

Supporting Information

Anodic Stripping Voltammetric Analysis of Trace Arsenic(III) on a Au-Stained Au Nanoparticles/Pyridine/Carboxylated Multiwalled Carbon Nanotubes/Glassy Carbon Electrode

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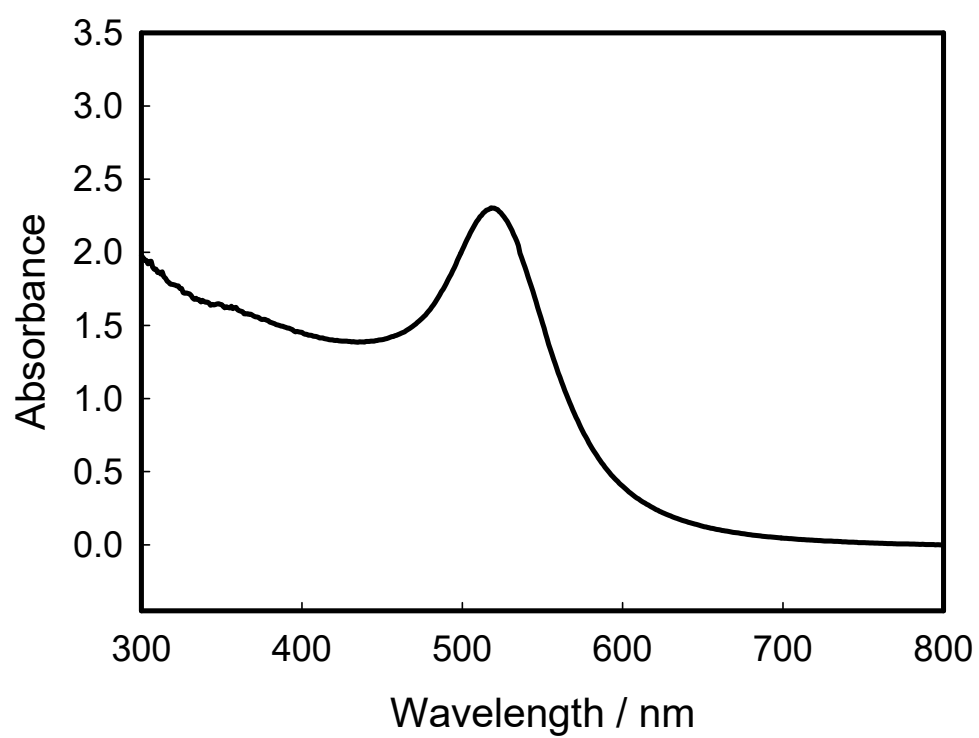


Figure S1. UV-Vis spectrum of the AuNPs.

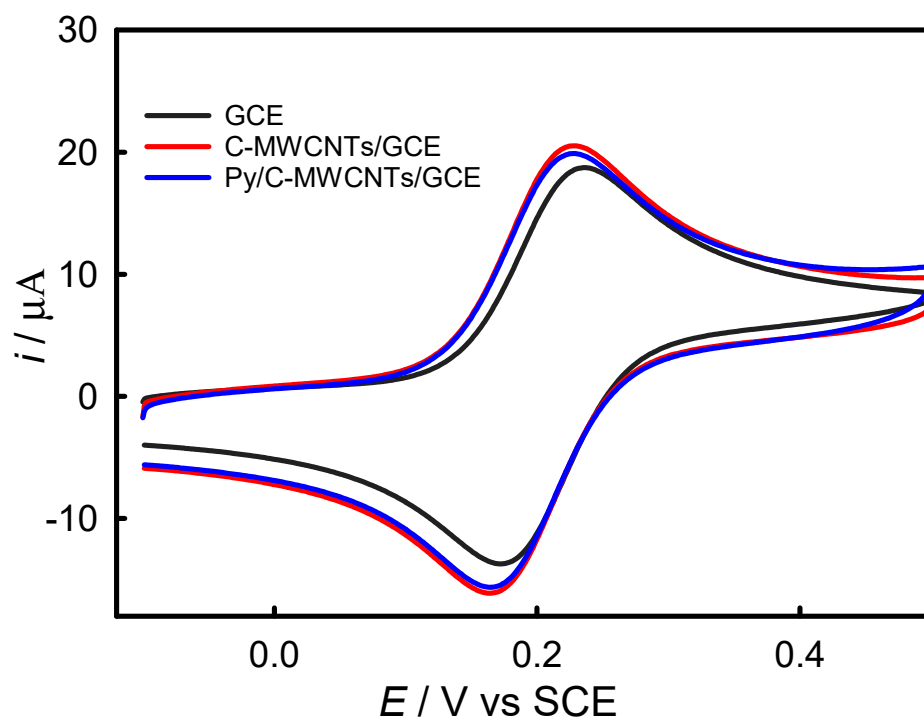


Figure S2. CV curves on GCE, C-MWCNTs/GCE and Py/C-MWCNTs/GCE in 0.1 M PBS containing 1.0 mM $\text{K}_4\text{Fe}(\text{CN})_6$ at pH 7.0.

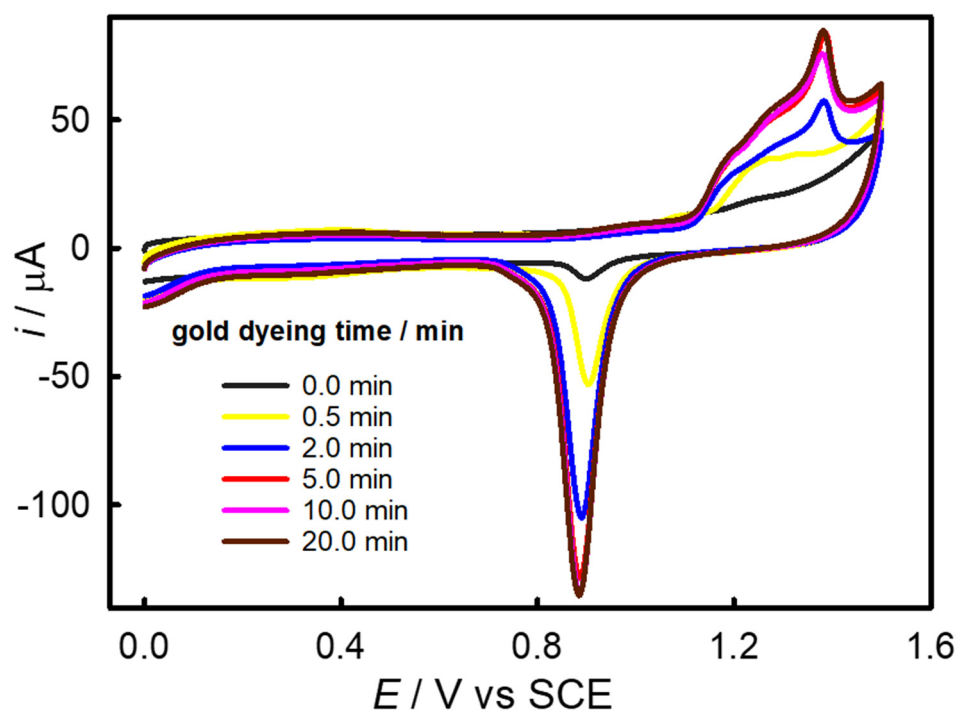


Figure S3. CV curves on Au/Py/C-MWCNTs/GCE prepared at different gold staining time. Scan rate: 50 mV s^{-1} .

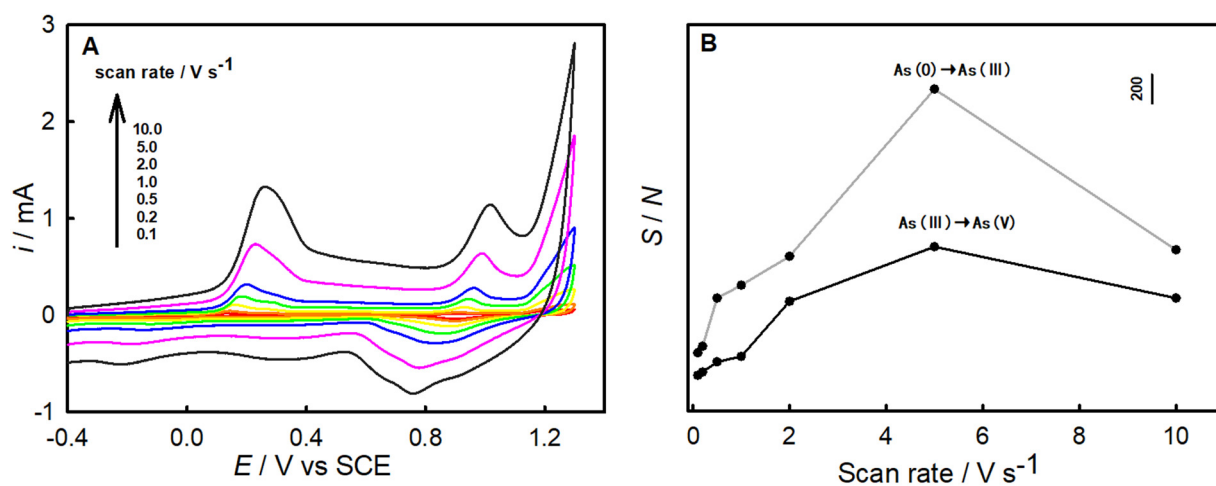


Figure S4. (A) CV curves on $\text{Au}_s/\text{Py}/\text{C-MWCNTs}/\text{GCE}$ in 0.1 M aqueous H_2SO_4 containing $1.0\text{ }\mu\text{M}$ As(III) at different scan rates, (B) the associated S/N plots of $\text{As(0)} \rightarrow \text{As(III)}$ (grey) and $\text{As(III)} \rightarrow \text{As(V)}$ (black) *vs* scan rate, S : peak current, N : noise of the background current. The experiments were conducted after preconcentration at -0.40 V for 7 min .

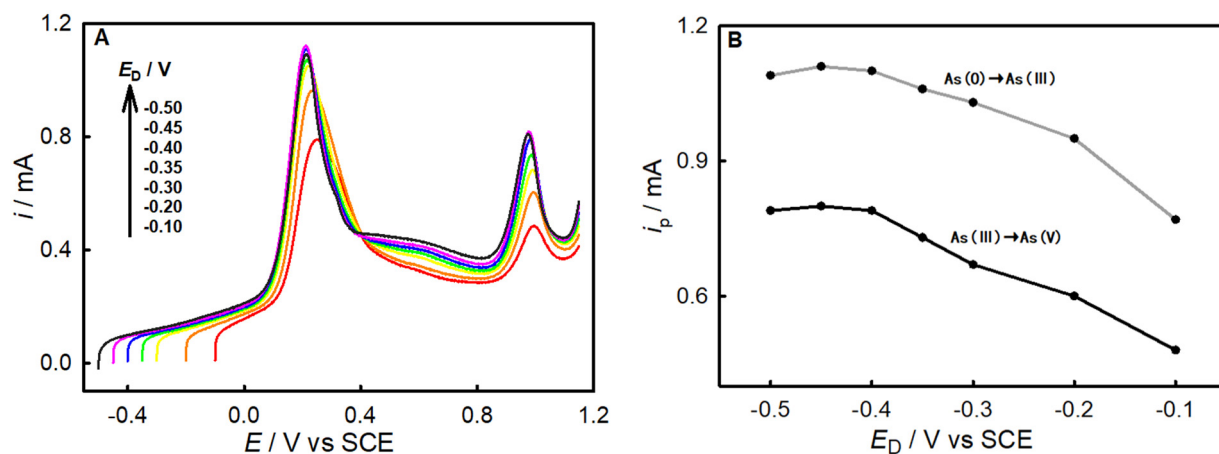


Figure S5. LSASV responses (A) on Au_s/Py/C-MWCNTs/GCE in 0.1 M aqueous H₂SO₄ containing 1.0 μM As(III) at various As(0)-deposition potential (E_D) values and the corresponding peak currents versus E_D (B). As(0)-deposition time (t_D) = 7 min.

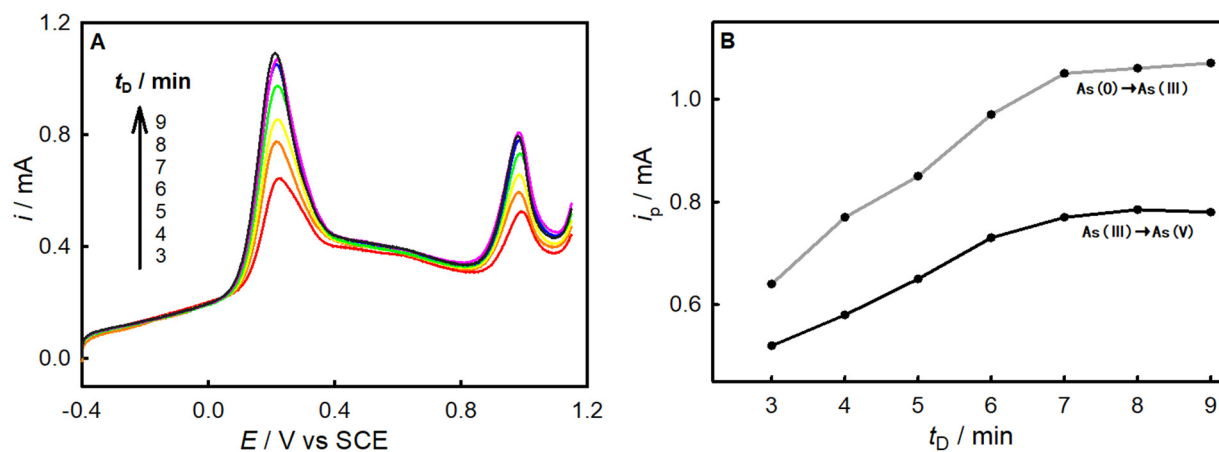


Figure S6. LSASV responses (A) on Au_s/Py/C-MWCNTs/GCE in 0.1 M aqueous H₂SO₄ containing 1.0 μM As(III) for various As(0)-deposition time (t_D) and the corresponding peak currents versus t_D (B). $E_D = -0.40$ V.

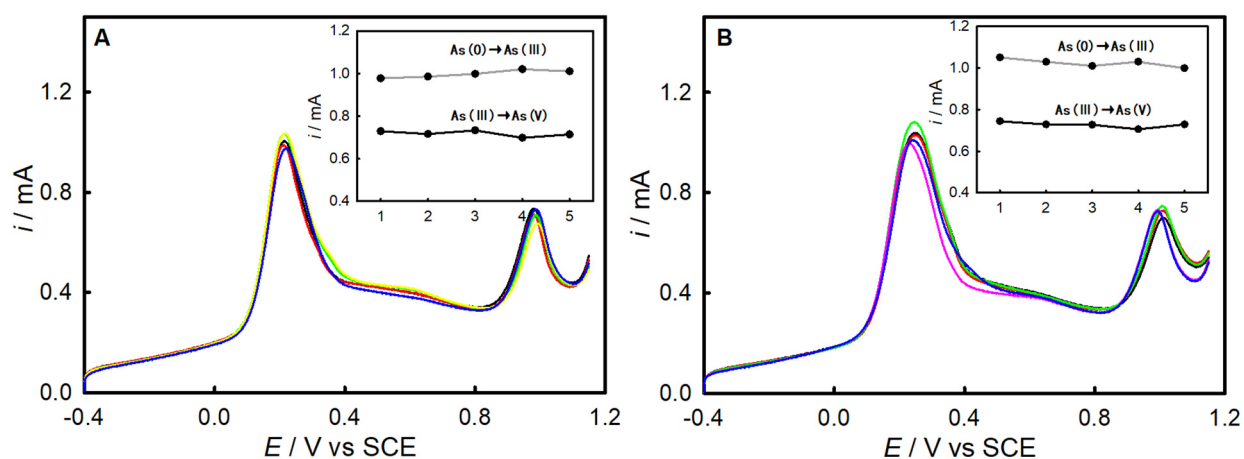


Figure S7. Stability and reproducibility of LSASV response of 1.0 μM As(III). (A) Repeated five times on one $\text{Au}_s/\text{Py}/\text{C-MWCNTs}/\text{GCE}$ in 0.1 M aqueous H_2SO_4 , (B) On a batch of five different $\text{Au}_s/\text{Py}/\text{C-MWCNTs}/\text{GCE}$ s. $E_D = -0.40$ V, $t_D = 7$ min.

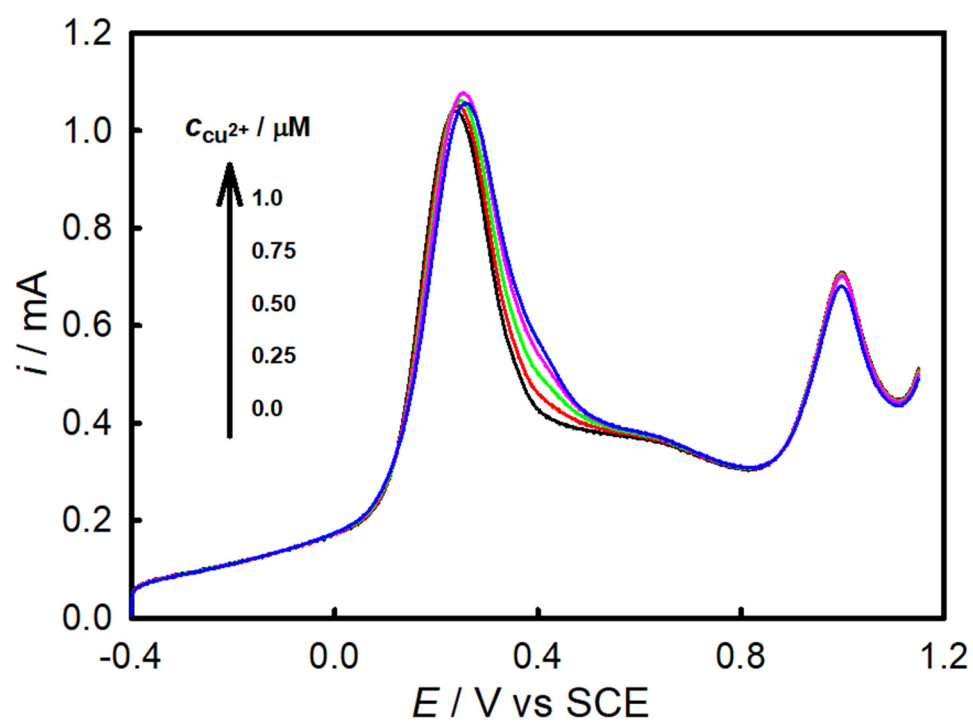


Figure S8. LSASV response on $Au_s/Py/C-MWCNTs/GCE$ in 0.1 M aqueous H_2SO_4 containing 1.0 μM As(III) with an interval addition of 0.25 μM Cu^{2+} . $E_D = -0.40$ V, $t_D = 7$ min.