Supporting Information

A new bifunctional electrochemical sensor for hydrogen peroxide and nitrite based on a bimetallic metalloporphyrinic framework

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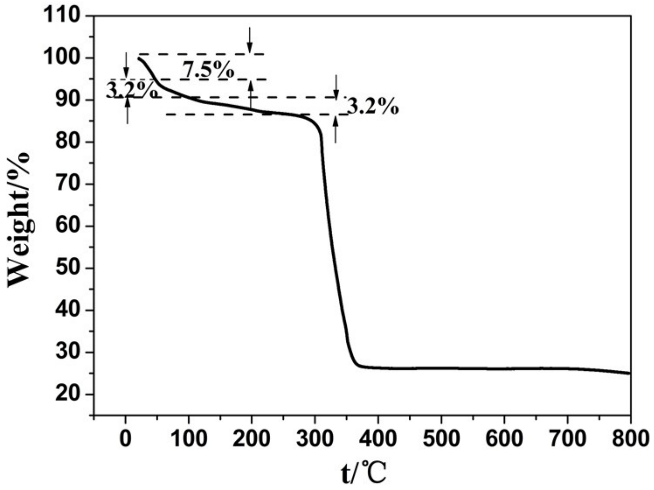

Fig. S1 TGA curve of as-prepared [Cu_2(Co-TCPP)(H_2O)$_2$]·0.5DMF·5H2O

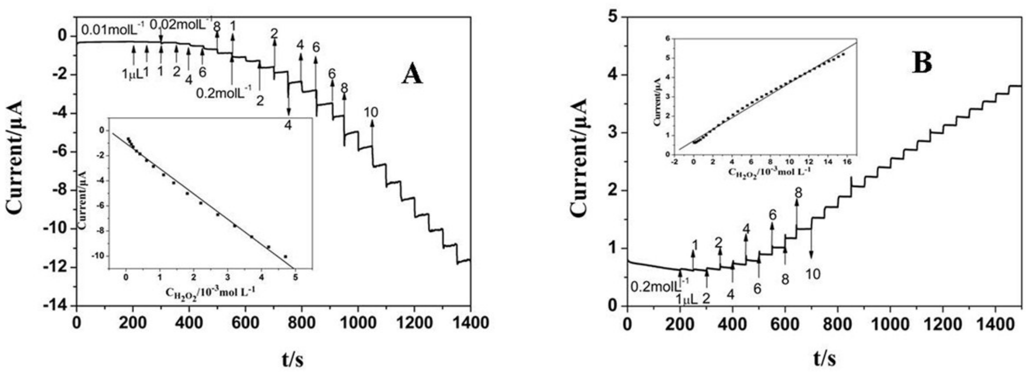

Fig. S2 Amperometric responses of Cu-CoTCPP/GCE to successive addition of H_2O_2 in 4 mL N_2-saturated PBS (0.1 M, pH 7.0) at -0.25 V (A) and 0.85 V (B). The inset shows the current response to the H_2O_2 concentration.

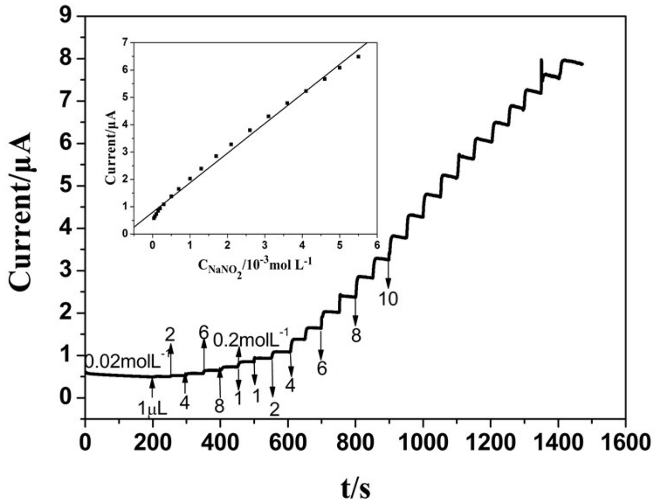

Fig. S3 Amperometric responses of Cu-CoTCPP/GC electrode to successive addition of $NaNO_2$ in 4 mL N_2-saturated PBS (0.1 M, pH 7.0) at an applied potential of 0.85V. The inset shows the current response to the $NaNO_2$ concentration.

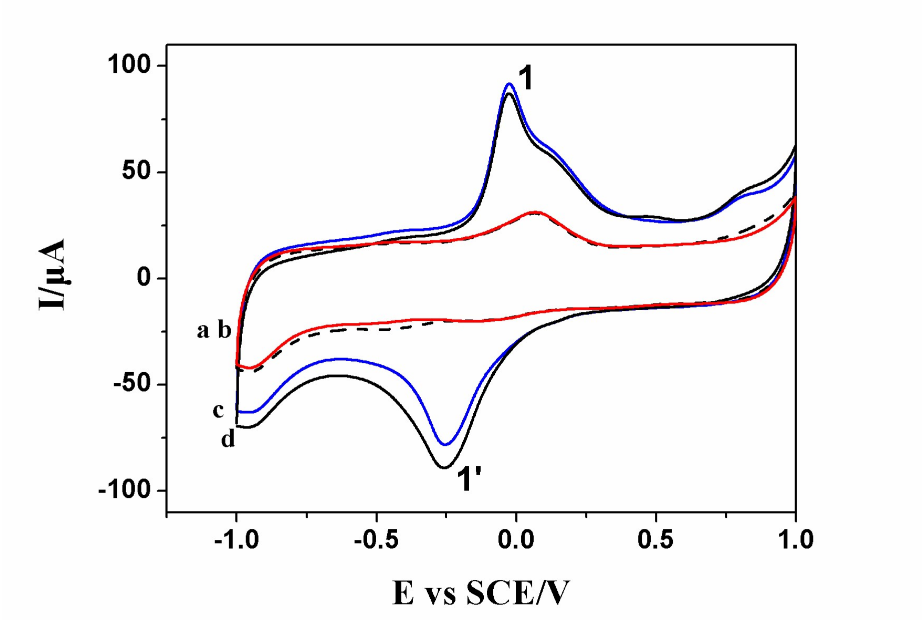

Fig. S4 CVs of MWCNT/GCE without H_2O_2 (a, red solid curve), with 0.5 mmol L^{-1} H_2O_2 (b, black dash curve), Cu-CoTCPP/MWCN/GC electrode without H_2O_2 (c, blue solid curve), and with 0.5 mmol L^{-1} H_2O_2 (d, black solid curve) in 4 mL N_2-saturated PBS (0.1 M, pH 7.0). The scan rate: 100 mVs^{-1}.

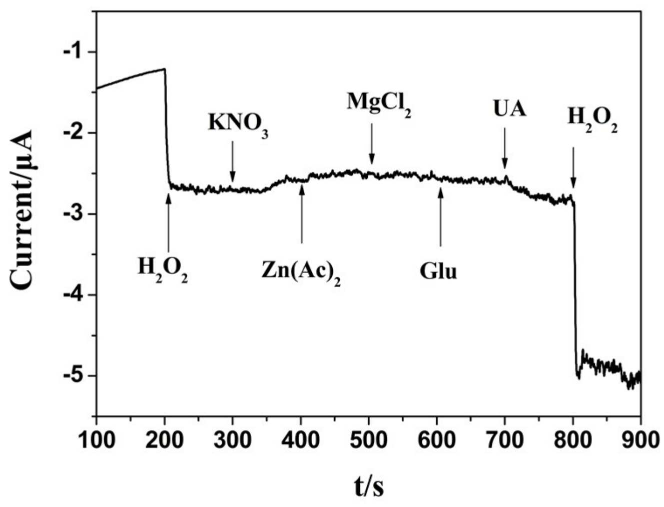

Fig. S5 The selectivity profile of electrode over interfering species of H_2O_2 (0.5 mmol L^{-1}), KNO_3 (0.5 mmol L^{-1}), $Zn(Ac)_2$ (0.5 mmol L^{-1}), $MgCl_2$ (0.5 mmol L^{-1}), Glu (0.5 mmol L^{-1}) , UA (0.5 mmol L^{-1}) obtained at -0.25 V in N_2-saturated PBS (0.1 mol L^{-1}, pH 7.0).

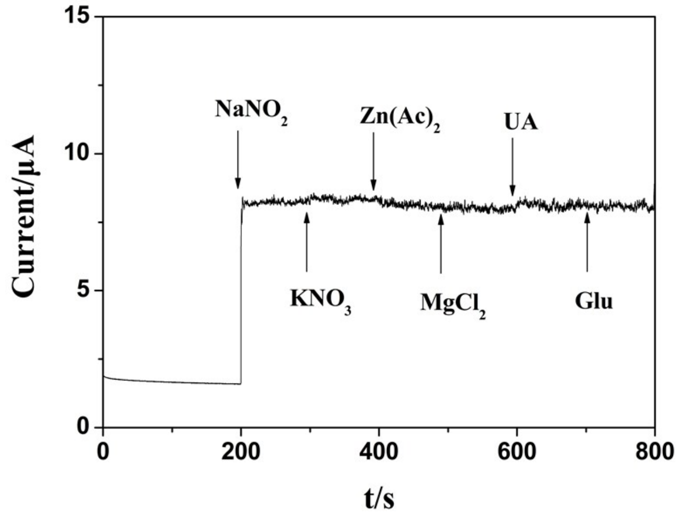

Fig. S6 The selectivity profile of electrode over interfering species of $NaNO_2$ (0.5 mmolL^{-1}), KNO_3 (0.5 mmolL^{-1}), $Zn(Ac)_2$ (0.5 mmolL^{-1}), $MgCl_2$ (0.5 mmolL^{-1}), UA (0.5 mmolL^{-1}), Glu (0.5 mmolL^{-1}) obtained at 0.85 V in N_2-saturated PBS (0.1 mol L^{-1}, pH 7.0).

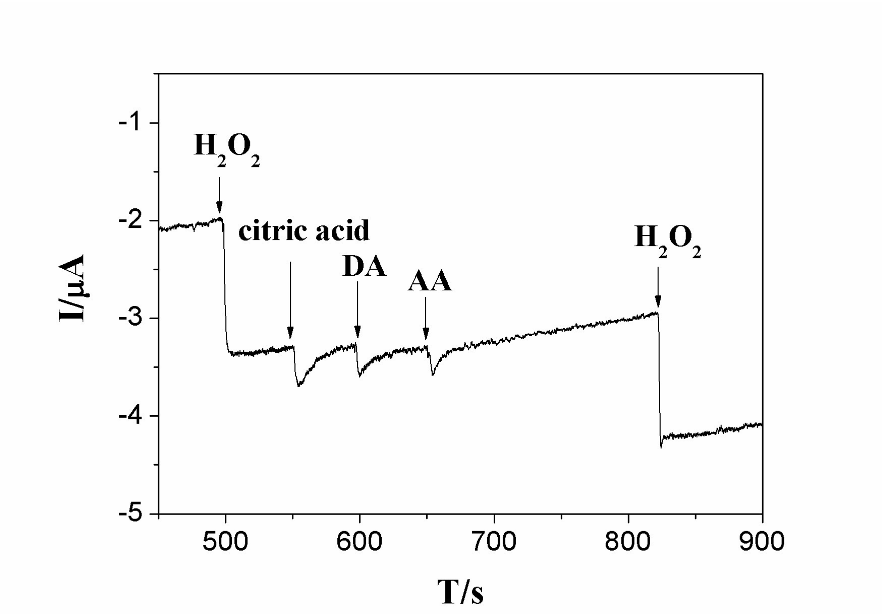

Fig. S7 The selectivity profile of electrode over interfering species of H_2O_2 (0.5 mmol L^{-1}), citric acid (0.5 mmol L^{-1}), DA (0.5 mmol L^{-1}), AA (0.5 mmol L^{-1}) obtained at -0.25 V in N_2-saturated PBS (0.1 mol L^{-1}, pH 7.0).

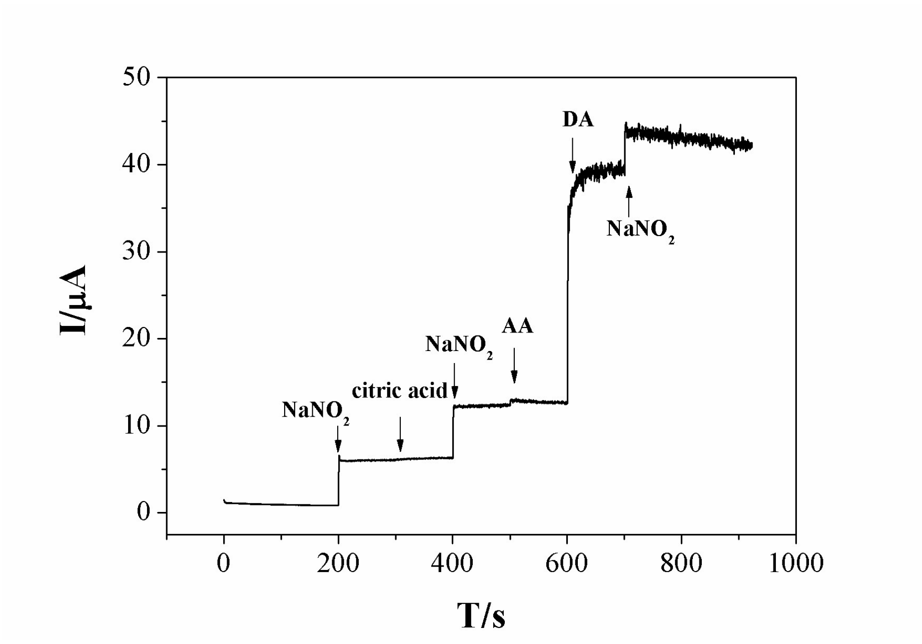

Fig. S8 The selectivity profile of electrode over interfering species of $NaNO_2$ (0.5 mmolL^{-1}), citric acid (0.5 mmol L^{-1}), DA (0.5 mmol L^{-1}), AA (0.5 mmol L^{-1}) obtained at 0.85 V in N_2-saturated PBS (0.1 mol L^{-1}, pH 7.0).