

## Supporting Information

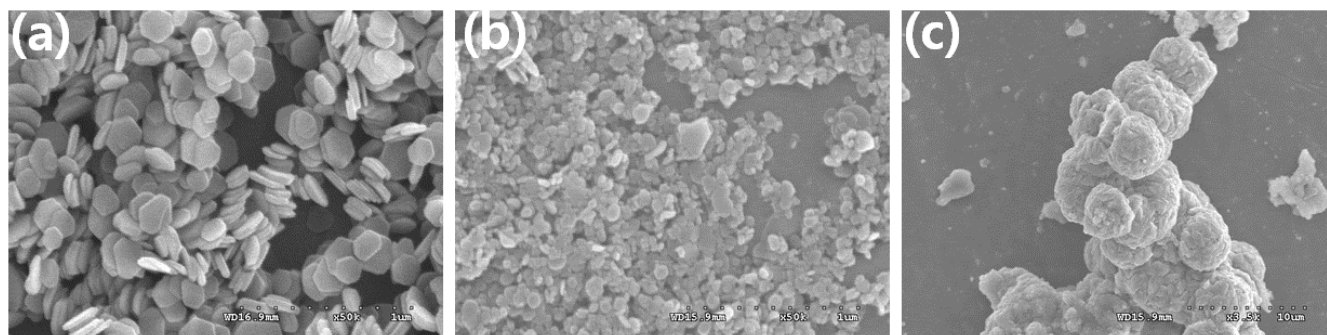
### Facile Fabrication and Photoelectrochemical Properties of One Axis-Oriented NiO Thin Film with (111) Dominant Facet

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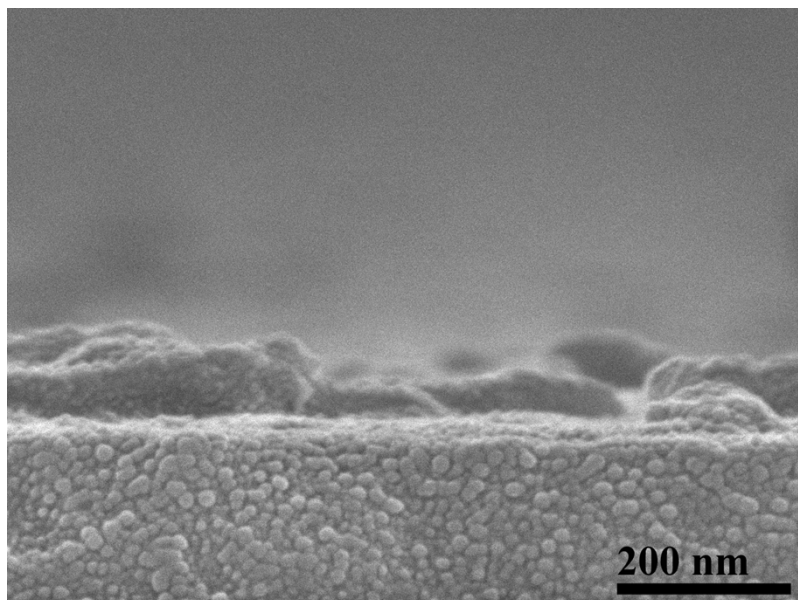
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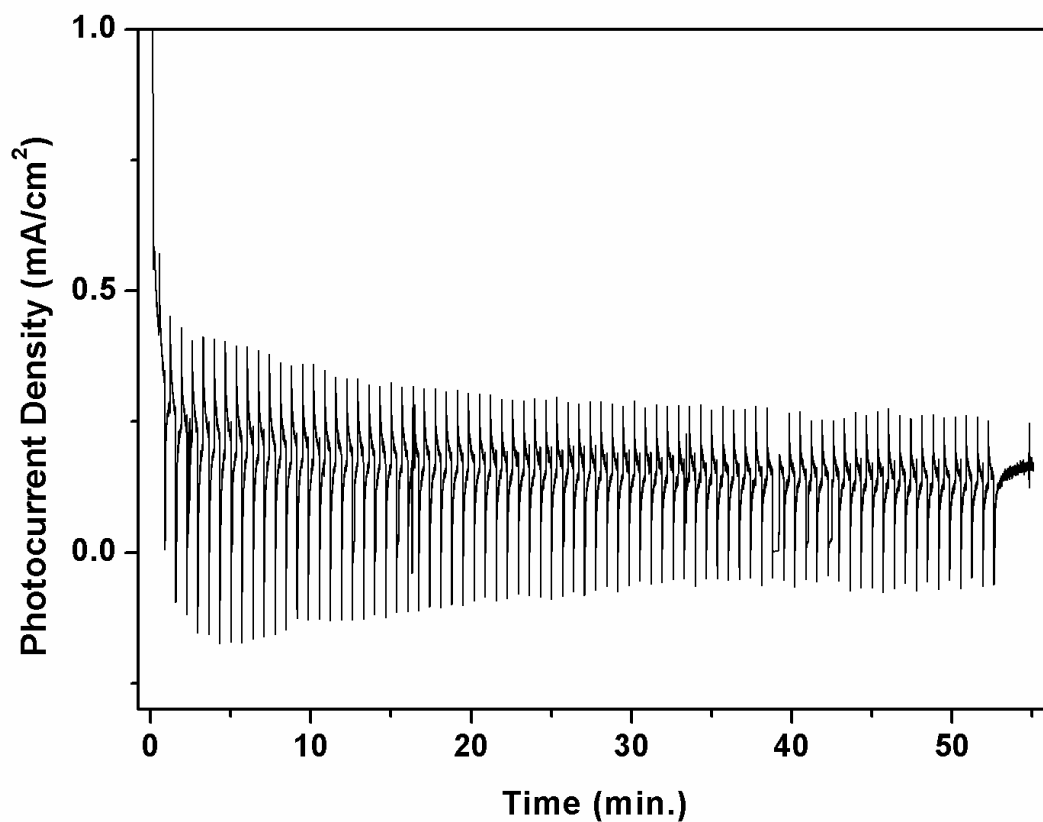
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**Figure S1.** The comparison of SEM images of Ni(OH)<sub>2</sub> particles. (a) Hexagonal plate by synthesizing 5 mL of 2.0 M Ni salt and 15 mL of 0.5 M NaOH, (b) Particle by synthesizing 10 mL of 2.0 M Ni salt and 10 mL of 0.5 M NaOH, and (c) Microstructure by synthesizing 10 mL of 2.0 M Ni salt and 5 mL of 0.5 M NaOH



**Figure S2.** Typical cross-sectional SEM image of (111) axis-oriented NiO thin film.



**Figure S3.** The photoresponse curve of (111) facet-oriented NiO thin film by keeping the light (1 sun illumination) on or off every 20 s for 1 h, at -0.9 V (vs Ag/AgCl) in 1.0 M KOH at room temperature.