

Low-Temperature Atomic Layer Deposition of ZnO thin films on Cotton for Flexible Electronics

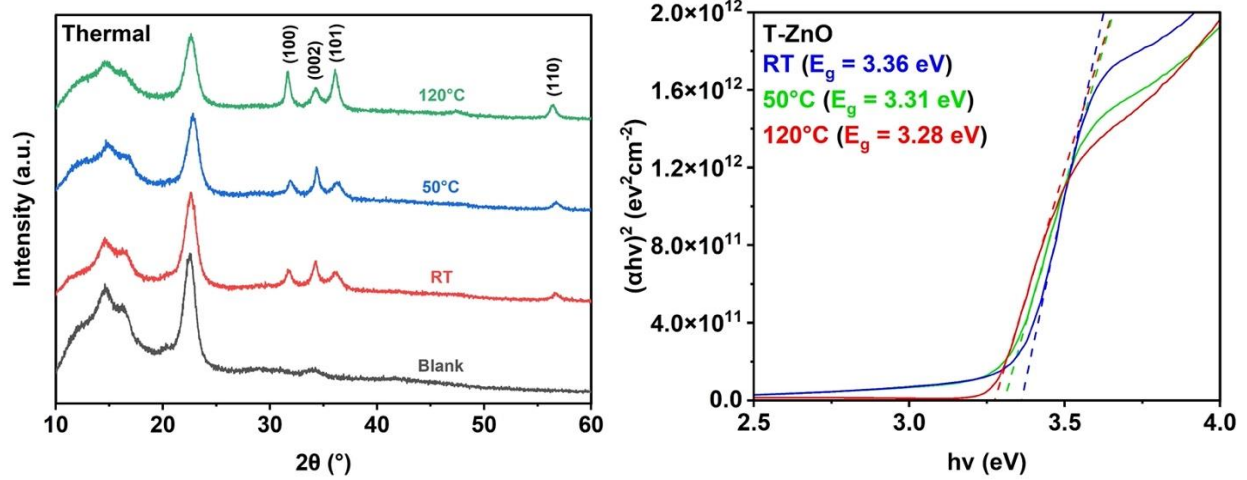


Figure 1. (Left) XRD patterns of the ZnO films deposited at RT, 50°C and 120°C; (Right) Corresponding Tauc plots showing the bandgap energy values for the deposited films at different temperatures where the bandgap decreased from 3.36 eV at RT to 3.26 eV at 120°C.

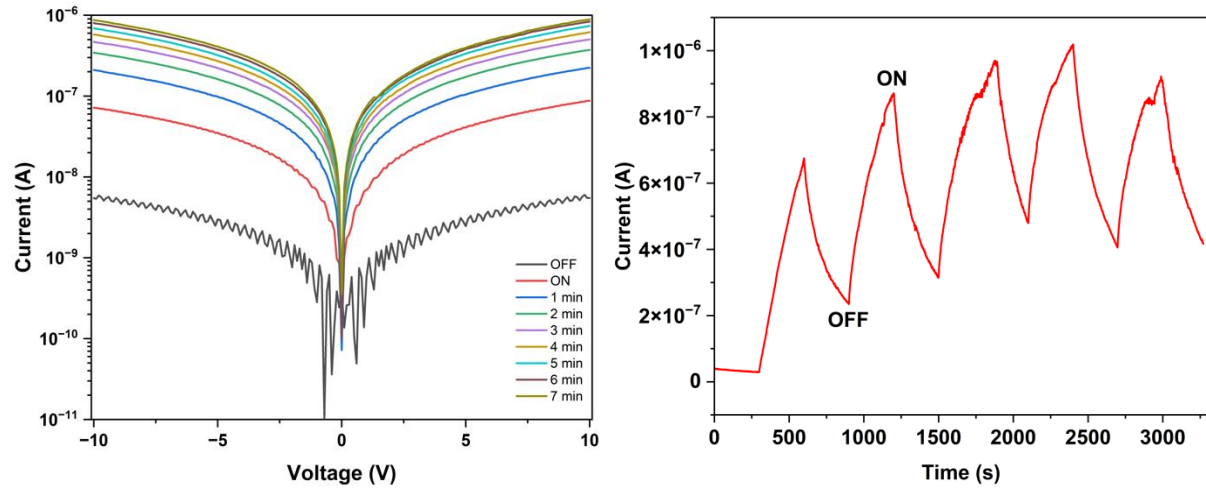


Figure 2. (Left) Current – Voltage curves of the room temperature deposited ZnO based photodetector in dark and under illumination; (Right) Current —time characteristics of the same device at a constant voltage of 10 V. Visible light was kept ‘ON’ and ‘OFF’ for 5 min for five consecutive pulses.