

## Plastic deformation of quartz in quartzite and quartz veins of Khoy ophiolitic massif, NW of Iran

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(Received: 6/9/2004, received in revised form: 21/1/2005)

**Abstract:** In Khoy ophiolitic massif (NW of Iran) three types of quartzite and also quartz bearing veins can be distinguished: massive quartzite, quartz bearing veins in the amphibolites and siliceous veins in the radiolarian cherts. Massive quartzites contain quartz porphyroclasts associated with very small- deformed quartz neoblasts. These quartzites are deformed in regime I and recrystallized as grains bulging. Siliceous veins in the cherts have Cu-carbonate impregnations in the field. Very large grains of quartz with well-developed triple point junctions can be distinguished in thin section. Their pattern of c-axes distributions doesn't show any special orientation. The pattern of c-axes distributions in the quartz bearing veins in the amphibolites is consistent with prism and rhomb slip system along  $\langle a \rangle$  direction. Water in these veins is at the origin of soluble structures and precipitation of clay minerals. SEM analysis on the soluble fovea as the result of water operation has revealed high amount of water.

**Keywords:** *Deformation regime, Recrystallization, LPO, SPO, Slip System, SEM.*