

## Petrological and 1-atm experimental study of picrites in Kume-jima, Ryukyu Islands

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Kumejima island, 90km west of the Okinawa island proper, belongs to the central Ryukyu arc which is divided by the Kerama gap from the south Ryukyu arc, and faces with steep cliff to the Okinawa Trough, an active back arc basin. This island consists mostly of volcanic rocks except coral limestone. On the north coast of the island exposing the Uegusukudake formation volcanics, produced picrites. Their MgO content attains to 16.5wt%, and the high forsterite content in their olivine phenocrysts up to Fo 92.2.

1-atm experimental study under NiNiO condition yielded olivine Fo with Mg#=94.2-97.6. The apparent discrepancy of olivine composition may be interpreted that olivine composition re-equilibrated with the surrounding evolved magma during slow cooling of the initially not picrites magma.

Kumejima island, 90km west of the Okinawa island proper, belongs to the central Ryukyu arc which is divided by the Kerama gap from the south Ryukyu arc, and faces with steep cliff to the Okinawa Trough, an active back arc basin. This island is at the southern end of the late Tertiary volcanic zone continuing from southwest Kyushu, and consists mostly of volcanic rocks except coral limestone. On the north coast of the island exposing the Uegusukudake formation volcanics, produced picrites. Their MgO content attains to 16.5wt%, and the high forsterite content in their olivine phenocrysts up to Fo 92.2, and high Cr<sub>2</sub>O<sub>3</sub> abundances in chromite spinel.

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