

Electronic Supplementary Information

Inverted perovskite solar cells based on potassium salts-modified NiO_x hole transport layers

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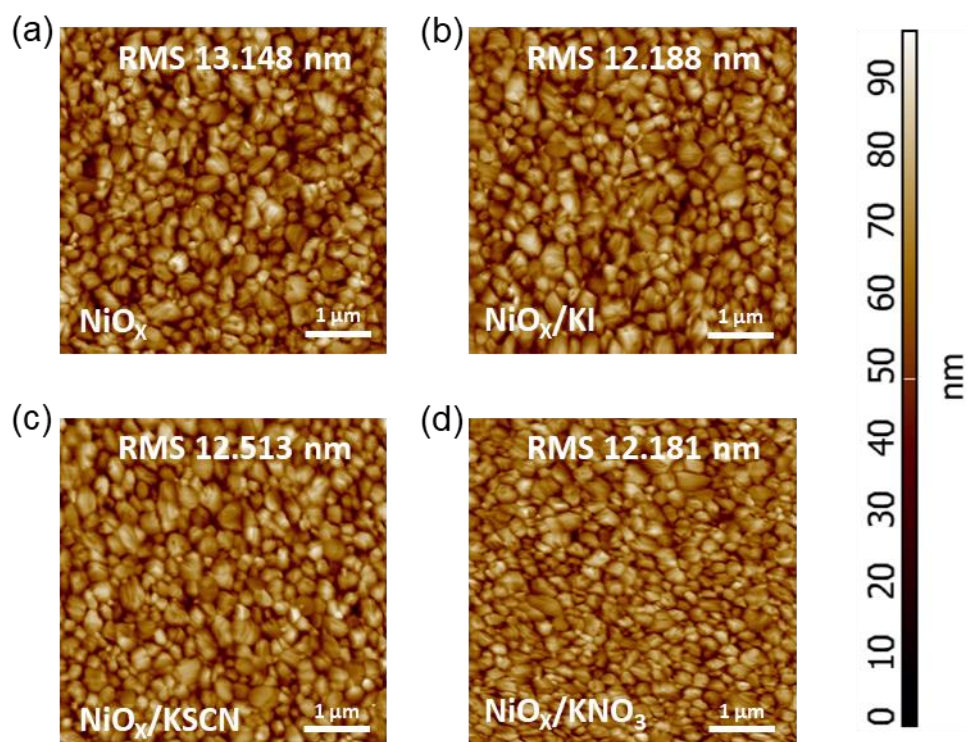


Figure S1. AFM images showing RMS roughness of the perovskite films based on (a) pristine and (b) KI, (c) KSCN, (d) KNO_3 treated HTLs.

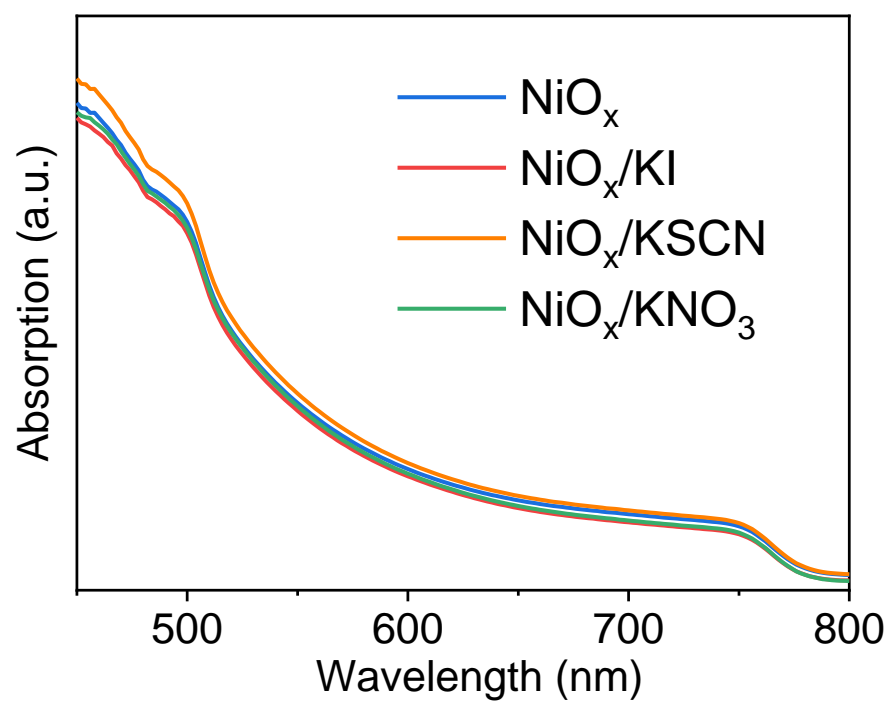


Figure S2. Absorption spectra of the perovskite coated different NiO_x films.

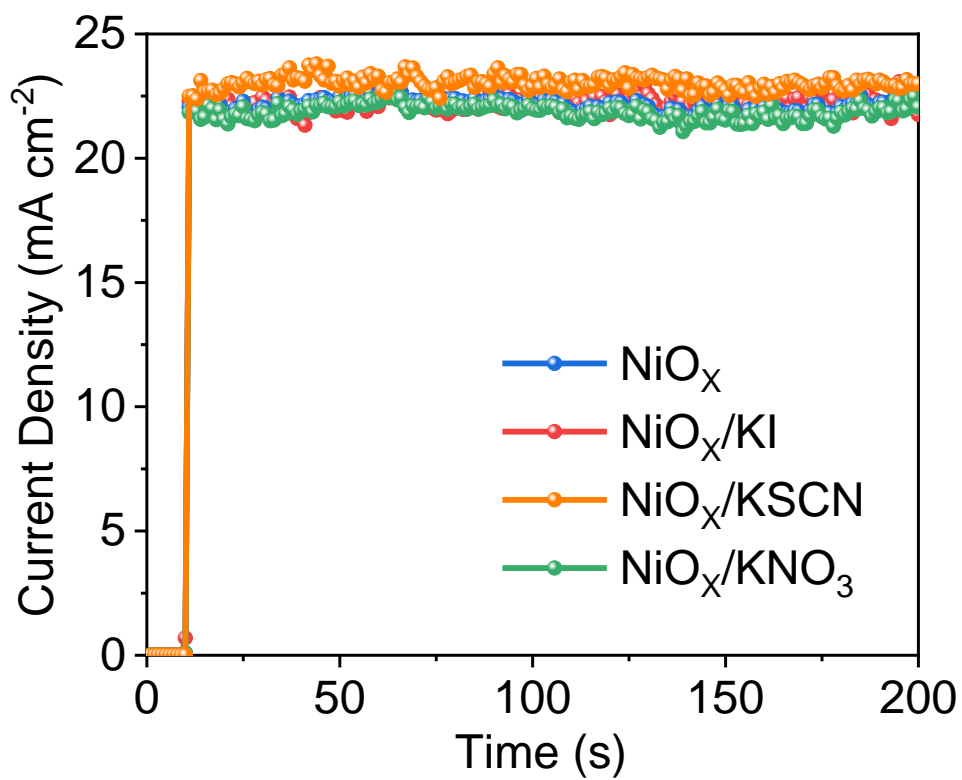


Figure S3. The photocurrent density of the device with and without KI modification measured at a fixed maximum power point voltage as a function of time.

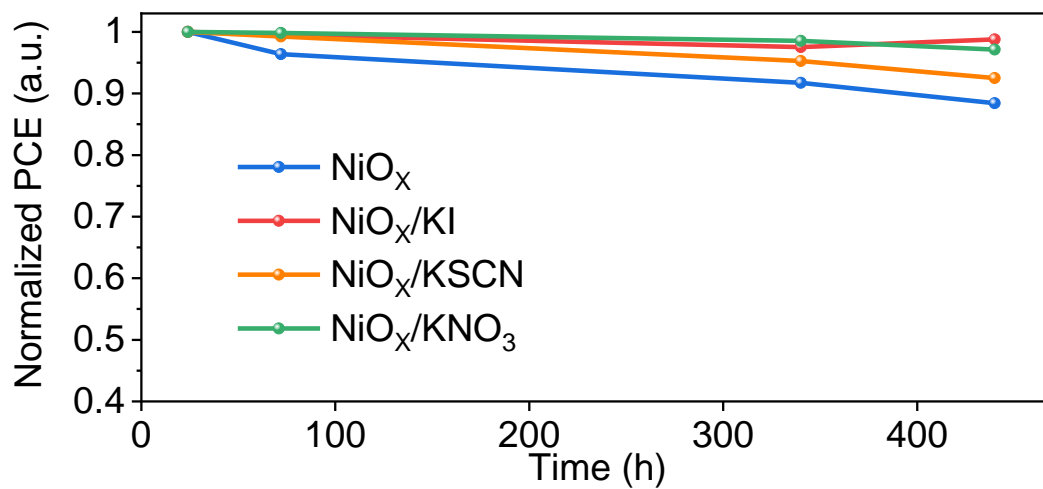


Figure S4. Results of humidity stability tests on the unencapsulated control and treated devices under 15% relative humidity at room temperature.

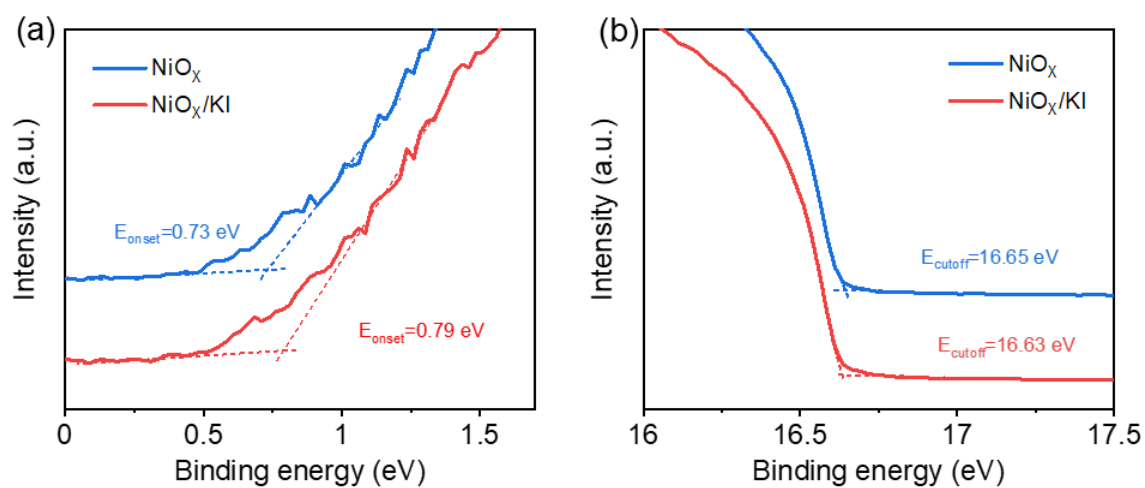


Figure S5. The UPS spectra in the onset and the cutoff energy regions of the surface measurement for the NiO_x films with and without KI treatment.