

颜炳强, 万渝生, 王世进, 刘敦一, 谢士稳, 刘守偈, 董春艳, 马铭株. 2013. 胶东谭格庄地区奥长花岗质片麻岩和斜长角闪岩的野外地质和锆石SHRIMP定年. 岩石学报, 29(2): 619-629

胶东谭格庄地区奥长花岗质片麻岩和斜长角闪岩的野外地质和锆石SHRIMP定年

作者	单位
<a href="#">颜炳强</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">万渝生</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">王世进</a>	<a href="#">山东省地质调查院, 济南 250013</a>
<a href="#">刘敦一</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">谢士稳</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">刘守偈</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">董春艳</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>
<a href="#">马铭株</a>	<a href="#">中国地质科学院地质研究所北京离子探针中心, 北京 100037</a>

基金项目: 本文受中国地质调查局项目(1212010811033、1212011120151、1212011121062)资助.

摘要:

对胶东谭格庄地区一地质剖面进行了详细野外观察和锆石SHRIMP年代学研究. 剖面主要是由奥长花岗质片麻岩和斜长角闪岩组成, 两者互层产出并一起发生褶皱变形, 在强变形域两者完全平行化. 所以, 在强变形地区, 不同成分岩性的薄层状互层产出不能作为变质沉积岩的识别标志. 奥长花岗质片麻岩(S1105)形成于 $2496 \pm 10\text{Ma}$ , 遭受了古元古代早期和晚期变质. 两个斜长角闪岩样品(S1238和S0812)都只发育变质锆石, 年龄分别为 $1842 \pm 3\text{Ma}$ 和 $1833 \pm 13\text{Ma}$ . 该剖面岩石记录的两期变质作用在胶东地区具有普遍意义. 结合前人研究, 作者指出该地区太古宙末存在区域性变质深熔作用, 早期地壳受到了强烈的再造; 古元古代末的变质作用具有带状分布特点, 与造山作用有关.

英文摘要:

~2.5Ga and ~1.9Ga metamorphic events are widely recorded all over the North China Craton, being important for understanding the formation and evolution of the craton. Eastern Shandong is located in the eastern North China Craton and contains metamorphic rocks with ca. 2.5Ga and ca. 1.9Ga metamorphic zircon ages. For further constraining the Early Precambrian tectono-thermal events in the area, we carried out detailed field observation and SHRIMP U-Pb zircon dating in a road cutting section near Tangezhuang, Laixi County, eastern Shandong. The outcrop consists of interlayered and folded trondhjemitic gneisses and amphibolites. The foliation of the rocks is completely parallel to each other and shows thin interlayer in strong deformation domain, suggesting that thin interlayers of different components cannot be considered as a fact that the protoliths are sedimentary in origin. SHRIMP U-Pb zircon dating yielded an age of  $2496 \pm 10\text{Ma}$  (MSWD=0.45) for magmatic zircons from a trondhjemitic gneiss sample (S1105), with metamorphic rims having ages of ca. 2.5Ga and ca. 1.9Ga. Two amphibolite samples (S1238 and S0812) contain metamorphic zircons with ages of  $1842 \pm 3\text{Ma}$  (MSWD=1.6) and  $1833 \pm 13\text{Ma}$  (MSWD=1.0), respectively, but no magmatic zircons have been identified. Combining with previous researches, we suggest that the Late Neoproterozoic metamorphism widespread over the whole Jiaodong terrane, leading to anatexis and recycling of older crust material, and the Late Paleoproterozoic metamorphism shows a zonal feature as a result of orogenesis.

关键词: [胶东](#) [SHRIMP](#) [锆石定年](#) [新太古代](#) [古元古代](#)

投稿时间: 2012-10-15 最后修改时间: 2013-01-15

[HTML](#) [查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

本系统由北京勤云科技发展有限公司设计

linezing.com