

Supplementary Materials

A schematic colorimetric assay for sialic acid assay based on PEG-mediated interparticle crosslinking aggregation of gold nanoparticles

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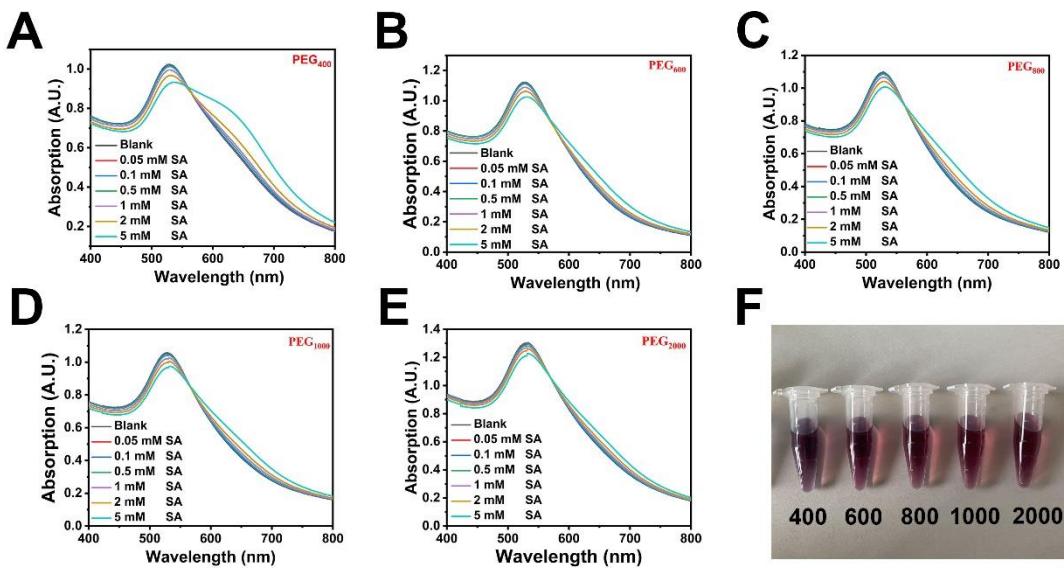


Figure S1. The sensing performance of the 4-MPBA-AuNPs with modified with different molecular weight (MW) type PEG. (MW: from 400 to 2000). The graph of the different type 4-MPBA-AuNPs-PEG solutions.

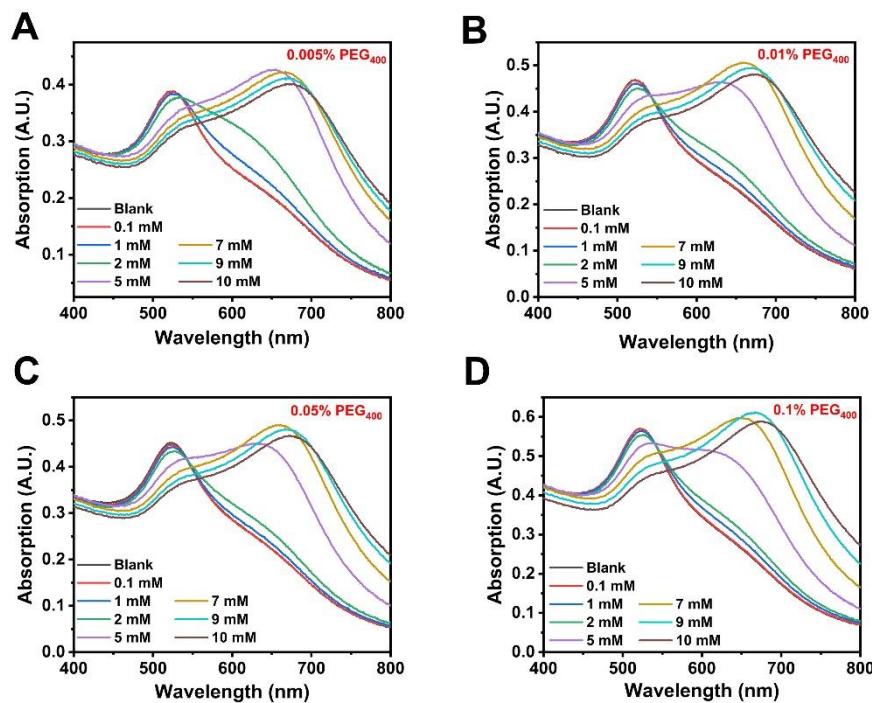


Figure S2. The UV-Vis spectrum of different concentrations of PEG₄₀₀ coated on 4-MPBA-AuNPs for the detection of SA.

Table S1. The sensitivity of the 4-MPBA-AuNPs coated with various concentration PEG₄₀₀ sensing platform for the detection of SA. ($A_{525/660}$ vs Concentration).

	0.005%	0.01%	0.05%	0.1%
Slope	-0.196	-0.206	-0.214	-0.216
R ²	0.944	0.984	0.98	0.997

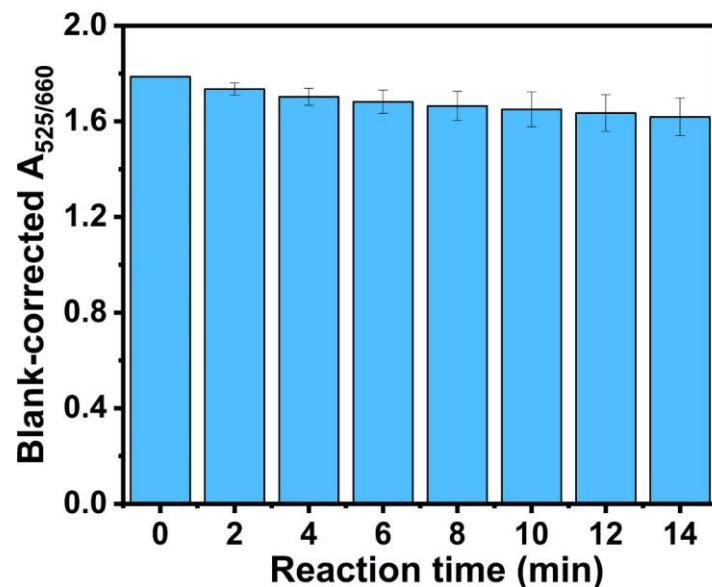


Figure S3. The ratio of the absorbance of 2 mM SA incubated with 4-MPBA-AuNPs@PEG₄₀₀ from 0 to 14 min.

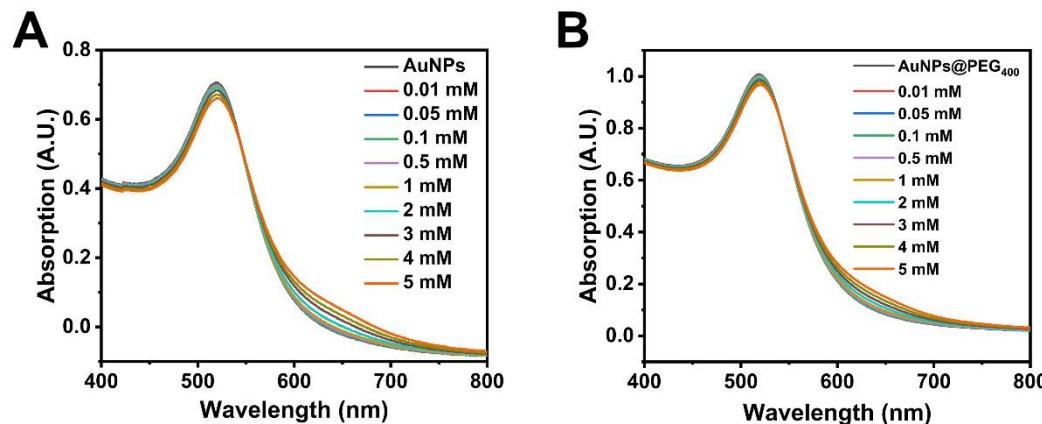


Figure. S4. (a) Extinction spectra of AuNPs at various SA concentrations, (b)extinction spectra of AuNPs@PEG₄₀₀ at various SA concentrations.

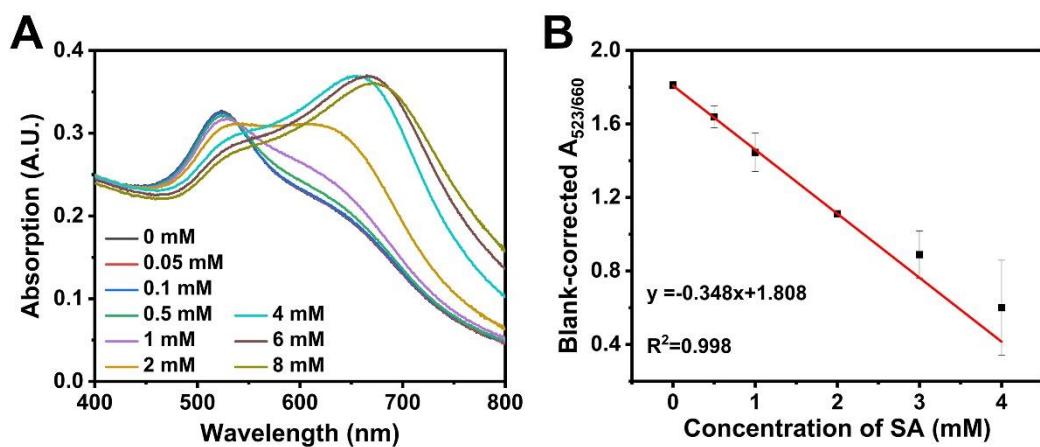


Figure. S5. (A) Extinction spectra of 4-MPBA-AuNPs at various SA concentrations, (B) Plot of $A_{523/660}$ against SA concentration.

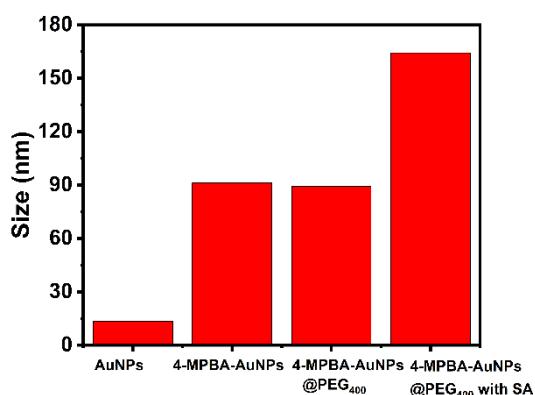


Figure. S6. The DLS analysis of the AuNPs, 4-MPBA-AuNPs, 4-MPBA-AuNPs@PEG₄₀₀ and 4-MPBA-AuNPs@PEG₄₀₀ mixed with SA.