Supporting Information

Enhanced photoelectrochemical property of TiO_2 nanotube array photoanode deposited with Al,Cr-codoped $SrTiO_3$ nanocubes

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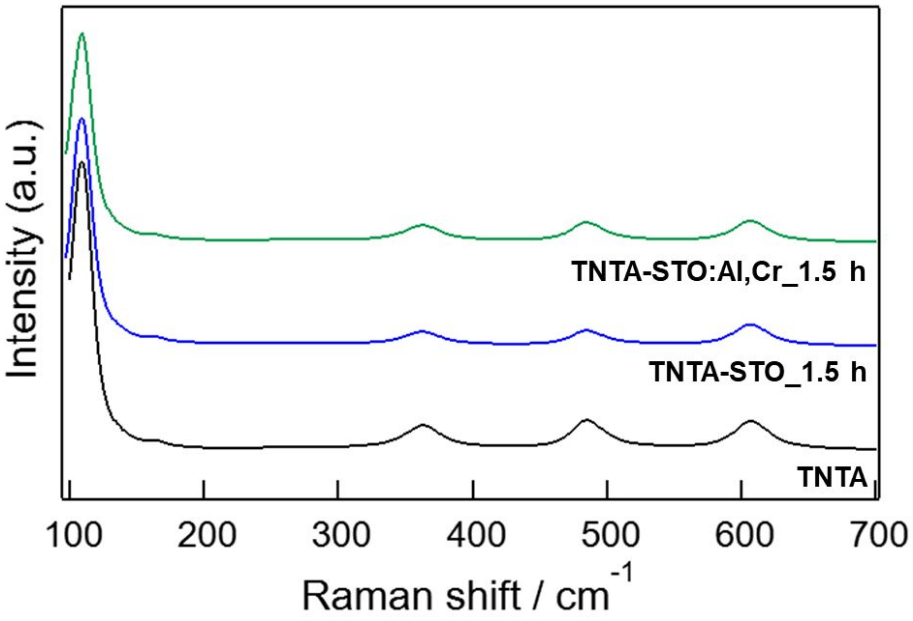
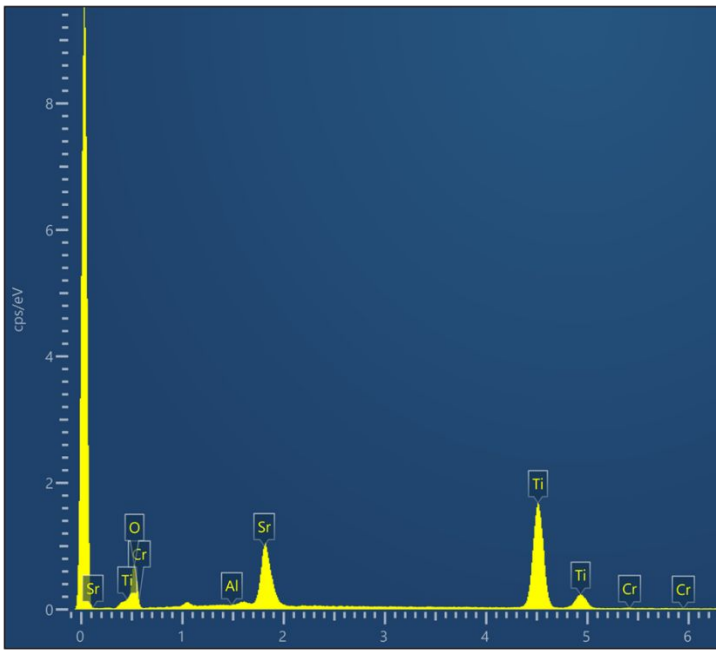


Fig. S1. Raman spectra of TNTA, TNTA-STO_1.5h, and TNTA-STO:Al,Cr_1.5h.



Sample	O	Ti	Sr	Al	Cr
TNTA-STO:Al,Cr_1.5h	70.0	23.7	6.3	0.0	0.1

Fig. S2. EDX data of TNTA-STO:Al,Cr_1.5h.

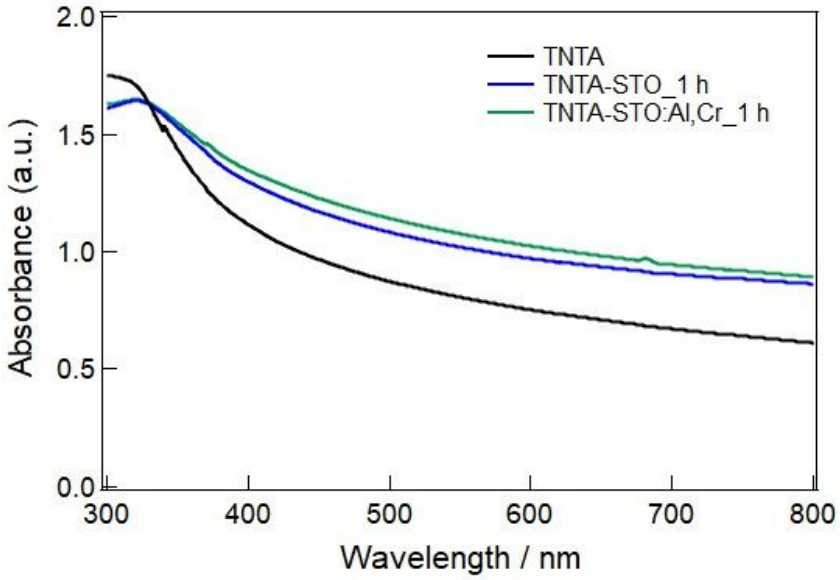


Fig. S3. UV-visible spectra of TNTA, TNTA-STO_1h, and TNTA-STO:Al,Cr_1h. The samples were scratched out from the Ti substrates and dispersed in water to measure the absorption spectra. A V-670 spectrophotometer (JASCO, Japan) was used.

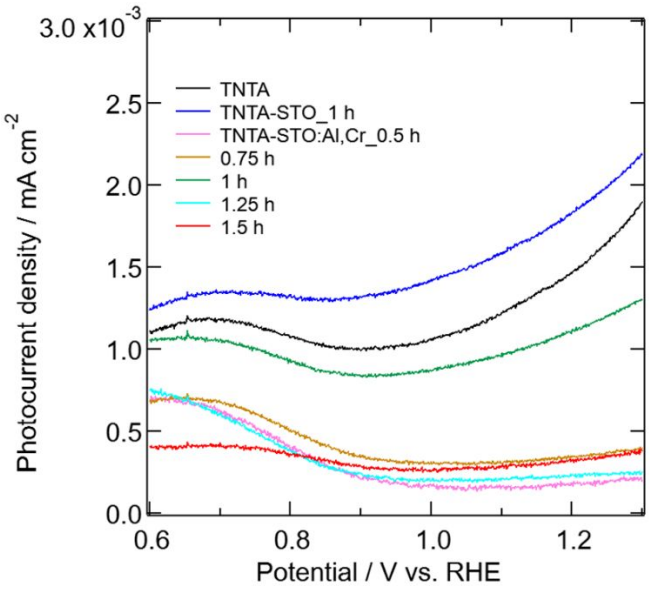


Fig. S4. LSV of prepared samples under dark condition.

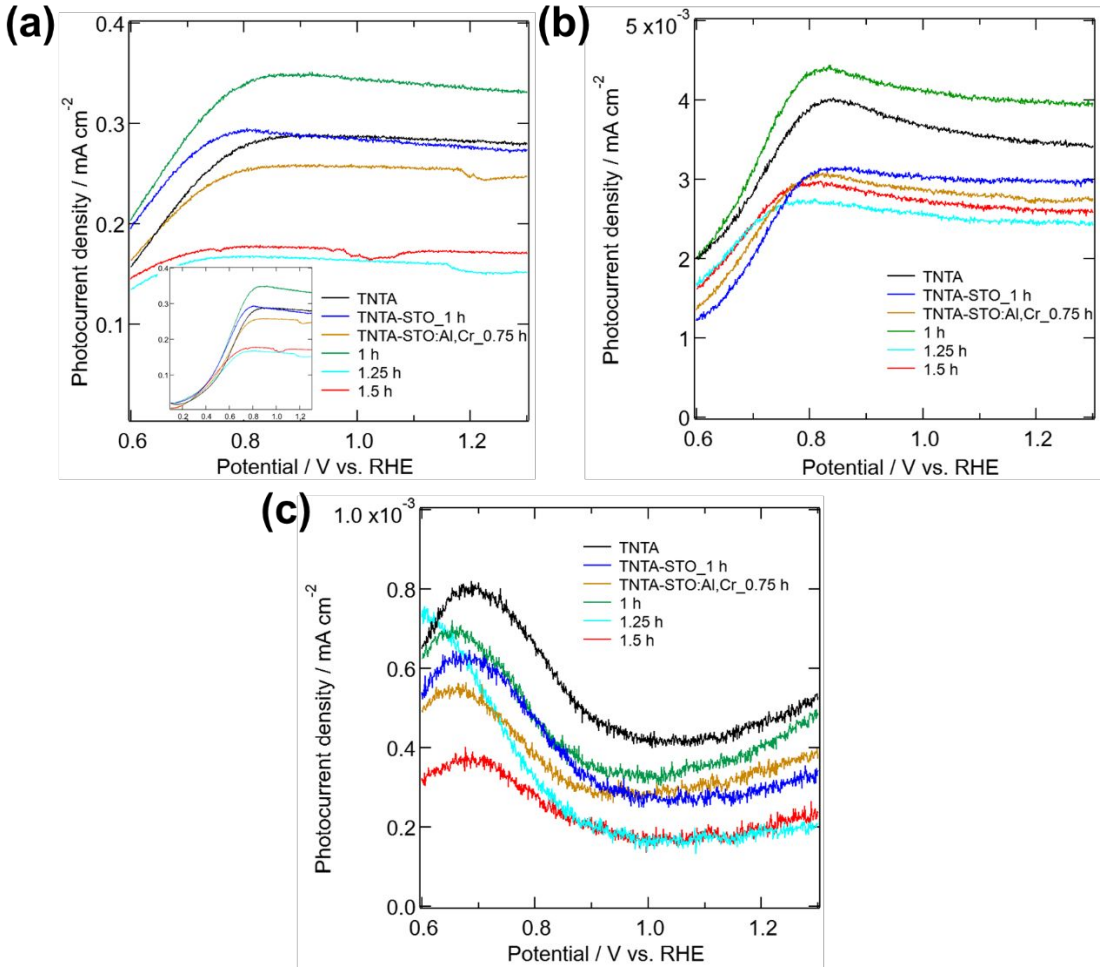


Fig. S5. LSV of prepared samples under (a) simulated sunlight, (b) visible light, and (c) dark condition (without methanol in the electrolyte).