

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Prismatic crystals, up to 4 mm, and platy elongated grains; partly in radial or polycrystalline aggregates. *Twinning:* Common, with twin plane $\parallel [001]$, possibly $\{110\}$; lamellar.

Physical Properties: *Cleavage:* Tabular [*sic*]; $\parallel [100]$. Hardness = Polishing hardness less than chalcopyrite, greater than bismuth. VHN = 126–134 D(meas.) = > 6.2 D(calc.) = n.d.

Optical Properties: Opaque. *Color:* Gray; white in polished section. *Luster:* Metallic. *Pleochroism:* Weak, white with blue tint to brown to light gray. *Anisotropism:* Strong, in gray-bluish and yellowish colors. R₁–R₂: n.d.

Cell Data: *Space Group:* *Bbmm*. $a = 13.399(20)$ $b = 20.505(10)$ $c = 4.117(5)$ $Z = [2]$

X-ray Powder Pattern: Uludağ, Turkey.

2.048 (100), 2.998 (78), 3.670 (67), 3.484 (67), 2.696 (67), 2.794 (44), 3.127 (33)

Chemistry:

	(1)	(2)	(3)
Pb	45.0	45.03	46.57
Ag	1.0	1.41	
Bi	38.5	37.43	37.58
Sb		0.61	
S	14.7	15.53	15.85
Total	99.2	100.01	100.00

(1) Uludağ, Turkey; by electron microprobe, corresponding to $(\text{Pb}_{4.72}\text{Ag}_{0.20})_{\Sigma=4.92}\text{Bi}_{4.00}\text{S}_{10.82}$.

(2) Shumilovsk deposit, Russia; by electron microprobe, corresponding to $(\text{Pb}_{4.83}\text{Ag}_{0.29})_{\Sigma=5.12}(\text{Bi}_{3.99}\text{Sb}_{0.11})_{\Sigma=4.10}\text{S}_{10.78}$.

(3) Pb₅Bi₄S₁₁.

Occurrence: In a contact metamorphic scheelite deposit (Uludağ, Turkey); in sulfide veinlets around a greisen Sn–W deposit in granite (Shumilovsk deposit, Russia); in a volcanogenic massive sulfide deposit (Cofer deposit, Virginia, USA).

Association: Sphalerite, tremolite, pyrite, calcite, garnet, quartz, scheelite, chalcopyrite, bismuth (Uludağ, Turkey); kobellite, tintinaite (Boliden, Sweden); wolframite, cassiterite, bismuthinite, galena, cosalite, heyrovskýite, galenobismutite, cannizzarite, tetradymite, joséite-B, bismuth, quartz (Shumilovsk deposit, Russia).

Distribution: From Uludağ, Bursa Province, Turkey [TL]. At Hůrky, Czech Republic. From Băița, Romania. At Boliden, Västerbotten, Sweden. From Vulcano, in the Lipari Islands, Italy. In the Shumilovsk Sn–W deposit, western Transbaikal, and from the Strezhana pyrite-polymetallic deposit, locality not otherwise defined, Russia. In the USA, at Organ, Doña Ana Co., New Mexico; large crystals in the Abril mine, Middle Pass district, Cochise Co., Arizona; from near Austin, Reese River district, Lander Co., Nevada; in the Cofer deposit, Louisa Co., Virginia. From the Huemules deposit, Chubut Province, Argentina.

Name: For the locality in Bursa Province, Turkey.

Type Material: n.d.

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