Supporting information for

A pomegranate seed-structured nanozyme-based colorimetric immunoassay for highly sensitive and specific biosensing of *Staphylococcus aureus*

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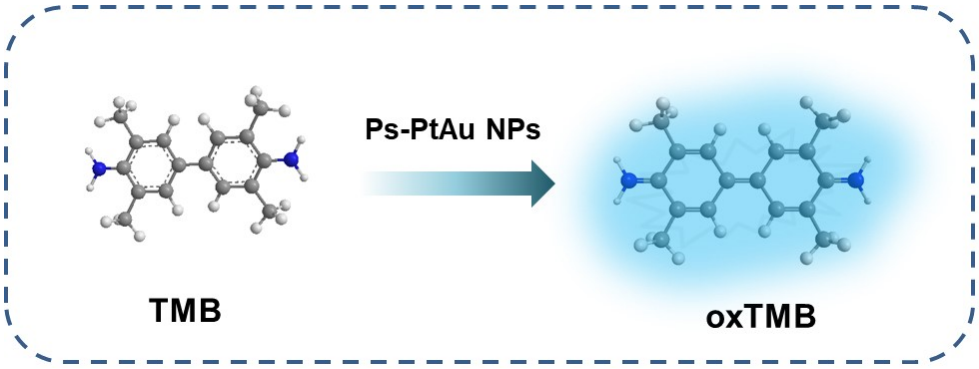

Fig. S1. The oxidation procedure of TMB with Ps-PtAu NPs.

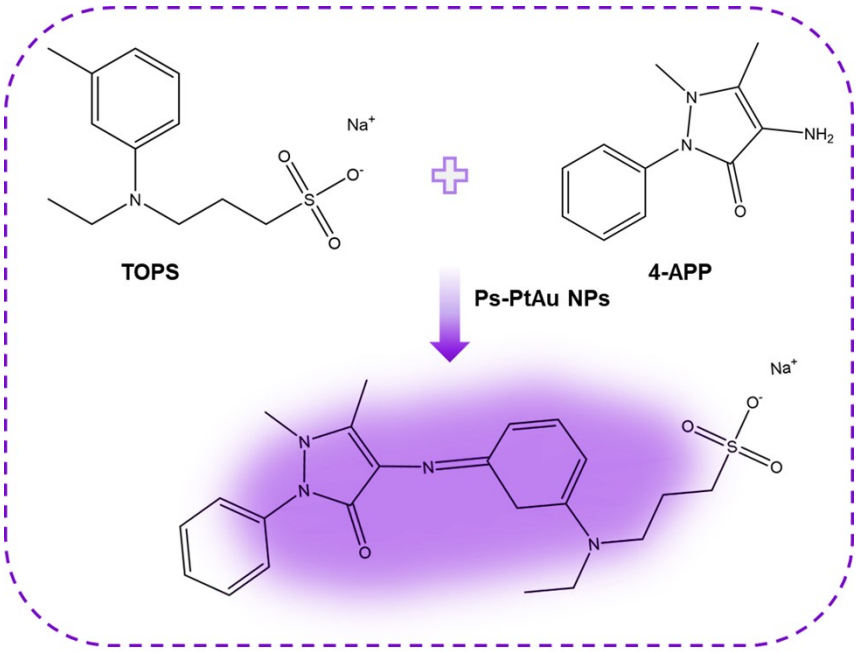

Fig. S2. The oxidation procedure of 4-AAP and TOPS with Ps-PtAu NPs.

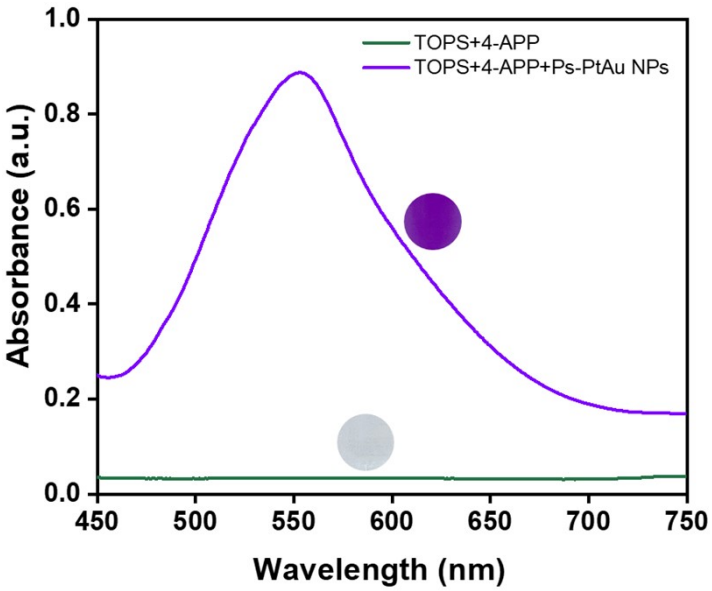

Fig. S3. The UV-vis absorbance spectra of TOPS + 4-AAP and TOPS + 4-AAP with Ps-PtAu NPs

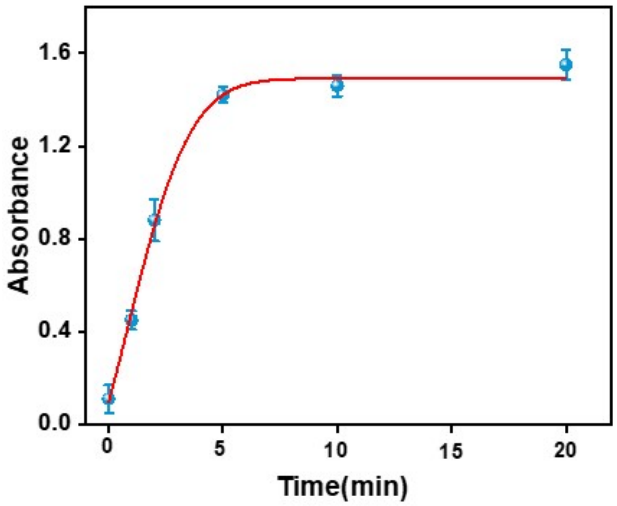

Fig. S4. The absorbance intensity of TMB at 651 nm with different reaction times.

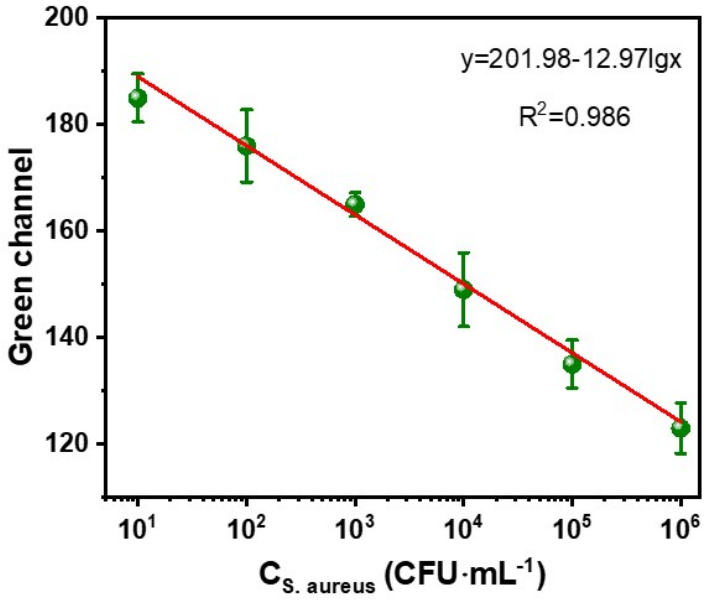

Fig. S5. The linear relationship between the *S. aureus* concentration and the green channel.

Table S1. Comparation the as-prepared strategy and previous research for the detection of *S. aureus*

Bacteria	Methods	Detection range (CFU/mL)	LOD (CFU/mL)	Reference
S. aureus	Temperature	10^2-10^6	6.0	[1]
S. aureus	SERS	10^1-10^7	—	[2]
S. aureus	Electrochemical	1×10^3-1×10^9	3.1×10^2	[3]
S. aureus	SERS	10^1-10^7	3	[4]
S. aureus	Fluorescence	10^2-10^5	2.7×10^2	[5]
S. aureus	Fluorescence	10^1-10^6	6.9	[6]
S. aureus	Colorimetric	3×10^2-3×10^8	1.2×10^2	[7]
S. aureus	Smartphone	10^1-10^6	1.0	This work

$$LOD = 3\sigma/s$$

Here, σ is the deviation from the blank value; *s* is the slope of the standard curve.

References

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