

Crystal Data: Orthorhombic, pseudohexagonal. *Point Group:* $2/m\ 2/m\ 2/m$ or $mm2$. As crystals, to 1 cm, but typically much smaller. *Twinning:* Always twinned in a complex fashion; twin plane {110}; trillings common.

Physical Properties: Hardness = > 3.5 VHN = 79–93, average 87 (100 g load).
D(meas.) = n.d. D(calc.) = 12.98

Optical Properties: Opaque. *Color:* In polished section, creamy white. *Luster:* Metallic.
Pleochroism: Brownish rose-white to creamy white. *Anisotropism:* Distinct.

R₁–R₂: (400) 65.9–67.0, (420) 67.9–69.0, (440) 69.8–70.9, (460) 71.5–72.6, (480) 73.3–74.4, (500) 74.9–76.2, (520) 76.5–77.8, (540) 78.1–79.3, (560) 79.5–80.7, (580) 80.6–81.8, (600) 81.5–82.8, (620) 82.3–83.5, (640) 82.9–84.0, (660) 83.6–84.6, (680) 84.0–85.1, (700) 84.6–85.5

Cell Data: *Space Group:* $Cmcm$ (probable) or $Cmc2_1$. $a = 2.961$ $b = 5.13$
 $c = 4.83$ $Z = 2$

X-ray Powder Pattern: Landsberg, Germany.
2.267 (10), 2.404 (6), 1.263 (6), 1.361 (5), 1.481 (4), 0.8310 (4), 2.564 (3)

| Chemistry: | (1) | (2) |
|------------|-------|--------|
| Ag | 43.2 | 44.65 |
| Hg | 56.6 | 55.35 |
| Total | 100.0 | 100.00 |

(1) Landsberg, Germany; by electron microprobe. (2) Ag₃Hg₂.

Occurrence: Formed in the oxidized zone by the alteration of moschellandsbergite (Landsberg, Germany); thought to be a primary mineral (Kremikovci deposit, Bulgaria).

Association: Schachnerite, mercurian silver, acanthite, cinnabar, “limonite”, ankerite (Landsberg, Germany); mercurian silver, cinnabar, many secondary copper minerals (Kremikovci deposit, Bulgaria); schachnerite, sphalerite, chalcopyrite, pyrite, pyrrhotite, gudmundite, cubanite, ilmenite, galena (Sala, Sweden).

Distribution: From the Vertraun auf Gott mercury mine, at Landsberg, near Obermoschel, Rhineland-Palatinate, Germany [TL]. In the Kremikovci deposit, Sofia district, Bulgaria. From Sala, Västmanland, Sweden.

Name: For the relation to schachnerite.

Type Material: Technical University, Berlin, Germany; National Museum of Natural History, Washington, D.C., USA, 145618, 150256.

References: (1) Seeliger, E. and A. Mücke (1972) Para-schachnerite, Ag_{1.2}Hg_{0.8}, und Schachnerite, Ag_{1.1}Hg_{0.9}, von Landsberg bei Obermoschel, Pfalz. Neues Jahrb. Mineral., Abh., 117, 1–18 (in German with English abs.). (2) (1973) Amer. Mineral., 58, 347 (abs. ref. 1). (3) Zakrzewski, M.A. and E.A.J. Burke (1987) Schachnerite, paraschachnerite and silver amalgam from the Sala mine, Sweden. Mineral. Mag., 51, 318–321. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 417.