

华仁民. 南岭中生代陆壳重熔型花岗岩类成岩—成矿的时间差及其地质意义[J]. 地质论评, 2005, 51(6): 633-639

南岭中生代陆壳重熔型花岗岩类成岩—成矿的时间差及其地质意义 [点此下载全文](#)

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基金项目: 本文为国家重点基础研究发展规划项目(编号1999CB403209)和国家自然科学基金项目(编号401 32010, 40572057)资助的成果

DOI:

摘要:

南岭地区陆壳重熔型花岗岩类的成岩作用与相关的成矿作用之间存在着明显的时间差, 主要表现为3种情况: ① 南岭地区大部分“花岗岩型”铀矿床的花岗岩成岩时间是印支期, 但铀的成矿作用主要发生在燕山晚期, 其间存在着巨大的时间差; ② 在燕山中期第一阶段(170~150 Ma)达到高潮的陆壳重熔型花岗岩类, 其相关的钨锡等稀有金属矿化多发生在燕山中期第二阶段(150~139 Ma), 成岩与成矿相差十几百万年; ③ 燕山晚期许多浅侵位的花岗质岩体与相关的锡、铀矿化之间也存在明显的时间差。这一时间差反映了成岩作用与成矿作用之间在物质来源和地质构造背景等方面的差异, 可能揭示了花岗岩与矿床在形成机制上的根本性差异。南岭地区大规模金属成矿作用主要与拉张的动力学背景、壳幔相互作用、高的热流值, 以及深部流体的参与密切相关。

关键词: [陆壳重熔型花岗岩](#) [成岩作用](#) [成矿作用](#) [时间差](#) [地幔流体](#) [南岭中国地质大学地球科学与资源学院, 北京, 100083](#)

Differences between Rock-forming and Related Ore-forming Times for the Mesozoic Granitoids of Crust Remelting Types in the Nanling Range, South China, and Its Geological Significance [Download Fulltext](#)

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Abstract:

The temporal differences between the emplacement of Mesozoic granitoids of crust remelting types and related mineralizations are quite common in the Nanling Range area, South China. Three major cases are recognized. (1) The host granitic rocks of those granite-type uranium deposits are mostly of the Indosinian Period (235~205 Ma), whereas the uranium mineralization took place in the late Yanshanian Period (younger than 140 Ma). (2) The first stage of the Yanshanian Period (170~150 Ma) was the time when most crust remelting granitic plutons developed. However, the associated mineralizations of W, Sn and other rare metals mostly occur in the second stage of the Yanshanian Period (150~139 Ma). (3) Many shallow-emplaced granitic rocks developed in the late Yanshanian Period (139~98 Ma), which are closely related with Sn and U mineralizations. There are also differences between rock-forming and ore-forming times. It is suggested that this temporal difference might reflect their differences in material sources as well as geotectonic settings, and further more, the primary difference of the mechanisms between granite formation and ore formation. It is concluded that the large-scale metallogeny in the Nanling Range area was essentially related with extension geotectonic setting, crust-mantle interaction, high heat flow, and the participation of deep-sourced fluids.

Keywords: [crust remelting type](#) [rock-formation](#) [ore-formation](#) [temporal difference](#) [mantle fluid](#) [Nanling Range](#)

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