

Supplementary Materials

Design and demonstration of large scale Cu₂O photocathodes with metal grid structure for photoelectrochemical water splitting

Min-Kyu Son^{1*}

¹Nanomaterials and Nanotechnology Center, Electronic Convergence Division, Korea Institute of Ceramic Engineering & Technology (KICET), Jinju 52851, Republic of Korea

*E-mail: minkyu.son@kicet.re.kr

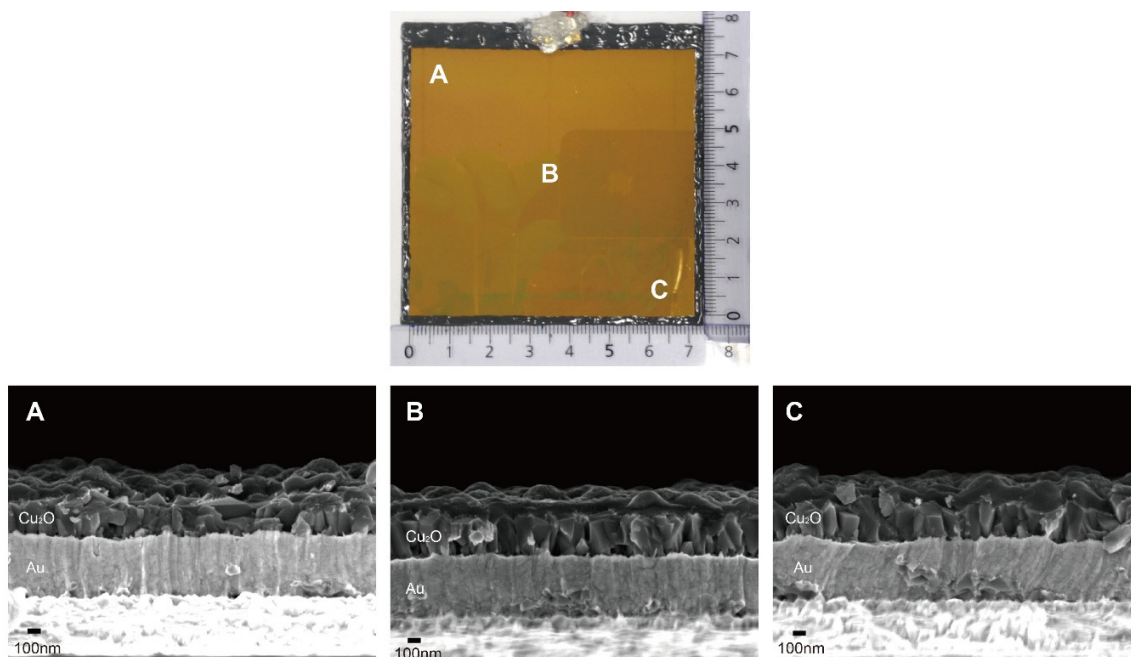


Figure S1. Cross-section SEM images of large scale Cu_2O photocathode with an area of 50 cm^2 at the different positions (A: Upper, B: Middle and C: Down). The large scale Cu_2O photocathode has thick Au back contact layer, AZO overlayer, TiO_2 protection layer and RuO_x HER catalyst.

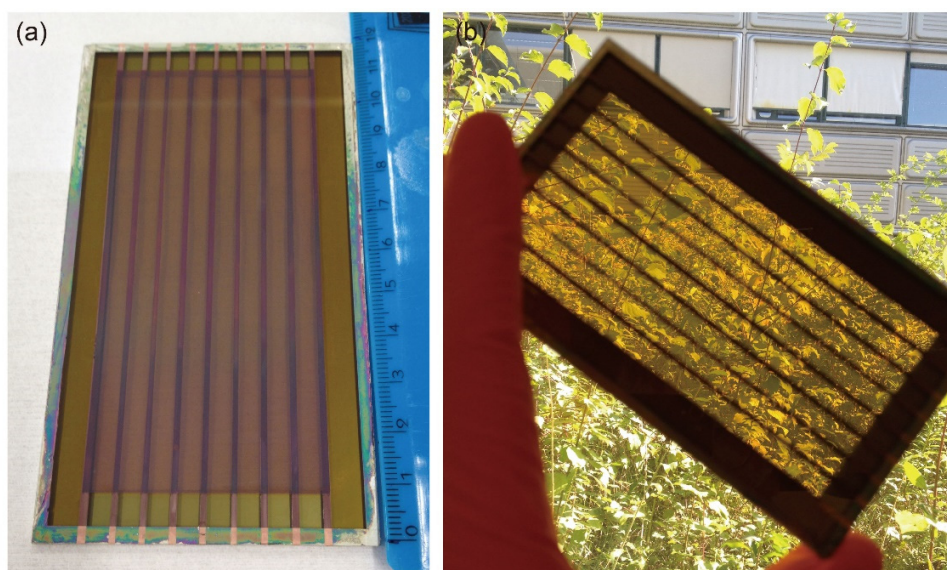


Figure S2. A 50 cm^2 scaled Cu_2O photocathode with sputtered Cu grid lines.

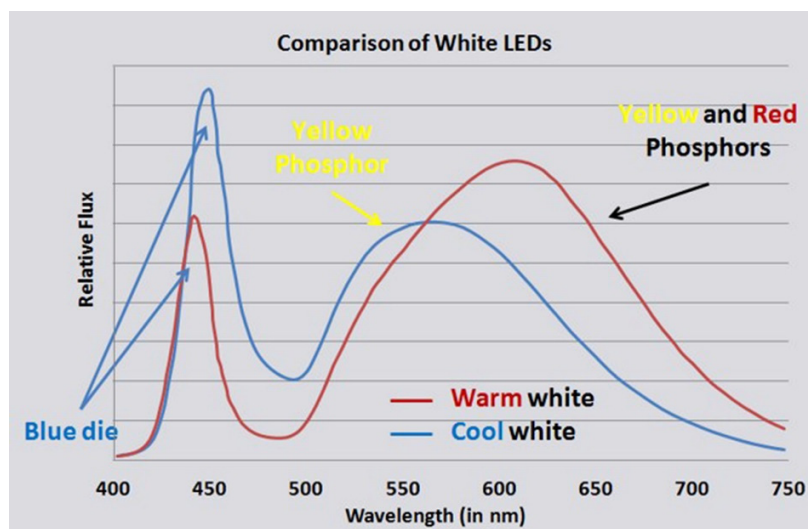


Figure S3. Lamp spectra of the warm (red) and cool (blue) white LED for the experiment of solar energy conversion devices. The warm white LED array was used for the PEC measurement of a 50 cm² scaled large scale Cu₂O photocathode in this work.