

## (Supplementary Information)

### Low-Pressure-Plasma-Processed Ruthenium/Nickel Foam Electrocatalysts for Hydrogen Evolution Reaction

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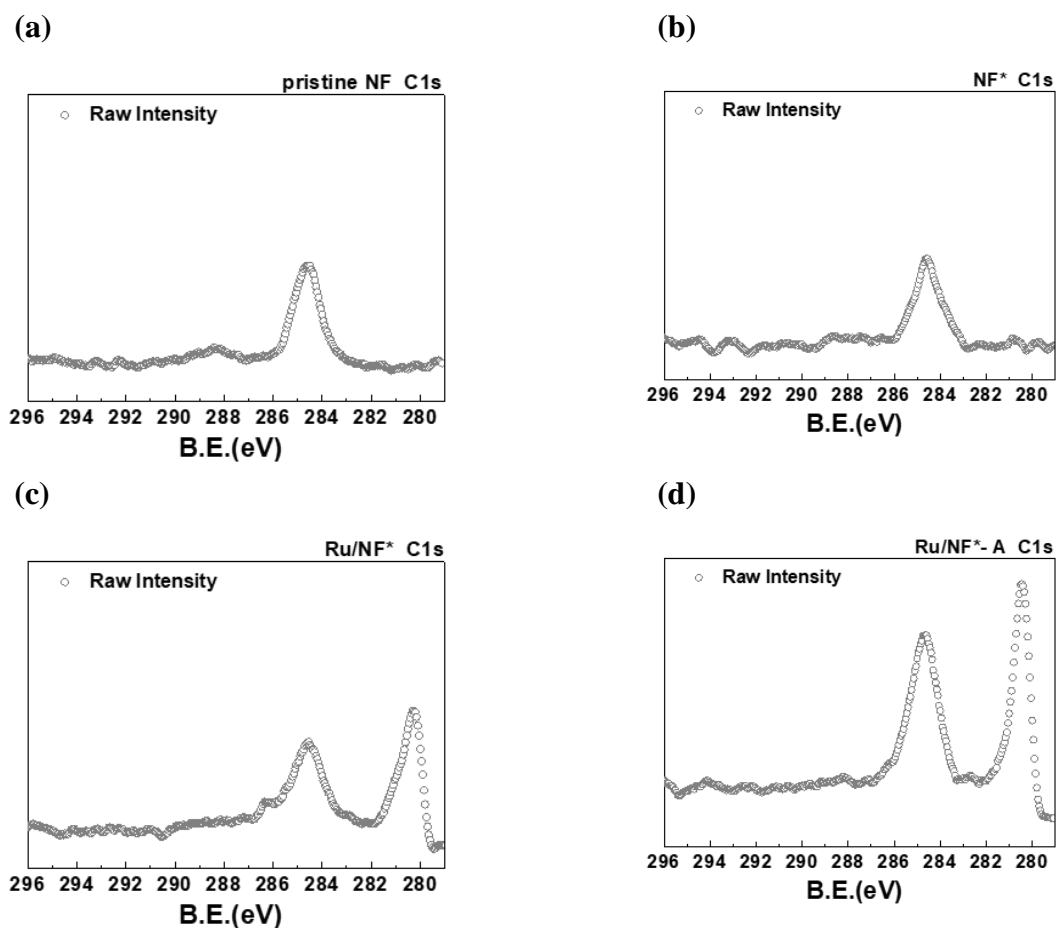
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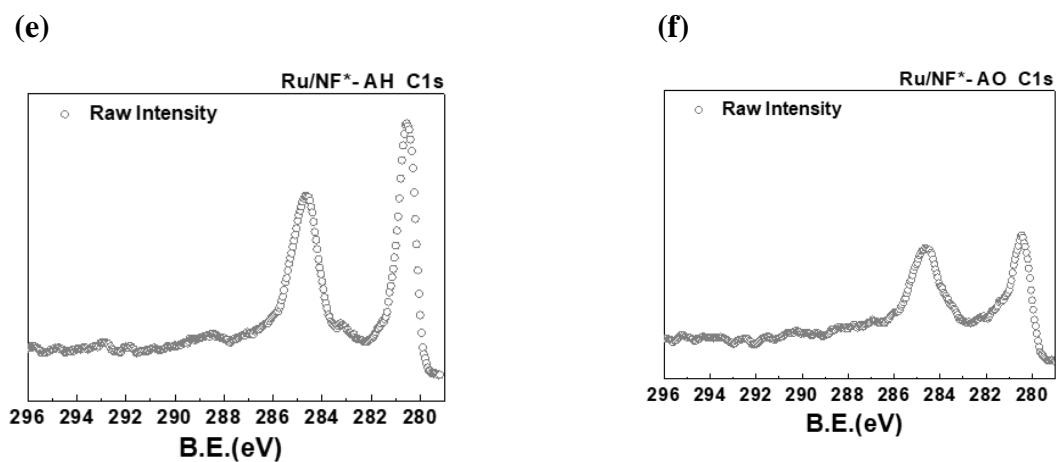
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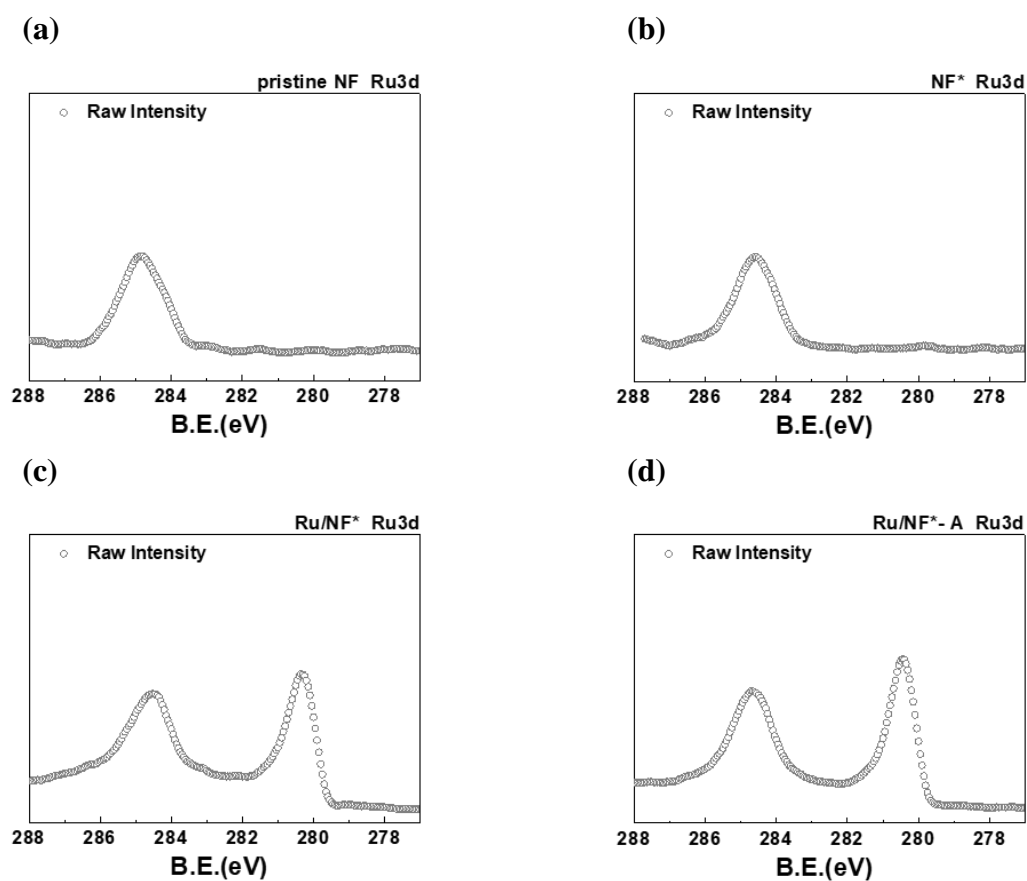
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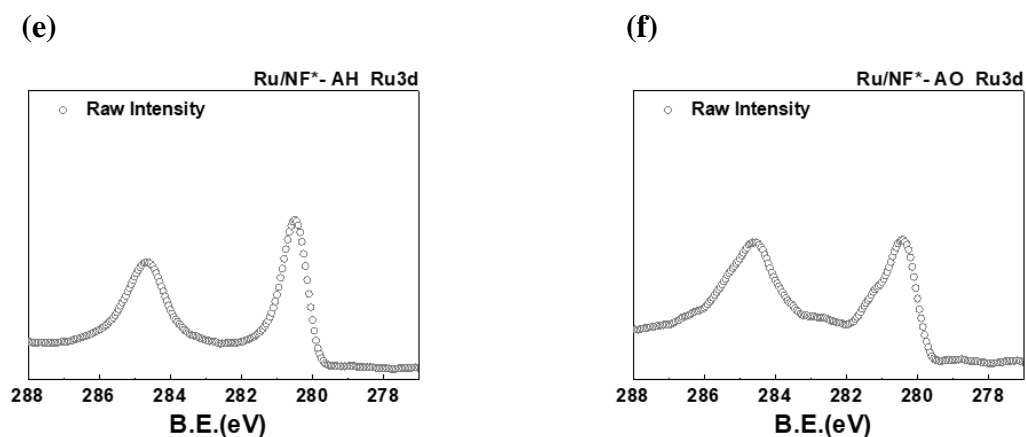
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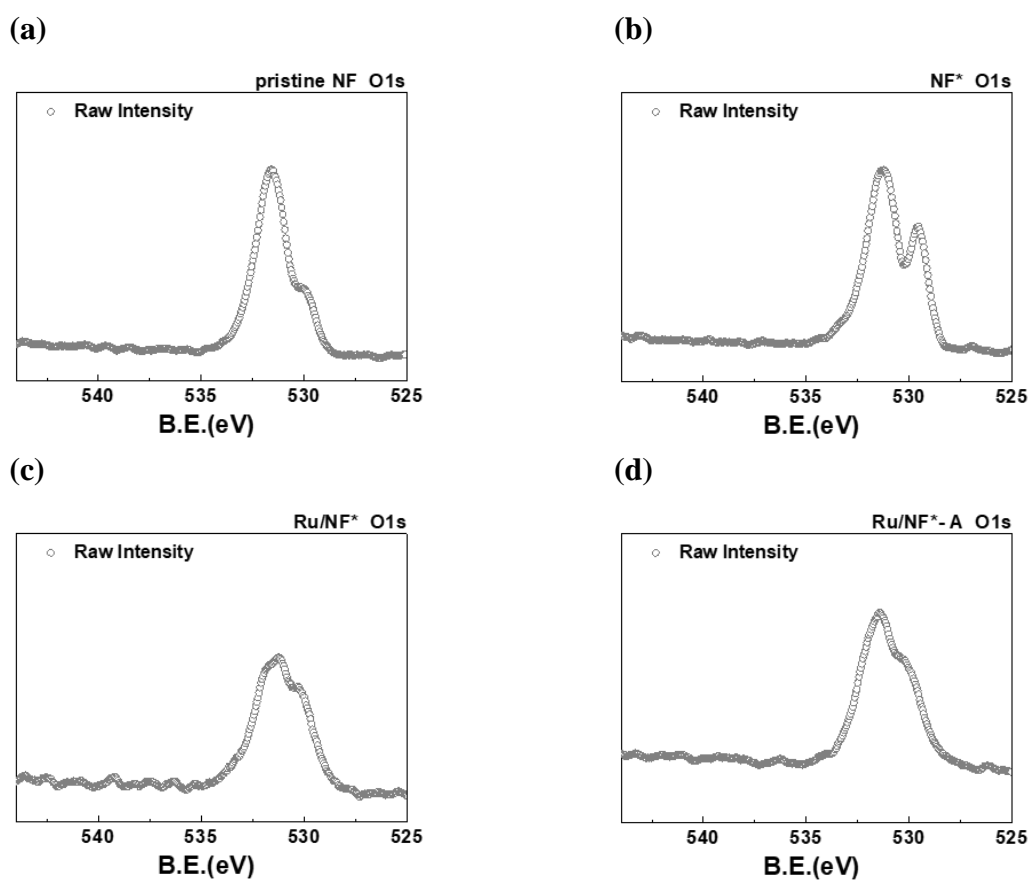


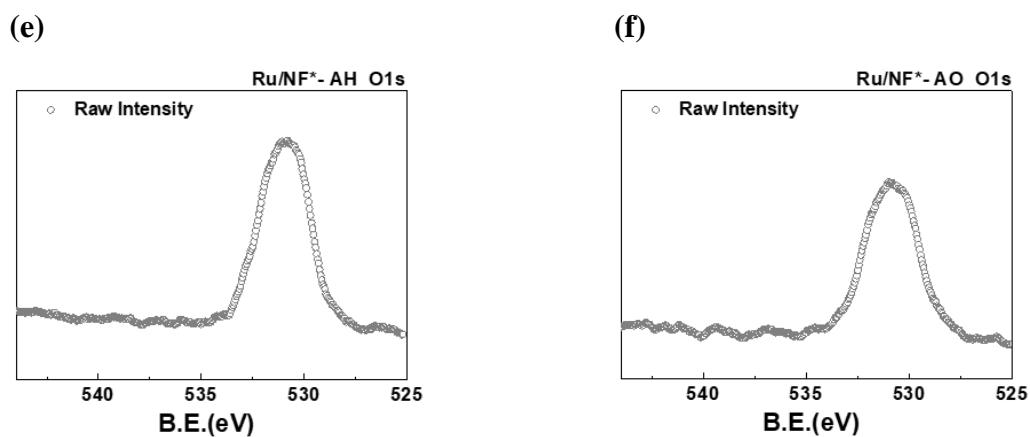
**Figure S1.** XPS spectra of C1s for the catalytic activity of (a) pristine NF, (b) NF\*, (c) Ru/NF\*, (d) Ru/NF\*- A, (e) Ru/NF\*- AH, (f) Ru/NF\*- AO.



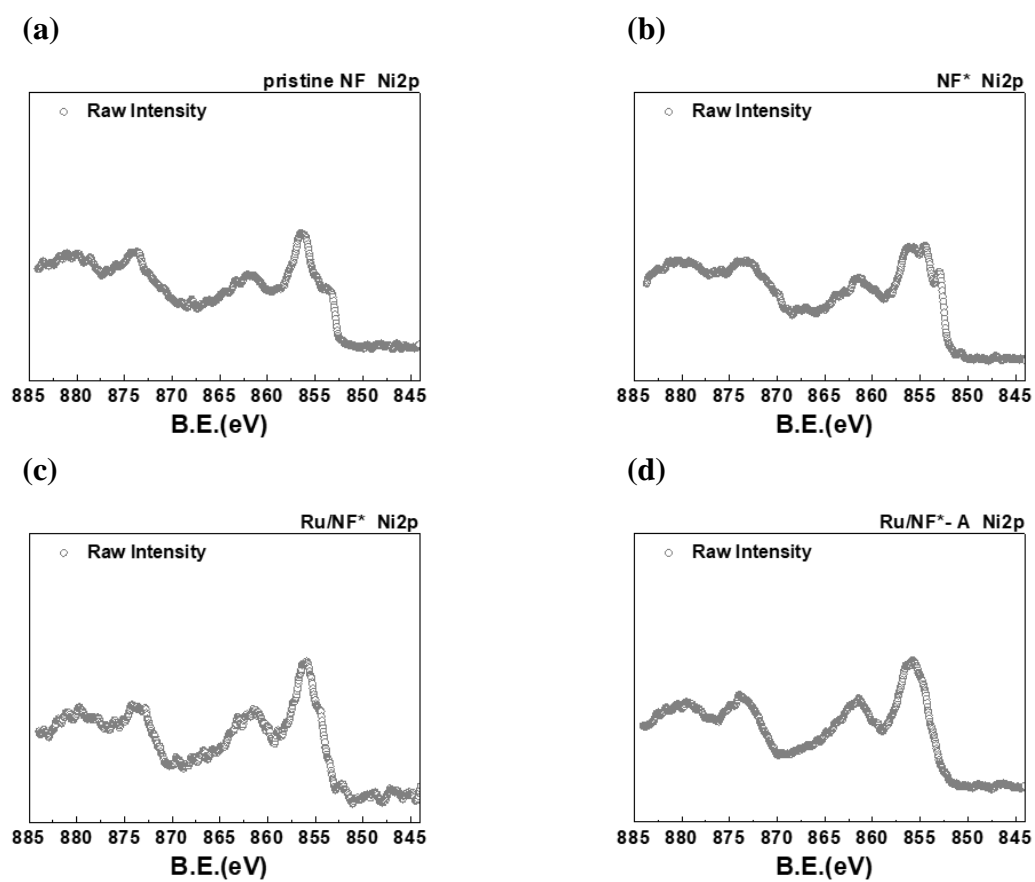


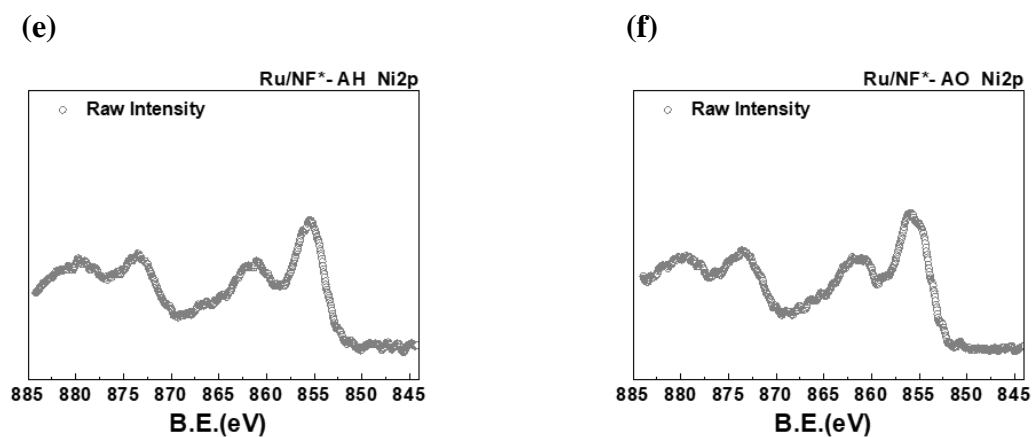
**Figure S2** XPS spectra of Ru3d for catalytic activity of (a) pristine NF, (b) NF\*, (c) Ru/NF\*, (d) Ru/NF\*- A, (e) Ru/NF\*- AH, and (f) Ru/NF\*- AO.



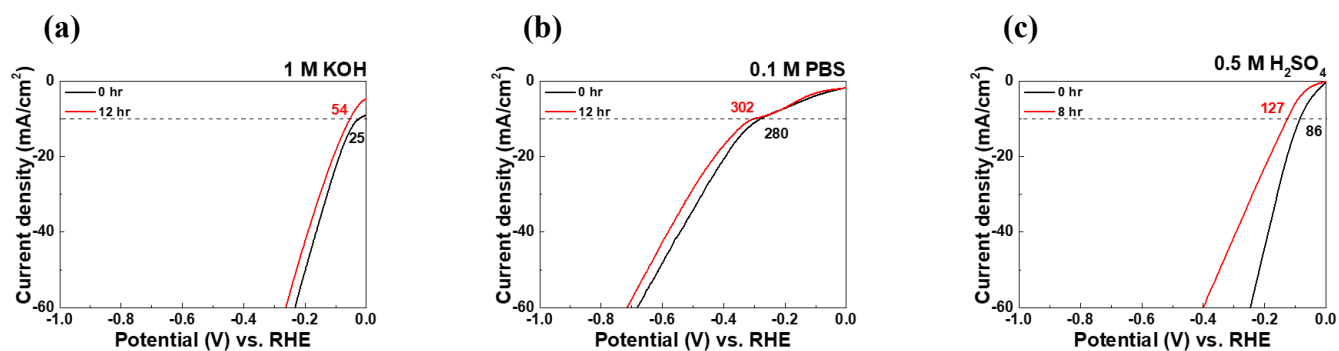


**Figure S3** XPS spectra of O1s for catalytic activity of (a) pristine NF, (b) NF\*, (c) Ru/NF\*, (d) Ru/NF\*-A, (e) Ru/NF\*-AH, and (f) Ru/NF\*-AO.





**Figure S4** XPS spectra of Ni<sub>2p</sub> for catalytic activity of (a) pristine NF, (b) NF\*, (c) Ru/NF\*, (d) Ru/NF\*-A, (e) Ru/NF\*-AH, and (f) Ru/NF\*-AO.



**Figure S5** LSV polarization curves for HER catalyzed by Ru/NF\*-AO before and after a durability test in (a) 1 M KOH, (a) 0.1 M PBS, and (c) 0.1 M H<sub>2</sub>SO<sub>4</sub> aqueous solutions.