Arsenolamprite

Crystal Data: Orthorhombic. Point Group: 2/m 2/m 2/m (synthetic). As needles, to 8 mm, foliated, radial aggregates of plates, and massive.

Physical Properties: Cleavage: Perfect, in one direction. Hardness = 2 VHN = n.d. D(meas.) = 5.3–5.5 D(calc.) = 5.577

Optical Properties: Opaque. Color: Gray-white, altering to a dull black coating. Streak: Black. Luster: Metallic, brilliant. Anisotropism: Weak. R₁ – R₂: (400) —, (420) 42.8–56.8, (440) 43.6–55.4, (460) 44.3–54.0, (480) 44.7–52.8, (500) 44.8–51.6, (520) 44.6–50.5, (540) 44.0–49.6, (560) 43.1–48.7, (580) 42.7–48.0, (600) 42.6–47.4, (620) 42.7–46.8, (640) 43.0–46.3, (660) 43.4–45.8, (680) 43.8–45.5, (700) 44.4–45.0

Cell Data: Space Group: Bmab (synthetic). a = 3.63 b = 4.45 c = 10.96 Z = 8

X-ray Powder Pattern: Alacran mine, Chile. 5.76 (10), 2.72 (10), 2.745 (8), 1.875 (7), 1.730 (7), 3.48 (6), 2.230 (5)

Chemistry: Nearly pure As, with up to 3% Bi.

Polymorphism & Series: Dimorphous with arsenic.

Occurrence: As plates and veinlets in carbonate rocks (Černý Důl mine, Czech Republic); in calcite veins (Mackenheim, Germany).

Association: Arsenic, bismuth, silver, sternbergite, emplectite, safflorite, löllingite, pyrite, galena, orpiment, realgar, calcite.

Distribution: In Germany, from the Palmbaum mine, Marienberg, Saxony [TL]; from Schweisweiler, Rhineland-Palatinate; at Mackenheim, Odenwald, and Wittichen, Black Forest. From the Černý Důl mine, Krkonoše (Giant Mountains), and Jáchymov (Joachimsthal), Czech Republic. At Sainte-Marie-aux-Mines, Haut-Rhin, France. In Switzerland, at the Lengenbach quarry, Bünital, Valais. From the Alacran Ag–As–Sb mine, Pampa Larga district, Copiapó, Chile. In the Goldstrike mine, Lynn district, Eureka Co., Nevada, USA.

Name: From its composition and the Greek for brilliant, in allusion to its reflectance.