Electronic Supplementary Information

Selective determination of dopamine using quantum-sized gold nanoparticles protected with charge selective ligands

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Contents

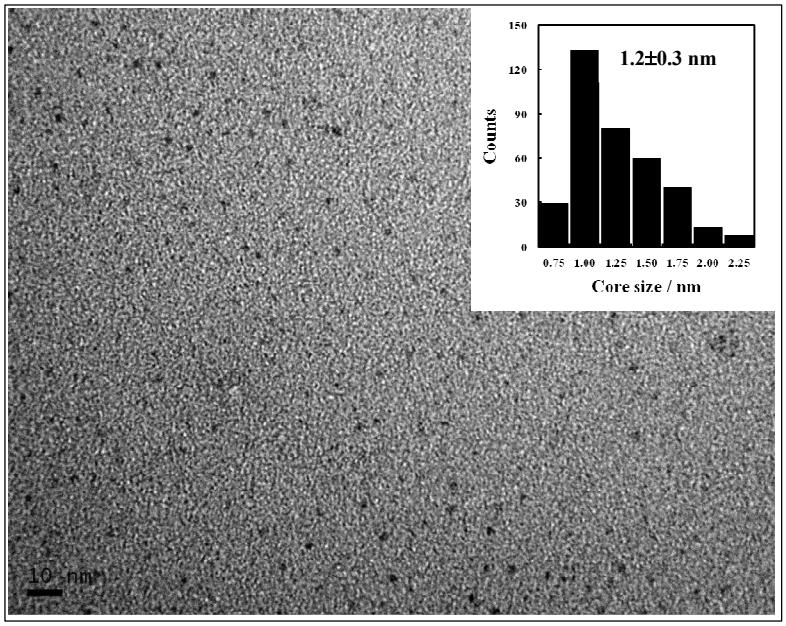

Fig. S1 TEM image of the synthesized GS-Au_{25}. The inset shows the histogram illustrating the core size distribution.

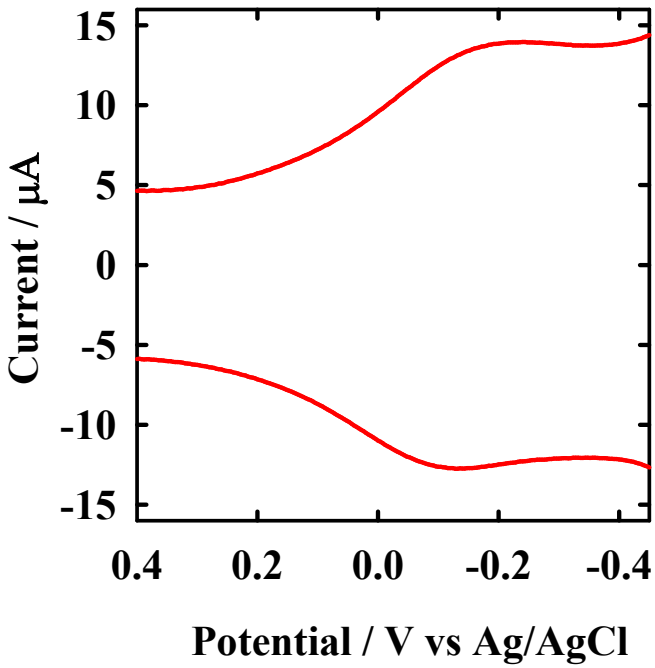

Fig. S2 SWV of 1 mM GS-Au_{25} dissolved in 0.1 M KCl at GCE working electrode.

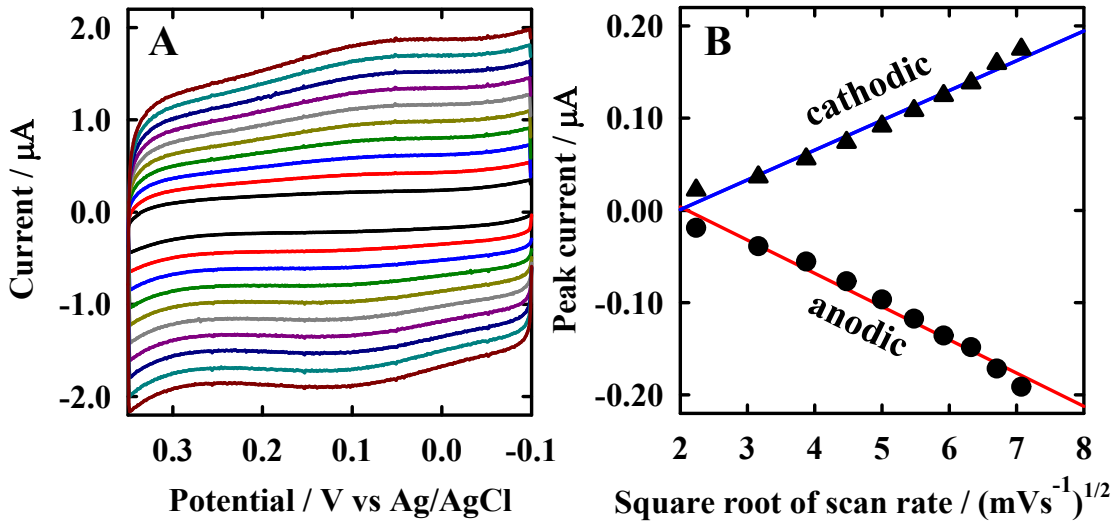

Fig. S3 (A) CVs of GS-Au_{25}ME at varying scan rates (inner to outer voltammograms correspond to 5, 10, 15, 20, 25, 30, 35, 40, 45 and 50 mVs^{-1} respectively). (B) Dependence of anodic and cathodic peak currents on the square root of scan rate.

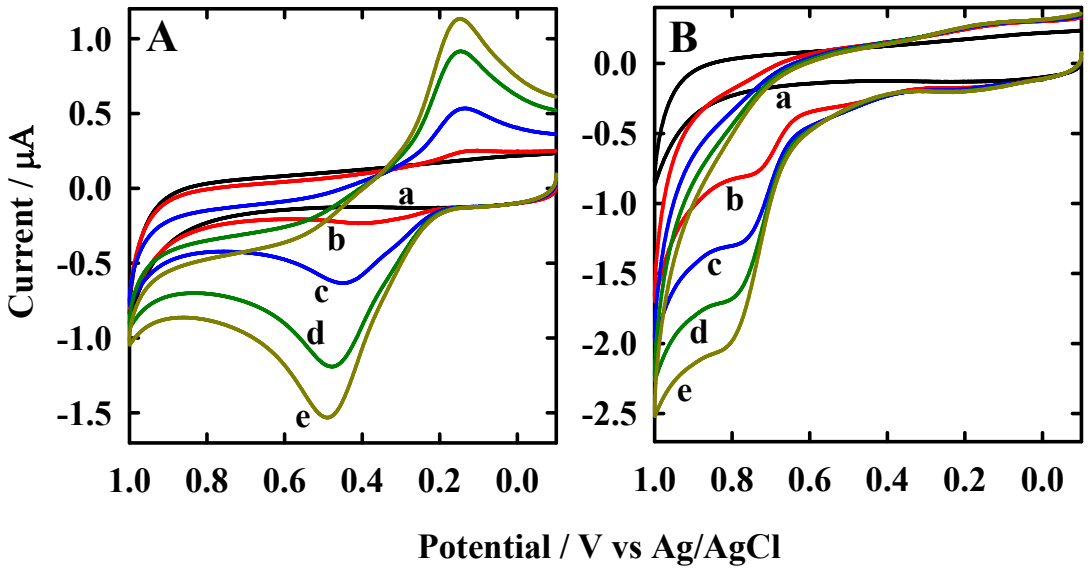

Fig. S4 CVs demonstrating the oxidation of (A) DA and (B) AA at the bare GCE: curves a-e correspond to CVs in the presence of 0, 1, 5, 10, and 15 µM of analyte, respectively.

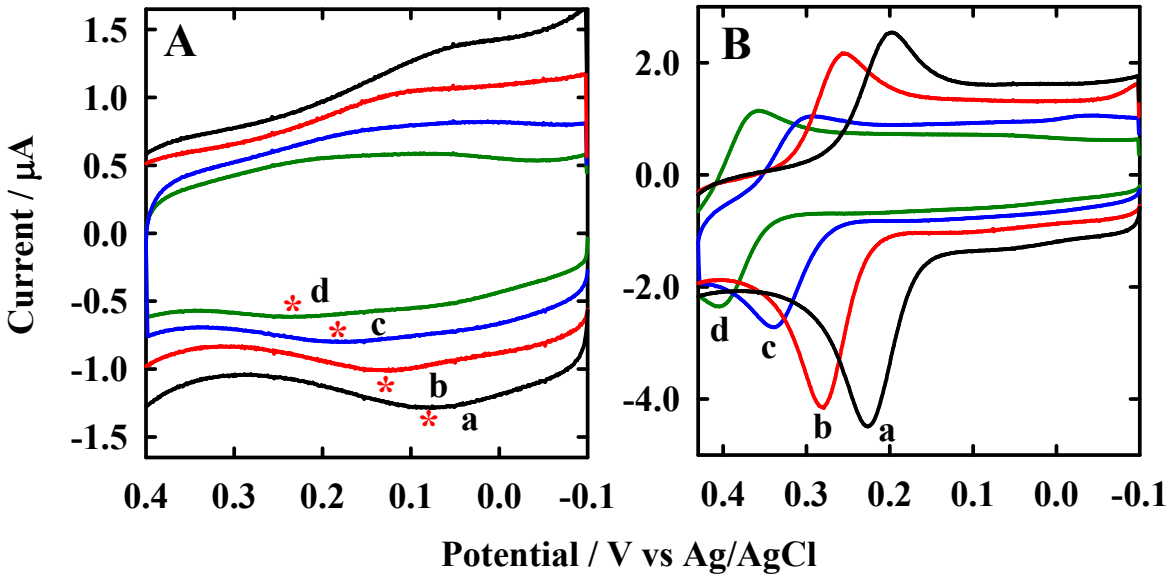

Fig. S5 CVs of GS-Au_{25}ME in the absence (A) and presence (B) of 10 µM DA in 0.1 M KCl at different pHs (maintained using phthalate buffer). Curves a to d correspond to CVs recorded at pH 6, 5, 4 and 3, respectively, and * represents the peak position.