

## Textural analysis of serpentinite collected from the Ohmachi Seamount, Izu-Bonin arc: Preliminary results of YK08-05 cruise

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Along the basal slope of the Ohmachi Seamount in the Izu-Bonin frontal arc, serpentinitized peridotites and serpentinites were collected through the dives by the submarine 'Shinkai 6500' during the JAMSTEC YK08-05 cruise.

The collected samples are characterized by the aggregates of antigorite, a high-temperature serpentine mineral, forming directly from olivine and pyroxenes. The antigorite serpentinites are mainly composed of a preferred orientation of antigorite and planar magnetite with porphyroclastic grains of spinel. In the aggregates of antigorite, the pseudomorphs (mesh texture) after olivine, consisting of lizardite/chrysotile (low-temperature serpentine minerals), remain as lens-shaped parts.

In this study, we confirmed that the serpentinites in the Ohmachi Seamount provide evidence only for retrograde metamorphism. This indicates that the P-T path of the serpentinites is inconsistent with that of amphibolites (tectonic blocks in the serpentinites), which have experienced prograde eclogite-facies metamorphism.