



## **Preservation of the U-Pb isotopic system in zircon**

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One of the important problems of contemporary geochronology is reliable dating of the most ancient formations. High physical-chemical robustness of zircon in response to superposed processes, the connection of the mineral habit and structure with conditions, under which the host rocks were formed and altered, made possible to use zircon as a main mineral-geochronometer.

At the dating by different methods, the question on preservation of the U-Pb isotopic system of a mineral losing its components in the course of time, that leads to true ages distortion, raises up.

Migration of components is caused by different material and structural non-uniformities. Nevertheless, it is also necessary to take into account the influence of rock-forming minerals.

Various rock-forming minerals possessing different preserving and transit characteristic features slow down or activate migratory processes that leads to establishment of a number of dates for rocks of the same age, but different in chemical composition.

For example, mafic minerals react more sensitively upon any transformation of conditions, creating more dynamic medium for zircon; this makes the equilibrium in the radiogenic system less stable.

Moreover, higher transit features are characteristic of these minerals, resulting from their crystallostructural properties.

Rock chemical composition is a factor influencing age values. At that, the next regu-

larity was established: the increased basicity of rocks leads to decreasing of the rock true dates.

Thus, the registered state of the U-Pb system of zircon from different rock-forming minerals and the ages obtained on its basis depend, to a certain extent, on the type of the zircon-bearing mineral.