

# Geological and petrological characteristics of Arita volcanic complex and adjacent basic volcanics, NW Kusu

# Jun'ichi Itoh[1]; Kozo Uto[1]; Akikazu Matsumoto[1]; Masafumi Sudo[2]; Hoang Nguyen[1]

[1] GSJ, AIST; [2] Univ. Potsdam, Inst. of Geoscience

Neogene volcanic groups are formed at back arc region in NW Kyushu, Japan. In the Arita region, Arita volcanic complex and small-scaled volcanoes, such as Kurodake and Jinrokuyama volcanoes, are distributed. Arita volcanic complex is composed of basaltic to rhyolitic pyroclastics and lavas, which were erupted by multiple vents. The duration of the eruption is estimated at 2.7-2.3 Ma by laser-heating  $^{40}\text{Ar}/^{39}\text{Ar}$  dating. Arita volcanic rocks are formed by magma mixing of basaltic magma and rhyolitic to high-SiO<sub>2</sub> rhyolitic magma. On the other hand, Kurodake and Jinrokuyama volcanoes formed distinct volcanic edifices, respectively. Especially, Kurodake volcano constructed a small-scaled stratovolcano. The volcanic rocks of the Kurodake and Jinrokuyama volcanoes, which are formed by basaltic andesite and andesite, show characteristic bulk chemical composition. Therefore, these volcanoes and volcanic complex were formed by discrete magma systems.