Three dimensional analysis of pyroxene-spinel symplectite from the Horoman peridotite complex, Hokkaido

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Symplectites in the Horoman peridotites (spinel-lherzolite) consist of orthopyroxene, clinopyroxene and spinel, and are thought to be the subsolidus reaction product after garnet with addition of olivin component during decompression of the complex from the garnet-lherzolite stability conditions, based on their chemical properties. And, crystallographic analysis using SEM-EBSD shows that symplectite minerals have systematic relationships among their crystallographic orientations. On the other hand, according to three-dimensional images of spinel grains constituting symplectite attained from Xray-CT scanning, they seem to be elongated to a certain orientation, which seems to be related to their own crystallographic orientation. Analyses of X-ray-CT images of spinel show that in detail.