Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As prismatic to thick tabular crystals, to 100 μm.

Physical Properties: *Cleavage*: None. *Fracture*: Uneven. *Tenacity*: Brittle. Hardness = ~ 5 VHN = 412-588 (50 g load). D(meas.) = n.d. D(calc.) = 3.67

Optical Properties: Opaque. *Color*: Black, gray with weak deep red internal reflections in reflected light. *Streak*: Reddish brown. *Luster*: Semi-metallic. *Anisotropism:* Weak. *Optical Class*: n.d.
R_1-R_2: (470) 14.4-16.4, (546) 13.2-15.5, (589) 13.0-14.9, (650) 12.7-14.1

Cell Data: *Space Group*: $P\bar{1}$. a = 8.0217(5) b = 9.6858(10) c = 6.5475(9)
α = 103.645(10)° β = 102.369(8)° γ = 106.281(8)° Z = 1

X-ray Powder Pattern: Tolbachik volcano, Kamchatka Peninsula, Russia.
3.141 (100), 3.044 (92), 4.718 (29), 7.36 (27), 3.671 (26), 2.811 (26), 4.417 (24)

Chemistry:

	(1)	(2)
MgO	2.78	
CaO	0.95	
MnO	0.04	
CuO	17.70	22.82
ZnO	0.14	
Al_2O_3	11.76	9.75
Fe_2O_3	10.10	15.27
TiO_2	1.47	
P_2O_5	0.13	
V_2O_5	54.97	52.16
Total	100.04	100.00

(1) Tolbachik volcano, Russia; average of 5 electron microprobe analyses; corresponding to $Ca_{0.17}Mg_{0.69}Mn_{0.01}Cu_{2.23}Zn_{0.02}Al_{2.31}Fe^{3+}_{1.27}Ti_{0.18}P_{0.02}V_{6.05}O_{24}$. (2) $Cu_3Fe_2^{3+}Al_2(VO_4)_6$.

Mineral Group: Howardevansite group.

Occurrence: A sublimate on basaltic scoria deposited from fumarolic gas.

Association: Hematite, bannermanite, ziesite.

Distribution: From the apical part of the Second scoria cone, Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Russia.

Name: Honors Professor Dmitry Pavlovich Grigoriev (1909-2003), Saint Petersburg Mining Institute, Russia, for his contributions to the mineralogical sciences.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (# 49123).

References: (1) Pekov I.V., N.V. Zubkova, V.O. Yapaskurt, P.M. Kartashov, Y.S. Polekhovsky, M.N. Murashko, and D.Y. Pushcharovsky (2014) Koksharovite, $CaMg_2Fe_4^{3+}(VO_4)_6$, and grigorievite, $Cu_3Fe_2^{3+}Al_2(VO_4)_6$, two new howardevansite-group minerals from volcanic exhalations. European Journal of Mineralogy, 26(5), 667-677. (2) (2015) Amer. Mineral., 100, 660-661 (abs. ref. 1).