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Metamorphism ultrabasic magmatism connection with view on formation of skarn in the Tnge-Hana area, SW Iran.

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The Neyriz ophiolite occurs along the Zagros suture zone, SW Iran, and is part of a 3000-km subduction belt that was thrusted over the edge of the Arabian continent during the Late Cretaceous. The ophiolitic suit lithologically consists of ultramafic unit, layered and massive gabbros, sheeted dykes, and pillow lavas, surrounded by radiolarites and limestone. In the Tang e Hana region, about 12 Km northwest of Neyriz, the ophiolitic rocks are mainly consisting of harzburgite, lherzolite, webesterite, dunite, whrlite, clinopyroxenite. Ultramafic rocks are typically ”alpine type”. In Tange e Hana, ophiolitic rocks harzburgite and lherzolite,...) are in contact with Cretaceous unfossiliferous limestons and made marbles and skarns.
Marbles show simple mineralogy of calcite ± forstrite and ultramafic rocks minerals are olivin + serpentin + pyroxene + spinel. Mineral assemblages in skarns are: 1) wollastonit skarn: calcite + wollastonite + fassaite ± hedenbergite ± Spinel ± diopside ± titanite ± anorthite ± serpentin. 2) Garnet skarn: calcite +andradite +grossular ± spinel. In this study mainly focused on the relation between metamorphism made by ultramafic rocks and formation of skarns. In detail study of each ultramafic rocks and skarns are concerned as following in skarn position study of zoning pattern of individual minerals and also study of physical and chemical conditions of skarns during their formation (XCO2, P, T) using mineral chemistry and O isotope ratios, and about Ultramafic rocks Study of P_T condition in peridotits useing mineral chemistry (EPMA) of peridotites (Px, Ol, Plg) and dating.