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摘要:

内蒙古黄岗锡铁矿是大兴安岭南段成矿带中的一个重要矿床。LA-ICP-MS锆石U-Pb测年结果表明,黄岗岩体中的钾长花岗岩和花岗斑岩分别形成于 136.7 ± 1.1 Ma和 136.8 ± 0.57 Ma,属早白垩世的产物。黄岗花岗岩体 SiO_2 含量较高(66.81%~77.39%), Al_2O_3 含量低(11.33%~14.54%),显著贫镁,ALK较高(5.65%~10.67%), $\text{K}_2\text{O}/\text{Na}_2\text{O}$ 值在0.32~10.53,平均为2.78。稀土配分曲线呈右倾轻稀土富集型,铈强烈亏损, δEu 值为0.03~0.20。富集高场强元素Zr、Hf和大离子亲石元素Rb、U、Th,而元素P、Ti、Ba、Sr明显亏损,具有与洋岛玄武岩相似的Y/Nb等元素比值(>1.2)。上述特征与典型的A1型板内非造山花岗岩一致,其成因可能为在岩石圈伸展环境下,幔源岩浆的底侵促使上覆的先存地壳发生部分熔融形成花岗岩岩浆,岩浆源区与壳幔混熔作用有关。

英文摘要:

Huanggang tin-iron deposit, Inner Mongolia, is an important deposit of the South Daxinganling metallogenic belt. LA-ICP-MS zircon U-Pb dating results show that the K-feldspar granite and granite-porphyry in the Huanggang rocks were formed at 136.7 ± 1.1 Ma and 136.8 ± 0.57 Ma, respectively. The Huanggang granites are characterized by SiO_2 content (66.81%~77.39%), Al_2O_3 content (11.33%~14.54%), and significant depletion of magnesium, high ALK (5.65%~10.67%), the $\text{K}_2\text{O}/\text{Na}_2\text{O}$ values format a range of 0.32 to 10.53, averaging 2.78. The chondrite-normalized REE pattern shows LREE enrichment, strong negative Eu anomalies, and δEu at 0.03 to 0.20. The high field strength elements such as Zr, Hf and lithophile elements such as Rb, U and Th are enriched, whereas the elements P, Ti, Ba and Sr are significantly depleted and their have similar Y/Nb values (>1.2) to those of oceanic island basalts. These features are coincident with the typical A1 within-plate anorogenic granite. Its genesis might be ascribed to the underplating of the mantle-derived magma which caused younger crust partial melting to form granitic magma within the lithosphere extension environment, and its magma source are related to the crust-mantle mixed remelting.

关键词: [A型花岗岩](#) [年代学](#) [地球化学](#) [黄岗锡铁矿区](#) [内蒙古](#)

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