Bouškaite $(MoO_2)_2O(SO_3OH)_2(H_2O)_2 \cdot 2H_2O$

Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As aggregates of random or radial, narrow blades flattened on {001} and elongated along [100] to 7 mm.

Physical Properties: *Cleavage*: Perfect on {001}. *Tenacity*: Very brittle, thin blades (fibers) are somewhat flexible. *Fracture*: Uneven. Hardness = ~2 D(meas.) = 2.40(2) D(calc.) = 2.38

Optical Properties: Transparent to translucent. *Color*: Colorless to light beige. *Streak*: White to light gray. *Luster*: Vitreous.
Optical Class: Biaxial (+). $\alpha = 1.504(2)$ $\beta = 1.605(2)$ $\gamma = 1.705(3)$ 2V(meas.) = 82(1)° 2V(calc.) = 82.05° *Dispersion*: Moderate, $r > v$. Non-pleochroic. *Orientation*: $X \wedge c = 24°$, $Y \wedge a = 20°$, $Z \wedge b = 16°$.

Cell Data: *Space Group: P*$\bar{1}$. $a = 5.581(3)$ $b = 9.572(1)$ $c = 14.425(4)$ $\alpha = 97.43(1)°$ $\beta = 100.05(2)°$ $\gamma = 89.96(1)°$ $Z = 2$

X-Ray Diffraction Pattern: Lill shaft, Březové hory ore district, central Bohemia, Czech Republic. 7.078 (100), 4.720 (56), 14.15 (35), 3.240 (10), 5.440 (9), 4.838 (7), 4.010 (7)

Chemistry:

	(1)	(2)
CaO	0.08	
SiO_2	0.36	
MoO_3	53.59	53.50
SO_3	29.43	29.76
H_2O	[16.71]	17.74
Total	100.17	100.00

(1) Lill shaft, Březové hory ore district, central Bohemia, Czech Republic; average electron microprobe and Raman spectroscopic analyses, H_2O calculated; corresponds to $(MoO_2)_{2.00}Ca_{0.01}O(SO_3OH)_{1.98}(SiO_4)_{0.03}(H_2O)_2 \cdot 2H_2O$. (2) $(MoO_2)_2O(SO_3OH)_2(H_2O)_2 \cdot 2H_2O$.

Occurrence: Secondary, post-mining mineral from a mine dump formed from weathered primary jordisite and pyrite.

Association: Rhomboclase.

Distribution: From dumps of the Lill shaft, the Březové hory ore district, near Příbram, central Bohemia, Czech Republic.

Name: Honors Czech mineralogist and geochemist Professor Dr. Vladimír *Bouška* (1933-2000), Charles University, Prague, author of more than 630 papers on mineralogy (ore minerals, metamict minerals, recently formed minerals, organic minerals), gemology, geochemistry (especially of coal), and natural glasses (tektites).

Type Material: Department of Mineralogy and Petrology, National Museum, Prague, Czech Republic (P1P 24/2018 holotype) and the Natural History Museum of Los Angeles County, Los Angeles, California, USA (66776 cotype).

References: (1) Sejkora, J., I.E. Grey, A.R. Kampf, J. Plášil, and P. Škácha (2019) Boušaite, a new molybdenyl-hydrogensulfate mineral, $(MoO_2)_2O(SO_3OH)_2(H_2O)_2 \cdot 2H_2O$, from the Lill mine, Příbram ore area, Czech Republic. J. Geosci., 64, 197-205.