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山东金岭金矿床成矿流体地球化学特征

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摘要:

对山东金岭金矿矿石中的流体包裹体进行了岩相学、显微测温及单个包裹体成分激光拉曼光谱研究. 结果表明: 金矿石中发育含CO₂相、气液两相和CO₂相等三类包裹体, 成矿过程中, 流体经历了NaCl-H₂O-CO₂体系的不混溶作用; 成矿流体具有低盐度(6.6%~10.8% NaCleqv)、低密度(0.54~0.93g·cm⁻³)的特点; 成矿温度集中于280~300℃之间, 成矿压力为70~119MPa, 成矿深度为6.78~9.07km; 矿石石英中流体包裹体成分普遍含CO₂. 结合新近的流体包裹体同位素分析结果和测年数据, 认为成矿流体为地幔流体、岩浆流体和大气降水的混合物, 矿床成因类型为幔源流体参与成矿的造山型金矿床中成亚类.

英文摘要:

The petrographic, microthermometric and laser Raman microspectroscopic studies on fluid inclusions developed in auriferous ore of Jinling gold deposit, Shandong Province, were carried out. The results show that there are three types of fluid inclusions in auriferous ore, including CO₂-bearing, aqueous two-phase, and CO₂ fluid inclusions, fluid immiscibility occurred in NaCl-H₂O-CO₂ system in the ore-forming process. The ore-forming fluids show the features of low salinity (6.6%~10.8% NaCleqv), low density (0.54~0.93g·cm⁻³). Mineralization temperature is concentrated in 280~300℃, and the pressure ranges from 70 to 119MPa, which equals to a depth of 6.78~9.07km. The composition of fluid inclusions in quartz of ore are rich in CO₂. Considering with the isotopic analysis and dating data, it is suggested that the ore-forming fluid are the mixture of deep mantle fluids, magmatic fluids and meteoric water, the genesis of the deposit is mesozonal orogenic gold deposit with mantle fluids involved in its mineralization.

关键词: [流体包裹体](#) [成矿流体](#) [地球化学特征](#) [山东金岭](#)

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