Electronic Supplementary Information

Molybdenum and rhenium disulfide synthesis via high-pressure carbonate melt

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Table S1. Compositions of mixes used in the experiments.

Experiment	MoS_2	ReS_2
Percentage added		
$CaCO_3$	41	55
$Ca_3(PO_4)_2$		23
$SrCO_3$		2
CaF_2		6.5
$Mg(OH)_2$		6
$MnCl_2 \cdot 4H_2O$		3.5
SiO_2		4
Fe_2SiO_4	7	
$MgCO_3$	40	
Na_2CO_3	9	
$Al(OH)_3$	3	
Total	100	100

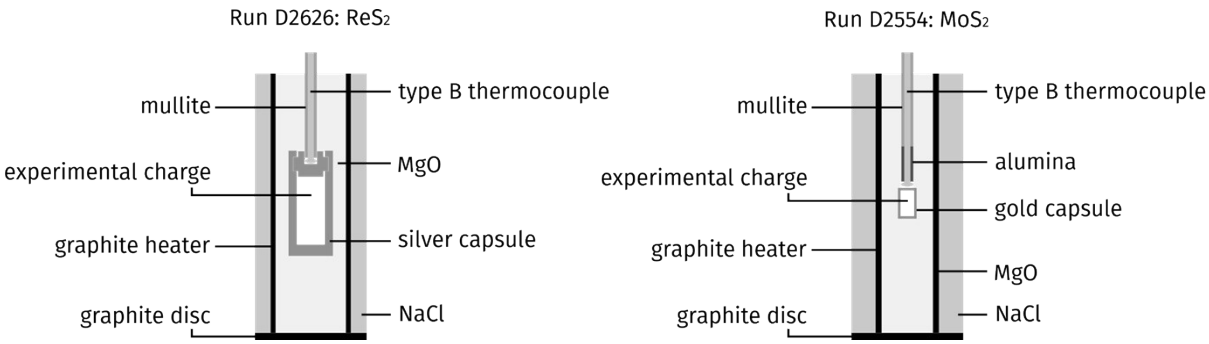

Figure S1. To-scale sketches of the two assemblies used in this study.

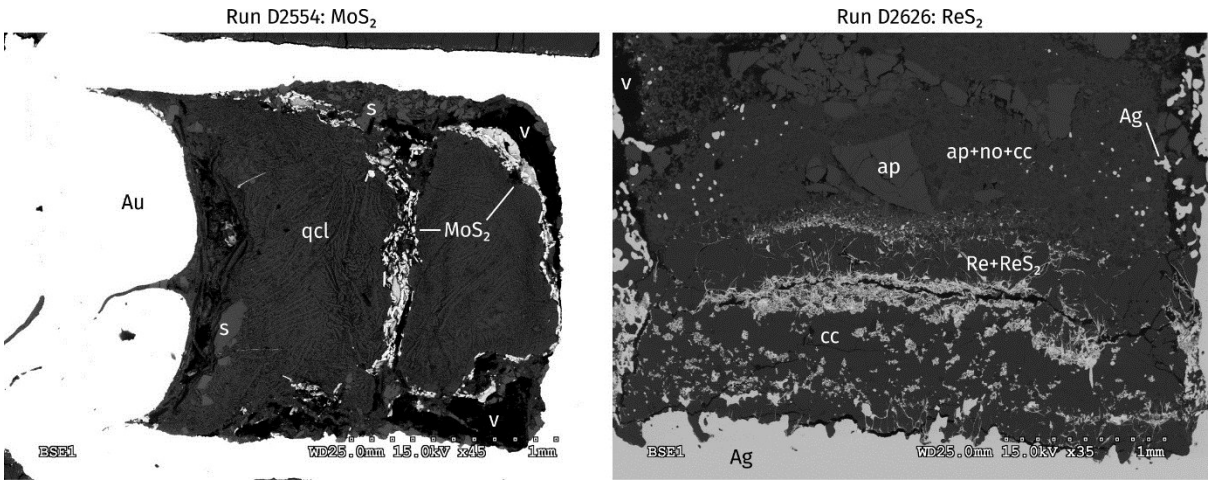

Figure S2. Low magnification overviews of the experimental results using backscattered electron imaging. Abbreviations: s–silicate diopside; qcl–quenched carbonate liquid; v–vapour (CO_2 dominated for D2554, mixed CO_2-H_2O for D2626); ap–apatite; no–norbergite; cc–calcite.

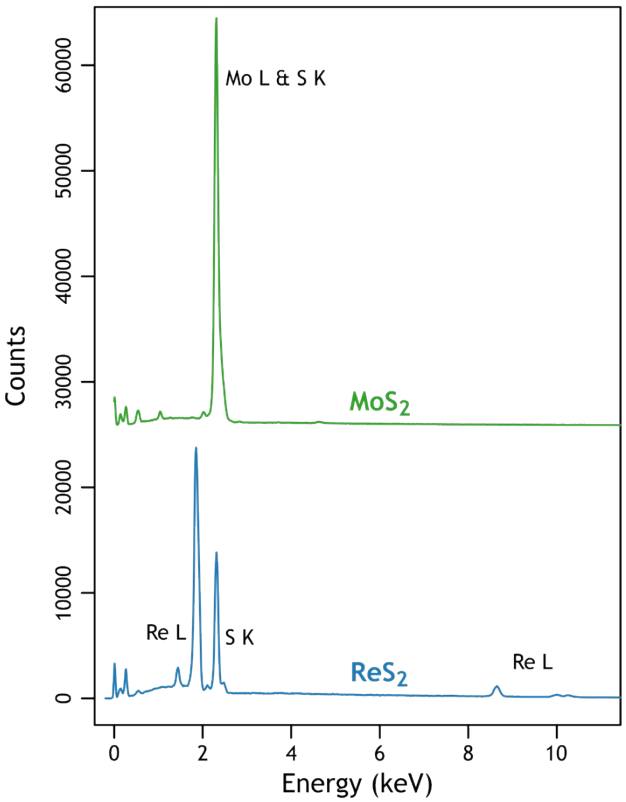

Figure S3. EDS spectra of sulfides from this study.

Table S2. Full results of WDS analyses.

Element	Mass (%)	Atom (%)
MoS_2		
Na	0.983	2.2186
S	41.053	66.4358
Mo	57.964	31.3455
ReS_2 (TAP for Re Mα)		
Si	0.152	0.4435
S	26.266	66.7282
Ca	0.404	0.8201
Re	73.177	32.0082
ReS_2 (PET for Re Mα)		
Si	0.138	0.4209
S	23.776	63.8103
Ca	0.362	0.7767
Re	75.724	34.9921