

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}$ . Tabular pseudo-hexagonal crystals, to 5 mm, display  $\{01\bar{1}0\}$ ,  $\{11\bar{2}1\}$ , and  $\{10\bar{1}1\}$  and form random groups and rosettes.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = ~ 4  
VHN = 270 (25 g load). *D(meas.)* = n.d. *D(calc.)* = 7.28

**Optical Properties:** Translucent. *Color:* Light yellow. *Streak:* White. *Luster:* Adamantine.  
*Optical Class:*  $n(\text{calc.}) = 2.04$  Orange fluorescence in UV.

**Cell Data:** *Space Group:*  $P\bar{3}$ .  $a = 10.0279(3)$   $c = 7.2965(2)$   $Z = 2$

**X-ray Powder Pattern:** Tsumeb mine, Tsumeb, Namibia.  
2.982 (100), 3.290 (34), 2.067 (16), 1.944 (11), 4.140 (10), 1.635(10), 1.523(10)

<b>Chemistry:</b>	(1)
PbO	64.44
CdO	8.82
As <sub>2</sub> O <sub>5</sub>	23.59
Cl	1.51
<u>-O = Cl<sub>2</sub></u>	<u>0.34</u>
Total	98.02

(1) Tsumeb mine, Tsumeb, Namibia; average of 45 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to  $\text{Pb}_{4.10}\text{Cd}_{0.98}\text{As}_{2.92}\text{O}_{12.07}\text{Cl}_{0.61}$ .

**Mineral Group:** Apatite supergroup.

**Occurrence:** A secondary mineral in the oxidized zone of a dolostone-hosted, polymetallic, hydrothermal ore deposit.

**Association:** Thometzekite, anglesite, gypsum.

**Distribution:** From the second oxidation zone, Tsumeb mine, Tsumeb, Namibia.

**Name:** Honors Georges Vanacker (1923-1992) of Bruges, Belgium, whose systematic mineral collection includes many specimens from the Tsumeb deposit, in one of which, vanackerite was first identified. His collection was donated to the Natural Sciences Institute, Brussels, Belgium.

**Type Material:** Mineralogical Museum of the University of Hamburg, Germany (TS 706).

**References:** (1) Schlüter, J., T. Malcherek and G. Gebhard (2016) Vanackerite, a new lead cadmium arsenate of the apatite supergroup from Tsumeb, Namibia. *Neues Jahrb. Mineral., Abh. (J. Min. Geochem.)*, 193(1), 79-86. (2) (2016) *Amer. Mineral.*, 101, 2573 (abs. ref. 1).