NEW MINERAL NAMES

Preobrazhenskite

YA. YA. YARZHEMSKII. Preobrazhenskite, a new borate of the saliferous strata of the Inder uplift. *Doklady Akad. Nauk S.S.S.R.*, **111**, 1087–1090 (1956) (in Russian).

The mineral is wide-spread in small amounts in several parts of the area. It occurs in colorless, lemon-yellow, and dark gray nodules in fine-grained halite-polyhalite rock and encloses kaliborite and boracite. In places it has been partially replaced by inyoite.

Chemical analysis by E. M. Petrov and V. P. Erekhovich gave B_2O_3 60.91, MgO 20.82, CaO 0.01, K 0.25, Na 0.38, Cl 0.82, Br 0.008, SO_3 not found, R_2O_3 0.11, SiO_2 0.13, insol. 0.06, H_2O^- 0.20, H_2O^+ 14.30, sum 98.00%. This corresponds to $3\ MgO \cdot 5B_2O_3 \cdot 4.5H_2O$.

Hardness $4\frac{1}{2}$–5. G. not given. Optically nearly uniaxial, positive, with *ns* γ 1.594–1.596, $\beta \cong \alpha$ 1.573–1.576. *X*-ray study by V. I. Appolonov indicated low symmetry; the powder data (not given M.F.) differ from those of other borates. A D.T.A. curve by V. P. Ivanov shows a large endothermic break at 540–600°, a sharp exothermic break at 730–750, and a moderate endothermic break at 900–950°.

The name is for Pavla Ivanovich Preobrazhensk (1874–1944), "tireless investigator of salt deposits of the U.S.S.R."

MICHAEL FLEISCHER

Mauritzite

L. TOKODY, T. MÁNDY, AND S. NEMES-VARGA. Mauritzit, ein neues Mineral von Erdobenye (Ungarn). *Neues Jahrb. Mineral.*, **1957**, No. 2, 33–39.

The mineral occurs in a quarry in hydrothermally altered pyroxene-andesite at Mulatóhegy near Erdöbénye, Hungary, with quartz, tridymite, opal, barite, halotrichite, calcite, siderite, and ilmenite. It is in mammillary forms, intimately mixed with chalcedony ("quartzin"). It is bluish-black, dull, streak and powder yellowish-brown with a greenish tinge. Sp. gr. and hardness not determined. Under the microscope straw-yellow, transparent, apparently isotropic with mean *n* 1.6035.

Analysis gave SiO_2 38.62, TiO tr., Al_2O_3 6.29, Fe_2O_3 19.90, FeO 6.29, MnO 0.12, MgO 9.83, CaO 1.42, K_2O, Na_2O, and P_2O_5 tr., H_2O^- 12.90, H_2O^+ 4.99, CO_2 0.18, sum 100.54%. This corresponds, after deducting all SiO_2 as quartz and CO_2 as $CaCO_3$ to $2\ (Mg,Fe)\ O \cdot (Fe,Al)_2O_3 \cdot 5H_2O$. The water is all lost at 150° and the dehydration is reversible for material heated up to 200°. The D.T.A. curve shows a single large endothermic break at 150°. The mineral dissolves in cold (1+1) HCl, leaving a residue of chalcedony.

The *x*-ray pattern shows lines of following spacings (Å) and intensities: 14.5 5, 4.54 4, 2.619 4 (broad), 1.735 2, 1.531 5, 1.318 3 (broad). This is shown to correspond closely to the pattern of a member of the montmorillonite group with a_0 5.31, b_0 9.19A.

The mineral is interpreted as being a silica-free montmorillonite of formula

$$(Al_{1.52}Fe_{1.48}{}^{+3}H_{20})(Fe_{1.58}{}^{+3}Fe_{1.07}{}^{+2}Mg_{3.03}Ca_{0.31})O_{20}(OH)_4.$$

The name is for Bela Mauritz, 1881—, Hungarian mineralogist.

DISCUSSION.—I find it very difficult to accept the authors' interpretation. The mineral corresponds very well with a montmorillonite intermediate between nontronite and griffithite (compare Faust, J., Wash. Acad. Sci. 45, 66–70 (1955)), if most of the SiO_2 found belongs to the mineral. The powder pattern shows no quartz lines and the authors' interpretation means that 38.6% quartz, even though present as chalcedony, gave no pattern. It is also hard to believe that a hydrous oxide with the formula calculated could be dehydrated and rehydrated reversibly when heated to temperatures up to 200°. Further work is obviously necessary.

M. F.