Flexible platform of electrochemically functionalized carbon nanotubes for NADH sensors

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SUPPORTING INFORMATION

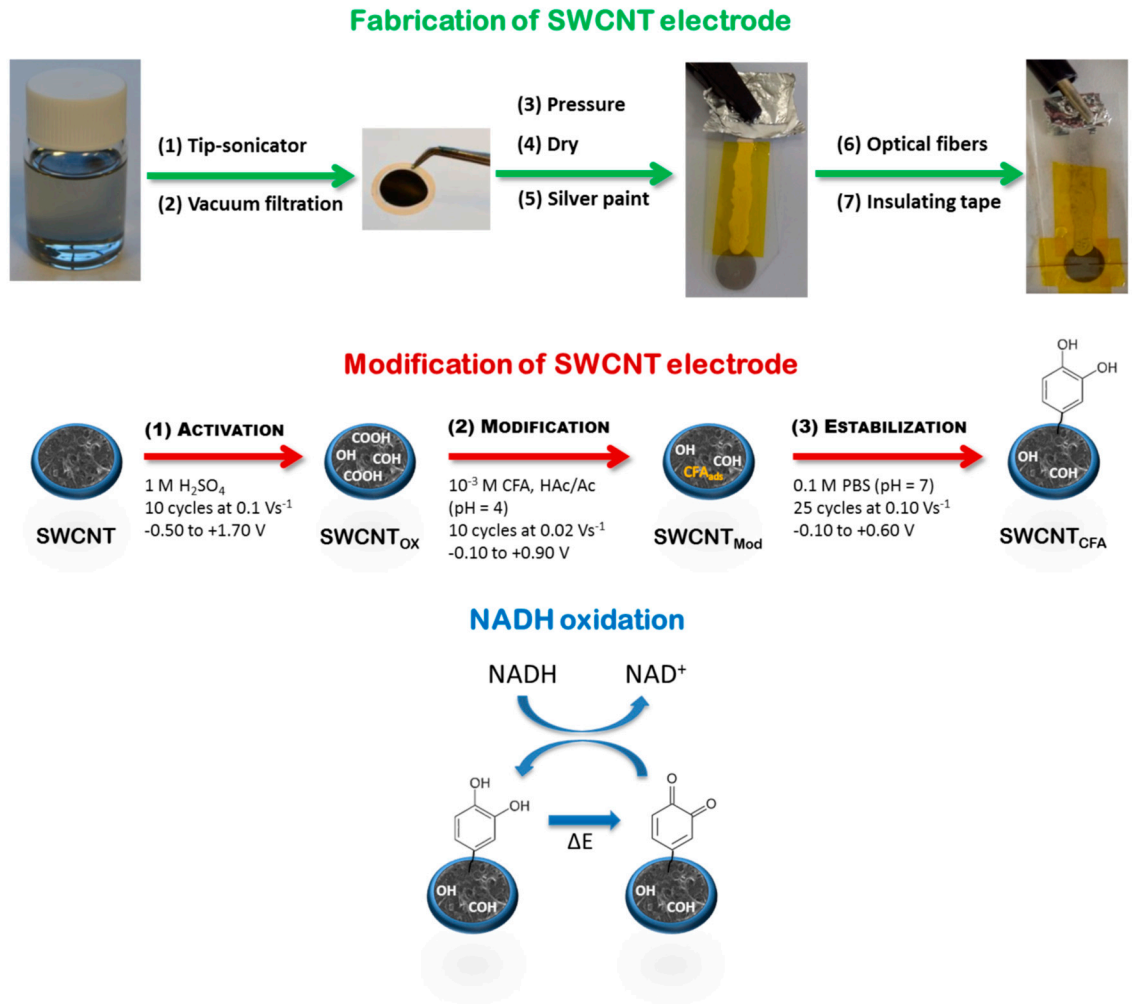

Figure S1. Schematic representation of the different steps involved in electrode fabrication (top), functionalization of SWCNTs (middle) and NADH oxidation (bottom).

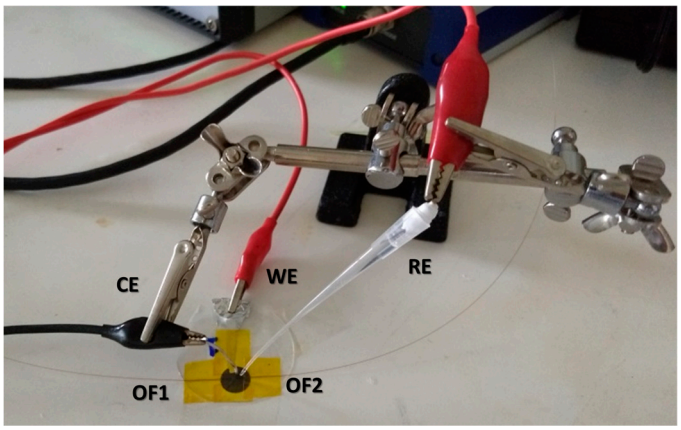

Figure S2. Photograph of the UV/Vis absorption spectroelectrochemical set-up in parallel configuration. WE: SWCNT working electrode, CE: Pt counter electrode, RE: Ag/AgCl/KCl 3M reference electrode, OF1: naked optical fibre that guides the light beam from the source cell to the solution, OF2: naked optical fiber that guides the light beam from the solution to the spectrometer.

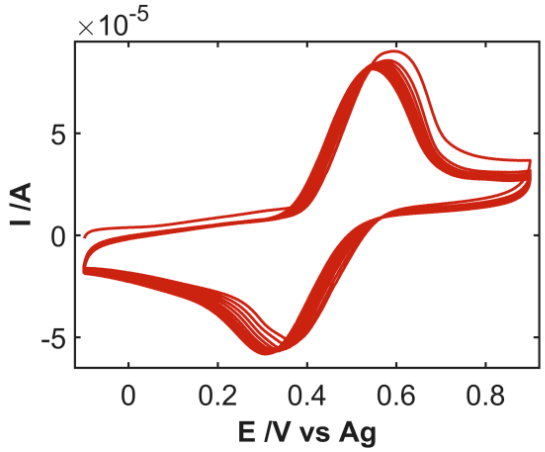

Figure S3. CV response of 10^{-3} M CFA, 0.1 M acetic acid solution at $SWCNT_{ox}$ electrode between -0.10 and +0.90 V at 0.02 Vs^{-1}.

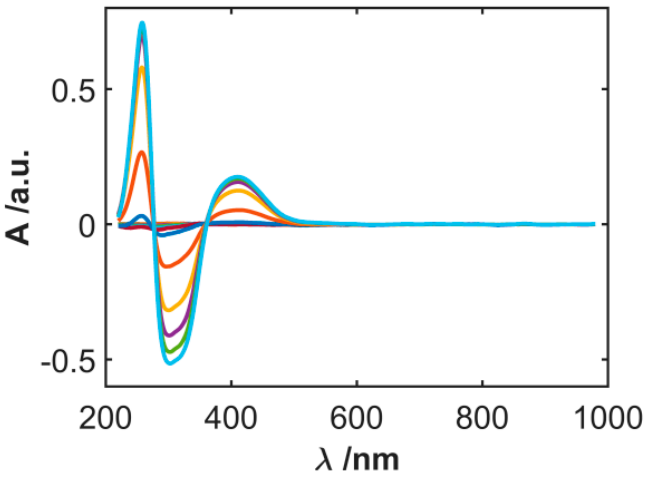

Figure S4. UV-Vis absorption spectra recorded during the first scan toward positive potential values at $SWCNT_{ox}$ electrode in 10^{-3} M CFA, 0.1 M acetic acid solution, between -0.10 and +0.90 V at 0.02 Vs^{-1}.

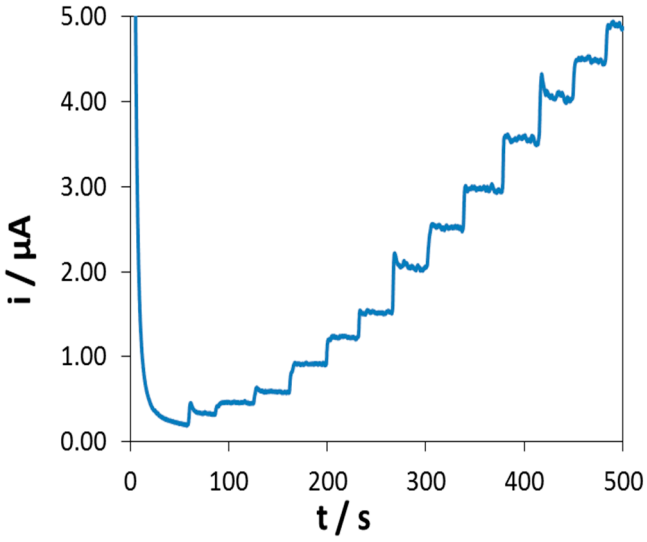

Figure S5. Amperometric response recorded with $SWCNT_{CFA}$ at +0.30 V in stirred 0.1 M PBS, by subsequent additions of defined aliquots of a NADH solution.

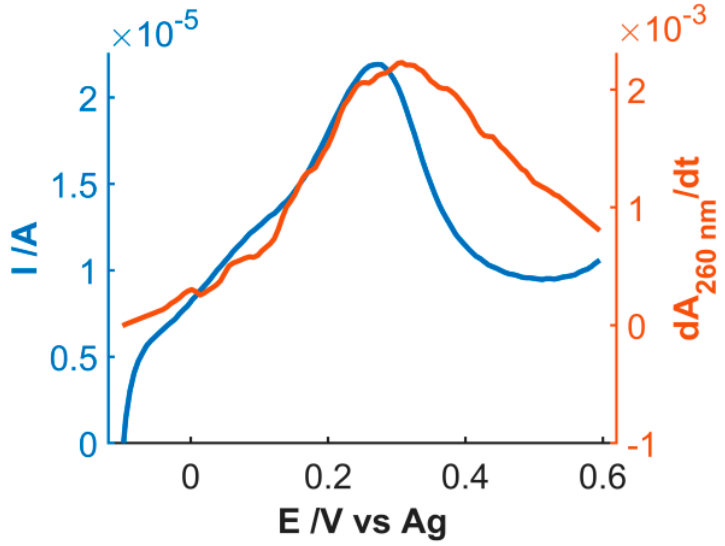

Figure S6. Comparison of LSV and derivative voltabsorptogram at 260 nm during the oxidation of $3 \cdot 10^{-4}$ M NADH, 0.1 M PBS.

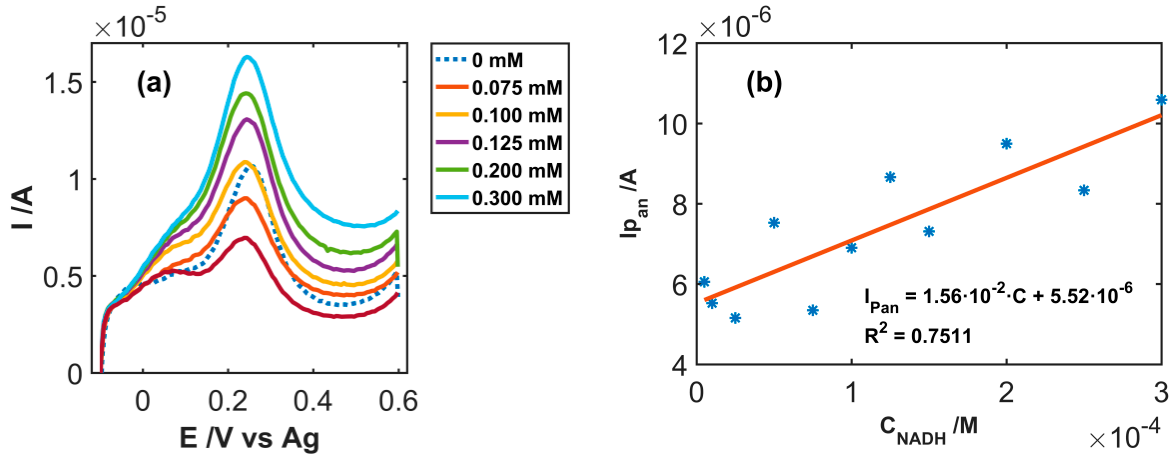

Figure S7. (a) LSV registered during the oxidation of $2 \cdot 10^{-4}$ M NADH in 0.1 M PBS. (b) Calibration curve of the current peak values *vs* the NADH concentration.