

## Geochemistry Characteristics of the Serpentinized Peridotite and Its Geological Significance in Wenduermiao of Cina

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Serpentinized peridotite as alteration products of mantle peridotite has been the most important kind of rock in ophiolite. The main mineral assemblage by mantle peridotite serpentinized is serpentine+carbonate minerals+magnetite+talcum. Petrogeochemistry characteristics have shown MgO content of serpentinized peridotite is higher than primitive mantle, fusible components such as CaO、Al<sub>2</sub>O<sub>3</sub>、TiO<sub>2</sub> show negative correlation with MgO (Fig1), which implies peridotite in Wenduermiao is a depleted mantle source. Rare-earth elements and trace elements in Wenduermiao show slightly enrichment in LREE and markedly depleted in LILE, strongly enrichment in HFSE (U、Pb、Hf). These features relate with mantle source, which were overlapped by fluid alteration in a subduction zone or serpentinization.

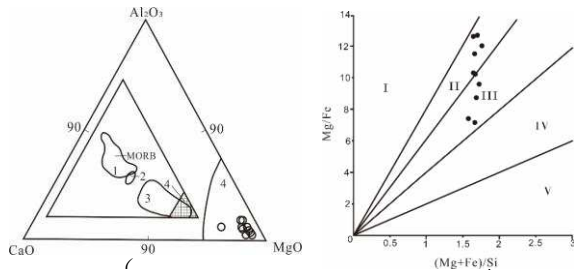


Fig.1 Al<sub>2</sub>O<sub>3</sub>-CaO-MgO (L) and Mg/Fe—(Mg+Fe)/Si (R)

Additionally, mantle peridotite derived from partial melting of a spinel facies mantle source. According to model established by Melcher, we suggest that the Wenduermiao mantle peridotite originated by partial melting of 5%~20% close to abyssal seamount mantle peridotite. Above suggest that Wenduermiao ophiolite formed in a MOR setting and was modified by fluids in a SSZ setting.

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