Supplementary material

Low-Temperature Etch Synthesis of Fe-Doped $Ni(OH)_2$ for Enhanced Bifunctional Water Splitting

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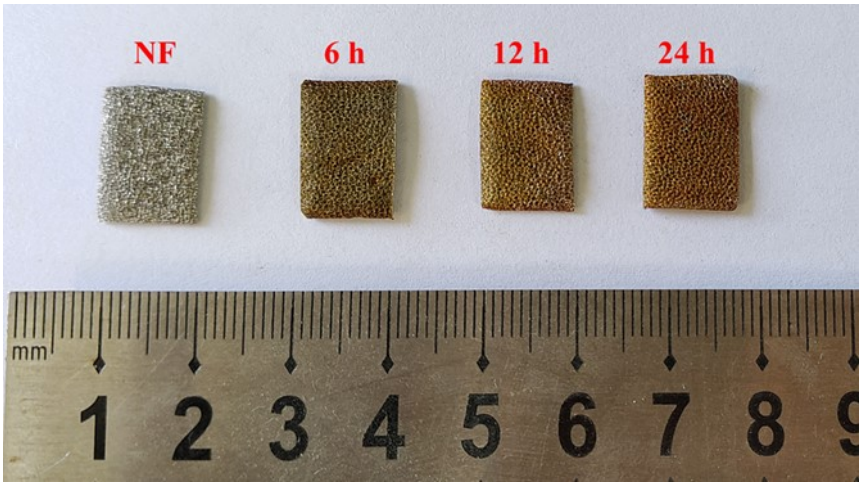

Fig. S1 Photographs of NF and Fe-Ni$(OH)_2$/NF catalysts with different etching time.

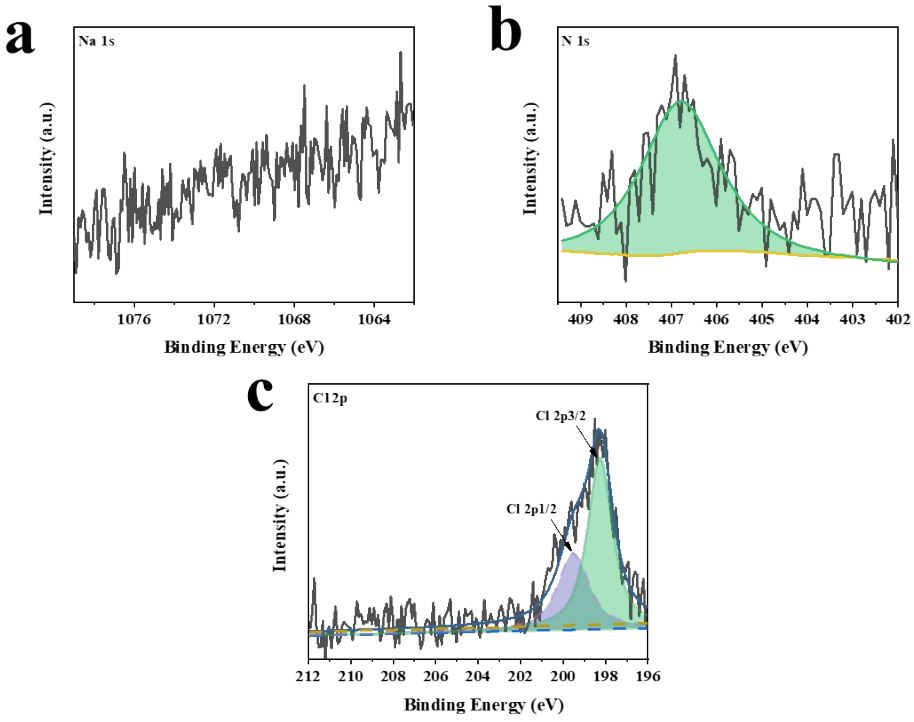

Fig. S2 *High-resolution XPS spectra of (a) Na 1s, (b) N 1s, and (c) Cl 2p.*

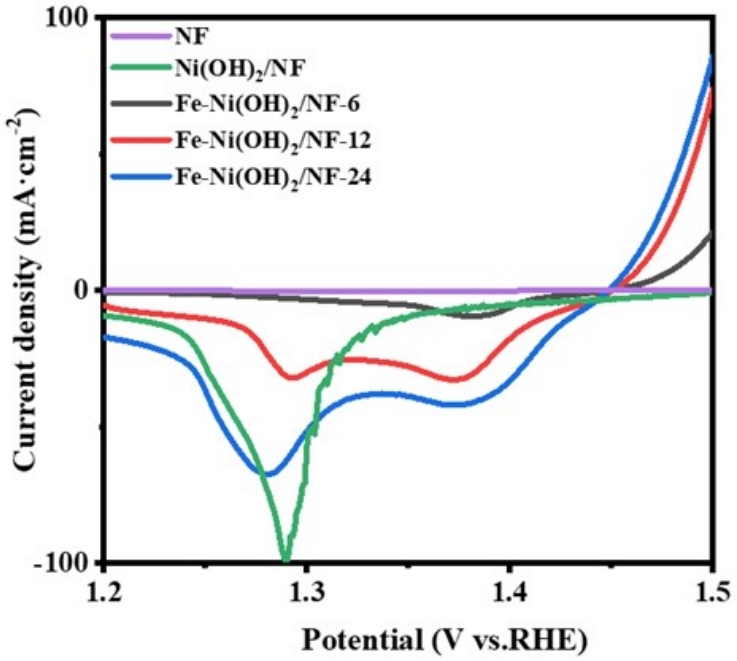

Fig. S3 The zoomed-in plots of LSV.

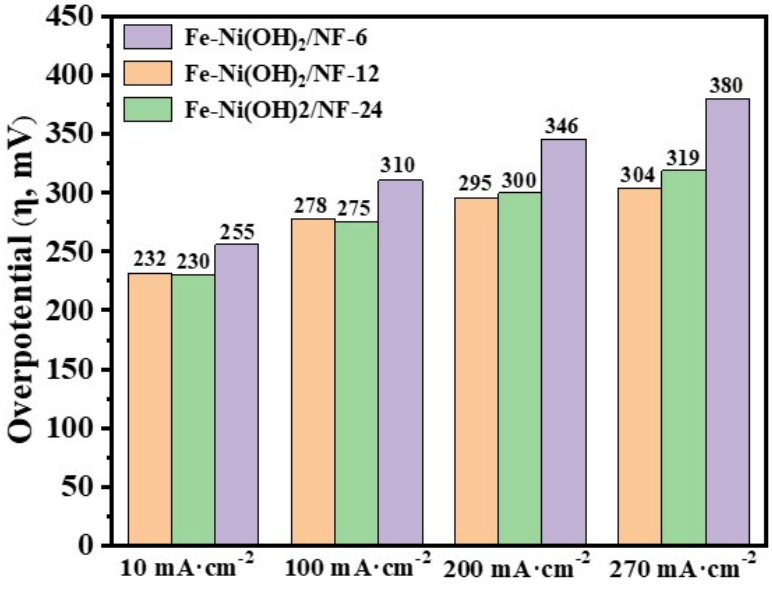

Fig. S4 Comparison plots of overpotential for OER at 10 mA·cm^{-2}, 100 mA·cm^{-2}, 200 mA·cm^{-2} and 270 mA·cm^{-2}.

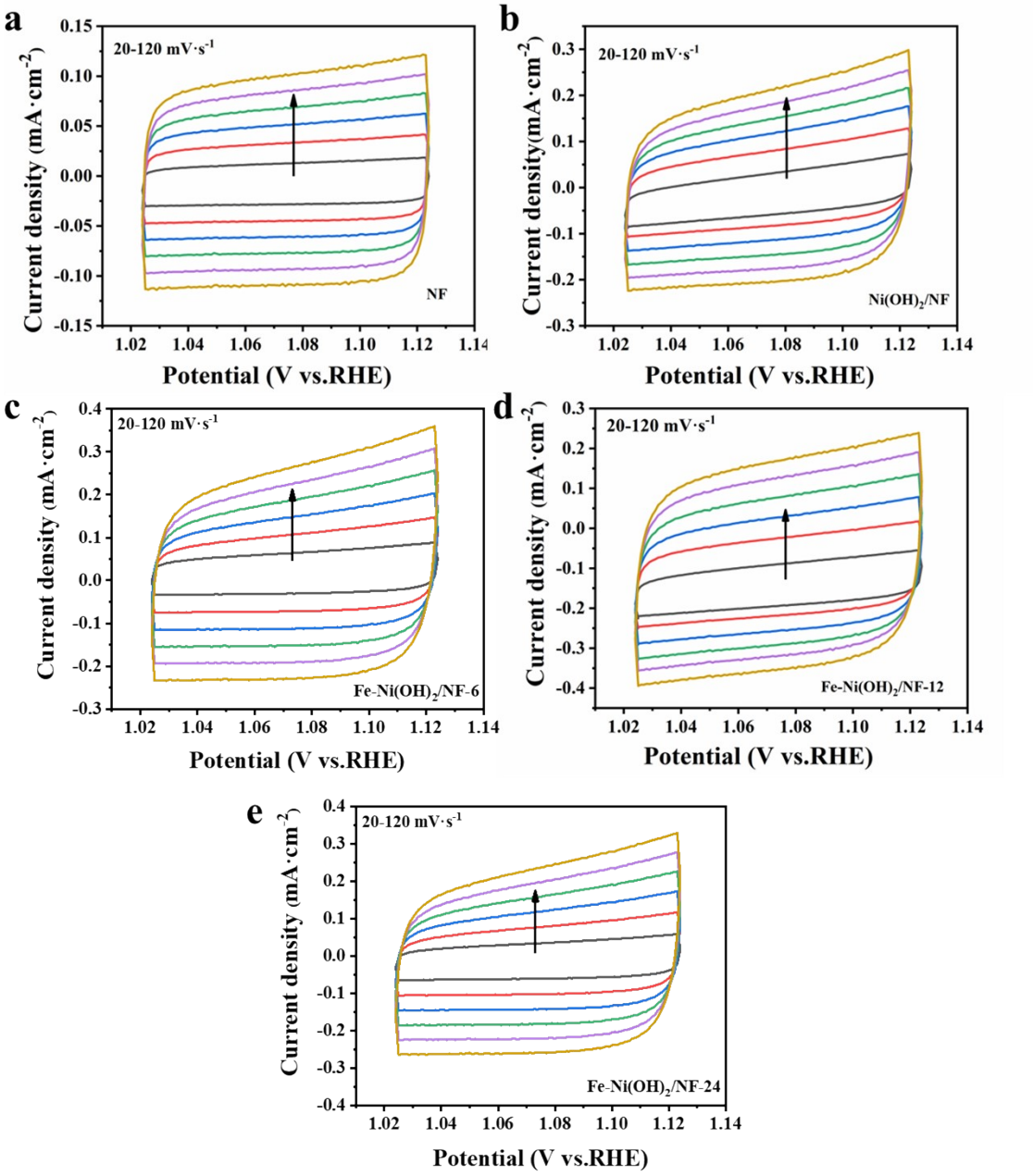

Fig. S5 (a-e) CV curves of NF, $Ni(OH)_2$/NF, Fe-$Ni(OH)_2$/NF-6, Fe-$Ni(OH)_2$/NF-12 and Fe-$Ni(OH)_2$/NF-24 in the double layer region at different scan rates.

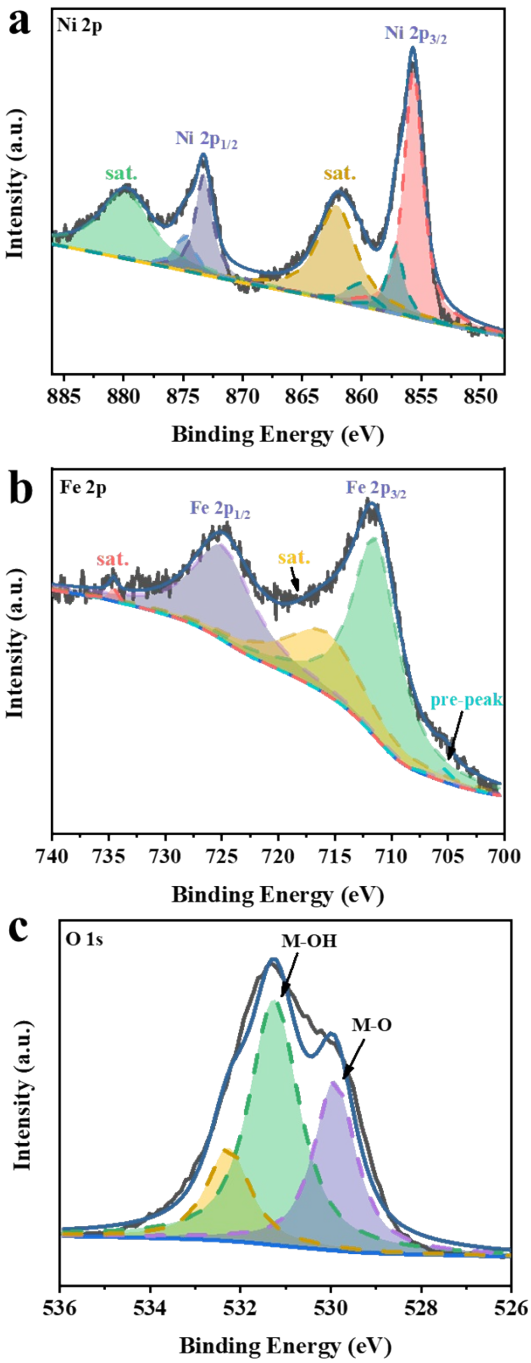

Fig. S6 The XPS spectra of Ni 2p (a), Fe 2p (b) and O 1s (c) of Fe-Ni$(OH)_2$/NF-12 after OER long-term durability test.

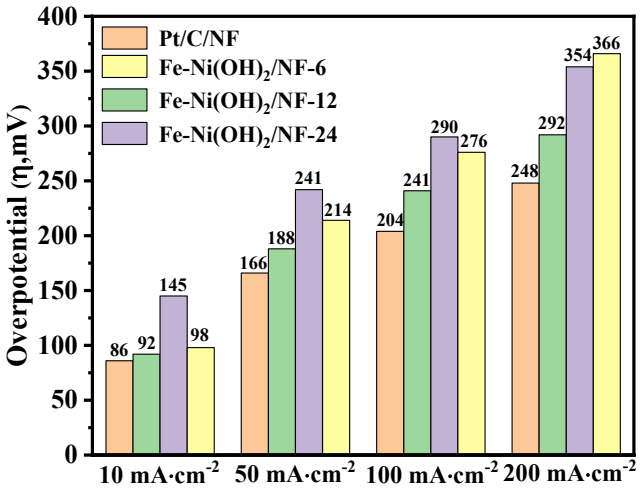

Fig. S7 Comparison plots of overpotential for HER at 10 mA·cm^{-2}, 50 mA·cm^{-2}, 100 mA·cm^{-2} and 200 mA·cm^{-2}.

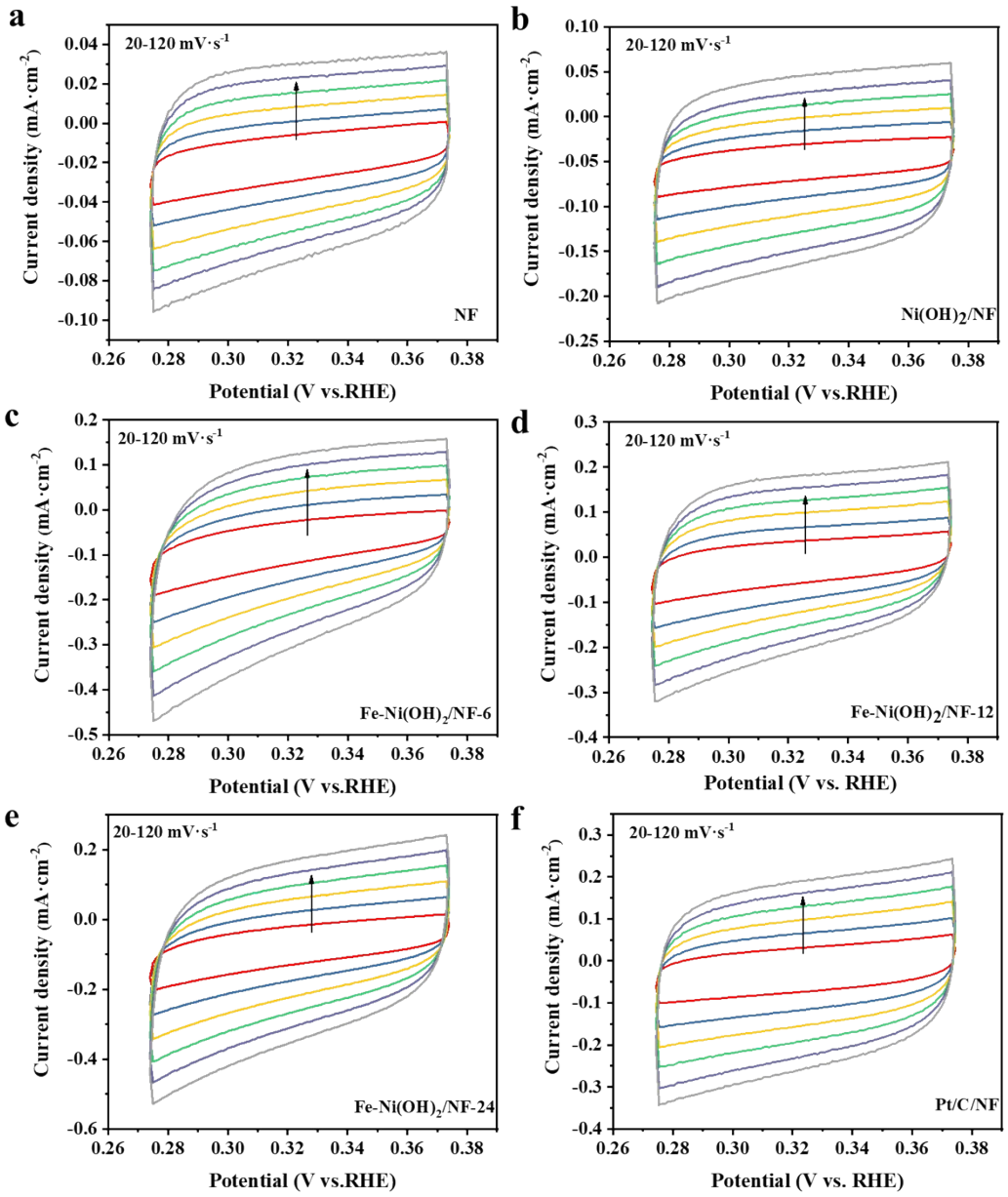

Fig. S8 (a-f) CV curves of NF, $Ni(OH)_2$/NF, Fe-$Ni(OH)_2$/NF-6, Fe-$Ni(OH)_2$/NF-12, Fe-$Ni(OH)_2$/NF-24 and Pt/C/NF in the double layer region at different scan rates.