

Interconnected $\text{MoS}_2/\text{FeCo}_2\text{S}_4$ nanosheet array bifunctional electrocatalysts grown on carbon cloth for efficient overall water splitting

Jiaying Shen ^a, Jilai Zhang ^a, Guannan Zhang ^a, Wenhua Li ^a, Meng Zheng ^a, Fengye Guo ^a,

Qianqiao Chen ^{a*}

^a: Nanjing University of Science and Technology, Nanjing, People's Republic of China, 210094

* Corresponding author

E-mail: cq@njust.edu.cn (Qianqiao Chen)

Supporting information

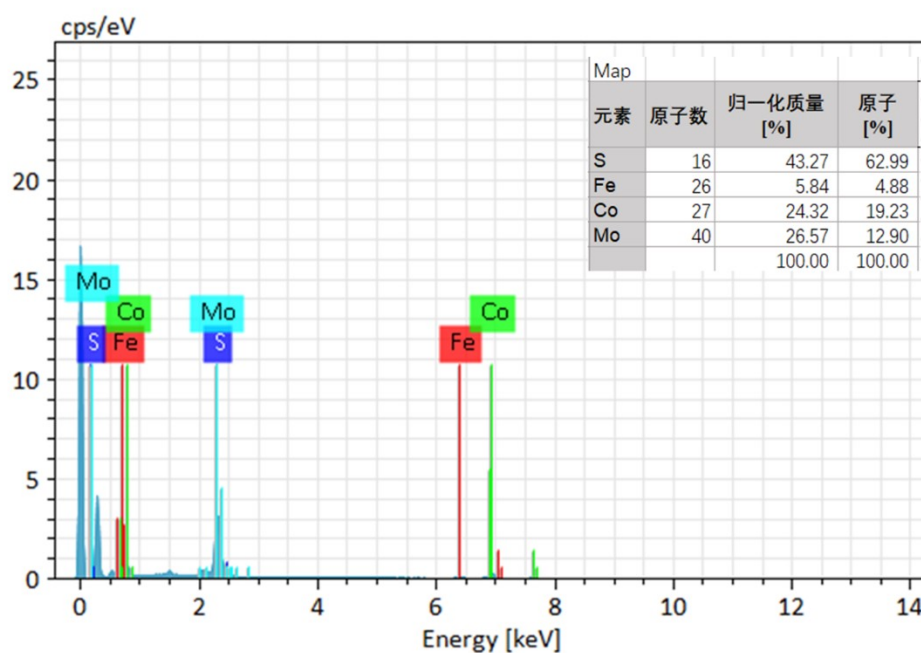


Figure. S1 EDX spectrum and the element analysis table (inset) of $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$.

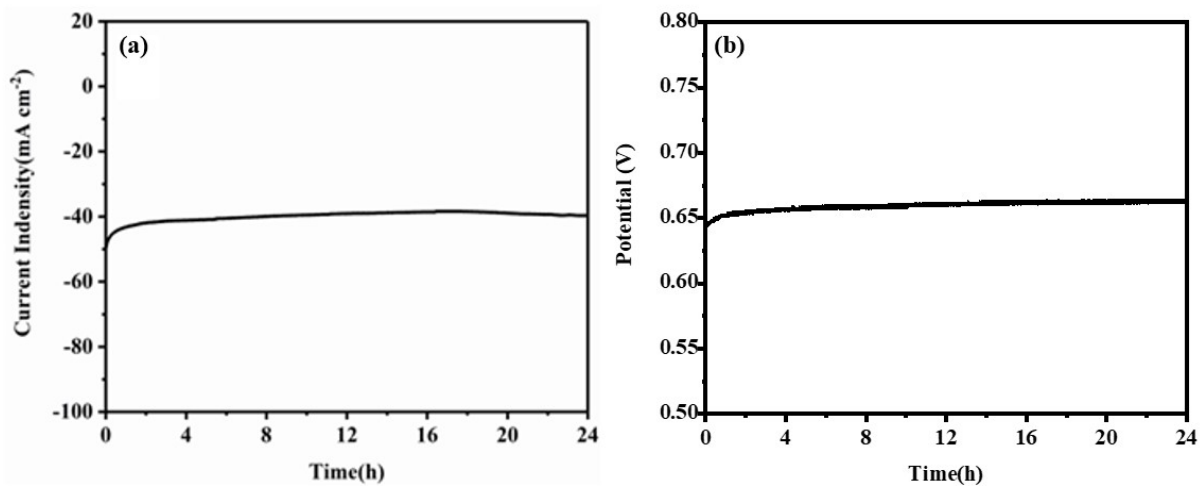


Figure. S2 (a) The chronoamperometry test of $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$ at a constant potential of 228 mV; (b) the chronopotentiometry test of $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$ at a constant current density of 50 mA cm^{-2} .

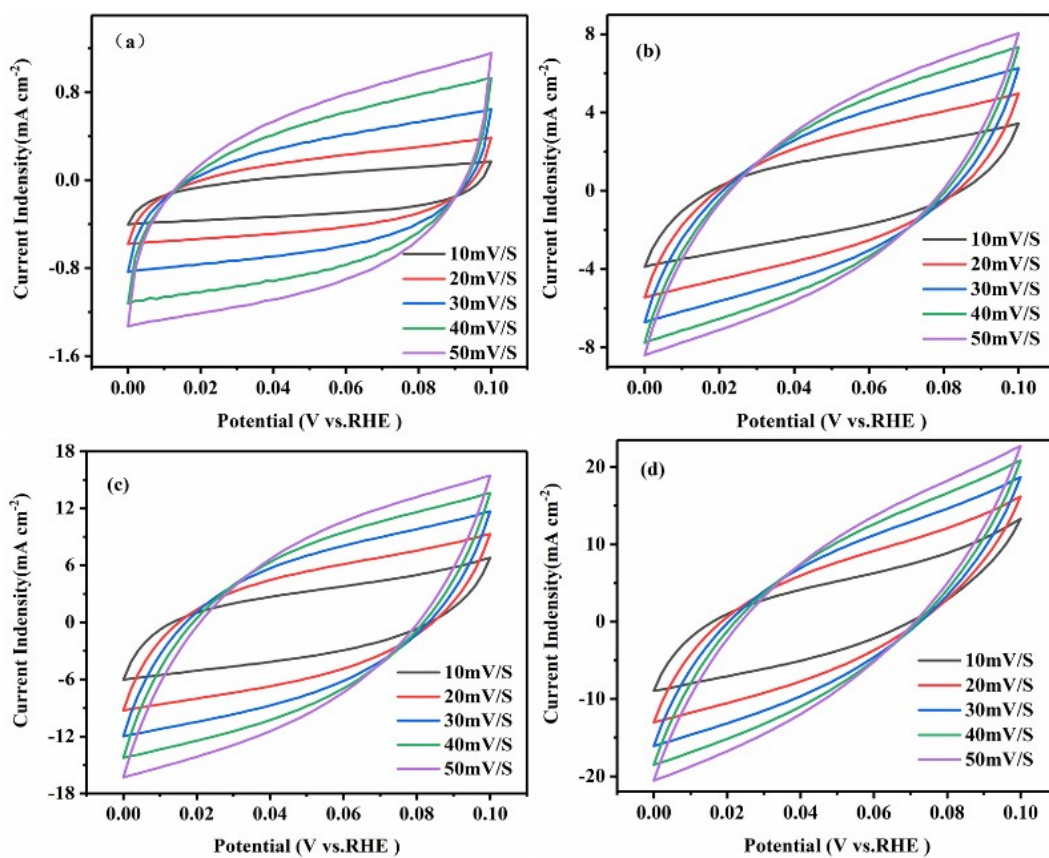


Figure S3. CV curves of (a) FeCoMo-LDH/CC; (b) $\text{FeCo}_2\text{S}_4/\text{CC}$; (c) MoS_2/CC ; (d) $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$ in 1 M KOH.

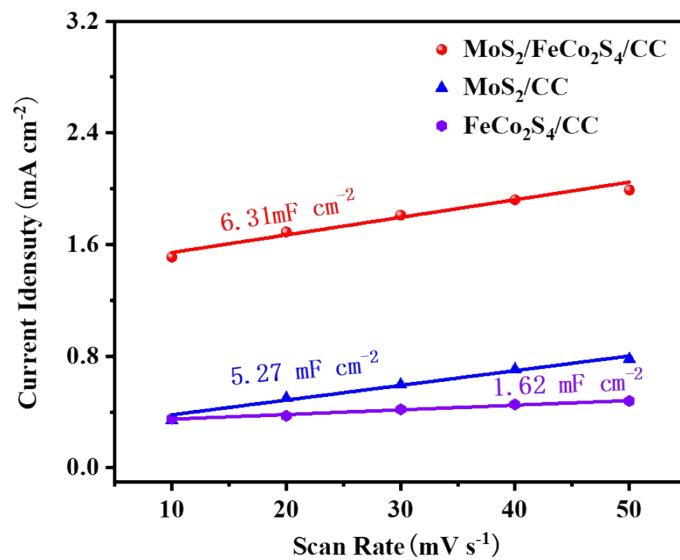


Figure. S4 C_{dl} of the MoS₂/FeCo₂S₄/CC, MoS₂/CC and FeCo₂S₄/CC.

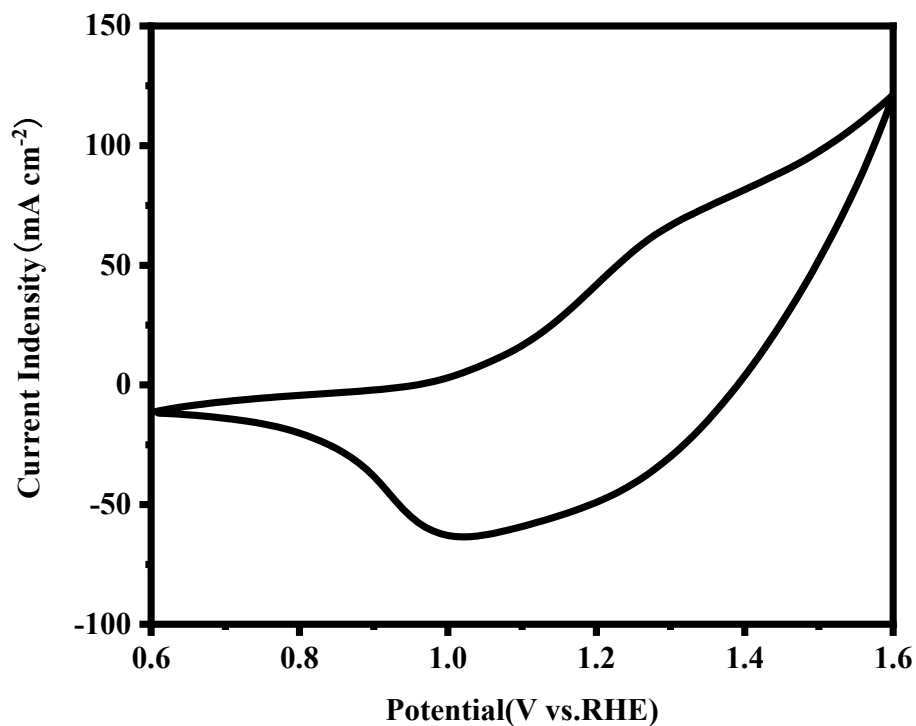


Figure. S5 Cyclic voltammogram of the MoS₂/FeCo₂S₄/CC in 1.0 M KOH solution at scan rate of 100 mV s⁻¹ in the potential range 0.6 to 1.6 V

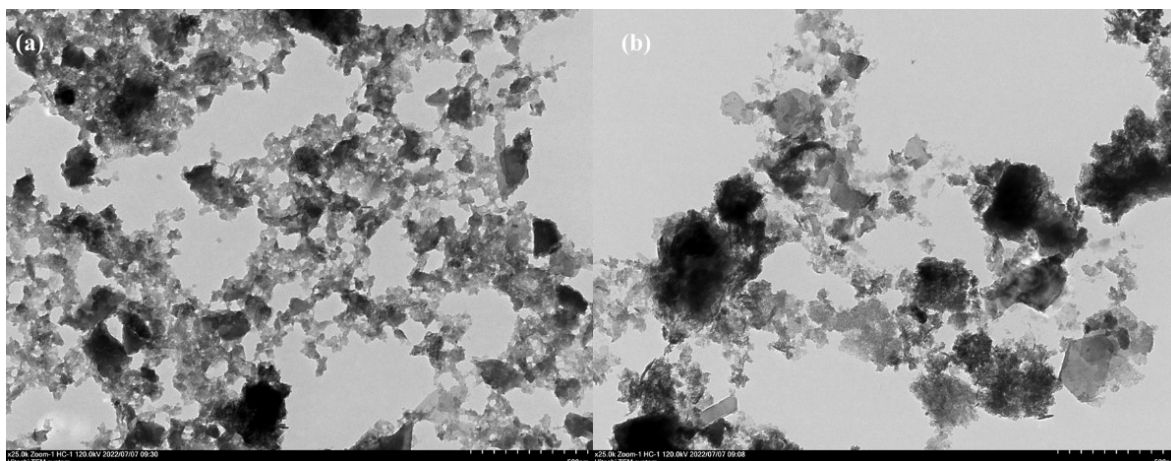


Figure. S6 TEM of the (a)fresh and (b) recovered $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$

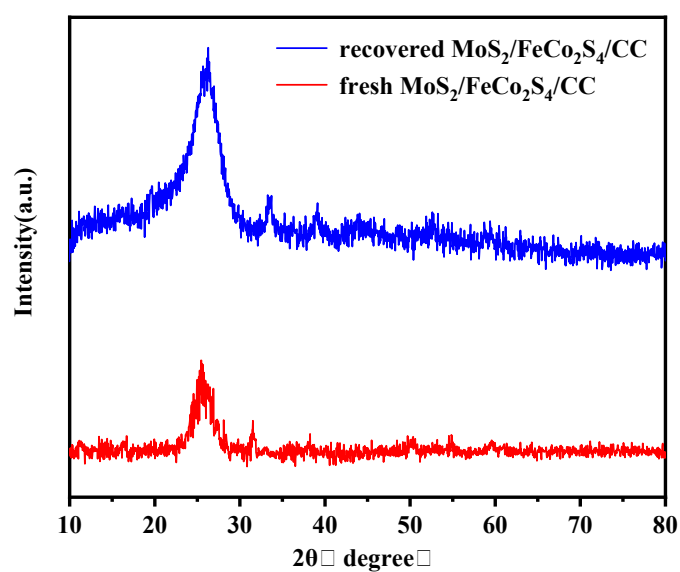


Figure. S7 XRD pattern of recovered $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$.

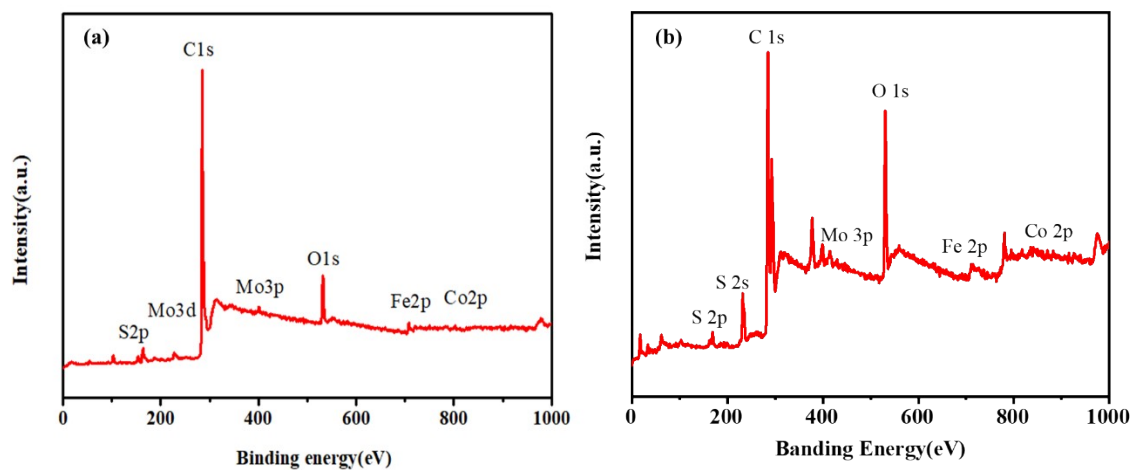


Figure. S8 XPS full spectrum of (a)fresh and(b)recovered $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$

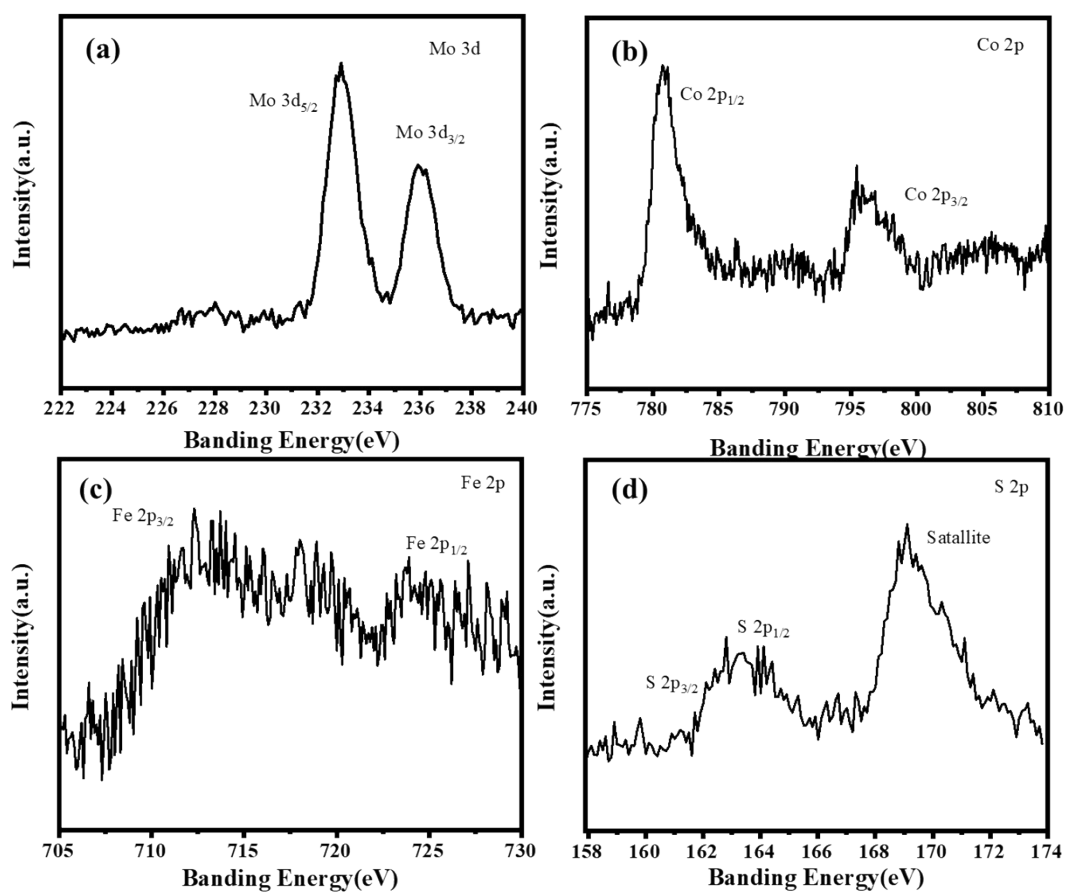


Figure. S9 XPS spectra of (a) Mo 3d, (b) Co 2p, (c) Fe 2p, and (d) S 2p of recovered $\text{MoS}_2/\text{FeCo}_2\text{S}_4/\text{CC}$.