Supporting information

Amorphous FeCoNiMnCr high-entropy alloy supported by 2H-MoS$_2$ on carbon cloth as a highly efficient and robust electrocatalyst for water oxidation

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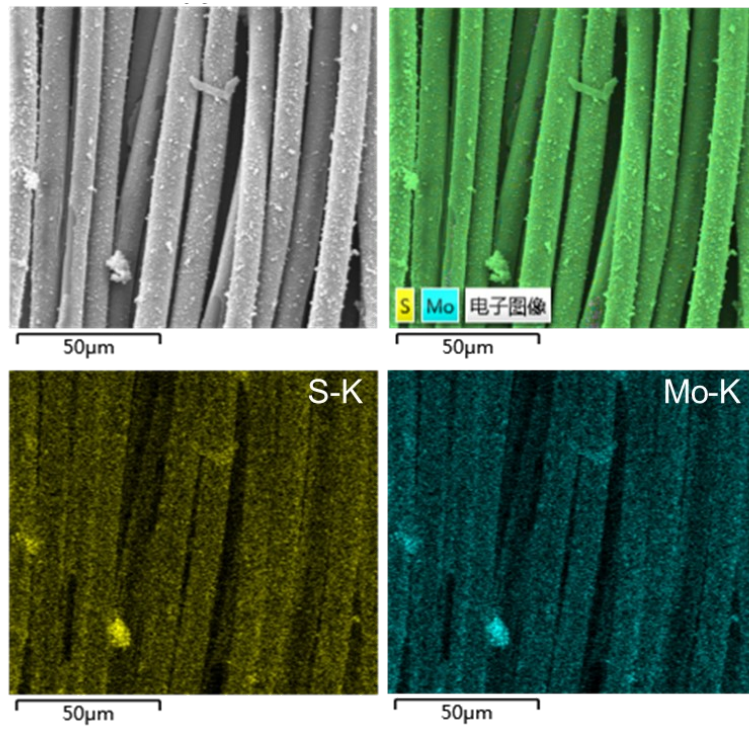
[2] Jiangsu Province High-efficiency Energy Storage Technology and Equipment Engineering Laboratory, School of Materials Science and Physics, China University of
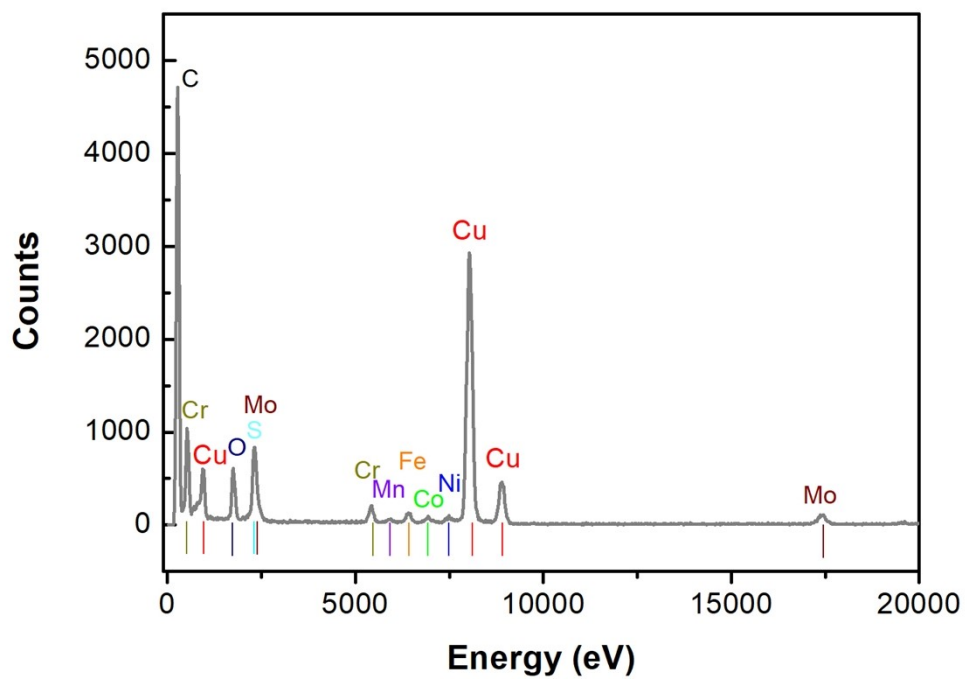
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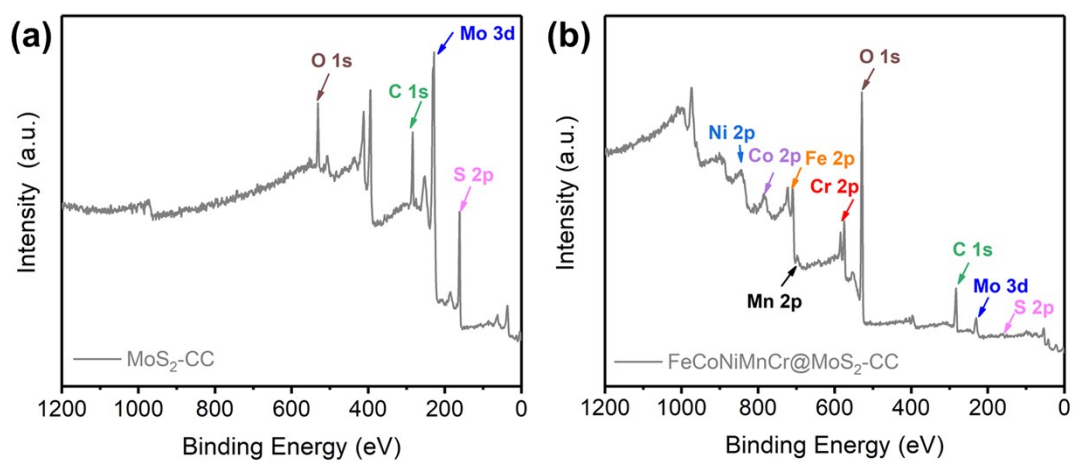* Corresponding authors. Email: daiweiji@just.edu.cn (W. Dai), s.huang@just.edu.cn (S. Huang)

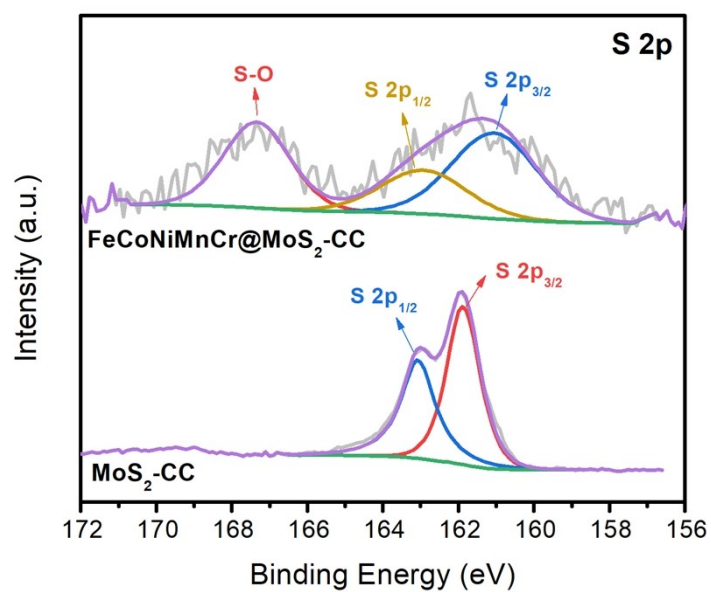[#] These authors contributed equally.

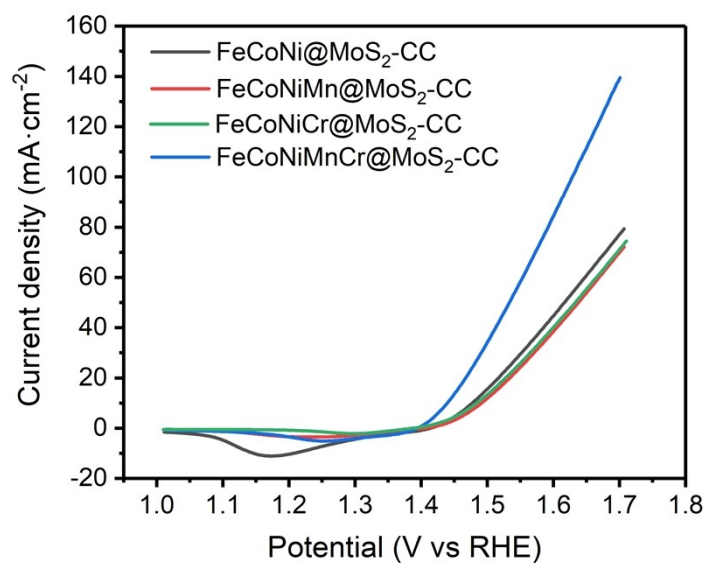**Figure S1**. EDS elemental mappings of MoS$_2$-CC.

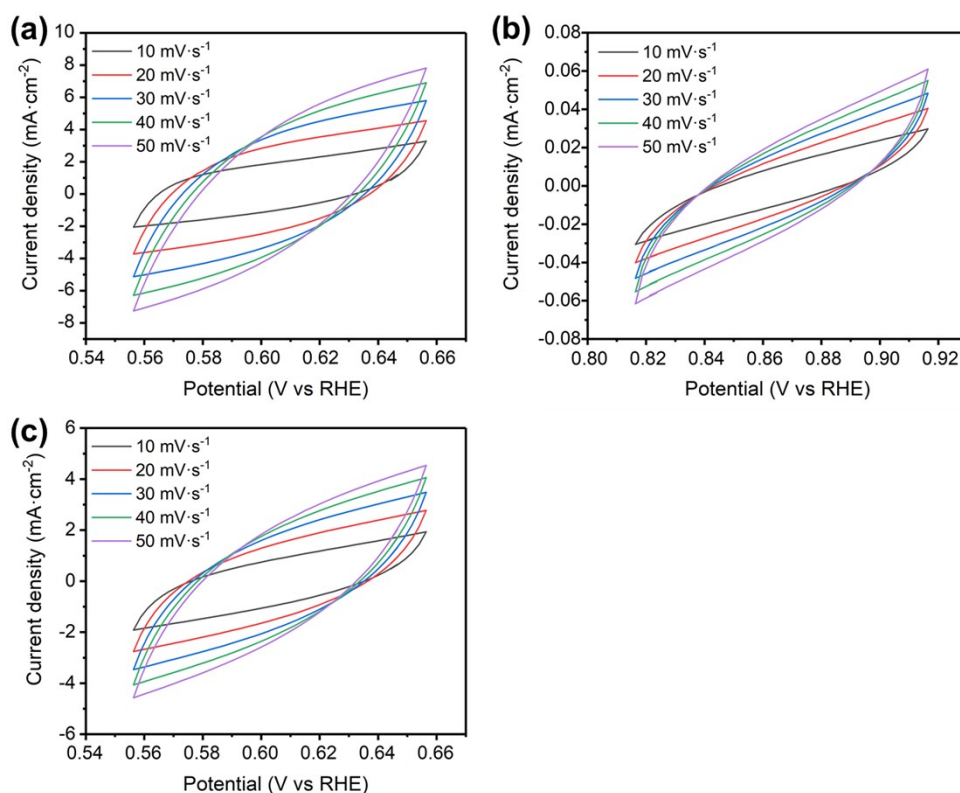**Figure S2**. EDS pattern of FeCoNiMnCr@MoS$_2$ electrocatalyst.

Figure S3. XPS survey spectra. (a) MoS$_2$-CC, (b) FeCoNiMnCr@MoS$_2$-CC.

Figure S4. High-resolution XPS spectra of S 2p.

Figure S5. CV scanning curves of MoS_2-CC loading with trimetallic and tetrametallic alloys.

Figure S6. CV scanning curves with various scan rates (10, 20, 30, 40 and 50 mV s^{-1}).

(a) MoS_2-CC, (b) FeCoNiMnCr-CC, (c) FeCoNiMnCr@MoS_2-CC.

Table S1. OER performances of some recently reported electrocatalysts.

Electrocatalysts	Electrolyte	η_{10}/mV	Tafel slope/ mV dec^{-1}	References
MoS$_2$@Fe/Ni-MOF600-3	1M KOH	340	159.8	Fuel 339 (2023) 127395
NiCo$_{2x}$Fe$_x$O$_4$ NBs	1M KOH	274	42	Angew. Chem. Int. Ed. 2021, 60, 11841 –11846
FeCoNiPB	1M KOH	235	53	Nano Res. 2022, 15(10): 8751–8759
FeNiMoCrAl HEA thin film	1M KOH	220	27.3	Small 2022, 18, 2106127
3D PG-NiCoFe-211	1M KOH	313	51.9	J. Energy Chem. 53 (2021) 260–267
FeCoMoPB amorphous nanoplate	1M KOH	239	53	Small 2022, 2204135
MnFeCoNiCu@MOFs/CC	1M KOH	263	43	J. Mater. Chem. A, 2020, 8, 11938
FeCoNiMnW HEA	1M KOH	512	145	Chem. Eng. J. 446 (2022) 137452
FeCoNiMnMo HEA	1M KOH	279	56.1	ACS Catal. 2022, 12, 19, 11667–11674
FeCoNiCrVB	1M KOH	237	24.2	New J. Chem. 2022, 46, 8398
Co$_{1.3}$Ni$_{0.5}$Fe$_{0.2}$P	1M KOH	320	45	Sci. China Mater. 2022, 65(10): 2685–2693
FeCoNiMnCr@MoS$_2$-CC	**1M KOH**	**210**	**40.3**	**This work**