# Phase equilibria modeling of kyanite-bearing eclogitic metapelites in the NCKFMASHTO system from the Egere terrane (Central Hoggar, South Algeria)

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**Description:**
Kyanite-bearing metapelites from the Egere terrane (Central Hoggar, South Algeria) have a high-pressure eclogitic facies paragenesis; furthermore, they preserve evidence of partial melting with the development of metamorphic textures involving garnet–kyanite–biotite–white mica–plagioclase–K-feldspar–quartz–rutile and ilmenite. Garnet porphyroblasts in these rocks display a calcium zonation formed during high-P metamorphism followed by decompression. Moreover, the large garnet poikiloblasts reflect complex mineral–melt relationships, and their growth was strongly linked to melt production. In order to give an account of the various textures and explain the evolution of the different parageneses in relation with pressure and temperature, thermodynamic modeling in the Na2O–CaO–K2O–FeO–MgO–Al2O3–SiO2–H2O–TiO2–Fe2O3 (NCKFMASHTO) system is a powerful approach. The intersection of …
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