Supporting Information

Photoelectrochemical Photocurrent Switching Effect on Pristine Anodized Ti/TiO₂ System as a Platform for Chemical Logic Device

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Figure S1. a) XRD patterns of anodized Ti/TiO₂ nanotubes without annealing (curve 1) and after their heat treatment at 450°C (curve 2), peaks appear in the 2Θ region: 25.18; 37.81; 48.01; 54.01 and 55.08, which correspond to the peaks of the anatase modification of TiO₂, b) EDX demonstrating Ti/O ratio in the resulting Ti/TiO₂ nanotubes depending on depth (as you approach the titanium substrate). Ti:O varies on average from 1: 1.7 to 1: 1.9, which is close to the Ti/O ratio in the TiO₂ phase and evidences Ti³⁺ self-doping.



Figure S2. Mott-Schottky plot for anodized pristine Ti/TiO₂ nanotubes.



Figure S3. Photocurrent dependence on applied potential for ultraviolet irradiation (365 nm) – violet line and blue irradiation (405 nm) – blue line.