Supplementary Information

Low-Temperature Combustion Synthesis & UV Treatment Processed p-Type Li:NiO_x Active Semiconductors for High-Performance Electronics

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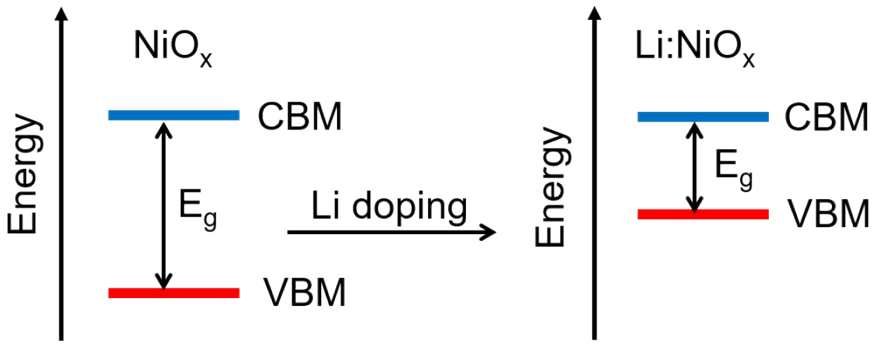

Fig. S1. Energy band structure of Li:NiO_x (CBM: bottom of conduction band; VBM: top of valence band).

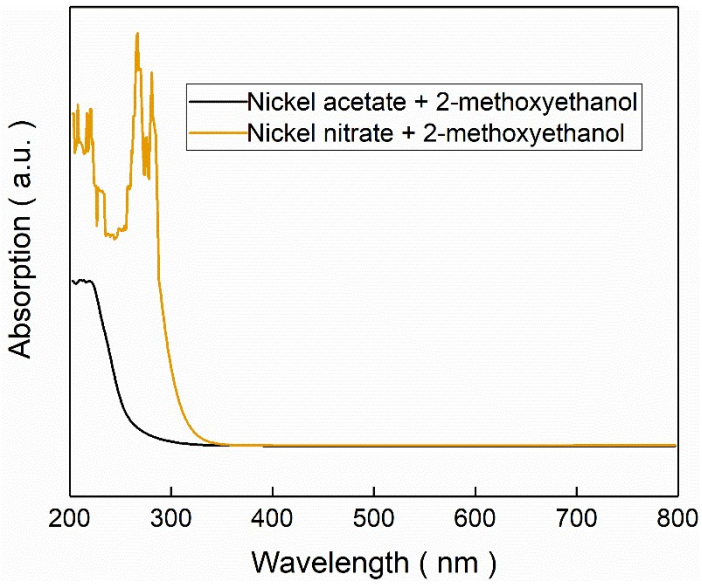

Fig. S2. Absorption spectra of the different precursors solutions.

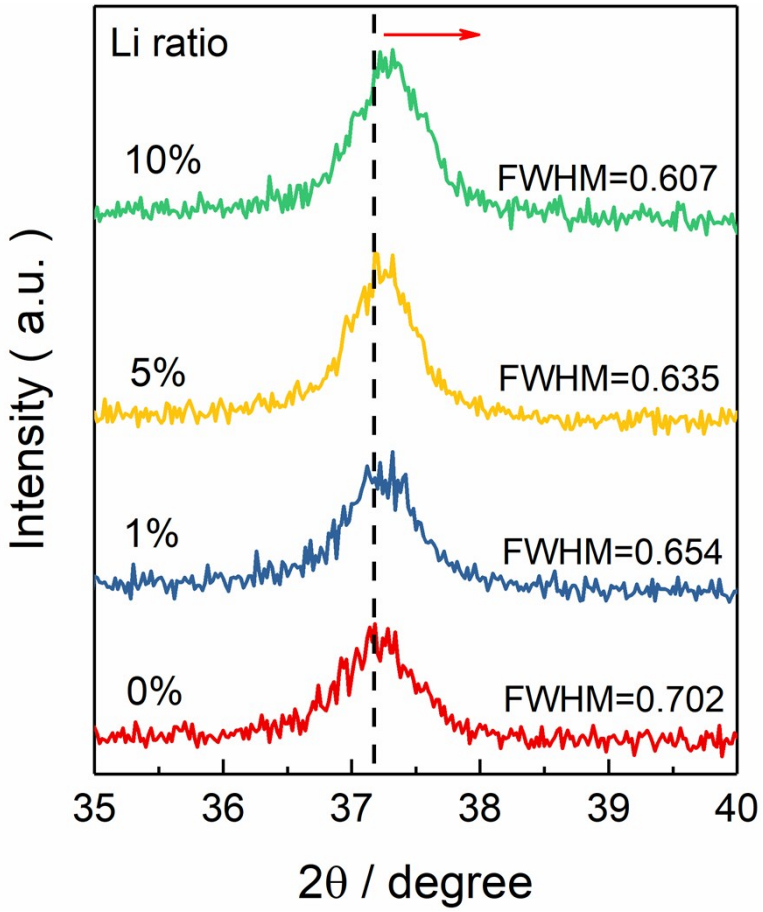

Fig. S3. The (110) plane of XRD patterns for Li:NiO_x thin films.

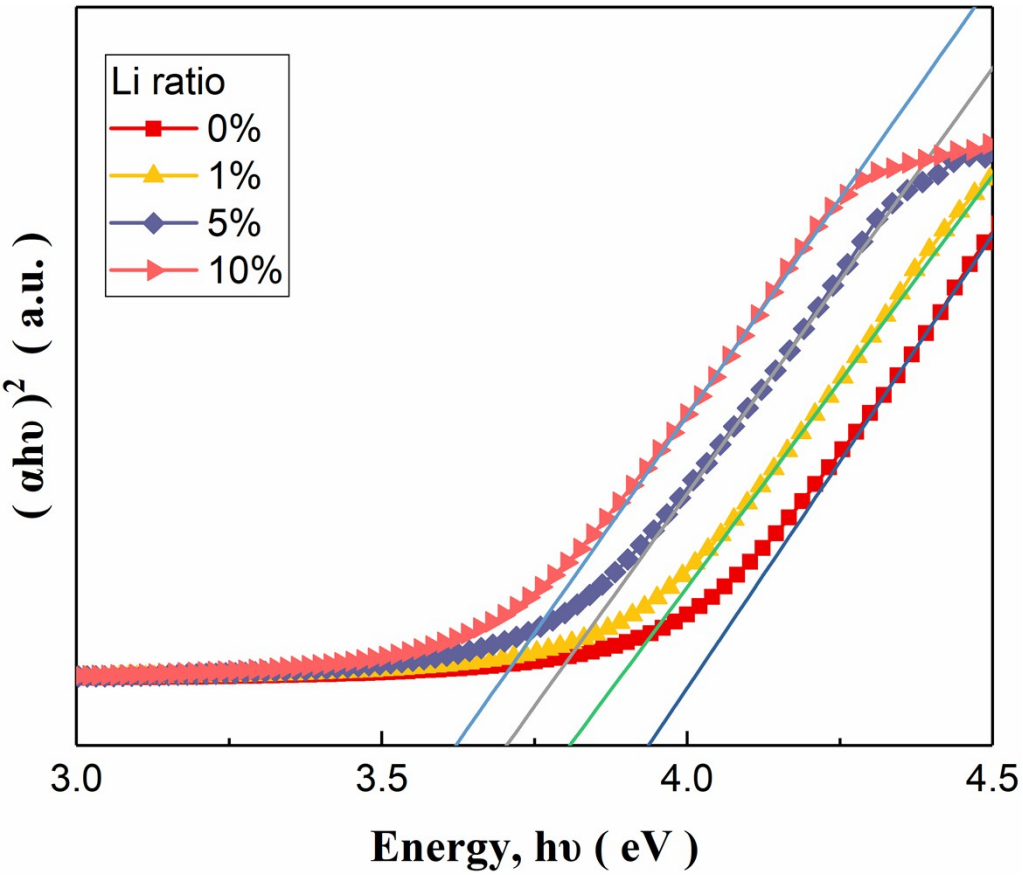

Fig. S4. Band gap extraction by Tauc model for Li:NiO_x thin films.

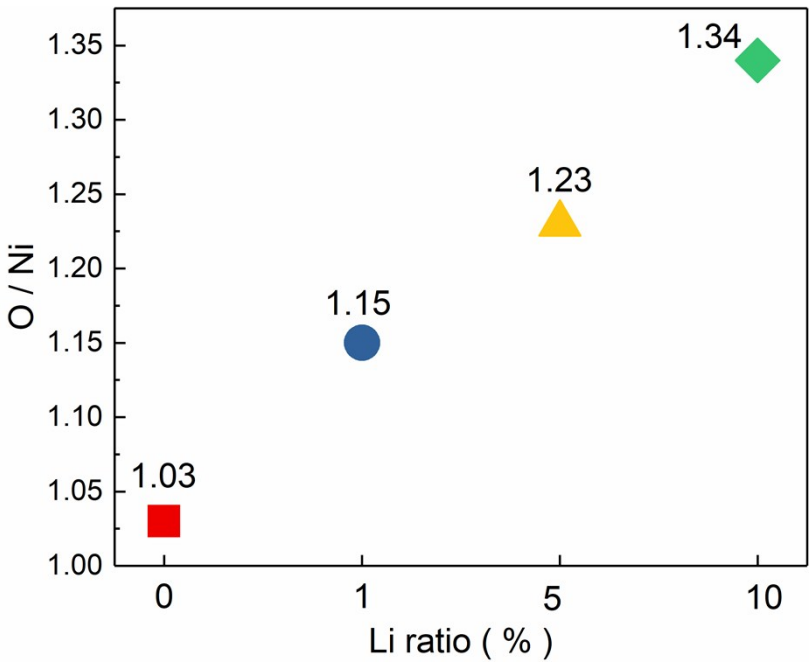

Fig. S5. O/Ni ratio measured by XPS with variation of Li concentration.

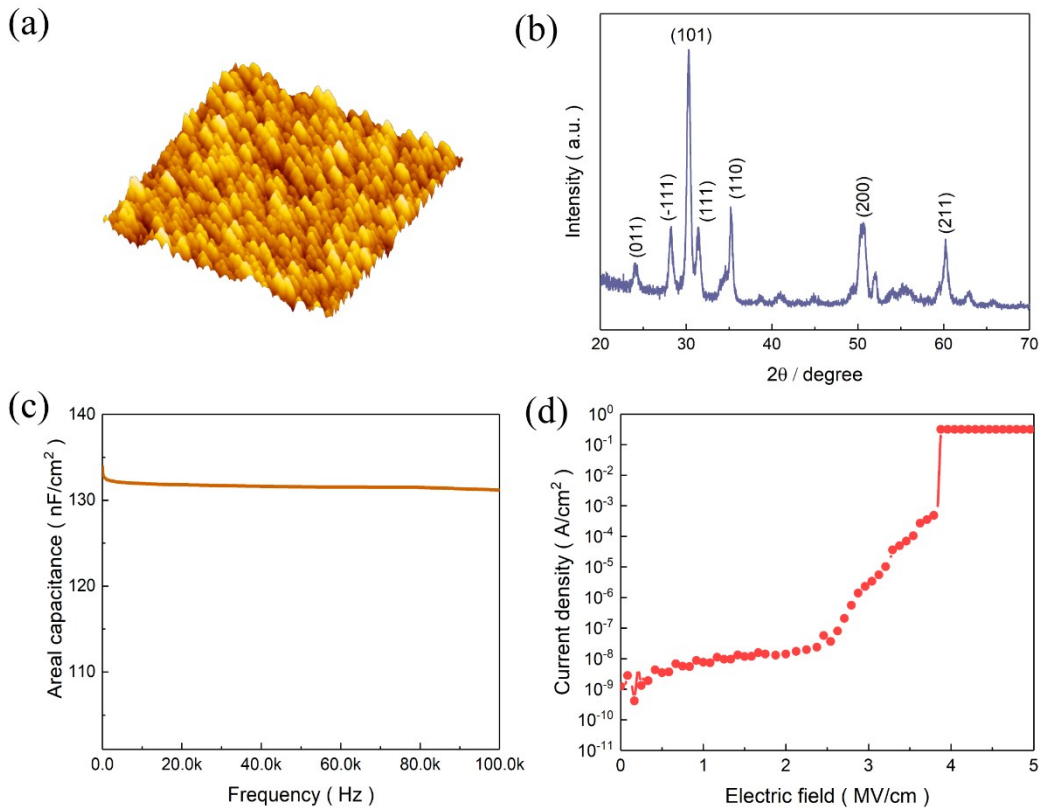

Fig. S6. (a) AFM images, (b) XRD pattern, (c) capacitance-frequency curves, and (d) leakage current characteristics of ALD-ZrO_2 dielectric.

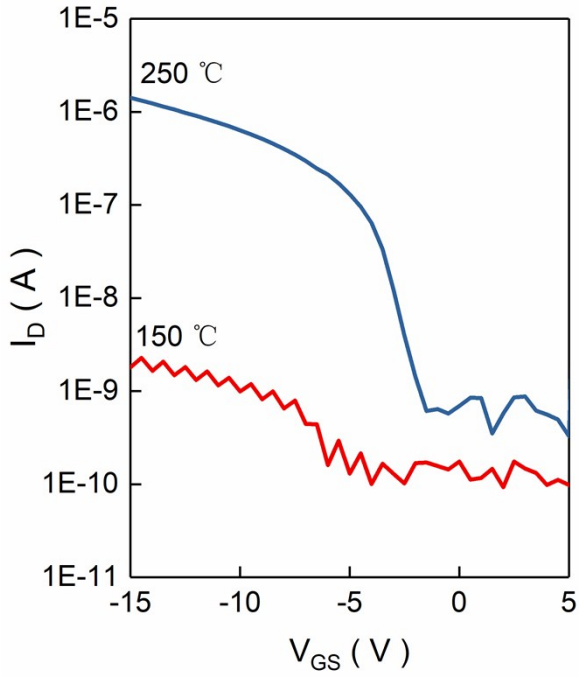

Fig. S7. Transfer curves of conventional-route $Li_{5\%}$:NiO_x TFTs as a function of annealing at different temperature. The ALD-ZrO_2 grown on ITO glass as dielectric.