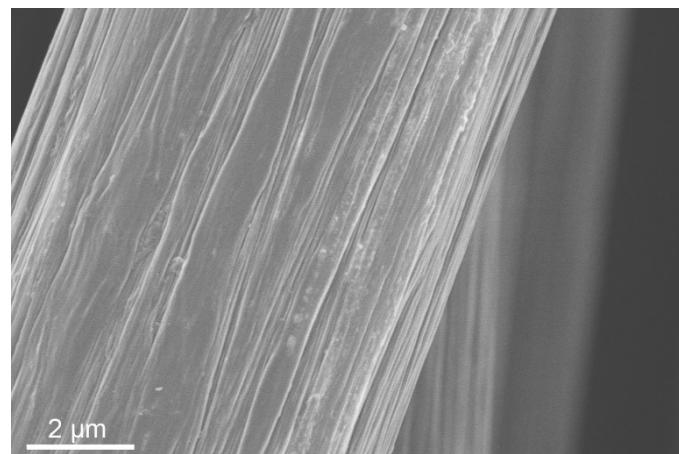


## Supporting Information

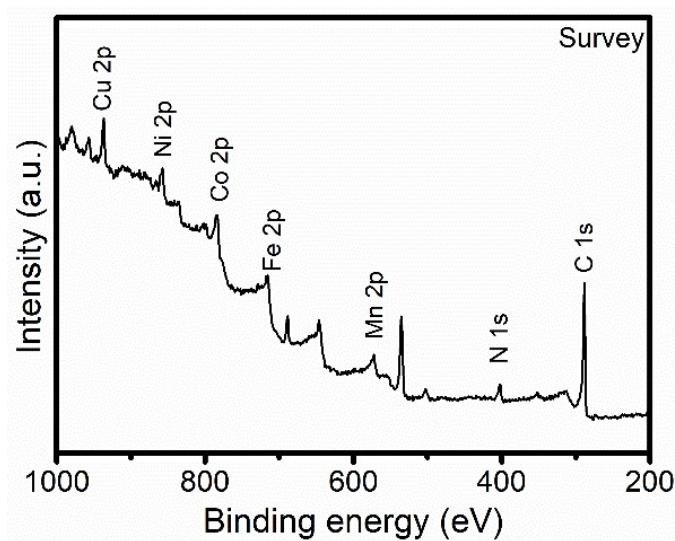
### High entropy alloy nitrides with integrated nanowire/nanosheets architectures for efficient alkaline hydrogen evolution reaction

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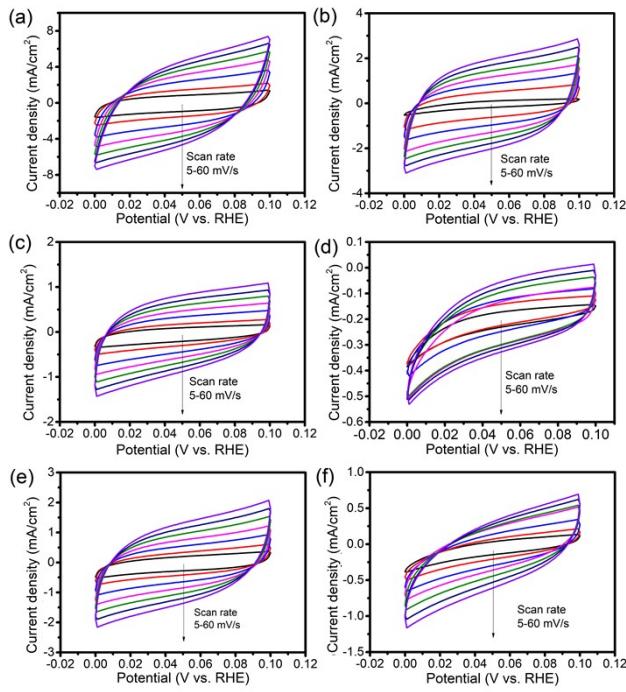
**Figure S1.** SEM images of blank CC.



**Figure S2.** XPS survey of FeCoNiCuMnN/CC-400.

**Table S1.** Comparison of HER performance of FeCoNiCuMnN/CC-400 with other electrocatalysts in 1.0 M KOH solution.

Electrocatalyst	Overpotential (mV)	Reference
PdPtCuNiP HEMG	32 (10 mA·cm <sup>-2</sup> )	<i>Adv. Funct. Mater.</i> , 2021, 31, 2101586
Mo doped CoS <sub>x</sub> /TM	230 (10 mA·cm <sup>-2</sup> )	<i>J. Electrochem. Soc.</i> , 2020, 167, 114510
CoMoNx-500 NSAs/NF	200 (10 mA·cm <sup>-2</sup> )	<i>ACS Appl. Mater. Interfaces</i> , 2020, 12, 29253-29263
NiCoFeMnCrP	220 (10 mA·cm <sup>-2</sup> )	<i>J. Mater. Chem. A</i> , 2021, 9, 17913–17922
Ni/NiO	226 (10 mA·cm <sup>-2</sup> )	<i>Electrochim. Acta</i> , 2020, 361, 137040
Pt <sub>18</sub> Ni <sub>26</sub> Fe <sub>15</sub> Co <sub>14</sub> Cu <sub>27</sub>	11 (10 mA·cm <sup>-2</sup> )	<i>Nat. Commun.</i> , 2020, 11, 1-9.
IrPdPtRhRu	17 (10 mA·cm <sup>-2</sup> )	<i>Chem. Sci.</i> , 2020, 11, 12731–12736
CoNiO <sub>2</sub> /SNC	330 mV (10 mA·cm <sup>-2</sup> )	<i>RSC Adv.</i> , 2020, 10, 27788–27793
3-Co-1T-MoS <sub>2</sub>	240 (10 mA·cm <sup>-2</sup> )	<i>Mater. Chem. Phys.</i> , 2020, 244, 122642
Fe-Co-CN/rGO-700	215 (10 mA·cm <sup>-2</sup> )	<i>Electrochim. Acta</i> , 2021, 365, 137384
PdFeCoNiCu/C	18 (10 mA·cm <sup>-2</sup> )	<i>J. Mater. Chem. A</i> , 2021, 9, 889–893
FeCoNiCuMnN/CC-400	184 (10 mA·cm <sup>-2</sup> )	This work



**Figure S3.** CV curves of (a) FeCoNiCuMnN/CC-400, FeCoNiN/CC, FeCoNiCuN/CC, FeCoNiMnN/CC, FeCoNiCuMnN/CC-500 and FeCoNiCuMnN/CC-300.