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ANTONI GAWEL

ORIGIN OF REALGAR IN THE FLYSCH DEPOSITS OF THE ENVIRONS OF BALIGROD (MIDDLE CARPATHIANS)

The paper deals -with the origin of realgar occurring in fissures of the Eocene shales and silicified hieroglyphic sandstones. In the present writer's opinion this mineral was deposited from alkaline polysulphide solutions originated from the basement underlying the Flysch formation. The presence of the latter is documented by the occurrence of exotic granite, mica schist and amphibolite pebbles within the Oligocene Krosno sandstones. Polysulphide solutions in question are supposed to represent a final stage of epimagmatic phenomena in the above crystalline rocks or to be the products of leaching of primary mineral veins by Flysch saline waters. When permeating through the Flysch deposits these solutions were partly oxidized in hypergenic zone by manganese oxides occurring as incrustations in fissures of the above deposits and as pseudomorphoses after manganese-bearing sphaerosiderites. The presence of heavy metal ions in these polysulphide solutions is manifested by the occurrence of traces of sphalerite within the deposit in question and the distribution of copper ores in variegated shales of the environs of Zaiuz and Monasterzec. Traces of mercury and cinnabar reported in some publications of 17 th century [Jonston (1633), Rzączyński (1721)] can also be of the same origin.

AHMED
MAHMOOD

CLINOPYROXENES OF THE TESCHENITIC ASSOCIATION FROM THE POLISH CARPATHIANS

A mineralogical study of the chief mineral component i.e. pyroxenes of the teschenitic association is made. The pyroxenes are mostly titan-augites. Besides these a later stage green variety occurs as the chief mafic mineral of the leucocratic rocks. It was identified as ferri-ferrous augite. All these pyroxenes are Si deficient Al along with a small amount of Ti, in certain cases, compensates this deficiency. The amount of Al+Ti, however, in the case of green ferri-ferrous pyroxene is insufficient and thus Fe^{3+} is supposed to fill the lacking Z sites. The pyroxenes investigated are compared with those from the other petrological provinces.

JERZY FIJAŁ

ON THE OCCURRENCE OF ASCHARITE IN THE KŁODAWA SALT DOME

Ascharite $Mg_2[B_2O_4OH]OH$ was found in the Zechstein salt deposit of the Kłodawa region within the horizon of the younger potassium salts (Z_3). It occurs as massive fine-grained aggregates embedded in kieserite-bearing carnallite rock. The mineral was identified using optical and electron microscopy, X-ray and infrared absorption analysis. Ascharite is the second borate mineral identified in this deposit, besides of boracite, reported earlier by Prochazka (1957) and Hanczke (1969)

ANDRZEJ PAULO

ON THE FORMATION OF RETGERSITE FROM CHELMIEC

The origin of retgersite from the vicinity of Chelmiec is discussed and its physical properties. X-ray and thermal data, and infra-red absorption spectrum are given. Author suggests that retgersite was formed by dehydration of morenosite, which was a primary weathering product of gersdorffite.

JAN KUBISZ

STUDIES ON SYNTHETIC ALKALI-HYDRONIUM JAROSITES. I. SYNTHESIS OF JAROSITE1 AND NATBOJAROSITE

An attempt of obtaining (potassium) jarosite and natrojarosite of theoretical composition using $Fe_2(SO_4)_3 \cdot aq$ and alkali sulphates or hydroxides at temperatures ranging from about 95 to 210°C failed in spite of using a fourfold excess of alkalis. Instead a series of hydronium-alkali jarosites with iron deficiency and excess of water resulted. The presence of excess ("additional") water is responsible for the contraction of the unit cell in K,H_3O -jarosites (or expansion in Na,H_3O -jarosites, respectively). The highest alkali (Na^+ or K^+) content obtained was only 67 to 75 per cent of lattice positions available and that of trivalent cation (Fe^{3+}) 98 to 83 per cent, indicating some kind of intercrystalline chemical equilibrium. These values approach those found in some natural minerals formed in weathering conditions. It was put forward that the lacking Fe^{3+} charge is balanced by H_2O for OH^- substitutions in $FeO_2(OH,H_2O)_4$ octahedra, and the iron vacancies being perhaps occupied by groupings of H_2O molecules, both accounting for the excess water. Thus the general chemical formula of minerals investigated should have the form:



BARBARA KWIECIŃSKA, JERZY SZPUNAR

NEUTRON DIFFRACTION STUDY OF GRAPHITE TEXTURE

The papers deals with results of examinations of natural graphites from Male Vrbno deposit in Czechoslovakia and from Pinerolo (Italy). As follows from microscope observations, chemical analysis, measurements of crystallite size using X-ray method the Czechoslovakian graphite displays higher metamorphic alterations. The texture measurements were made using neutron diffraction method. No significant differences in type of texture and in stage of its development were observed.