All Oxide Based Flexible Multi-Folded Invisible Synapse as Vision Photo-receptor

Ping-Xing Chen,^a Debashis Panda, ^{a,b*} and Tseung-Yuen Tseng ^a

^a Institute of Electronics, National Yang Ming Chiao Tung University, Hsinchu City 30010, Taiwan

^b Department of Electronics and Communication Engineering, CV Raman Global University, Bhubaneswar 752054, India.

*Corresponding author: phy.dpanda@gmail.com; ece.dpanda@nycu.edu.tw; ece.dpanda@cgu-odisha.ac.in

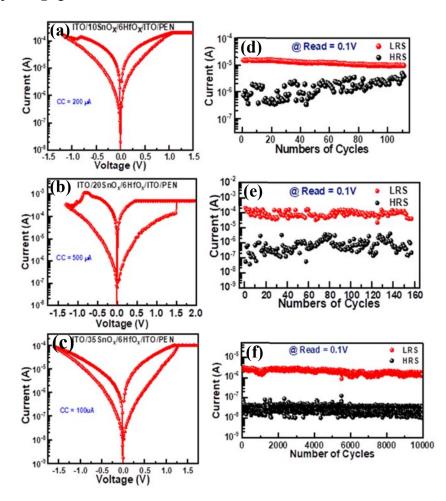


Figure S1: (a), (b) and (c): The optimization of the current-voltage bipolar switching curves of different SnO_x thicknesses of 5, 20 and 35 nm devices having 6 nm HfO_x layer for each device ; (e), (f) and (g) are the corresponding endurance results, respectively. The minimum compliance current is used to obtain the best switching and endurance performances. The 35 nm thick SnO_x layer device can sustain well for more than 10000 cycles along with gradual switching at a low compliance current.