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THE GEOCHEMICAL ROLE OF THE ALKALINITY OF CRYSTALLIZATION ENVIRONMENT IN THE GENESIS OF PEGMATITES FROM THE CARPATHIAN PROVINCE, ROMANIA

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Abstract

The genesis of pegmatites is the result of a complex geochemical evolution of the pegmatitic fluids, under the alkaline conditions of a crystallization environment. In each stage of genetic processes, there are specific minerals that crystallize, some of which are significant for the stage in progress; the pegmatite crystallization can come to an end no matter the stage in progress is, generating thus totally banded, partially banded or massive pegmatite bodies.

Thus, the main stages developing during the evolution of pegmatite genetic processes are: the calc-alkaline stage (Ca, Na) which is presented in every type of pegmatite; the alkaline stage 1: potassic stage (K) and/or sodic stage (Na); the alkaline stage 2: the potassic stage (K); the hydrolysis stage (H_2O); the alkaline stage 3: the sodic stage (Na); the acidic stage (silicatic - Si).

Keywords: crystallization, genesis of pegmatites, genetic stage, pegmatites.

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