

皖北地区新元古代构造背景的转换：来自碎屑岩地球化学的证据

[点此下载全文](#)

引用本文：孙林华,桂和荣.2011.皖北地区新元古代构造背景的转换：来自碎屑岩地球化学的证据[J].地球学报,32(5):523-532.

DOI: 10.3975/cagsb.2011.05.02

摘要点击次数: 850

全文下载次数: 761

作者	单位	E-mail
孙林华	宿州学院地球科学与工程学院	sunlinh@hotmail.com
桂和荣	宿州学院地球科学与工程学院	

基金项目:安徽省高校优秀青年人才基金(编号: 2010SQRL190); 宿州学院科研平台项目(编号: 2010YKF30)

中文摘要:在对安徽省北部宿州新元古代史家组砂岩地球化学特征分析的基础上,结合前人发表的淮南和凤阳新元古代刘老碑组页岩的地球化学数据,对它们的物源和构造背景进行了对比讨论。结果表明:刘老碑组页岩的地球化学特征表明其来自于中-酸性火成岩高程度的首次风化,而史家组砂岩则来自于经历了再循环的古老地壳物质较低程度的风化。刘老碑组页岩相对史家组砂岩具有高(MgO+Fe₂O₃)、TiO₂含量和Al₂O₃/SiO₂比值的特征,结合La-Th-Sc和Th-Sc-Zr/10判别图解,表明二者可能沉积于不同的构造背景,其中前者属于大陆岛弧(也可能是弧后盆地),而后者则形成于相对稳定的被动大陆边缘或者板内。结合前人关于皖北新元古代研究的相关进展,证实了华北板块东南缘构造背景在新元古代时期经历了从活动向稳定的转变。

中文关键词:[地球化学](#) [碎屑岩](#) [新元古代](#) [构造背景](#) [皖北](#)

Transition of Neoproterozoic Tectonic Background in Northern Anhui Province: Evidence from Geochemistry of Clastic Rocks

Abstract:Based on a geochemical analysis of sandstones of Neoproterozoic Shijia Formation in Suzhou of northern Anhui Province, in combination with previously published geochemical data of shales of Neoproterozoic Liulaobei Formation, the authors made a comparatively study of the provenance and tectonic setting of these two suites of clastic rocks. The results indicate that the shales of Liulaobei Formation might have originated from the first cycle of intermediate-felsic volcanic rocks with intense weathering, whereas sandstones of Shijia Formation were probably generated by low-intense weathering of the recycled old crust material. The shales of Liulaobei Formation are characterized by high (MgO+Fe₂O₃) and TiO₂ content and Al₂O₃/SiO₂ ratios relative to the sandstones of Shijia Formation. These data, together with La-Th-Sc and Th-Sc-Zr/10 discrimination diagrams, imply that they were deposited in different settings, i.e., the former was deposited in a continental island arc (probably back-arc basin), whereas the latter was in a passive continental margin or intra-plate environment. In combination with previous studies of the Neoproterozoic evolution in northern Anhui Province, these results demonstrate that the tectonic background of the southeast margin of North China Craton underwent transition from active to passive during Neoproterozoic.


keywords:[geochemistry](#) [clastic rock](#) [Neoproterozoic](#) [tectonic setting](#) [northern Anhui Province](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

版权所有 《地球学报》编辑部 Copyright©2008 All Rights Reserved

主管单位: 国土资源部 主办单位: 中国地质科学院

地址: 北京市西城区百万庄大街26号, 中国地质科学院东楼317室 邮编: 100037 电话: 010-68327396 E-mail: dqjxub@126.com

 技术支持: 东方网景