

Supporting Information

Hierarchical architecture of WO_3 nanosheets by self-assembly of Nanorods for photoelectrochemical application

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Results and discussion:

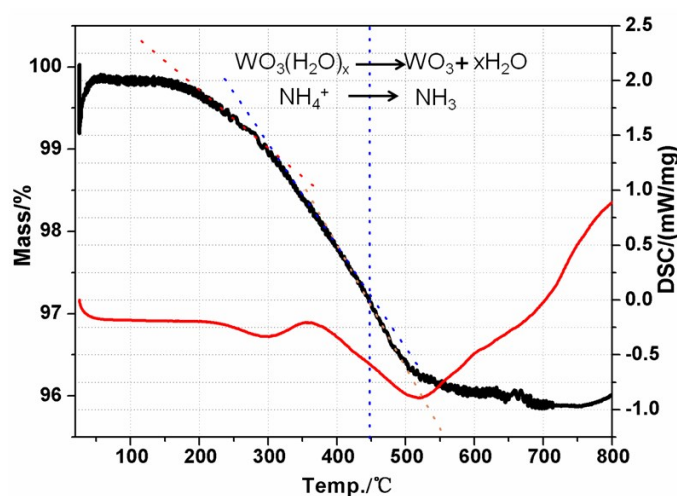


Fig.S1 TGA and DSC thermograms of the as-prepared hierarchical $\text{WO}_3(\text{H}_2\text{O})_x$ at a heating rate of 10 °C /min in air atmosphere.

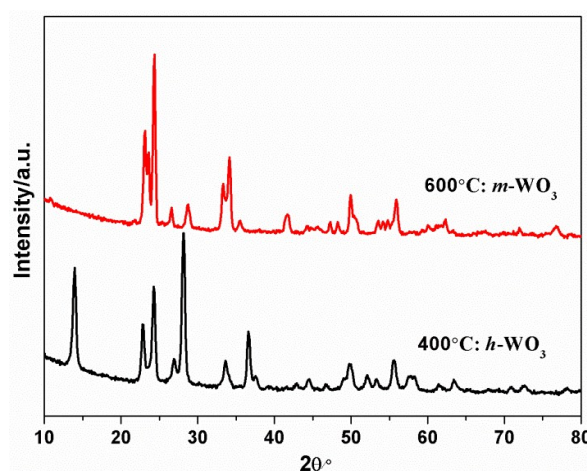


Fig.S2 XRD patterns of the hierarchical WO_3 obtained by different annealing temperatures of 400 °C and 600 °C.

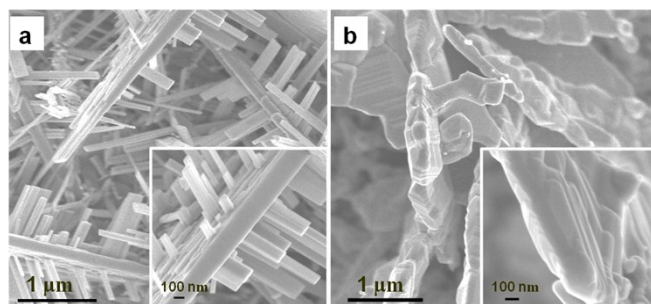


Fig.S3 SEM images of the WO_3 samples obtained by different annealing temperatures of (a) 400°C and (b) 600°C.

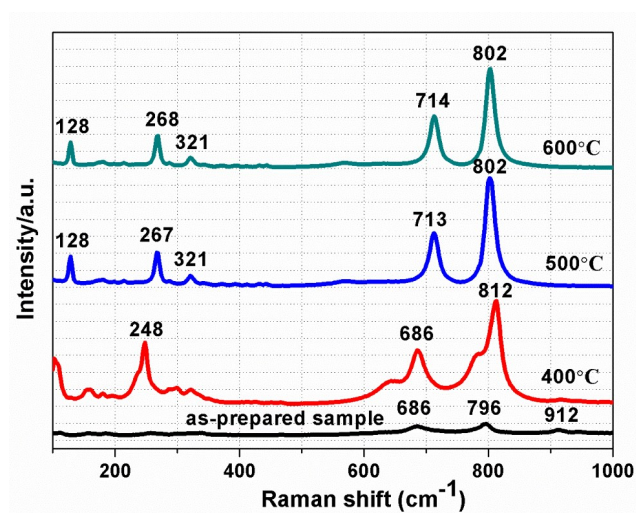


Fig.S4 The Raman spectra of the as-prepared hierarchical sample and obtained WO_3 by annealing different temperatures: 400°C, 500°C and 600°C.

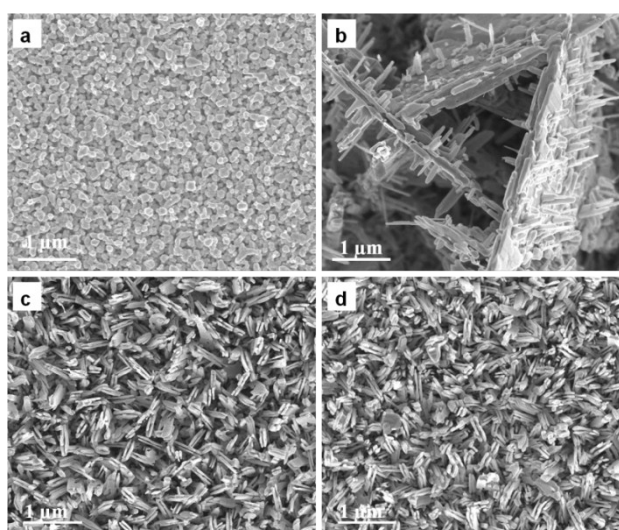


Fig.S5 The SEM images of the WO_3 samples obtained with concentrated hydrochloric acid of (a)2ml, (b)4ml, (c)6ml and (d)8ml added in the precursor, respectively. (All the samples have been annealed with 500°C under air condition)

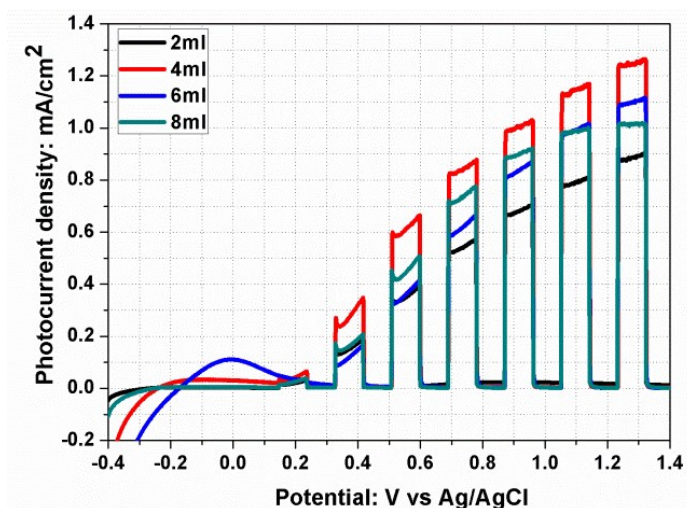


Fig.S6 The PEC performance of the WO_3 samples obtained with concentrated hydrochloric acid (2ml-8ml) added in the precursor, respectively. (All the samples have been annealed with 500°C under air condition)

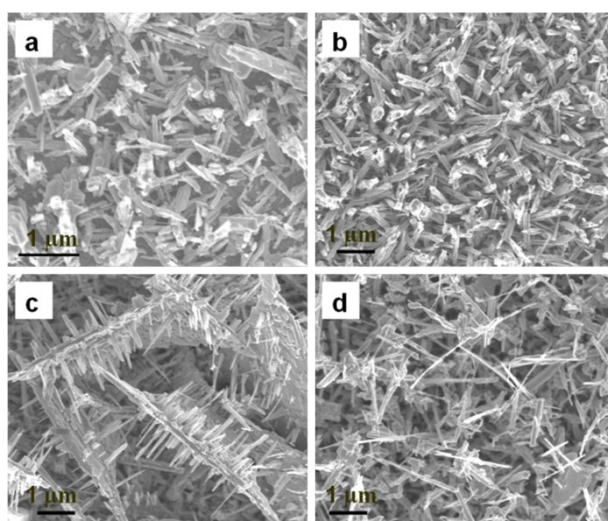


Fig.S7 The SEM images of the WO_3 samples obtained with different amount of capping agent of (a) 0.5mmol, (b) 1.0mmol, (c) 2.0mmol and (d) 3.0mmol added in the precursor, respectively. (All the samples have been annealed with 500°C under air condition)

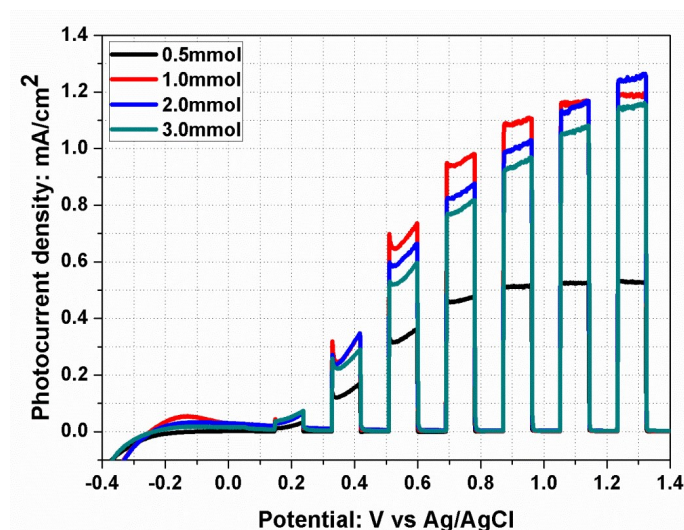


Fig.S8 The PEC performance of the WO_3 samples obtained with different amount of capping agent (0.5mmol-3.0mmol) added in the precursor, respectively. (All the samples have been annealed with 500°C under air condition)