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SIT002-P05

Room:Convention Hall

Time:May 27 14:00-16:30

## Sulfide-rich dunite from Wadi Thuqbah, the northern Oman Ophiolite

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We found a sulfide-rich dunite from Wadi Thuqbah, the northern Oman Ophiolite, which has never been reported elsewhere. The dunite contains about 2 mode% sulfides. The sulfide-rich dunite occurs as heterogeneous patches near the boundary between wehrlite and dunite in the Moho transition zone. Pentlandite and pyrrhotite form composite grains with magnetite. Pentlandite and pyrrhotite show complicated intergrowth, which is cut by magnetite.

The Fo content of olivine is 90.7~91.0 but the NiO content is 0.1 wt% (0.08~0.12 wt%) in the sulfide-rich dunite. The high-Mg, low-Ni olivine of the sulfide dunite contains as high contents of siderophile elements (Mn, Co, Cu, Zn and Pb) as other sulfide-free dunitites, wehrlites and mantle harzburgites.

Localized and heterogeneous distribution of the sulfide-rich dunite suggests incorporation of sulfur into the crystal mass which possibly formed the Moho transition zone dunite and wehrlite.

Keywords: Oman Ophiolite, Sulfide-dunite, crust-mantle transition zone