

Petrology of the late intrusions in the Oman ophiolite.

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In the Oman ophiolite, the late intrusions sometimes called "wehrlite intrusions" cut the whole crustal sequence. Previous workers interpreted them as a result of off ridge magmatism and ascribed their origin to an upward injection of crystal-melt mixture derived from impregnated dunite in the Moho transition zone.

The wehrlite intrusions are connected with lavas which show island-arc magma signatures. High-Cr chromian spinels ($Cr\# = 0.6 \sim 0.7$) was commonly found in plagioclase wehrlite from Wadi Hilti in the Northern Oman ophiolite. Such high-Cr spinels have never been reported from the ocean floor and are similar to spinels in island arc rocks. These suggest that the wehrlite intrusions were produced at a supra-subduction zone setting.