

ROLE OF CATALYSIS IN CREATION OF MINERAL DEPOSIT

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Modern achievements in investigation of catalysis allow to do assumption that velocity and energy of ore-forming reactions depend on it. Phenomena of catalysis amplify acidic-filtrating effect, influence on genesis and composition of carboniferous, formation of oil and gas fields, forming of Fe-Mn concretions on oceanic bottom, crystallization of diamonds and etc. Exceptional parageneses of chemical elements, particularly presence of elements of VIII group Mendeleev's periodic system (Pt, platinoids, Fe, Co, Ni) and separate elements of neighboring groups (Cr, Mn, Mo, W, Re, TR) in many largest world mineral deposits probably are consequence of catalysis.

Parageneses of rare elements, REE, platinoids plus siderophile and ore-forming chalcophile elements have been occurred at a number of gold and another deposits (Witwatersrand, Suhoy Log, Muruntow and etc.). Well-known worldwide association of ore deposits with oil and gas fields and ore stuff with bitumen probably in a large measure is a result of catalysis influence.

The authors offer ways and methods of investigation of catalysis influence on forming of mineral-raw resources. The first way is observation of mineral and geochemical parageneses distinctive for certain types of mineral deposits. The another way is modulation by lab conditions, especially investigation of kinematics of chemical ore-forming reactions.

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