

Supplementary Material:

Hierarchical ZnCoS@CoFe-layered double hydroxide on Ni foam to enhance the OER performance for water splitting

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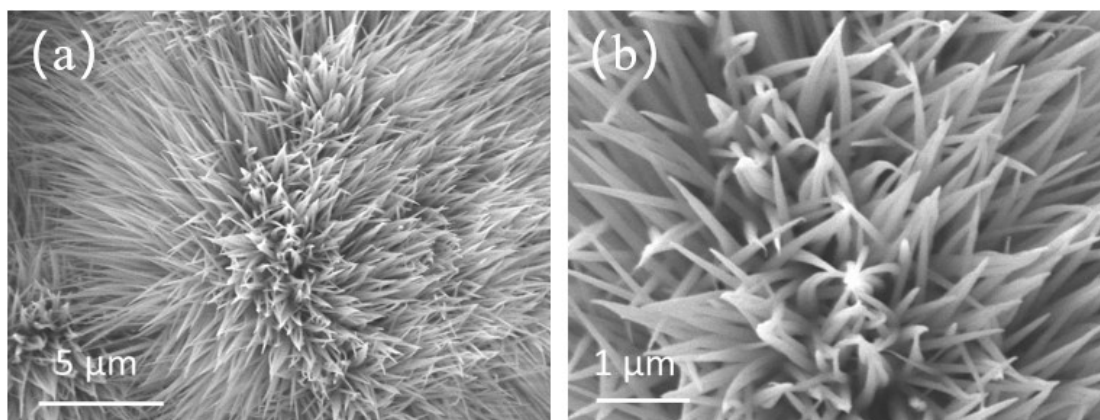


Figure S1. (a and b) SEM images of ZnCo-LDH/NF at low and high magnification.

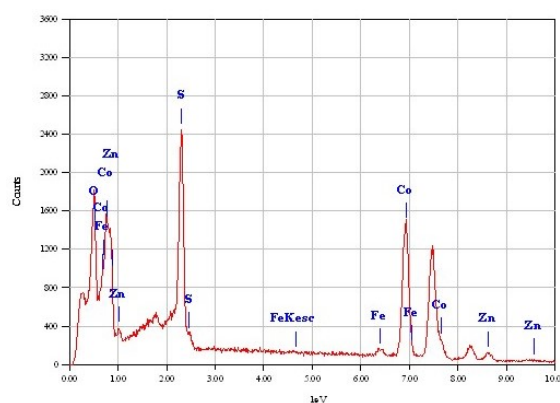


Figure S2. EDX pattern of ZnCoS@CoFe-LDH

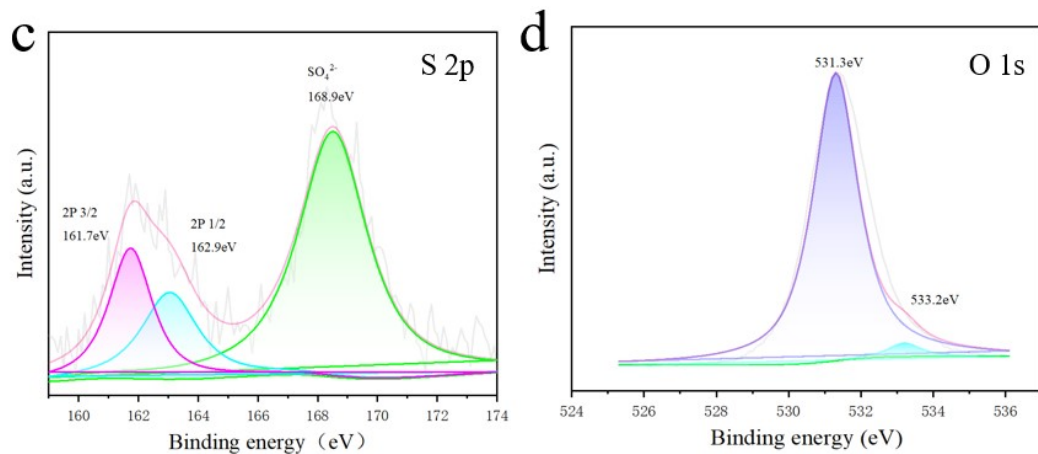


Figure S3. XPS survey spectra, high resolution (c) S 2p spectra and, (d) O 1s spectra of ZnCoS@CoFe-LDH.

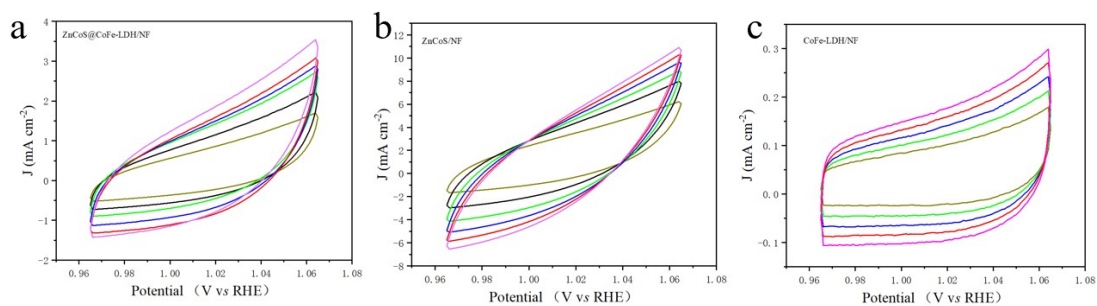


Figure S4. CV curves of (a) ZnCoS@CoFe-LDH/NF, (b) ZnCoS/NF, (c) CoFe-LDH/NF in the region of 0.96 ~ 1.07 V vs. RHE in 1.0 M KOH at various scan rates.

Table S1. EDX data of ZnCoS@CoFe-LDH

Element	(keV)	Mass %	Error	At %
O K	0.525	6.63	0.18	19.13
S K	2.307	13.05	0.19	18.78
Fe K	6.398	2.56	1.07	2.12
Co K	6.924	66.32	1.43	51.91
Zn K	8.630	11.43	3.88	0.07
Total		100		100

Table S2. Comparison of OER performance with that of recently reported electrocatalysts in 1.0 KOH.

Catalyst	Electrolyte	$e \eta(\text{mV})@j$ (mA cm^{-2})	Tafel slope (mV dec^{-1})	Ref.
ZnCoS@CoFeLDH	1 M KOH	160@10	43.35	This work
NiSe@CoFe LDH	1 M KOH	203@10	90.3	1
Co (OH) ₂ /Fe ₇ Se ₈	1 M KOH	278@10	64	2
Mo-Ni ₃ S ₄ /CW	1 M KOH	240@10	47.7	3
Ni (OH) ₂ /MoS ₂	1 M KOH	328@10	69.3	4
NiFeVS _x @NF	1 M KOH	259@10	34	5
3D Ni ₃ S ₂ /NF	1 M KOH	242@10	74	6
ZnCo ₂ O ₄ @ZnCo-LDHs	1 M KOH	375@10	73	7
CoP/Co (OH) ₂ @NF	1 M KOH	266@10	95.87	8
CeO ₂ /Co-Mn-S/NF	1 M KOH	239@10	93.2	9

References

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