Supporting Information

Electrophoretically Deposited Ni(OH)$_2$ Decorated Stainless Steel Nanoparticles for High Performance Oxygen Evolution Reaction Catalysis

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Figure S1. Representative TGA curve of electrodeposited $\alpha$-Ni(OH)$_2$

Figure S2. Schematic sketch of electrophoretic co-deposition of Ni(OH)$_2$ nanoparticle decorated stainless steel nanoparticles.
Figure S3. Representative X-ray diffraction (XRD) data of as-purchased stainless steel nanoparticles (SSNP) and electrophoretically deposited SSNP/Ni(OH)$_2$ nanocomposite. No α-Ni(OH)$_2$ peaks are apparent owing to disordered structure or small particle size.
Figure S4. Cyclic voltammograms (CV) of samples carried out in non-faradaic potential window: (a) Ni foam; (b) Ni(OH)$_2$; (c) SSNP; (d) SSNP/Ni(OH)$_2$; (e) Difference between anodic and cathodic currents, $j_a$ and $j_c$ respectively at 0.05 V plotted versus scan rate. Double-layer capacitance of the electrode can be calculated as half of the slope.