

Supporting information

Designing MoS₂ nanocatalysts with high exposure of active edge sites for anthracene hydrogenation reaction

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Figure captions:

Table S1 The intensities of (100) and (110) diffraction peaks ($I_{(100)}$ and $I_{(110)}$) in the XRD patterns and specific surface areas (SSA) of synthesized and commercial MoS_2 catalysts

Fig. S1 TG curves of MoS_2 samples.

Fig. S2 EDX spectra of the indicated selected area in (a) MoS_2 -DW, and (b) MoS_2 -EG.

Fig. S3 XPS spectra of MoS_2 -DW sample: (a) N 1s, (b) Mo 3d, (c) S 2p, and (d) O1s.

Fig. S4 XPS spectra of MoS_2 -EG sample: (a) N 1s, (b) Mo 3d, (c) S 2p, and (d) O1s.

Table S1 The intensities of (100) and (110) diffraction peaks ($I_{(100)}$ and $I_{(110)}$) in the XRD patterns and specific surface areas (SSA) of synthesized and commercial MoS₂ catalysts

Catalyst	$I_{(100)}$	$I_{(110)}$	SSA(m²/g)	HP(%)	S_{AH8}(%)
MoS₂-com.	3055.3	1832.0	4.1	15.7	2.5
MoS₂-DW	253.3	153.7	23.0	43.0	56.8
MoS₂-EG	162.4	81.2	20.7	51.0	72.1
MoS₂-CN	870.4	465.3	8.1	45.1	58.2
MoS₂-CH	853.0	405.1	20.9	25.7	17.0

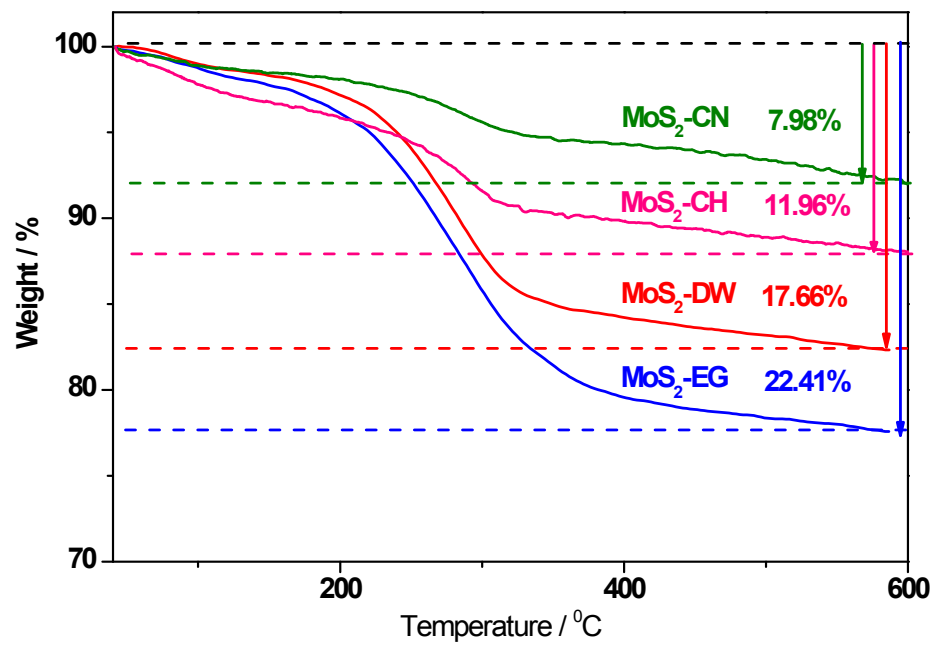


Fig. S1 TG curves of MoS₂ samples.

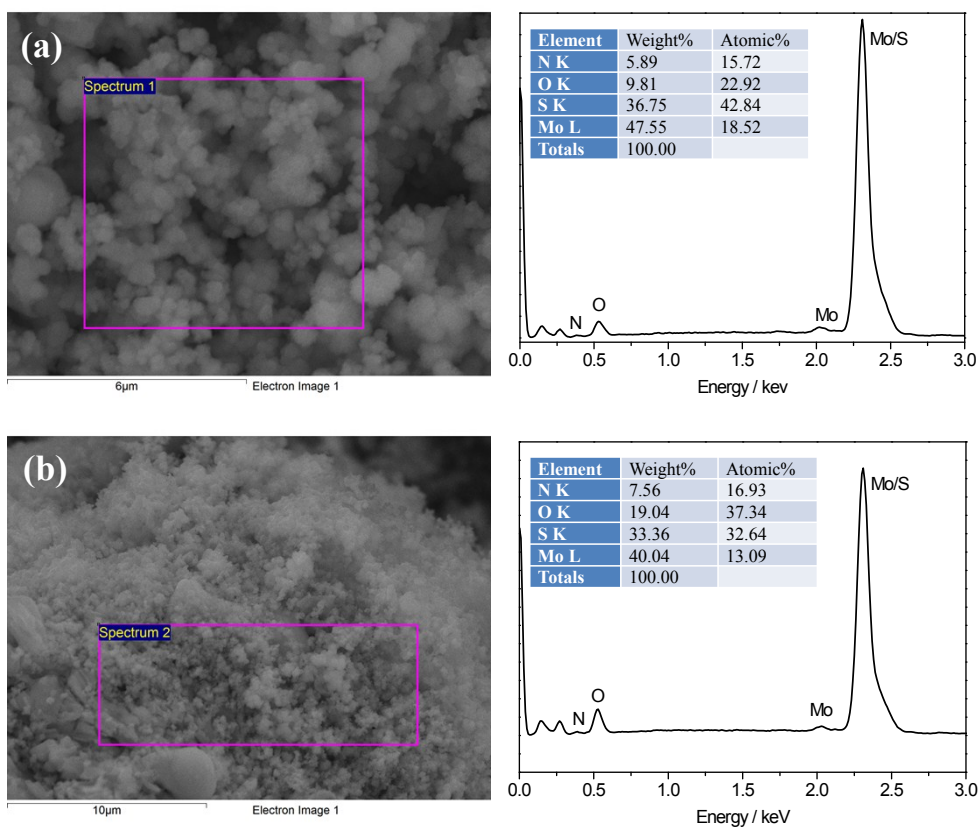


Fig. S2 EDX spectra of the indicated selected area in (a) MoS₂-DW, and (b) MoS₂-EG.

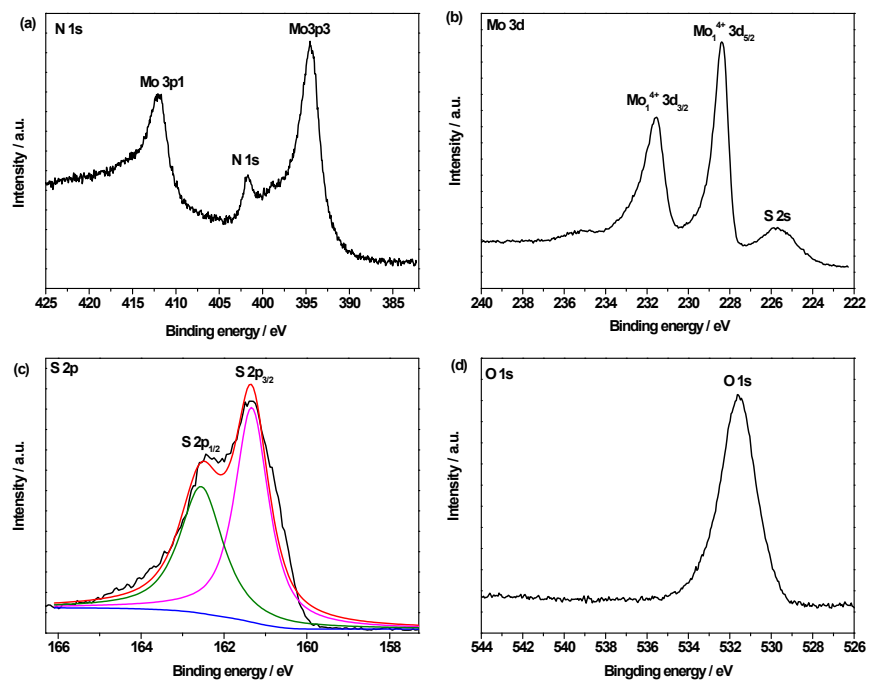


Fig. S3 XPS spectra of MoS₂-DW sample: (a) N 1s, (b) Mo 3d, (c) S 2p, and (d) O1s.

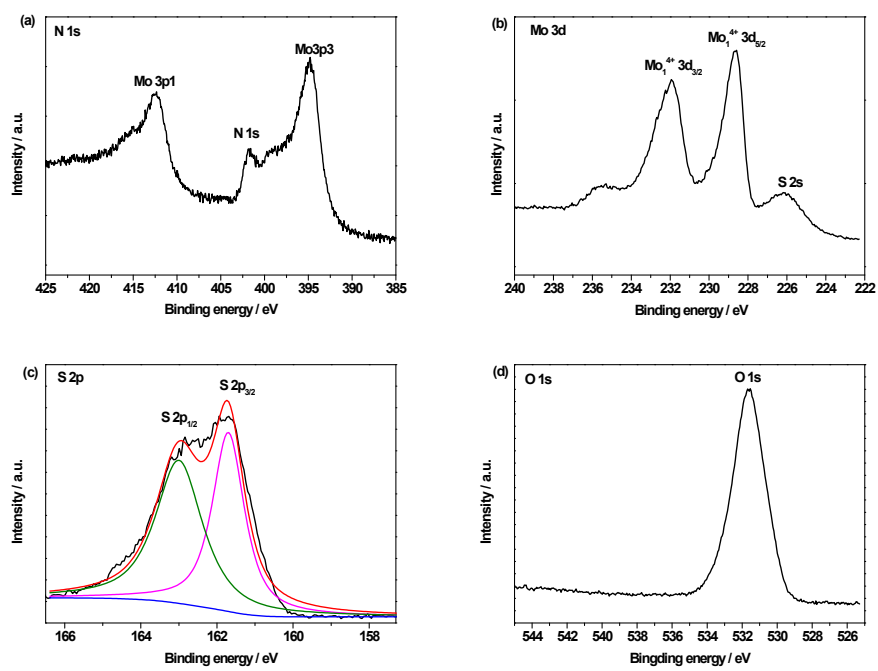


Fig. S4 XPS spectra of MoS₂-EG sample: (a) N 1s, (b) Mo 3d, (c) S 2p, and (d) O 1s.