

Supplementary Materials for Electrochemical Biosensor Based on Chitosan- and Thioctic-Acid-Modified Nanoporous Gold Co- Immobilization Enzyme for Glycerol Determination

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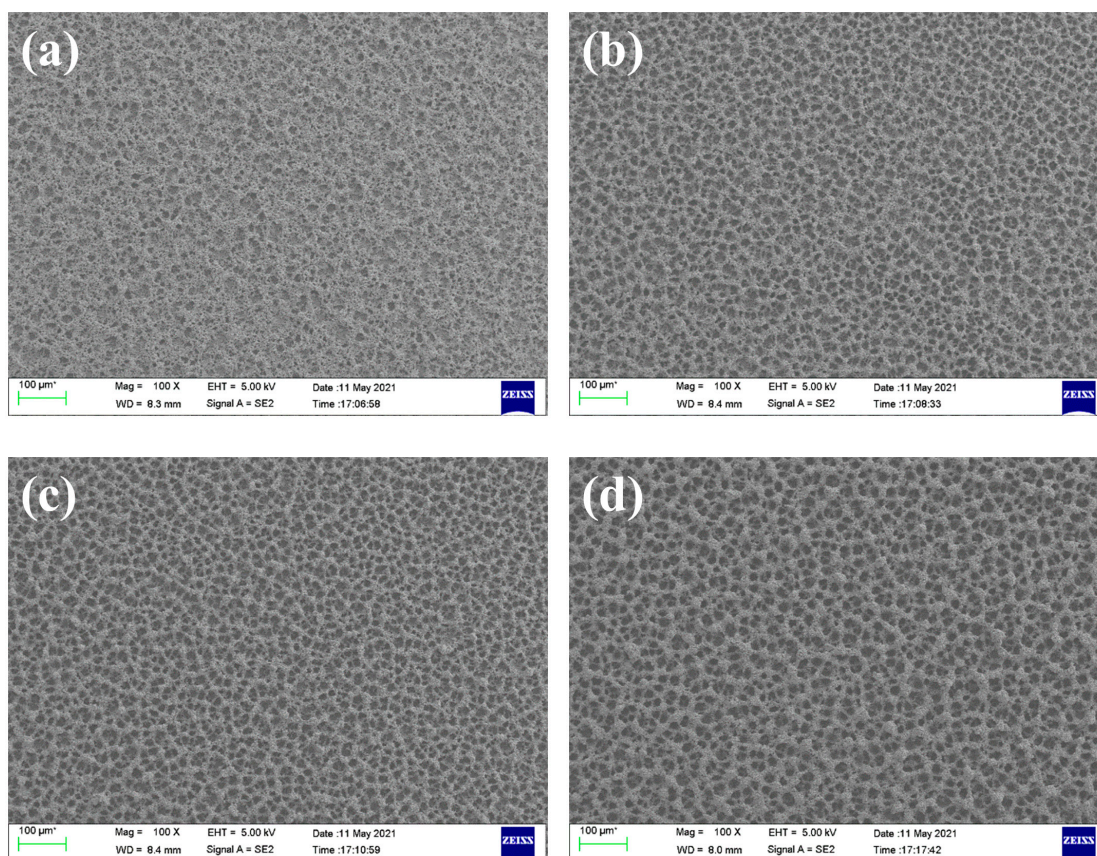


Figure S1. SEM images of NPG electrodeposited at (a) –1, (b) –2, (c) –3 and (d) –4 V for 50 s.

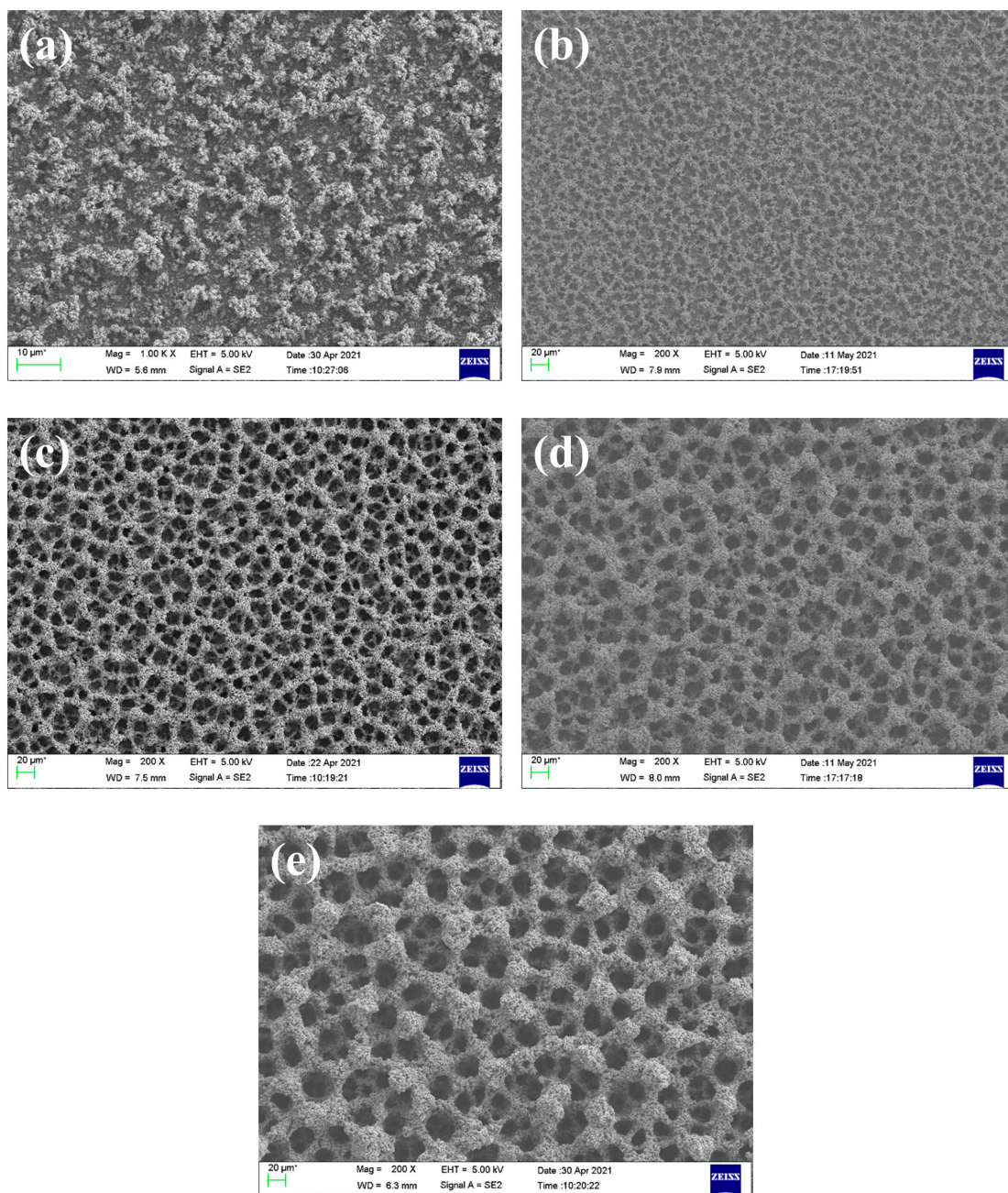


Figure S2. SEM images of NPG electrodeposited at -4 V for (a) 10, (b) 30, (c) 50, (d) 70 and (e) 90 s.

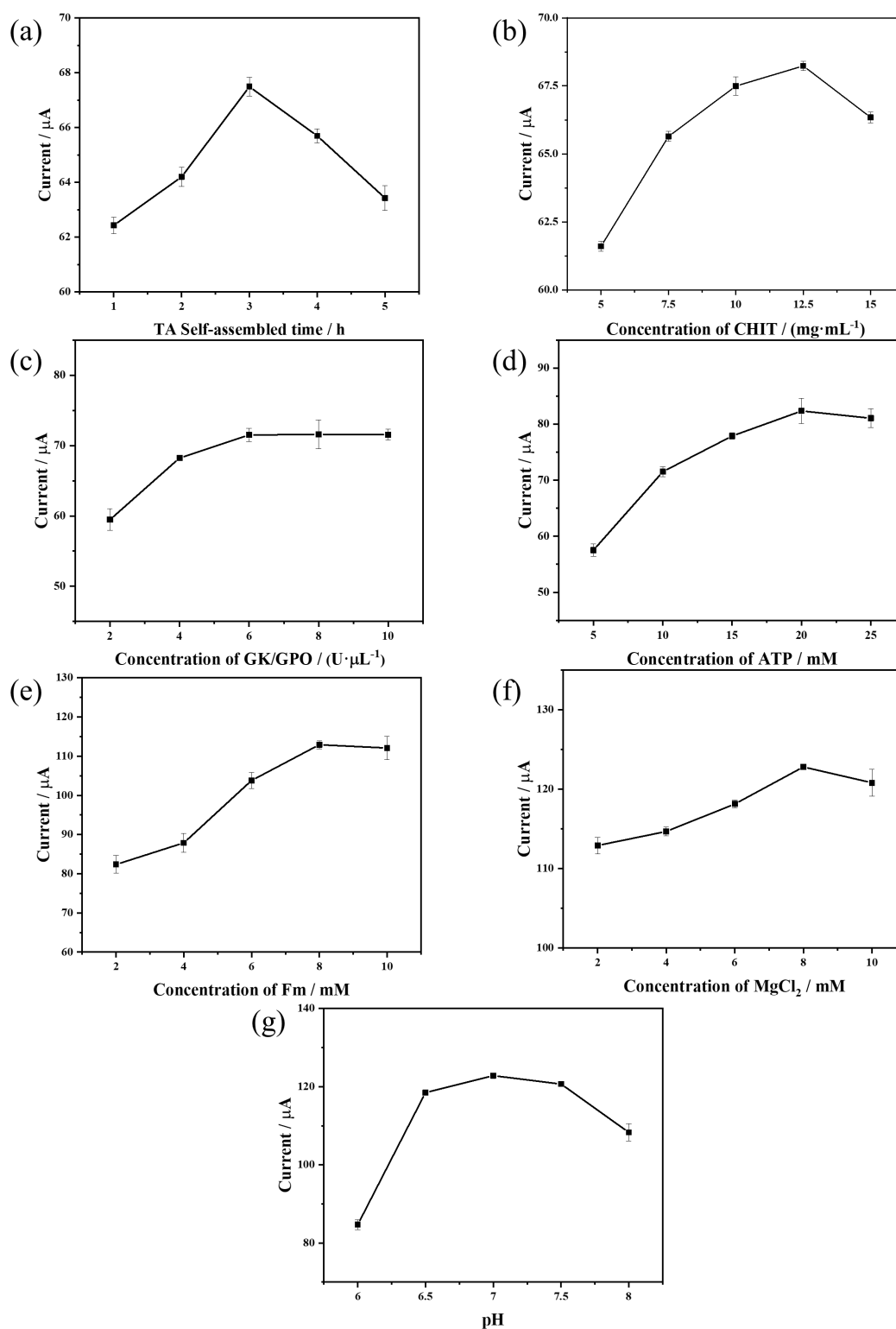


Figure S3. Effect of several variables on the response current of the GK/GPO/CHIT/TA/NPG/AuE biosensor: (a) TA self-assembled time, (b) the concentration of CHIT, (c) the concentration of GK/GPO, (d) the concentration of ATP, (e) the concentration of Fm, (f) the concentration of MgCl_2 and (g) pH.

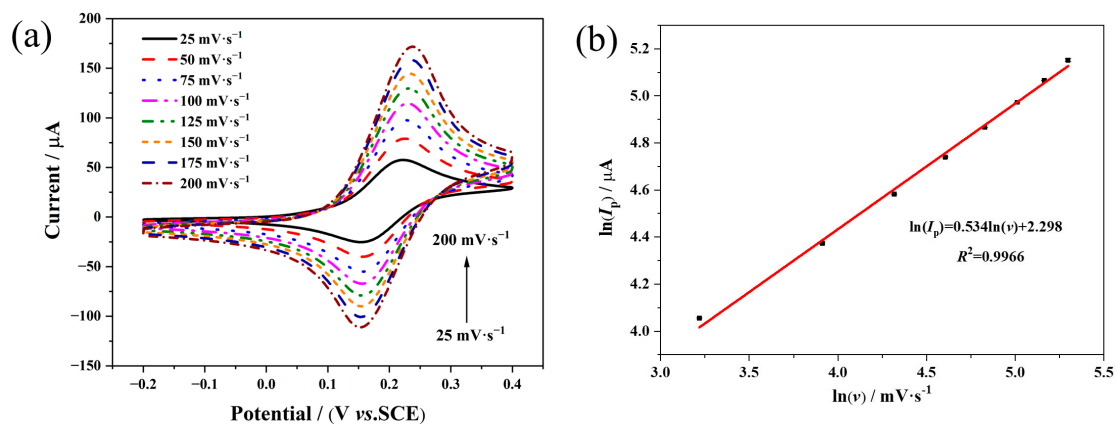


Figure S4. (a) CV response of the GK/GPO/CHIT/TA/NPG/AuE biosensor measured in 0.1 M PB (pH 7.0) containing 20 mM ATP, 8 mM Fm, 8 mM MgCl₂ and 1 mM glycerol at different scan rates (25~200 mV·s⁻¹), and (b) corresponding linear relationship between anodic peak current and scan rate.

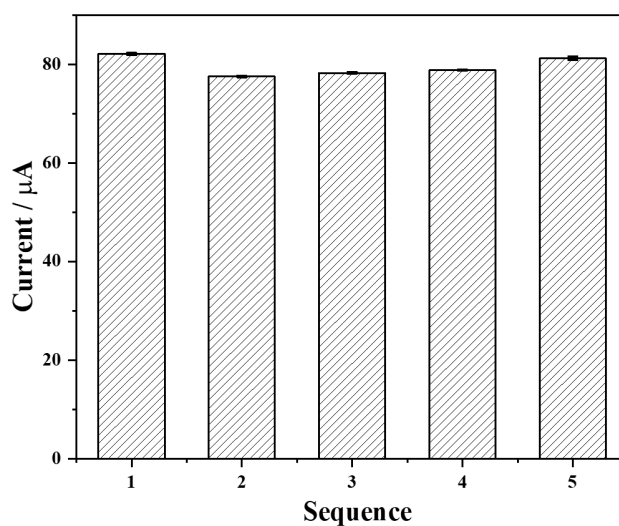


Figure S5. Repeatability of the GK/GPO/CHIT/TA/NPG/AuE modified electrode in 0.1 M PB (pH 7.0) containing 20 mM ATP, 8 mM Fm, 8 mM MgCl₂ and 1 mM glycerol at a scan rate of 50 mV·s⁻¹.

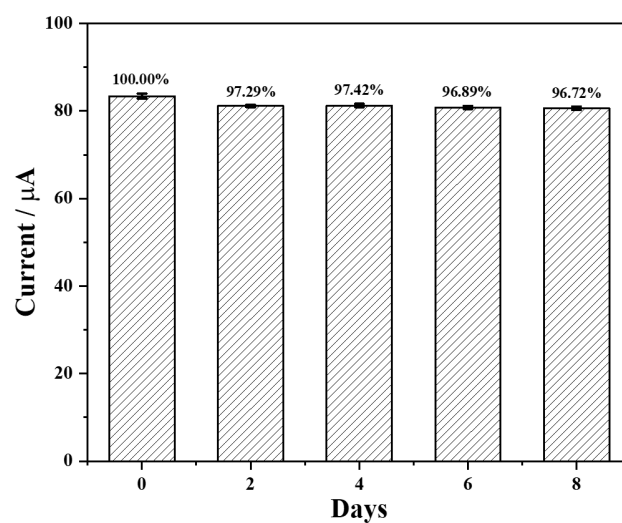


Figure S6. Storage stability of the GK/GPO/CHIT/TA/NPG/AuE modified electrode in 0.1 M PB (pH 7.0) containing 20 mM ATP, 8 mM Fm, 8 mM MgCl_2 and 1 mM glycerol at a scan rate of $50 \text{ mV} \cdot \text{s}^{-1}$.