

# Supplementary Material

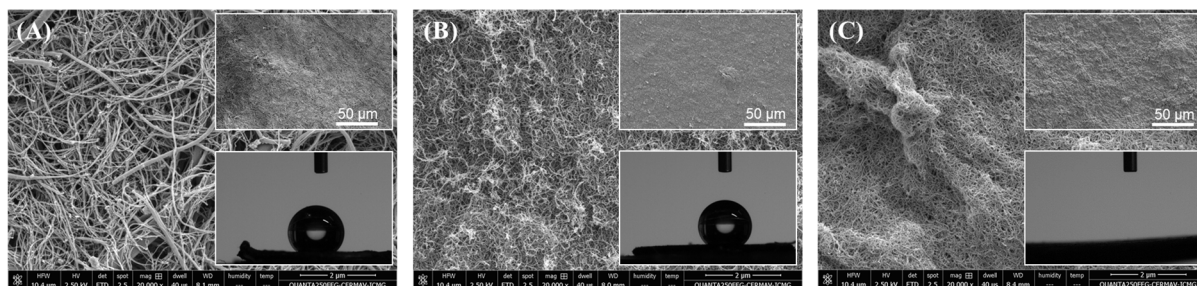
## Hollow Bioelectrodes based on Buckypaper Assembly. Application to the Electroenzymatic Reduction of O<sub>2</sub>

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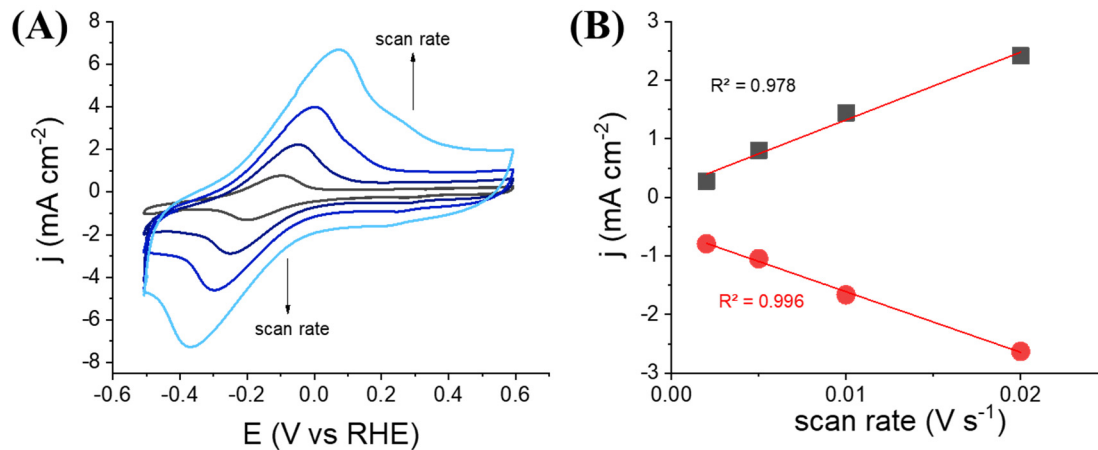
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### Additional Results



**Figure S1.** SEM images of A) C<sub>bp</sub>, B) L<sub>bp</sub> and C) hemin-L<sub>bp</sub> and the respective water contact angles.

Figure S2 shows a single reversible system at  $E_{1/2} = -0.140$  V vs RHE, corresponding to the electroactivity of hemin. A linear dependence of oxidative and reductive peak currents towards the scan rate is observed. This reflects an adsorption-controlled process for hemin corroborating its good adsorption on the MWCNT walls of L<sub>bp</sub>.



**Figure S2.** (A) Cyclic voltammograms recorded in 0.1 M phosphate buffer (pH 6.5) under argon for the hemin-L<sub>bp</sub> at different scan rates from 2 to 20 mV s<sup>-1</sup>. (B) Evolution of oxidation and reduction peak current towards scan rate with its respective coefficient of determination ( $R^2$ ).