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西秦岭北缘与埃达克岩和喜马拉雅型花岗岩有关的斑岩型铜-钼-金成矿作用

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摘要:

埃达克岩是以往20年中特别引起人们兴趣和关注的与成矿有关的中酸性岩浆岩之一,而喜马拉雅型花岗岩是最近提出来的也与地壳加厚有关的花岗岩类。本文的研究表明,在西秦岭北缘存在印支期的埃达克岩和喜马拉雅型花岗岩,而且它们均与金、铜、钼等成矿作用有关。研究表明,本区阿娥山和德乌鲁-黑河地区的埃达克岩和喜马拉雅型花岗岩具有较高的 $Mg^{\#}$ 数值,可能是加厚地壳底部幔源岩浆和壳源岩浆混合形成的,而温泉和柴家庄地区的埃达克岩和喜马拉雅型花岗岩 $Mg^{\#}$ 低,应当是加厚的下地壳部分熔融形成的。文中介绍了西秦岭北带斑岩铜-钼-金矿带的地质背景,讨论了埃达克岩和喜马拉雅型花岗岩的特征及其与成矿作用的关系,提出了进一步找矿工作的建议。研究表明,三叠纪时期的西秦岭造山带地壳厚度大,岩浆活动频繁,找矿潜力巨大,是我国新一轮的铜钼金找矿区之一,发展前景很大。

英文摘要:

Adakite is one of intermediate and acidic magmatite related to mineralization, and it has been taken the special attention and interest during the latest 20 years; Himalayan granite is a term which is introduced recently to describe a kind of granite related to crust thickening. The study results in this essay show that in the northern edge of West Qinling exist Indosinian adakite and Himalayan type granite which are related with mineralization of gold, copper and molybdenum. The adakite and Himalayan type granite in Ayishan and Dewulu-Heihe area are characterized by the high value of $Mg^{\#}$, which may be caused by the mixing of mantle magma and crustal magma in the bottom of thickening crust, but the low value of $Mg^{\#}$, which adakite and Himalayan granite in Wenquan and Chijiazhaung area have, should be caused by partial melting of thickened low crust. In this paper, the geological setting of porphyry Cu-Mo-Au ore-belt in the northern section of West Qinling is introduced, the characteristics of adakite and type granite, and the relation with mineralization are analyzed. The study work reveal that orogenic zone of west Qinling formed in Triassic Period should be a favorable area for finding Cu-Mo-Au deposit due to the thick crust and frequently magmatic activities.

关键词: [西秦岭](#) [斑岩铜矿](#) [埃达克岩](#) [喜马拉雅型花岗岩](#) [成矿作用](#)

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