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 (\(\lambda = 632.8\) 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$_2$O$_2$ sensors built from the films FCNTPB1 (a) and FCNTPB3 (b).