

Supporting Information

CuCo Bimetallic-Doped Carbon-Dotted Nanoenzymes for

Colorimetric and Fluorescent Dual-Mode Detection of Ascorbic Acid

Yi Gao ^{1,2}, Tingting Chu ^{1,2}, Chengyu Zhou ^{1,2}, Dongshan Xiang ^{1,2}, Yin Zheng ^{1,2,*},
Yingru Li^{3,4*}

¹Hubei Key Laboratory of Biologic Resources Protection and Utilization

²School of Chemical and Environmental Engineering, Hubei Minzu University, Enshi,
Hubei 445000, P. R. China

³Key Laboratory of Green Manufacturing of Super-light Elastomer Materials of State
Ethnic Affairs Commission, Hubei Minzu University, Enshi 445000, China

⁴College of Intelligent Systems Science and Engineering, Hubei Minzu University,
Enshi 445000, China

*Correspondence: Yin Zheng - Emai: zhengyin0617@163.com;

Yingru Li- Emai: liyingru@outlook.com

Figures

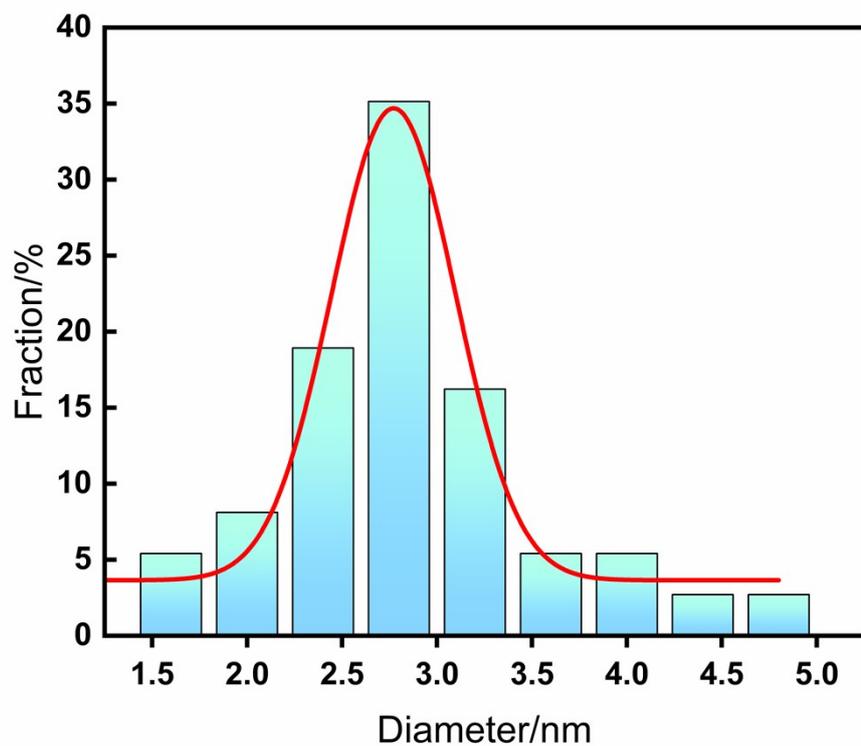


Figure. S1 Particle size distribution of CuCo-CQDs(Cu:Co=1:2)

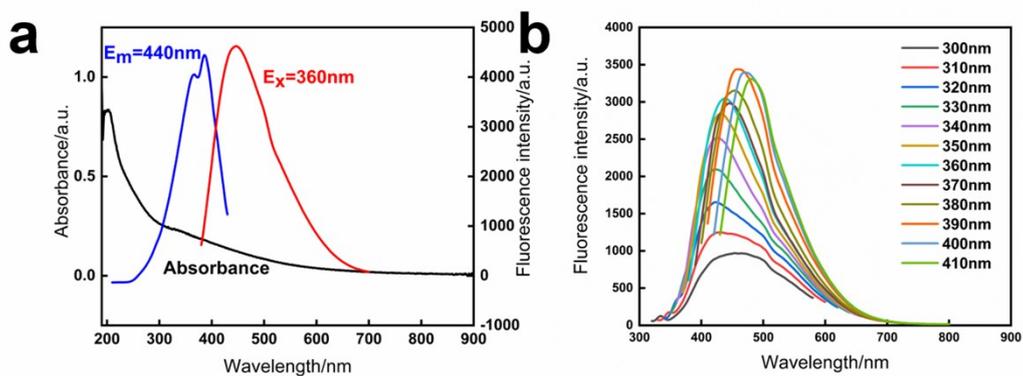


Figure. S2 (a)UV-visible absorption, and fluorescence spectra, as well as (b)fluorescence emission spectra of CuCo-CQDs (Cu:Co=1:2) under excitation at various excitation wavelengths (300-410 nm).

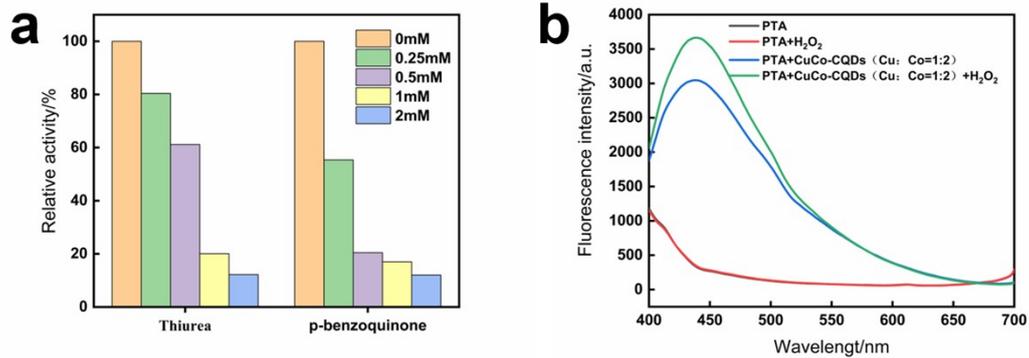


Figure. S3 (a)Relative activities of different ROS trappers and CuCo-CQDs (Cu: Co=1:2) reactions; (b)Fluorescence emission spectra of different reaction systems

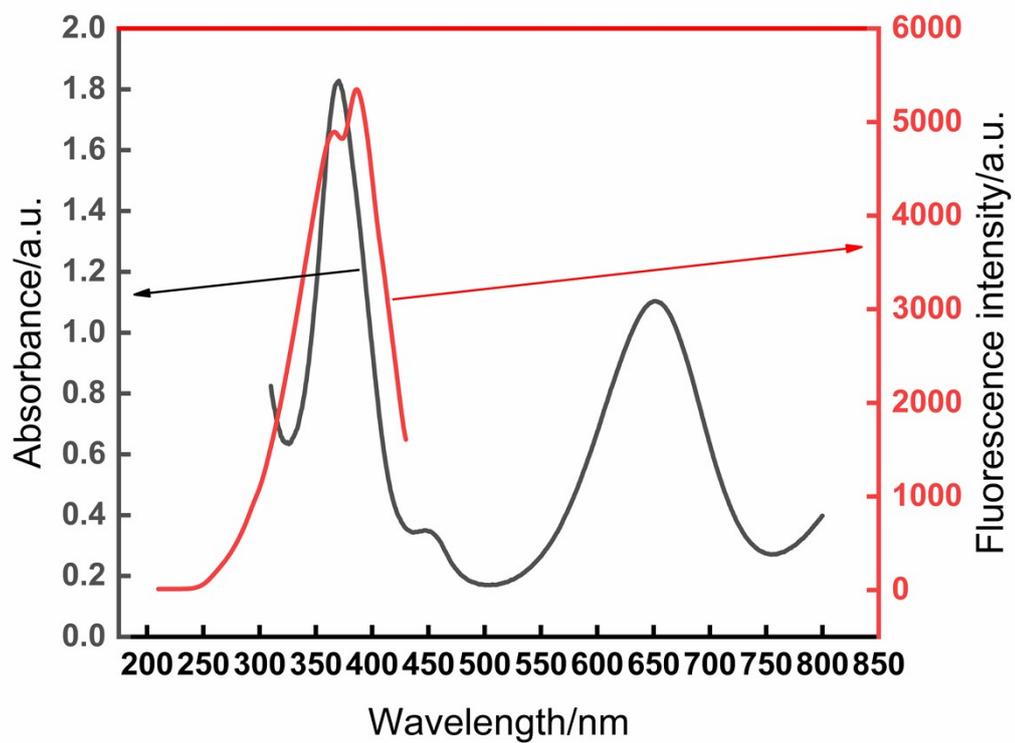


Figure. S4 UV-Vis absorption spectra of oxTMB and excitation spectra of CuCo-CQDs (Cu: Co=1:2)

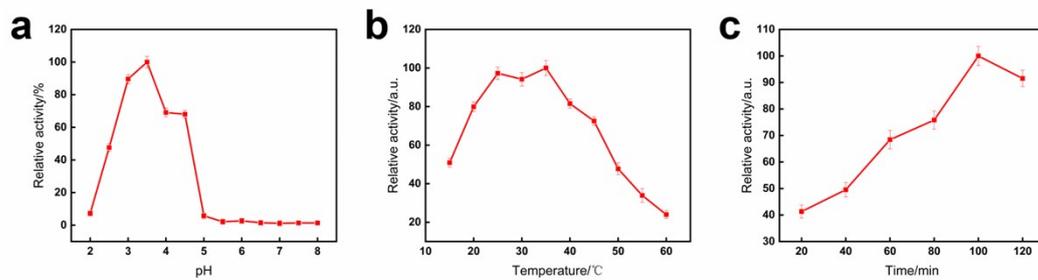


Figure. S5 (a)Relationship between experimental conditions pH, (b)incubation temperature and (c)time and catalytic activity of CuCo-CQDs (Cu: Co=1:2)

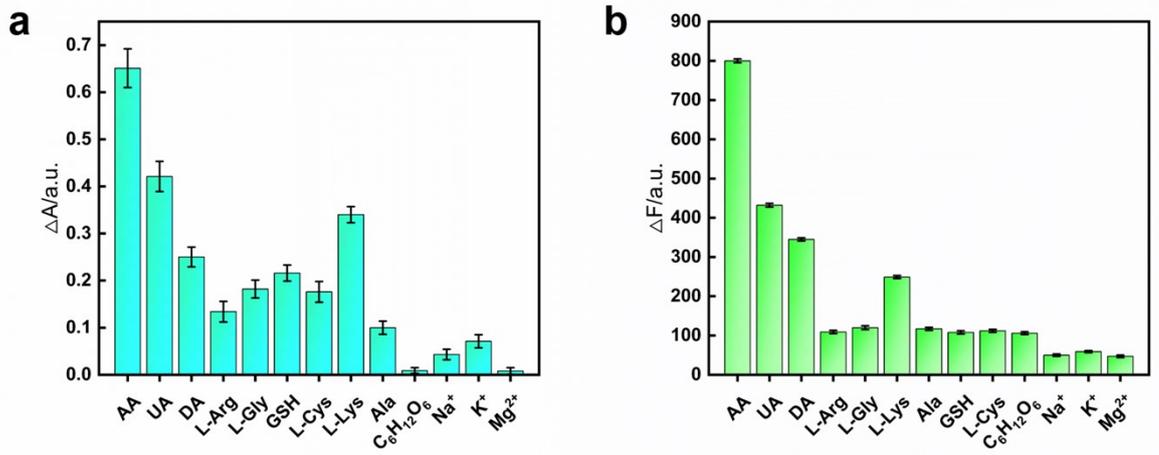


Figure. S6 The anti-interference ability of TMB-H₂O₂ system to detect AA

Table S1 Detection of AA in actual samples

Detection method	Sample	Detected ($\mu\text{mol/L}$)	Added/ ($\mu\text{mol/L}$)	Measured/ ($\mu\text{mol/L}$)	Recovery/ %	RSD/ %	HPLC Measured/($\mu\text{mol/L}$)
Colorimetric assay	1	3.42	0.5	4.01	102.3	4.1	4.12
	2	3.56	5	8.41	98.2	3.4	8.56
	3	3.49	20	23.54	100.2	3.9	23.69
Fluorometric assay	1	3.6	5	8.46	98.3	3.1	8.62
	2	3.51	15	19.02	102.7	4.2	18.72
	3	3.46	30	34.5	103.1	4.6	34.02

References

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- [3] Sun X, Chang J L, Dong Q, et al. Facile synthesis of Fe₃O₄@polyethylenimine with peroxidase-like activity for highly sensitive detection of interferon α -2b[J]. *Sci. China Mater.* 2023, 66, 4121–4130.