

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: Major element compositions of the starting silicates (in wt.%).

File name: Supplementary Data 2

Description: Summary of experimental conditions and products.

File name: Supplementary Data 3

Description: Major element compositions (in wt.%), N contents (in ppm), and $\delta^{15}\text{N}$ (‰) in silicate melts.

File name: Supplementary Data 4

Description: Major element compositions (in wt.%), N contents (in ppm), and $\delta^{15}\text{N}$ (‰) in metallic melts.

File name: Supplementary Data 5

Description: The modeled N-C-H-S contents and N-isotopes in Earth's different reservoirs.

File name: Supplementary Data 6

Description: The contribution of different types of impactors to Earth's major volatiles.