

Article

Water Photo-Electrooxidation Using Mats of TiO_2 Nanorods, Surface Sensitized by a Metal–Organic Framework of Nickel and 1,2-Benzene Dicarboxylic Acid

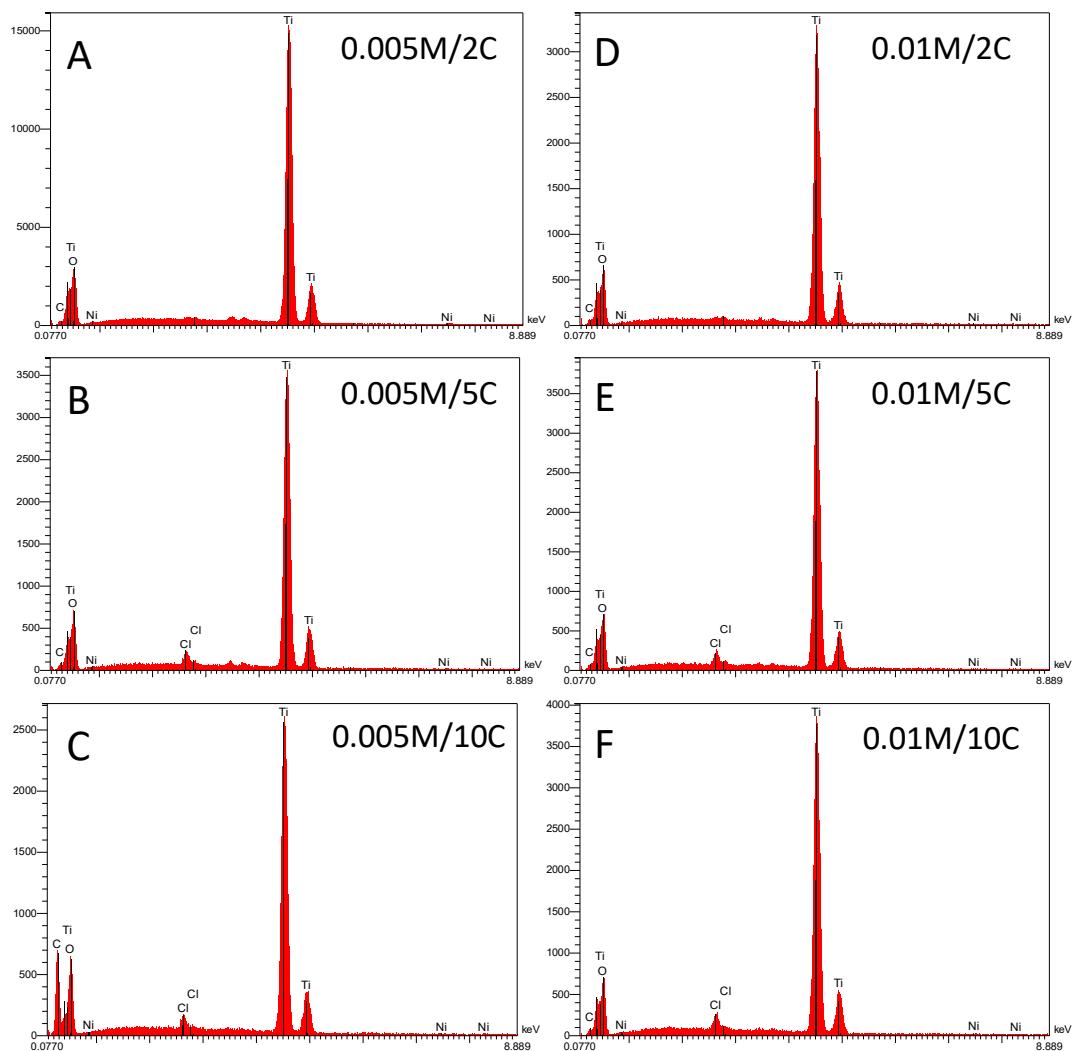


Figure S1. Experimental EDX spectra of the photoelectrodes prepared by using 0.005M and 0.01M Ni solution and various deposition cycles 2C, 5C, 10C.

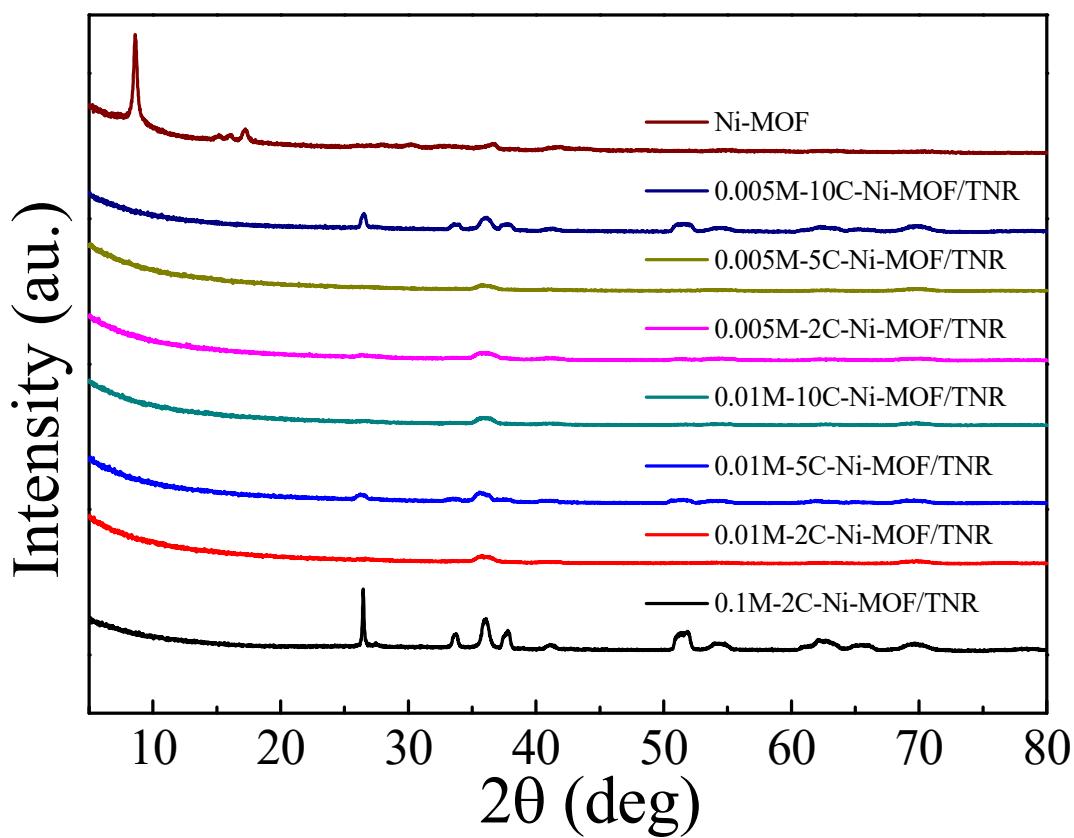


Figure S2. XRD pattern of different concentration of Ni-MOF on TDNR.

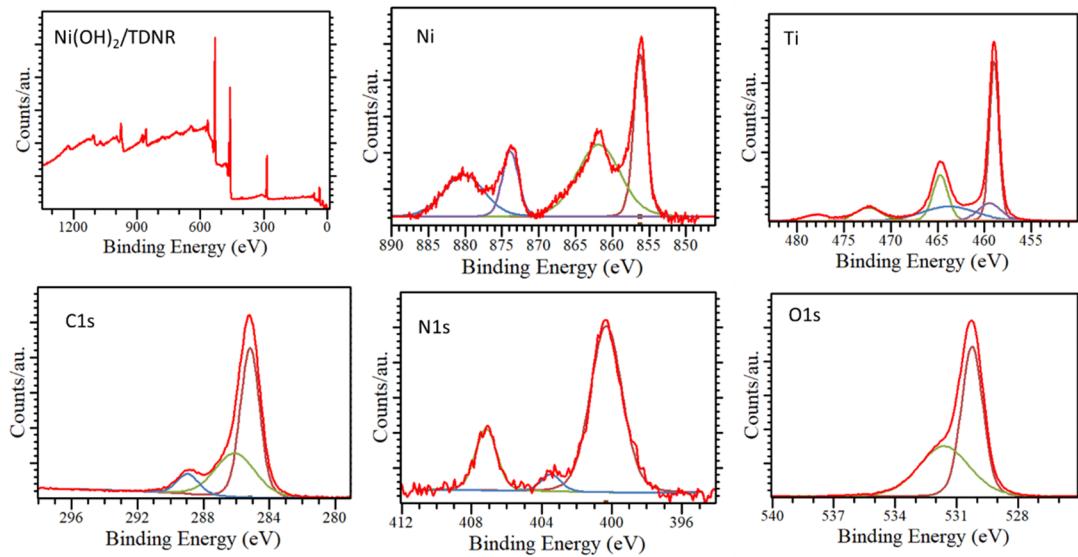


Figure S3. XPS spectra of Ni (OH)₂/TDNR with zooms on element contributions.

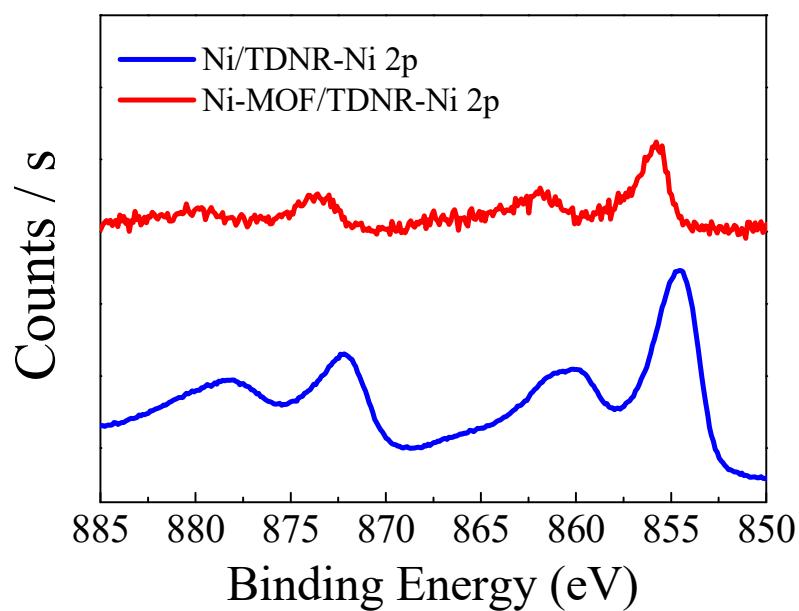


Figure S4. XPS Ni 2p spectrum of $\text{Ni}(\text{OH})_2/\text{TDNW}$ and Ni-MOF/TDNW.

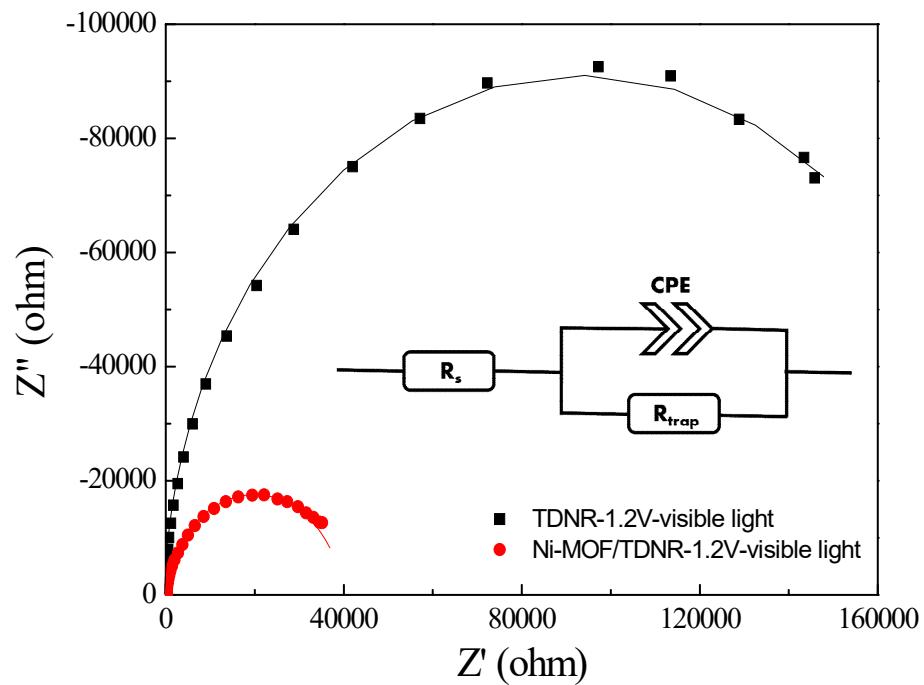


Figure 5. Experimental (symbols) and calculated (solid lines) PEIS diagrams measured at 1.2V/SCE under visible light illumination on bare TDNRs (■) and 0.005M Ni-MOF/TDNR (●) photoelectrodes.

Table S1. Fit parameters of the experimental PEIS spectra of Figure S6 (bare TDNR and 0.005M Ni-MOF/TDNR under visible illumination).

	<i>Element</i>	<i>Value</i>	<i>Error(%)</i>
<i>TDNR</i> <i>1.2V/Vis.</i>	Rs ($\Omega \text{ cm}^2$)	22.0	0.70
	CPE-T (F cm^{-2})	8.3E-6	0.83
	CPE-P	0.98	0.16
	Rct ($\text{k}\Omega \text{ cm}^2$)	186.61	1.48
<i>0.005M</i> <i>Ni-MOF/TDNR</i> <i>1.2V/Vis.</i>	Rs ($\Omega \text{ cm}^2$)	131.5	2.1E-13
	CPE-T (F cm^{-2})	1.6E-5	3.9E-13
	CPE-P	0.91	1.0E-13
	Rct ($\text{k}\Omega \text{ cm}^2$)	39.94	4.1E-13