

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As aggregates of subparallel platy crystals tabular on (100) and elongate along [001], to ~0.15 mm.

**Physical Properties:** *Cleavage:* Perfect on {100}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = ~5 D(meas.) = n.d. D(calc.) = 3.613

**Optical Properties:** Transparent to translucent. *Color:* Blue to pale blue. *Streak:* Very pale blue to white. *Luster:* Vitreous.

*Optical Class:* Biaxial (+).  $\alpha = 1.674(2)$   $\beta = 1.692(3)$   $\gamma = 1.730(3)$   $2V(\text{meas.}) = \sim 75^\circ$   $2V(\text{calc.}) = 70^\circ$  *Pleochroism:* Moderate, X = pale blue, Y = pale blue, Z = pale blue with faint greenish tint. *Dispersion:* None. *Absorption:*  $X \geq Z \geq Y$ . *Orientation:*  $X \wedge a = \sim 20^\circ$ ,  $Y = b$ ,  $Z = \sim c$ ; with an optical axis plane parallel to (010). *Elongation:* Positive.

**Cell Data:** Space Group:  $P2_1/c$ .  $a = 10.224(2)$   $b = 19.085(4)$   $c = 5.252(1)$   $\beta = 92.23(3)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Cerchiara mine, Liguria, northern Apennines, Italy. 10.216 (100), 2.6155 (35), 3.353 (33), 2.3719 (23), 2.8693 (22), 9.007 (20), 4.934 (19)

Chemistry:	(1)	(2)
SiO <sub>2</sub>	42.51	42.33
CuO	44.12	49.03
K <sub>2</sub> O	4.46	4.15
MgO	1.27	
Na <sub>2</sub> O	0.61	
MnO	0.27	
Li <sub>2</sub> O	1.17	1.32
H <sub>2</sub> O	[3.16]	3.17
Total	97.58	100.00

(1) Cerchiara mine, Liguria, northern Apennines, Italy; average of 7 electron microprobe analyses supplemented by Raman spectroscopy, Na<sub>2</sub>O and Li<sub>2</sub>O by LA-ICP-MS, H<sub>2</sub>O calculated for charge balance; corresponds to K<sub>1.08</sub>(Li<sub>0.89</sub>Mg<sub>0.36</sub>Cu<sub>0.33</sub>Na<sub>0.22</sub>Mn<sup>2+</sup><sub>0.04</sub>) $\Sigma=1.86$ Cu<sub>6.00</sub>Si<sub>8.08</sub>O<sub>22</sub>(OH)<sub>4</sub>.

(2) K(LiCu)Cu<sub>6</sub>(Si<sub>4</sub>O<sub>11</sub>)<sub>2</sub>(OH)<sub>4</sub>.

**Polymorphism & Series:** Polytype of lavinskyite-2O.

**Occurrence:** In microfractures and veinlets cross-cutting Jurassic metacherts within ophiolite.

**Association:** Calcite, quartz, norrishite, "schefferite" (Mn-bearing variety of diopside).

**Distribution:** From the Cerchiara manganese mine, Liguria, northern Apennines, Italy.

**Name:** Honors Robert Matthew *Lavinsky* (b. 1973), dealer in collectable minerals and crystals, donor of important mineral specimens to the Smithsonian Institution, Harvard University, California Institute of Technology, University of Arizona, and other institutions. Lavinsky is the largest contributor of information and photographs to Mindat (online database of mineralogical information) and has provided mineral specimens for scientific investigation. Suffix indicates the polytype.

**Type Material:** Department of Earth Science, University of Genoa, Italy (MO482) and Natural History Museum, Vienna, Austria (N 9733).

**References:** (1) Kolitsch, U., S. Merlino, D. Belmonte, C. Carbone, R. Cabella, G. Lucchetti, and M.E. Ciriotti (2018) Lavinskyite-1M, K(LiCu)Cu<sub>6</sub>(Si<sub>4</sub>O<sub>11</sub>)<sub>2</sub>(OH)<sub>4</sub>, the monoclinic MDO equivalent of lavinskyite-2O (formerly lavinskyite), from the Cerchiara manganese mine, Liguria, Italy. *Eur. J. Mineral.*, 30(4), 811-820. (2) (2019) *Amer. Mineral.*, 104(4), 629 (abs. ref 1).