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Room:Convention Hall

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Pterographical characteristics of Peridotites from near the Kairei hydrothermal field, Central Indian Ocean

Ryo Takamaru^{1*}, Tomoaki Morishita², Kentaro Nakamura³, Hiroshi Sato⁴

¹Nat. Sci. Tech., Kanazawa Univ., ²FSO, Kanazawa Univ., ³PEL, JAMSTEC, ⁴Business Administration, Senshu Univ.

In recent submersible investigation and dredge cruising at near the Kairei hydrothermal field, southern Central Indian Ridge, we have recovered a lot of serpentized and/or heavy altered mantle peridotites.

For unraveling the ultramafic rock-seawater reaction, we observed petrographically these peridotite samples especially in term of relic primary minerals such as olivine, pyroxene and spinel. Most sample generally shows that develop a typical mesh-rim texture of lizardite with brucite or magnetite at olivine and form bastite at pyroxene rim. Other secondary minerals such as talc and tremolite are occurred from a few samples.

Based on the result of these petrographical observation, we are going to identify secondary minerals using Raman spectroscopy and measure the mineral chemical composition of these minerals by EPMA and LA-ICP-MS.

Keywords: Kairei hydrothermal field, serpentized peridotite, low-temperature alteration, serpentine, talc