Supplementary Information

for

Influence of different birnessite interlayer alkali cations on soot and light hydrocarbons catalytic oxidation activity

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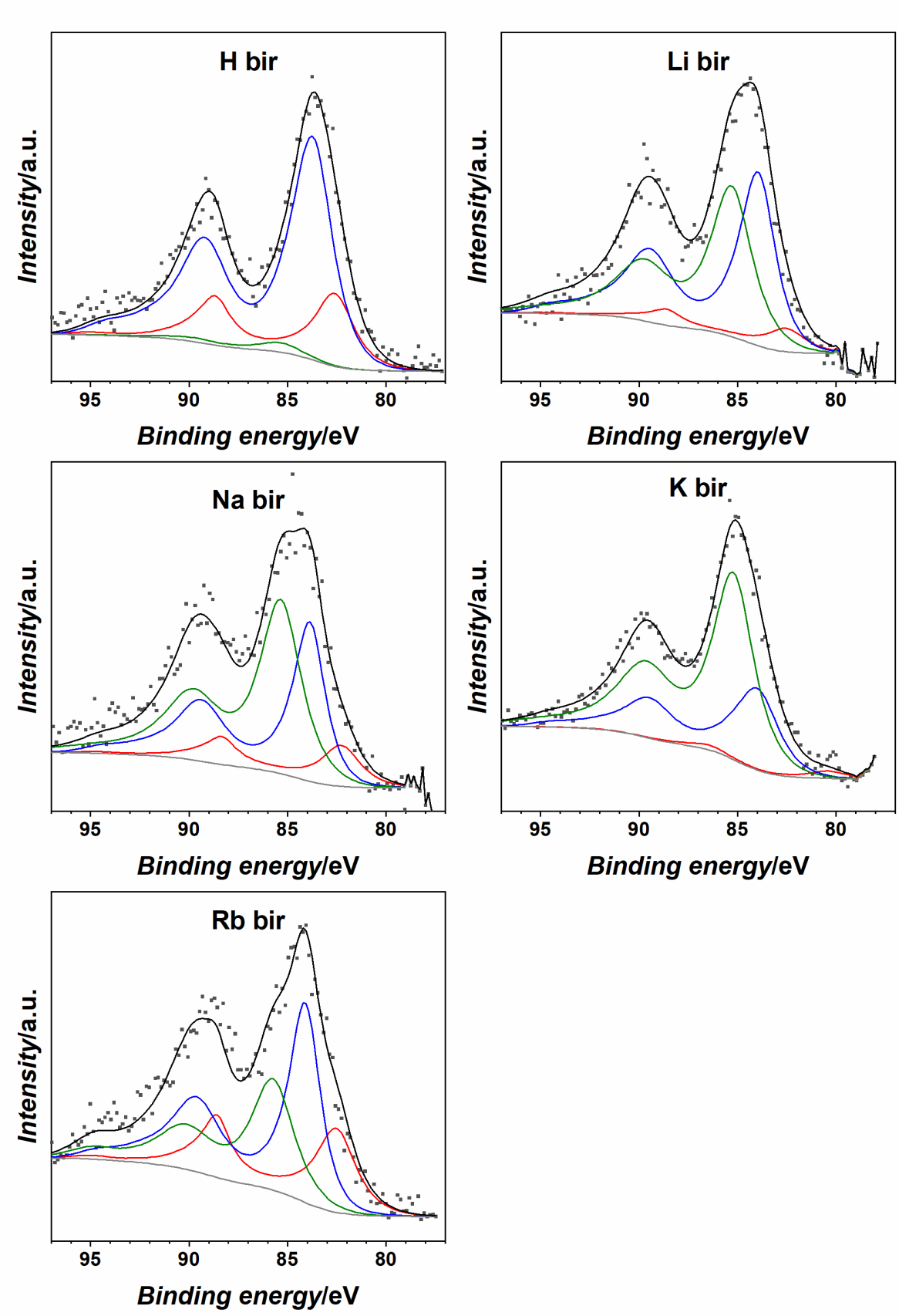

Figure S 1. Detailed scans of Mn 3s range and envelope curves for Mn oxidation states for studied birnessite samples: red +IV, blue +III, green +II.

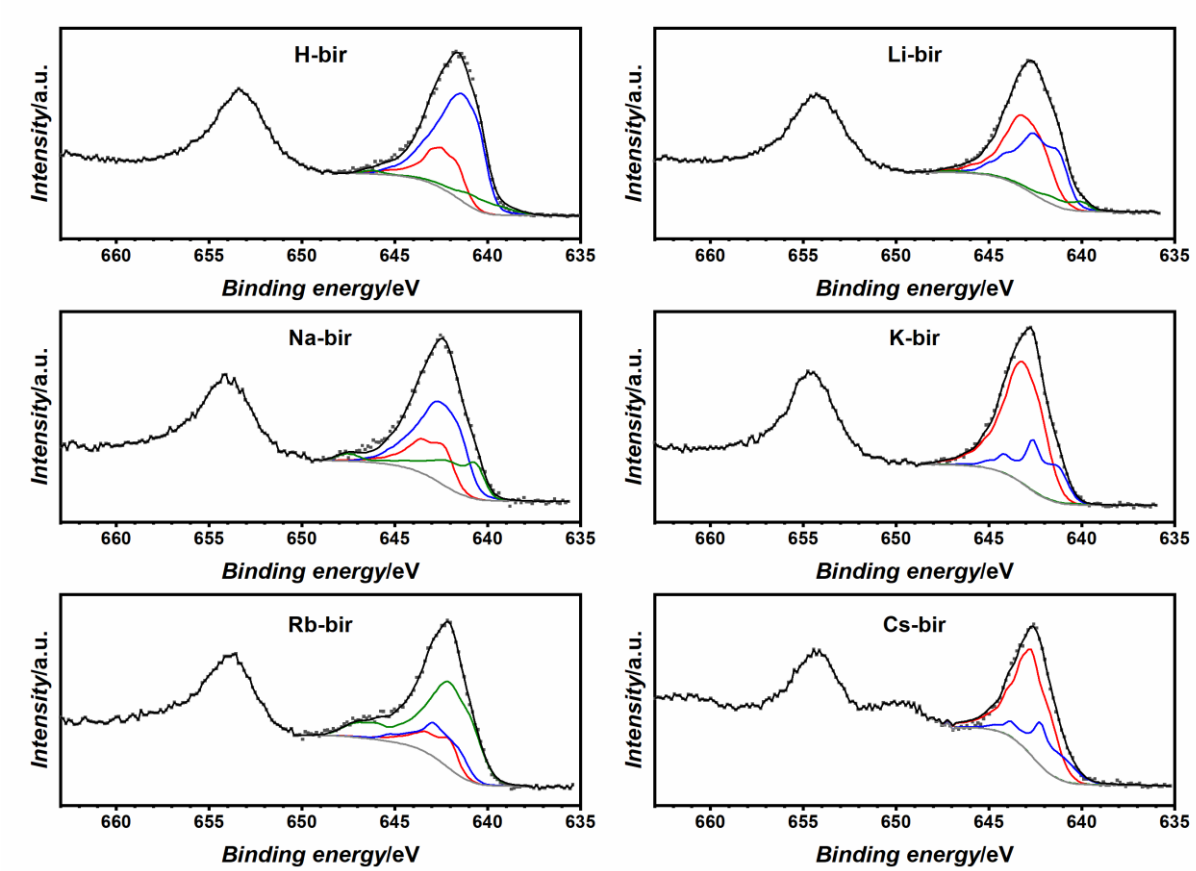

Figure S 2. Detailed scans of Mn 2p range and envelope curves for Mn oxidation states for studied birnessite samples: red +IV, blue +III, green +II.

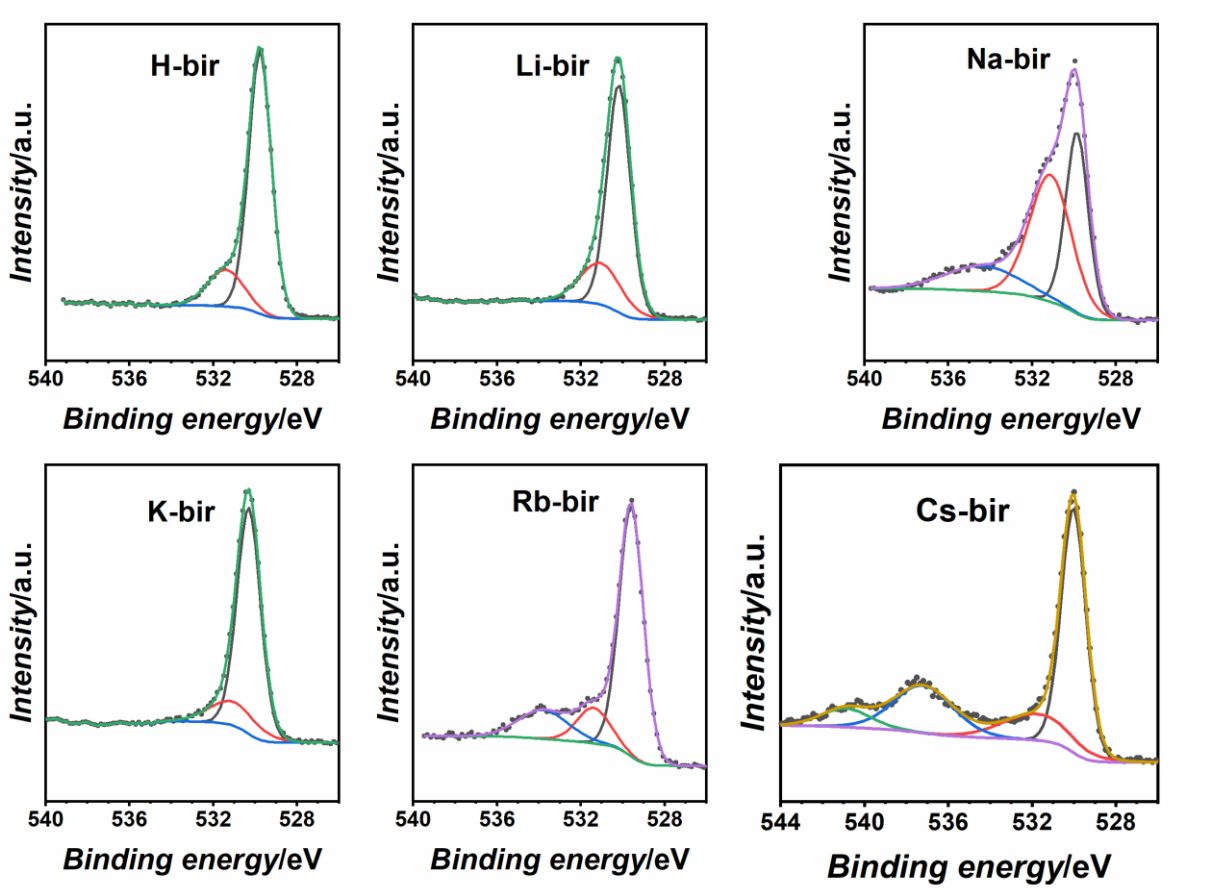

Figure S 3. Detailed scans of O 1s range for studied birnessite samples.

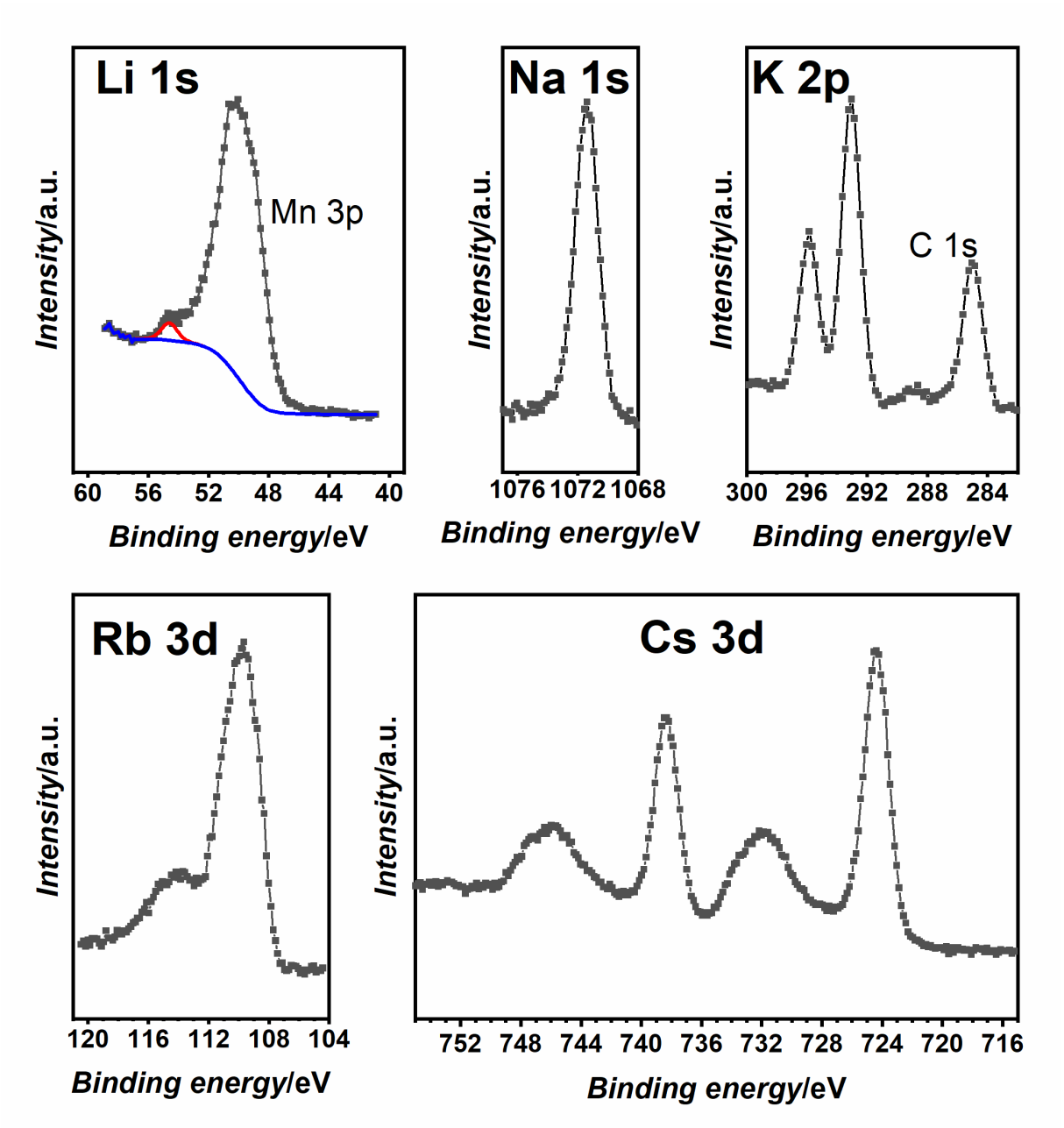

Figure S 4. Detailed scans of relevant alkali bands for studied birnessite samples.

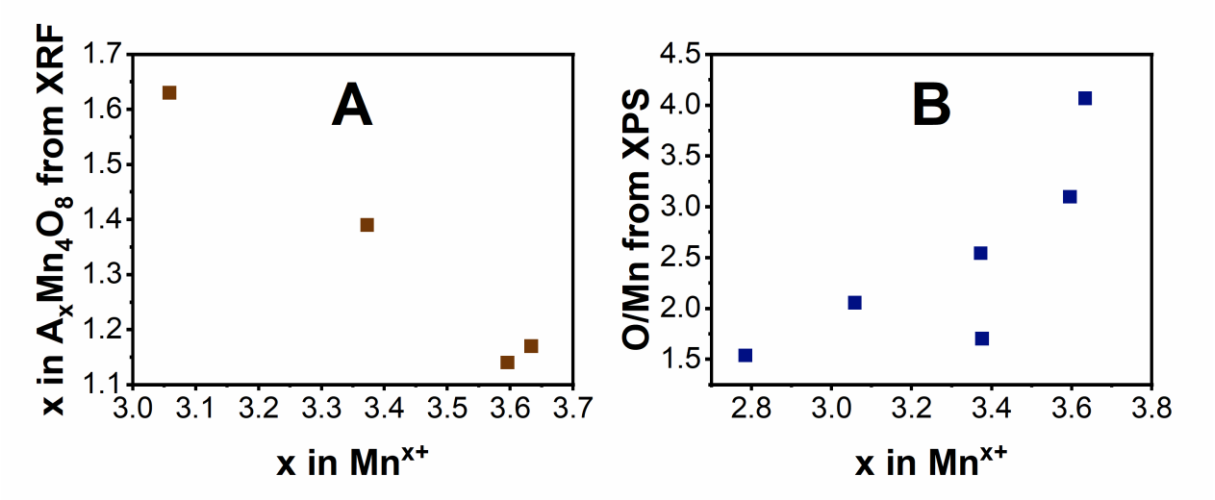

Figure S 5. Correlations of Mn average oxidation state: A) with alkali amount as determined by XRF; B) with O/Mn ratio determined form XPS.

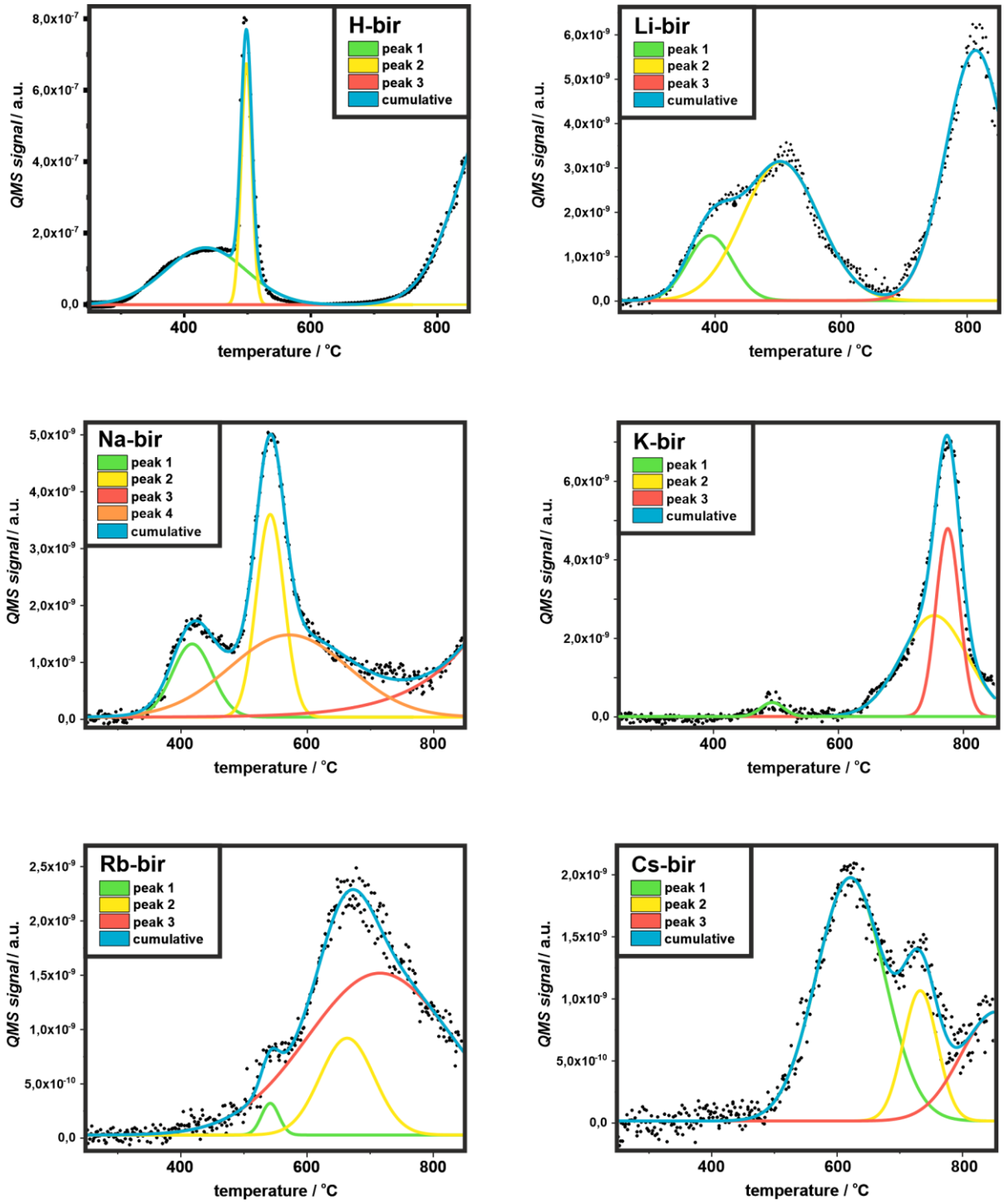

Figure S 6 Mass-spectrometry followed temperature-programmed profiles of oxygen release from birnessite samples with fitted Gaussian peaks.