

Supporting Information

Modeling and Characterization of Extreme Thin Absorber (η a) Solar Cells Based on ZnO Nanowires

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SEM micrographs of devices 10 and 18:

Device 18 presents voids revealing uncompleted filling of the ZnO/CdSe nanostructure with CuSCN, see Fig. S1. This is not the case, in device 10 where no voids were observed. Furthermore, clear “fingerprints” in the CuSCN from nanowires and even from CdSe crystals were clearly detected in the micrographs of device 10 indicating a very good CuSCN penetration and the consequent fully interpenetrating ZnO/CdSe/CuSCN interface.

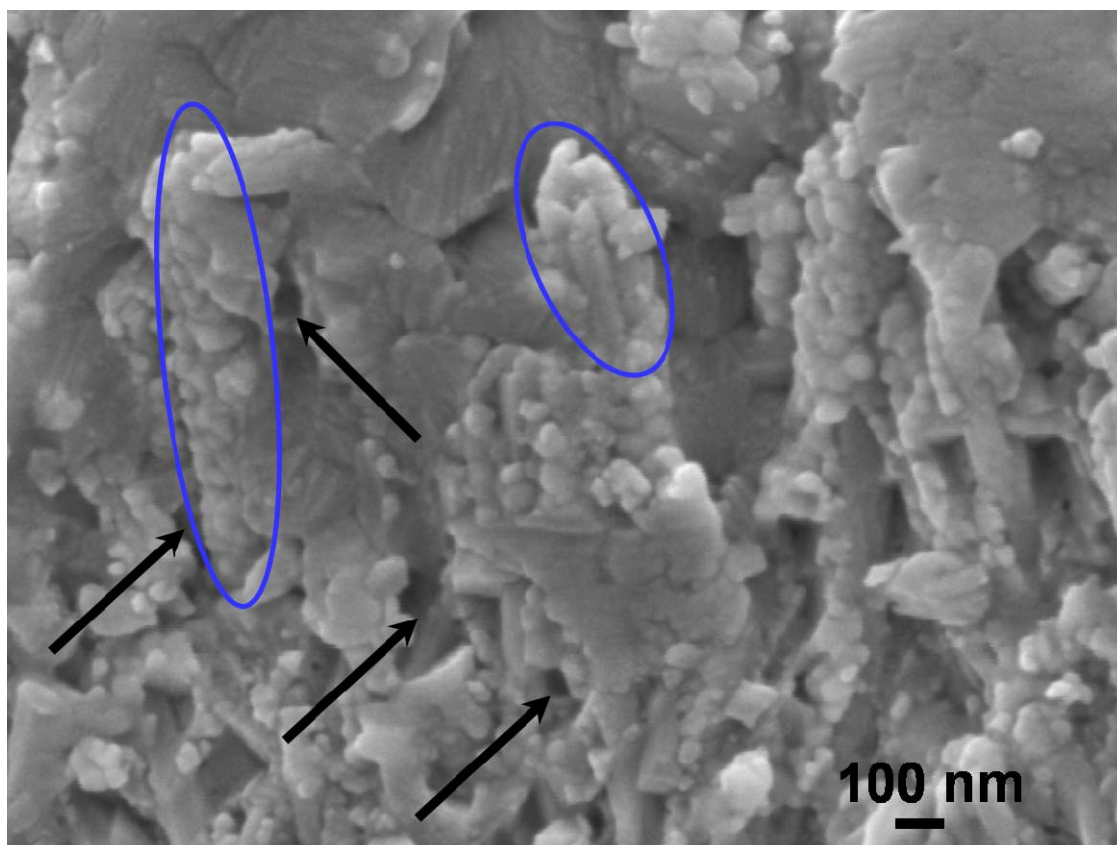


Figure S1: High magnified SEM micrograph of the cross section of device 18. Black arrows mark the presence of voids. Blue ovals highlight features from ZnO/CdSe nanowires.

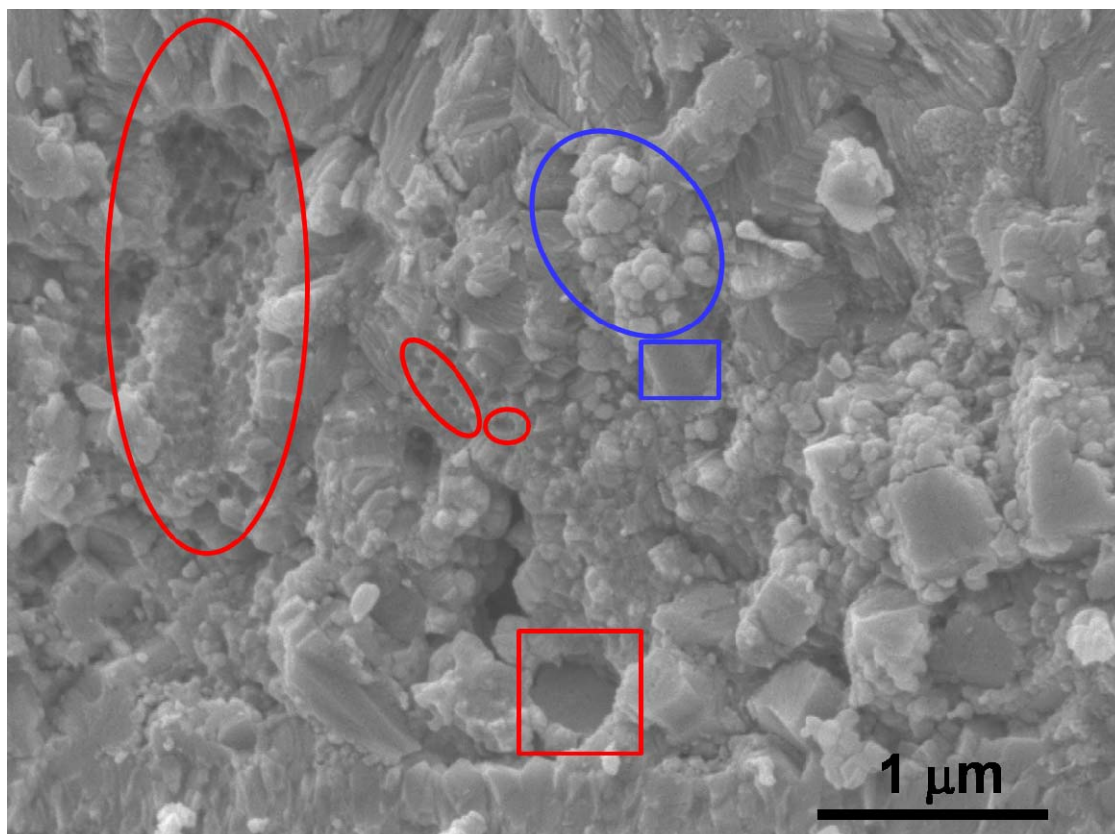


Figure S2: High magnified SEM micrograph of the cross section of device 10. Blue features highlight the presence of ZnO nanowires coated with CdSe (oval) and uncoated ZnO nanowire (square). Red features mark the fingerprints in the CuSCN of CdSe (ovals) and ZnO nanowire (square). The fingerprints are due to the accidental nanowire detachment during the cross section preparation.