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Supplementary Information

High-Efficiency Photoelectrochemical Hydrogen Generation Enabled by p-Type Semiconductor Nanoparticles-Decorated n-Type Nanotube Arrays

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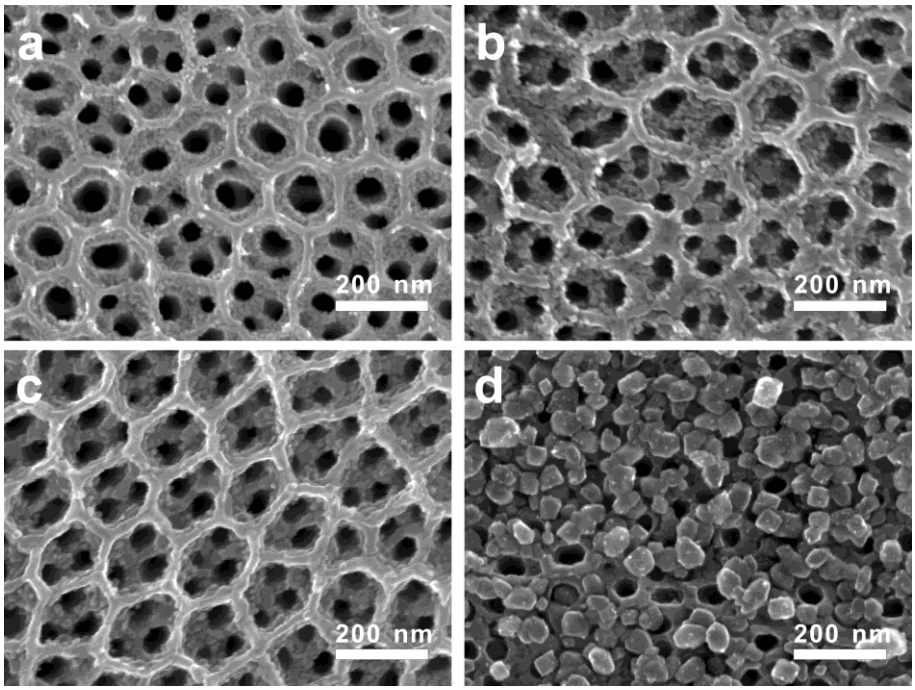

Figure S1. SEM images of TiO_2 nanotube arrays after being decorated with NiO nanoparticles via different cycles of CBD process: (a) 5 cycles; (b) 10 cycles; (c) 15 cycles; and (d) 20 cycles.

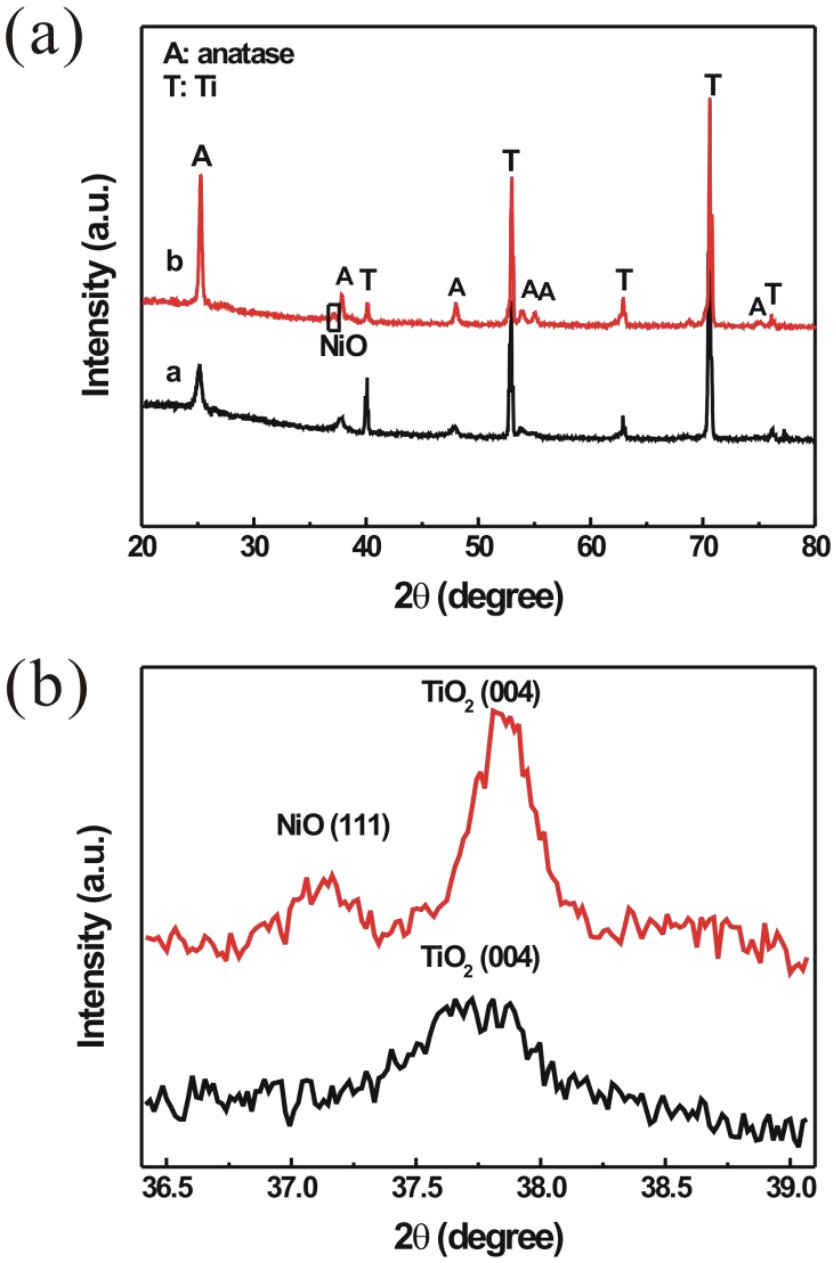

Figure S2. (a) XRD patterns and (b) regional XRD patterns of pure TNTAs (black curves) and NiO@TNTAs prepared by the CBD synthesis for 15 cycles (red curves).

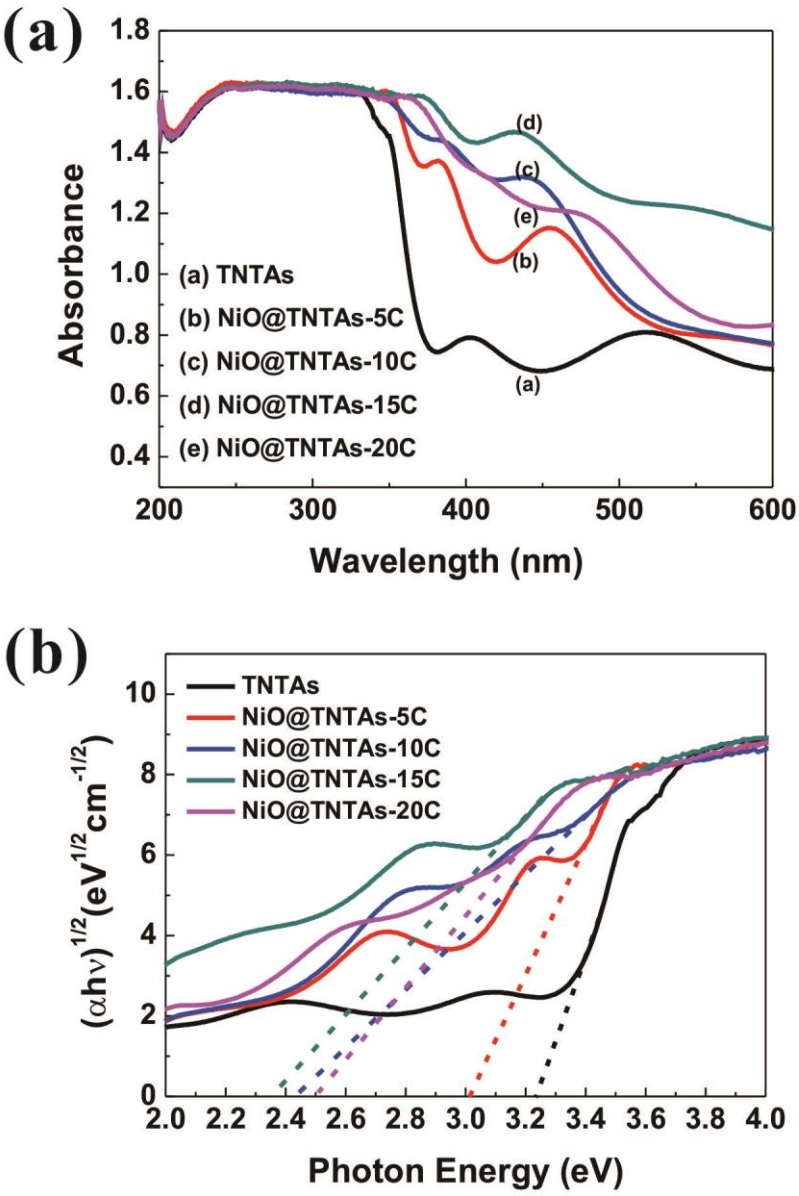

Figure S3. (a) UV–vis diffuse reflectance spectra of TNTAs and NiO@TNTAs samples prepared under different deposition cycles. (b) The absorption spectra of the corresponding samples by plotting $(\alpha h\nu)^{1/2}$ vs. $h\nu$.

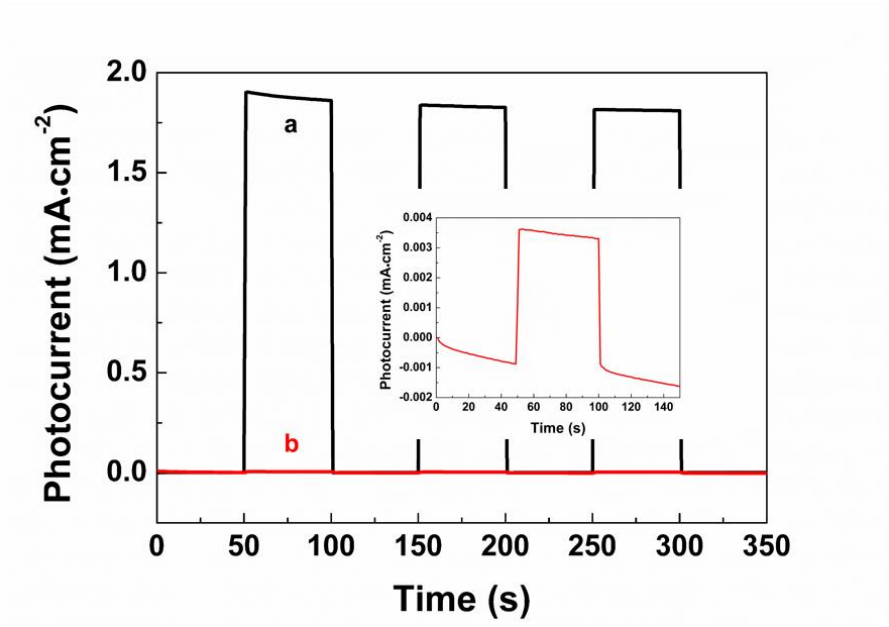

Figure S4. Photocurrent response of NiO@TNTAs-15C under full light (line a) and visible light (λ≥420 nm, line b), respectively. The inset is the close-up of line b.