

安徽铜陵新桥铜-硫-铁-金矿床中石英闪长岩  
和辉绿岩锆石SHRIMP年代学及其意义

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摘要: 对安徽铜陵新桥铜-硫-铁-金矿床区内的石英闪长岩和辉绿岩中的锆石分别进行了SHRIMP精确定年研究, 石英闪长岩中锆石 $^{206}\text{Pb}/^{238}\text{U}$ 年龄为 $(140.4\pm 2.2)$  Ma, 辉绿岩中锆石的年龄较复杂, 其中发现了元古代锆石颗粒, 其锆石 $^{207}\text{Pb}/^{206}\text{Pb}$ 年龄为 $(2\ 261\pm 14)$  Ma,  $(1\ 612\pm 8)$  Ma,  $(919\pm 12)$  Ma,  $(831\pm 17)$  Ma。另外还有一组早古生代年龄的锆石, 锆石 $^{206}\text{Pb}/^{238}\text{U}$ 年龄为 $(443\pm 13)$  Ma。以上这些新资料说明该区可能存在元古代基底的信息, 且燕山期岩浆活动对本区成矿具有重要意义。

关键词: 铜陵新桥铜矿; 锆石SHRIMP定年; 元古代基底; 燕山期

中图分类号: P597.3 文献标识码: A 文章编号: 1000-3657 (2004) 02-0169-05

SHRIMP U-Pb geochronology of the Xinqiao Cu-S-Fe-Au deposit  
in the Tongling ore district, Anhui

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Abstract: High-precision SHRIMP U-Pb dating was performed on zircon from quartz diorite and diabase in the Xinqiao Cu-S-Fe-Au deposit, Tongling ore district, Anhui. Zircon from quartz diorite yielded a  $^{206}\text{Pb}/^{238}\text{U}$  age of  $(140.4\pm 2.2)$  Ma, while the zircon age of diabase is relatively complex. Several Proterozoic zircon grains were found in diabase, which yielded  $^{207}\text{Pb}/^{206}\text{Pb}$  ages of  $(2\ 261\pm 14)$  Ma,  $(1\ 612\pm 8)$  Ma,  $(919\pm 12)$  Ma and  $(831\pm 17)$  Ma. In addition, there is also a group of Early Paleozoic zircon grains, whose  $^{206}\text{Pb}/^{238}\text{U}$  age is  $(443\pm 13)$  Ma. The above new data give the information of the possible existence of Proterozoic basement in this district, and Yanshanian magmatism is of great significance for mineralization in the district.

Key words: Zircon SHRIMP dating; Tongling ore district; Xinqiao copper deposit; Proterozoic basement; Yanshanian