

谢桂青, 毛景文, 胡瑞忠, 李瑞玲, 曹建劲. 中国东南部中—新生代地球动力学背景若干问题的探讨[J]. 地质论评, 2005, 51(6): 613-620

中国东南部中—新生代地球动力学背景若干问题的探讨 [点此下载全文](#)

[谢桂青](#) [毛景文](#) [胡瑞忠](#) [李瑞玲](#) [曹建劲](#)

1)

中国地质大学地质过程与矿产资源国家重点实验室, 北京, 100083 2)

中国地质科学院矿产资源研究所, 北京, 100037 3)

中国科学院地球化学研究所矿床地球化学开放研究实验室, 贵阳, 550002

基金项目: 本文为国家自然科学基金资助项目(编号40402011和40434011)、国家重点基金项目(编号G1999043211)、中国博士后基金资助项目、中国科学院创新项目(编号KZCX3—SW—125)和中国科学院地球化学研究所开放实验室基金资助项目(编号200402)的成果。

DOI:

摘要:

近年来, 有关中国东南部中新生代地球动力学背景的研究已取得了重要的进展, 主要体现在: 地幔性质、岩石圈减薄、岩石圈伸展和构造背景四个方面。研究表明, 中国东南部中新生代的地幔性质主体是亏损地幔和EM II型富集地幔混合, 中生代以富集地幔为主, 而新生代主体为亏损地幔。中国东南部晚中生代经历了岩石圈减薄, 并伴生了玄武质底侵作用, 具有较为复杂的岩石圈增生~减薄过程。大量事实表明中国东南部中生代存在多期岩石圈伸展事件, 侏罗纪存在局部岩石圈伸展, 主要集中于内陆地区, 白垩纪经历了区域性岩石圈伸展。近二十年来, 中国东南部大规模岩浆的构造背景一直存在着争论, 焦点在于太平洋俯冲对中国东南部产生什么的影响。从目前已有的资料来看, 白垩纪地幔源区受到太平洋俯冲的影响, 太平洋俯冲和玄武质岩浆底侵诱发了地壳加厚, 岩石圈拆沉和软流圈上涌而导致岩石圈伸展是中国东南部主要构造背景。但是, 中国东南部晚中生代以来的岩石圈伸展—减薄及其深部动力学机制是目前急需进一步深入探讨的问题。

关键词: [地幔性质](#) [岩石圈减薄](#) [地壳拉张](#) [构造背景](#) [中国东南部](#)

Discussion on Some Problems of Mesozoic and Cenozoic Geodynamics of Southeast China [Download Fulltext](#)

[XIE Guiqing](#) [MAO Jingwen](#) [HU Ruizhong](#) [LI Ruling](#) [CAO Jianjin](#)

1)

State Key Lab. of Geological Processes and Mineral Resources, and Mineral Resources, China University of Geosciences, Beijing, 100083; 2)

Institute of Mineral Resources, Chinese Academy of Geological Sciences, Beijing, 100037 3)

Institute of Geochemistry, Chinese Academy of Sciences, Guiyang, 550002

Fund Project:

Abstract:

In recent year, many achievements in scientific research on Mesozoic and Cenozoic geodynamics setting in Southeast China have been made, which include mantle source, lithosphere thinning, lithosphere extension events and tectonics setting in southeast China. Geochemical and isotopic studies indicated that mantle source are composed of depleted asthenospheric mantle and enriched lithospheric mantle beneath the crust, the subcontinental lithospheric mantle (SCLM) are predominantly EM II lithospheric mantle in the Mesozoic while asthenospheric mantle in the Cenozoic in southeast China. It is suggested that the lithospheric thinning took place in the late Mesozoic accompanied by basaltic magma underplating, which has complicated lithospheric accretion and thinning process beneath the crust in southeast China. Several lines of evidences demonstrated that lithospheric extension occurred in this region during the Late Mesozoic to Cenozoic. Moreover, local extension occurred in inland area of southeast China in the Jurassic while regional extension in the Cretaceous in southeast China. The tectonic setting that accounts for Mesozoic magmatism in southeast China has been an issue of little consensus since the last two decades and focused on whether the extensive magmatism province are related to Pacific plate subduction in the regions. From available data, it is thought that Cretaceous mantle sources have affected by Pacific plate subduction and basaltic magma underplating resulted in the lithospheric thinning and subsequent lithospheric delamination and asthenospheric upwelling. However, lithospheric extension—thinning and its deep process beneath the crust in the Mesozoic to Cenozoic in southeast China remains to be further studied.

Keywords: [mantle source](#) [lithospheric thinning](#) [lithospheric extension](#) [geodynamics setting](#) [southeast China](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是第694003位访问者 版权所有《地质论评》

地址: 北京阜成门外百万庄路26号 邮编: 100037 电话: 010-68999804 传真: 010-68995305

本系统由北京勤云科技发展有限公司设计