

## Enhanced photoelectrochemical water splitting of CrTiO<sub>2</sub> nanotube photoanodes by decoration of their surface via photodeposition of Ag and Au

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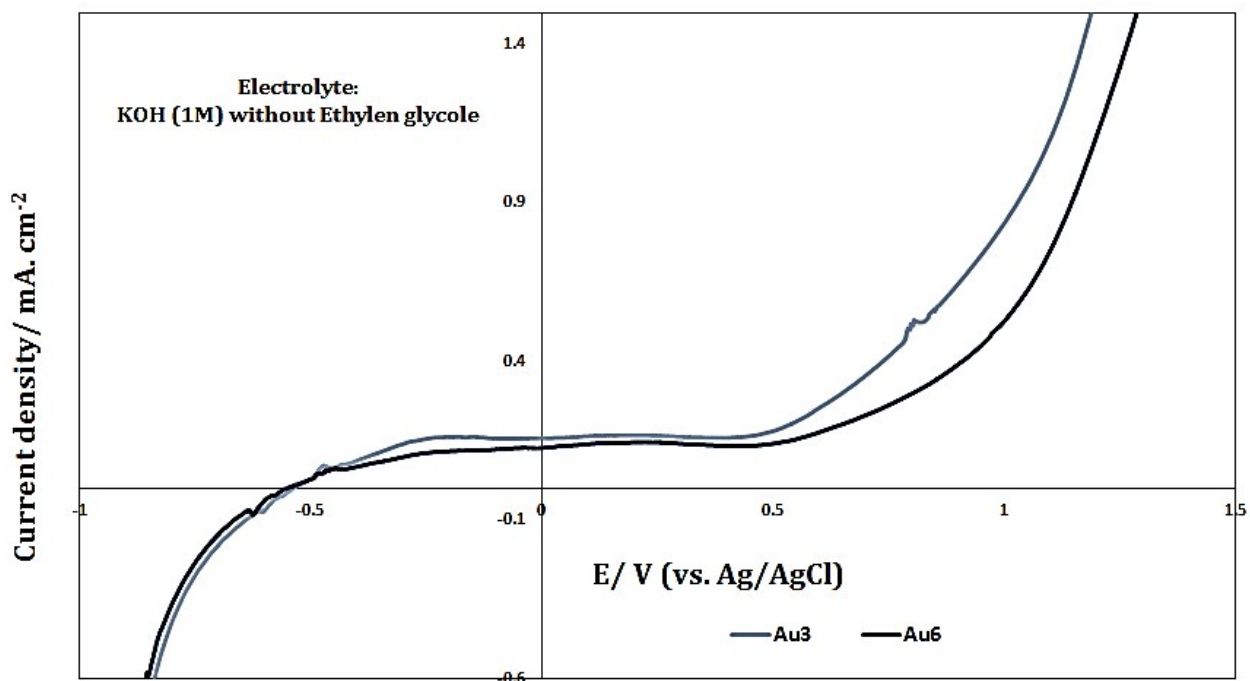
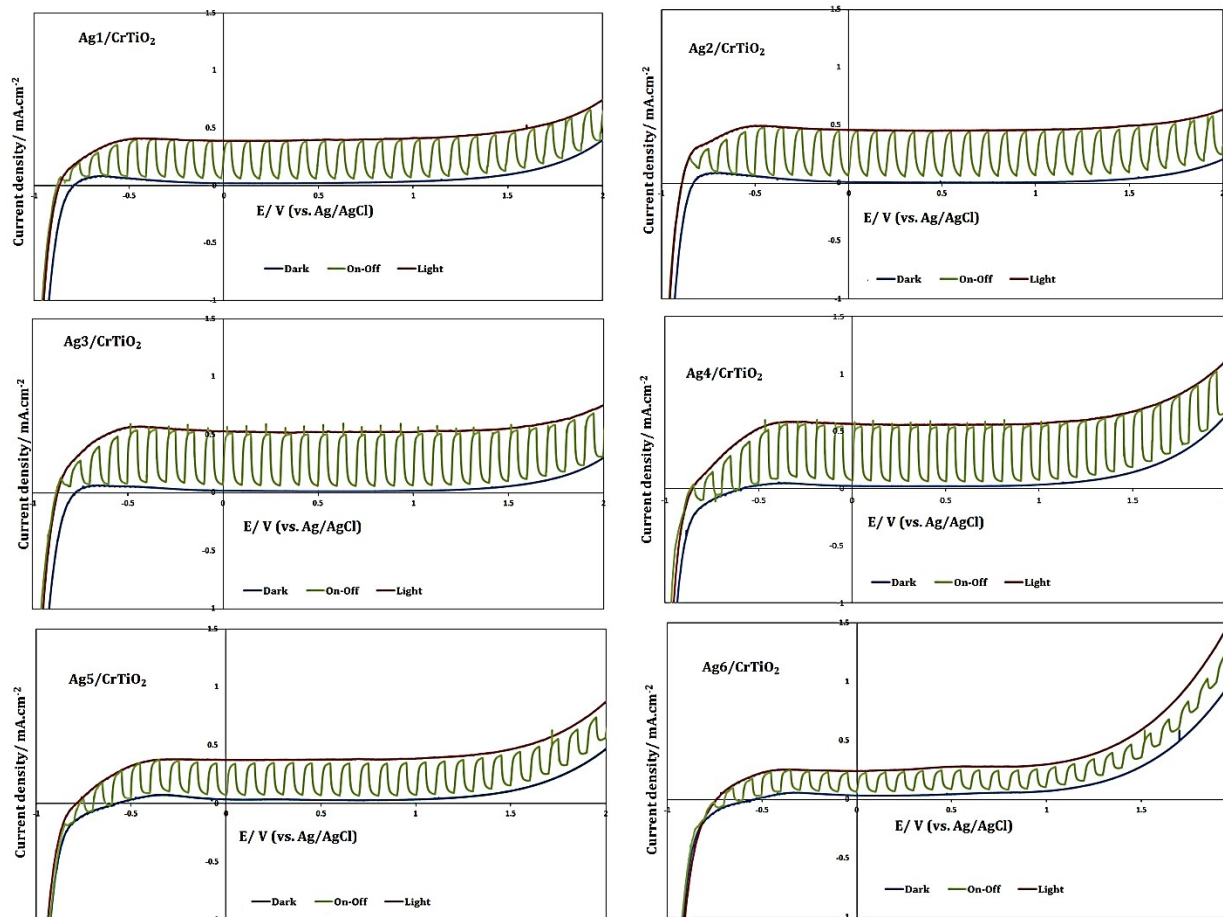


Fig. S1. LSV of Au<sub>2</sub>/CrTiO<sub>2</sub>NTs and Au<sub>6</sub>/CrTiO<sub>2</sub>NTs in KOH (1M) solution without ethylene glycol. The anodic peak was eliminated by removing ethylene glycol from the solution

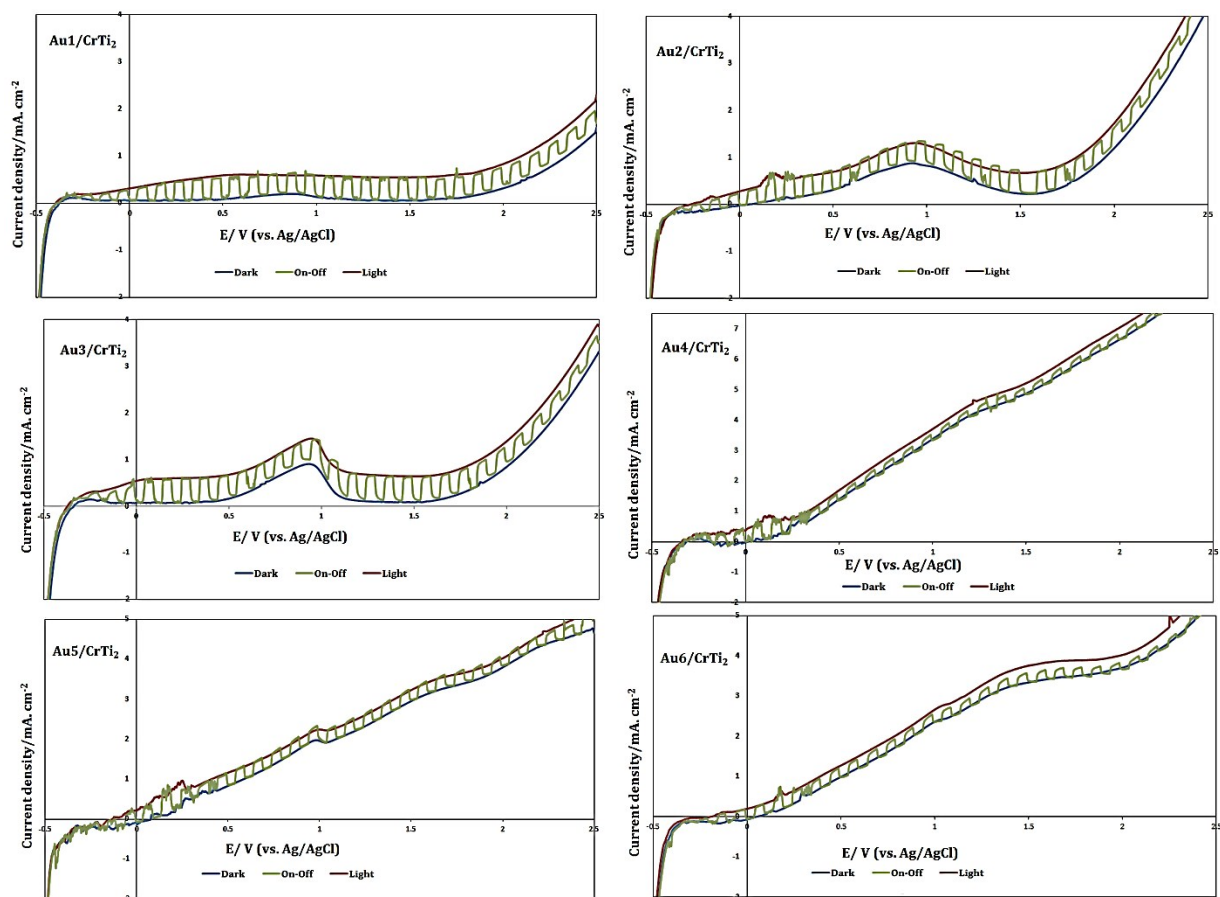
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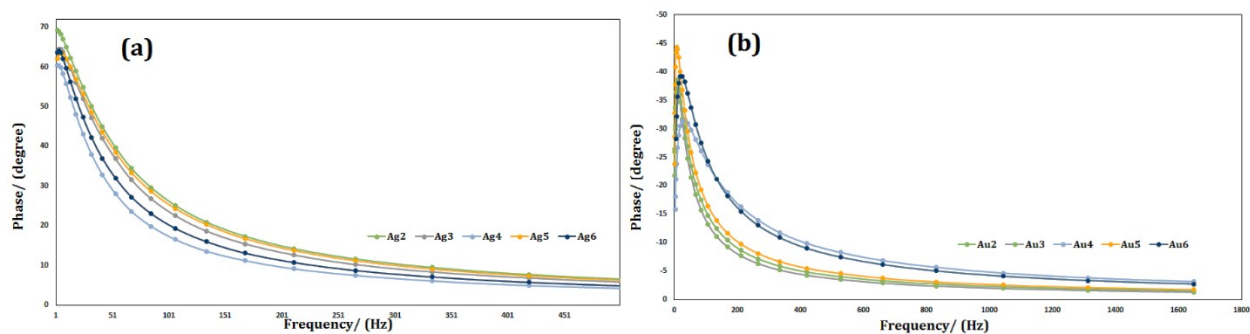
Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/x0xx00000x



**Fig. S2.** LSV of Ag/CrTiO<sub>2</sub> NTs samples recorded in KOH (1 M) aqueous solution containing 5% V ethylene glycol in the dark, under constant illumination and chopped light irradiation



**Fig. S3.** LSV of Au/CrTiO<sub>2</sub> NTs samples recorded in KOH (1 M) aqueous solution containing 5% v/v ethylene glycol in the dark, under constant illumination and chopped light irradiation)



**Fig. S4.** The Phase diagram of Ag/CrTiO<sub>2</sub> NTs (a) and Au/CrTiO<sub>2</sub> NTs (b) at different times of photodeposition measured at 0.2 V vs. Ag/AgCl, in the presence of the illumination 200 mW cm<sup>-2</sup>