

## Geochemical characteristics of granite, Taitao Peninsula, southern Chile

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Origin of the granite is significant for understanding the crustal growth on the earth. Generally, the origins of the granitic magma have difference between Archean and Phanerozoic granites. It depends on the temperature of subducted slab. The REE compositions of Phanerozoic granites suggest that partial melting of the mantle wedge have an intimate involvement in origin of the granites. On the other hand, a large amount of Cretaceous granites in Pacific Rim which are typical Phanerozoic granites were made in the short term and intermittently. The generations of the granites were concerned with the ridge-subduction according to the explanation.

We could see the triple-junction off the Taitao peninsula, southern Chile at the present day. According to the research in the past, mid-oceanic-ridge was passed the bellow of Taitao peninsula at 3-6 Ma. And the Taitao granites were emplaced at that time. Origin of these granites is important for understanding igneous activity with ridge-subduction.

Our group has made the geological research in this area and collects around 200 granite samples in the couple of research. In this study, we present whole rock analyses of major, trace and rare earth elements of these samples. Furthermore, to estimate the REE composition of primitive granitic magma, we have to know what the most primitive plagioclase is. XAn of plagioclase seemed to be the most suitable index value to define the order of crystallization.

Taitao peninsula granitoids have flat REE pattern and Eu negative anomaly. We concluded that the magma was made by amphibolite melting. We could valuate a pressure that granitic magma was generated. And it becomes lower than whole rock evaluations. It suggests that Taitao granites are made by partial melting of subducted MORB or continental crust components result from ridge subduction at 3-4.2 Ma.