

Supplementary Material for

**Enzyme-free glucose sensors with efficient synergistic electro-catalysis based on ferrocene derivative and two metal nanoparticles**

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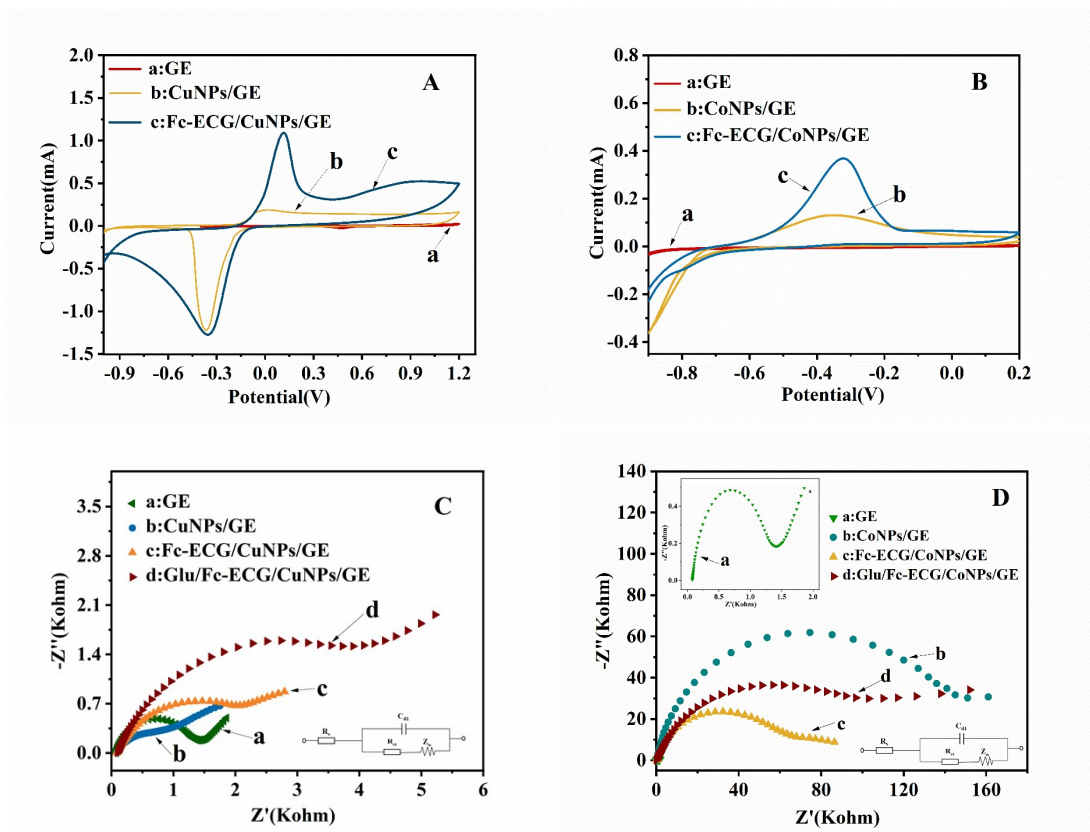
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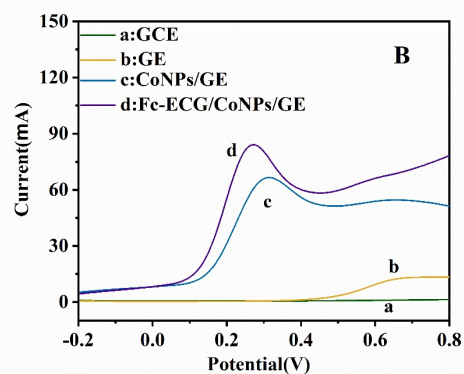
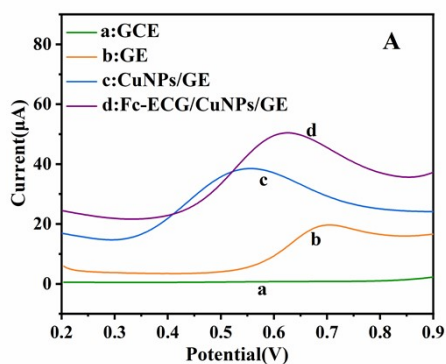
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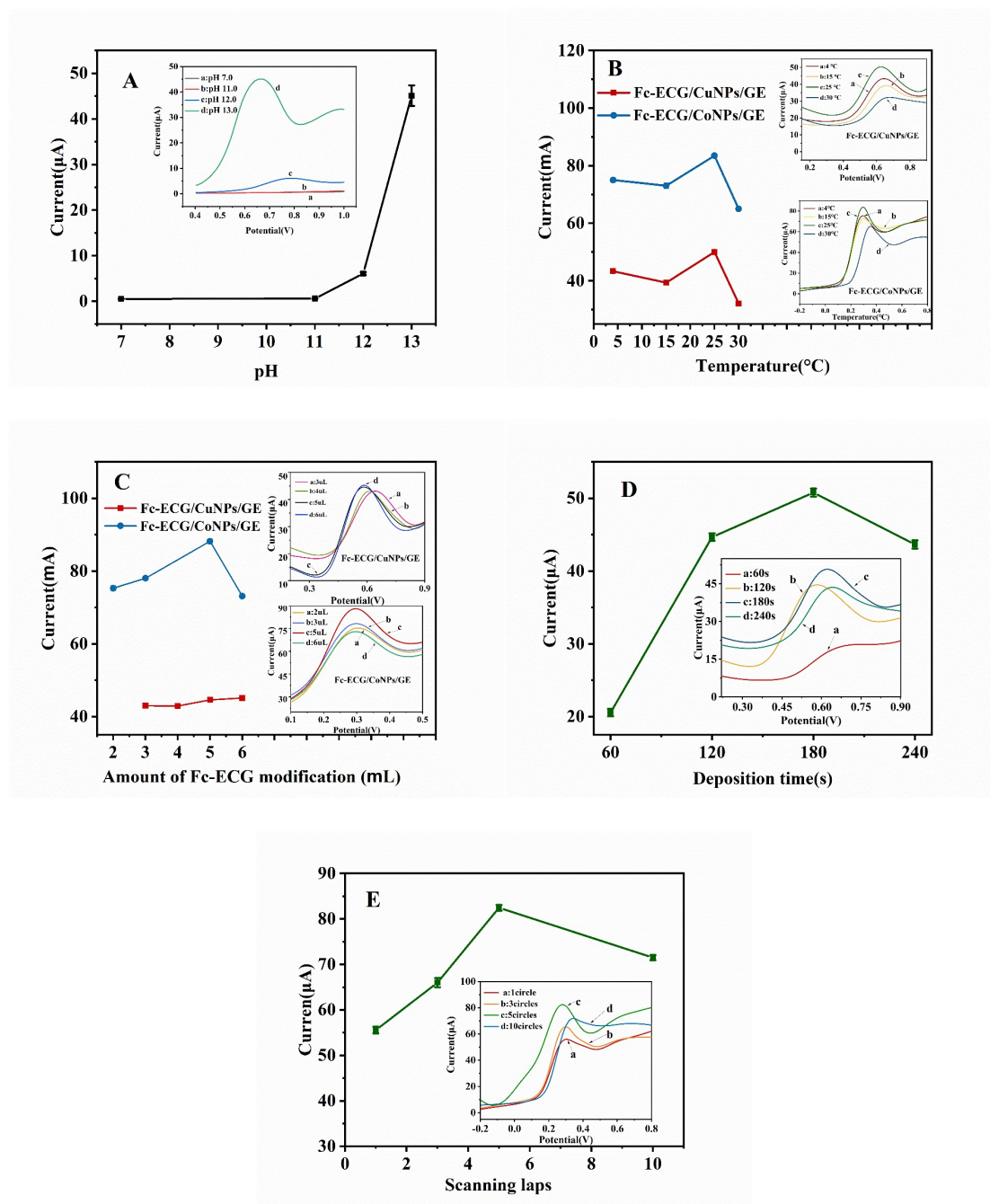
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**Fig. S1** (A) CV graphs of GE (a), CuNPs/GE (b), Fc-ECG/CuNPs/GE (c), Glu/Fc-ECG/CuNPs/GE(d) in PBS (pH 7.0); (B) CV graphs of GE (a), CoNPs/GE (b), Fc-ECG/CoNPs/GE (c), Glu/Fc-ECG/ CoNPs/GE (d) in PBS (pH 7.0) (the inset is an enlarged view); (C) EIS plots of GE (a), CuNPs/GE (b), Fc-ECG/CuNPs/GE (c), Glu/Fc-ECG/ CuNPs/GE (d) in 5 mM  $K_4[Fe(CN)_6]/K_3[Fe(CN)_6]$  with 0.1 M KCl solution; (D) EIS plots of GE (a), CoNPs/GE (b), Fc-ECG/CoNPs/GE (c), Glu/Fc-ECG/ CoNPs/GE (d) in 5 mM  $K_4[Fe(CN)_6]/K_3[Fe(CN)_6]$  with 0.1 M KCl solution (the inset is an enlarged view).



**Fig. S2** (A) DPVs of GCE (a), GE (b), CuNPs/GE (c), Fc-ECG/CuNPs/GE (d) in a mixture of 4 mM Glu and 0.1 M NaOH solution; (B) DPVs of GCE (a), GE (b), CoNPs/GE (c), Fc-ECG/CoNPs/GE (d) in a mixture of 4 mM Glu and 0.1 M NaOH solution;



**Fig. S3** Optimization of Fc-ECG/CuNPs/GE and Fc-ECG/CoNPs/GE (the insets are corresponding DPV plots). (A) pH value with bare gold electrode for glucose; (B) Temperature; (C) Amount of Fc-ECG modification, (D) Deposition time of CuNPs by *i-t* technique, (E) Scanning laps for depositing CoNPs by CV technique.