



Figure S. I_{DS} - V_{DS} plots of nitrogen-doped ZnO NWs (sample C, obtained with $N_2O:O_2:Ar_2$ ratio of 2:20:60) at different V_g with Ni (50 nm) as electrode after storage in air for 5 months. Diameter of nanowire is 50 nm and effective gate length is 2 μm . The right inset shows $\ln I_{DS}$ - V_g plot at $V_{DS}=10$ V. We obtain a hole mobility (μ) of 14.7 cm^2/Vs , a hole concentration (n_h) of $1.3 \times 10^{19} cm^{-3}$, and a resistivity of 0.005 Ωcm .