Belakovskiite $Na_7(UO_2)(SO_4)_4(SO_3OH)(H_2O)_3$

Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As fibers to 22 mm. Soluble in water.

Physical Properties: *Cleavage*: None. *Fracture*: Irregular. *Tenacity*: Brittle, flexible and elastic. Hardness = 2 D(meas.) = n.d. D(calc.) = 2.953

Optical Properties: Transparent. *Color*: Pale yellowish green. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Biaxial (+). α = 1.500 β = 1.511 γ = 1.523 *Orientation*: $X \approx a$.

Cell Data: *Space Group*: $P\bar{1}$. a = 5.4581(3) b = 11.3288(6) c = 18.4163(13) α = 104.786(7)° β = 90.092(6)° γ = 96.767(7)° Z = 2

X-ray Powder Pattern: Blue Lizard Mine, Utah, USA.
5.19 (100), 3.057 (59), 4.66 (58), 3.568 (37), 8.96 (35), 8.46 (29), 1.8320 (29)

Chemistry:

	(1)
Na_2O	21.67
UO_3	30.48
SO_3	40.86
H_2O	[6.45]
Total	99.4

(1) Blue Lizard Mine, Utah, USA; average of 9 electron microprobe analyses, H_2O calculated from structural analysis; corresponding to $Na_{6.83}(U_{1.04}O_2)(SO_4)_4(S_{0.99}O_3OH)(H_2O)_3$.

Occurrence: A secondary efflorescence on sandstone in the oxidation zone of a Colorado Plateau type uraninite deposit.

Association: Blödite, ferrinatrite, kröhnkite, meisserite, metavoltine.

Distribution: From the Blue Lizard Mine, Red Canyon, White Canyon district, San Juan Co., Utah, USA.

Name: Honors Dmitry Ilych Belakovskiy (b. 1957), a prominent Russian mineralogist and Curator of the A.E. Fersman Mineralogical Museum, Moscow, Russia.

Type Material: Natural History Museum of Los Angeles County, California, USA (# 64055) and the A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4410/1).

References: (1) Kampf, A.R., J. Plášil, A.V. Kasatkin, and J. Marty (2014) Belakovskiite, $Na_7(UO_2)(SO_4)_4(SO_3OH)(H_2O)_3$, a new uranyl sulphate mineral from the Blue Lizard mine, San Juan County, Utah, USA. Mineral. Mag., 78(3), 639-649. (2) (2015) Amer. Mineral., 100, 658 (abs. ref. 1).