Electronic Supplementary Information

Carboxyl functionalized mesoporous polymer: A novel peroxidase-like catalyst for $\text{H}_2\text{O}_2$ detection

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![FT-TR spectrum of CFMP](image)

**Fig. S1** The FT-TR spectrum of CFMP.
**Fig. S2** The photographs of ABTS solution (left), ABTS-H$_2$O$_2$ (middle) and ABTS-H$_2$O$_2$-CFMP solution in pH 4.0 acetate buffer. (ABTS, 0.1 mM; H$_2$O$_2$, 44 μM; CFMP, 1 mg/mL; reaction time: 2 h).
**Fig. S3** UV-vis spectra of ABTS solution (black line), ABTS-H$_2$O$_2$ (red line) and ABTS-H$_2$O$_2$-CFMP (blue line) in pH 4.0 acetate buffer. (ABTS, 0.1 mM; H$_2$O$_2$, 44 μM; CFMP, 1 mg/mL).
Fig. S4 UV-vis spectra of TMB solution in the presence of 5 μL of H₂O₂ and 100 μL of MP dispersion. Inset: 0.1 mM TMB solution by adding 5 μL of H₂O₂ and 100 μL of MP dispersion.
**Fig. S5** The effect of pH on the catalytic performance for detection of H$_2$O$_2$. 
Fig. S6 The effect of temperature on the catalytic performance for detection of H$_2$O$_2$. 