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Supplementary Information

Flexible High Performance Hybrid AZO/Ag-Nanowire/AZO Sandwich Structured Transparent Conductors for Flexible Cu(In,Ga)Se_2 Solar Cell Applications

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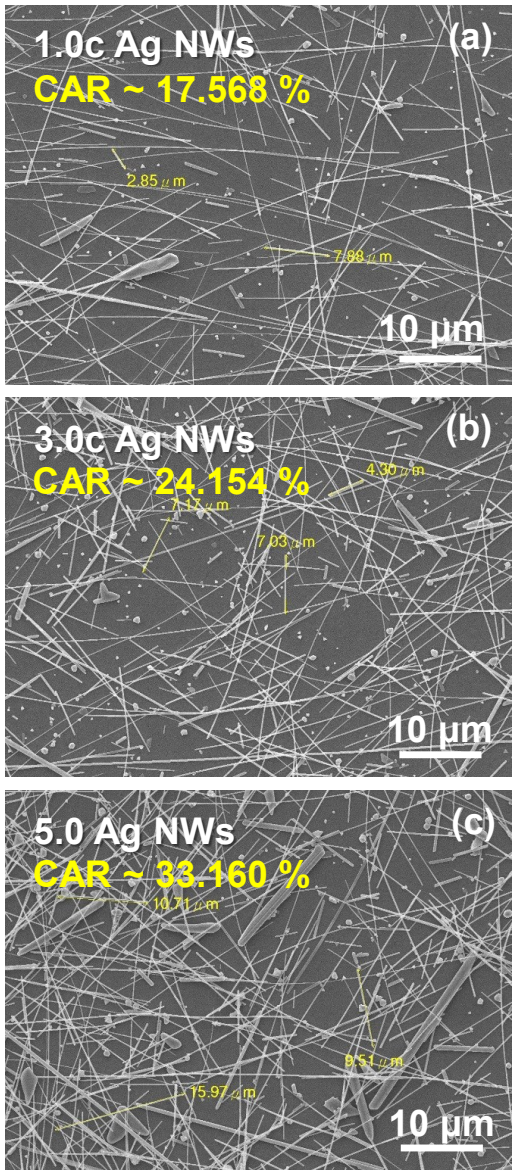

Fig S1. Top view SEM images showing increasing Ag-NWs network density achieved through increased number of Ag-NWs precursor solution spin coating cycles.

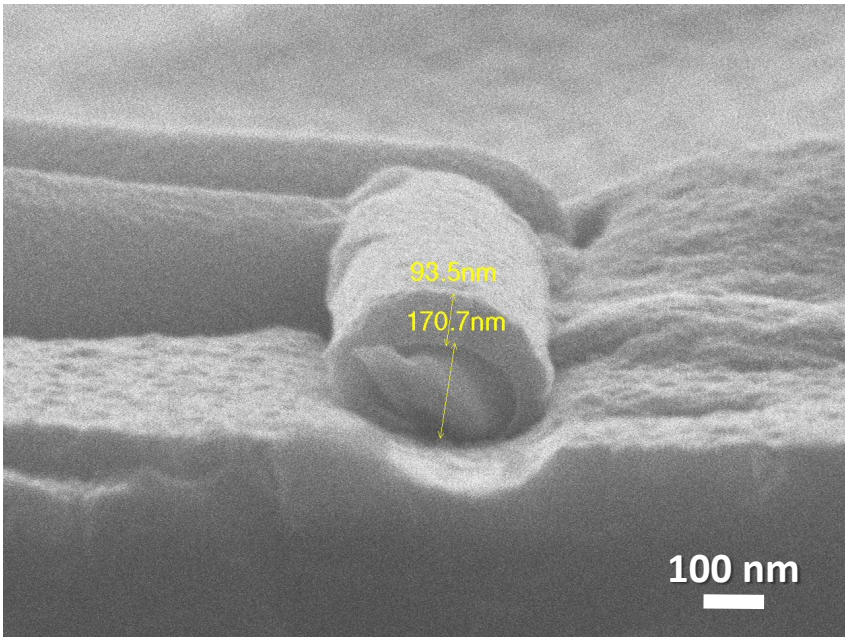

Fig S2. Cross section SEM image illustrating shadowing effect and resultant uneven AZO film thickness observed during initial stages of AZO deposition on top of Ag-NWs network.

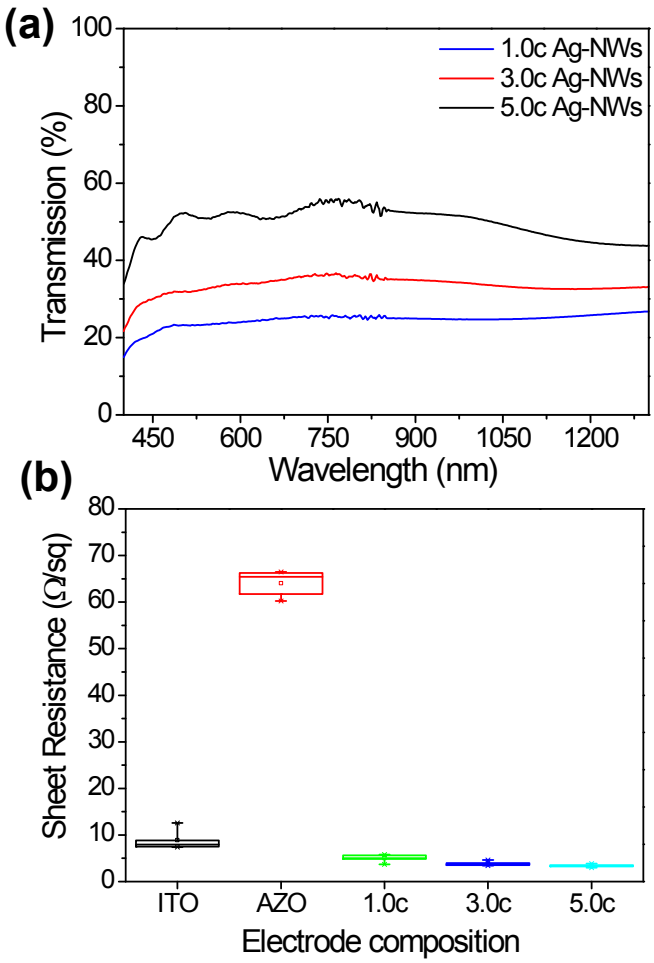

Fig S3. (a) Transmission spectra and (b) sheet resistance values obtained from AAA electrodes using higher density (1.0c, 3.0c and 5.0c) Ag-NWs network.

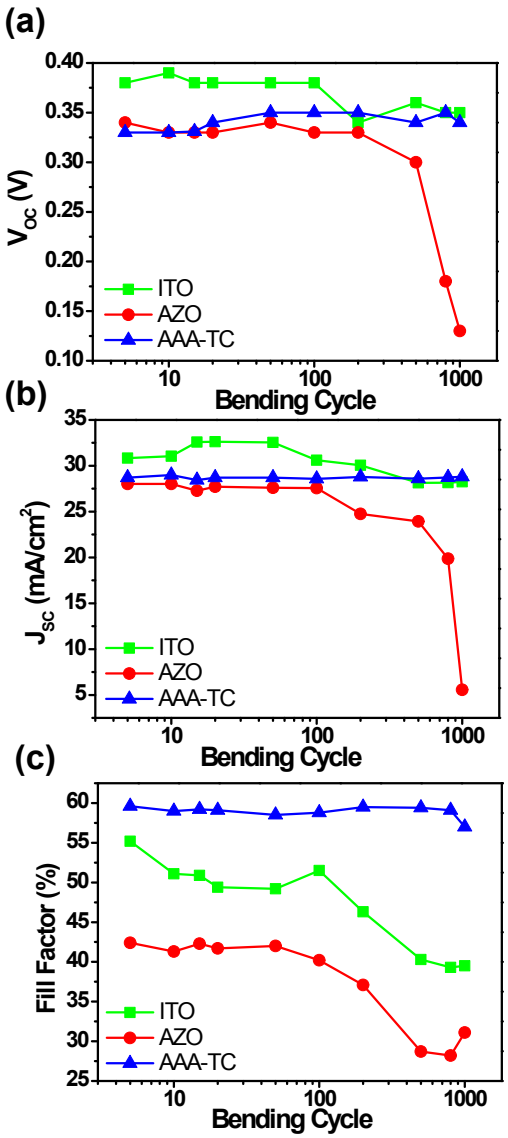

Figure S4. Extracted device characteristics for solar cells fabricated using ITO, AZO and AAA electrodes, shown as a function of increasing number of bending cycles.