

Springer Mineralogy

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Metasomatic Textures in Granites

Evidence from Petrographic Observation

Based on hundreds of thin sections from granite in China, this book introduces metasomatic textures and their formation mechanism in granite. It also proposes that metasomatic textures can basically be classified into two patterns: hetero-oriented replacement and co-oriented replacement, according to the consistency of orientations of replacive and replaced minerals. The hetero-oriented albitization of K-feldspar is quite distinct from the co-oriented albitization of K-feldspar. They occur separately without transition, although both are generally referred to as albitization of K-feldspar. This unique granite atlas uses a series of color microphotos taken with a quartz plate under crossed polars to clearly illustrate metasomatic mechanisms and superimposed metasomatic processes. The origins of clear albite rim, intergranular swapped albite, K-feldspathization, quartzification, muscovitization, beryllization, myrmekite, small platy albite, perthitic albite, K-feldspar megacryst etc. are comprehensively discussed and explained. The book will appeal to teachers, researchers and students involved in igneous and metamorphic petrology.

Earth Sciences

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