Akopovaite $Li_2Al_4(OH)_{12}(CO_3)(H_2O)_3$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As rosette-like aggregates of curved lamellar, pseudohexagonal crystals to 30 μm.

Physical Properties: *Cleavage*: Perfect on {001}. *Tenacity*: n.d. *Fracture*: n.d. Hardness = ~1 VHN = 20-31, 24 average (0.5 g load). D(meas.) = 2.12(2) D(calc.) = 2.14

Optical Properties: Transparent. *Color*: White or pale yellowish. *Streak*: n.d. *Luster*: Silky. *Optical Class*: Anisotropic. n' = 1.535(3) Displays undulatory mosaic extinction.

Cell Data: *Space Group: C*2/*m*. a = 5.0953(6) b = 8.877(1) c = 7.806(1) β = 102.572(6)° Z = 1

X-Ray Diffraction Pattern: Karasu-Karavshinskoye Sn-deposit, Turkestan Ridge, Kyrgyzstan. 7.66 (100), 3.821 (45), 4.397 (27), 2.488 (27), 1.903 (18), 2.227 (16), 2.532 (10)

Chemistry:

	(1)	(2)
Li_2O	6.43	6.79
Al_2O_3	45.79	46.31
Fe_2O_3	0.27	
CO_2	10.09	10.00
H_2O	36.1	36.90
Total	98.68	100.00

(1) Karasu-Karavshinskoye Sn-deposit, Turkestan Ridge, Kyrgyzstan; average electron microprobe analysis, ICP-OES for Li; CHN method for CO_2 and H_2O, supplemented by Raman spectroscopy; corresponds to $Li_{1.94}(Al_{4.05}Fe_{0.02})_{\Sigma=4.07}(OH)_{12}(CO_3)_{1.03}(H_2O)_{3.03}$. (2) $Li_2Al_4(OH)_{12}(CO_3)(H_2O)_3$.

Mineral Group: Hydrotalcite supergroup.

Occurrence: In a zoned spodumene-bearing pegmatite vein associated with quartz-micaceous schists.

Association: Gibbsite, quartz, albite, microcline, muscovite, montebrasite, siderite, schorl, birnessite-like Fe-Mn oxides.

Distribution: On the right side of the Asan-Usan glacier, from Ore body #2, Karasu-Karavshinskoye Sn-deposit, northern slope of Turkestan Ridge, Kyrgyzstan.

Name: Honors Anna Vartanovna *Akopova* (b. 1952), a chemistry teacher in the gymnasium #14, Rostov-on-Don, Russia. Her teaching, including experimental work, has prompted many of her students to choose a career in the Natural Sciences, including the first author of the present paper.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (96260).

References: (1) Karpenko, V.Y., E.S. Zhitova, L.A. Pautov, A.A. Agakhanov, O.I. Siidra, M.G. Krzhizhanovskaya, V.A. Rassulov, and V.N. Bocharov (2020) Akopovaite, $Li_2Al_4(OH)_{12}(CO_3)(H_2O)_3$, a new Li member of the hydrotalcite supergroup from Turkestan Range, Kyrgyzstan. Mineral. Mag., 84, 301-311.