

# Theoparacelsite

# Cu<sub>3</sub>As<sub>2</sub>O<sub>7</sub>(OH)

©2001-2005 Mineral Data Publishing, version 1

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . In minute crystals, platy or finely parallel fibrous, in botryoidal crusts, to 0.5 cm; may be interstratified with other layer-structure minerals.

**Physical Properties:** *Cleavage:* {0001}, perfect. *Fracture:* Conchoidal. Hardness = 3.5  
D(meas.) = 4.00 D(calc.) = 3.95

**Optical Properties:** Translucent. *Color:* Emerald-green to blue-green; pale green in thin section. *Streak:* Pale green. *Luster:* Vitreous.  
*Optical Class:* Uniaxial (+); birefringence very weak. *Pleochroism:* Weak.  $\omega = 1.759$ –1.760  
 $\epsilon = 1.759$ –1.760

**Cell Data:** *Space Group:*  $P\bar{3}m1$  (synthetic).  $a = 3.131$   $c = 4.608$   $Z = 1$

**X-ray Powder Pattern:** Vermion district, Greece.  
2.335 (100), 4.61 (95), 1.755 (50), 2.708 (30), 1.563 (25), 1.480 (18), 1.336 (10)

**Chemistry:**

	(1)	(2)
NiO	80.21	80.57
H <sub>2</sub> O	19.30	19.43
Total	99.51	100.00

(1) Vermion district, Greece; by electron microprobe, H<sub>2</sub>O by the Penfield method. (2) Ni(OH)<sub>2</sub>.

**Occurrence:** As coatings in chromitite in lenses in serpentinites (Vermion district, Greece); on chromitite (Hagdale quarry, Scotland).

**Association:** Magnetite, chromite, millerite, vesuvianite, chlorite, andradite–grossular, nickeliferous serpentine minerals, calcite (Vermion district, Greece); zaratite, reevesite, honessite, hydrohonessite, nakauriite, pentlandite, heazlewoodite (Hagdale quarry, Scotland).

**Distribution:** From the Vermion district, 50 km west of Thessalonike, Macedonia, Greece. In the Hagdale quarry, Unst, Shetland Islands, Scotland. At the Lord Brassey mine, Heazlewood, Tasmania, Australia.

**Name:** For Theophrastus, (ca. 371 BC–ca. 287 BC), the first Greek mineralogist.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 148460.

**References:** (1) Marcopoulos, T. and M. Economou (1981) Theophrastite, Ni(OH)<sub>2</sub>, a new mineral from northern Greece. *Amer. Mineral.*, 66, 1020–1021. (2) Livingstone, A. and D. Bish (1982) On the new mineral theophrastite, a nickel hydroxide, from Unst, Shetland, Scotland. *Mineral. Mag.*, 46, 1–5.