

Supporting Information

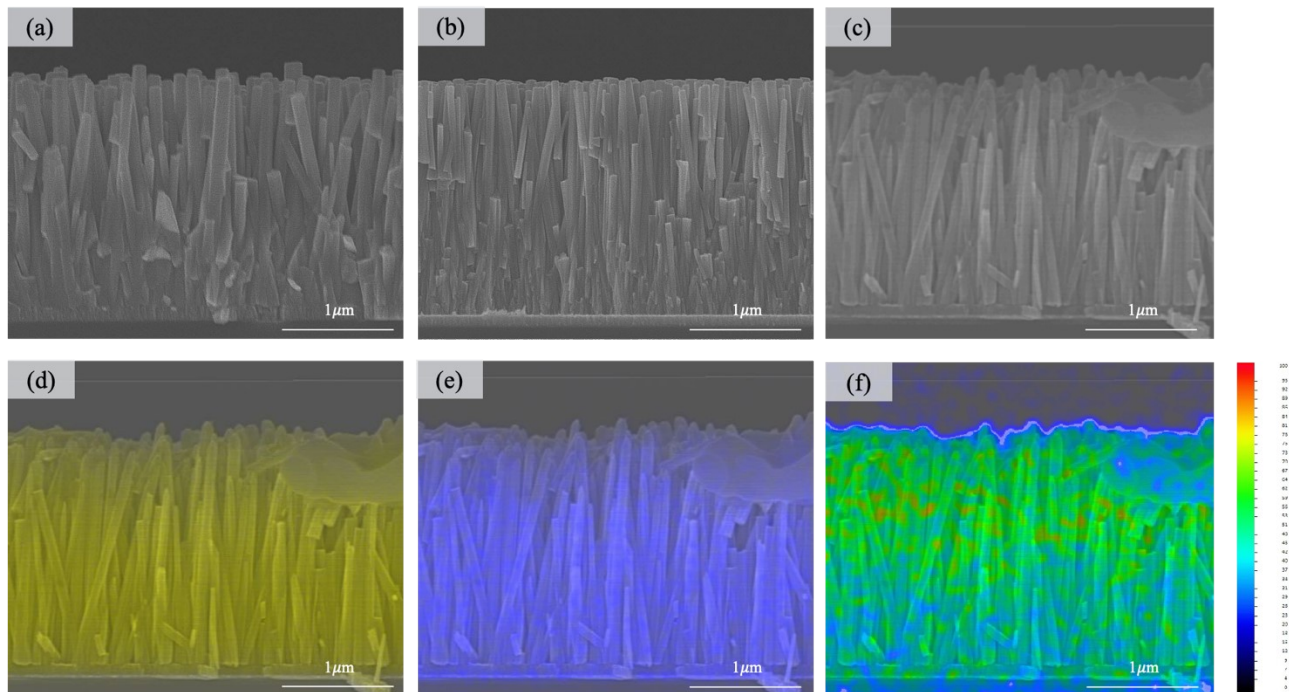


Figure S1. Cross-sectional SEM images of (a) ZnO, (b) Sb-doped ZnO after annealing, and (c) ZnO/Annealed Sb-doped ZnO and the corresponding EDS maps of (d) Zn, (e) O, and (f) Sb.

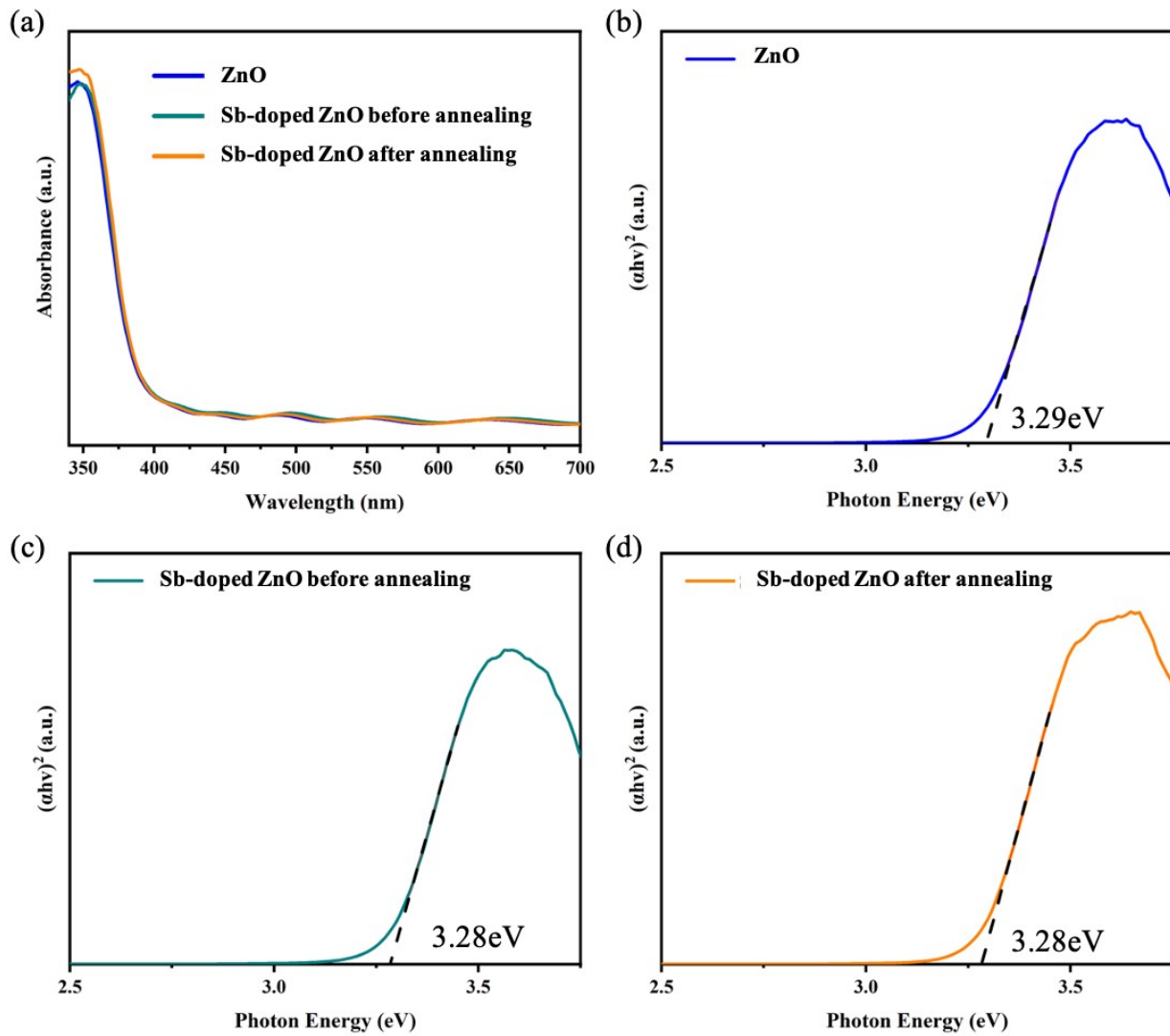


Figure S2. (a) UV-visible absorption spectra and the Tauc plots of the (b) ZnO, (c) Sb-doped ZnO before annealing, and (d) Sb-doped ZnO after annealing.

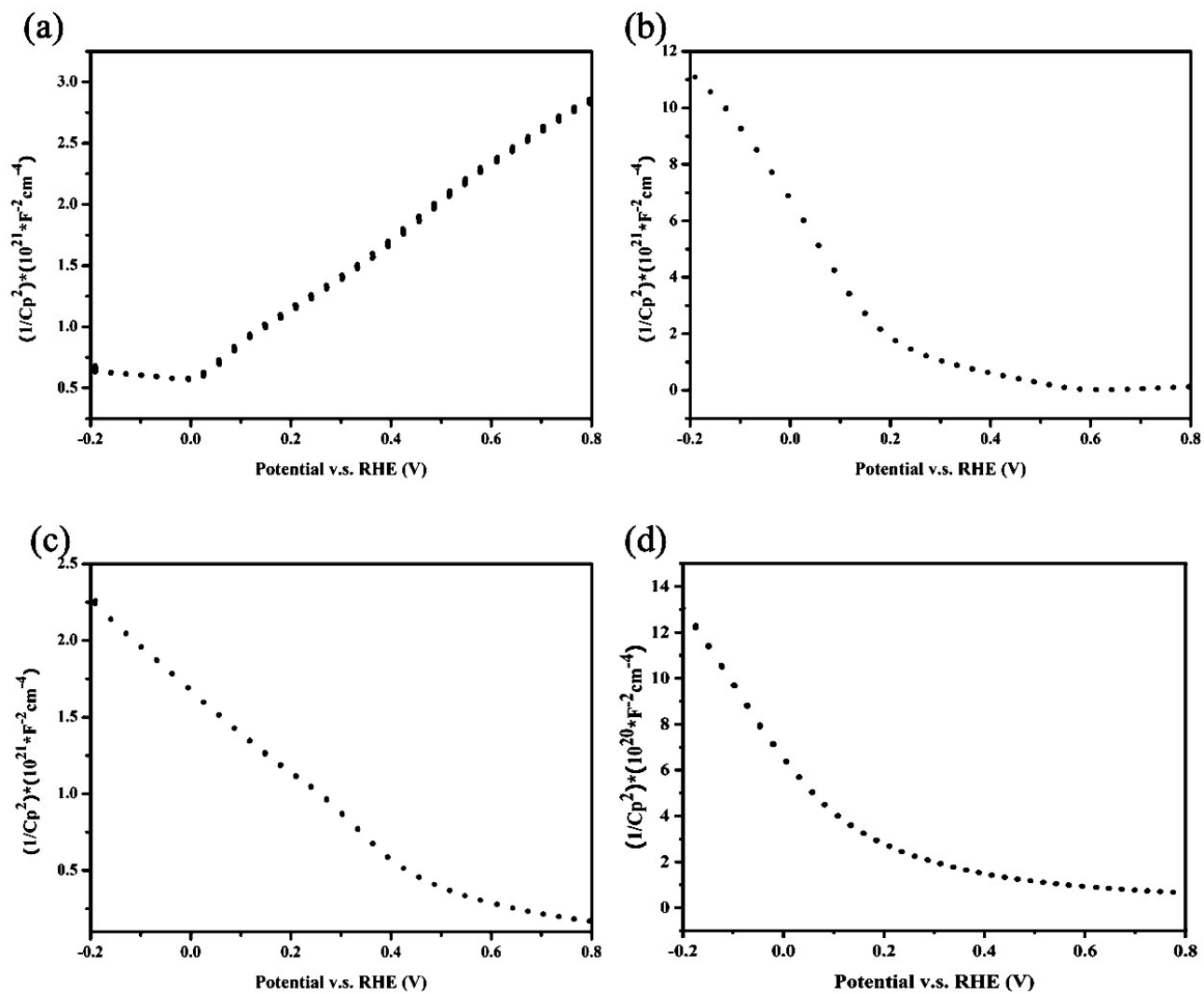


Figure S3. Mott-Schottky analysis of (a) ZnO, (b) Sb-doped ZnO before annealing, (c) Sb-doped ZnO after annealing, (d) Annealed Sb-doped ZnO after storage for 300 days.

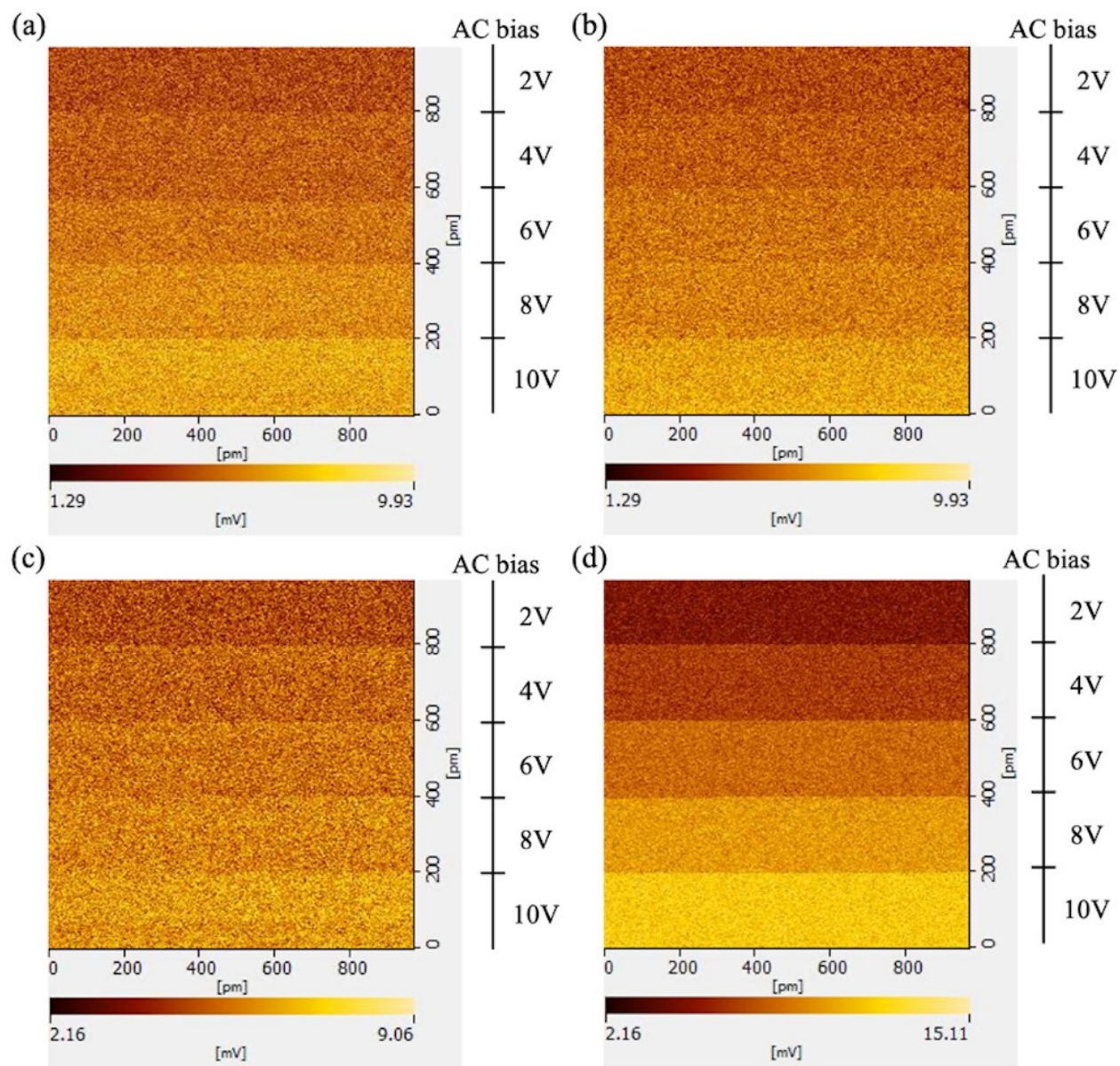


Figure S4. Piezoresponse mapping under different AC bias of (a) ZnO, (b) Sb-doped ZnO after annealing, (c) Annealed Sb-doped ZnO/ZnO, and (d) PPLN.

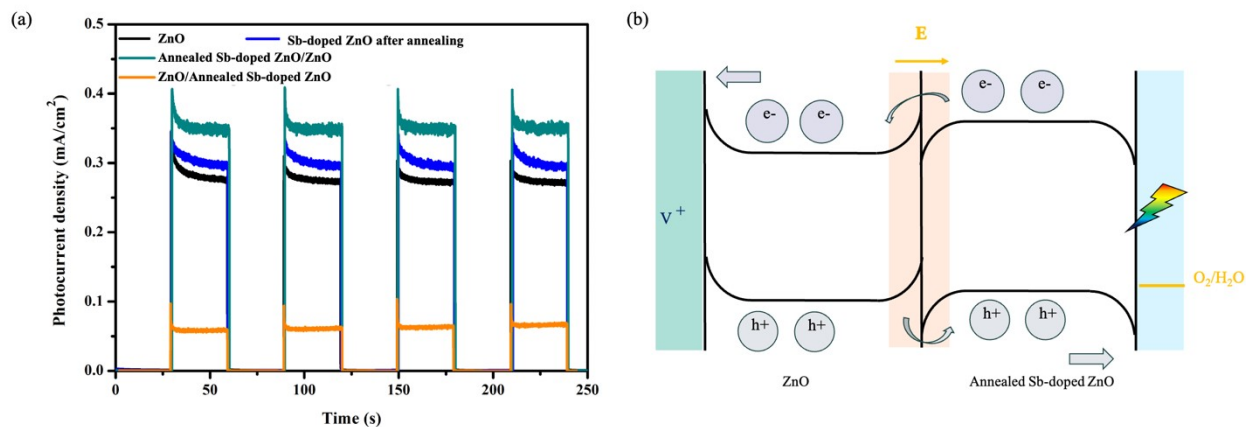


Figure S5. (a) Transient photocurrent response as a function of time of ZnO, Sb-doped ZnO after annealing, annealed Sb-doped ZnO/ZnO and ZnO/Annealed Sb-doped ZnO. (b) Schematic energy band diagrams of the ZnO/annealed Sb-doped ZnO.

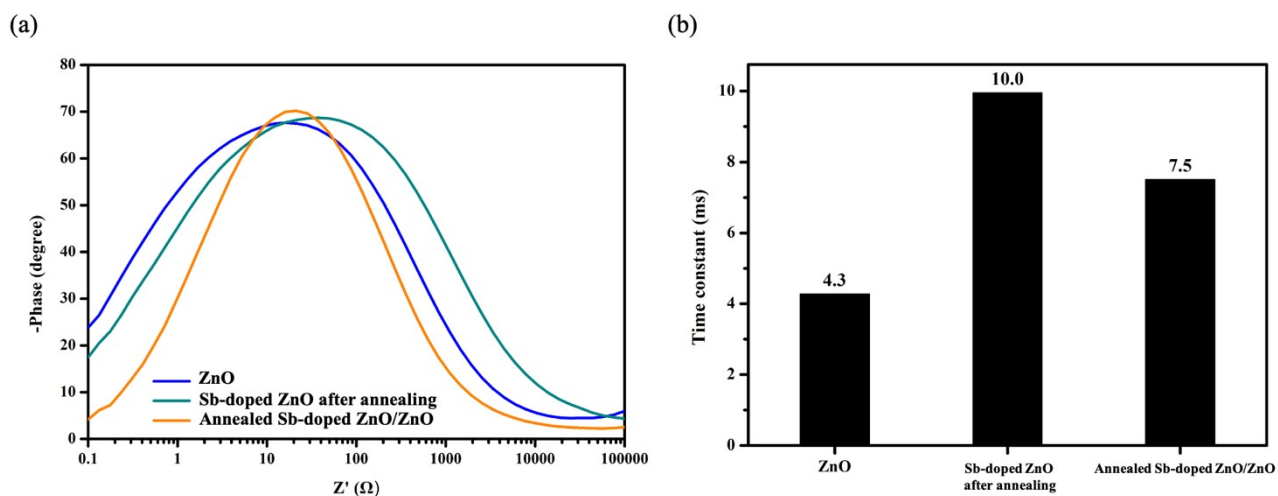


Figure S6. (a) Bode phase plot and the derived (b) charge transfer time constant of ZnO, Sb-doped ZnO after annealing, annealed Sb-doped ZnO/ZnO.

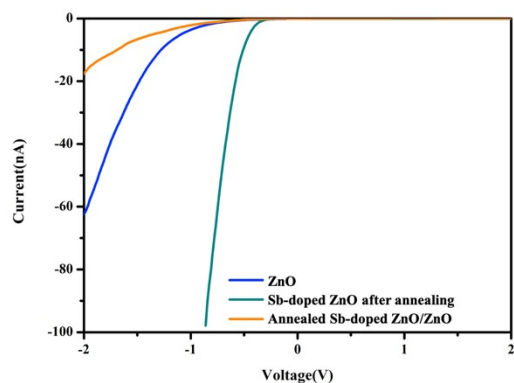


Figure S7 Current-Voltage Characteristic of ZnO, Sb-doped ZnO after annealing, and annealed Sb-doped ZnO/ZnO.

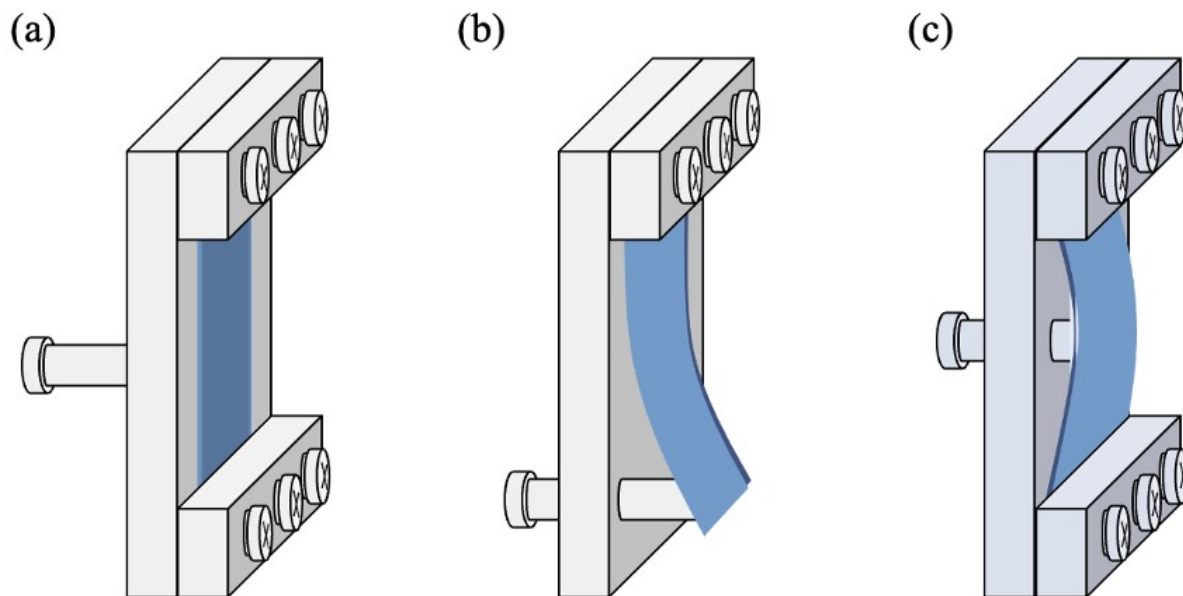


Figure S8. Schematic of the force applicator, depicting (a) no applied stress, (b) applied compressive stress, and (c) applied tensile stress.