Supporting information

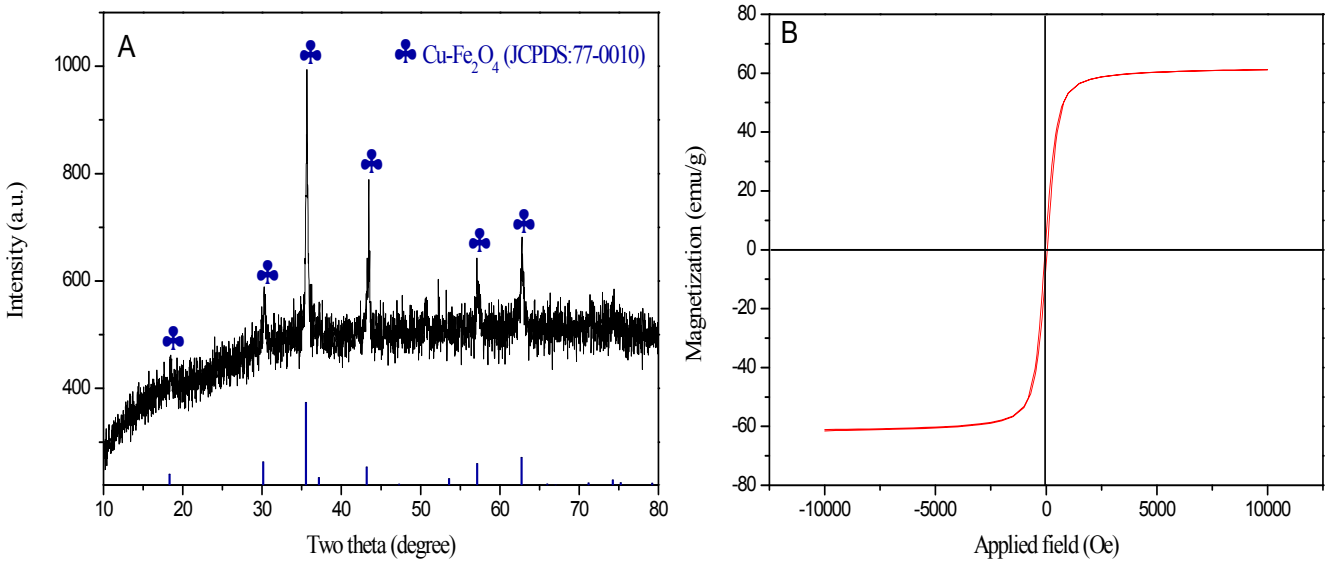

Fig. s1. A XRD pattern (A) and magnetization curves of $CuFe_2O_4$ (B).

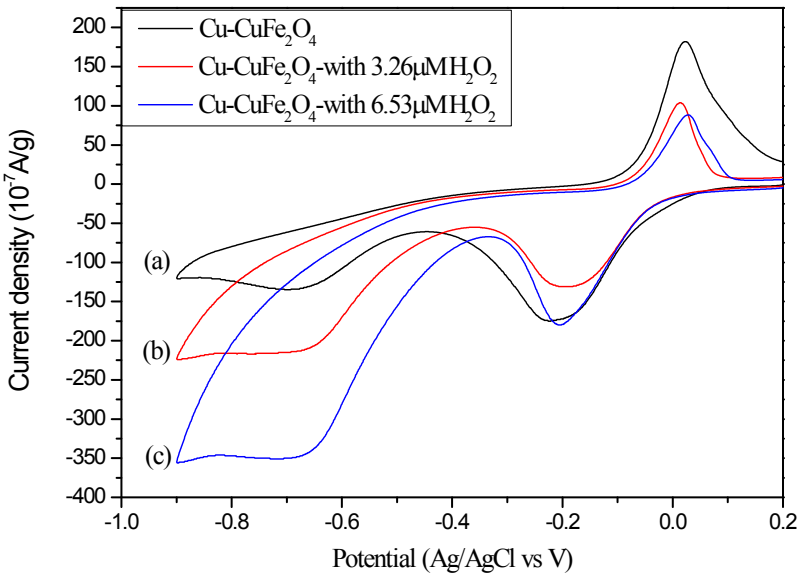

Fig. s2. CV curves of modified GCE with Cu-$CuFe_2O_4$ in the acetate buffer solution (pH=4.0).

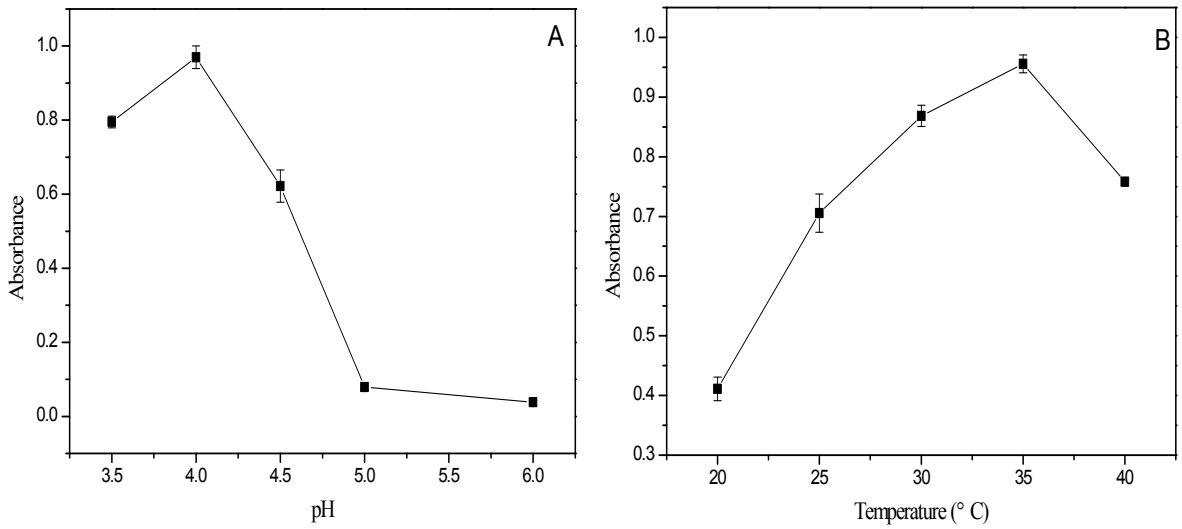

Fig. s3. Effects of pH value of the solution (A) and experimental temperature (B) on the peroxidase-like activity of the Cu-$CuFe_2O_4$. The experimental conditions are 200 μL of 0.25 mg mL^{-1} Cu-$CuFe_2O_4$, 2.5 mL of HAc-NaAc buffer solution, 250 μL of 10 mM TMB and 50 μL of 3.60 mM H_2O_2.

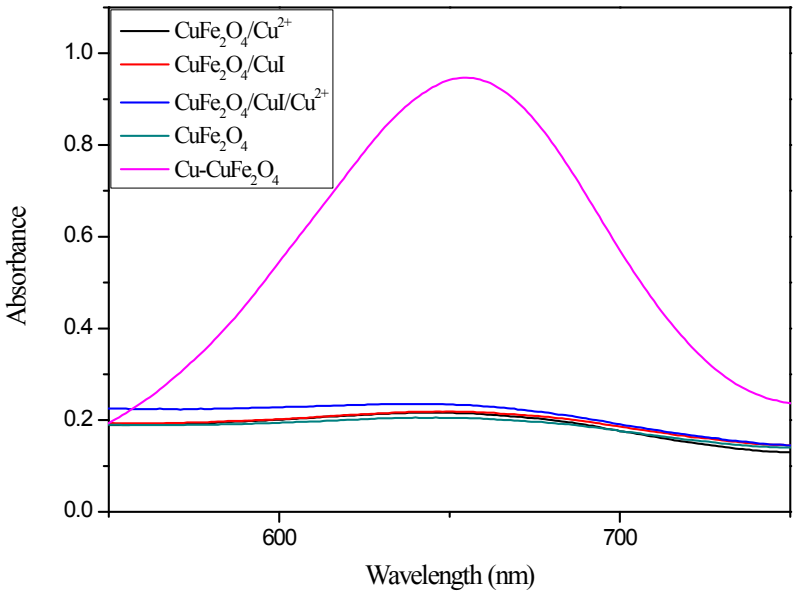

Fig. s4. Absorbance values of different systems. Cu^{2+} was added through the addition of 0.1 mM $Cu(NO_3)_2$. The concentration of CuI is 0.25 mg/mL.

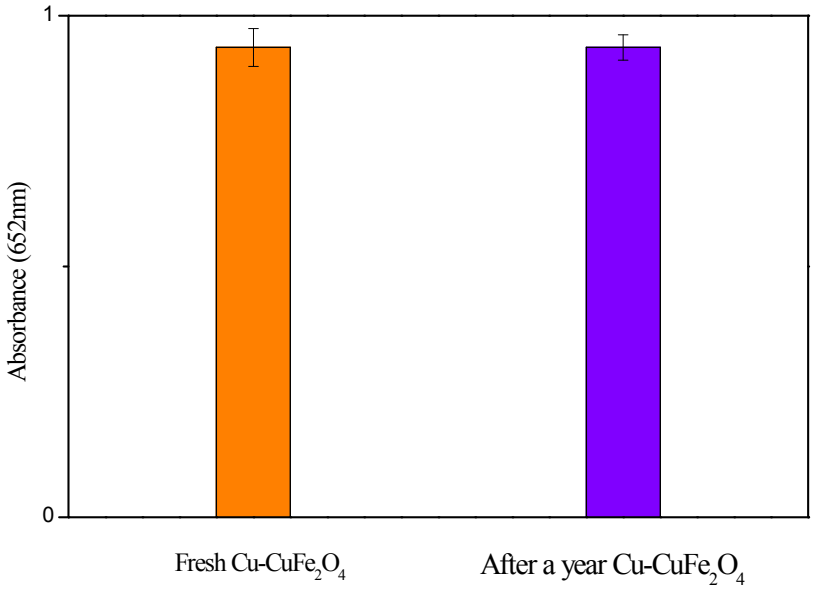

Fig. s5. Stability of Cu-$CuFe_2O_4$ as a nanozyme.

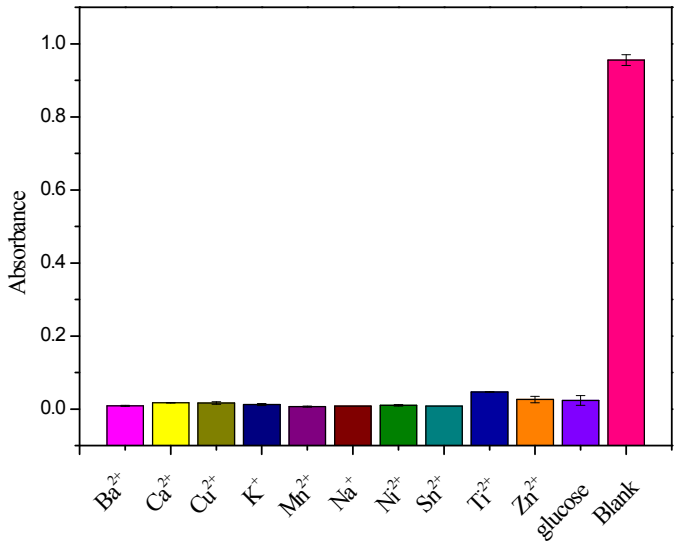

Fig. s6. Selectivity analysis for 60 μM of H_2O_2 replaced by 600 μM of different metal ions and glucose, respectively. The experimental conditions are 200 μL of 0.25 mg mL^{-1} Cu-$CuFe_2O_4$, 2.5 mL of HAc-NaAc buffer solution, 250 μL of 10 mM TMB.

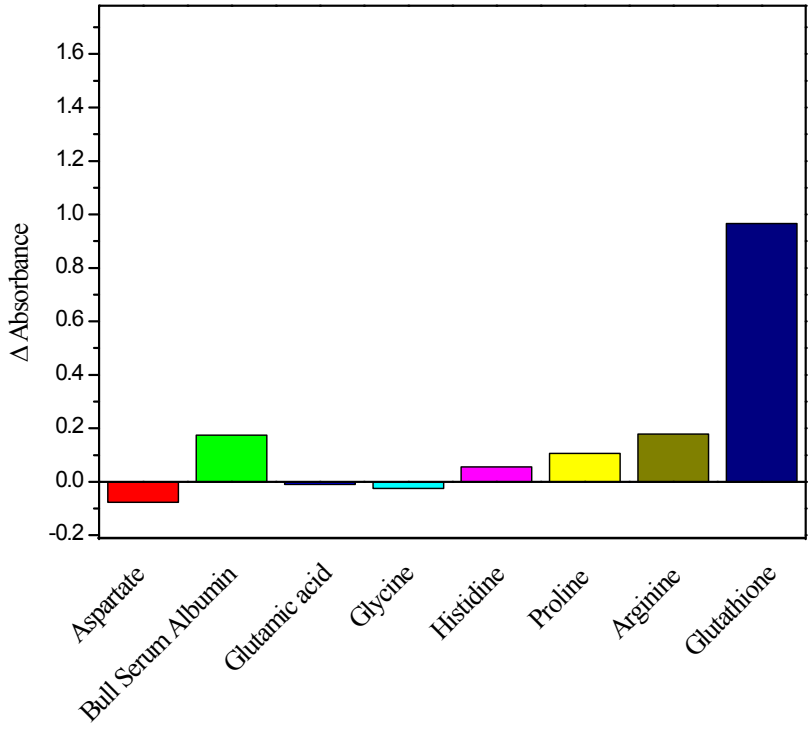

Fig. s7. The absorbance of systems contained different biomolecules. (Blank GSH concentration is 90 μM while the other biomolecules concentration is 900 μM). The experimental conditions are 200 μL of 0.25 mg mL^{-1} Cu-$CuFe_2O_4$, 2.5 mL of HAc-NaAc buffer solution, 250 μL of 10 mM TMB and 60 μM H_2O_2.

Table s1 Determination of GSH in chicken serums.

Sample	GSH determination (μM)	GSH added (μM)	GSH detected (μM)	Recovery (%)	RSD (%)
1	66.0	5.00	71.3	106	2.17
		10.0	76.3	103	2.54
		15.0	80.8	98.7	1.67
2	67.5	5.00	72.6	102	1.53
		10.0	77.2	97.0	2.07
		15.0	82.3	98.7	1.32