Alfredopetrovite $Al_2(Se^{4+}O_3)_3 \cdot 6H_2O$

Crystal Data: Hexagonal. *Point Group*: $\bar{6}\,m2$. As crystals to ~ 0.1 mm; as scaly druses or compact balls to 0.5 mm.

Physical Properties: *Cleavage*: None. *Fracture*: Smooth curved fracture surfaces. *Tenacity*: Brittle. Hardness = 2.5 D(meas.) = n.d. D(calc.) = 2.504

Optical Properties: Transparent. *Color*: Colorless to blue. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Uniaxial (+). $\omega = 1.554(2)$ $\varepsilon = 1.566(2)$ *Pleochorism*: None.

Cell Data: *Space Group*: $P\bar{6}\,2c$. $a = 8.818(3)$ $c = 10.721(2)$ $Z = 2$

X-ray Powder Pattern: El Dragón mine, Antonio Quijarro Province, Potosí Department, Bolivia.
3.404 (100), 7.63 (55), 6.22 (55), 2.783 (50), 4.398 (40), 5.37 (26), 1.661 (26)

Chemistry:

	(1)	(2)
CuO	1.09	
CoO	0.10	
NiO	0.44	
Al_2O_3	18.12	18.78
SeO_2	60.12	61.31
H_2O	[20.12]	19.91
Total	99.99	100.00

(1) El Dragón mine, Antonio Quijarro Province, Potosí Department, Bolivia; normalized average of 3 electron microprobe analyses, H_2O calculated from structure; corresponding to $Al_{1.94}Cu_{0.07}Ni_{0.03}Co_{0.01}Se_{2.95}O_{15}H_{12.16}$. (2) $Al_2(SeO_3)_3 \cdot 6H_2O$.

Occurrence: A secondary mineral in the weathered portions of a telethermal vein hosted by sandstones and shales.

Association: Ahlfeldite, allophane, calcite, chalcomenite, favreauite, felsőbányaite, malachite, molybdomenite.

Distribution: From the El Dragón mine, Antonio Quijarro Province, Potosí Department, Bolivia.

Name: Honors Alfredo Petrov (b. 1955), geologist, mineralogist and avid mineral collector for his contributions to the mineralogy and geology of Bolivia and to the mineral collector's community.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (64111, 65578-65580) and the Museum Victoria, Melbourne, Australia (M53004).

References: (1) Kampf, A.R., S.J. Mills, B.P. Nash, B. Thorne, and G. Favreau (2016) Alfredopetrovite, a new selenite mineral from the El Dragón mine, Bolivia. Eur. J. Mineral., 28(2), 479-484. (2) (2016) Amer. Mineral., 101, 2355 (abs. ref. 1).