

Insight into Amphibole-rich mafic-ultramafic rocks beneath island arc: an example from Shikano-shima, Kyusyu, Japan

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The role of amphibole in arc magma petrogenesis is not completely understood yet. Amphibole might be an important phase of crystallization at middle to lower crustal conditions in arc settings, and therefore might be an important role in the formation of arc magmas (Davidson et al., *Geology*, 2007). Amphibole-rich mafic and ultramafic rocks formed at the deeper part of arc setting are not studied well. Amphibole-rich rocks are commonly observed in the Ryoke belt, Japan, closely associated with granitic rocks (Kamei et al., *Lithos*, 2004; Yuhara & Kagami, *Sci. Rep Fukuoka Univ.*, 2007). We examined petrological and mineralogical characteristics coupled with zircon chronology of amphibole-rich mafic rocks in the Shikano-shima granitic rocks of the Cretaceous age (Yuhara & Uto, *Jour. Geol. Soc. Japan*, 2008). We concluded that older (up to 20 Ma) amphibole-rich ultramafic rocks, which might be related to continental arc magmas, were assimilated by a mafic melt of high-Mg andesite affinity.

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