

Supporting Information for

**Interconnected porous nanoflakes of CoMo_2S_4 as an efficient
bifunctional electrocatalyst for overall water electrolysis**

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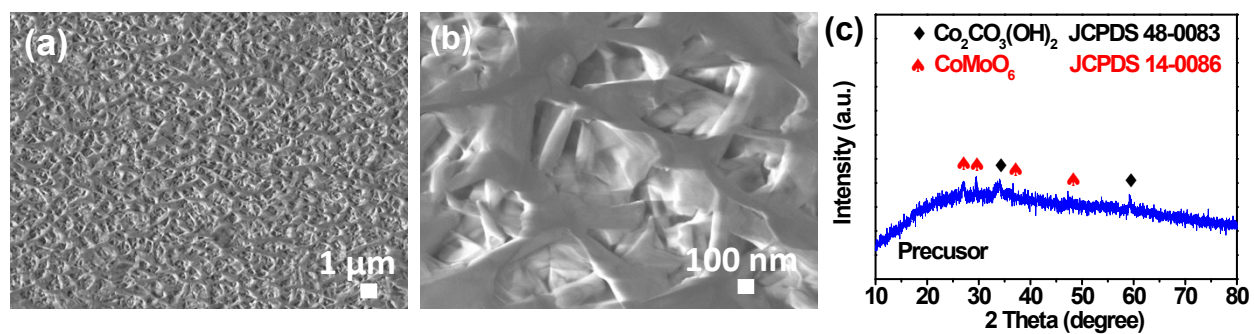


Figure S1 (a,b) SEM images and (c) XRD pattern of the powder precursor after the first hydrothermal method.

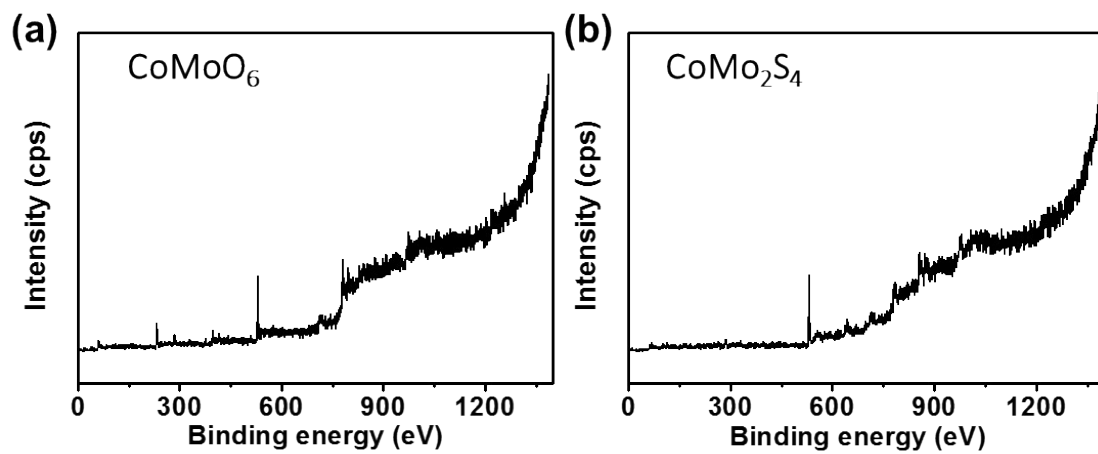


Figure S2 XPS full survey profiles of (a) CoMoO_6 and (b) CoMo_2S_4 samples.

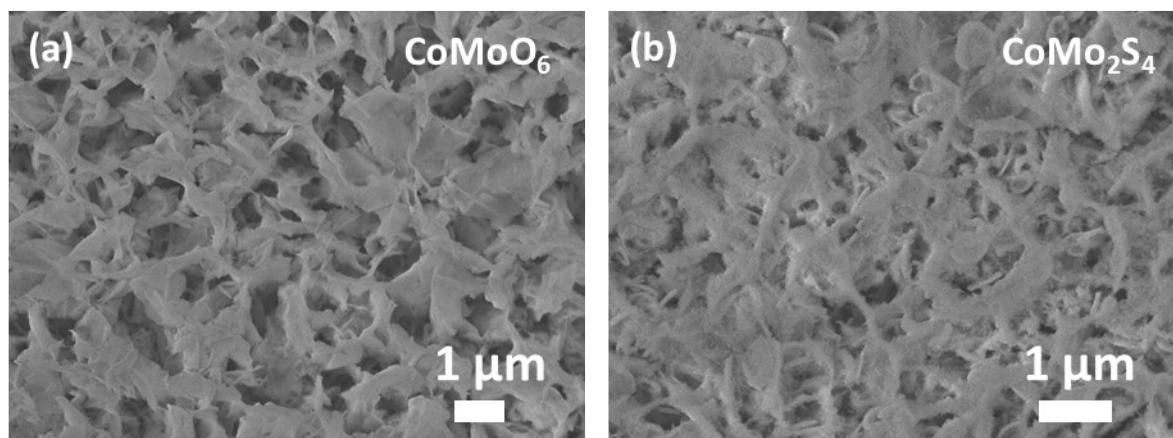


Figure S3 SEM images of (a) tested CoMoO_6 electrode and (b) tested CoMo_2S_4 electrode.

Table S1 Comparison of the electrochemical activities of as-prepared catalysts and reported transition metal-based electrocatalysts for overall water splitting

Catalyst	V _{total} @10mA/cm ²	Durability	Substrate	Electrolyte
CoMo ₂ S ₄ // CoMo ₂ S ₄ (our work)	1.65 V	10 h	Ni foam	1.0 M KOH
(Ni,Co)S ₂ // (Ni,Co)S ₂ (Ref S1)	1.71 V	-	Carbon cloth	0.1 M KOH
Co ₂ B // Co ₂ B (Ref S2)	1.81 V	-	Powder	3.0 M KOH
Co-S // Co-S (Ref S3)	1.74 V	2 h	Carbon paper	1.0 M KOH
NiCo ₂ S ₄ // NiCo ₂ S ₄ (Ref S4)	1.68 V	10 h	Carbon cloth	1.0 M KOH
NiCo ₂ O ₄ // NiCo ₂ O ₄ (Ref S4)	1.98 V	-	Carbon cloth	1.0 M KOH
CoNi(OH) _x // NiN _x (Ref S5)	1.65 V	-	Cu foil	1.0 M KOH
Co ₉ S ₈ @MnS // Co ₉ S ₈ @MnS (Ref S6)	1.47 V	10 h	Ni foam	1.0 M KOH
CoMoV LDH // CoMoV LDH (Ref S7)	1.61 V	20 h	Ni foam	1.0 M KOH
Co ₃ O ₄ @CuCAT // Co ₃ O ₄ @CuCAT (Ref S8)	1.57 V	50 h	Carbon cloth	1.0 M KOH
CoS // CoS (Ref S9)	1.72 V	15 h	Carbon cloth	1.0 M KOH

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