Crystal Data: Monoclinic. *Point Group*: 2/*m*. As aggregates of globular cryptocrystalline grains to 0.2 mm.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: Conchoidal. Hardness = 4 D(meas.) = n.d. D(calc.) = 2.80

Optical Properties: Translucent. *Color*: Blue and green. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Biaxial (+). α = 1.498(3) β(calc.) = 1.500 γ = 1.516(3) 2V(meas.) = 20(10)° Nonpleochroic.

Cell Data: *Space Group*: $P2_1/c$. a = 12.6346(8) b = 9.0760(6) c = 12.7560(8) β = 108.75(9)° Z = 2

X-Ray Diffraction Pattern: Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia. 7.24 (100), 2.600 (48), 6.25 (38), 2.571 (37), 3.70 (36), 3.65 (34), 4.47 (31)

Chemistry:

	(1)
Na_2O	25.03
K_2O	0.80
CaO	3.91
MgO	0.59
CuO	12.64
SO_3	55.98
Total	98.97

(1) Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia; average electron microprobe analysis; corresponds to $Na_8(Na_{0.53}Ca_{0.47})_2(Na_{0.53}\square_{0.47})_2Cu_2(SO_4)_8$.

Polymorphism & Series: Series exists between $Na_{12}Cu_2(SO_4)_8$ and $Na_8\square_2Ca_2Cu_2(SO_4)_8$.

Occurrence: A sublimate at an active volcanic fumarole.

Association: Tenorite, euchlorine, dobrovolskiite.

Distribution From the Arsenatnaya fumarole, Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka, Russia.

Name: Honors Russian Professor Dr. Tomas Georgievich *Petrov* (b. 1931), former chairman of the Crystallogenesis Laboratory, Department of Crystallography, St. Petersburg State University for his contributions to mineralogy and crystallography, particularly for the development of technology for the industrial fabrication of jewelry malachite.

Type Material: Mineralogical Museum, St. Petersburg State University, St. Petersburg, Russia (1/19696).

References: (1) Filatov, S.K., A.P. Shablinskii, S.V. Krivovichev, I.P. Vergasova, and S.V. Moskaleva (2020) Petrovite, $Na_{10}CaCu_2(SO_4)_8$, a new fumarolic sulfate from the Great Tolbachik fissure eruption, Kamchatka Peninsula, Russia. Mineral. Mag., 84, 691-698.
(2) Miyawaki, R., F. Hatert, M. Pasero, and S.J. Mills (2021) IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) - Newsletter 59. Eur. J. Mineral., 59, 143.