

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As prismatic crystals, to 0.3 mm, showing {001} and {010}, commonly intergrown.

**Physical Properties:** *Cleavage:* Good on {100}. *Fracture:* n.d. *Tenacity:* Brittle. Hardness = 5-6 D(meas.) = n.d. D(calc.) = 2.92

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White.

*Luster:* Vitreous.

*Optical Class:* Biaxial (-)  $\alpha = 1.532(1)$   $\beta = 1.535(1)$   $\gamma = 1.537(1)$   $2V(\text{meas.}) = 60(10)^\circ$   $2V(\text{calc.}) = 78^\circ$  Orientation: X ~ [100]; Y  $\perp$  {001}; Z  $\perp$  {010}.

**Cell Data:** *Space Group:* I2/c.  $a = 8.772(1)$   $b = 13.370(2)$   $c = 14.690(2)$   $\beta = 115.944(6)^\circ$  Z = 8

**X-ray Powder Pattern:** Great Fissure Tolbachik eruption, Kamchatka Peninsula, Russia. 3.364 (100), 4.329 (70), 3.897 (70), 2.981 (60), 3.300 (50), 3.066 (40), 2.646 (40)

<b>Chemistry:</b>	(1)
Na <sub>2</sub> O	0.63
K <sub>2</sub> O	12.85
FeO	0.28
CuO	0.83
ZnO	3.85
Al <sub>2</sub> O <sub>3</sub>	27.33
SiO <sub>2</sub>	12.35
As <sub>2</sub> O <sub>5</sub>	40.60
<u>P<sub>2</sub>O<sub>5</sub></u>	<u>1.63</u>
Total	100.35

(1) Great Fissure Tolbachik eruption, Kamchatka Peninsula, Russia; electron microprobe analysis, corresponding to (K<sub>0.92</sub>Na<sub>0.07</sub>) $_{\Sigma=0.99}$ [(Al<sub>1.81</sub>Zn<sub>0.16</sub>Cu<sub>0.04</sub>Fe<sub>0.01</sub>) $_{\Sigma=2.02}$ (As<sub>1.20</sub>Si<sub>0.70</sub>P<sub>0.08</sub>) $_{\Sigma=1.98}$ O<sub>8</sub>].

**Mineral Group:** Feldspar group.

**Occurrence:** A product of fumarolic activity.

**Association:** Alumokluchevskite, lammerite, johillerite, sylvite, hematite, tenorite, As-bearing orthoclase.

**Distribution:** From the second cinder core of the North Breach of the Great Fissure Tolbachik eruption, Kamchatka Peninsula, Russia.

**Name:** Honors Stanislav K. Filatov (b. 1940), Saint Petersburg State University, for his studies of exhalation minerals.

**Type Material:** Museum, Department of Mineralogy, Saint Petersburg State University, Saint Petersburg, Russia; 1/19086.

**References:** (1) Vergasova, L.P., S.V. Krivovichev, S.N. Britvin, P.C. Burns, and V.V. Ananiev (2004) Filatovite, K[(Al,Zn)<sub>2</sub>(As,Si)<sub>2</sub>O<sub>8</sub>], a new mineral species from the Tolbachik volcano, Kamchatka Peninsula, Russia. *Eur. J. Mineral.*, 16, 533-536. (2) Filatov, S.K., S.V. Krivovichev, P.C. Burns, and L.P. Vergasova (2004) Crystal structure of filatovite, K[(Al,Zn)<sub>2</sub>(As,Si)<sub>2</sub>O<sub>8</sub>], the first arsenate of the feldspar group. *Eur. J. Mineral.*, 16, 537-543. (3) (2005) *Amer. Mineral.*, 90, 518 (abs. refs. 1 & 2).