

廖震,王玉往,王京彬,龙灵利,邹滔,张会琼,李德东. 2012. 内蒙古大井锡多金属矿床岩脉LA-ICP-MS锆石 U-Pb定年及其地质意义. 岩石学报, 28(7): 2292-2306

内蒙古大井锡多金属矿床岩脉LA-ICP-MS锆石 U-Pb定年及其地质意义

作者	单位	E-mail
廖震	有色金属矿产地质调查中心, 北京 100012	lz@cnnm.com
王玉往	有色金属矿产地质调查中心, 北京 100012 ; 中色地科矿产勘查股份有限公司, 北京 100012	
王京彬	有色金属矿产地质调查中心, 北京 100012 ; 中色地科矿产勘查股份有限公司, 北京 100012	
龙灵利	有色金属矿产地质调查中心, 北京 100012	
邹滔	有色金属矿产地质调查中心, 北京 100012 ; 昆明理工大学国土资源工程学院, 昆明 650093	
张会琼	有色金属矿产地质调查中心, 北京 100012 ; 中国地质大学, 北京 100083	
李德东	有色金属矿产地质调查中心, 北京 100012	

基金项目: 本文受危机矿山项目(200699105)资助.

摘要:

内蒙古大井矿床是我国北方一个重要的锡多金属矿床, 矿区浅成-超浅成岩脉发育, 并与矿脉密切共生. 前人的年代学研究结果显示矿区岩脉与矿脉同属于燕山中晚期岩浆热液活动的产物, 因此该矿床成因被定为与矿区次火山岩脉有关的热液脉型矿床. 本文通过选取矿区分布最广, 且与矿脉相伴出现的霏细岩脉和英安斑岩脉进行LA-ICP-MS锆石U-Pb定年, 结果表明两个英安斑岩脉样品DJ-7和YX-20的形成年龄分别为 240 ± 1 Ma和 239 ± 1 Ma, 而霏细岩脉样品DJ-1的形成年龄为 162 ± 1 Ma. 因此, 矿区岩脉至少形成于两个不同时代, 即印支早期和燕山中期. 结合前人在区域上的研究成果分析, 认为英安斑岩脉和霏细岩脉形成的构造背景分别为同造山-后造山转换阶段和造山后的伸展阶段. 因为该矿床的成矿年龄可以确定在140Ma左右, 所以本文认为矿区岩脉的形成与矿床的形成并无直接关系, 只是为后者提供了有利的就位空间.

英文摘要:

The Dajing deposit is an important tin-polymetallic in Inner Mongolia, North China. The hypabyssal dikes, which are closely coexisting with ore veins in deposit, are extensively developed. The previous chronology studies show that both the dikes and ore veins were generated in Mid-Late Yanshanian Period in this study area, so the deposit was regarded to be magmatic hydrothermal type deposit, which related to the activities of the subvolcanic dike swarms in this area. We obtain the zircon LA-ICP-MS U-Pb ages of dacite porphyry and felsite dikes, which are widely distributed in the deposit and were considered to be closely connected with the genesis of the deposit. The zircon U-Pb ages are 240Ma and 239Ma for the dacite porphyry of DJ-7 and YX-20 respectively, and 162 ± 1 Ma for felsite dike of DJ-1. These results implicate that the dikes were formed in Early Indosinian and Middle Yanshanian in the deposit area. Combining with the previous regional research, these results indicate that the dacite porphyry was formed in syn-orogenic to post-orogenic setting, and felsite was formed in post-orogenic setting. Because of the 140Ma ore-forming age, we concluded that the dikes in the ore areas have no obvious relationship with the deposit genesis. However, it provided the advantageous space for the formation of the ore veins.

关键词: [LA-ICP-MS锆石U-Pb定年](#) [岩脉](#) [锡多金属矿床](#) [大井](#)

投稿时间: 2011-11-18 最后修改时间: 2012-03-20

[HTML](#) [查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

黔ICP备07002071号-2

主办单位: 中国矿物岩石地球化学学会

单位地址: 北京9825信箱/北京朝阳区北土城西路19号

本系统由北京勤云科技发展有限公司设计

linezing.com