Supporting Information

Plant polyphenols involved coordination assemblies derived $Mo_3Co_3C/Mo_2C/Co@NC$ with phase regulation and interface engineering for hydrogen evolution reaction electrocatalysis

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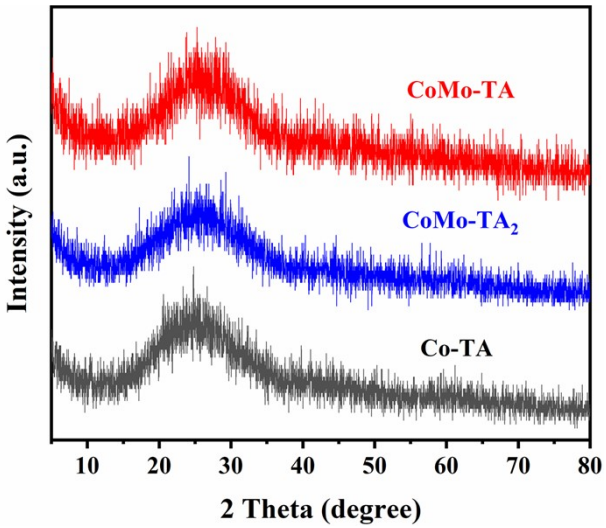

Fig. S1 XRD patterns of Co-TA，CoMo-TA and CoMo-TA_2.

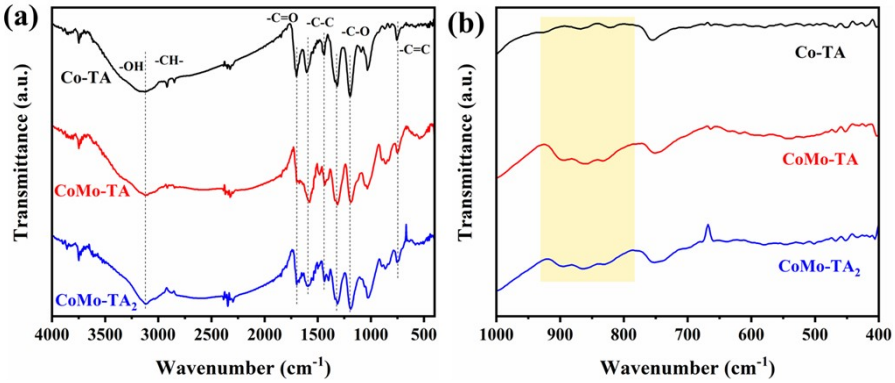

Fig. S2 FTIR images of Co-TA，CoMo-TA and CoMo-TA_2.

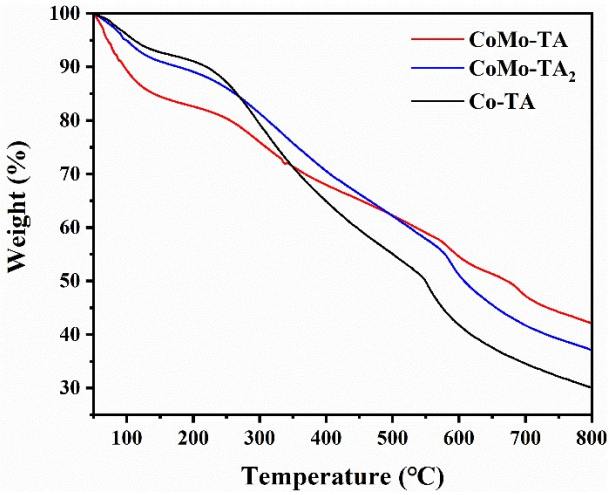

Fig. S3 TGA images of Co-TA，CoMo-TA and CoMo-TA_2.

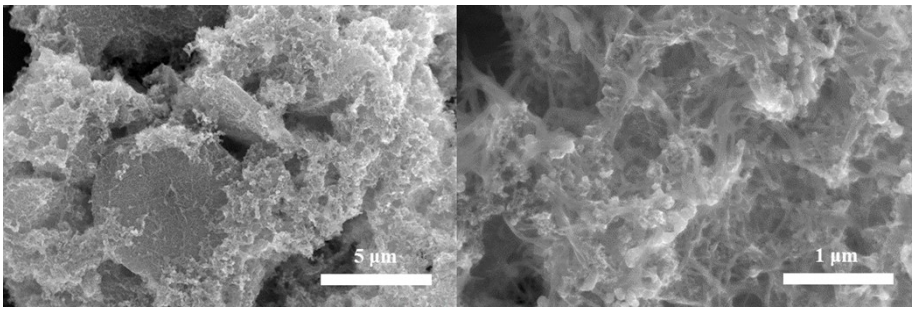

Fig. S4 SEM images of Mo_3Co_3C/Co@NC.

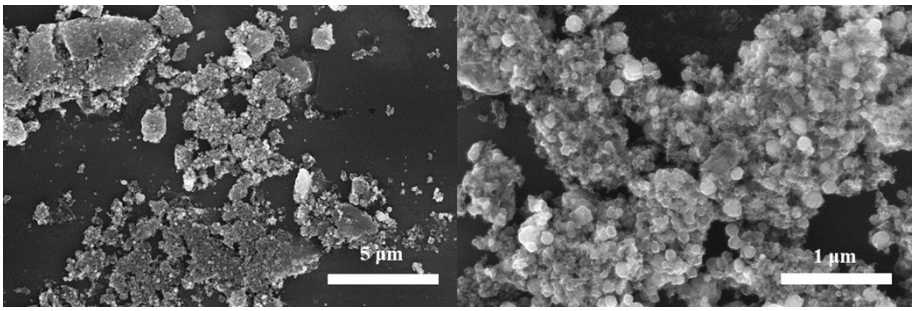

Fig. S5 SEM images of Co@NC.

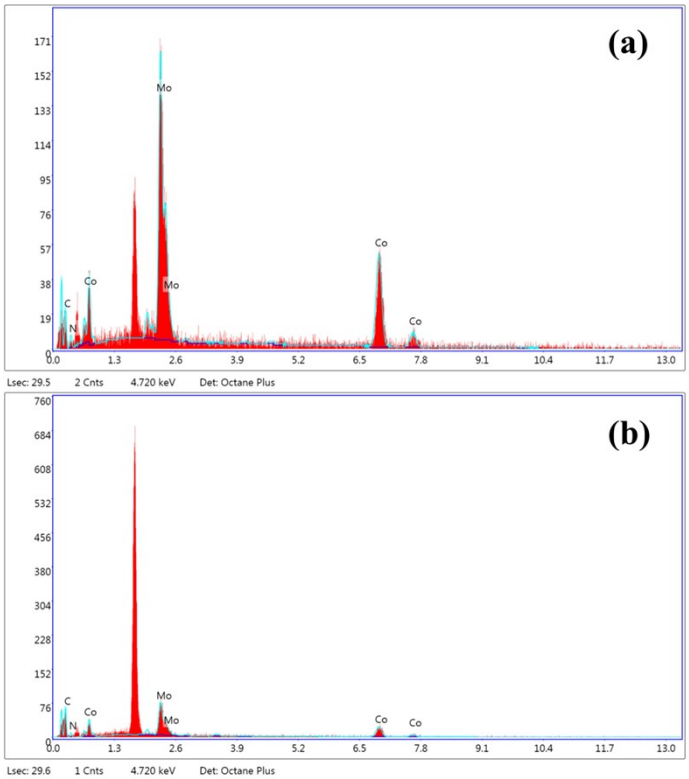

Fig. S6 EDS images of Mo_3Co_3C/Mo_2C/Co@NC (a) and Mo_3Co_3C/Co@NC (b).

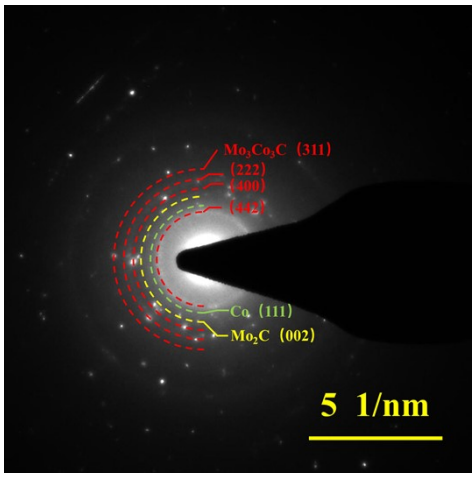

Fig. S7 SAED image of $Mo_3Co_3C/Mo_2C/Co@NC$.

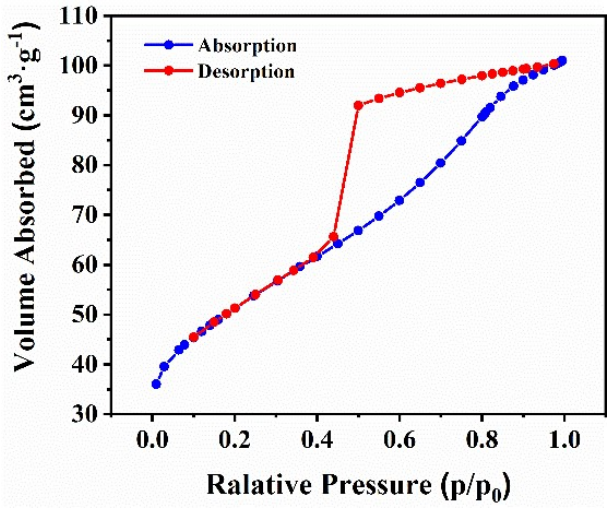

Fig. S8 Adsorption-desorption isotherm of $Mo_3Co_3C/Mo_2C/Co@NC$.

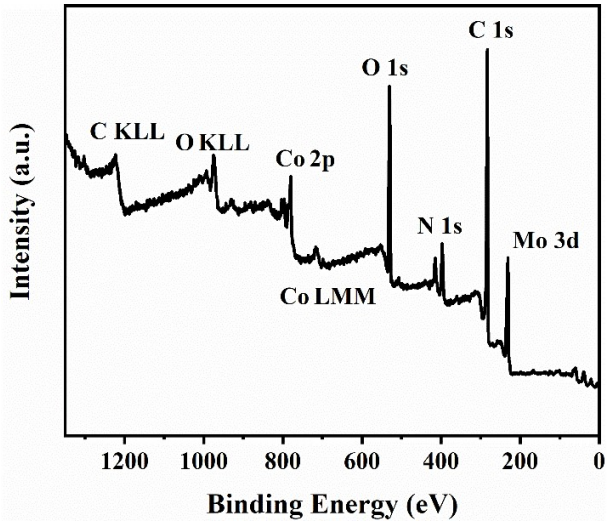

Fig. S9 Full XPS spectrum of $Mo_3Co_3C/Mo_2C/Co@NC$.

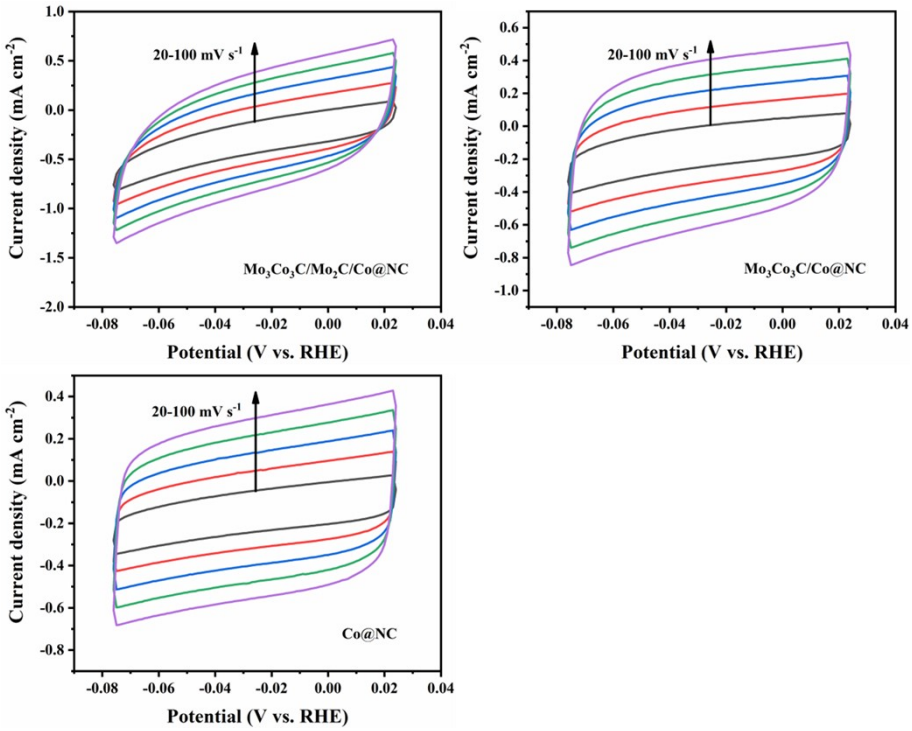

Fig. S10 The cyclic voltammograms of $Mo_3Co_3C/Mo_2C/Co@NC$, $Mo_3Co_3/Co@NC$ and Co@NC.

Table S1. The element content of $Mo_3Co_3C/Mo_2C/Co@NC$ and $Mo_3Co_3C/Co@NC$ (Atom%).

	Co	Mo	C	N
$Mo_3Co_3C/Mo_2C/Co@NC$	18.61	12.93	46.05	22.41
$Mo_3Co_3C/Co@NC$	5.91	4.19	63.66	26.24

Table S2. Comparison of the HER performance for $Mo_3Co_3C/Mo_2C/Co@NC$ catalyst with other electrocatalysts in alkaline solution.

Catalyst	Loading mass (mg cm^{-2})	η_{10} [mV]	Tafel slope [mV dec^{-1}]	Ref
$Mo_3Co_3C/Mo_2C/Co@NC$	0.326	211	96	This work
Mo_2C/NCS-6	0.0192	142	56.1	1
AMP 800/12(Mo_2C)	0.461	197.9	69.2	2
$Co_2P/Mo_3Co_3C/Mo_2C@C$	0.8	154	65	3
$NiMo_2C@C$	0.15	181	84	4
C-MoS_2	0.343	200	53	5
2%Co-Mo_2C	0.272	243	89	6
$Co_6Mo_6C_2/Co_2Mo_3O_8@NC$	0.8	220	104.7	7
Mo_2C/N-rGO	0.25	142	101.78	8

Reference

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