

Supporting Information

**Highly Electrocatalytic Activity of $W_{18}O_{49}$ Nanowire for
Cobalt Complex and Ferrocenium Redox Mediators**

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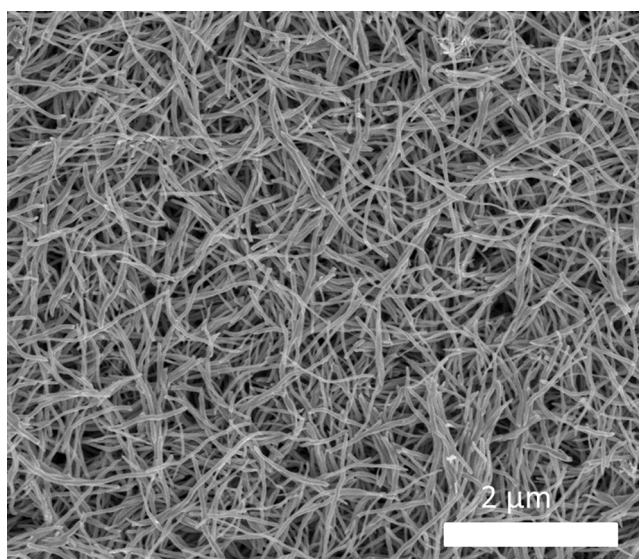


Figure S1. SEM of W-O-W

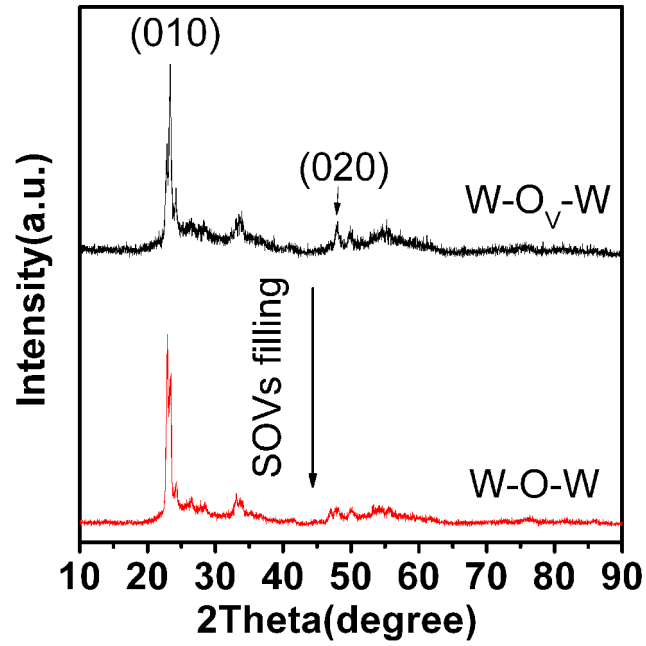


Figure S2. XRD for W-O_v-W (black) and W-O-W (red), respectively.

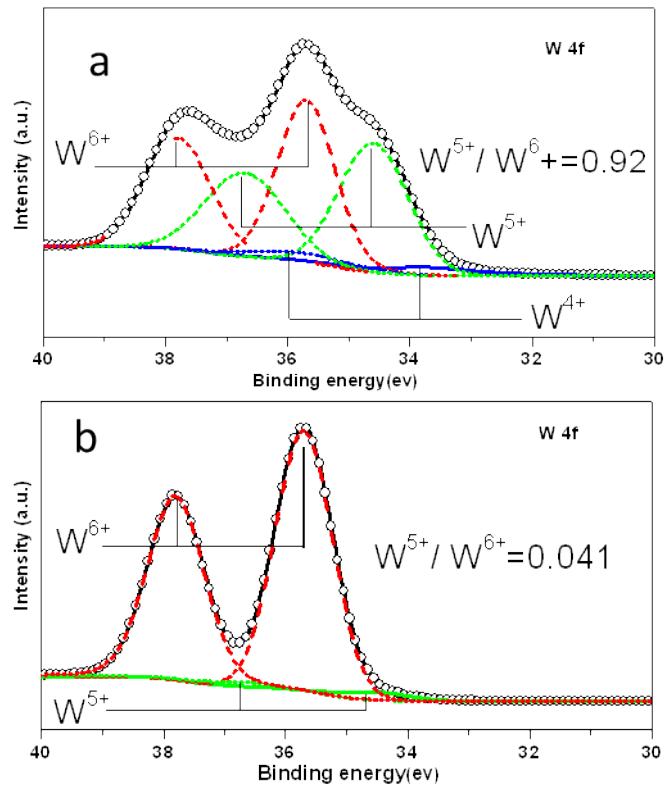


Figure S3. a) and b) are the W 4f core-level spectrum of W-O_v-W and W-O-W, respectively. The ratio of W⁵⁺/W⁶⁺ is obtained by fitting the curves.

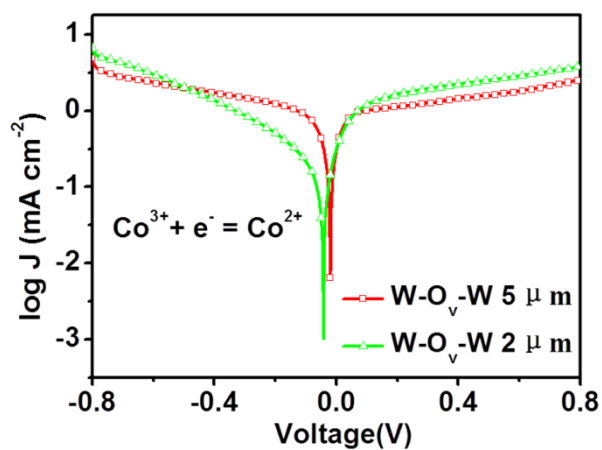


Figure S4. Effect of different thickness of W-O_v-W on Tafel polarization.

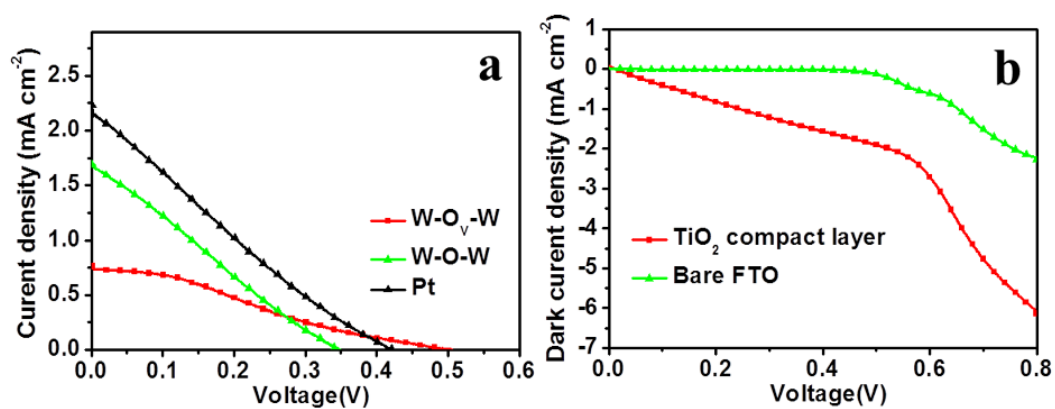


Figure S5. a) Photocurrent density - voltage curves of DSCs utilizing Fc/FcPF₆ redox mediators without TiO₂ blocking layer. b) Dark current with and without the TiO₂ blocking layer.