Supplementary Materials

for

Atomic Layer Deposition of Ultrathin ZnO Films for Hybrid Window Layers for $Cu(In_x,Ga_{1-x})Se_2$ Solar Cells

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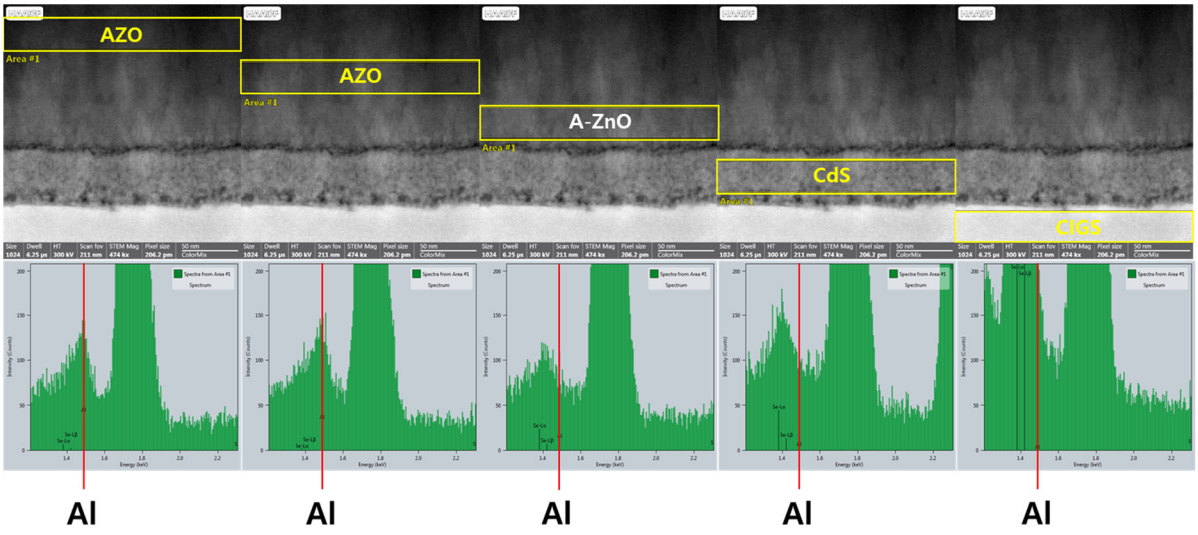


Figure S1. EDS data of an aluminum (Al) element in different positions of a CIGS solar cell device.

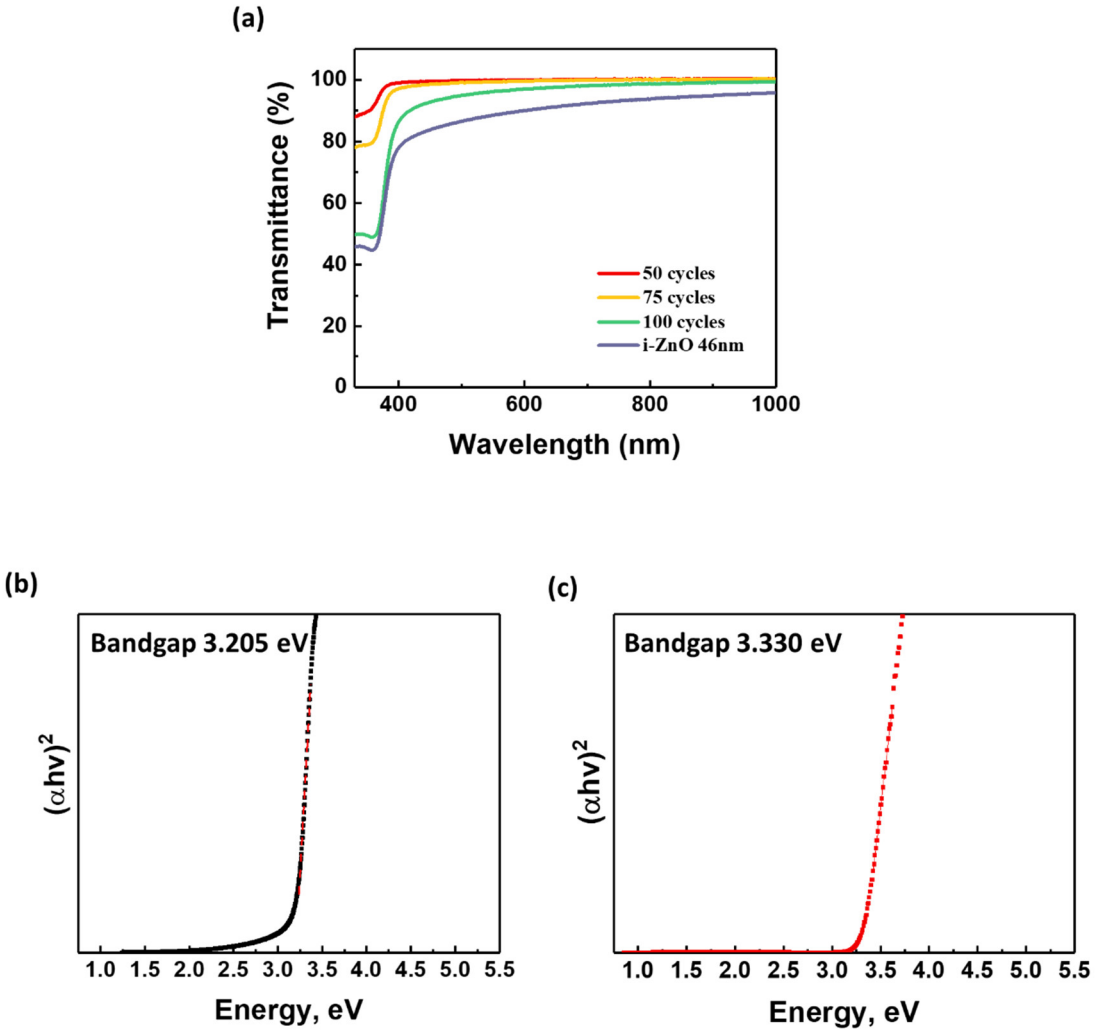


Figure S2. Transmittance and optical band gap properties of the i-ZnO and A-ZnO; (a) transmittance spectra of i-ZnO and A-ZnO, (b) optical band gap of i-ZnO, and (c) optical band gap of A-ZnO.