

D. A. VARLAMOV, V. N. ERMOLAEVA, S. JANČEN, N. V. CHUKANOV.
OXIDES OF THE PYROCHLORE-SUPERGROUP FROM A NON-SULFIDE
ENDOGENEOUS ASSOCIATION OF Pb-Zn-Sb-As MINERALS
IN THE PELAGONIAN MASSIF, MACEDONIA

* *Institute of Experimental Mineralogy RAS, Chernogolovka, Russia*

** *Institute of Problems of Chemical Physics RAS, Chernogolovka, Russia*

*** *Vernadsky Institute of Geochemistry and Analytical Chemistry RAS, Moscow, Russia*

**** *Faculty of Technology and Metallurgy,
Saints Cyril and Methodius University, Skopje, Macedonia*

Specific features of chemical composition, isomorphism and zonality have been studied for pyrochlore supergroup minerals (PSM) from metasomatic rocks of the ore body No. 9 (Nezilovo, Pelagonian massif, Republic of Macedonia). The ore body No. 9 bears unusual nonsulfide association of chalcophile elements: Zn, As, Sb and Pb. PSM were crystallized in all stages of metasomatism. Zoning of PSM and their relationships with associated minerals (Zn-bearing silicates, tilasite, barite, carbonates, various accessory Pb-, Sb- and Zn-oxides, *etc.*) indicate complex geochemical evolution of the ore occurrence No. 9. Possible mechanism of formation of nonsulfide parageneses of chalcophile elements is discussed.

Key words: pyrochlore supergroup minerals, chalcophile elements, metasomatic rocks, Pelagonian massif, Macedonia.