

Supergenní mineralizace skarnového cínového ložiska Zlatý Kopec v Krušných horách (Česká republika)

Supergene mineralization of the skarn tin deposit Zlatý Kopec in the Krušné hory Mts. (Czech Republic)

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Abstract

A new interesting supergene minerals were found at the abandoned ore deposit Zlatý Kopec near Boží Dar, Krušné hory Mountains, Czech Republic. Aurichalcite forms groups of light blue hemispherical aggregates up to 0.X mm in size. Aurichalcite is monoclinic, space group $P2_1/m$ with a 13.820(5), b 6.412(3), c 5.289(3) Å, β 101.03(5)°, V 460.0(3) Å³. Brochantite forms aggregates of vitreous emerald green crystals up to 0.0X mm in size in association with hemimorphite and Zn-rich malachite. Brochantite is monoclinic, space group $P2_1/a$ with a 13.089(4), b 9.837(4), c 6.019(3) Å, β 103.33°, V 754.1(5) Å³. Devillite forms pearly light blue tabular crystals up to 0.5 mm and radial aggregates up to 1 mm in size. Devillite is monoclinic, space group $P2_1/c$ with a 20.866(9), b 6.136(2), c 22.192(1) Å, β 102.73(5)°, V 2771(2) Å³. Greenockite occurs as yellow thin coatings on a sphalerite and it is hexagonal, space group $P6_3mc$ with a 4.10(3), c 6.737(3) Å, V 97.9(8) Å³. Hemimorphite forms white coatings, white crusts up to 3 mm thick and radial aggregates up to 3 mm in size. It is orthorhombic, space group $Imm2$ with a 8.363(1), b 10.711(1), c 5.1108(6) Å, V 457.79(9) Å³. Jarosite forms yellow powder and earthy aggregates in association with colourless crystals of gypsum. Jarosite is trigonal, space group $R-3m$, with a 7.295(7), c 17.198(1) Å, V 792.5(8) Å³. Linarite occurs as small dark blue crystals groups up to 1 mm in size. It is monoclinic, space group $P2_1/m$ with a 9.6910(4), b 5.6448(9), c 4.6847(6) Å, β 102.64(2)°, V 250.00(8) Å³. Zn-rich malachite forms light green hemispherical aggregates up to 0.2 mm in size. Zn-rich malachite is monoclinic, space group $P2_1/a$ with a 9.457(5), b 12.003(6), c 3.207(5) Å, β 97.8(2)°, V 360.7(6) Å³. Rare schulenbergite forms pearly light blue aggregates of very thin tabular crystals. Schulenbergite is trigonal, space group $P-3$ with a 8.286(1), c 6.999(3) Å, V 416.2(5) Å³. The X-ray powder diffraction patterns and quantitative chemical composition for determined mineral phases are given in the paper.

Key words: supergene mineralization, chemical composition, powder X-ray diffraction data, unit-cell parameters, Zlatý Kopec, Krušné hory Mts., Czech Republic

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