

Supplementary Materials:

Crystal-Plane Dependence of Nb-Doped Rutile TiO_2 Single Crystals on Photoelectrochemical Water Splitting

Tomohiko Nakajima *, Takako Nakamura and Tetsuo Tsuchiya

Advanced Coating Technology Research Center, National Institute of Advanced Industrial Science and Technology,
Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan.

* Correspondence: t-nakajima@aist.go.jp

Surface morphology of the aged samples

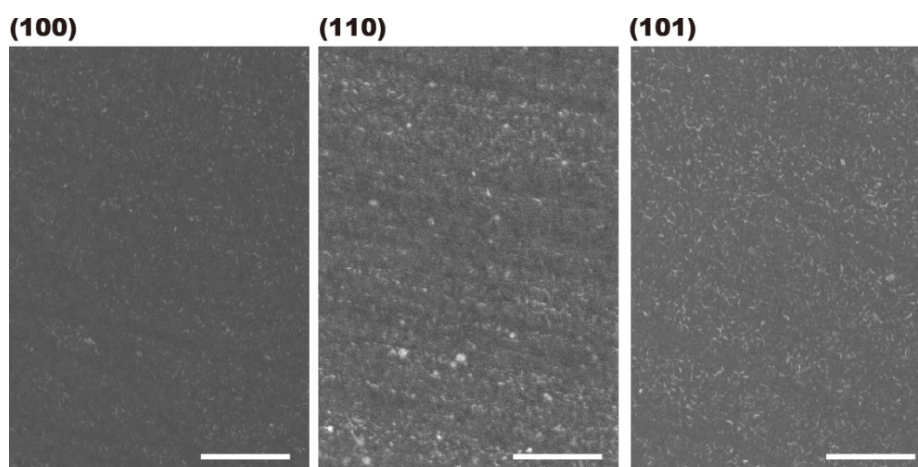


Fig. S1: The surface morphology for the (100)-, (110)- and (101)-planes of $\text{TiO}_2\text{:Nb}$ substrates after the PEC reaction at 1.5 V_{RHE} for 1 h in 1 M KOH electrolyte. The white scale bars represent 500 nm.

Spectrum of illuminated simulated solar light

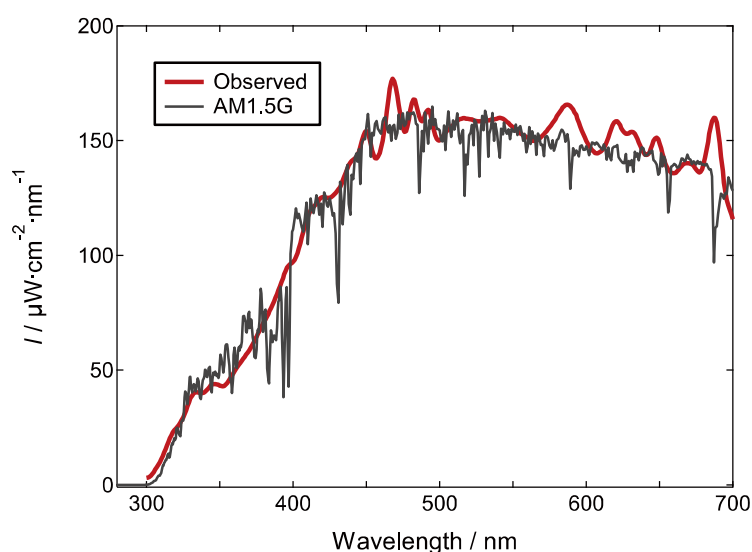


Fig. S2: The spectra for 100 $\text{mW}\cdot\text{cm}^{-2}$ AM1.5G (1 SUN) and simulated solar light used for the IPCE measurements