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Stacked indium oxide/zinc oxide heterostructures as semiconductor in a thin film transistor device

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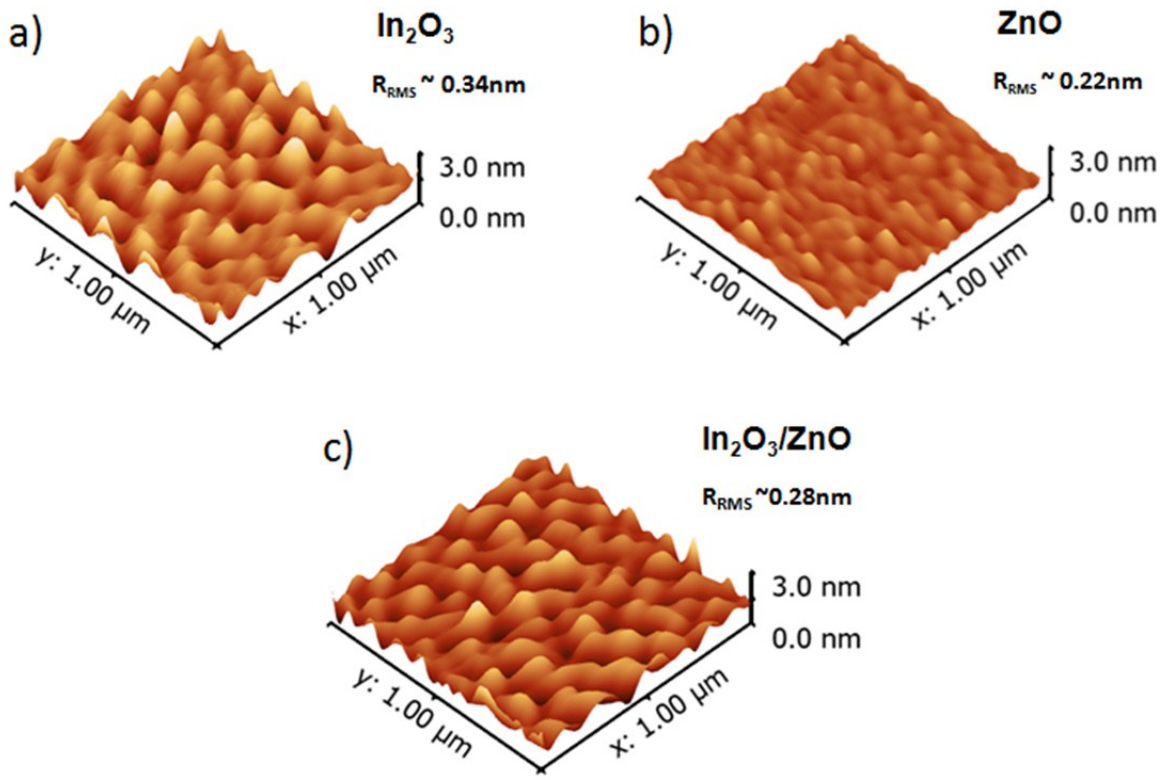

Fig. S1 AFM topography micrographs for the a) In_2O_3 b) ZnO and c) In_2O_3/ZnO (4 stacks) with their roughness (R_{RMS}) indicated respectively, annealed at 300°C.

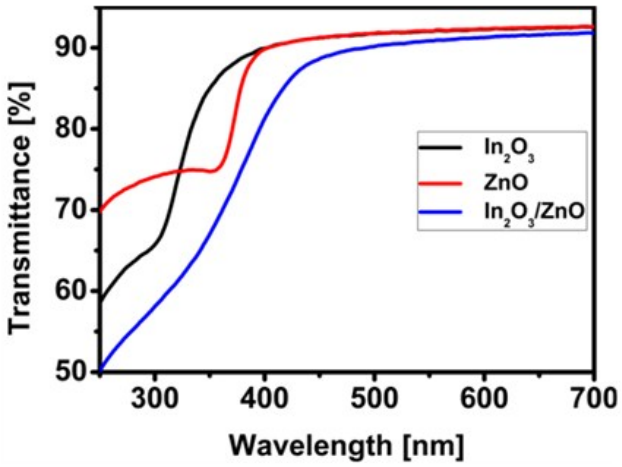

Fig. S2 UV-vis spectra for the individual thin films In_2O_3, ZnO and In_2O_3/ZnO (4stacks), annealed at 300°C respectively.

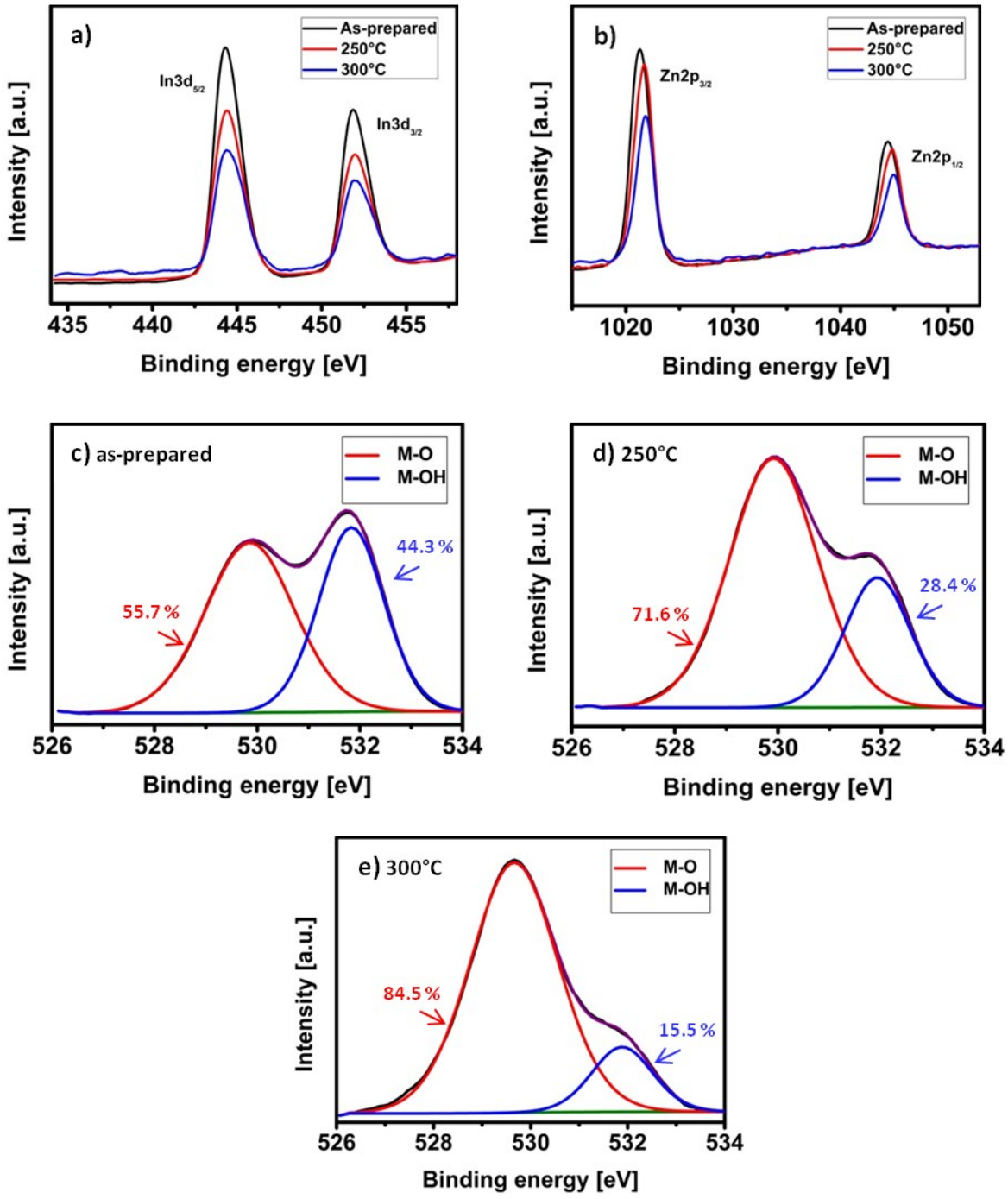

Fig. S3 Combined XPS core spectra for a) In, b) Zn and their corresponding deconvoluted O1s spectra for c) as-prepared d) 250°C and e) 300°C annealed In_2O_3/ZnO heterostructures (4 stacks).

Table S1 Peak position values based on the XPS core spectra obtained for the In and Zn peaks arising from the In_2O_3/ZnO heterostructures (4 stacks) at different annealing temperatures.

Annealing temperature [°C]	**$In3d_{5/2}$ [eV]**	**$In3d_{3/2}$ [eV]**	**$Zn2p_{3/2}$ [eV]**	**$Zn2p_{1/2}$ [eV]**
As-prepared	444.3	451.8	1021.3	1044.4
250	444.4	452	1021.7	1044.8
300	444.4	452	1021.8	1044.9