

ELECTRONIC SUPPLEMENTARY INFORMATION (ESI)

Gold Nanomaterial-Integrated Distance-Based Analytical Device for Uric Acid Quantification in Human Urine Samples

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Preparation of solution

Phosphate buffer saline solution (50.0 mmol L⁻¹, pH 7.4) was prepared by mixing Na₂HPO₄ and NaH₂PO₄ with deionized (DI) water, and then adjusting the pH with NaOH (0.20 mol L⁻¹) and/or HCl (0.20 mol L⁻¹).

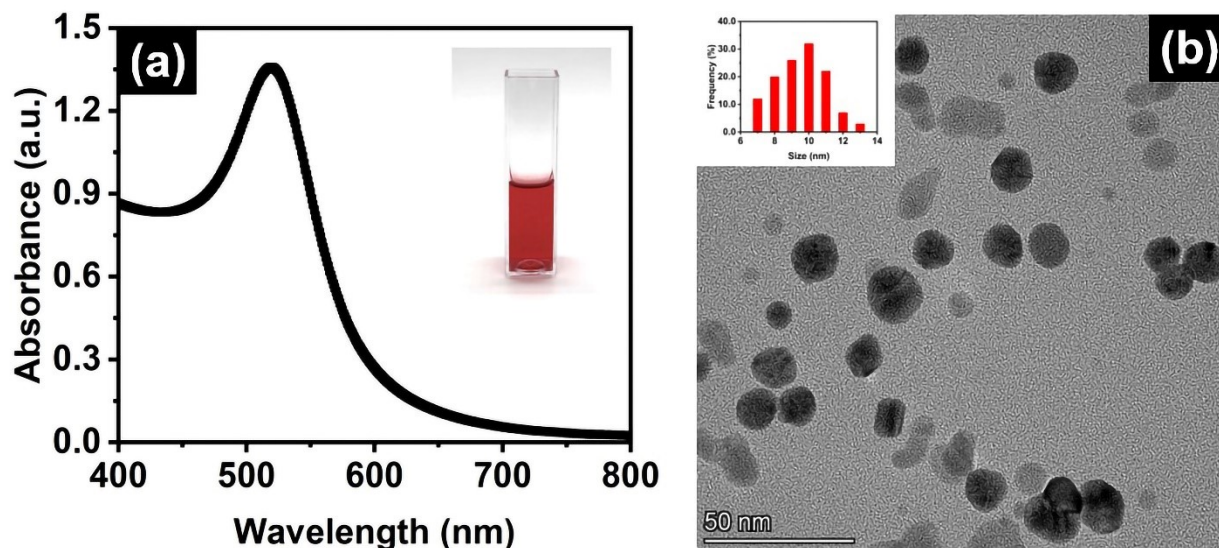


Figure S1 Illustrations on (a) absorbent spectrum and (b) TEM image of the synthesized AuNPs in this study.

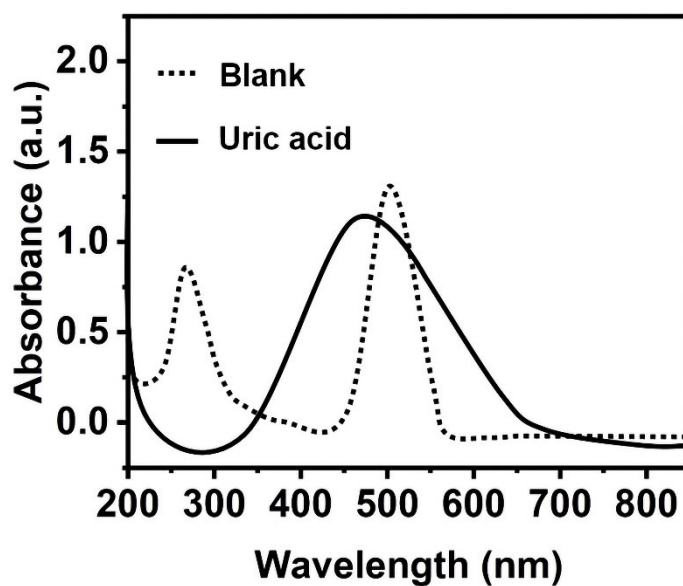


Figure S2 Absorbent spectrum of DAB/uricase/AuNPs solution (dot line) without and (dot line) with uric acid at 3.0 mmol L^{-1} .

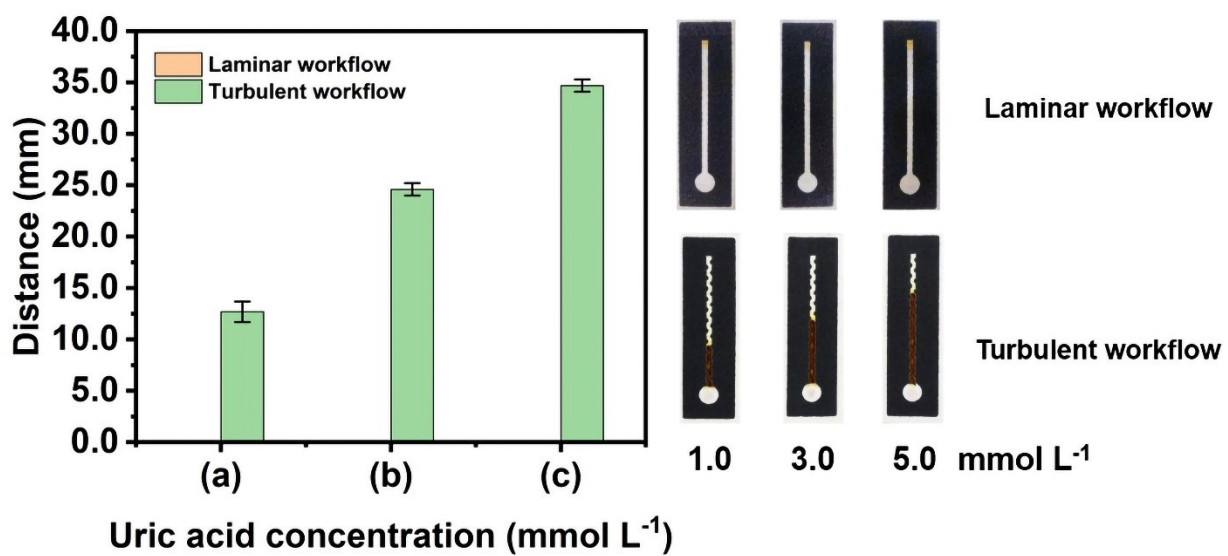


Figure S3 The influence of the laminar flow format and turbulent flow format of the detection zone of the dPAD for uric acid detection at (a) 1.0, (b) 3.0, and (c) 5.0 mmol L⁻¹ (n = 3).

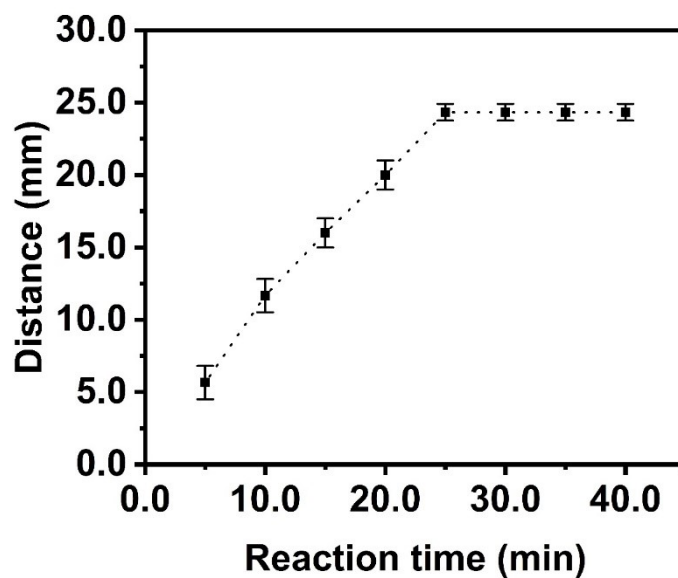


Figure S4 The effect of the reaction time on the distance signals for uric acid detection at 3.0 mmol L⁻¹ in the proposed method (n = 3).

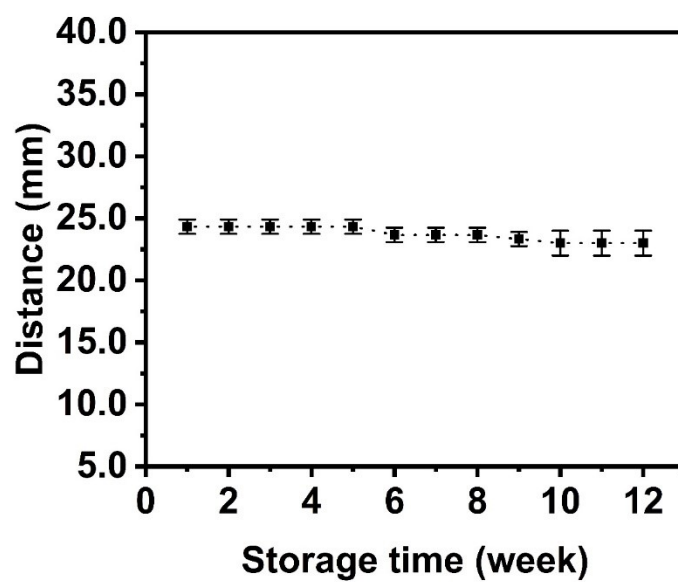


Figure S5 The effect of the storage time on the distance signals of the developed dPAD for detecting uric acid at 3.0 mmol L⁻¹ (n = 3).

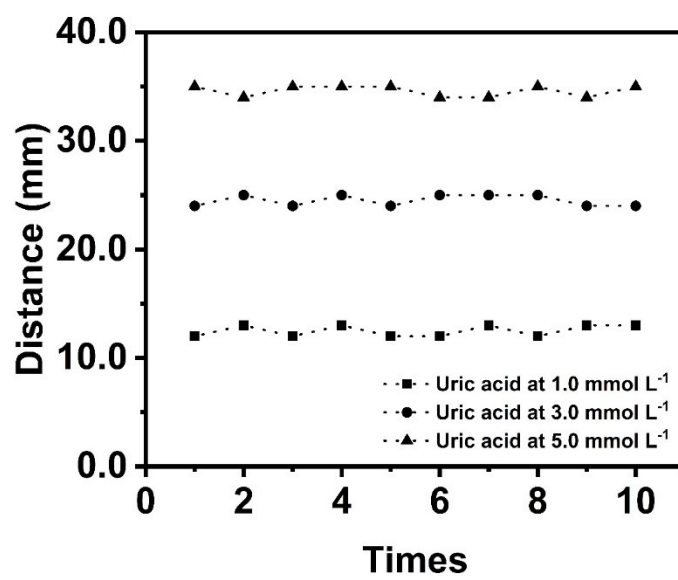


Figure S6 The reproducibility of the dPAD for the detection of uric acid at (■) 1.0, (●) 3.0, and (▲) 5.0 mmol L⁻¹ (n = 3).