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 \([\text{Cu}_2(\text{Co-TCPP})(\text{H}_2\text{O})_2] \cdot 0.5\text{DMF} \cdot 5\text{H}_2\text{O}\)

Fig. S2 Amperometric responses of Cu-CoTCPP/GCE to successive addition of \(\text{H}_2\text{O}_2\) in 4 mL \(\text{N}_2\)-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 \(\text{H}_2\text{O}_2\) concentration.
Fig. S3 Amperometric responses of Cu-CoTCPP/GC electrode to successive addition of NaNO\textsubscript{2} in 4 mL N\textsubscript{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\textsubscript{2} concentration.

Fig. S4 CVs of MWCNT/GCE without H\textsubscript{2}O\textsubscript{2} (a, red solid curve), with 0.5 mmol L\textsuperscript{-1} H\textsubscript{2}O\textsubscript{2} (b, black dash curve), Cu-CoTCPP/MWCN/GC electrode without H\textsubscript{2}O\textsubscript{2} (c, blue solid curve), and with 0.5 mmol L\textsuperscript{-1} H\textsubscript{2}O\textsubscript{2} (d, black solid curve) in 4 mL N\textsubscript{2}-saturated PBS (0.1 M, pH 7.0). The scan rate: 100 mVs\textsuperscript{-1}.
Fig. S5 The selectivity profile of electrode over interfering species of H$_2$O$_2$ (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 mmol L$^{-1}$), KNO$_3$ (0.5 mmol L$^{-1}$), Zn(Ac)$_2$ (0.5 mmol L$^{-1}$), MgCl$_2$ (0.5 mmol L$^{-1}$), UA (0.5 mmol L$^{-1}$), Glu (0.5 mmol L$^{-1}$) 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 H₂O₂ (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 N₂-saturated PBS (0.1 mol L⁻¹, pH 7.0).

Fig. S8 The selectivity profile of electrode over interfering species of NaN₂O₂ (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 0.85 V in N₂-saturated PBS (0.1 mol L⁻¹, pH 7.0).