

Morphological evolution of zircon crystals in granitic magma chambers

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Quantitative descriptions for shapes, sizes and habits of 600 zircon crystals, separated from the Yakushima granite were used to discuss morphological evolution of zircon crystals in a natural granitic magma chamber. Smaller crystals have lower prism and pyramid indices and long prismatic habit. These observation suggest that elongated small crystals with low prism and pyramid indices probably nucleated and crystallized at the late of magmatic stage, maintaining its growth form. This study confirms that the morphology of zircon crystal population is closely connected with the temperature of crystallization and composition of magma, and it is useful as a petrogenetic indicator for calk-alkaline granites.