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霓长岩岩石学特征及其地质意义评述 [点此下载全文](#)

[杨学明](#) [范宏瑞](#)

[1]中国科学技术大学地球和空间科学系, 合肥 [2]中国科学院地质研究所, 北京

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摘要:

本文以几个典型实例, 综合评述了与碱性岩和碳酸岩有关的碱质交代蚀变岩—霓长岩的岩石学特征。按照在霓长岩化作用过程中形成的新生矿物组合、结构构造、化学成分、空间分布及物质来源等特征, 霓长岩可以分为低级、中级、高级、接触和脉状等5种类型。控制霓长岩化作用5的主要因素包括: (1) 碳酸岩或者碱性岩的岩石学特征和侵位条件; (2) 流体的来源、性质和成分; (3) 围岩的矿物组合、结构构造和化学成分; (4) 霓长岩化作

关键词: [霓长岩](#) [霓长岩化作用](#) [碳酸岩](#) [碱性岩](#) [岩石学](#)

Petrological Characteristics of Fenites and Their Geological Significance [Download Fulltext](#)

Yang Xueming, Yang Xiaoyong, Fan Hongrui, Guo Fan, Zhang Zhaofeng, Zheng Yongfei

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Abstract:

Based on several typical localities of fenites in the world, this paper systematically reviews the petrological characteristics of fenites associated with alkaline igneous rocks and carbonatites. The fenites can be grouped into five types, i. e., low-grade, medium-grade, high-grade, contact and vein fenites in terms of newly formed mineral assemblages and textures and structures during the processes of fenitization, chemical composition and geological setting and distribution of the fenites as well as the sources of fenitizing fluids. The fenitization is controlled by the following factors: (1) the petrological features and emplacement conditions of the relevant alkaline rocks and carbonatites; (2) the sources, nature and compositions of fenitizing fluids; (3) the mineral assemblage, textures and structures and chemical compositions of wall rocks around alkaline igneous and carbonatite intrusives; (4) physico-chemical conditions during the processes of fenitization. The study of fenites associated with carbonatites is very helpful to recognize the carbonatites whose geological-geochemical signature can be easily affected by late-stage geological processes, so that it is difficult to tell them from metamorphic marble of sedimentary origin. It is suggested that a comparison of alkali altered wall rocks around the Bayan Obo Fe-Nb-REE ore deposit with fenites related to carbonatites found in the Bayan Obo area might provide a key clue to the genesis of the deposit, which might show the relationship between the altered wall rocks and fenites.

Keywords: [fenite](#) [fenitization](#) [carbonatite](#) [alkaline igneous rocks](#) [Bayan Obo](#)

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