

## Geochemical characteristics of the volcanic rocks of the Oman ophiolite inferred from clinopyroxene trace element compositions

# Kazuya Nagaishi[1], Tsuyoshi Ishikawa[1], Susumu Umino[2]

[1] Dept. Biology & Geosciences, Shizuoka Univ., [2] Dept. Bio. and Geosci., Shizuoka Univ.

Trace element compositions of relict clinopyroxene (cpx) phenocrysts collected from the arc-related Alley volcanics and the spreading ridge-related Geotimes volcanics (including Geotimes subunit and Lasail subunit) of the Oman ophiolite are determined, and the equilibrated melt compositions are calculated using the cpx/melt distribution coefficients. In terms of the inferred trace element characteristics, the Alley volcanics can be subdivided into three types, that is, arc thoreiite/calc-alkaline rocks, boninite and low-Pb andesite/dacite. Volcanic rocks that have intermediate characteristics between these three end members also exist. The observed chemical variation in the Alley volcanics may reflect the varied PT conditions of the slab dehydration and the mantle melting during the Alley magma formation. Although only a little data are available, the inferred melt compositions of the Geotimes subunit seem to lack enrichments in fluid-mobile elements relative to HFS elements. On the other hand, the melts of the Lasail subunit tend to show higher K contents than the Geotimes subunit, which may be an important clue for understanding of the origin of the Geotimes volcanics.