

Supporting Information

for

Self-powered photodetectors based on core-shell ZnO-Co₃O₄ nanowire heterojunctions

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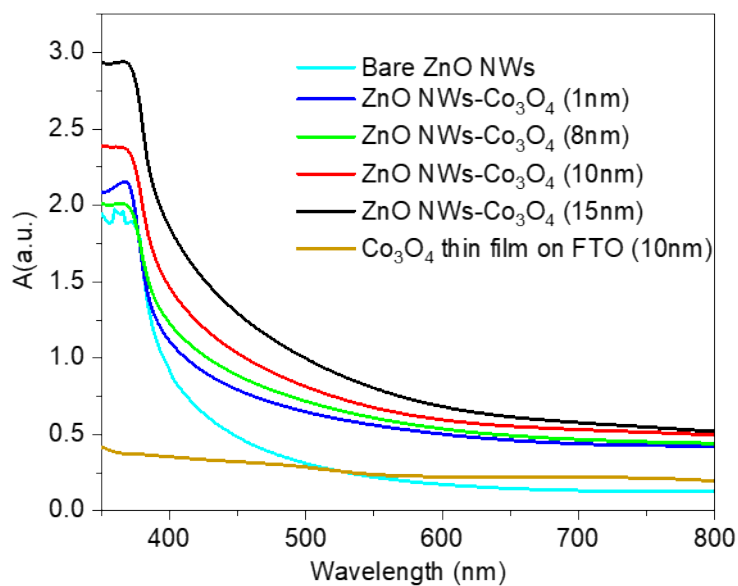


Figure S1. Absorbance of bare ZnO NWs, ZnO NWs covered by 1, 8, 10, 15 nm of Co_3O_4 and thin film of Co_3O_4 (10 nm) on FTO.

The absorbance is not fully motivated, since part of the radiation is not absorbed, but scattered from the NWs, as clearly indicated by the transmission spectra.

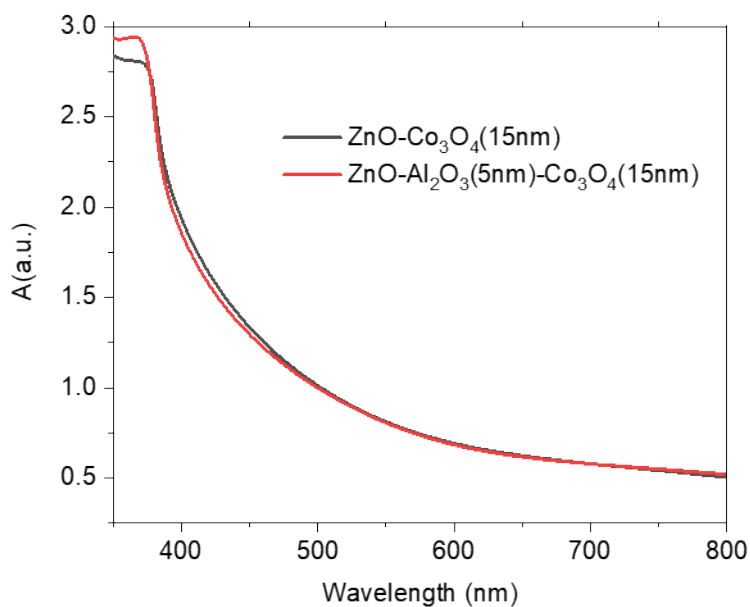


Figure S2. Comparison of absorbance of the ZnO NWs- Co_3O_4 (15nm) with (5nm) and without Al_2O_3

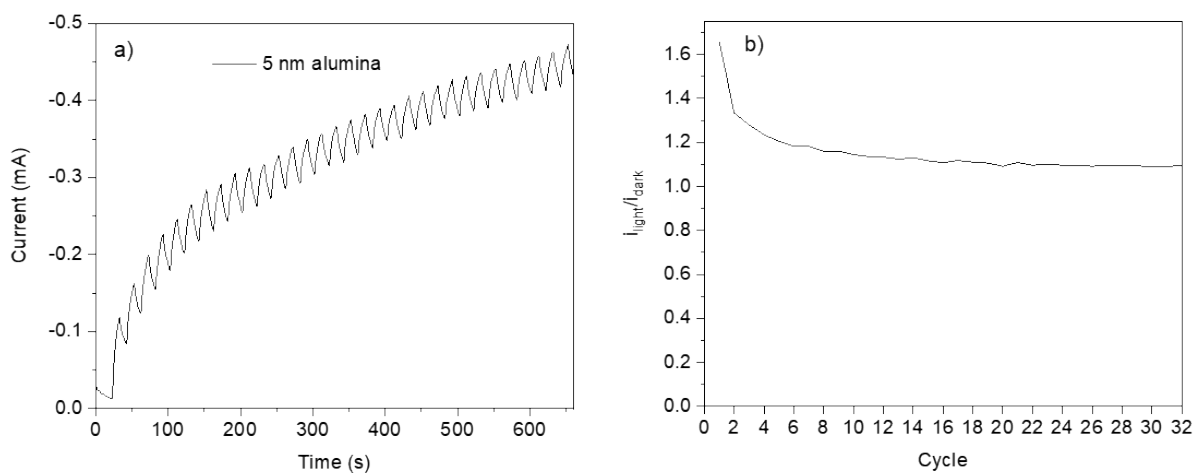


Figure S3. a) Current-time graph of ZnO-Al₂O₃ (5nm)-Co₃O₄ (15nm) core-shell structure after 32 cycle at 0.1 V bias voltage. b) The ratio between photocurrent (i_{light}) and dark current (i_{dark})

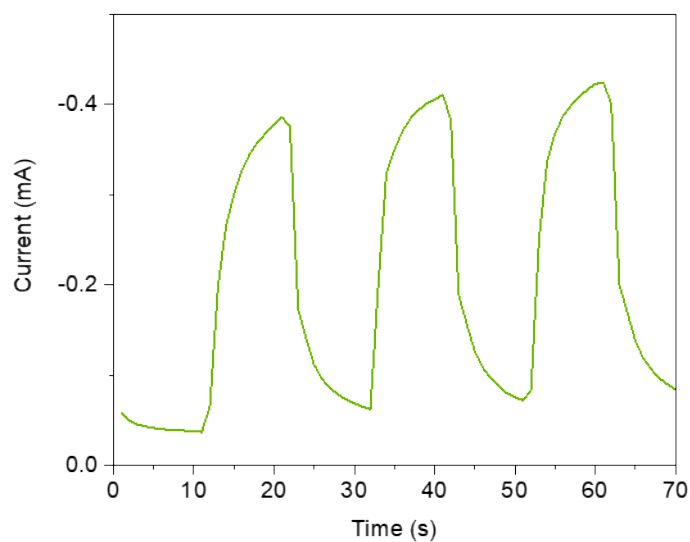


Figure S4. Current-time graph of ZnO-Al₂O₃ (5nm)-Co₃O₄ (1nm) at 0.1 V bias voltage

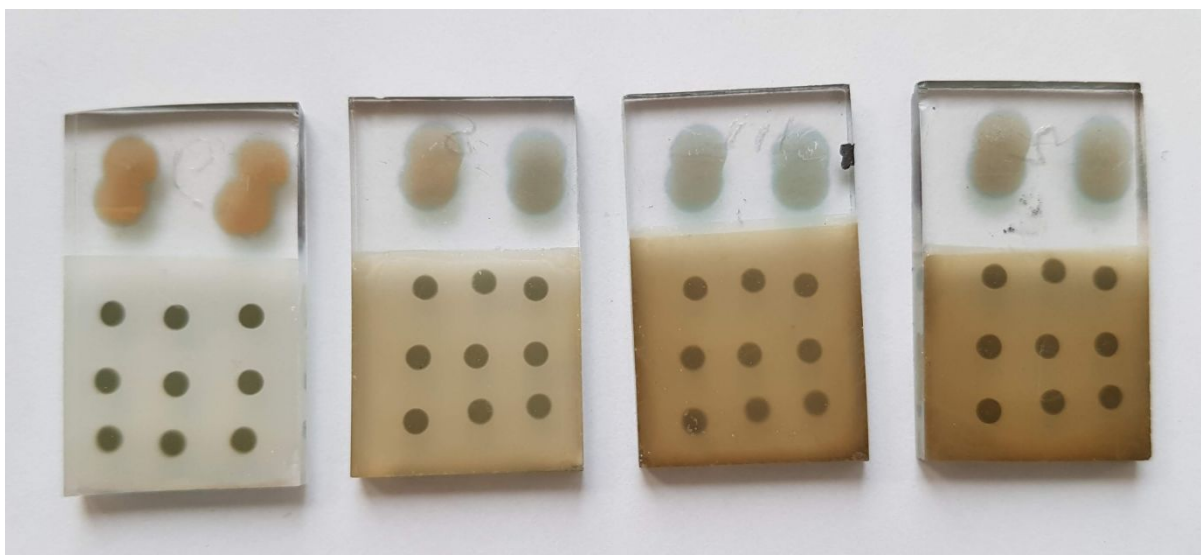


Figure S5. The actual picture of devices. From left to right the ZnO-Co₃O₄ with cobalt thickness of 1,8,10, and 15 nm respectively (round metal pads were deposited for electrical contacts).