

Supporting Information

for

Toward the use of CVD-grown MoS₂ nanosheets as field-emission source

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Additional experimental data

Table S1: Peak fitting analysis results of the Mo 3d, S 3p, and O 1s core-level high-resolution XPS spectra from Figure 2b,c (BE = binding energy and FWHM = full width at half maximum).

Phase	Core level Mo3d/ S1s	Peak BE	FWHM	Core level S2p/O1s	Peak BE	FWHM
MoS ₂	Mo3d _{5/2}	228.9	0.81	S2p _{3/2}	161.8	0.73
	Mo3d _{3/2}	232	0.91	S2p _{1/2}	163	0.73
MoS ₂	S2s	226.2	2.02			
MoO ₂	Mo3d _{5/2}	232.7	0.68	O1s	530.3	1.36
	Mo3d _{3/2}	235.6	1.67			
-C-O				O1s	532.0	2.54

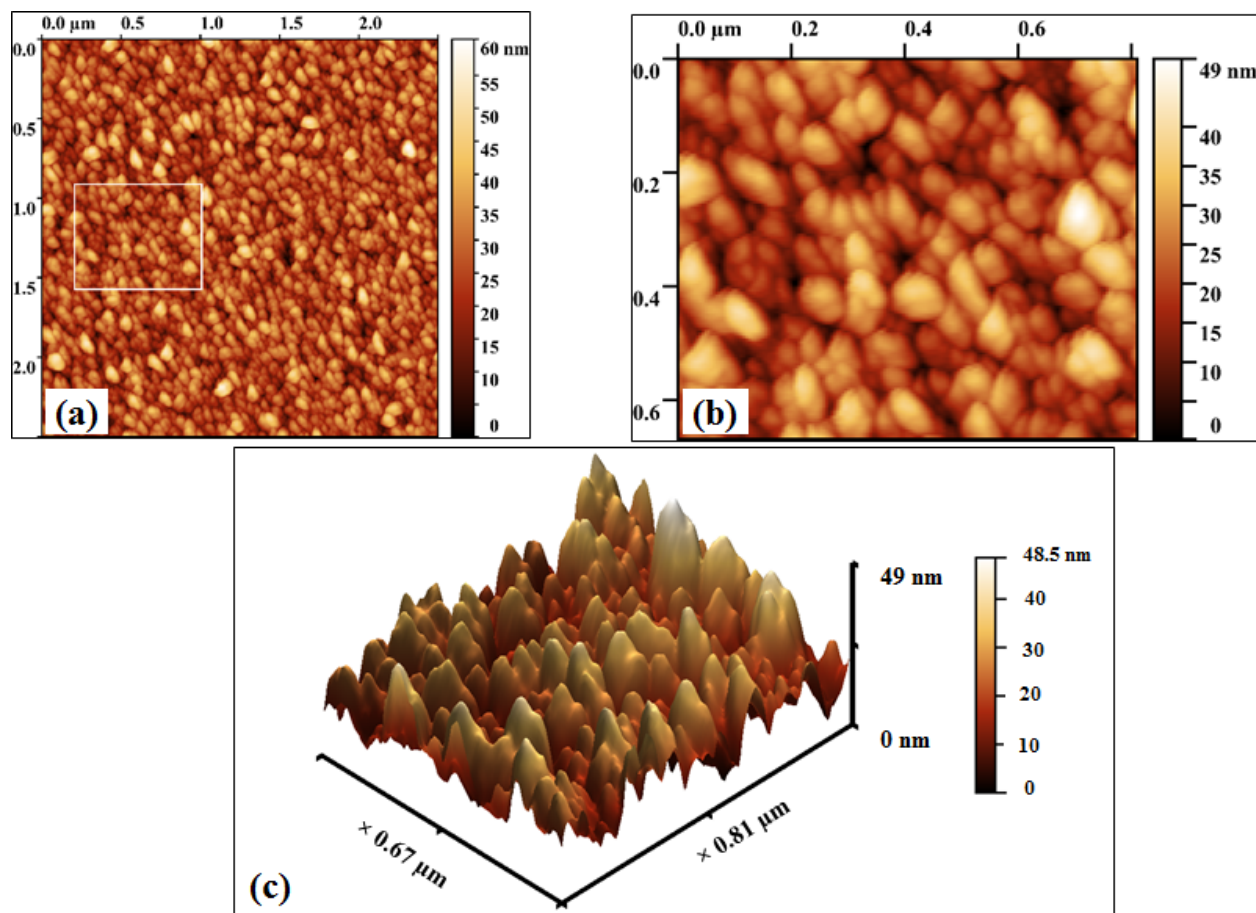


Figure S1: AFM resonant-mode mapping for MoS₂ sample grown by double sulfurization of a 50 nm Mo film at 850 °C on SiO₂/Si substrates: (a) Topographic view of a 2.5 × 2.5 μm² area and (b) zoom-in over the white square in panel (a); (c) 3D image of panel (b).

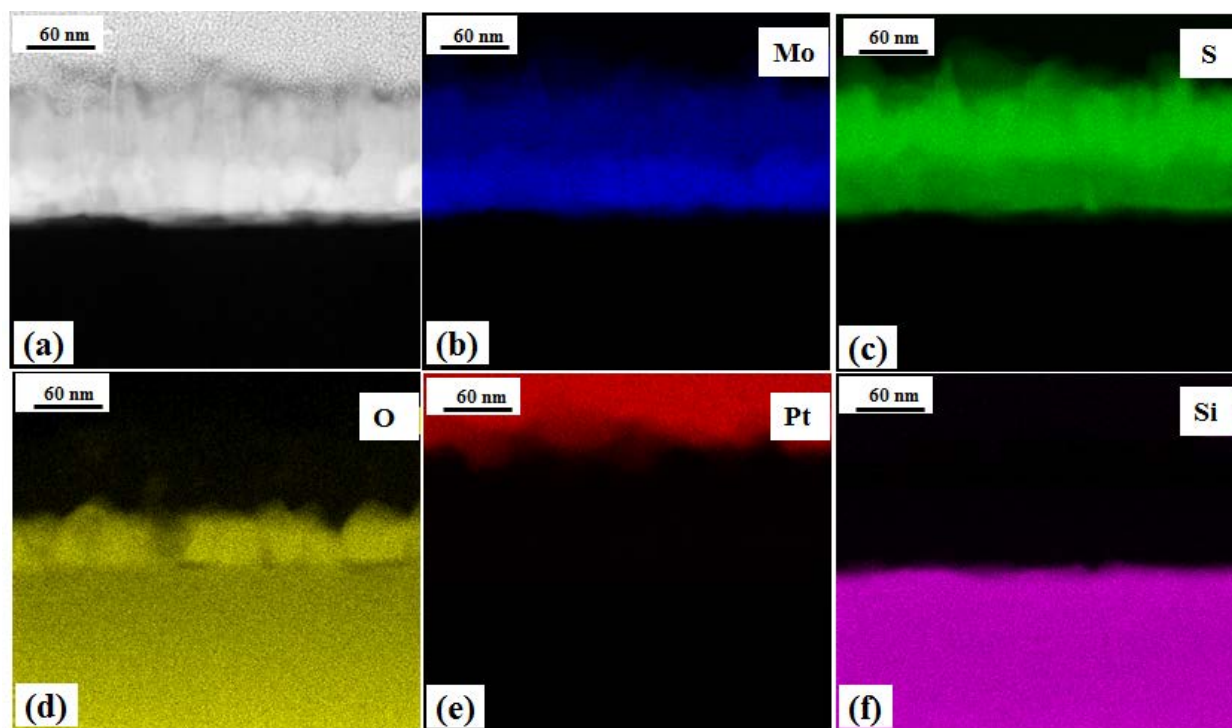


Figure S2: MoS₂ sample grown by double sulfurization of a 50 nm Mo film at 850 °C on SiO₂/Si substrates: (a) HAADF-STEM image, (b–f) EDS mapping results for various elements, over the area in panel (a).