Abstract

Mass Spectrometric Investigation of the Vaporization Process of Lunar Samples

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The vaporization process of Apollo 12 selected lunar samples was studied in a temperature range up to 2200 K utilizing the Knudsen cell-Mass Spectrometric technique.

Atomic and metal-oxide molecular species were detected in the equilibrium vapor and their partial pressures measured at different temperatures. Thermodynamic data were obtained using both second-law and third-law procedure.

The characterization of the mode of vaporization of the specimens is discussed and compared with the vaporization behavior of olivine.