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中亚成矿域地质矿产研究的若干重要问题

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摘要:

我国新疆地处中亚成矿域的核心地区, 具有得天独厚的地理和资源优势。在执行国家“十一五”科技支撑计划重点项目08课题并取得初步成果的同时, 我们意识到中亚成矿域目前还存在如下关键科学问题: 中亚成矿域的形成和演化在全球地质构造体系中的地位和作用; 环E喀什-西准噶尔成矿省的地质背景: 是岛弧环境还是后碰撞环境形成了斑岩型矿床以及相关浅成低温热液型矿床? 成吉斯-塔尔巴哈台山的地质演化及其对金属成矿作用的制约机制; 天山和阿尔泰山地区广泛发育的韧性剪切带对金成矿作用控制时限与区域构造演化的耦合问题: 中地壳韧性剪切带如何会聚成矿流体? 晚古生代晚期火山岩和次火山岩中铜金多金属矿集区的形成和演化; 印支期地质过程的成矿意义和地球动力学背景; 中生代陆相盆地演化与能源资源形成的动力学过程。对这些科学问题的探讨必然带动中亚成矿域地质研究的深入, 并取得矿产资源基础的突破。

英文摘要:

Located in the core area of Central Asian Metallogenic Domain (CAMD), Chinese Xinjiang has the unique geographic and resource advantages. A steady political situation with government encouraging the cooperative research project focused on CAMD, as well as the friendly diplomatic relationship and staff communication with surrounding countries, all build a firm foundation for us to investigate the CAMD as a whole. With some new achievements, we come to realize that, in the current study on CAMD, there are such scientific problems as followed: The status and role that the formation and evolution of CAMD in global geological tectonic system; the geological background of circum Balkhash-nghar metallogenic province: was it island-arc or post-collisional setting that develop the porphyry deposits and related epithermal deposits? The geological evolution of the Chigiz-Taerbahatai and its constraints on ore-formation; Problems of the widespread shear zones in Tianshan and Altay mountains on the timing control of gold deposition and coupling with regional tectonic evolutions: how do the shear zones in middle-crust level concentrate the ore-forming fluids? Formation and evolution of the ore-concentrated area in Late Paleozoic volcanic and sub-volcanic rocks: was it the magmatic fluid forced by caldera or the activity of ancient hot spring that form the giant gold deposits? The ore-forming significance and geodynamic background of the Indosinian geological processes. Discussions on those crucial scientific problems would definitely lead to further research on the geological development of CAMD, along with new breakthrough of mineral exploration. In order to promote the survey on the geology and mineralization in CAMD, we selected 44 scientific papers in these two special issues (Acta Petrologica Sinica 2008 December volume and this volume), which mainly illustrate the latest progresses on the related topics.

关键词: [中亚成矿域](#) [准噶尔](#) [天山](#) [塔里木](#) [新疆](#)

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