

Crystal Data: Tetragonal. *Point Group:* $4mm$ (possible). As equant grains, to 0.2 mm.

Physical Properties: Hardness = 4.5 VHN = 270–360, 310 average (10 g load).
D(meas.) = n.d. D(calc.) = 4.63

Optical Properties: Opaque. *Color:* [Black]; cream with grayish tint in reflected light.
Luster: Metallic.

Optical Class: Uniaxial. *Anisotropism:* Moderate.

R_1 – R_2 : (400) —, (420) 25.1–27.0, (440) 25.8–28.3, (460) 26.7–29.2, (480) 27.8–31.0, (500) 29.2–33.1, (520) 30.5–34.8, (540) 32.4–36.1, (560) 32.8–37.1, (580) 33.1–37.3, (600) 33.0–36.8, (620) 32.5–36.4, (640) 31.8–36.0, (660) 31.2–34.0, (680) 31.6–33.0, (700) —

Cell Data: *Space Group:* $P4_2mc$ (possible). $a = 5.64(1)$ $c = 10.34(3)$ $Z = 4$

X-ray Powder Pattern: Khachakchansky deposit, Russia.
3.15 (10), 1.910 (4), 2.445 (2), 1.692 (2), 2.340 (< 2), 3.43 (1), 2.824 (1)

Chemistry:

	(1)	(2)
Ag	46.58	47.34
Hg	0.3	
Fe	24.08	24.51
S	28.86	28.15
Total	99.8	100.00

(1) Khachakchansky deposit, Russia; by electron microprobe, average of 22 analyses; corresponds to Ag_{0.98}Fe_{0.98}S_{2.04}. (2) AgFeS₂.

Occurrence: In goethite pseudomorphs after magnesian siderite, in quartz-siderite veins.

Association: Acanthite, stephanite, Ag–Hg amalgam, chalcopyrite, tetrahedrite, galena, goethite.

Distribution: From the Khachakchansky Ag–Pb deposit, near the Lena River, eastern Sakha, Russia [TL].

Name: For its occurrence near the Lena River, Russia.

Type Material: Geological Museum, Yakutsk Scientific Center, Academy of Sciences, Yakutsk, Russia.

References: (1) Amuzinsky, V.A., Y.Y. Zhadov, N.V. Zayakina, and N.V. Leskova (1995) Lenaite AgFeS₂ – a new mineral species. *Zap. Vses. Mineral. Obshch.*, 124(5), 85–91 (in Russian with English abs.). (2) (1996) *Amer. Mineral.*, 81, 1283 (abs. ref. 1).