

Supporting Information

Fe₃O₄-carbon nanofibers/gold nanoparticles hybrid for enzymatic biofuel cells with larger power output

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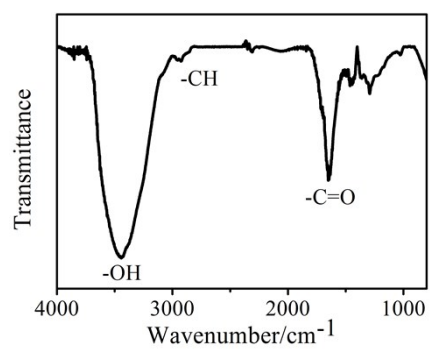


Fig.S1 FT-IR spectra of the CNF aerogels.

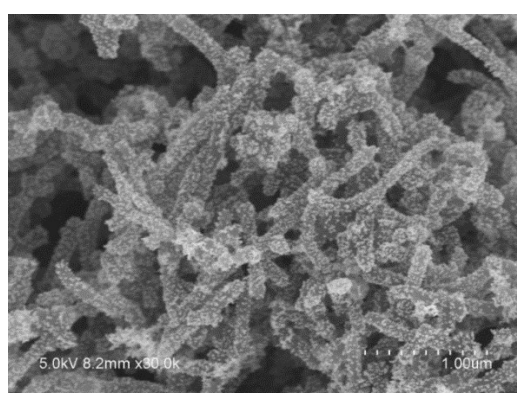


Fig.S2 SEM of CNFs/Au NPs hybrid.

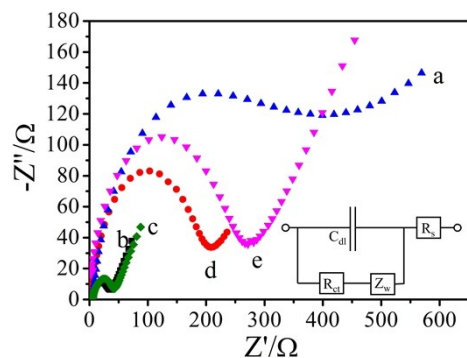


Fig.S3 EIS of bare CP electrode (a), CP/CNFs/Au NPs electrode (b), CP/Fe₃O₄-CNFs/Au NPs electrode (c), GOD modified CP/Fe₃O₄-CNFs/Au NPs bioanode (d) and BOD modified CP/Fe₃O₄-CNFs /Au NPs biocathode (e).

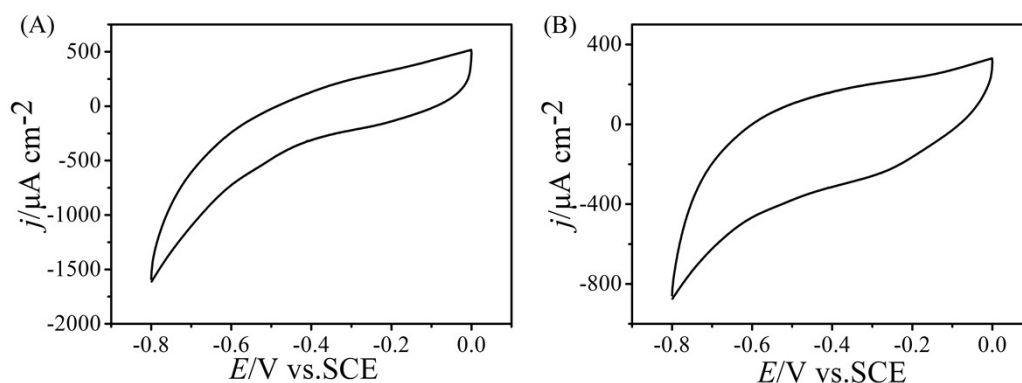


Figure.S4 (A) CVs of the CP/Fe₃O₄-CNFs/Au NPs electrode in air saturated PBS (pH 7.4). (B) CVs of the CP/CNFs/Au NPs electrode in air saturated PBS (pH 7.4).

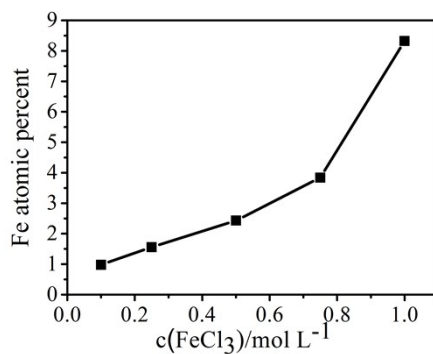


Fig.S5 Plot of the Fe atomic percent in the Fe₃O₄-CNFs hybrids with different concentration of FeCl₃. The concentration of FeCl₃ was 0, 0.10, 0.25, 0.50, 0.75 and 1.0 M, respectively.

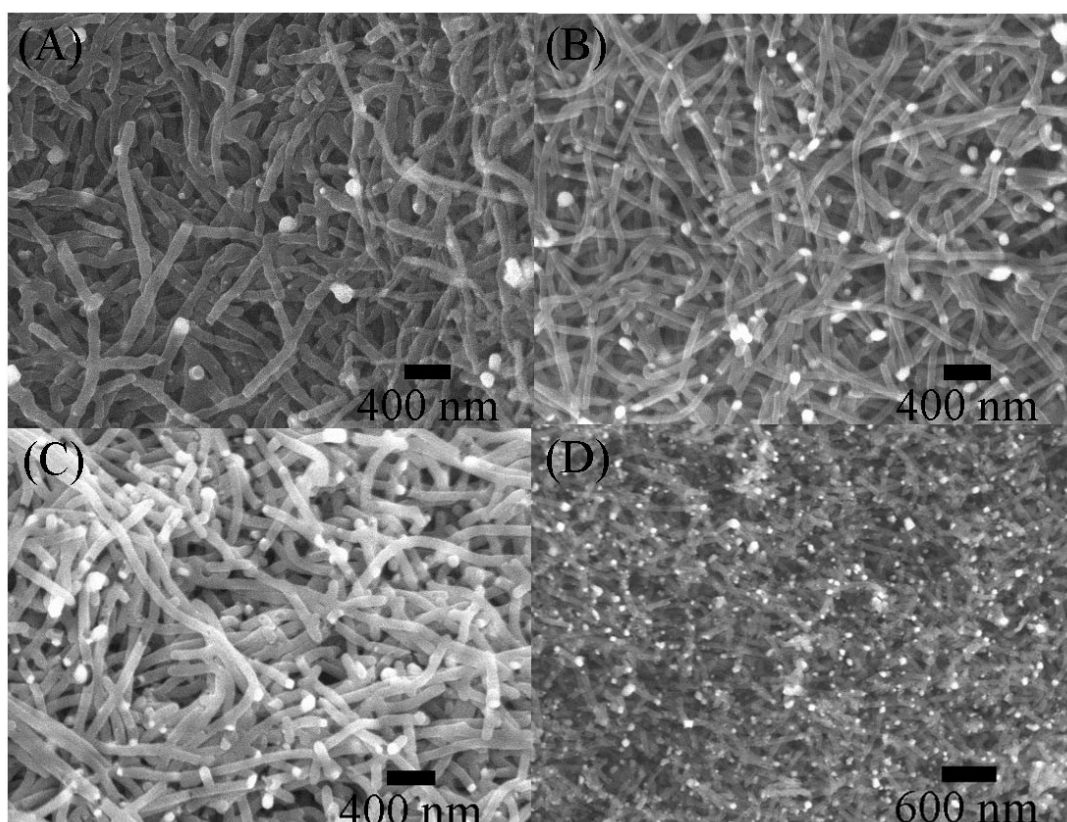


Fig.S6 SEM of Fe₃O₄-CNFs nanocomposite with different mass percentage of Fe₃O₄ in Fe₃O₄-CNFs hybrids. The concentration of FeCl₃ was (A) 0.10 M, (B) 0.25 M, (C) 0.75 M and (D) 1.0 M, respectively.

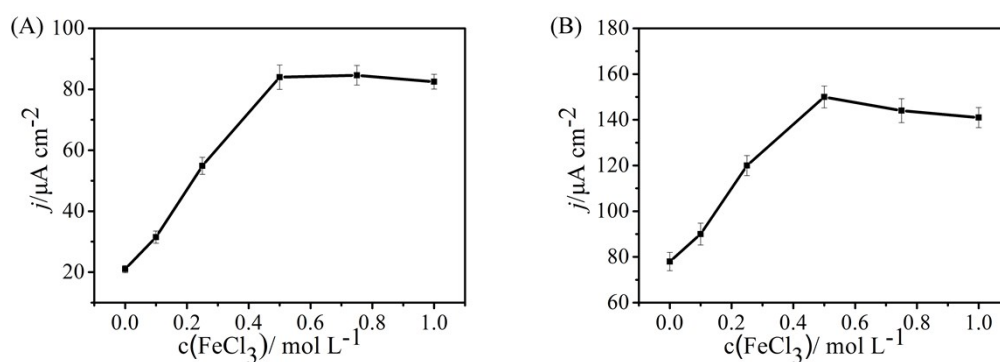


Fig.S7 (A) Plot of the anodic current density from the CV measurements at the potential of -0.5 V at GOD modified CP/Fe₃O₄-CNFs/Au NPs bioanode with different concentration of FeCl₃. (B) Plot of the cathodic current density from the CV measurements at the potential of 0.3 V at BOD modified CP/Fe₃O₄-CNFs/Au NPs biocathode with different concentration of FeCl₃. The concentration of FeCl₃ was 0, 0.10 M, 0.25 M, 0.50 M, 0.75 M and 1.0 M, respectively.