

Texture evidences imply on dynamic conditions in late-stage to post magmatic crystallization from dynamo-magmatic gneisses of Ghaleh-Dezh, Azna

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Abstract: The dynamo-magmatic gneisses of Azna have a mylonitic texture characterized by large retortshape porphyroclasts or augen of feldspars, around which a more ductile, medium to fine-grained matrix of white-mica (phengitic muscovite), biotite, quartz and feldspar is deflected. The structure is named core-and-mantle structure. Feldspars behave in both plastic and brittle fashion. Evidence of strain, such as deformation twins, bent or curved twins, undulatory extinction, deformation bands and kink bands occur in plagioclase and display dynamic deformation in solid state. Deformation of quartz in dynamo-magmatic gneisses commonly results in the development of core-and-mantle structure and quartz ribbons of elongated, preferably oriented, newly recrystallized quartz aggregates suggesting a dynamic recrystallization. Most of the micas are completely aligned subparallel or parallel to the margins of quartz ribbons and define the foliation in the rock. The textures are indication of dynamic deformation during the crystallization and so it.

Keywords: *dynamo-magmatic gneisses, core-and- mantle structure, deformation, Azna.*

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