Supporting Information

A novel copper-based nanozyme: fabrication and application for colorimetric

detection of resveratrol

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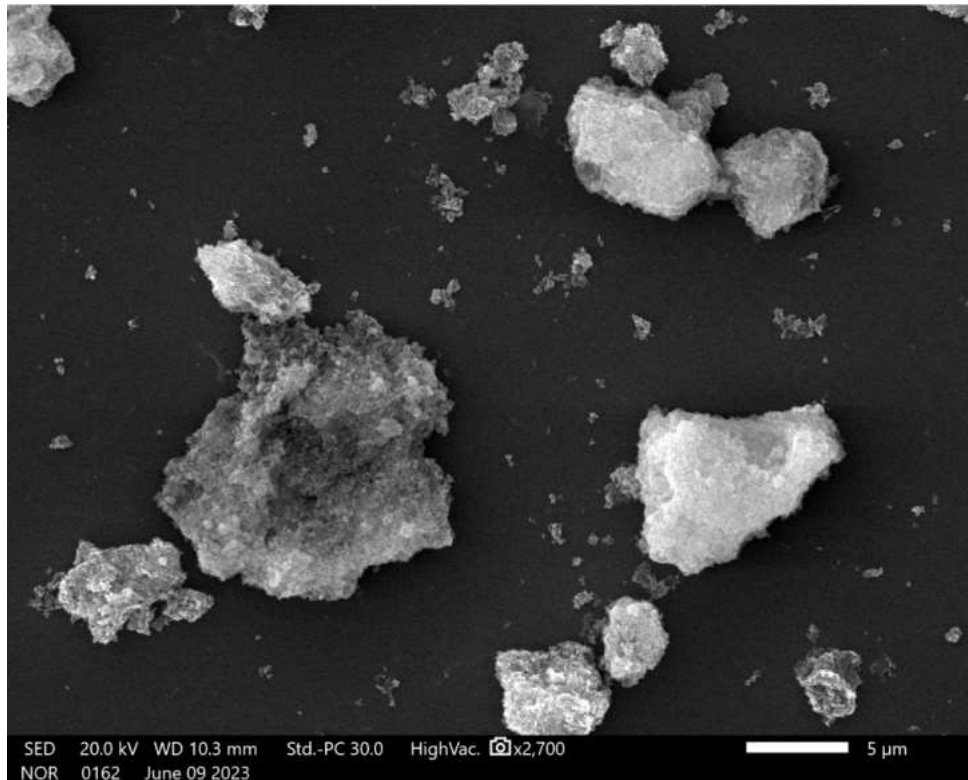
CONTENT

Fig S1. Original SEM photo of the simple copper phosphate
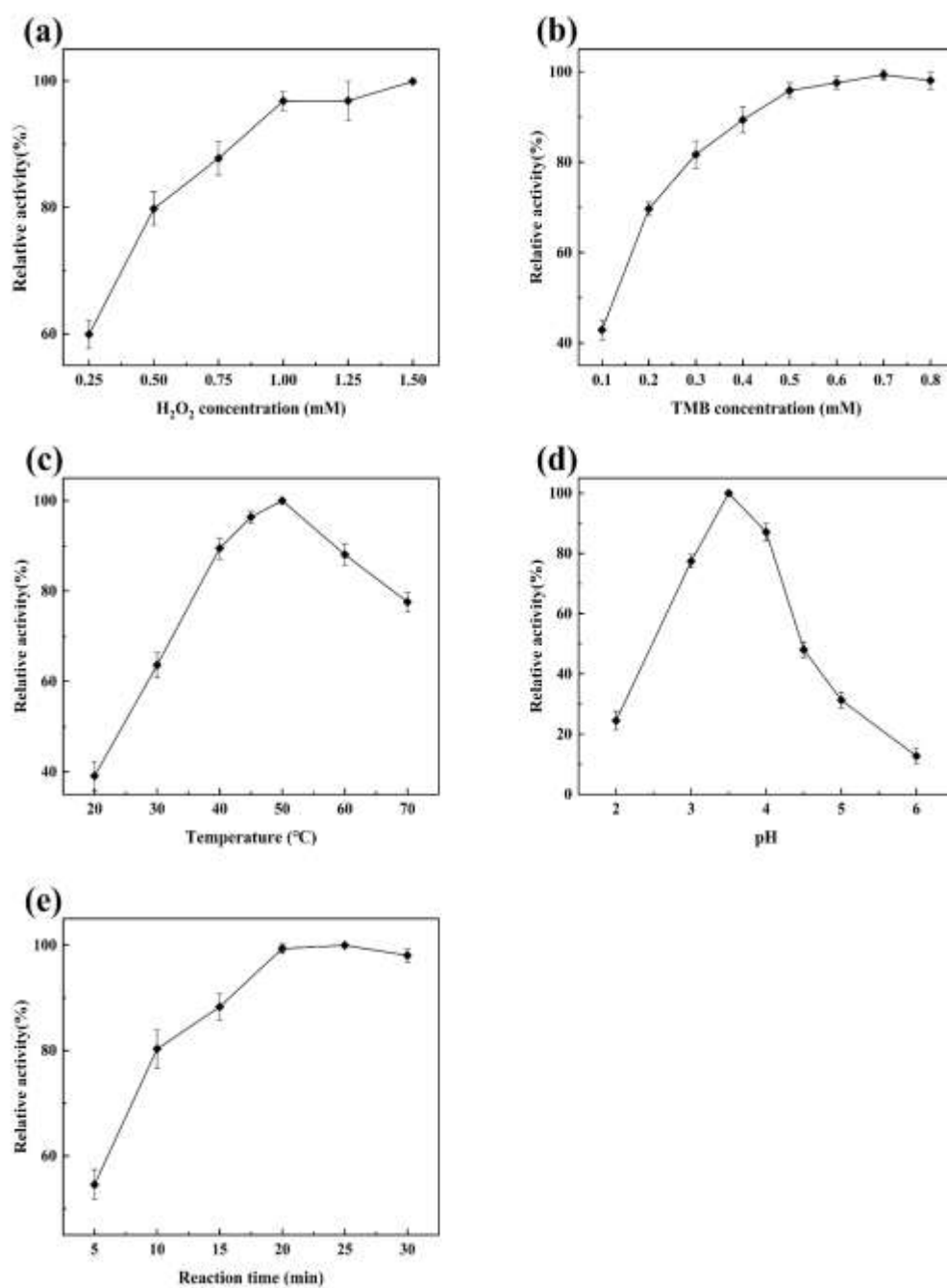
Figure S2. The catalytic activity of urea@Cu-NF with varying (a) H_2O_2 concentration, (b) TMB concentration, (c) temperature, (d) pH and (e) reaction time.
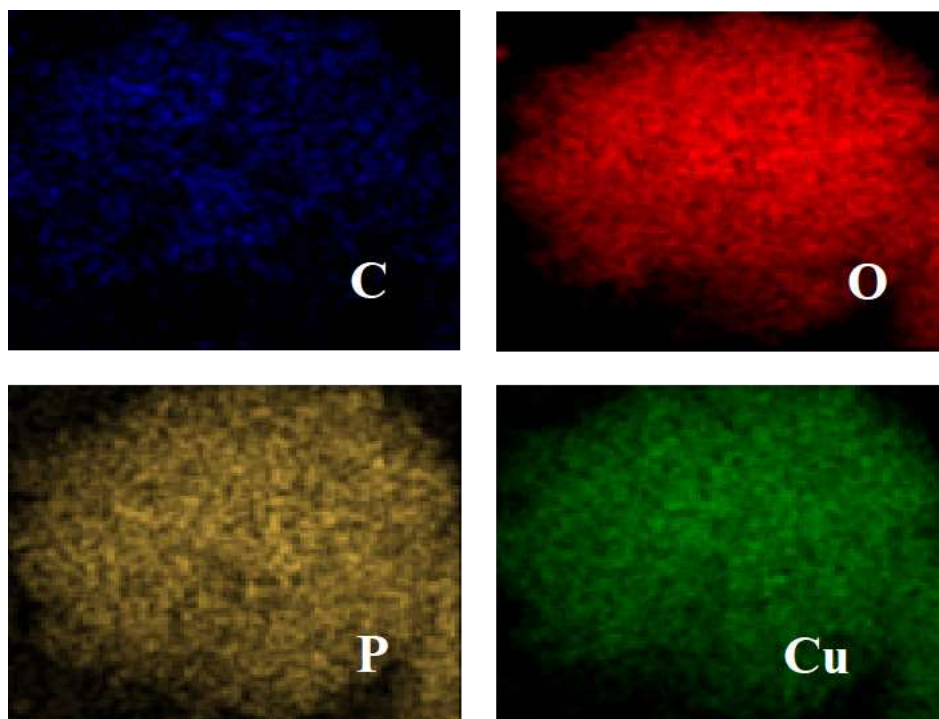
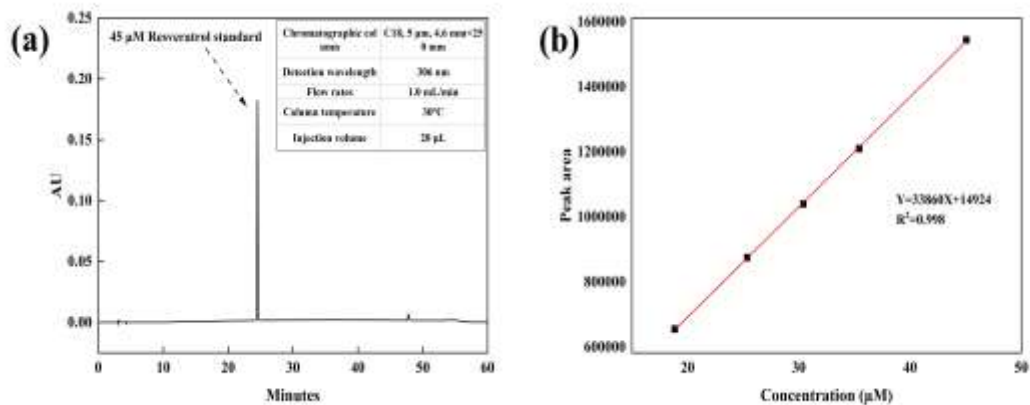**Figure S3. Element mapping images of urea@Cu-NF**

Figure S4. (a) HPLC chromatograms of a resveratrol standard solution, containing 45 μM, and (b) linearity plot of resveratrol
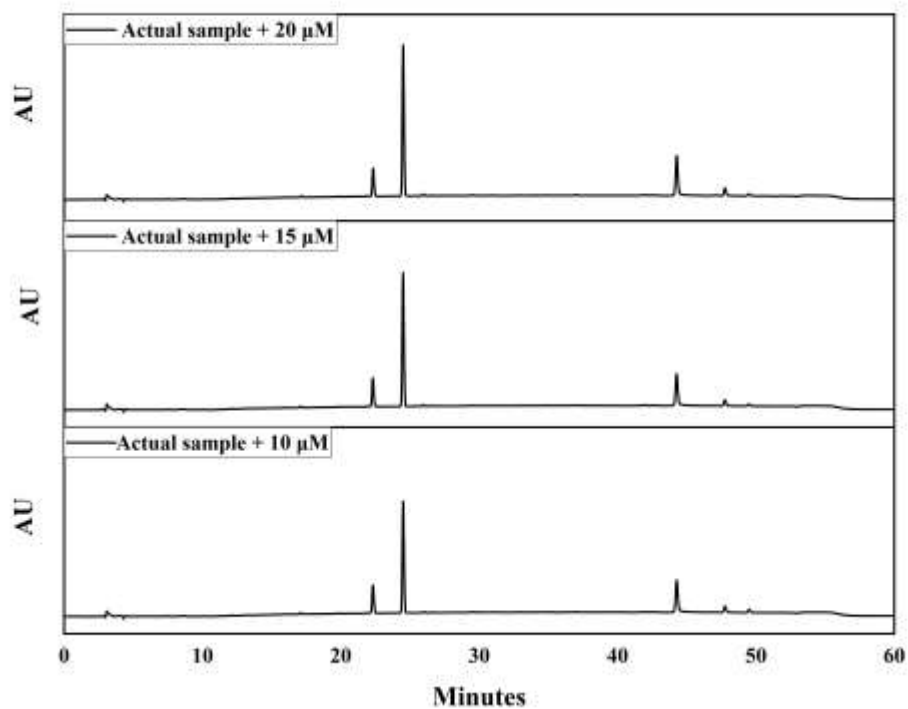

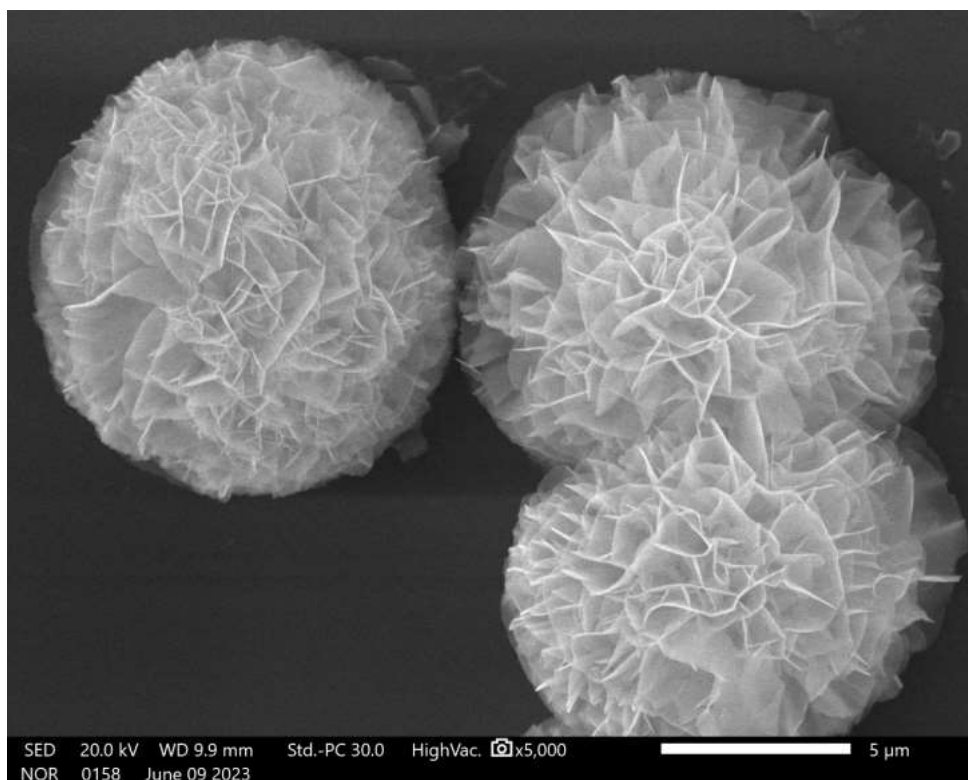**Figure S5. HPLC chromatograms of actual samples spiked with 10 μM, 15 μM and 20 μM standard solutions of resveratrol**

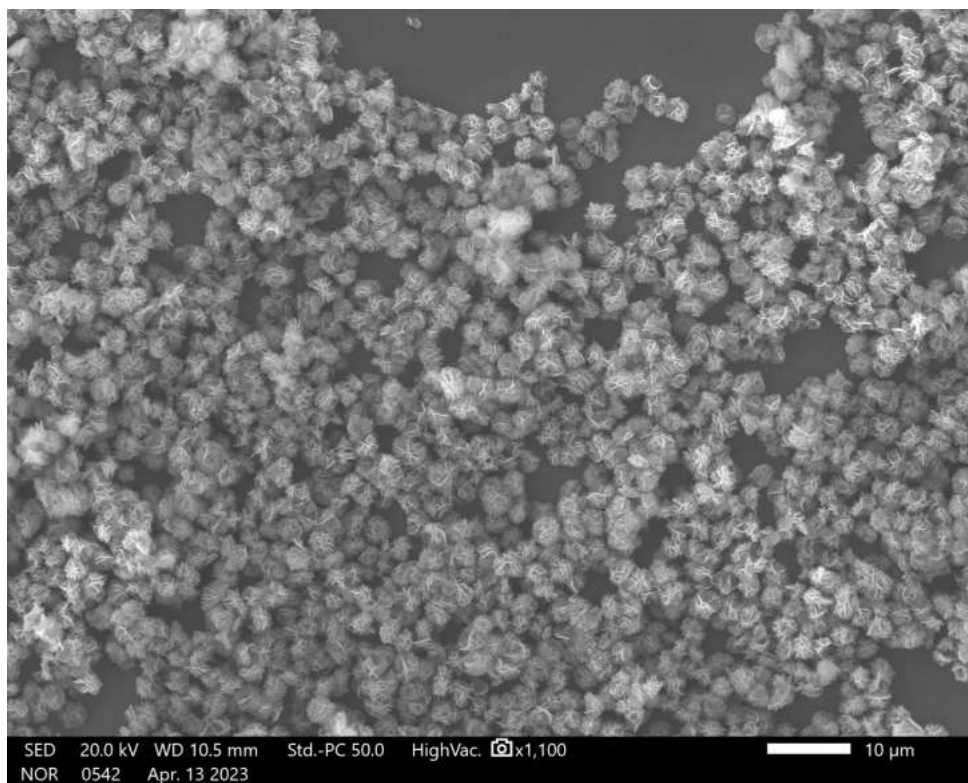**Fig. S6. SEM image of urea@Cu-NF after 8th reaction round**

Figure S7. SEM image of urea@Cu-NF after 28 days storage

Table S1. Kinetic parameters of urea@Cu-NF and comparison with other reported nanozymes

Catalyst	Structure	Substrate	K_m (mM)	V_{max} (10^{-8}M/S)	Reference
WO$_3$ nanoparticle	nanosheet	H$_2$O$_2$	1260	3	1
		TMB	10.6	1.53	
Ag@Fe$_3$O$_4$ nanowire	nanowire	H$_2$O$_2$	75.2	2.288	2
		TMB	3.46	2.288	
GBR	flat film	H$_2$O$_2$	10.98	3.60	3
		TMB	0.83	0.68	
Au/Cu$_2$O nanocubes	nanocube	H$_2$O$_2$	10.56	6.68	4
		TMB	0.21	6.08	
Ce/ZnCo$_2$O$_4$ nanospheres	nanosphere	H$_2$O$_2$	0.553	2.618	5
		TMB	0.0886	18.796	
UO$_2$ hollow nanospheres	hollow nanosphere	H$_2$O$_2$	6.423	0.584	6
		TMB	0.549	0.629	
Urea@Cu-NF	nanoflower	H$_2$O$_2$	3.82	13.29	This work
		TMB	0.503	6.09	

References

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