Electronic Supplementary Material (ESI) for RSC Advances.

Temperature-Responsive Iron Nanozymes Based on Poly(N-vinylcaprolactam) with Multi-Enzyme Activity

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Table S1 The volume of the fed samples for SOD kit assay.

Sample	V (μL)[a]	V (μL)[b]	V (μL)[c]	V (μL)[d]
Test sample	—	—	20	20
double-distilled water	20	20	—	—
Enzyme working solution	20	—	20	—
Enzyme dilution solution	—	20	—	20
Substrate application Solution	200	200	200	200

[a]Control well, [b]Control blank well, [c]Assay well, [d]Blank well.

Table S2 Comparison of the Apparent Michaelis−Menten Constant (K_m) and Maximum Reaction Rate (V_{max}) of FeCPNGs and HRP.

substrate	catalyst	K_m (mM)	V_m($\times 10^{-8}$ M s^{-1})
H_2O_2	FeCPNGs	1.95	8.71
H_2O_2	HRP	2.35	9.86

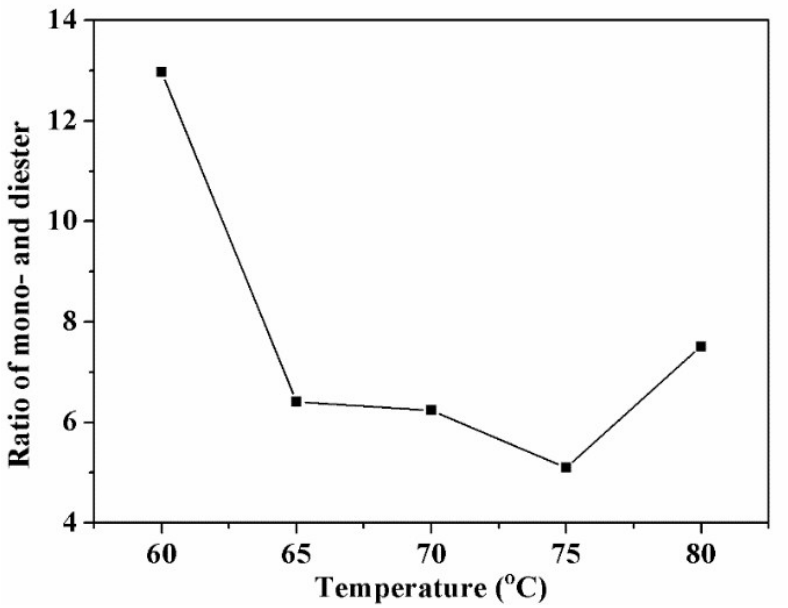

Fig. S1 Molar ratios of monoester and diester at different temperatures.

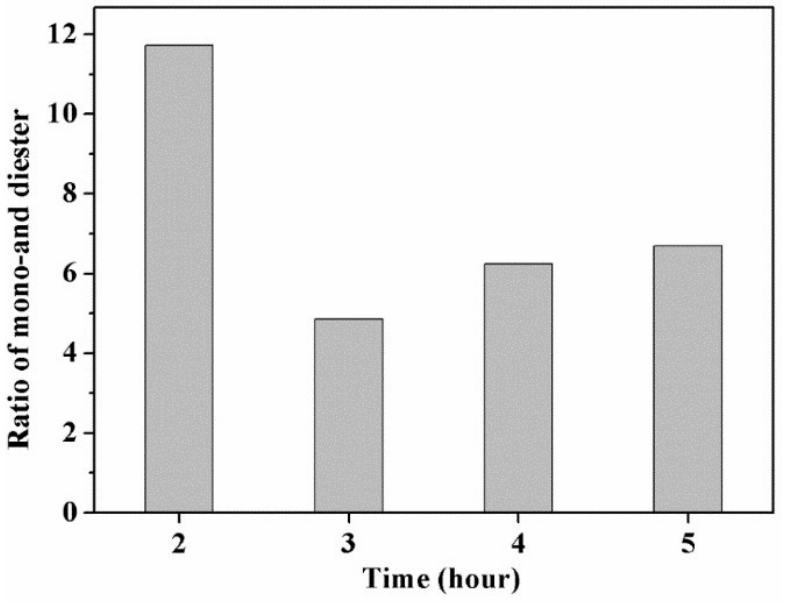

Fig. S2 Mono- and di-ester ratios at different reaction times.

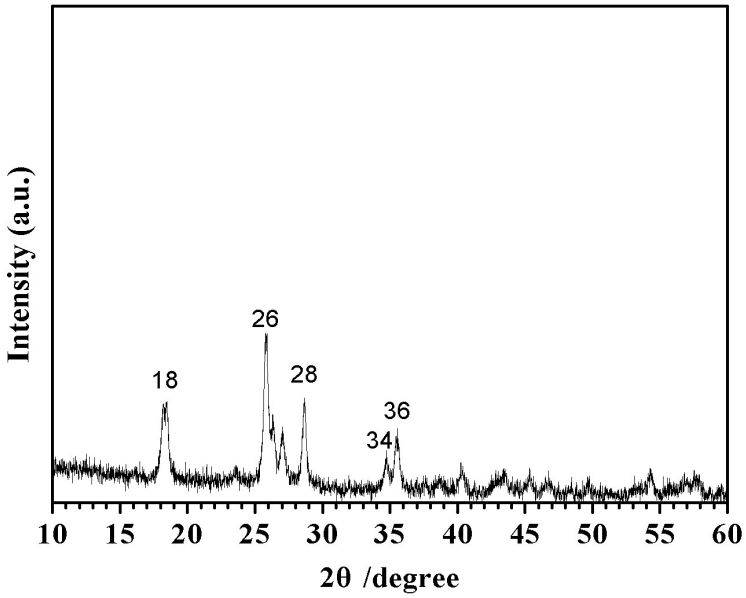

Fig. S3 The XRD pattern of the prepared nanozyme.

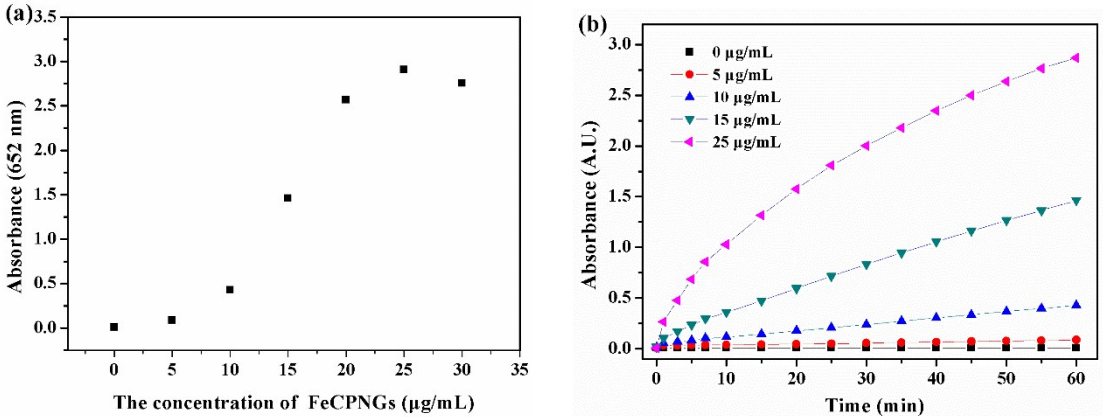

Fig. S4 The effect of FeCPNGs concentration on UV absorption maximum intensity at 652 nm (a) UV absorbance at 652 nm with different concentrations of FeCPNGs at different time in an hour (b).

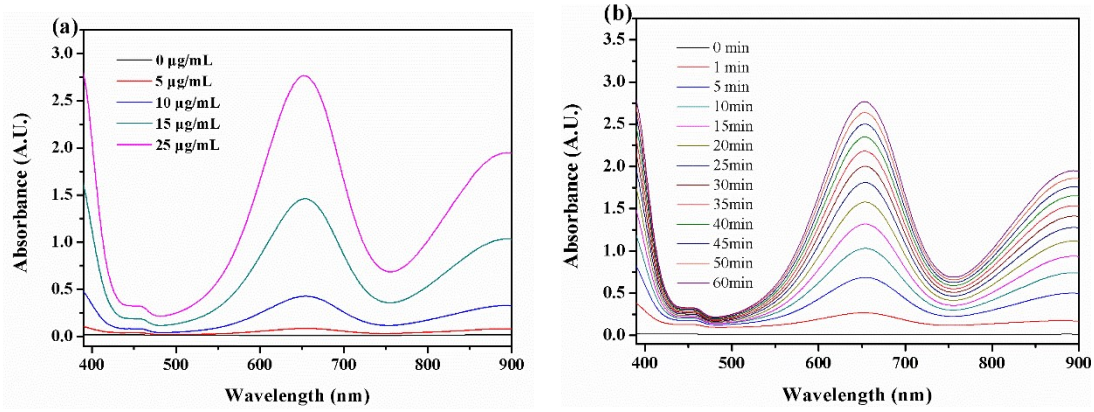

Fig. S5 The UV absorption spectra containing different concentrations of FeCPNGs (a) and UV absorption curves with concentration of 25 μg/mL at different time in an hour (b).