

# Oosterboschite

# (Pd, Cu)<sub>7</sub>Se<sub>5</sub>

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**Crystal Data:** Orthorhombic, pseudotetragonal. *Point Group:* n.d. As irregular grains, to 0.4 mm. *Twinning:* Polysynthetic, two orthogonal sets of fine lamellae always observed in polished section.

**Physical Properties:** Hardness = 4.5–5 VHN = 340 (100 g load). D(meas.) = n.d. D(calc.) = 8.48

**Optical Properties:** Opaque. *Color:* In polished section, pale yellow with a cream tint. *Anisotropism:* Medium strong, in bluish gray to brownish gray.

R<sub>1</sub>–R<sub>2</sub>: (400) 38.4–45.1, (420) 39.9–46.5, (440) 41.4–47.9, (460) 42.8–49.2, (480) 43.9–50.3, (500) 44.9–51.2, (520) 45.6–51.7, (540) 46.0–51.8, (560) 46.0–51.6, (580) 46.1–51.3, (600) 46.3–51.2, (620) 46.7–51.4, (640) 47.2–51.6, (660) 47.7–51.8, (680) 48.2–52.0, (700) 48.6–52.2

**Cell Data:** *Space Group:* n.d. *a* = 10.42 *b* = 10.60 *c* = 14.43 *Z* = 8

**X-ray Powder Pattern:** Musonoi mine, Congo. 2.647 (100), 2.600 (80), 1.847 (80), 2.736 (70d), 2.244 (70d), 1.935 (70), 1.903 (70)

Chemistry:	(1)	(2)
Pd	44.9	44.1
Cu	17.1	16.7
Se	38.8	39.2
Total	100.8	100.0

(1) Musonoi mine, Congo; by electron microprobe, corresponds to (Pd<sub>4.28</sub>Cu<sub>2.73</sub>)<sub>Σ=7.01</sub>Se<sub>5.00</sub>.

(2) Do.; corresponds to (Pd<sub>4.17</sub>Cu<sub>2.64</sub>)<sub>Σ=6.81</sub>Se<sub>5.00</sub>.

**Occurrence:** In the zone of oxidation (Musonoi mine, Congo).

**Association:** Verbeekite, trogtalite, selenian digenite, covellite (Musonoi mine, Congo); gold, christianleyite, verbeekite (Hope's Nose, England).

**Distribution:** From the Musonoi Cu–Co mine, near Kolwezi, Katanga Province, Congo (Shaba Province, Zaire) [TL]. At the Copper Hills prospect, East Pilbara region, Western Australia. From Hope's Nose, Torquay, Devon, England.

**Name:** For Robert Oosterbosch (1908–), Belgian mining engineer, for many years involved in the development of the Shaba mines.

**Type Material:** National School of Mines, Paris, France.

**References:** (1) Johan, Z., P. Picot, R. Pierrot, and T. Verbeek (1970) L'oosterboschite (Pd, Cu)<sub>7</sub>Se<sub>5</sub>, une nouvelle espèce minérale, et la trogtalite cupro-palladifère de Musonoi (Katanga). Bull. Soc. fr. Minéral., 93, 476–481 (in French with English abs.). (2) (1972) Amer. Mineral., 57, 1553 (abs. ref. 1).