Electronic Supplementary Material (ESI) for RSC Advances.

One-pot hydrothermal synthesis and selective etching method of porous $MoSe_2$ sand rose-like structure for electrocatalytic hydrogen evolution reaction

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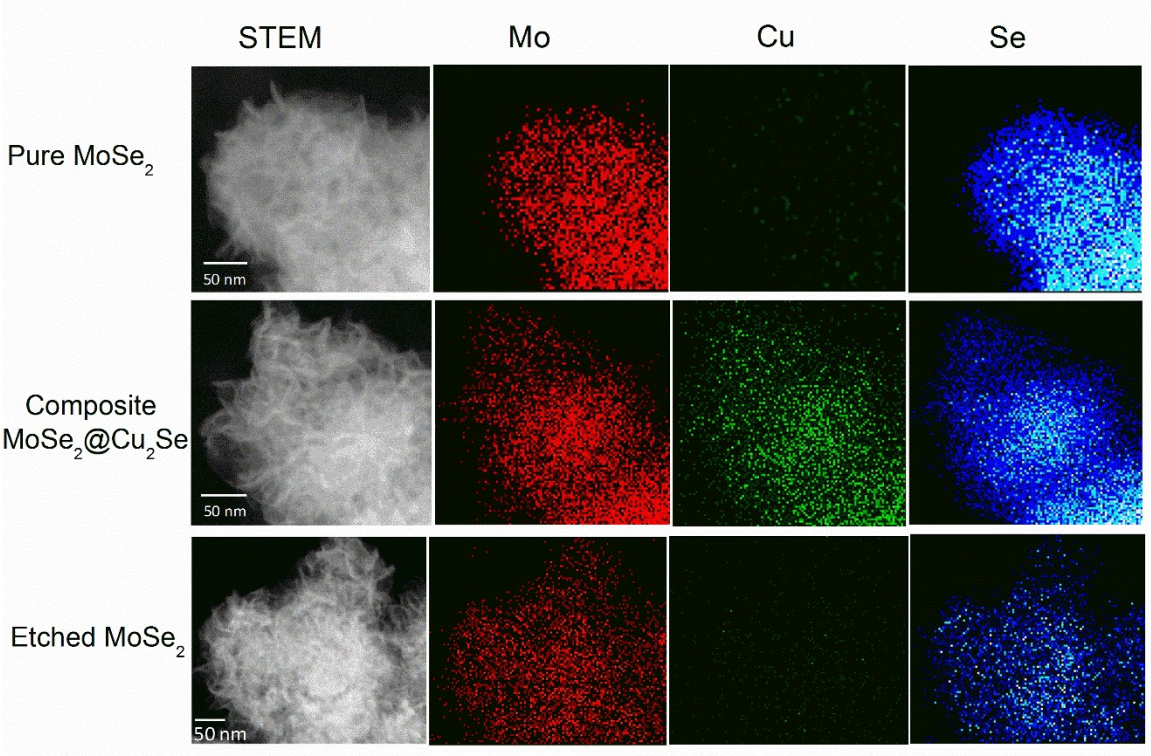
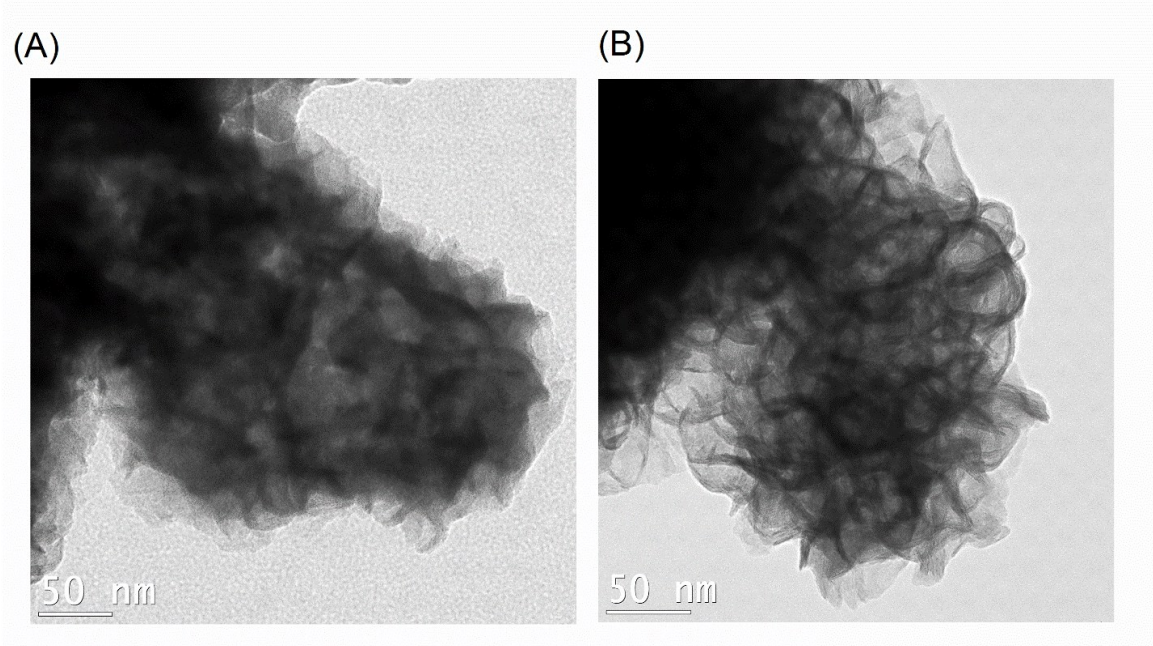
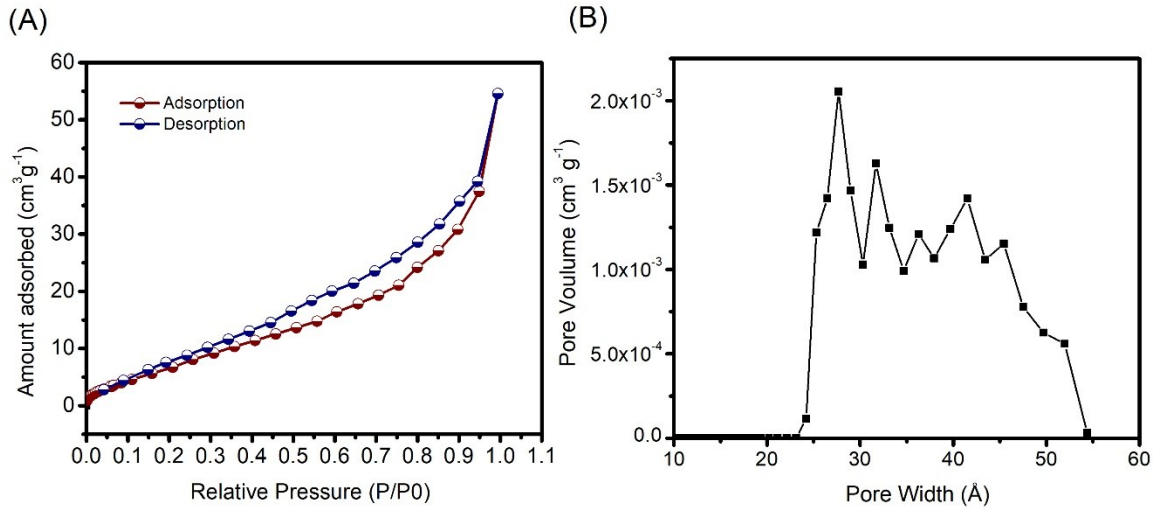


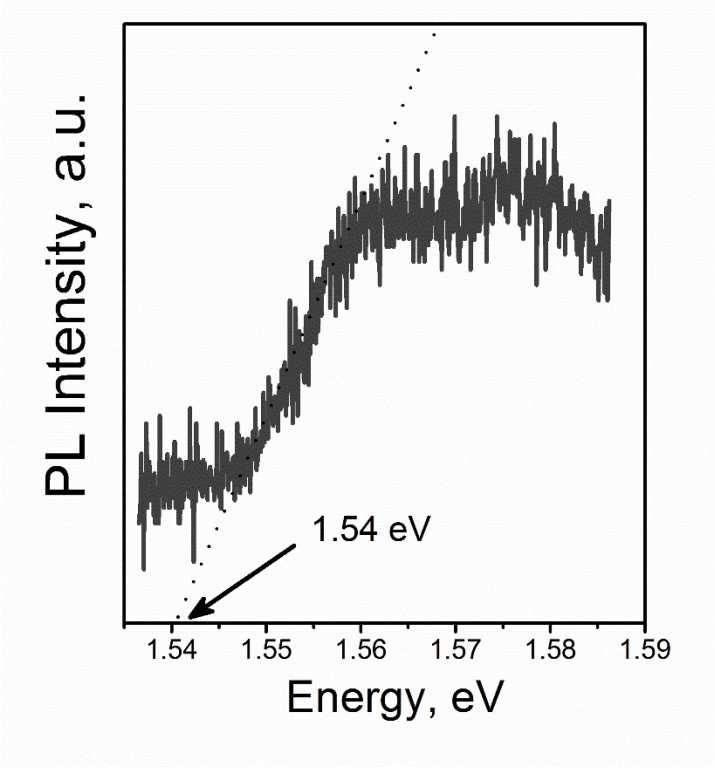
Supplementary data figure S1 Scanning transmission electron microscope (STEM) images and elemental mapping images of Mo, Cu, and Se components of pure $MoSe_2$, composite $MoSe_2@Cu_2Se$ and porous $MoSe_2$ after etching process.



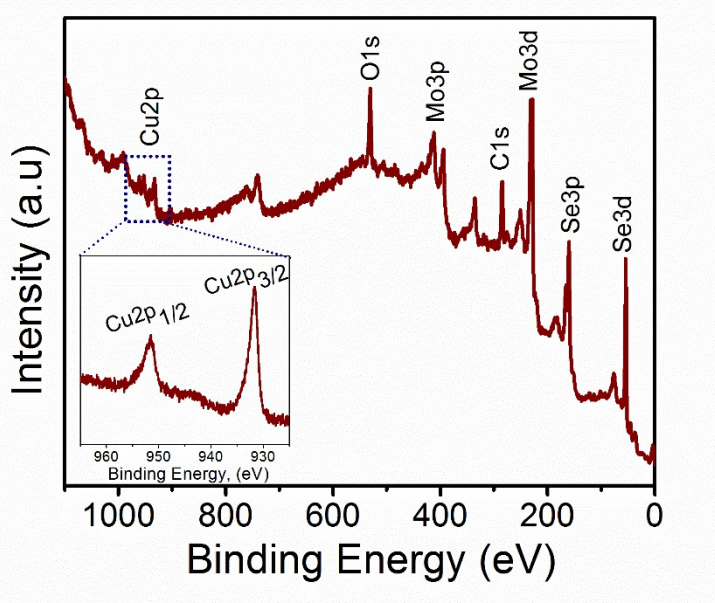
Supplementary data figure S2 TEM images of (A) pure $MoSe_2$ and (B) porous $MoSe_2$ after etching process.



Supplementary data figure S3 (A) Nitrogen adsorption–desorption isotherm at 77 K and (B) the corresponding density functional theory (DFT) pore-size distribution curve of the porous $MoSe_2$.



Supplementary data figure S4 Photoluminescence spectrum of the porous $MoSe_2$ microspheres showing the presence of excitonic peak at 1.54 eV.



Supplementary data figure S5 XPS survey spectrum of composite $MoSe_2$@Cu_2Se.