# Supporting Information

Synergistic coupling of FeOOH with Mo-incorporated NiCo LDH towards enhancing the oxygen evolution reaction

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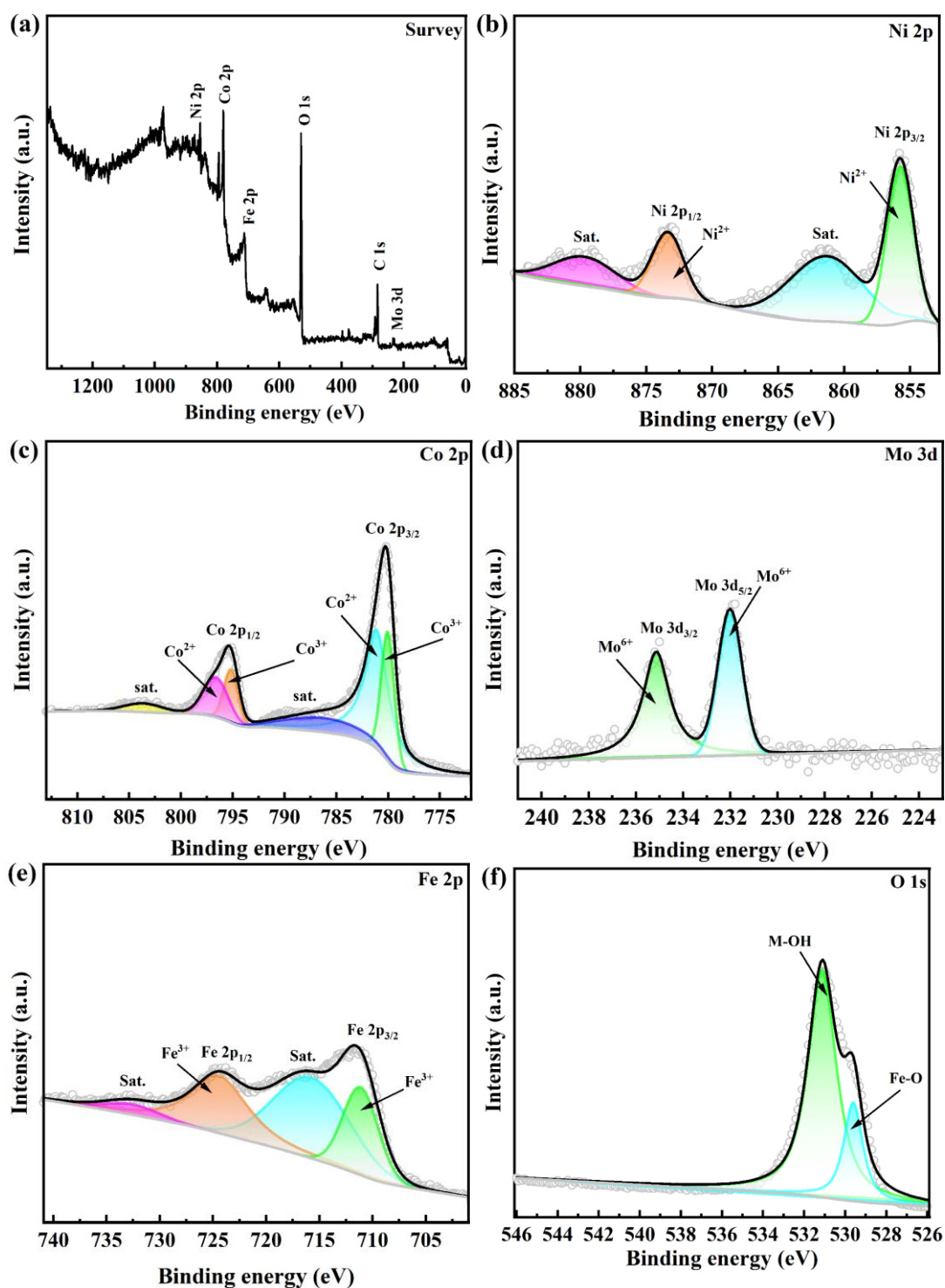
Corresponding author: ljcfstu@163.com
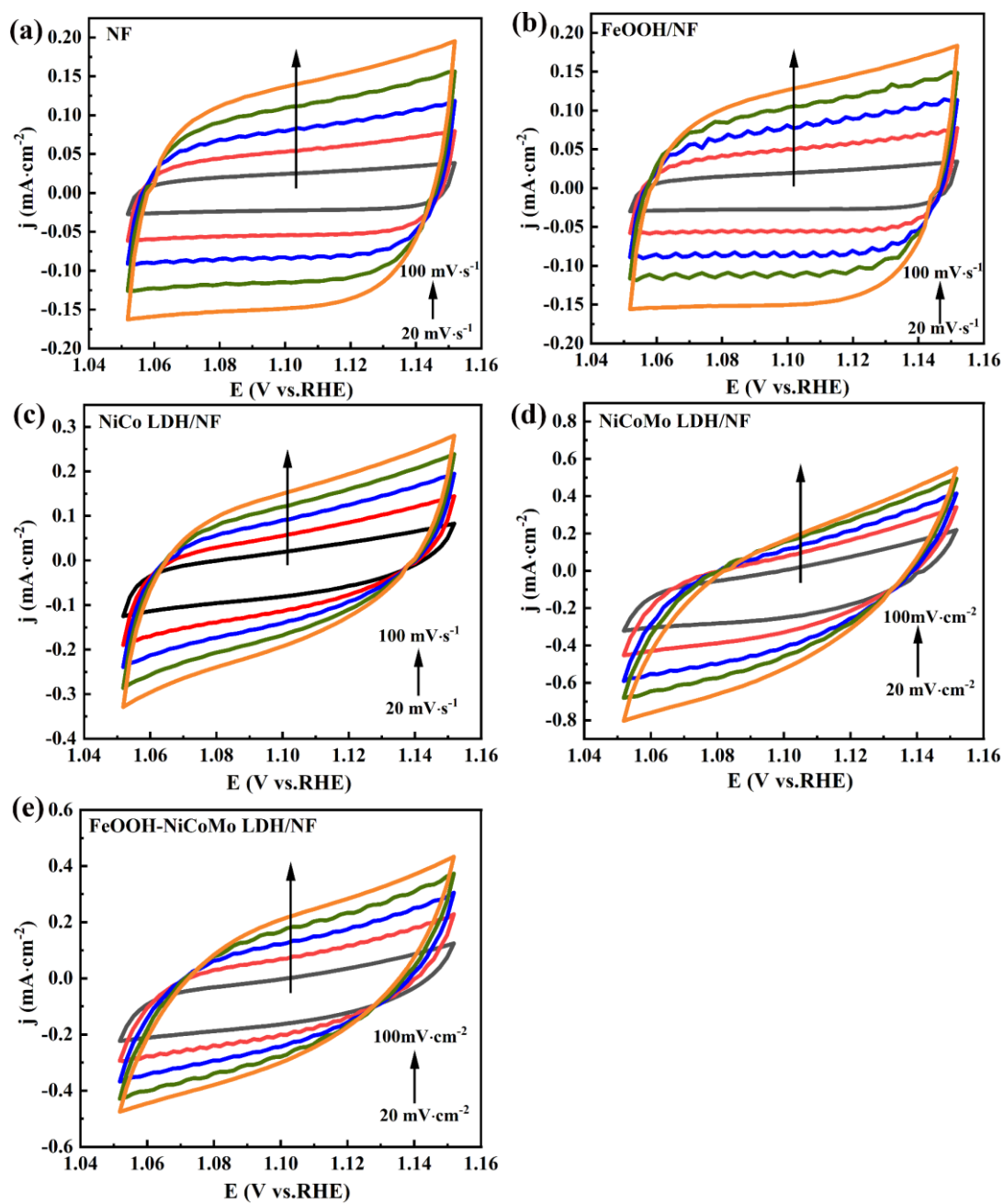
Fig. S1 The CV curves of (a) NF, (b) FeOOH/NF, (c) NiCo LDH/NF, (d) NiCoMo LDH/NF, (e) FeOOH-NiCoMo LDH/NF.
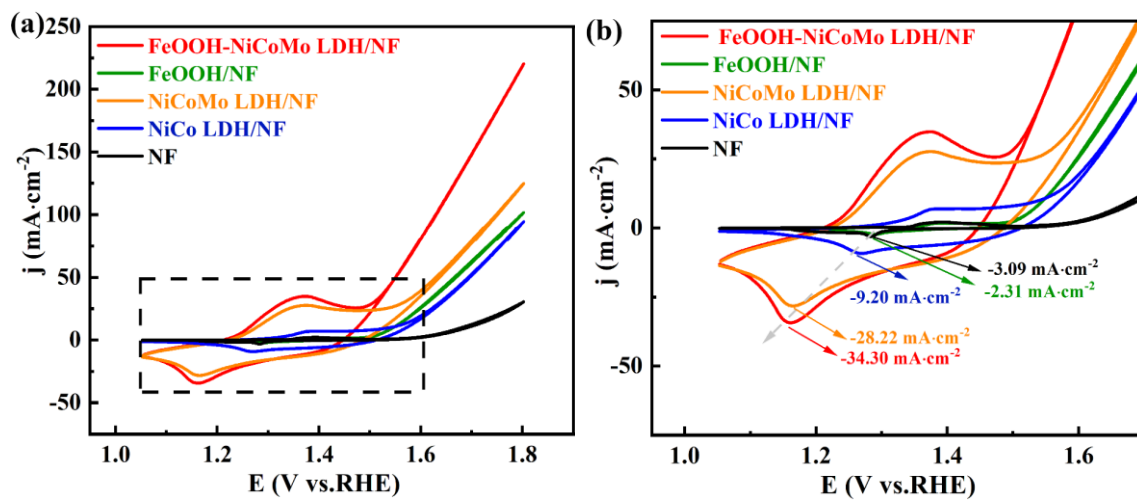
Fig. S2 (a) CV of samples at a scan rate of 5 mV·s^{-1} without *iR compensation* in 1.0 mol/L KOH, (b) Partial enlargement of CV.

Fig. S3 XPS spectra of FeOOH-NiCoMo LDH/NF. (a) XPS survey spectrum, (b) Ni 2p, (c) Co 2p, (d) Mo 3d, (e) Fe 2p, (f) O 1s XPS high resolution spectrum of FeOOH-NiCoMo LDH/NF after long-term stability test in 1.0 M KOH.
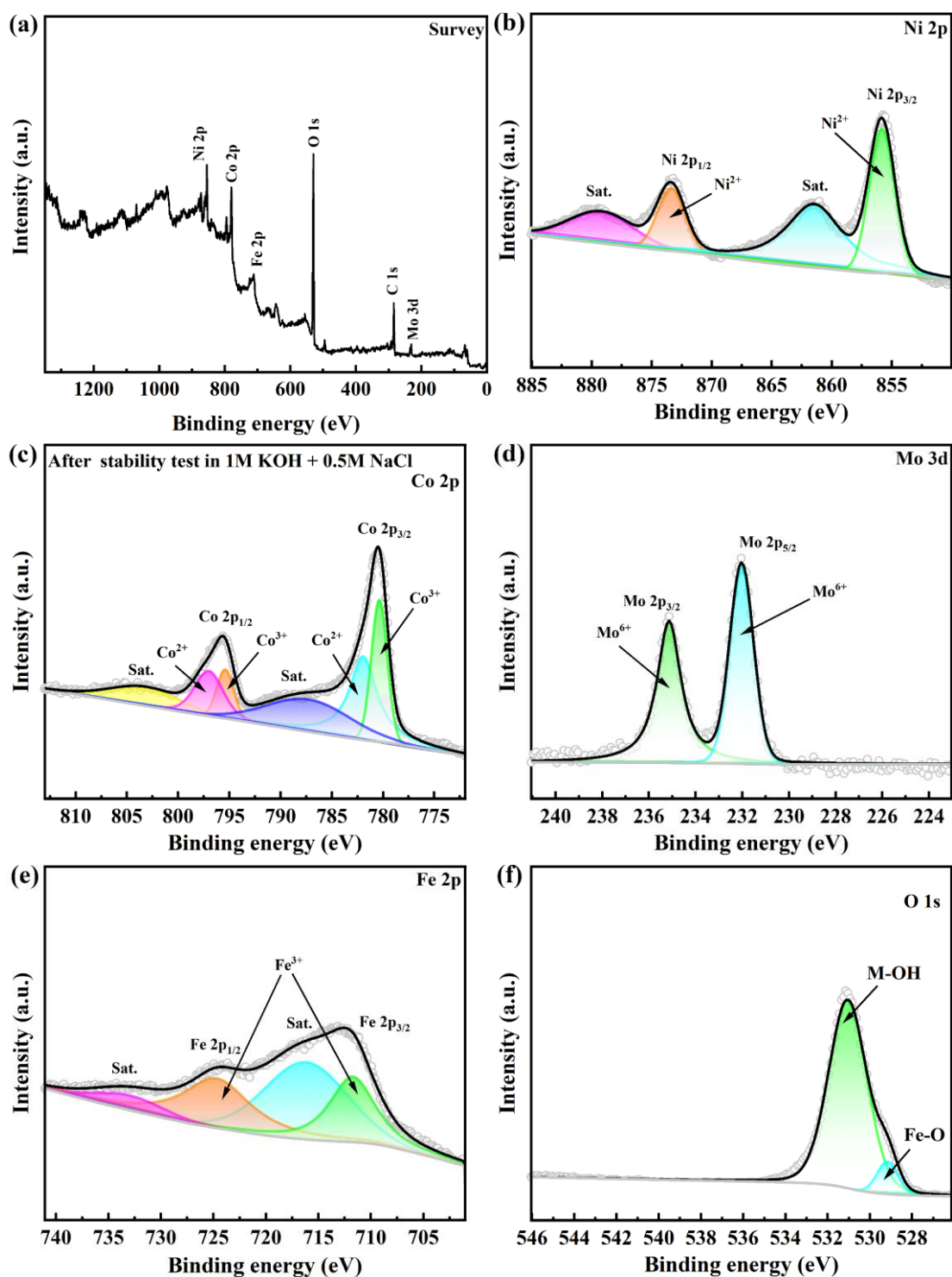
Fig. S4 XPS spectra of FeOOH-NiCoMo LDH/NF. (a) XPS survey spectrum, (b) Ni 2p, (c) Co 2p, (d) Mo 3d, (e) Fe 2p, (f) O 1s XPS high resolution spectrum of FeOOH-NiCoMo LDH/NF after stability test in 1.0 M KOH and 0.5 M NaCl aqueous solution.

Table. S1 Comparison of the electrocatalytic activity of FeOOH-NiCoMo LDH/NF electrocatalysts with several catalysts have been reported recently (η_i: Overpotential at the applied current density; j: Current density)

Catalyst	medium	η_j /mV	$j/mA \cdot cm^{-2}$	Reference
FeOOH-NiCoMo LDH/NF	alkaline	256	50	Our work
		275	100	
		333	500	
NiCo LDH/ZnCo$_2$O$_4$	alkaline	260	10	1
Co/NCP@NiCo LDHs	alkaline	277	10	2
CoNiN@NiFe LDH	alkaline	227	10	3
		291	100	
NiSe@CoFe LDH	alkaline	203	10	4
		236	100	
NiFeCr LDH/MoS$_2$	alkaline	1.50 (vs. RHE)	10	5
NiFe LDH@Mo-NiS-NiS$_2$	alkaline	261	50	6
CoFeMo LDH	alkaline	240	100	7
		350	500	
FeOOH@CC	alkaline	257.8	50	8
FeOOH/CoP	alkaline	250	10	9

Table. S2 Summary of EIS fitting results for oxygen evolution reaction

Catalysts	R_{ct} (Ω)	R_s (Ω)
FeOOH-NiCoMo LDH/NF	0.675	1.096
NF	187.9	1.996
FeOOH/NF	16.16	1.482
NiCo LDH/NF	46.32	1.514
NiCoMo LDH/NF	4.994	1.372

Reference

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