

## **Age and petrochemistry of the felsic member of the Setouchi Volcanic Rocks, SW Japan**

HIRONAO SHINJOE<sup>1</sup>, YUJI ORIHASHI<sup>2</sup>

<sup>1</sup> Faculty of Business Administration, Tokyo Keizai University (shinjoe@tku.ac.jp)

<sup>2</sup> Earthquake Research Institute, University of Tokyo (oripachi@eri.u-tokyo.ac.jp)

In the Middle Miocene time of the SW Japan intensive magmatism took place in the forearc region; more than 80 km trenchward of the Quaternary volcanic front. The most voluminous member of the magmatism is the Outer Zone granitic rocks which are distributed to the south of the Median Tectonic Line (MTL). To the north of the MTL, are distributed Setouchi Volcanic Rocks, which are comprised of medium-K andesites and basalts, high-Mg andesites, and garnet-bearing dacites and rhyolites. Setouchi Volcanic Rocks were formed immediately after the opening of the Japan Sea and clockwise rotation of the SW Japan arc. Hence the magmatism are usually ascribed to the subduction of young hence hot Shikoku Basin of the Philippine Sea plate. The peculiar rock types of the Setouchi Volcanic Rocks are high-Mg andesite and adakitic dacite/rhyolite. High-Mg andesite magma has been considered to be derived from the reaction of slab melt with mantle wedge peridotite. Adakitic dacite/rhyolite are with depleted HREE, high Sr/Y ratio, and high K<sub>2</sub>O content, which suggested they were formed by melting of subducted sediments at mantle depth. Time and space distribution of the high-Mg andesite and adakitic dacite/rhyolite therefore can be correlate with those of the region slab melting occurred beneath the arc. We review the age and petrochemistry of the felsic member of the Setouchi Volcanic Rocks including our new data on the U-Pb zircon ages, and discuss on the tectonic model of the Setouchi magmatism.