

## Supporting Information

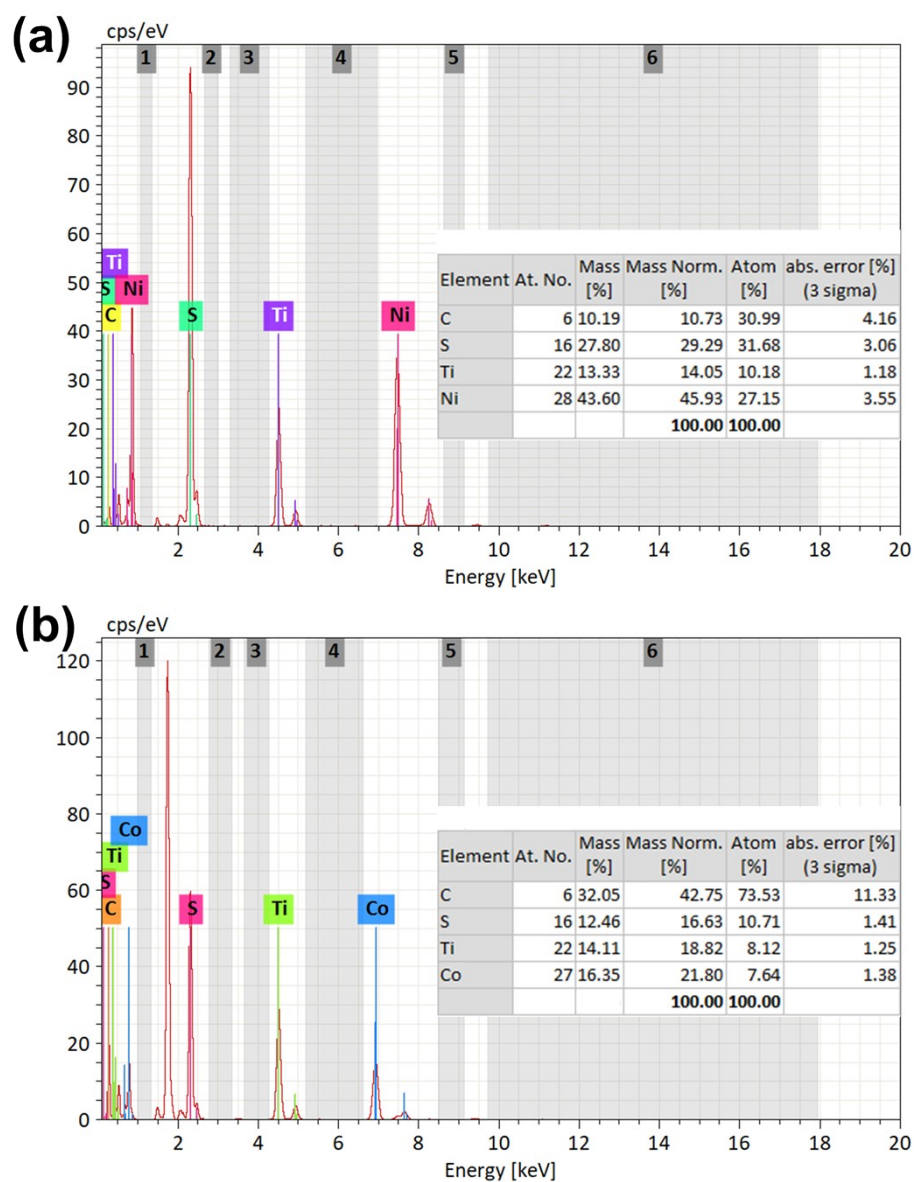
### **MXene composite with Ni/Co sulfide for enhanced hydrogen evolution reaction**

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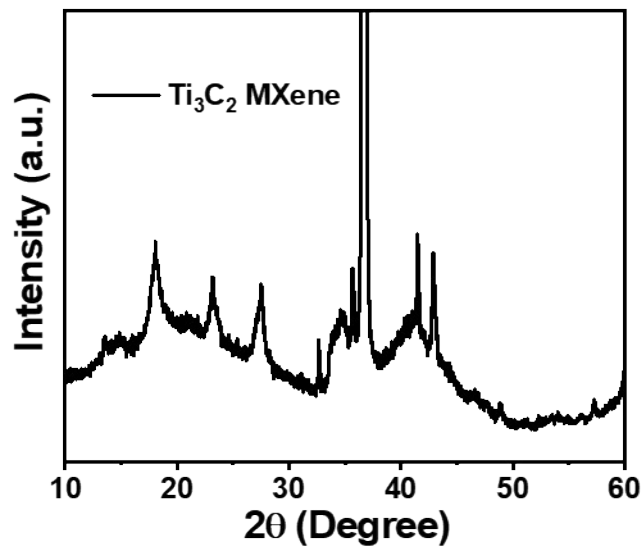
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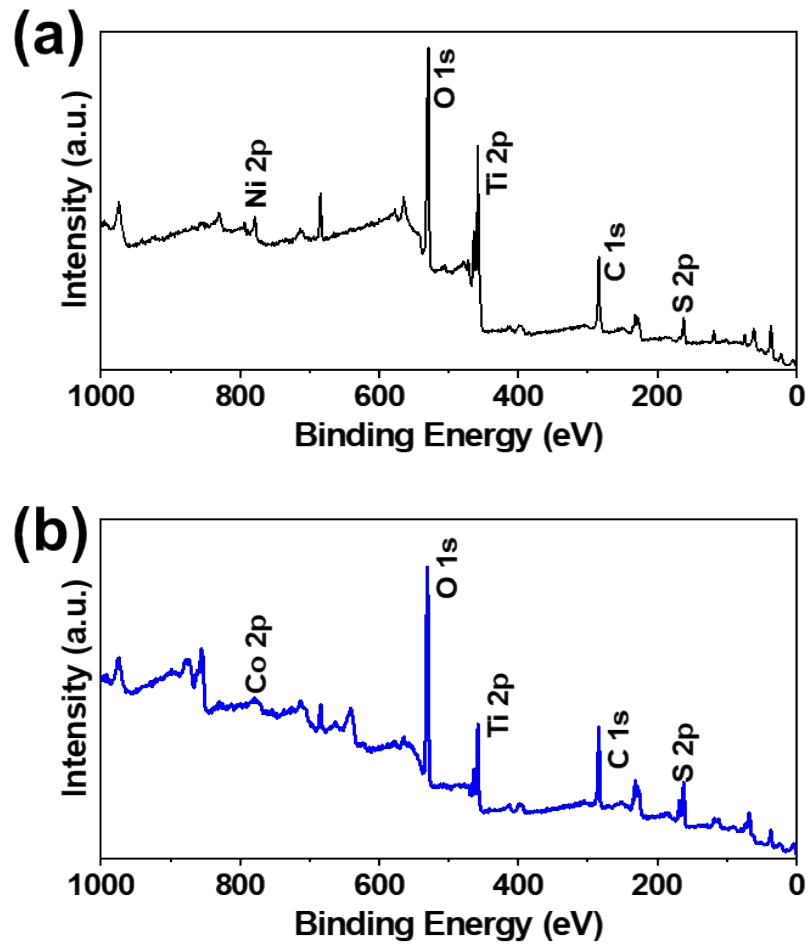
<sup>†</sup> These authors equally contributed to this work.



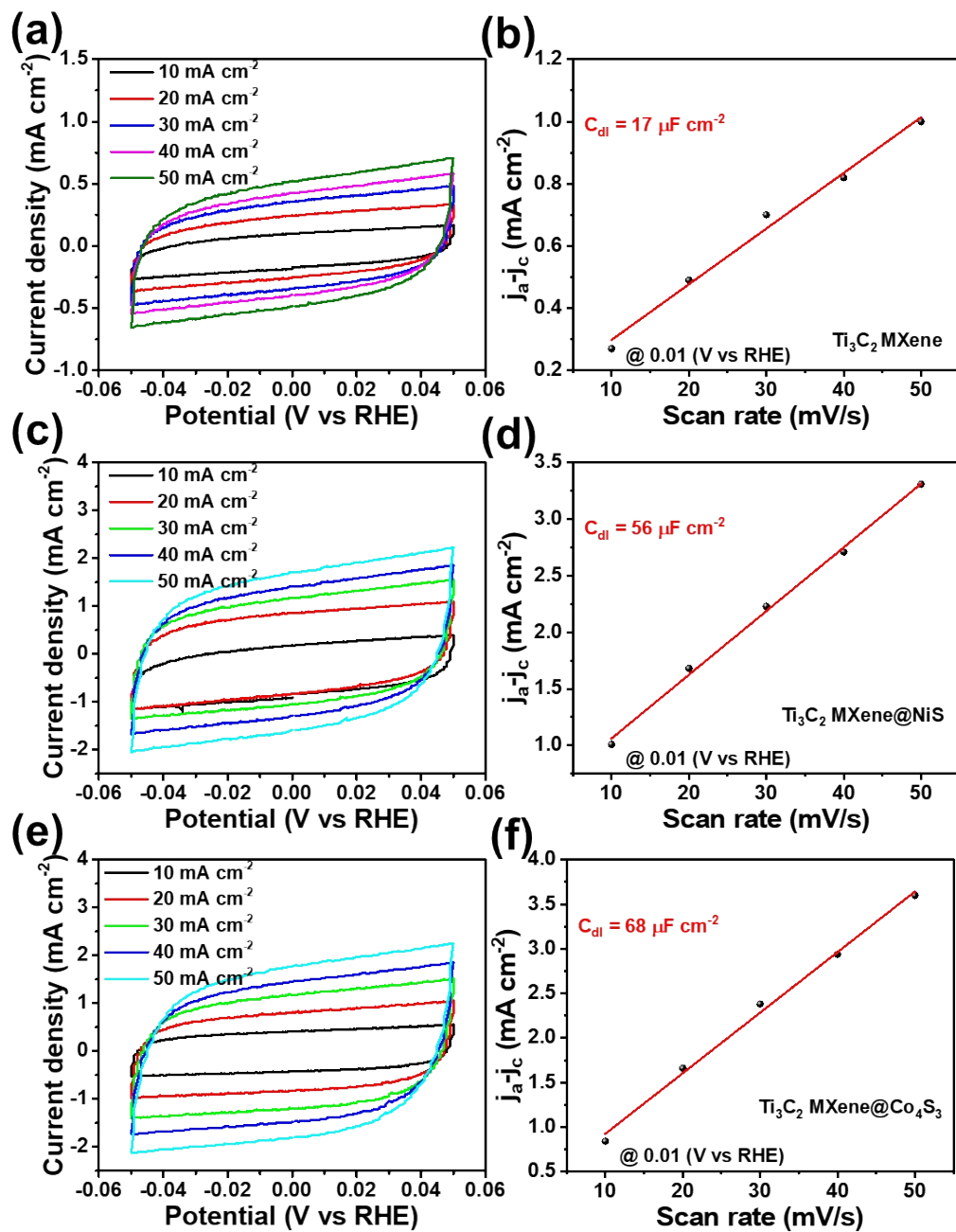
**Fig. S1.** EDS spectra of the (a)  $\text{Ti}_3\text{C}_2@\text{NiS}$  and (b)  $\text{Ti}_3\text{C}_2@\text{Co}_4\text{S}_3$  materials.



**Fig. S2.** XRD pattern of the  $\text{Ti}_3\text{C}_2$  Mxene material.



**Fig. S3.** XPS survey scan spectra of the (a)  $\text{Ti}_3\text{C}_2$  Mxene@NiS and (b)  $\text{Ti}_3\text{C}_2$  Mxene@ $\text{Co}_3\text{S}_4$  materials.



**Fig. S4.** CV curves measured in the non-faradaic region and corresponding double-layer capacitance data of the (a,b)  $Ti_3C_2$  MXene, (c,d)  $Ti_3C_2$  MXene@NiS, and (e,f)  $Ti_3C_2$  MXene@ $Co_4S_3$  materials.

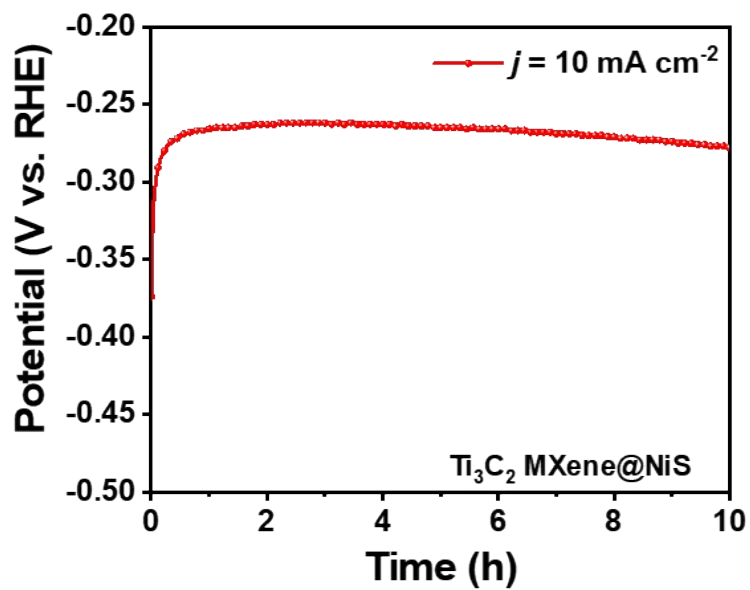
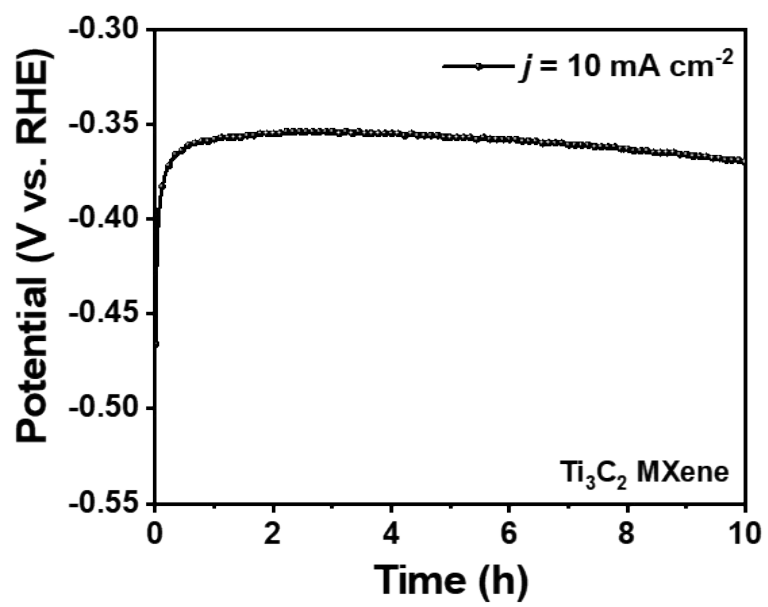


Fig. S5. Long-term stability test result for the  $\text{Ti}_3\text{C}_2 \text{ MXene@NiS}$  catalyst.



**Fig. S6.** Long-term stability test result for the  $\text{Ti}_3\text{C}_2$  MXene catalyst.