

## Some Sr-dominant new minerals found in serpentinite melange from the Itoigawa-Ohmi district, Niigata Prefecture.

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The Itoigawa - Ohmi district, Niigata Prefecture, central Japan, in the most eastern part of the Renge belt (Nishimura, 1998) is known as the first locality of jadeitite in Japan (Kawano, 1939; Ohmori, 1939), however, the origin of jadeitites from this district are still not clear. In 1997, we began mineralogical and petrological studies about jadeitite in serpentinite melange from the Itoigawa-Ohmi district. During mineralogical studies on jadeitites, we found three new minerals, itoigawaite  $\text{SrAl}_2\text{Si}_2\text{O}_7(\text{OH})_2\text{oH}_2\text{O}$  (Miyajima et al., 1999), reneite  $\text{Sr}_4\text{ZrTi}_4(\text{Si}_2\text{O}_7)_2\text{O}_8$  (Miyajima et al., 2001) and matsubaraite  $\text{Sr}_4\text{Ti}_5(\text{Si}_2\text{O}_7)_2\text{O}_8$  (Miyajima et al. submitted). We also found some rare minerals such as tausonite, lamprophyllite, thomsonite-Sr, stronalsite, slawsonite and strontium-apatite. The former three species are first find in Japan. Recently, we found Sr-analogue of clinzoisite,  $\text{CaSrAl}_3(\text{Si}_2\text{O}_7)(\text{SiO}_4)(\text{OH})$ , in diaspore bearing prehnite rock as tectonic block in the serpentinite melange from this district. This mineral is approved as niigataite by Commission on New Minerals and Mineral Names, International Mineralogical Association on January, 2002. All of these new and rare minerals are Sr-dominant minerals. In this district, two new Sr-dominant minerals, ohmilite  $\text{Sr}_3(\text{Ti, Fe})\text{Si}_4\text{O}_{12}(\text{O, OH})_2\cdot 3\text{H}_2\text{O}$  and strontio-orthojoaquinite  $\text{Na}_{2+x}\text{Ba}_4\text{Fe}_{1.5}(\text{Sr, Ba, REE, Nb})_{4-x}\text{Ti}_4(\text{O, OH})_4(\text{Si}_4\text{O}_{12})_4\text{oH}_2\text{O}$ , were reported by Komatsu et al. (1973) and Chihara et al. (1974), respectively.

The 17 previously known Sr-dominant silicate minerals are as follows, itoigawaite\*, hennomartinite, lamprophyllite\*, ortholamprophyllite, strontio-chevkinite, reneite\*, matsubaraite\*, niigataite\*, strontio-orthojoaquinite\*, ohmilite\*, haradaite, slawsonite\*, stronalsite\*, brewsterite, thomsonite-Sr\*, chabazite-Sr. The occurrences of Sr-dominant minerals except serpentinite melange are metamorphosed manganese deposits (hennomartinite, strontio-orthojoaquinite, haradaite), alkaline plutonic rock (lamprophyllite, ortholamprophyllite, thomsonite-Sr, chabazite-Sr), alkaline volcanic rock (lamprophyllite), and fenite in carbonatite plug (strontio-chevkinite). The 10 species with \* indicate that these minerals are found in the Itoigawa-Ohmi district.

The Sr-dominant minerals are found from jadeitite, albitite and rodingite. The Sr-minerals except niigataite, ohmilite and strontio-orthojoaquinite are found in jadeitites. No Sr-dominant minerals are found in serpentinite and tectonic blocks such as crystalline schists and green stones.

Sr-dominant minerals such as stronalsite are found in jadeitites from Ohsa, Okayama Prefecture, Japan (Kobayashi et al., 1987) and Oya, Hyogo Prefecture, Japan (Miyajima et al., 1998). These area are also belonging to the Renge Belt. Sr-rich epidote in maetasite from Motagua Fault Zone, Guatemala, where is known as the occurrence of jadeitite, are reported by Harlow (1994). No Sr-dominant minerals in jadeitites are reported from Myanmar until present time.

In the Itoigawa-Ohmi district, Sr-dominant minerals are crystallized at late stage of formation of jadeitite. The formation of Sr-dominant minerals in jadeitite are considered that Sr enrichment is caused by crystallizing of abundant jadeite which can not accept Sr. The Sr-dominant minerals may be found in jadeitite from other localities such as Myanmar.