

AuPd bimetallic nanoparticles-supported carbon nanotubes for selective detection of dopamine in the presence of ascorbic acid

Haitang Yang^{†‡}, Dandan Liu[†], Xiaoyu Zhao[†], Jing-He Yang[†],
Haibo Chang[‡], Ruimin Xing^{*†‡}, Shanhui Liu^{*†‡},

[†] Henan Key Laboratory of Polyoxometalate Chemistry, Institute of Molecular and Crystal Engineering, College of Chemistry and Chemical Engineering, Henan University, Kaifeng, P. R. China

[‡] Institute of Environmental and Analytical Sciences, College of Chemistry and Chemical Engineering, Henan University, Kaifeng, Henan, 475004, People's Republic of China.

* Corresponding author. E-mail: shanhuliu@henu.edu.cn; Tel.: +86 371 23881589;

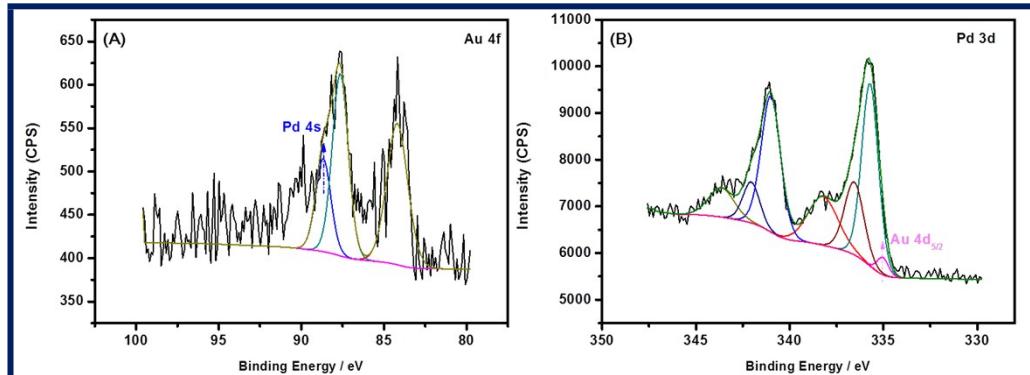


Fig. S1 Detail scan spectra for Au4f, Pd3d, respectively.

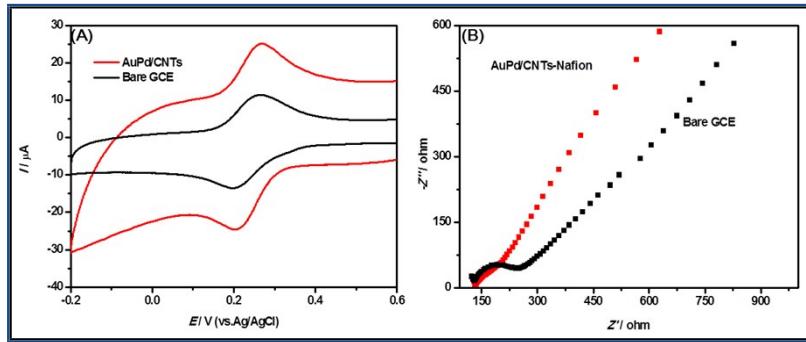


Fig.S2. (A) Cyclic voltammograms (CVs) of 10 mM $\text{Fe}(\text{CN})_6^{3-/4-}$ in 1.0 M KCl using different electrodes. (B) Electrochemical impedance spectroscopy (EIS) measurements of bare GCE and AuPd/CNTs-Nafion/GCE. Biasing potential, 0.25 V. Amplitude, 5 mV.

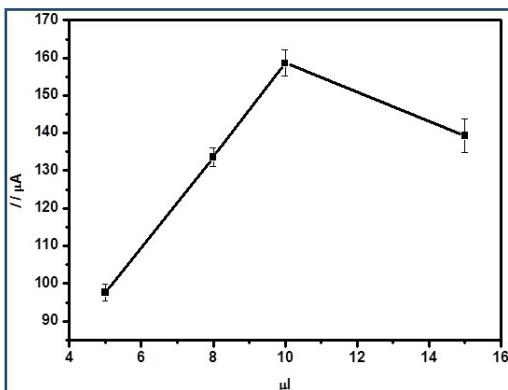


Fig. S3 Influence of the deposition amount on the current response of the DA oxidation in 0.1 M PBS (pH 7.0) on AuPd/CNTS-Nafion/GCE.

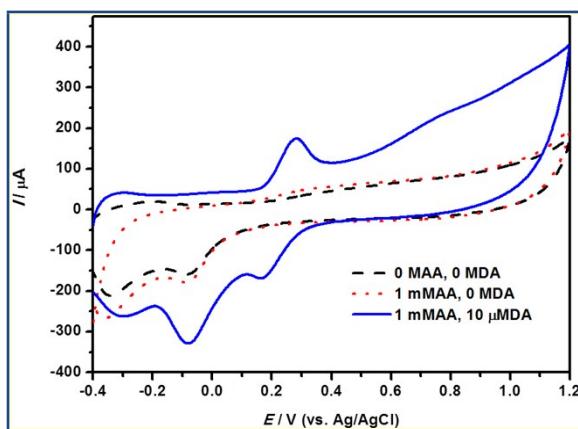


Fig. S4. CVs of different kinds of solution in 0.1 M PBS (pH=7) on AuPd/CNTs-Nafion/GCE at the scan rate of 100 mV/s.

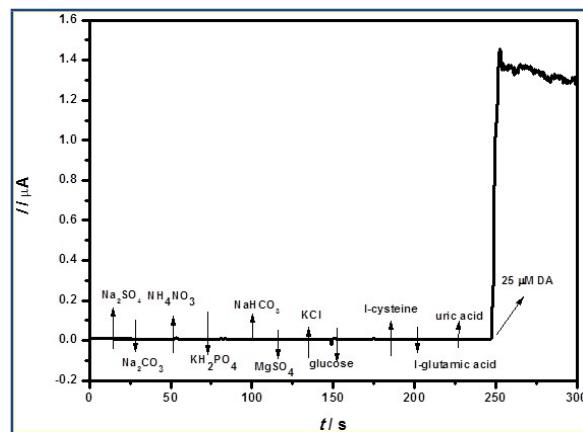


Fig.S5. Response at AuPd/CNTs-Nafion/GCE for $25 \mu\text{M}$ of DA, in presence of various interfering compounds at concentrations of 3.0 mM , electrolyte: 0.1 M PBS , pH 7, polarization potential: 0.2 V .

Table S1. The analysis results of Au4f and Pd3d

Chemical State	Position/eV	FWHM/eV	Area
Au 4d5/2	335.00	0.75	288.20
Pd 3d5/2	335.70	1.09	4459.29
Pd 3d5/2	336.56	1.26	2054.00
Pd 3d5/2	338.22	1.90	2127.32
Pd 3d3/2	341	1.26	3839.57
Pd 3d3/2	342.12	1.09	977.08
Pd 3d3/2	343.64	1.66	1087

