

陈必河, 贾宝华, 刘耀荣, 彭学军, 贺春平. 湘南中生代火山岩中尖晶石二辉橄榄岩包体Sm-Nd等时线年龄及地质意义[J]. 地质论评, 2004, 50(2): 180-183

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摘要:

湖南宁远太阳山中生代玄武质火山岩内, 产较丰富的尖晶石二辉橄榄岩包体。包体经人工碎样, 镜下挑选了含铬尖晶石、镁橄榄石、含铬透辉石、斜方辉石、全岩5个样品, 由国土资源部天津地质矿产研究所同位素室测试, 得出 Sm-Nd全岩-单矿物等时线同位素年龄 2702 ± 19 Ma。进而根据测试结果和以往资料综合分析, 认为华南陆块岩石圈是沿垂向演化增生, 由下往上依次为: 上地幔岩垫托、结晶基底、褶皱基底、褶皱盖层、沉积盖层5个构造层。其中, 上地幔岩起着底板垫托作用, 形成于新太古代, 为该地区最古老岩石。

关键词: [中生代](#) [火山岩](#) [尖晶石二辉橄榄岩包体](#) [同位素年龄](#) [等时线同位素年龄](#) [湖南](#)

Sm-Nd Isochron Age of Spinel-Lherzolite Xenoliths from Mesozoic Volcanic Rocks in the South Hunan and Its Geological Significance [Download Fulltext](#)

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Abstract:

There are a lot of spinel-lherzolite xenoliths in the Taiyangshan Mesozoic basalt in Ningyuan, Hunan province. Five samples of chrome spinel, forsterite, chrome-diopside, orthorhombic and whole rock were picked out under microscope from the broken pieces, were analysed in the Isochronology Center, Tianjin Institute of Geology and Mineral Resources, Geological Survey of China. A Sm-Nd whole rock-single mineral isochron age of 2702 ± 19 Ma was got. According to this result and having synthesized the data others got before, writers consider the lithosphere of southern China was vertically multiplied. From bottom upward in order: upper mantle mat, crystallized basement, folded basement, folded cover and sedimentary cover. Among five structural layers, upper mantle rock plays a role of motherboard cushion, was formed at Neoproterozoic is the oldest rock in this district.

Keywords: [xenoliths](#) [spinel-lherzolite](#) [isotopic age](#) [South Hunan](#)

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