

NEW MINERAL NAMES

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Plumbopalladinite

A. D. GENKIN, T. L. EVSTIGNEEVA, L. N. VYAL'SOV, I. P. LAPUTINA, AND N. V. TRONEVA (1970) Plumbopalladinite, a new mineral from copper-nickel ores. *Geol. Rud. Mestorohzd.* 5, 63-68 [in Russian].

Microprobe analyses of 4 samples gave Pd 44.6, 42.0, 41.3, 41.5; Pb 54.8, 55.5, 55.2, 55.0; Bi 1.0, 1.1, 0.6, 0.5; Ag—, 2.0, 2.2, 2.0; Sn—, 0, 5, 0.3, 0.6; Cu—, 0.25, 0.1, 0.3; Sb —, 0.1, 0.03, 0.1; sum 100.4, 101.4, 99.5, 100.0%, corresponding to $(\text{Pd, Ag})_8 (\text{Pb, Bi, Sb, Sn, Cu})_2$ or Pd_8Pb_2 .

X-ray study showed the mineral to be hexagonal, NiAs-type, a 4.470, c 5.719 Å. The strongest X-ray lines are 3.20 (5)(101 $\bar{1}$), 2.30 (10)(10 $\bar{1}$ 2), 2.23 (10)(11 $\bar{2}$ 0), 1.760 (4)(11 $\bar{2}$ 2), 1.602 (4)(20 $\bar{2}$ 2), 1.302 (5)(21 $\bar{3}$ 2), 1.207 (6)(11 $\bar{2}$ 4). The pattern is identical with that of synthetic Pd_8Pb_2 .

The mineral occurs as aggregates usually 0.05-0.15 mm., but occasionally up to 0.7 mm., of very small grains. In reflected light bright white with a faint rose tint, grayish-white next to native Ag. Birefringence noticeable in air, more distinct in immersion. Strongly anisotropic in orange-brown to dark-brown shades. Reflectivities are given for 4 samples at 16 wave lengths; extreme values of R_g are: 440, 46.2-50.3; 480, 49.5-52.6; 580, 57.0-58.6; 660, 61.7-62.6; 740, 65.4-68.7. Hardness 407-441 kg/sq. mm., about 5 on the Mohs scale.

The mineral occurs in the Talnakh Ni-Cu deposits in veinlets of cubanite in talnakhite, usually closely associated with polarite [*Amer. Mineral.* 55, 1810 (1970)], stannopalladinite, native Ag, sphalerite, and galena.

The name is for the composition. The mineral and the name were approved before publication by the Commission on New Minerals and Mineral Names, IMA.

Rasvumite

M. N. SOKOLOVA, M. G. DOBROVOL'SKAYA, N. I. ORGANOVA, AND A. L. DMITRIK (1970) A sulfide of iron and potassium, the new mineral rasvumite. *Zap. Vses. Mineral. Obschh.* 99, 712-720 (in Russian).

Analysis by M.E.K. on 80 mg. gave S 42.40, Fe 45.50, Mg 0.50, Cu traces, Ca none, K 10.60, Na 0.39, sum 99.39%, corresponding to $(\text{K}+\text{Na}):(\text{Fe}+\text{Mg}):S=2:5.80:9.18$. The mineral dissolves in acids.

Single crystal study was difficult because the fibers were mostly aggregates; but the mineral was shown to be orthorhombic, C-centered, with a 9.12, b 11.08, c 5.47 Å., $a:b:c=0.8231:1:0.4937$. The unit cell contains $\text{K}_8 (\text{Fe, Mg})_8\text{S}_{14}$, G . calc. 3.18, measured by suspension in alcohol 3.1. Cleavage {110} perfect. The strongest X-ray lines are 7.04 (7)(110), 5.54 (8)(200), 3.45 (5)(310), 2.99 (10)(221), 1.949 (5)(402), 1.799 (9)(332), 1.765 (8)(440).

The mineral occurs in grains, usually less than a mm in size, but up to 2 mm. These are aggregates of very fine, often curved needles. Color steel-gray, luster metallic, becoming dull black on oxidation. Slightly magnetic. Strongly birefringent and anisotropic. Reflectances were measured on 2 sections at 16 wave lengths giving for R_{max} and R_{min} , respectively: 460 nm, 30.0, 24.0; 14.0, 16.3; 540 nm, 28.9, 24.0; 14.6, 16.9; 660 nm, 29.9, 25.0; 15.3, 17.3; 660 nm, 32.3, 26.5; 15.6, 18.1%. Hardness 24.3-43.3, av. 333.9 kg/sq. mm. Polishes poorly, easily splitting into fine needles.

The mineral occurs in pegmatites of the Rasvumchorr and Kukisvumchorr apatite deposits, Khibina massif, Kola Peninsula, U.S.S.R., commonly along grain boundaries of K feldspar, nepheline, and aegirine. It is associated with djerfisherite, pyrrhotite, cubanite, and two unknown copper-bearing minerals.

The name is for the locality. Samples are preserved in the Fersman Mineralogical Museum, Acad. Sci. USSR, Moscow. The mineral and name were approved before publication by the Commission on New Minerals and Mineral Names, IMA.

Mangantapiolite (=manganoo Tapiroite)

V. A. KHVOSTOVA AND V. N. ARKHANGEL'SKAYA (1970) A find of the manganese variety of tapiolite. *Dokl. Akad. Nauk. SSSR*, **194**, 677-678

Analysis gave Ta₂O₅ 72.72, Nb₂O₅ 8.30, TiO₂ 0.32, Fe₂O₃ 5.49, FeO 4.19, MgO 0.61, MnO 5.63, SnO₂ 1.74, SiO₂ 0.61, Al₂O₃ 9.29, sum 99.90%. After deducting SnO₂ and SiO₂ (present as cassiterite and quartz), this gives—



G. 7.24, H. 800 kg/sq. mm (=6 Mohs). Optical and x-ray powder data are given.

DISCUSSION.—Since $\text{Fe}^{3+} + \text{Fe}^{2+} > \text{Mn}$, this is a manganoo tapiolite.

Aldzhanite, Chelkarite

N. P. AVROVA, V. M. BOCHAROV, I. I. KHALTURINA, AND Z. R. YUNOSOVA (1968) Mineralogy of borates in halogen formations. *Geol. Razved. Mestorozhd. Tverd. Polez. Iskop. Kaz.* **1969**, 169-173; from an abstract in *Ref. Zh. Geol.* **1969**, abstract no. 6V 233.

The minerals were found in the insoluble residues of carnallite-bischofite rock, with boracite, hilgardite, anhydrite, and carbonates.

Chelkarite occurs as flattened long prismatic crystals less than 15 mm long. Orthorhombic, space group D_{2h}^{16} - $Pbca$ with a 13.69, b 20.84, c 8.26 (not stated whether Å or kX). The strongest X-ray lines are 10.42 (9), 3.531 (10), and 2.209 (8). Cleavage perfect parallel to the elongation, so that the mineral breaks into fine needles. Microanalysis of 2 samples gave B₂O₃ 15.39, 20.07, CaO 18.33, 15.85; MgO 15.27, 14.92; Na₂O 0.72, 0.34; K₂O 0.20, 0.44; Cl n.d., 18.38; H₂O n.d., 33.7; Fe₂O₃ —, 0.48; SiO₂ —, 0.49; sum —, 104.67 —4.15 = 100.52%. (This gives nearly CaMgB₂O₄Cl·7H₂O) (M.F.) The mineral is colorless and transparent with ns α' 1.520, γ 1.558.

Aldzhanite is orthorhombic, a 12.76, b 14.59, c 8.19 (A. or kX?). The strongest lines are 7.46 (10), 3.49 (8), 3.07 (9), 2.548 (8), 2.318 (8), 2.061 (8). Analysis gave B₂O₃ 23.6; semi-quantitative spectrographic analysis showed Ca 15-20, Cl 10, Mg > 1, Mn 1%. Colorless to pale rose dipyrnidal crystals, G. 2.21, ns α' 1.600, γ' 1.620.

The locality is not given, presumably in Kazakhstan.

Ferrohalotrichite

EVERALDO Z. VIEIRA DE MELLO, (1969) Occurrence de um sulfato hidratado de Al, Fe⁺⁺, e Mg. Ferrohalotrichita em Piripiri, Piauí, Brazil. *Min. Interior, Supt. Desenvolvimento Nordeste, Dept. Recursos Naturais, Div. Geol. Ser. Especial no. 10*, 1-50.

The mineral occurs as efflorescences associated with epsomite and S on a pyritic schist. Analysis gave FeO 10.30, MgO 0.55, Fe₂O₃ 0.70, Al₂O₃ 9.40, CaO 0.10, SO₃ 35.70, H₂O 42.20, sum 98.95%. G. 1.75. Optically biaxial, neg., $2V$ 30-40; α 1.480, γ 1.486, $Z \wedge c = 33^\circ$. X-ray powder data are indexed on a cell with a 21.836, b 23.763, c 12.754Å., β 97°22'.

DISCUSSION. A useless name for halotrichite.

Haradaite

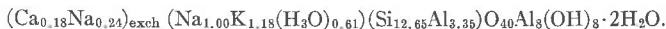
YOSHIO TAKEUCHI AND WERNER JOSWIL (1967) The structure of haradaite and a note on the Si:O bond lengths in silicates *Mineral. J. [Tokyo]* **5**, 98–123 [in English].

Haradaite is orthorhombic, spacegroup *Amam*, a 7.06, b 14.64, c 5.33 Å, $Z=4$ (SrVSi₂O₇). G . 3.80 (measured). Cleavage (010) perfect. Piezo-electricity tests were negative. Atomic parameters are given. The structure is related to those of astrophyllite and lamprophyllite. As far as I know, the original description of the mineral has not been published.

Tarasovite

E. K. LAZARENKO AND YU. M. KOROLEV (1970) Tarasovite, a new dioctahedral ordered interlayered mineral. *Zap. Vses. Mineral. Obschch.* **99**, 214–224 [in Russian].

Analysis of the mineral gave SiO₂ 47.58, Al₂O₃ 36.36, Fe₂O₃ 0.47, FeO 0.28, MgO 0.30, CaO 0.59, Na₂O 2.41, K₂O 3.52, H₂O⁺ 5.79, H₂O⁻ 3.25, sum 100.55%. This is formulated as—



DTA curves show endothermic reactions at 80°, 180–200° (weak), 500–590° (strong), 680° (very weak), an exothermal reaction at 1050° (weak).

X-ray data are given; the strongest lines are 43.75 (100)(001), 21.8 (70)(002), 14.6 (22.5)(003), 10.55 (93)(004), 4.87 (31)(009), 3.19 (41)(00.14). The basal spacing when treated with ethylene glycol is 46.15 Å, with glycerol 46.75, with pyridine 52.62; when heated at 600° 19.49 Å. Electron diffraction data gave a unit cell a 5.13, b 8.88, c 19.7 Å., β 95.0°, values close to those of rectorite; presumably the mineral had dehydrated in the vacuum chamber.

The structure is given in detail; it consists of regular alternation of 2:1 layers and interpacket spaces with exchangeable ions.

The mineral occurs as aggregates of scales in the selvage of quartz veins in Middle Carboniferous sandy slates, at Nagolnaya Tarasovka, Donbas region, USSR. *G.* 2.36. Optically biaxial, neg., α 1.544, β 1.578, γ 1.586, $2V=23^\circ$.

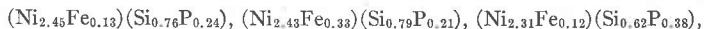
The name is for the Ukrainian writer Taras Grigorievich Shevchenko. Type material is deposited in the Mineralogical Museum, Acad. Sci. USSR, Moscow. The mineral and name were approved before publication by the Commission on New Minerals and Mineral Names, IMA.

NEW DATA

Perryite

C. M. WAI, The metal phase of Horse Creek, Mount Egerton, and Norton County enstatitic meteorites: *Mineral. Mag.* **37**, 905–908.

New microprobe analyses of perryite from these meteorites gave, resp., Ni 80.5, 75.6, 81.6; Fe 4.0, 9.4, 4.1; Si 12.0, 11.8, 10.3; P 4.1, 3.4, 5.2; Co 0.04, 0.05, <0.02; Cu 0.29, 0.20, 0.16, sum 100.9, 100.45, 101.4%, giving the formulas—



suggesting the formula



Previous analyses [*Amer. Mineral.* **54**, 579 (1969)], gave

