

# Geochemistry of lunar crusts: Implications for the lunar evolution

# Takamitsu Sugihara[1]

[1] Department of Earth and Planetary Sciences

Geochemical characteristics of lunar surface materials were investigated to gain better understanding of lunar crustal evolution. South Pole-Aitken basin (SPA) has relatively mafic characteristics as compared to farside anorthositic crust. The SPA, however, has lower MgO and FeO abundances than those of nearside high-Th crustal materials. Near side low-Th crusts partly have higher MgO and FeO materials than those of the SPA. These materials of the low-Th crusts are often distributed around near-side giant basins. Therefore, these mafic materials of the low-Th crusts are some ejecta deposits of the basins, indicating that nearside lower crust has more mafic characteristics than that of farside. The near side high-Th crust is composed of the most FeO- and MgO-rich materials in crust materials on the moon. Thus, in nearside of the moon, there are interesting evidences for interpretations of early lunar evolution.