Electronic Supplementary Material (ESI) for Materials Advances.

Supplement information

Malic acid-coated iridium nanoparticles induced cascade enzymatic reactions for norepinephrine detection

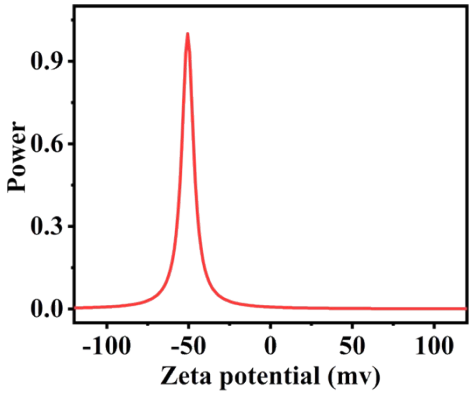

Fig. S1. The zeta potential of MA-IrNPs

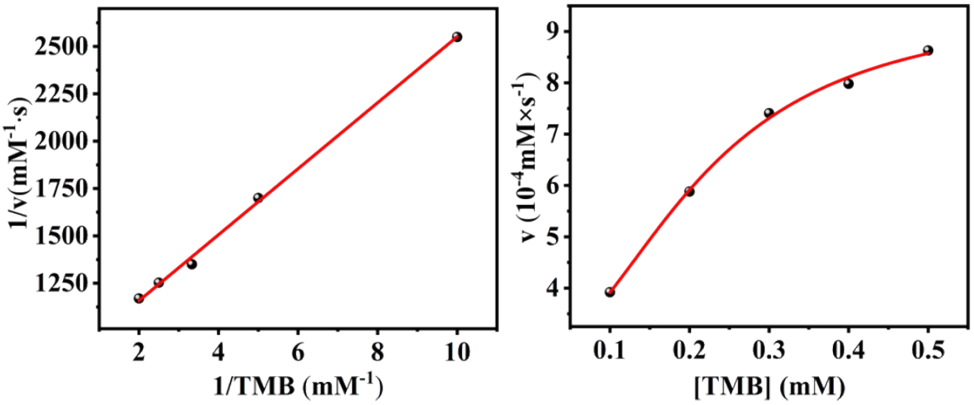

Fig. S2. (A) Steady-state kinetic analysis of oxidase-like of MA-IrNPs. (B) Lineweaver–Burk plot of oxidase-like activity of MA-IrNPs. Reaction conditions: 8 μg/ml MA-IrNPs in 0.01 M acetate buffer solution (pH=3.8). The kinetic constants of MA-IrNPs was determined in the acetate buffer at different TMB concentrations (0.1-0.5 mM)

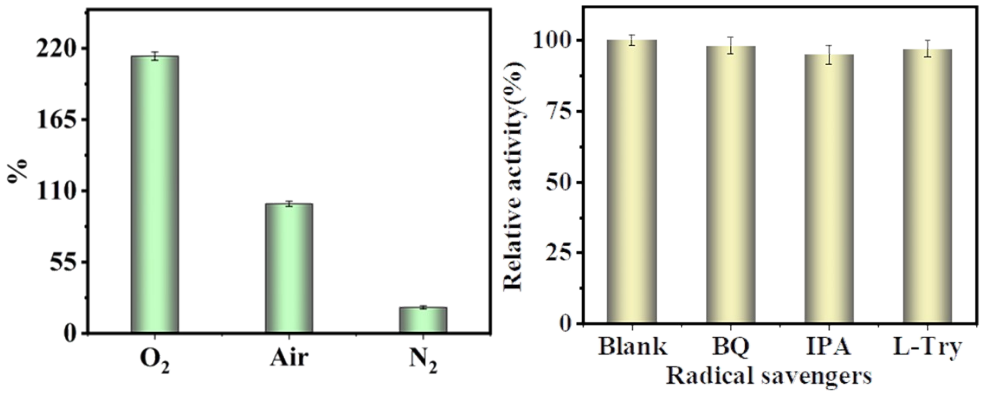

Fig. S3. (A) Effects of different atmospheres on the activity of laccase-like of MA-

IrNPs. (B) Effects of different reactive oxygen scavengers on the activity of laccase-like of MA-IrNPs.

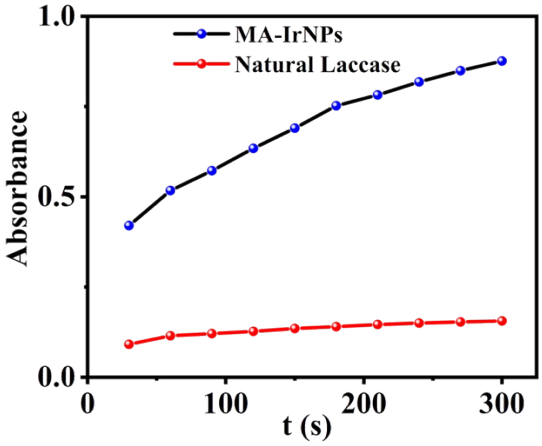

Fig. S4. Comparison of reaction velocity of MA-IrNPs and natural laccase

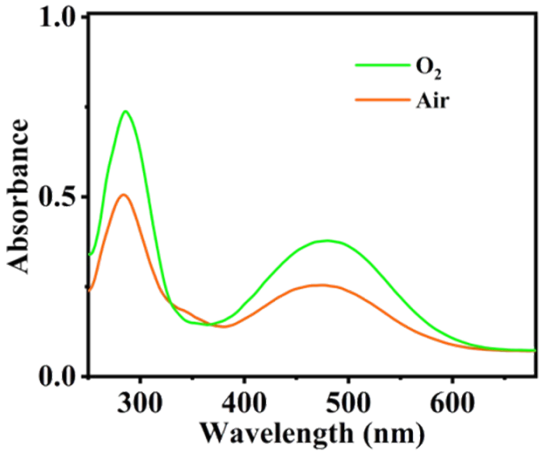

Fig. S5. Effect of oxygen on the detection of NE by MA-IrNPs

Table S1. Laccase-like activity comparison of kinetic parameters for other similar nanozymes.

Catalyst	K_m (mM)	V_m (10^{-3}mM·s^{-1})	ref
Natural laccase	0.41	0.11	[1]
Tar-IrNPs	0.204	5.4	[2]
Rh-N/C	0.10	0.13	[3]
CMC-PtNPs	0.218	0.133	[4]
Cu/GMP	0.59	0.4	[5]
MA-IrNPs	0.117	2.0	This work

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