Supporting Information (SI) for

An oxidase-like nanozyme-based sensor array for the specific detection and discrimination of catechins

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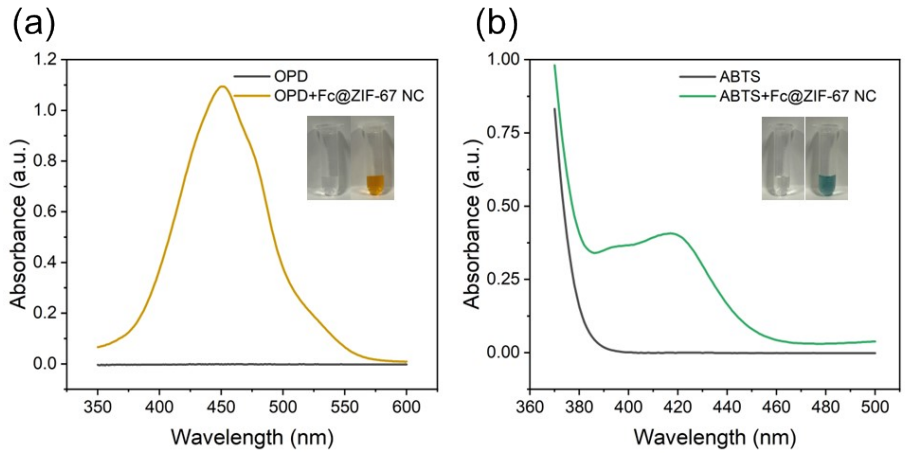

Fig. S1 (a) Fc@ZIF-67 NC catalyzed OPD oxidation. (b) Fc@ZIF-67 NC catalyzed ABTS oxidation.

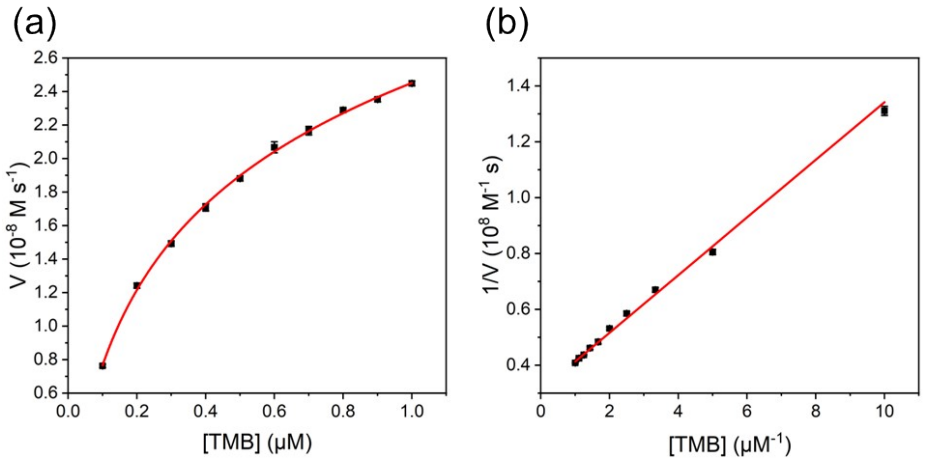

Fig. S2 Steady-state kinetic assay of Fc@ZIF-67 NC. (a) Initial velocity of reaction at different TMB concentrations. (b) The Lineweaver-Burk plot of (a).

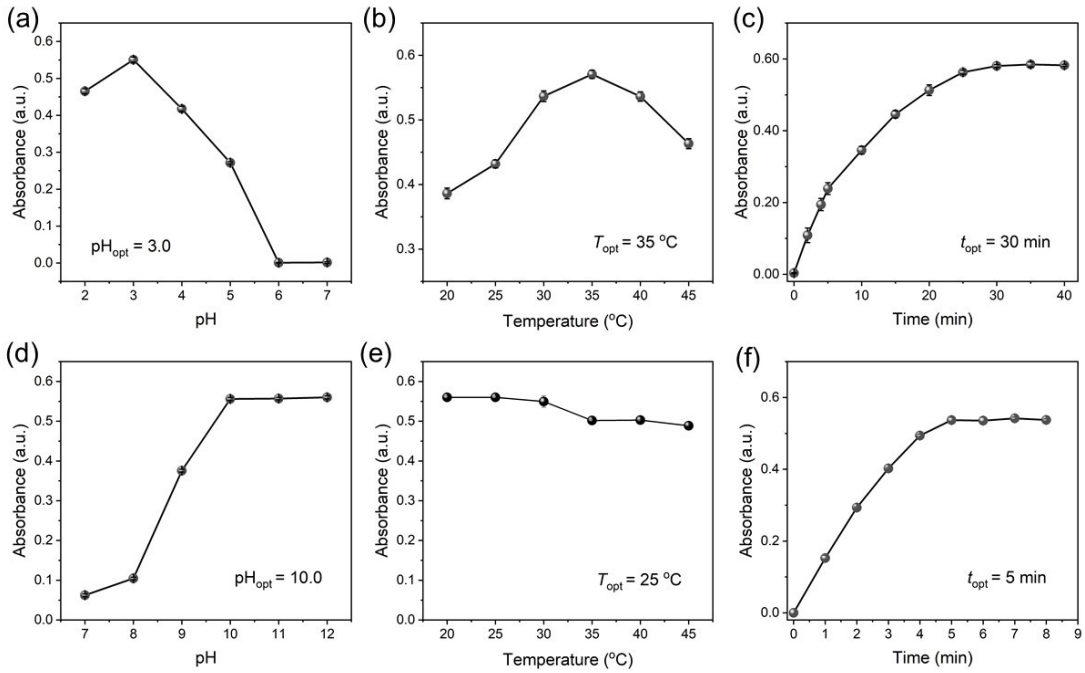

Fig. S3 Optimization of the TMB reaction conditions (a-c) and the DA reaction conditions (d-f).

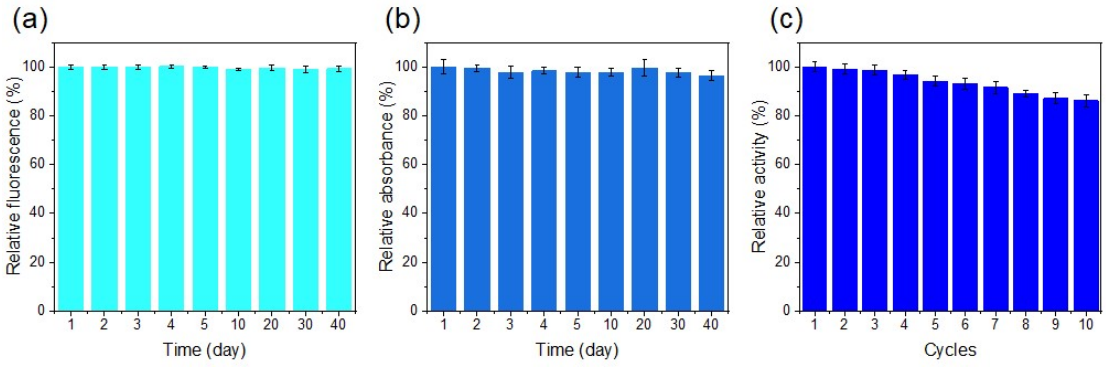

Fig. S4 Long-term stability analysis of Fc@ZIF-67 NC through determining the fluorescence signal in the DA reaction (a) and the absorbance signal in the TMB reaction (b), without the adding of catechin. Fc@ZIF-67 NC was stored at 4 °C. (c) The reusability analysis of the Fc@ZIF-67 NC through determining the absorbance signal in the TMB reaction. The initial signal value was all set as 100%.

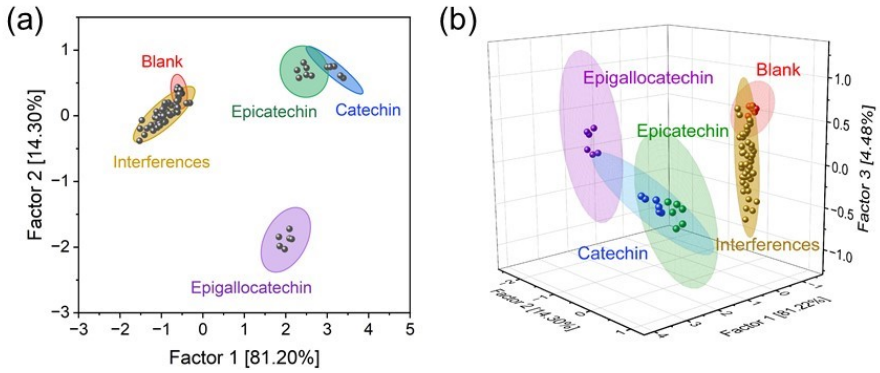

Fig. S5 (a) 2D-PCA and (b) 3D-PCA score plots for the discrimination of catechins and interferences.

Table S1 Comparing the kinetical parameters of Fc@ZIF-67 NC with other oxidase-like nanozymes [a]

	K_m (mM)	V_{max} (10^{-5} mM•s^{-1})	k_{cat}/K_m (10^{-6} mg^{-1}•s^{-1}•L)	Reference
Fe_3O_4-MnO_2	0.101	0.57	2.82	[1]
Fe-N-C SAC	1.81	0.0601	0.07	[2]
MnO_2@Co_3O_4	0.025	0.135	2.16	[3]
Ni/Co MOF	0.255	1.35	0.66	[4]
GNC-900	0.108	1.08	2.40	[5]
Fc@ZIF-67 NC	0.333	3.227	3.88	This work

a The data are cited or calculated from the original references.

References

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