

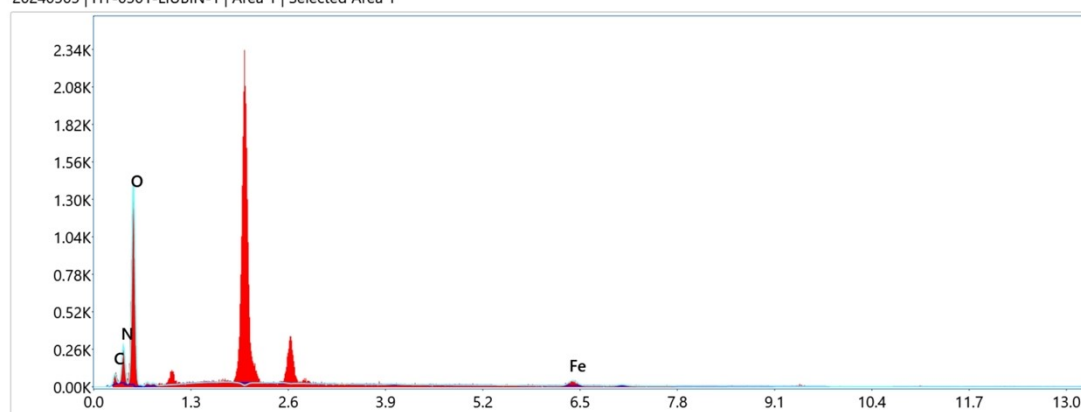
Dual-signal detection of tannin acid in red wines based on peroxidase activity carbon dots

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Det: Octane Elect Super C5

Element	Weight %	MDL	Atomic %
C K	10.89	3.21	14.01
N K	17.26	1.08	19.03
O K	68.37	0.62	66.00
Fe K	3.49	0.92	0.96

Fig. S1 P,Fe-CDs element content analysis

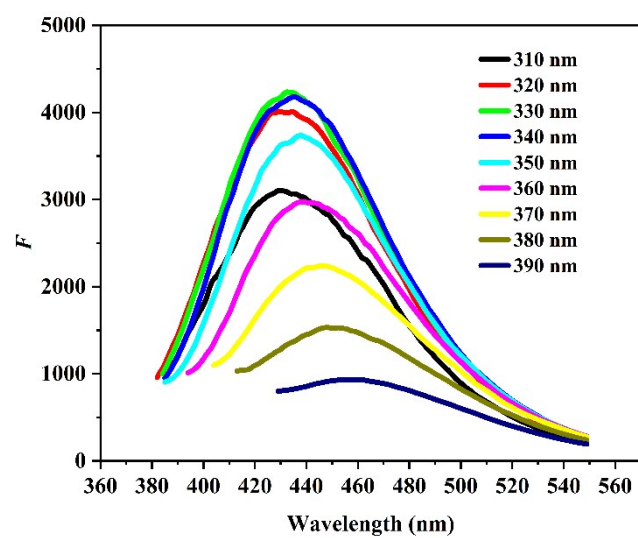


Fig. S2 Emission spectra of P,Fe-CDs at different excitation wavelengths.

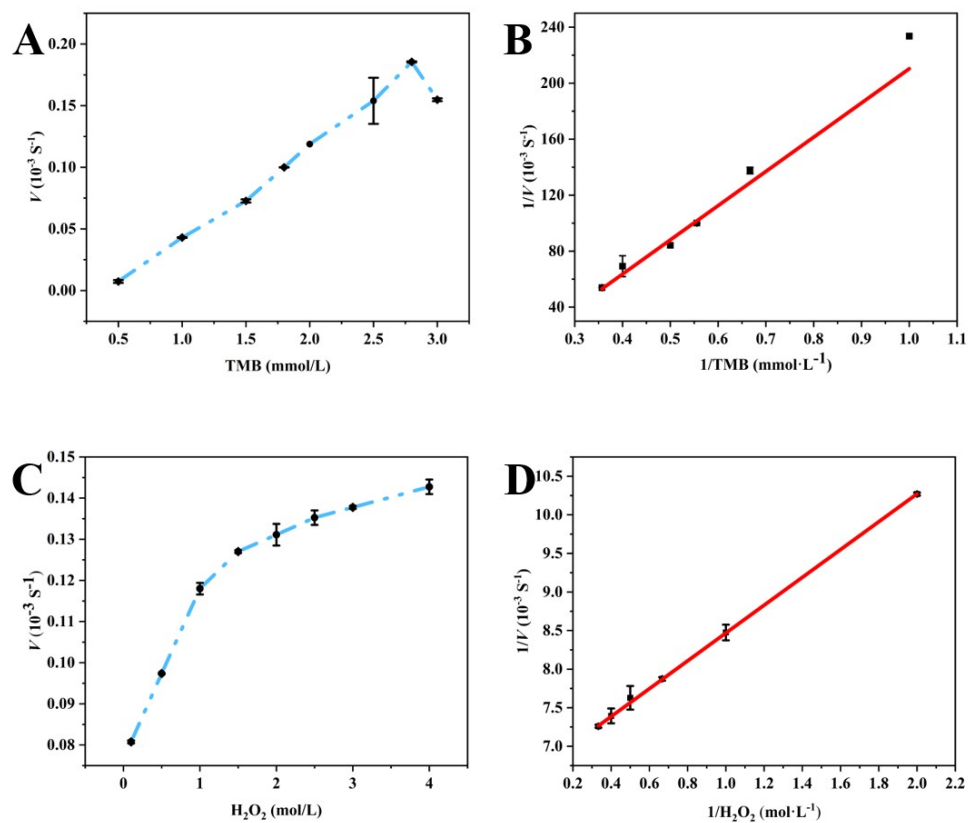


Fig. S3 TMB response curve of P,Fe-CDs (A); Lineweaver-Burk curve (B); H_2O_2 response curve of P,Fe-CDs(C); Lineweaver-Burk curve (D).

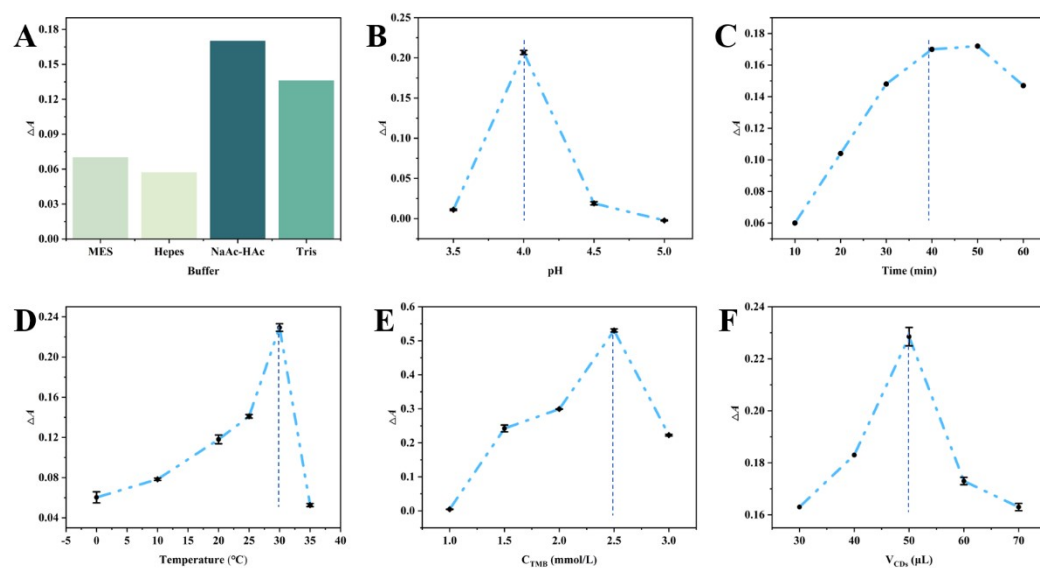


Fig. S4 Assay system optimization: buffer type (A); pH (B); time (C); temperature (D);

TMB concentration (E); P,Fe-CDs addition volume (F).

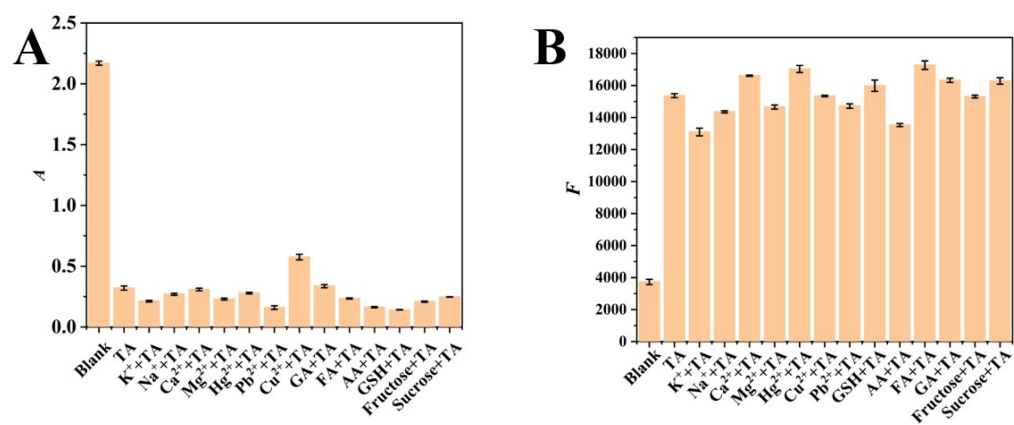


Fig S5 Coexisting ion interference : colorimetric method (A).

fluorescence method (B).