Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

MTT44-08 Room:102B Time:May 26 17:30-17:45

My identity as a geochemist in mineral physics

KAGI, Hiroyuki[1*]

[1]Graduate School of Science, The University of Tokyo

In the long-standing progress of earth sciences, the interplay between seismology and high-pressure mineral physics greatly contributed to understanding of deep earth. It is my understanding that scientists in these fields establish the communities and share the observational data, large facilities and so on. In contrast, it seems to me that many of geochemists, including myself in a sense, construct their own laboratories equipping state-of-the-art device. The difference in research style is noteworthy and may give a clue to the breakthrough of traditional geochemistry.

One of my research interests is to investigate the structure and properties of hydrous materials which potentially exists in deep earth. To achieve these research projects in Japan, I joined to a research consortium and we have constructed a new high-pressure beamline at the spallation neutron source, J-PARC for deep-earth mineralogy. We have been studying structures of hydrous materials and ices; recent progress will be introduced in my talk.

Recently, our attention is focused into chemical evolution of organic materials during planetary shock bombardment process generating high pressure and high temperature simultaneously. We try to understand temperature-induced reaction and pressure-induced reaction independently. Our recent study on pressure-induced reactions on organic compounds and insights into evolution of organic materials will be introduced.

Keywords: high pressure, neutron diffraction, organic compounds