Rossovskyite $(Fe^{3+},Ta)(Nb,Ti)O_4$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As flattened anhedral grains to 6 cm.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: Uneven. Hardness = 6
D(meas.) = 6.06 D(calc.) = 6.302

Optical Properties: Opaque. *Color*: Black; gray in reflected light. *Streak*: Black.
Luster: Semi-metallic to dull.
Optical Class: Biaxial. Distinctly bireflectant. *Pleochroism*: Gray to light gray.
R_1-R_2: (470) 18.9-17.1, (546) 17.9-16.2, (589) 17.4-16.1, (650) 17-15.9

Cell Data: *Space Group*: *P*2/*c*. a = 4.668(1) b = 5.659(1) c = 5.061(1) β = 90.21(1)° Z = 2

X-ray Powder Pattern: Bulgut occurrence, Altai Mts., Western Mongolia.
2.938 (100), 3.604 (49), 1.698 (31), 2.476 (29), 2.337 (27), 1.718 (26), 2.534 (23)

Chemistry:	(1)
MnO	1.68
FeO	[5.92]
Fe_2O_3	[14.66]
TiO_2	7.69
Nb_2O_5	26.59
Ta_2O_5	37.51
WO_3	5.61
Total	99.66

(1) Bulgut occurrence, Altai Mts., Western Mongolia; average of 5 electron microprobe analyses, Fe apportioned by Mössbauer spectroscopy; corresponds to $Mn^{2+}_{0.06}Fe^{2+}_{0.21}Fe^{3+}_{0.47}Ti_{0.25}Nb_{0.51}Ta_{0.43}W_{0.06}O_4$.

Occurrence: In a lens-shaped, zoned pegmatite body at the contact of porphyritic biotite granite with crystalline schist.

Association: Quartz, microcline, muscovite, triplite, albite, apatite, pyrite, schorl, almandine-spessartine garnet, beryl, zircon, yttrobetafite-(Y), unspecified tantalo-niobates.

Distribution: Found at the Bulgut occurrence, Altai Mts., Western Mongolia.

Name: Honors Lev Nikolaevich Rossovsky (1933-2009), a specialist in the geology, geochemistry and mineralogy of granite pegmatites for his contributions to the investigation of numerous pegmatite fields in Central Asia and Russia.

Type Material: Mineralogical Museum, Tomsk State University, Tomsk, Russia (20927).

References: (1) Konovalenko, S.I., S.A. Ananyev, N.V. Chukanov, R.K. Rastsvetaeva, S.M. Aksenov, A.A. Baeva, R.R. Gainov, F.G. Vagizov, O.N. Lopatin, and T.S. Nebera (2015) A new mineral species rossovskyite, $(Fe^{3+},Ta)(Nb,Ti)O_4$: crystal chemistry and physical properties. Physics and Chemistry of Minerals, 42(10), 825-833. (2) (2018) Amer. Mineral., 103, 2530-2531 (abs. ref. 1).