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花岗岩拓扑学的研究展望 [点此下载全文](#)

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摘要:

花岗岩拓扑学 (granite topology)着重阐明花岗岩区域岩石成因及其与大地构造环境的联系, 花岗岩是多种地质因素及其相互作用的产物, 总体上受壳幔相互作用中热流传递机理的控制, 这种热扰动和相继的热松弛与地表的大地构造环境又有重要的联系, 根据目前研究, 花岗岩的区域岩石成因和大地构造环境的联系实际上仅同大地构造旋回中由某种热扰动所引起的某一构造阶段有关, 因而一个大的构造单元往往可以出现一系列不同成因的花岩类型及其组合。

关键词: [花岗岩](#) [大地构造环境](#) [拓扑学处理](#) [成因](#) [克幔相互作用](#) [热流传递机理](#)

A Prospect on Granite Topology [Download Fulltext](#)

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Abstract:

Granite topology is defined as the search for the regional petrogenesis of granite and the relationships with its tectonic setting. Within the geological context, the criteria of some petrological, mineralogical and geochemical paragenetic associations which are closely in connection with its emplacement and textural e-volving patterns can bodily be considered as a main theme to elucidate the natural system containing both the source region and the evolving processes of granite, and highlight upon the linkage with the tectonic stage of a tectonic cycle during its formation. It can also be suggested as the build-up of the observed modellings of the transmission of heat flow of magma genesis in prospect. Granite petrogenesis with multifactorial generative processes is intrinsically in connection with the mechanism of transfer of heat flow such as conduction, convection and advection through crustal-mantle interaction, the thermal perturbation and relaxation of which are intimately connected with their tectonic disturbances. Accordingly, granite topology emphasizes the tectonic constraints and forms a main theme with criteria of some petrological, mineralogical, and geochemical paragenetic associations as principal and in connection with their emplacement and textural, structural evolving patterns as a trinity as the build-up of the regional petrogenesis. The petrological, mineralogical and geochemical paragenetic associations can bodily reflect the thermodynamic behavior of the natural system that contains both the source region and processes. Although the associations behave as different entities operating as different functions within the system, but they are closely interconnected, even overlapped, and cannot be treated solely instead of their integrated attacks. In general, the elemental abundances and the mineral phases can be matched with the components and phases of the system. Theoretically, a topological treatment within a rigorous thermodynamic constraints of a chemical system such as (KNCASH) can be applied to a granite series to formulate matrices array in order to solve the thermodynamic processes which are desirable in depicting observed modellings within the heat flow regime.

Keywords: [granite](#) [tectonic setting](#) [topological treatment](#)

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