J. Electrochem. Sci. Eng. **16** (2026) S3459

Open Access : : ISSN 1847-9286
https://pub.iapchem.org/ojs/index.php/JESE

Supplementary material to

Tadalafil electrooxidation on gold and MWCNT-based nanocomposites modified carbon paste electrodes: comparative study and analytical application

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J. Electrochem. Sci. Eng. **16** (2026) 3459; http://doi.org/10.5599/jese.3459

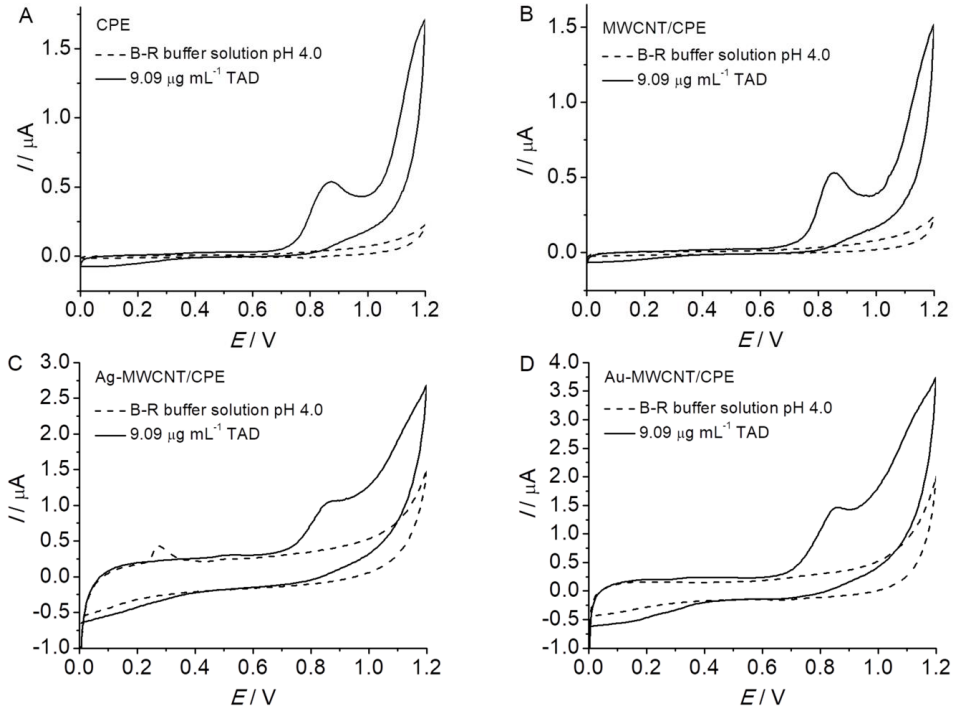

Figure S1. *CVs recorded with (A) bare CPE, (B) MWCNT/CPE, (C) Ag-MWCNT/CPE and (D) Au-MWCNT/CPE in B-R buffer pH 4.0 in the absence (dashed line) and in the presence of 9.09 μg mL^{-1}TAD (full lines),* $\nu = 50$ *mV s^{-1}*

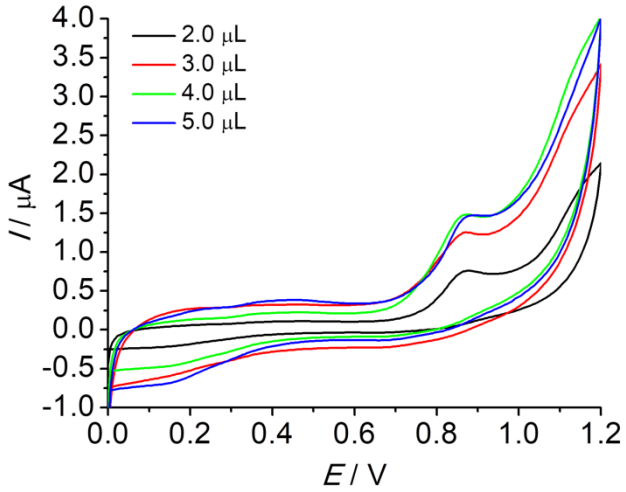

Figure S2. *CVs of TAD (9.09 µg mL^{-1}) recorded with Au-MWCNT/CPE prepared by drop coating different volume (2.0-5.0 µL) of nanocomposite suspension (1.5 mg mL^{-1}). Supporting electrolyte: B-R buffer solution pH 4.0; v = 50 mV s^{-1}*

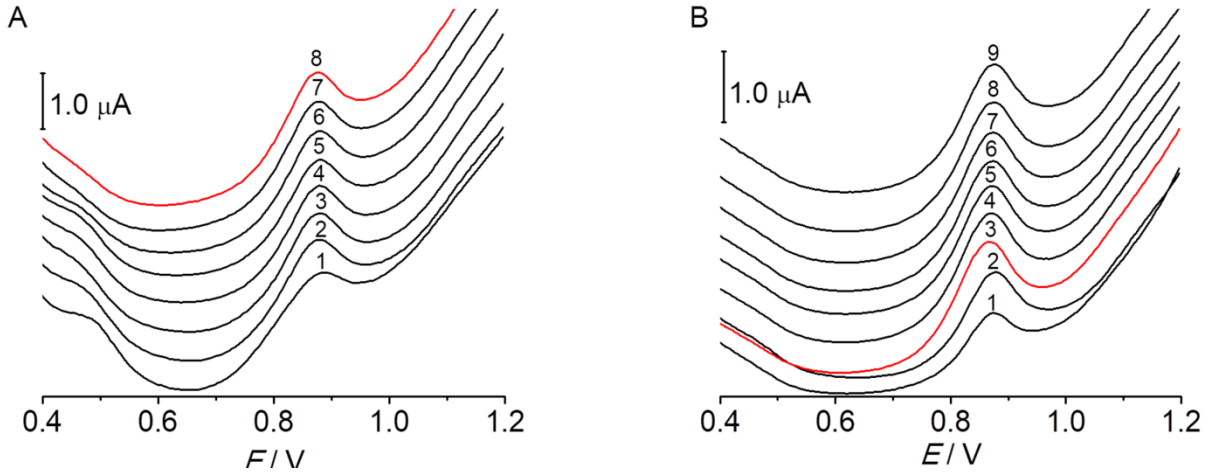

Figure S3. *SW-AdSV curves of TAD (0.99 µg mL^{-1}) obtained at pH 4.0 using Au-MWCNT/CPE at (A) t_{acc} = 30 s and different E_{acc} (curves 1-8: -0.6; -0.4; -0.2; 0.0; 0.2; 0.4; 0.5 and 0.6 V) and at (B) E_{acc} = 0.6 V and different t_{acc} (curves 1-9: 0; 5; 10; 20; 30; 60; 90; 120 and 180 s)*

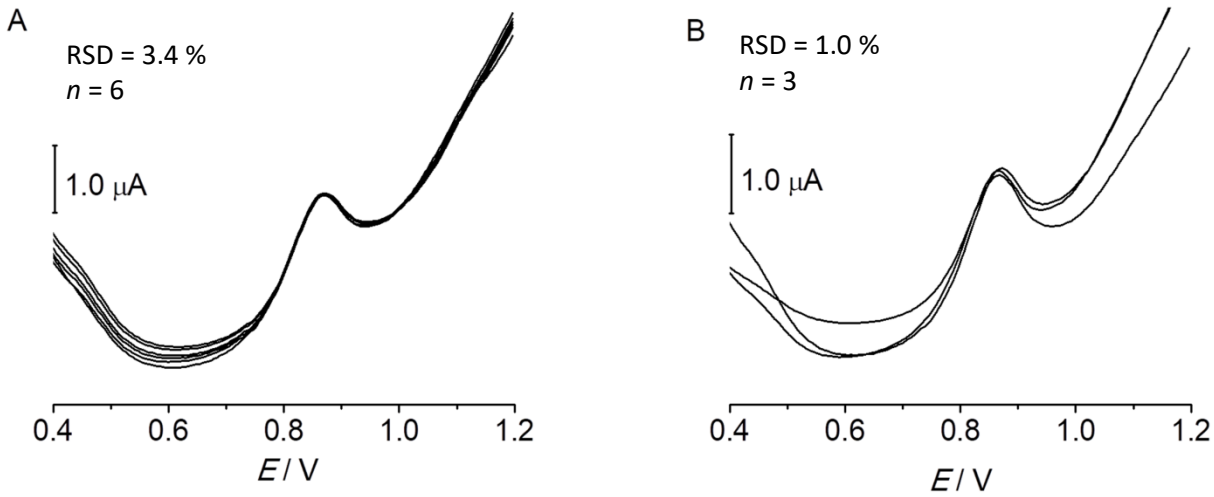

Figure S4. *(A) Repeatability and (B) reproducibility of TAD oxidation signal (0.99 µg mL^{-1}) at pH 4.0 using Au-MWCNT/CPE*

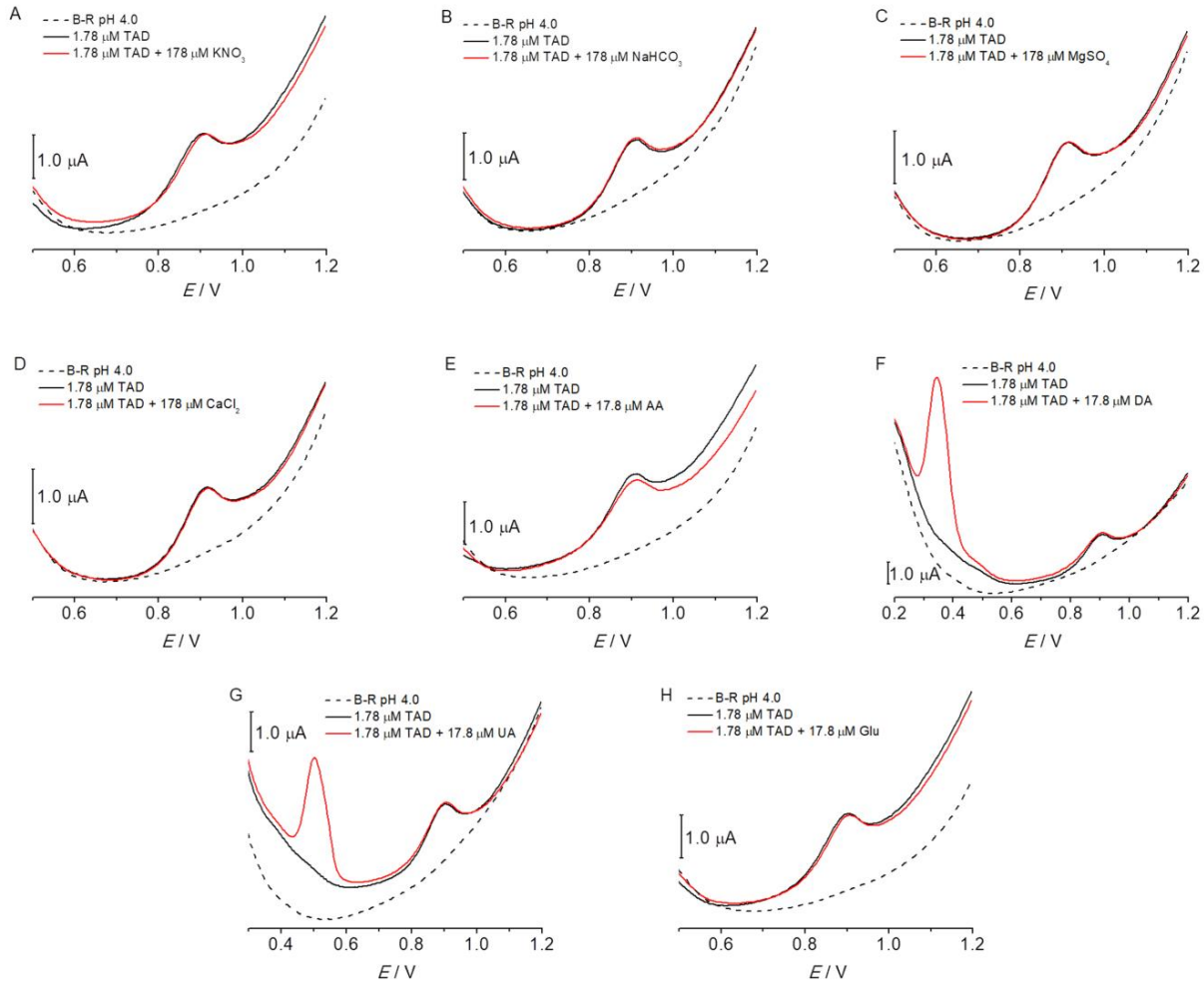

Figure S5. *SW-AdSV signals of TAD (1.78 µmol L^{-1}) at pH 4.0 recorded in the absence and in the presence of (A) KNO_3, (B) $NaHCO_3$, (C) $MgSO_4$, (D) $CaCl_2$, (E) AA, (F) DA, (G) UA and (H) Glu using Au-MWCNT/CPE. The dashed lines illustrate the appropriate voltammograms of the baseline*

Table S1. *The effect of some possible interfering substances (178.0 or 17.8 µmol L^{-1}) on the determination of 1.78 µmol L^{-1} TAD in B-R buffer solution pH 4.0 at Au-MWCNT/CPE*

Interferent	Interferent/TAD molar ratio	Effect on TAD peak intensity, %
K^+	100	<0.96
Na^+	100	<0.61
Ca^{2+}	100	<0.40
Mg^{2+}	100	<0.51
Cl^-	200	<0.40
HCO_3^-	100	<0.61
SO_4^{2-}	100	<0.51
NO_3^-	100	<0.96
AA	10	<1.0
DA	10	<0.25
UA	10	<0.36
Glu	10	<0.98

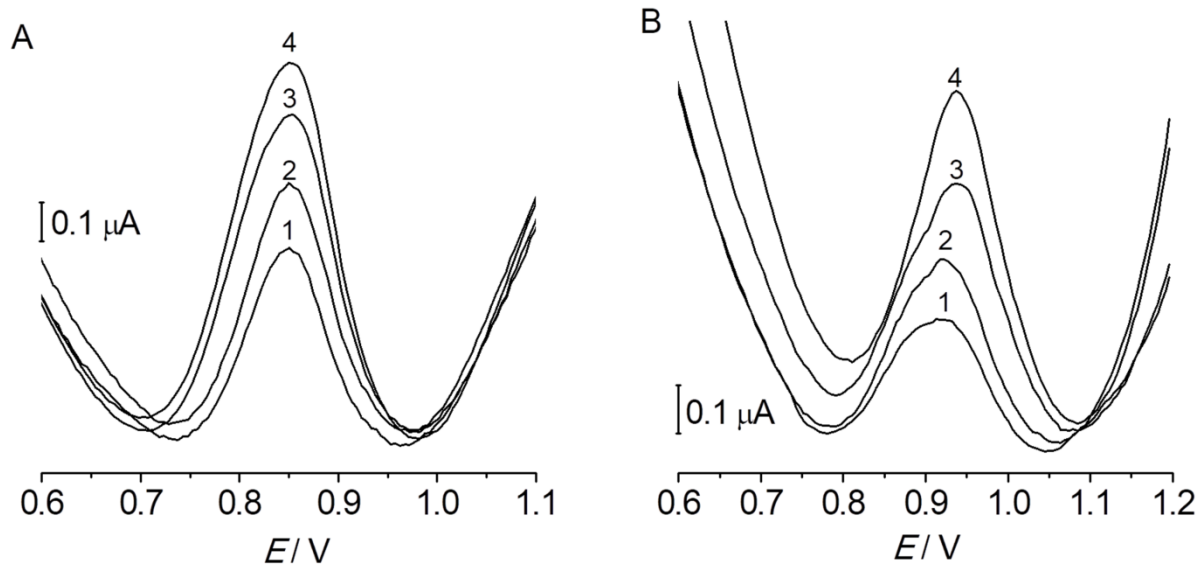

Figure S6. *Baseline corrected SW-AdSVs of TAD determination in (A) pharmaceutical formulation and (B) human blood serum sample using the standard addition method and Au-MWCNT/CPE as working electrode. The curves, (A): pharmaceutical formulation sample (1) and three standard additions of TAD (2 to 4); (B): spiked serum sample (1) and three standard additions of TAD (2 to 4)*

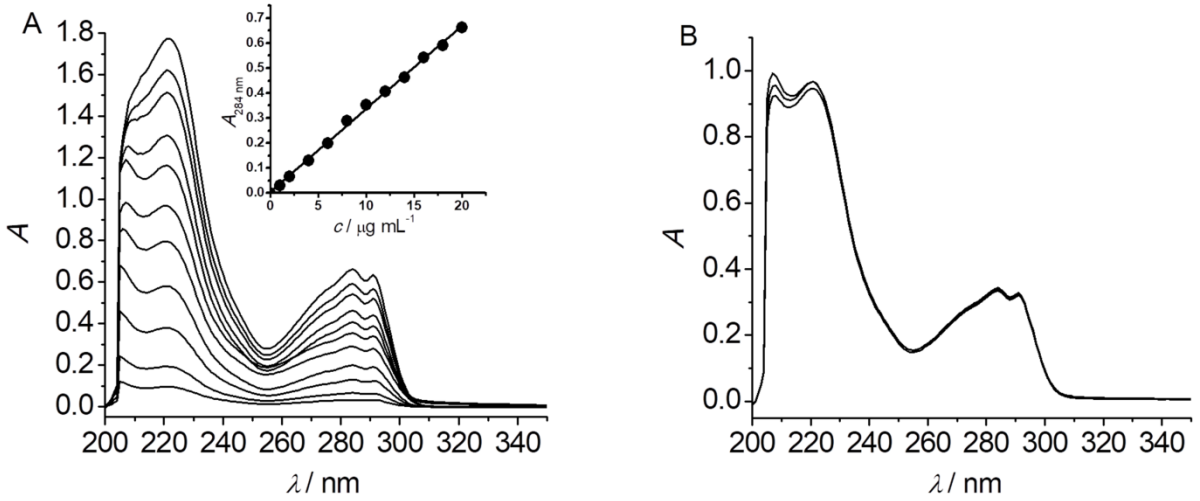

Figure S7. *(A) UV absorption spectra of TAD (1.0-20.0 μg mL^{-1}) and the corresponding calibration curve (inset). (B) Absorption spectra of Cialis® tablet sample (*n *= 3)*