

Quasi-1D Hyperbranched WO₃ Nanostructures for Low Voltage Photoelectrochemical Water-Splitting

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SUPPORTING INFORMATION

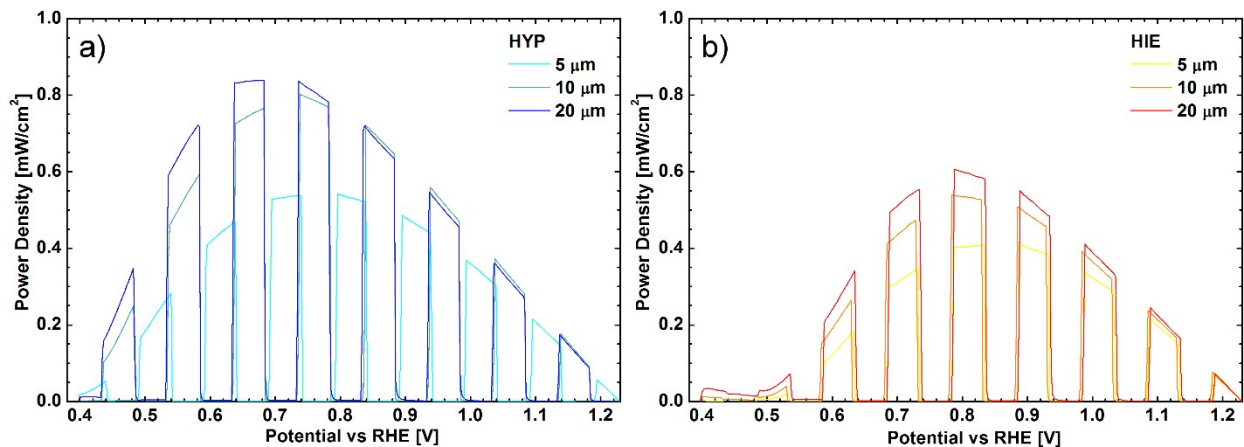


Figure S1. Power efficiency curves of the HYP (a) and HIE (b) samples as a function of thickness.

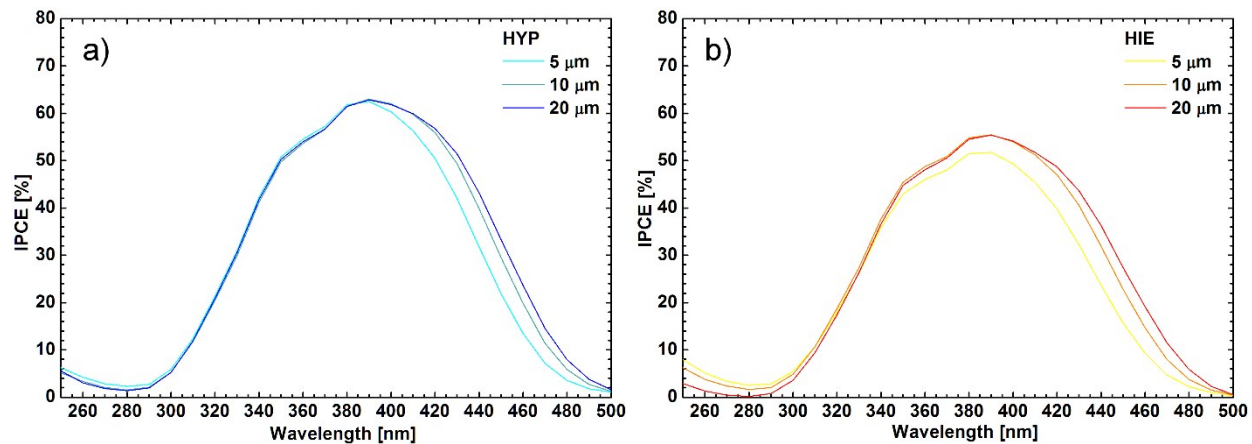


Figure S2. IPCE curves of the HYP (a) and HIE (b) samples as a function of thickness measured by shining light from the glass side and with an applied bias of 1 V vs RHE.

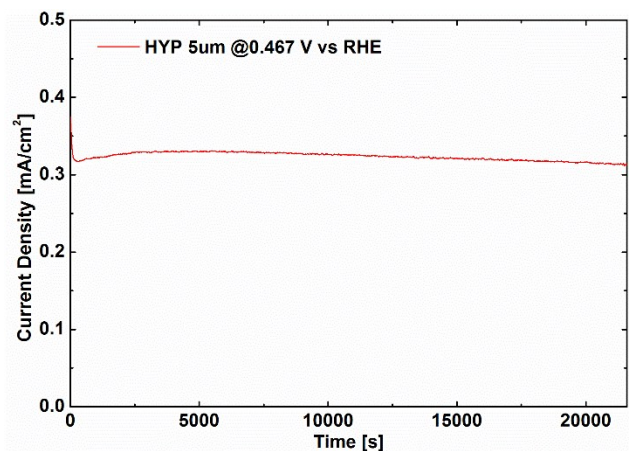


Figure S3. Chronoamperometry of the 5- μm -thick HYP sample performed for 6 hours under standard AM 1.5G illumination with the sample immersed in an aqueous solution of 1 M sulfuric acid (H_2SO_4) and with an applied bias of 0.467 V vs RHE.

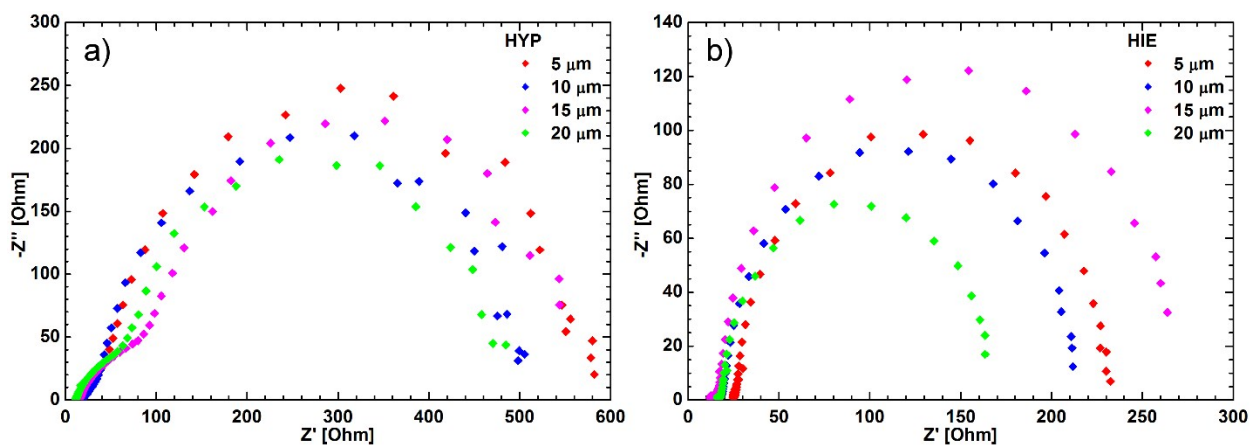


Figure S4. EIS curves as Nyquist plots of the HYP (a) and HIE (b) samples as a function of thickness measured with an applied bias of 0.7 V vs RHE.

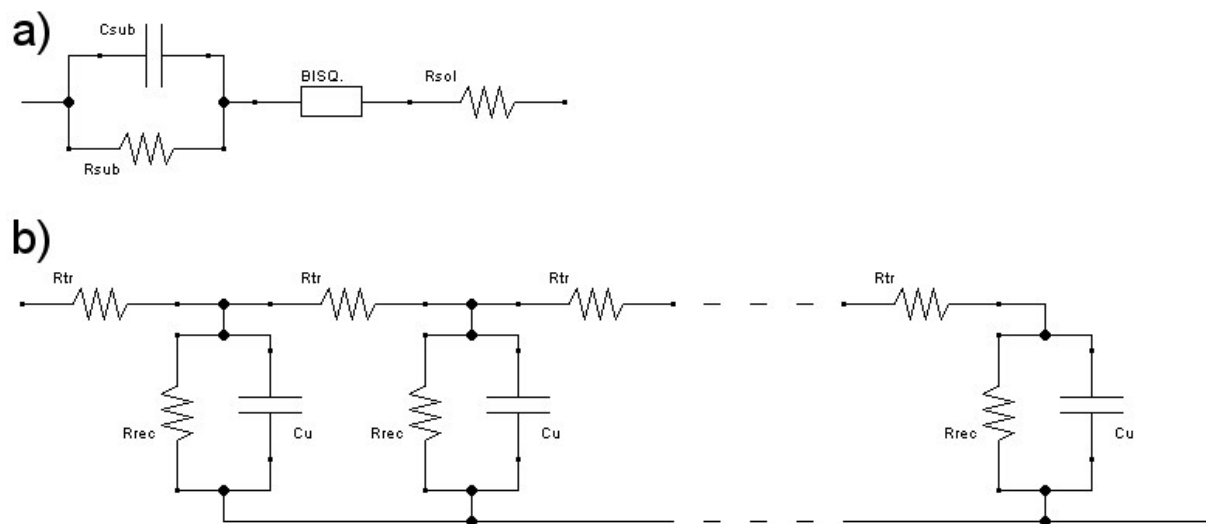


Figure S5. Equivalent circuit employed for the EIS data fitting (a), showing respectively the double layer at the TCO substrate/film interface (R_{sub} and C_{sub}), the “Bisquert” transmission line element (BISQ.) and the resistance of the electrolytic solution (R_{sol}). Exploded circuit for the “Bisquert” transmission line element (b), showing a repetition of the main circuit block made by the bulk transport resistance (R_{tr}) and the double layer at the nanoparticles/electrolyte interface (R_{rec} and C_u).