

南アメリカタイタオオフィオライト最上部マントルかんらん岩の構造岩石学的特徴 Microstructural and fabric characteristics of the uppermost mantle peridotites in the Taitao ophiolite, South America

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The <6Ma young Taitao ophiolite, exposed at the westernmost promontory of the Taitao Peninsula, is located approximately 40 km southeast of the Chile triple junction and consists of a complete sequence of oceanic lithosphere, including ultramafic rocks, gabbros, a dyke complex and volcanoclastic rocks. The ophiolite is surrounded by several contemporaneous granite plutons intruded in between the ophiolite and the Pre-Jurassic metamorphic basement. Several studies have been carried out on the Taitao ophiolite and surrounding granites. Whereas they have focused mostly on petrology and geochemistry, we investigated microstructures and crystal-fabrics of the ultramafic rocks, aiming to understand the origin of the ophiolite. 6 out of 16 ultramafic rocks preserved peridotite textures despite of intense serpentinization and show mostly porphyroclastic textures consisting of pyroxene porphyroclasts with a fine-grained olivine-pyroxene matrix. Their olivine crystal-fabrics shows [100]{0kl} and [100](001) patterns. These indicate that the uppermost mantle section have remarkably been deformed before and/or during the obduction process after their formation beneath the mid-ocean ridge.

Keywords: Taitao ophiolite, mantle section, peridotite, microstructure, olivine fabrics