

Supporting information

A Flexible Electrochemical Glucose Sensing Platform Based on Electrospun PVA Mat Covered with in-situ Grown Silver Nanoparticles and a Mixed Self-assembled Monolayer of Glucose Oxidase and Ferrocene

Yu Wang^{a,d#}, Qiyang Wang^{c#}, Guobi Chai^{a,b}, Wu Fan^{a,b}, Qingzhao Shi^{a,b}, Wenfen Zhang^{b,d}, Jian Mao^{a,b}, Jianping Xie^{a,b}, Ronghan Wei^{c*}, Qidong Zhang^{a,b*}

^aFood Laboratory of Zhongyuan, Flavour Science Research Center of Zhengzhou University, Kexue Avenue 100, Zhengzhou, Henan 450001, P. R. China.

^bZhengzhou Tobacco Research Institute of CNTC, Fengyang Road 2, Zhengzhou, Henan 450001, P. R. China.

^cCollege of Mechanics and Safety Engineering, Zhengzhou University, Kexue Avenue 100, Zhengzhou, Henan 450001, P. R. China.

^dCollege of Chemistry, Zhengzhou University, Kexue Avenue 100, Zhengzhou, Henan 450001, P. R. China.

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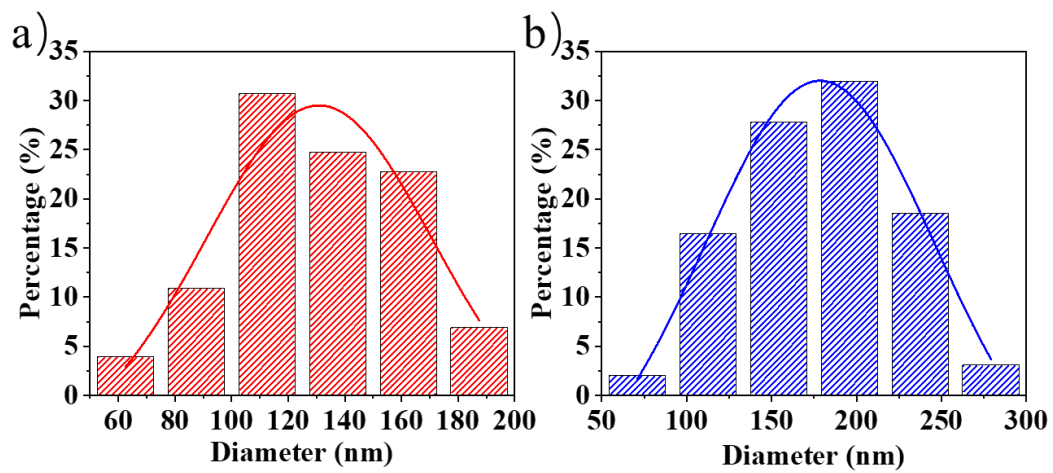


Fig.S1. Diameter distribution of PVA fibers (a) before cross-linking; (b) after cross-linking.

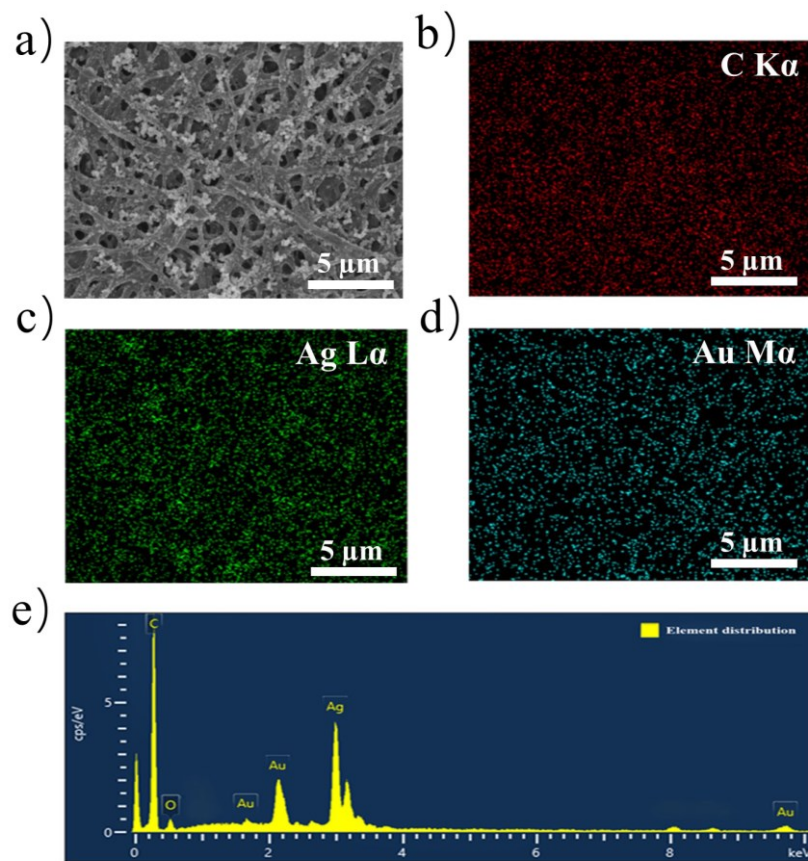


Fig.S2. SEM and EDX of PVA/nano-Ag/Au (a) SEM; (b-d) EDX mapping with elemental analysis; (e) EDX spectrum.

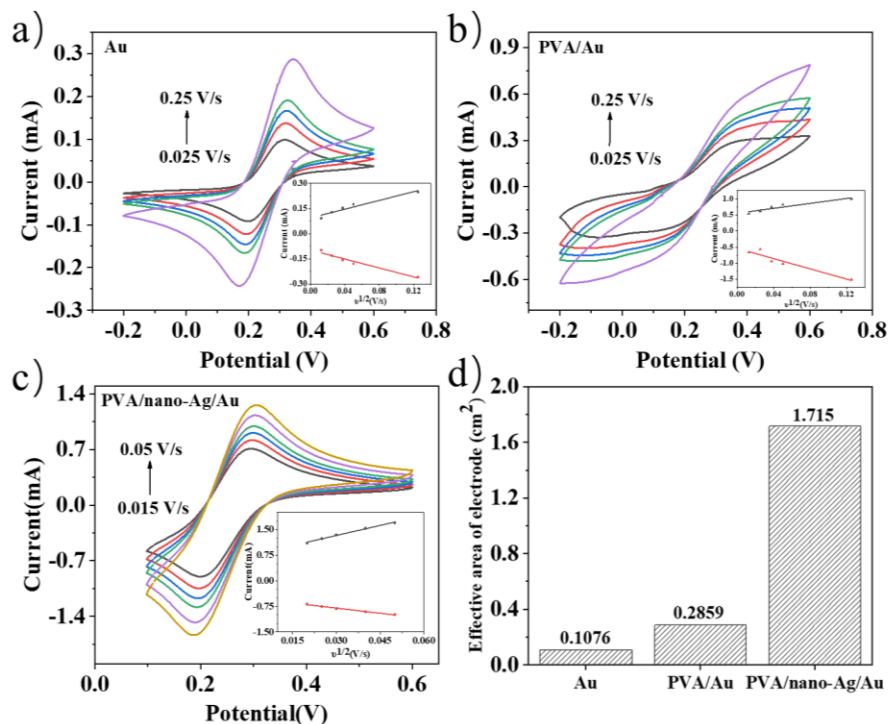


Fig.S3. CV curves in 5 mM $[\text{Fe}(\text{CN})_6]^{3-}/[\text{Fe}(\text{CN})_6]^{4-}$ at different scan rates of (a) Au; (b) PVA/Au; (c) PVA/nano-Ag/Au; insert: calibration plot of peak current versus square root of scan rate; (d) the effective areas calculated of electrodes.

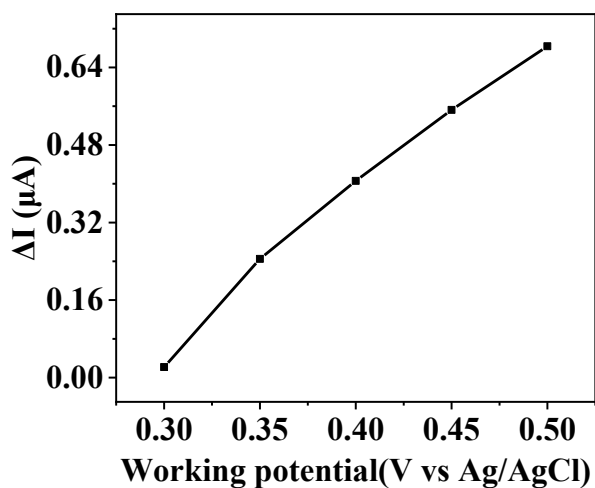


Fig.S4. The current change of PVA/nano-Ag/Au/Fc-GOD in 0.2-0.4 mM glucose solution under different applied potentials by CV.

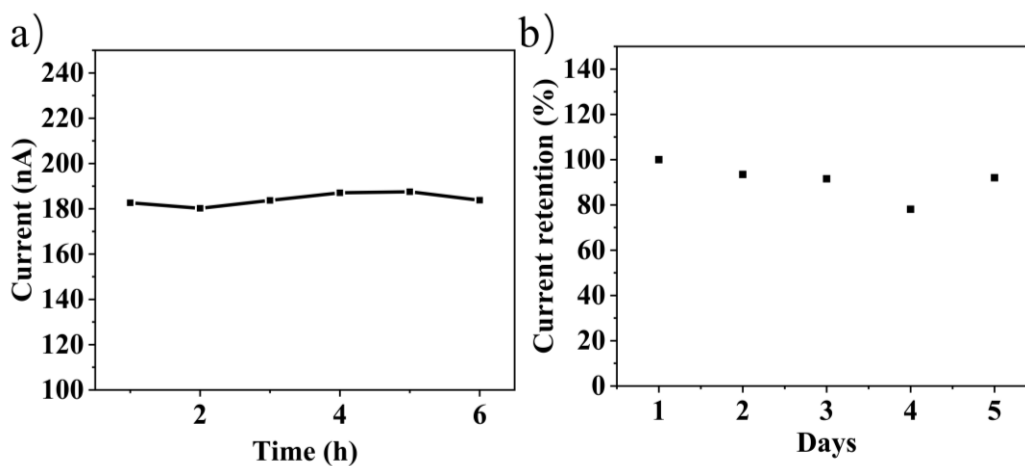


Fig.S5. Repeatability of glucose detection performance with PVA/nano-Ag/Au/Fc-GOD in 0.2 mM glucose within different storage durations. (a) during 6 h, 1/h; (b) during 5 days, 1/day.

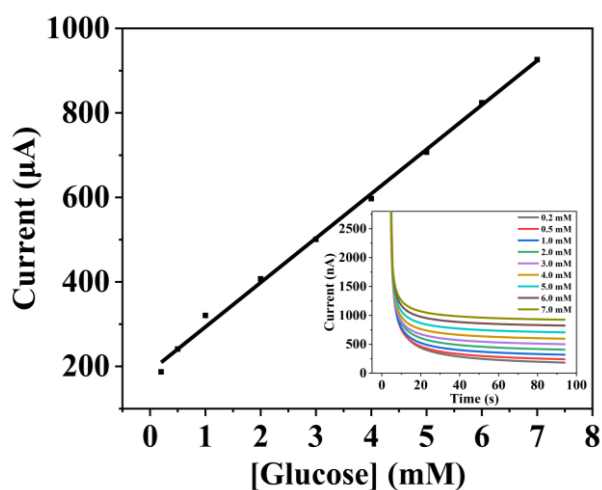


Fig.S6. Plot of linear fit of current to glucose concentration in artificial sweat; insert: chronoamperometric response to the increasing glucose concentrations from 0.2 mM to 7.0 mM.

Table S1. Comparison of analytical characteristics of several glucose-sensing electrodes.

Modified Electrode	Linear Range (mM)	LOD (mM)	Stretchability	Ref.
PET/PMMA/Au/GOx	>1.0	0.33	Yes	11
GOD/SnO ₂ -NF/CH/PB/GE	0.5-5.0	0.05	No	15
Electrospun Nylon-PPy-MIPs	0.1-1	0.1	No	16
Mn ₂ O ₃ /Ag nanofibers/GOx	up to 1.11	1.73×10 ⁻³	Yes	17
Carbon film/BSA/Fc/GOx	0.05-2.7	0.066	No	25
Au/PB/GOx/Ch fiber	0-0.5	6×10 ⁻³	Yes	43
PVA/nano-Ag/Au/Fc-GOD	0.2-7.0	0.038	Yes	This work