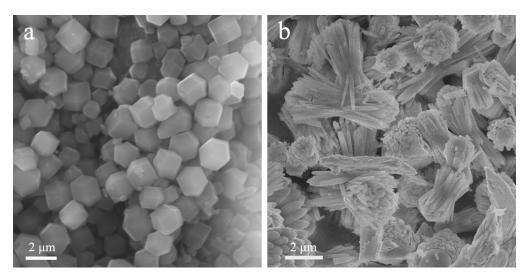


Fig.S3. SEM images of Co-MOF(a) and Ni-MOF (b)

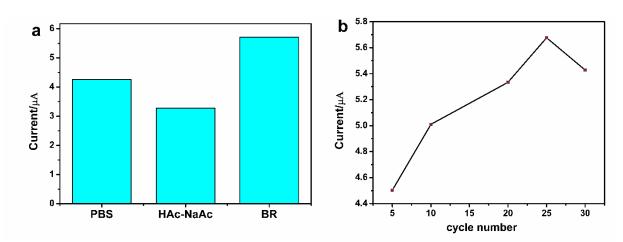


Fig. S4. (a) Oxidation peak currents of CoNi-MOF/GCE in the presence of 40 μ M Qu in different buffer solution. (b) Plots of oxidation peak currents versus cycle numbers in the presence of 40 μ M Qu.