

Electronic Supplementary Information
Self-Assembled *c*-Oriented Ni(OH)₂ Films for Enhanced
Electrocatalytic Activity towards Urea Oxidation Reaction

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Figures S1-S8:

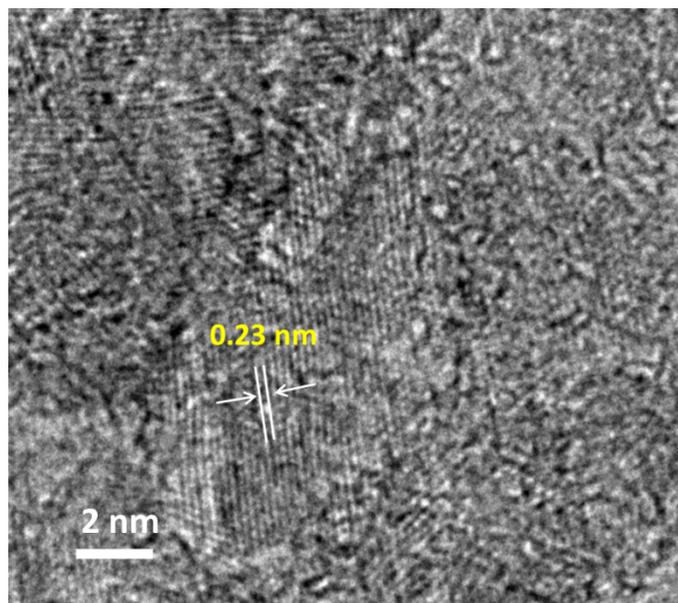


Fig.S1 High-resolution TEM image of as-prepared Ni(OH)₂ nanosheets.

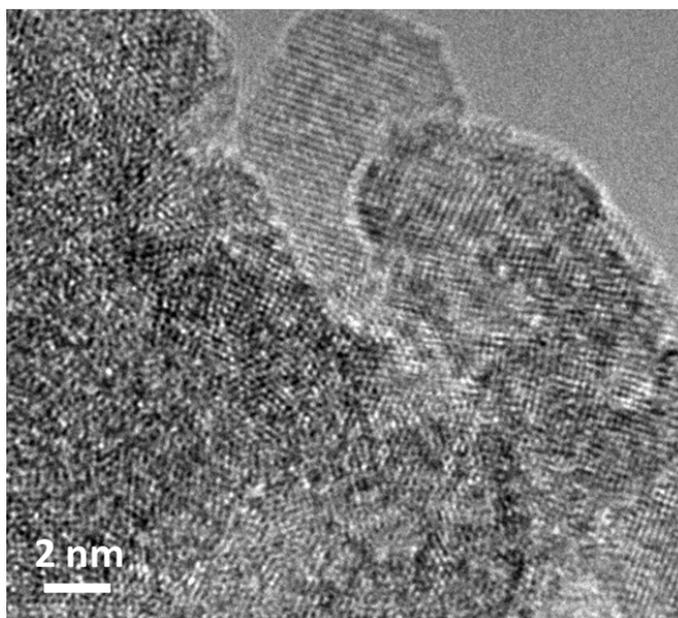


Fig.S2 High-resolution TEM image of as-prepared Ni(OH)₂-gP.

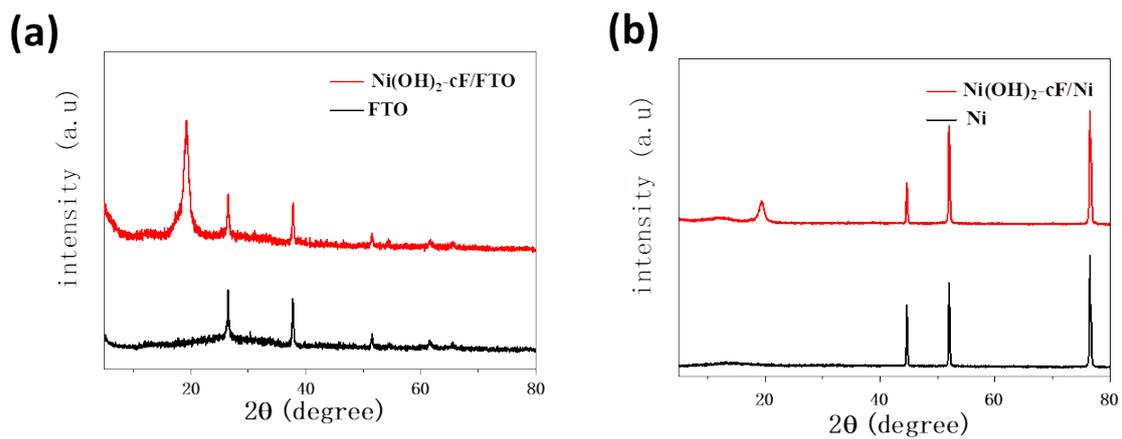


Fig.S3 XRD of the as-prepared Ni(OH)₂-cF on the (a) FTO substrate and (b) nickel foil.

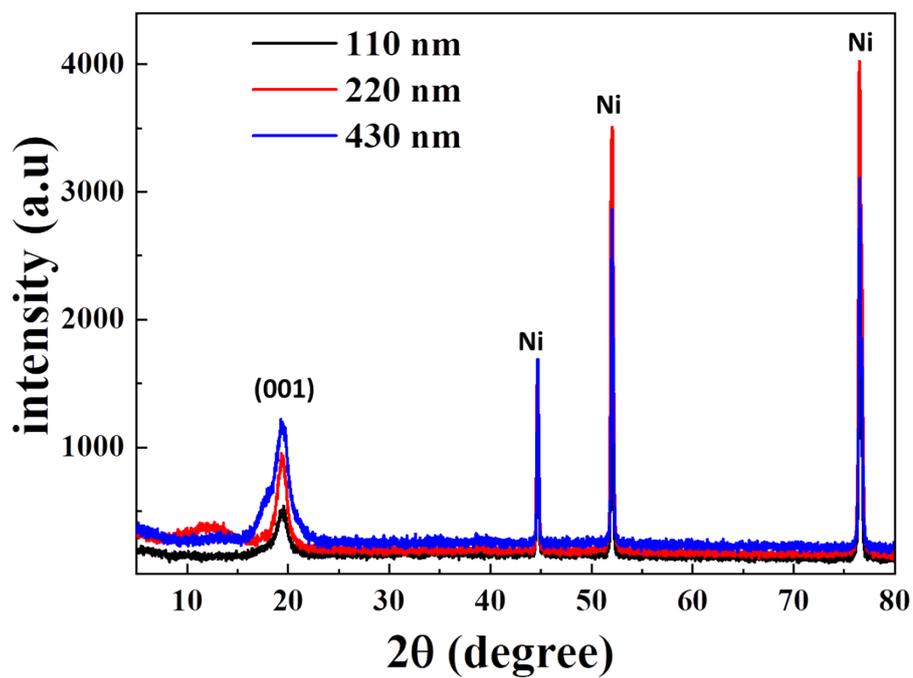


Fig.S4 XRD of the as-prepared Ni(OH)₂-cF with different thicknesses on the nickel foil.

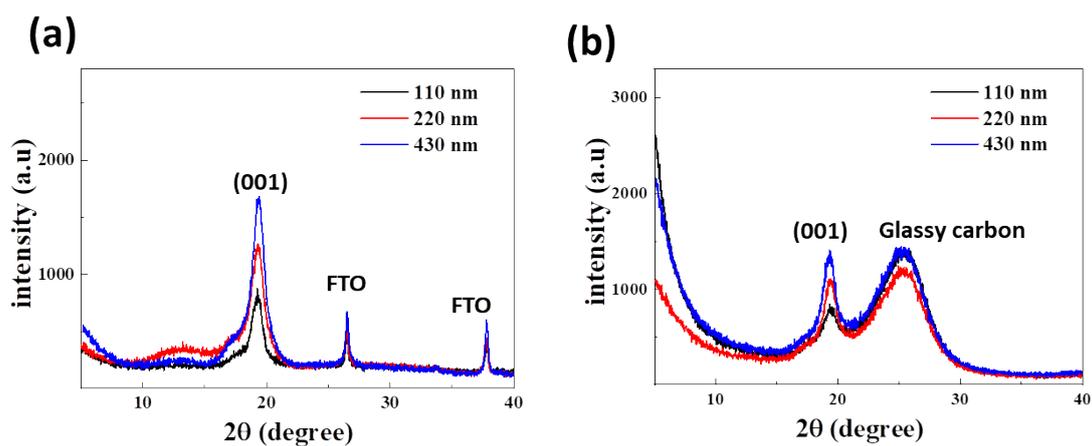


Fig.S5 XRD of the as-prepared Ni(OH)₂-cF with different thicknesses on the (a) FTO substrate and (b) glassy carbon.

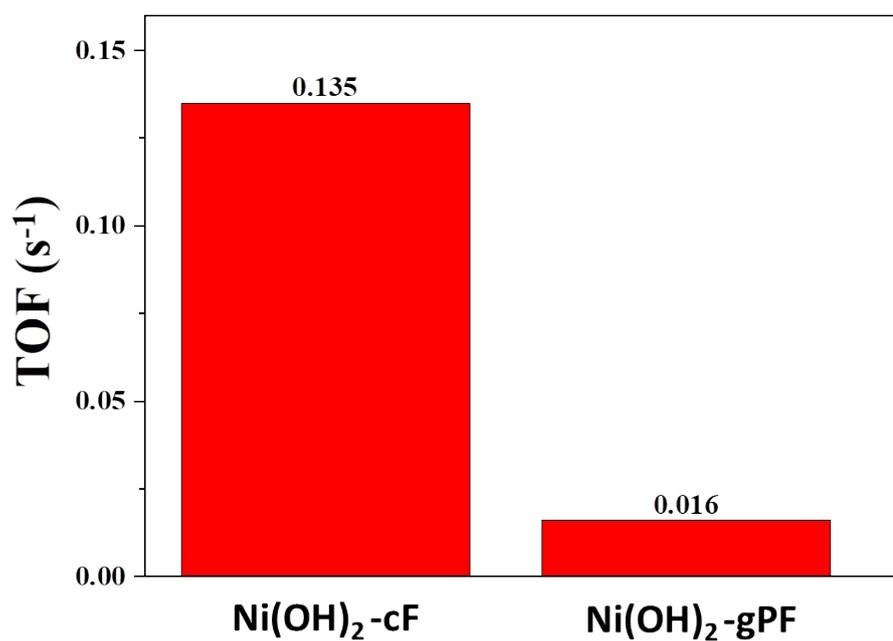


Fig.S6 The TOF values of Ni(OH)₂-cF and Ni(OH)₂-gPF at $\eta=260$ mV.

The TOF values (*Angewandte Chemie*, 2020, 132.21: 8149-8154) were calculated from the following equation:

$$TOF = J * A/4 * F * m$$

where J ($A\ cm^{-2}$) is the current density at overpotential of 260 mV, A is the geometric surface area of the electrode, F is the faraday constant ($96485\ C\ mol^{-1}$), m is the mole number of Ni atoms in the catalyst.

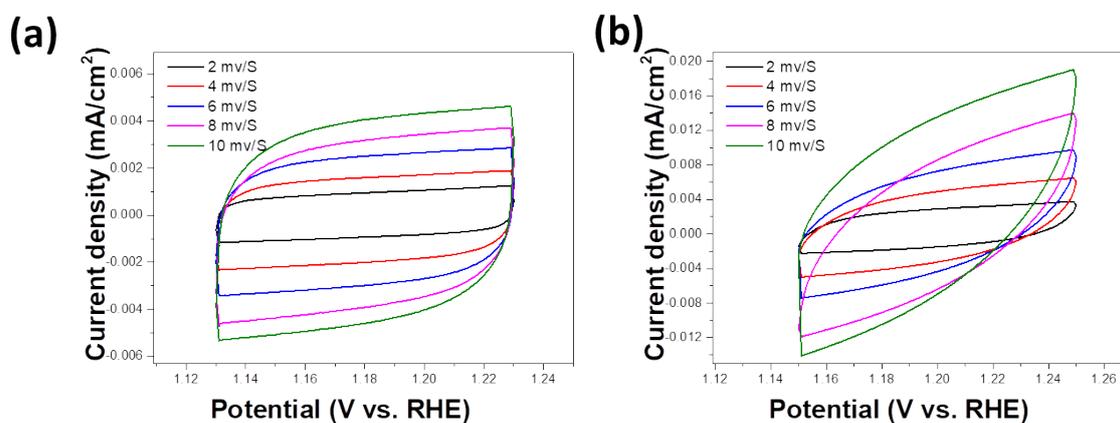


Fig.S7 Typical CV curves at different scan rates of (a) Ni(OH)₂-cF and (b) Ni(OH)₂-gPF.

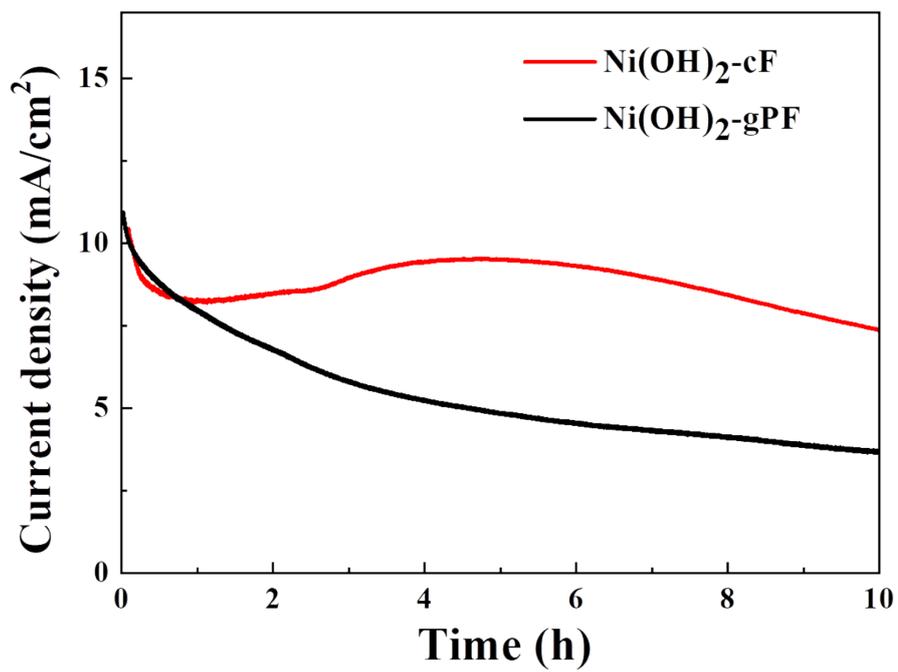


Fig.S8 Chronoamperometry curves at 10 mA/cm² of Ni(OH)₂-cF and Ni(OH)₂-gPF on the nickel foils.