

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As irregular grains embedded in other minerals. *Twinning:* Polysynthetic.

Physical Properties: Hardness = n.d. VHN = 329–378 (10 g load). D(meas.) = n.d. D(calc.) = 11.08

Optical Properties: Opaque. *Color:* Lilac-rose. *Luster:* Metallic. *Pleochroism:* Dark lilac-rose to pale rose.

R₁–R₂: (400) —, (420) 44.4–46.5, (440) 44.6–47.2, (460) 45.0–48.2, (480) 45.5–49.1, (500) 45.9–50.3, (520) 46.7–51.6, (540) 47.7–52.8, (560) 49.0–54.1, (580) 50.9–55.4, (600) 52.9–56.7, (620) 55.3–57.7, (640) 57.7–59.2, (660) 59.8–59.5, (680) 61.5–60.3, (700) 62.7–60.6

Cell Data: *Space Group:* $Pbnm$. $a = 8.11(1)$ $b = 5.662(6)$ $c = 4.324(2)$ $Z = 4$

X-ray Powder Pattern: Oktyabr deposit, Russia.

2.28 (100), 2.16 (70), 1.955 (50), 2.36 (40), 1.397 (40), 1.315 (40), 1.120 (40)

Chemistry:	(1)	(2)	(3)
Pd	64.8	64.3	64.19
Pt	2.5		
Sn	35.5	35.0	35.81
Sb	0.3		
Bi	0.2		
Total	103.3	99.3	100.00

(1) Oktyabr deposit, Russia; by electron microprobe, corresponding to $(\text{Pd}_{1.98}\text{Pt}_{0.04})_{\Sigma=2.02}\text{Sn}_{0.98}$.

(2) Western Platinum mine, South Africa; by electron microprobe, corresponding to $\text{Pd}_{2.02}\text{Sn}_{0.98}$.

(3) Pd₂Sn.

Occurrence: In Cu–Ni sulfide ores; in cubanite–chalcopyrite, cubanite–talnakhite, and cubanite–mooihoekite assemblages (Oktyabr deposit, Russia).

Association: Cubanite, chalcopyrite, galena, talnakhite, mooihoekite, magnetite, sperrylite, sobolevskite, taimyrite, polarite, maslovite, atokite–rustenbergite, froodite, silver, palladium, bismuth.

Distribution: In Russia, from the Oktyabr deposit, Talnakh area, Noril'sk region, western Siberia [TL] and in the Kingash massif, eastern Sayan. At the Atok, Western Platinum, and Rustenberg mines, in the Merensky Reef, Bushveld complex, Transvaal, South Africa. From Little Darling Creek, east of Broken Hill, New South Wales, Australia. In the Strathcona deposit, Sudbury, and the Geordie Lake intrusion, Coldwell complex, Ontario, Canada.

Name: For the chemical composition, PALLadium and *olovo*, *tin* (in Russian).

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 75509.

References: (1) Genkin, A.D., T.L. Evstigneeva, L.N. Vyal'sov, I.P. Laputina, and N.V. Groneva (1974) Paolovite, Pd₂Sn, a new mineral from copper–nickel sulfide ores. *Geol. Rudn. Mestorozhd.*, 16, 98–103 (in Russian). (2) (1974) *Amer. Mineral.*, 59, 1331–1332 (abs. ref. 1). (3) Criddle, A.J. and C.J. Stanley, Eds. (1993) *Quantitative data file for ore minerals*, 3rd ed. Chapman & Hall, London, 410.