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巴尔喀什成矿带Cu-Mo-W矿床的辉钼矿Re-Os同位素年龄测定及其地质意义 [点此下载全文](#)

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摘要:

巴尔喀什成矿带是世界著名的中亚成矿域斑岩型铜钼成矿带, 产出许多斑岩型铜钼矿床和一些石英脉-云母能是一个多核成矿系统, 具有以走滑断裂为边界构成的断裂构造体系并受之控制。本文对巴尔喀什成矿带巴尔喀什品进行了铼-钨同位素分析, 得到博尔雷大型斑岩型铜(钼)矿床和东科翁腊德、扎涅特、阿克沙套石英脉-云母年龄(平均值)分别为315.9 Ma、298.0 Ma、295.0 Ma和289.3 Ma; 其中, 东科翁腊德、阿克沙套和扎涅特等3个7.9±0.99/-3.4) Ma, MSWD值为0.97。辉钼矿铼-钨年龄说明巴尔喀什成矿带铜-钼-钨成矿作用发生在315.9 Ma。矿床的形成可分为两期: 一期为斑岩型铜钼矿床, 形成于~315.9 Ma; 另一期为石英脉-云母型钨钼矿床, 形成年龄和等时线年龄, 推测该地区花岗岩和伟晶岩的形成时代与相应的矿床基本同时, 均为晚石炭世, 属海西期国内西、东准噶尔和东天山斑岩铜钼矿带的对比表明, 巴尔喀什成矿带铜钼成矿作用的年龄介于东天山土屋-瓦岩铜矿之间。分析表明, 中亚成矿域大规模斑岩型铜钼成矿作用集中在晚石炭世, 属海西晚期构造-岩浆活动的

关键词: [铼-钨同位素年龄](#) [辉钼矿](#) [成矿时代](#) [铜-钼-钨矿床](#) [巴尔喀什成矿带](#) [哈萨克斯坦](#)

Re-Os Dating of Molybdenites from Cu-Mo-W Deposits in Balkhash Metallogenic Belt, Kazakhstan: Geological Significance [Download Fulltext](#)

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Abstract:

The Balkhash Metallogenic Belt in Kazakhstan, with the output of many porphyritic Cu-Mo deposits, is a very famous porphyritic Cu-Mo metallogenic belt in Central Asian Metallogenic Belt, represented as a multiple core metallogenic system controlled by the boundary strike-slip fault system. Molybdenite samples from western Balkhash metallogenic belt are selected for Re-Os isotopic dating. The Re-Os ages of 315.9 Ma, 298.0 Ma, 295.0 Ma and 289.3 Ma, respectively. Meanwhile, the molybdenite from Akshatau W-Mo deposits give a Re-Os isochron age of 297.9 Ma, with MSWD of 0.97. Re-Os dating indicates that the Cu-Mo-W metallogenesis in western Balkhash metallogenic belt formed during Late Carboniferous (315.9 Ma~289.3 Ma), while porphyry Cu-Mo deposits formed at ~315.9 Ma, and quartz-vein greisen W-Mo deposits formed at ~298.0 Ma. The Re-Os model and isochron ages suggest that Late Carboniferous porphyry granitoid and pegmatite formation is related to the Hercynian movement. Comparing to the Juggar-East Tianshan porphyry Cu metallogenic belt in northwestern Tianshan and west Junggar, Cu-Mo metallogenesis in Balkhash metallogenic belt, is between that of Tuwu-Yandong and Baogutu in Tianshan and west Junggar. Concluded, the large-scale porphyry Cu-Mo metallogenesis in Central Asian Metallogenic Belt in Late Carboniferous due to Hercynian tectonic-magmatic activities.

Keywords: [Re-Os isotopic age](#) [molybdenite](#) [metallogenetic time](#) [Cu-Mo-W deposits](#) [Balkhash Metallogenic Belt](#)