

Supporting information

Photoelectrocatalytic Hydrogen Evolution Reaction Stimulated by Surface Plasmon Resonance Effect of Copper and Silver Surrounded with MoS₂

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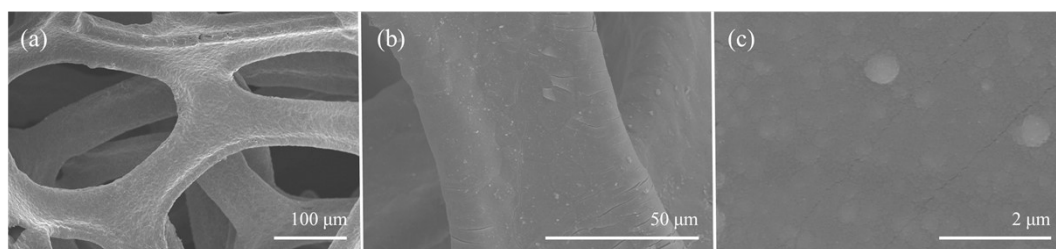


Figure S1. SEM images of (a) Cu foam, (b) MoS₂@Cu foam, (c) corresponding higher-magnification of MoS₂@Cu foam.

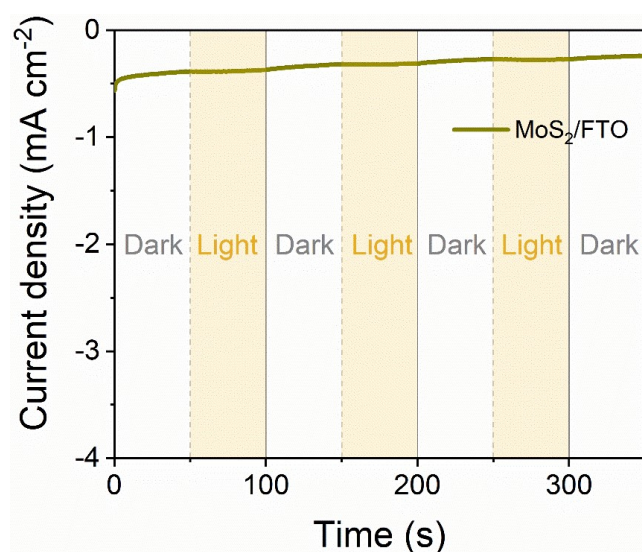


Figure S2. On-off J-t curves of MoS₂/FTO. The potential bias is -200mV.

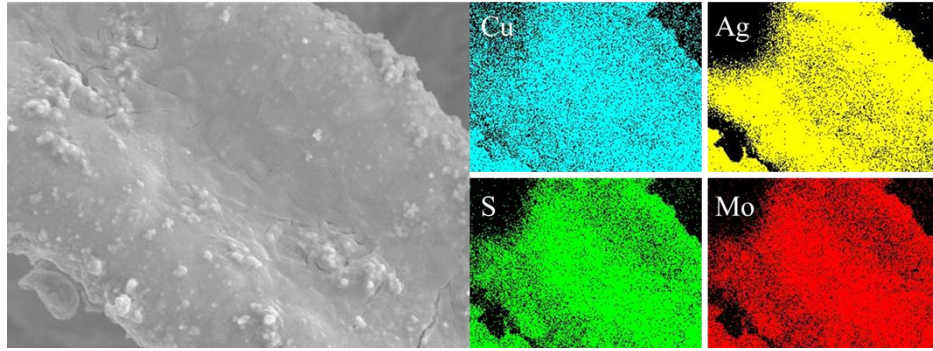


Figure S3. EDS mapping images of $\text{MoS}_2@\text{Ag-Cu}$ foam after long-term cyclic testing.

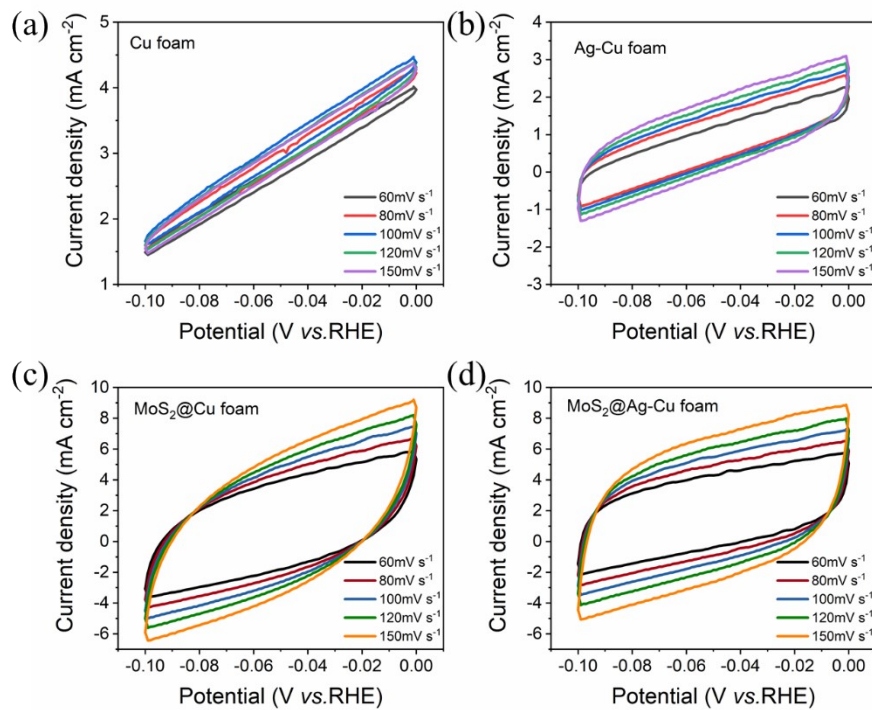


Figure S4. Electrochemical double-layer capacitance (EDLC) measurements of (a) Cu foam, (b) Ag-Cu foam, (c) $\text{MoS}_2@\text{Cu}$ foam and (d) $\text{MoS}_2@\text{Ag-Cu}$ foam, respectively. The current densities at 0.05 V vs. RHE and the corresponding scanning rates were used to calculate the EDLC value.

Table S1 The values of photo response current (ΔJ), overpotentials (η), Tafel, ECSA for Cu foam, Ag-Cu foam, MoS₂@ Cu foam, and MoS₂@Ag-Cu foam.

Samples Values	Cu foam	Ag-Cu foam	MoS ₂ @ Cu foam	MoS ₂ @Ag-Cu foam
ΔJ (mA cm ² , Light/Dark) · Fig.4b	0.091	0.143	0.137	0.262
η (vs. 10mA cm ⁻² , V) · Fig.6a	0.370	0.278	0.223	0.218
η (vs. 50mA cm ⁻² , V) · Fig.6a	0.468	0.353	0.270	0.253
Tafel (mV dec ⁻¹) · Fig.6b	153	115	68.5	54.2
ECSA (mF) · Fig.6c	1.8	11.2	38.5	53.2