

Crystal Data: Monoclinic. *Point Group:* $2/m$. Rare crystals, elongated along [001], with principal forms {100}, {110}, {001}, a dozen additional forms, to 4 mm; as stalactites, which may be terminated by crystal faces; in parallel growths, and as efflorescences. *Twinning:* Observed.

Physical Properties: *Cleavage:* {001}, perfect; {100}, less perfect. Hardness = 2.5
D(meas.) = 1.692 D(calc.) = 1.693 Slowly effloresces at room temperature to produce nesquehonite.

Optical Properties: Transparent to translucent, becoming opaque on exposure.
Color: Colorless to white; colorless in transmitted light. *Luster:* Vitreous if fresh.
Optical Class: Biaxial (+). *Orientation:* $X = b; Z = c; Y \perp \{100\}$. $\alpha = 1.456\text{--}1.465$
 $\beta = 1.468\text{--}1.469$ $\gamma = 1.507\text{--}1.508$ $2V(\text{meas.}) = 59^\circ 30'$ $2V(\text{calc.}) = 59^\circ 20'$

Cell Data: *Space Group:* $P2_1/a$ (synthetic). $a = 12.4758(7)$ $b = 7.6258(4)$ $c = 7.3463(6)$
 $\beta = 101.762(6)^\circ$ $Z = 4$

X-ray Powder Pattern: Synthetic.

2.839 (100), 4.583 (95), 3.237 (55), 1.710 (33), 5.239 (31), 5.110 (31), 7.178 (30)

Chemistry:

	(1)	(2)
CO ₂	25.09	25.23
MgO	23.27	23.12
H ₂ O	51.75	51.65
Total	100.11	100.00

(1) Cogne, Italy. (2) MgCO₃•5H₂O.

Occurrence: Stalactites pendant from the shale roof of an anthracite coal mine (Nesquehoning, Pennsylvania, USA); in a hydromagnesite deposit (Atlin, Canada); a weathering product of an ultramafic body (Sør-Trøndelag, Norway).

Association: Nesquehonite, hydromagnesite, dypingite.

Distribution: In the USA, from Nesquehoning, near Lansford, Carbon Co., Pennsylvania; near the Robinson Gulch pegmatite, Jefferson Co., Colorado. From Atlin, British Columbia, Canada. At Cogne, Val d'Aosta, Piedmont, Italy. From the Feragen ultramafic body, Sør-Trøndelag, Norway. Found in seafloor precipitates in the Japan Sea.

Name: For its occurrence near Lansford, Pennsylvania, USA.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 228–230. (2) Hill, R.J., J.H. Canterford, and F.J. Moyle (1982) New data for lansfordite. *Mineral. Mag.*, 46, 453–457. (3) Bai-Nian Liu, Xiang-Ting Zhou, Xiu-Shan Cui, and Ji-Gang Tang (1990) Synthesis of lansfordite MgCO₃•5H₂O and its crystal structure investigation. *Science in China, Series B*, 33(11), 1350–1356.