

Supplementary Information

Electrochemical detection of Sulfamethoxazole in water matrices using green nanomaterials: Pilot-scale validation in a Solar Photo-Fenton Process

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1. Characterization of the CNMs

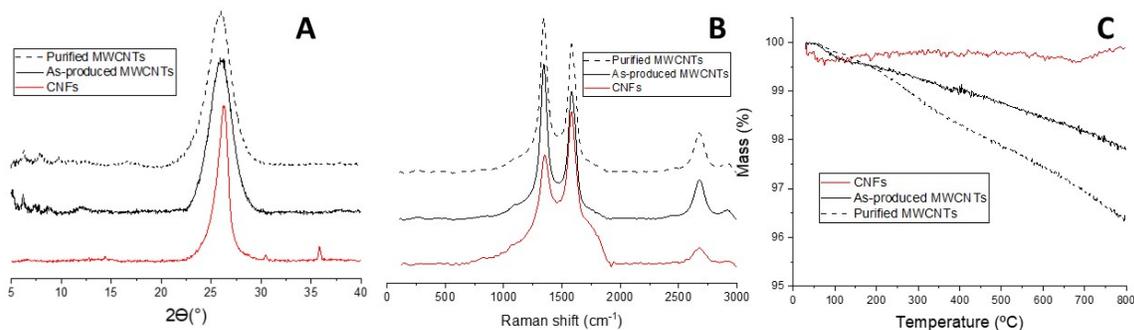


Figure S1. Characterization of the CNMs: XRD (A); RAMAN spectroscopy (B); and TGA in N_2 (C).

2. Characterization of the NBs

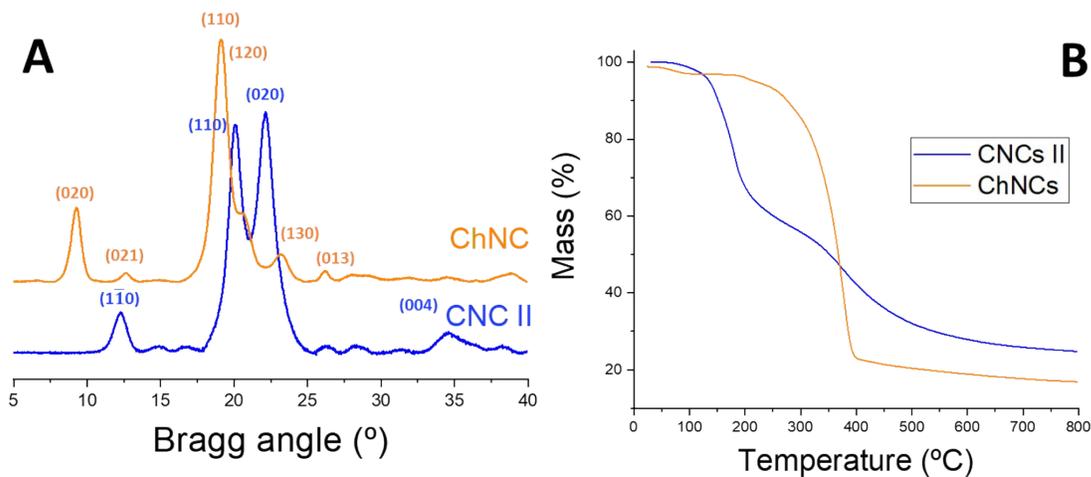


Figure S2. Characterization of the NBs: XRD (A) and TGA in N_2 (B).

3. Electrochemical characterization

Table S1. Electrochemical parameters obtained from cyclic voltammetry in 5 mM $K_3Fe(CN)_6/K_4Fe(CN)_6$, PBS 0.1 M + KCl 0.1 M.

ELECTRODE	E_a (V)	I_a (μA)	CV (%)
GCE	0.32	118 ± 1.3	1.1
CNT/ChNC (0.2 g/L)	0.33	184 ± 14.3	7.8
CNT/ChNC (0.4 g/L)	0.33	228 ± 7.0	3.0
CNF/CNC (0.2 g/L)	0.34	144 ± 3.7	2.6
CNF/CNC (0.4 g/L)	0.35	173 ± 8.0	4.6

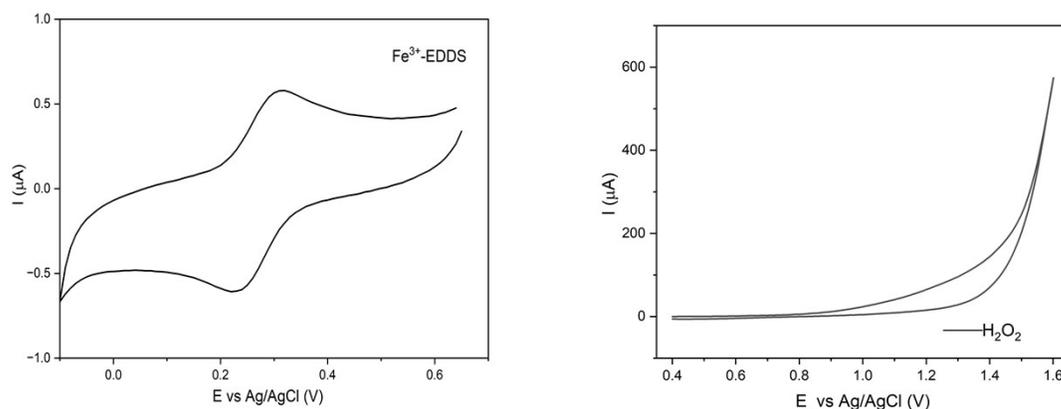


Figure S3. Cyclic voltammetry of 0.1 mM Fe^{3+} -EDDS (1:1 molar ratio) (**left**) and 1.5 mM H_2O_2 (**right**).