Electronic Supplementary Information

Transparent films from carbon nanotubes/Prussian blue nanocomposites: preparation, characterization and application as electrochemical sensor

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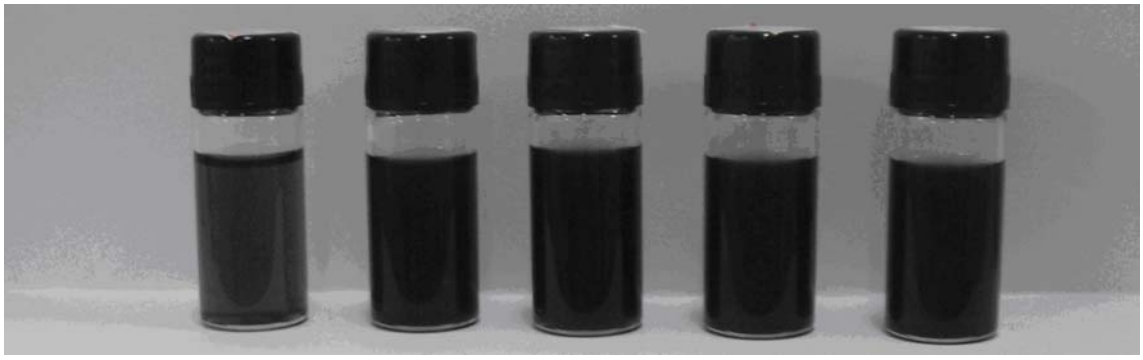

Fig. S1 Digital photograph of five NMP dispersions of iron- and iron oxide-filled multiwall carbon nanotubes. From left to right: 0.58, 0.87, 1.18, 1.59 and 1.70 mg of CNTs dispersed in 3.00 mL of NMP.

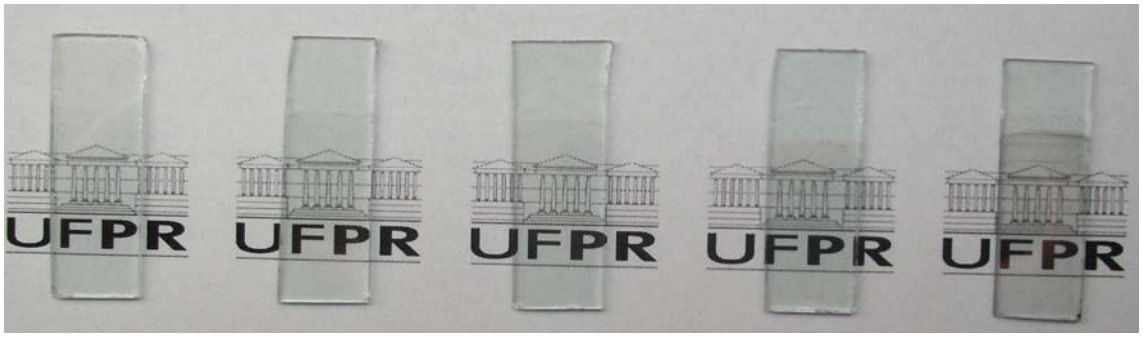

Fig. S2 Digital photograph of CNTs films prepared over ITO-based glass electrodes. From left to right, films prepared starting from the dispersions showed before (Fig. S1), in the same sequence.

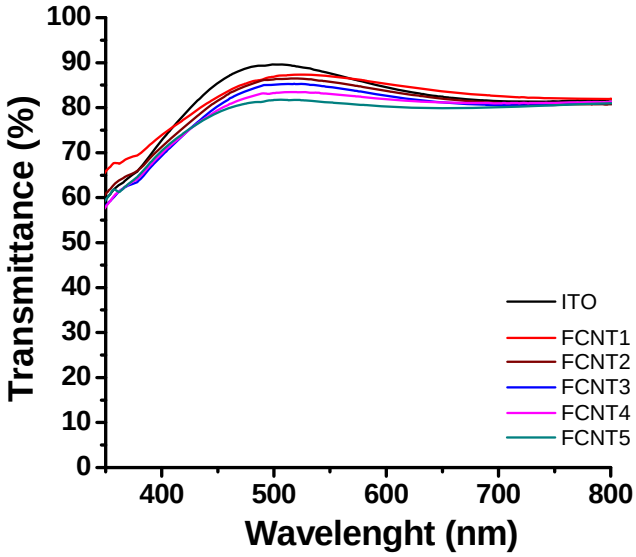

Fig. S3 Transmittance spectra of a neat ITO-electrode and the five CNTs films showed before (Fig. S2).

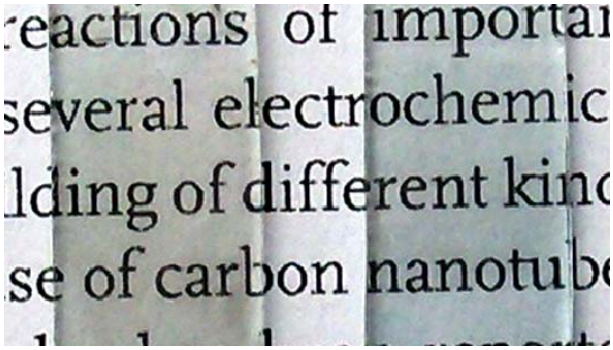

Fig. S4 Digital photograph of the FCNT5 film before (left) and after (right) the Prussian blue electrodeposition

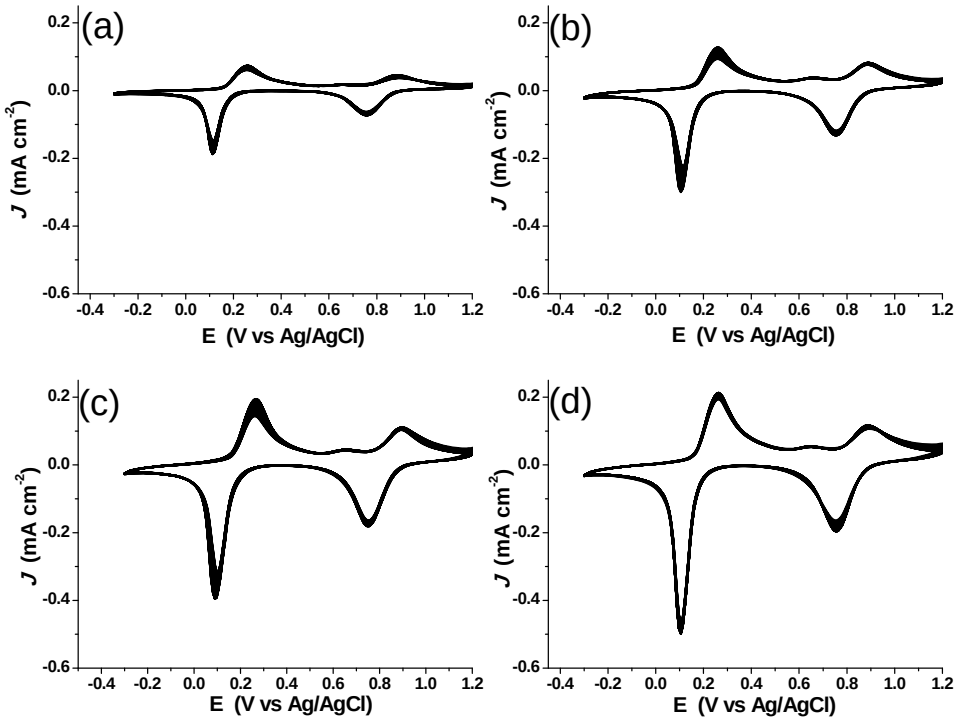

Fig. S5 Cyclic voltamograms (100 first cycles) in 0.05 mol L^{-1} KCl aqueous solution (pH 6.8) at a scan rate of 50 mV s^{-1}: (a) FCNTPB1; (b) FCNTPB2; (c) FCNTPB3; (d) FCNTPB4.

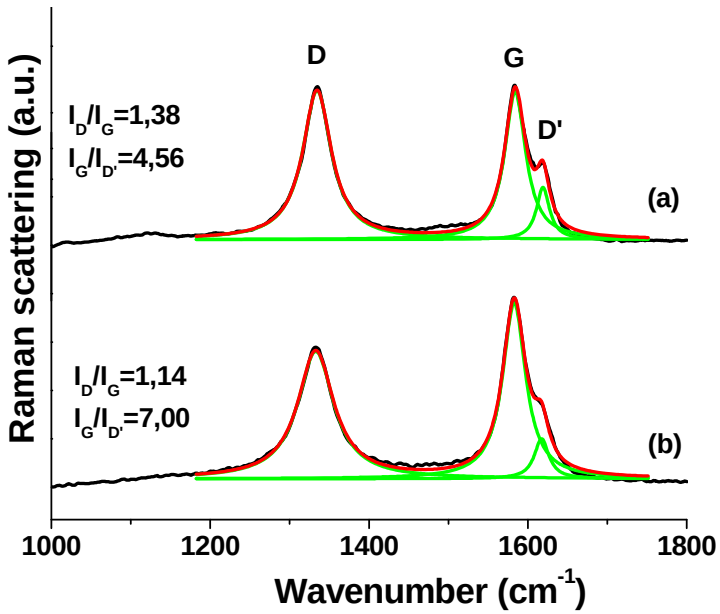

Fig. S6 Raman spectra (λ = 632.8 nm) of the films FCNT5 (a) and FCNTPB5 (b), showing the details of the band deconvolution (green lines) and the fitting (red lines).

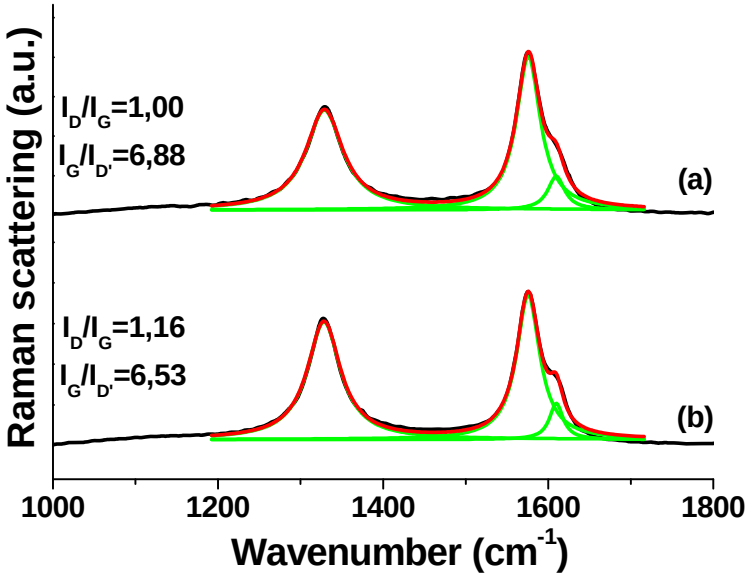

Fig. S7 Raman spectra of a CNT film (FCNT5) before (a) and after (b) 150 cycles in a 0.05 mol.L^{-1} KCl solution.

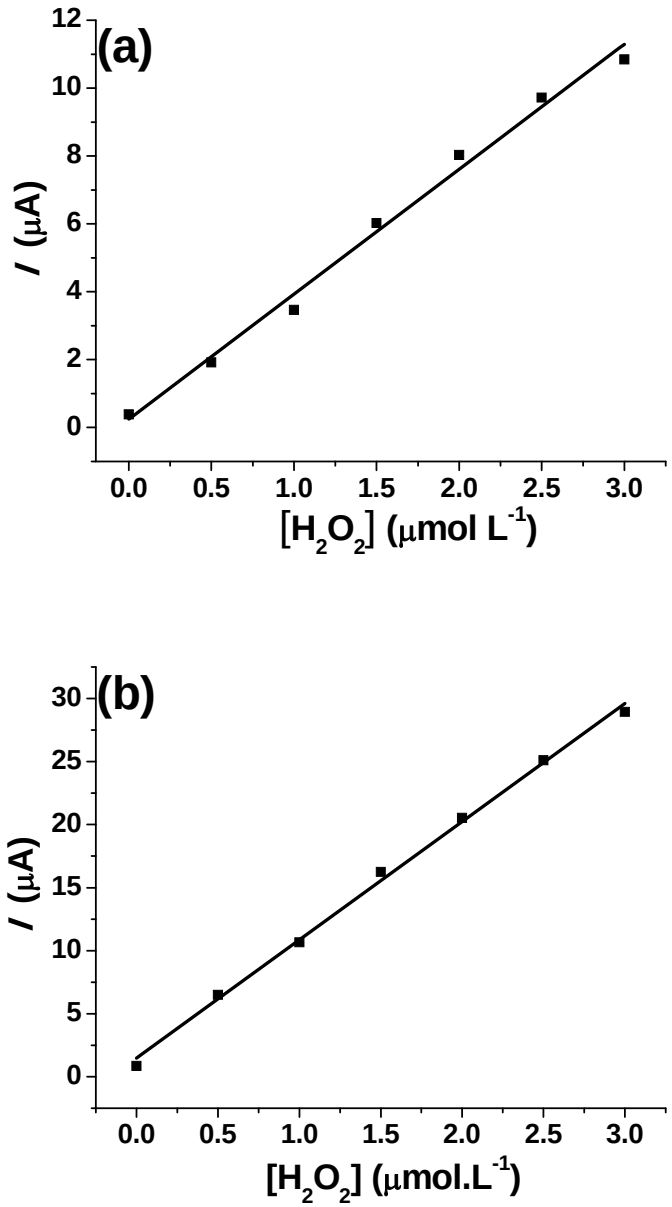

Fig. S8 Analytical curve obtained from the H_2O_2 sensors built from the films FCNTPB1 (a) and FCNTPB3 (b).