Tatarinovite $Ca_3Al(SO_4)[B(OH)_4](OH)_6 \cdot 12H_2O$

Crystal Data: Hexagonal. *Point Group*: 6. As dipyramidal {10 4} crystals to 1 mm; also as granular sugary aggregates to 5 mm.

Physical Properties: *Cleavage*: Perfect on {100}. *Tenacity*: n.d. *Fracture*: n.d.
Hardness = ~ 3 D(meas.) = 1.79(1) D(calc.) = 1.777

Optical Properties: Transparent. *Color*: Colorless; white aggregates. *Streak*: White.
Luster: Vitreous.
Optical Class: Uniaxial (+). ω = 1.475(2) ε = 1.496(2)

Cell Data: *Space Group*: $P6_3$. a = 11.1110(4) c = 10.6294(6) Z = 2

X-ray Powder Pattern: Bazhenovskoe chrysotile deposit, near Asbest, Middle Urals, Russia.
9.63 (100), 5.556 (30), 3.841 (21), 4.654 (14), 3.441 (12), 2.538 (12), 2.746 (10)

Chemistry:	(1)
CaO	27.40
B_2O_3	4.06
$A1_2O_3$	6.34
Fe_2O_3	0.03
SiO_2	2.43
SO_3	8.48
CO_2	4.2
H_2O	46.1
Total	99.04

(1) Bazhenovskoe chrysotile deposit, near Asbest, Middle Urals, Russia; ICP-AES supplemented by IR spectroscopy, H_2O by the Alimarin method and CO_2 by selective sorption; corresponding to $H_{31.41}Ca_{3.00}(Al_{0.76}Si_{0.25})_{\Sigma=1.01}(B_{0.72}S_{0.65}C_{0.59})_{\Sigma=1.96}O_{24.55}$.

Mineral Group: Ettringite group.

Occurrence: In cavities in a rodingite body at the contact between a dike of partly rodingitized gabbroic rock and hosting serpentinite.

Association: Diopside, xonotlite, clinochlore, pectolite, calcite.

Distribution: From the Bazhenovskoe chrysotile deposit, near Asbest, Middle Urals, Russia.

Name: Honors Russian geologist and petrologist Pavel Mikhailovich Tatarinov (1895-1976), a specialist in deposits of chrysotile asbestos.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4736/1 and 4736/2).

References: (1) Chukanov, N.V., A.V. Kasatkin, N.V. Zubkova, S.N. Britvin, L.A. Pautov, I.V. Pekov, D.A. Varlamov, Ya.V. Bychkova, A.B. Loskutov, and E.A. Novgorodova (2016) Tatarinovite $Ca_3Al(SO_4)[B(OH)_4](OH)_6 \cdot 12H_2O$, a new ettringite-group mineral from the Bazhenovskoe deposit (the Middle Urals, Russia) and its crystal structure. Geology of Ore Deposits, 58(8), 653-665. (2) (2017) Amer. Mineral., 102(7), 1569-1570 (abs. ref. 1).