

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: The measured chemical contents with their MI spectral data in lunar sampling sites.

File Name: Supplementary Data 2

Description: Ablation experiment results of the 1D CNN inversion model with different model size, learning rate and weight decay on oxides FeO, Al₂O₃, MgO, CaO and SiO₂.

File Name: Supplementary Data 3

Description: Three Lunar and Young Mare Basalt Geological Boundaries.