

**Crystal Data:** Monoclinic. *Point Group:*  $2/m$ . Commonly in foliated columnar or fibrous aggregates, with cleavages as much as 60 cm across; may be reniform or botryoidal; also granular or powdery; rarely as prismatic crystals, to 10 cm. *Twinning:* On {100}.

**Physical Properties:** *Cleavage:* Perfect on {010}, imperfect on {100}; cleavage lamellae are flexible. *Tenacity:* Sectile. Hardness = 1.5–2 VHN = n.d. D(meas.) = 3.49 D(calc.) = 3.48

**Optical Properties:** Transparent. *Color:* Lemon-yellow to golden or brownish yellow. *Streak:* Pale lemon-yellow. *Luster:* Resinous, pearly on cleavage surface. *Optical Class:* Biaxial (-). *Pleochroism:* In reflected light, strong, white to pale gray with reddish tint; in transmitted light, Y = yellow, Z = greenish yellow. *Orientation:* X = b; Z  $\wedge$  c = 2°. *Dispersion:* r > v, strong.  $\alpha$  = 2.4 (Li).  $\beta$  = 2.81 (Li).  $\gamma$  = 3.02 (Li). 2V(meas.) = 76° *Anisotropism:* Barely observable because of strong internal reflections.  
R<sub>1</sub>–R<sub>2</sub>: (400) 33.0–36.5, (420) 31.0–35.2, (440) 28.9–33.9, (460) 27.4–31.5, (480) 26.0–30.3, (500) 24.9–29.3, (520) 24.0–28.4, (540) 23.3–27.8, (560) 22.8–27.3, (580) 22.3–26.9, (600) 22.0–26.5, (620) 21.7–26.3, (640) 21.5–26.0, (660) 21.2–25.7, (680) 21.0–25.5, (700) 20.8–25.3

**Cell Data:** *Space Group:*  $P2_1/n$ . a = 11.475(5) b = 9.577(4) c = 4.256(2)  
 $\beta$  = 90°41(5)' Z = 4

**X-ray Powder Pattern:** Baia Sprie (Felsöbánya), Romania.  
4.85 (100), 4.02 (50), 2.47 (40), 1.755 (40), 3.22 (30), 2.79 (30), 2.72 (30)

**Chemistry:** Stated to be very near As<sub>2</sub>S<sub>3</sub>.

**Occurrence:** In low-temperature hydrothermal veins, hot springs and fumaroles; also commonly as an alteration product of arsenic minerals, especially realgar.

**Association:** Stibnite, realgar, arsenic, calcite, barite, gypsum.

**Distribution:** Not uncommon in small amounts, but rare in fine specimens. In the USA, crystallized from Mercur, Tooele Co., Utah; in Nevada, at the Getchell mine, Humboldt Co.; from the White Caps mine, Manhattan, Nye Co.; with fine examples from in the Twin Creeks mine, Humboldt Co. At Tajov, Slovakia. From Křeševo, Bosnia-Herzegovina. At Alšar (Allchar), near Rošden, Macedonia. Fine crystals from the Zarshuran gold deposit, 35 km north of Takab, northwestern Iran. From Jelamerk, Turkey. In Russia, at Loukhomi, Caucasus Mountains, and Men-Kyule, Sakha. From Racha Luyumi, Georgia. Large crystals from the Shimen mine, 33 km southeast of Shimen, Hunan Province, China. Exceptional specimens from the Quiruvilca mine, La Libertad, Peru.

**Name:** From the Latin *auripigmentum*, *golden paint*, in allusion to the color.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 266–269. (2) Mullen, D.J.E. and W. Nowacki (1972) Refinement of the crystal structures of realgar, AsS and orpiment, As<sub>2</sub>S<sub>3</sub>. Zeits. Krist., 136, 48–65. (3) Berry, L.G. and R.M. Thompson (1962) X-ray powder data for the ore minerals. Geol. Soc. Amer. Mem. 85, 80–81. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 400.