Characteristics and implications of podiform-chromite hosted silicate inclusions in the Zedang ophiolite, Southern Tibet

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Mineral inclusions in Zedang Chromite

Chromite grains in the Zedang massive chromitite contain in-situ diopside lamellae, octahedral pseudomorphs of serpentine inclusions and other mineral inclusions of diopside, enstatite, hydrous silicates (such as Cr-bearing amphibole and linear serpentine).

Discussion of Results

Diopside lamellae-bearing chromite probably has a precursor possessing of $CaFe_2O_4$-phase (CF phase) at > 12.5 GPa [1]. The individual in-situ octahedral pseudomorphs of serpentine inclusions are considered to be pseudomorphs after isometric ringwoodite [2]. Linear hydrous silicate inclusions implying a fluid infiltration along fracture zones at shallow depths during the period of the last stage

An alternative three-stage model will be used to interpret the formation and evolution of the Zedang chromite. This study on inclusions in chromite also provides a new window to explore the origin and evolution of unusually high-Pressure phase bearing ophiolitic podiform chromitite and mantle dynamics.

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