

Crystal Data: Tetragonal. *Point Group:* $\bar{4}$. Crystals, sphenoidal pseudotetrahedral or pseudo-octahedral, characteristically twinned and etched, to 18 mm, showing {100}, {110}, {111}, {1 $\bar{1}$ 1}, {311}. *Twinning:* Common on {110}, interpenetrant, characteristically crosslike with a square cross-section.

Physical Properties: *Cleavage:* On {110}, perfect. *Tenacity:* Brittle. Hardness = \sim 3
D(meas.) = 3.156 D(calc.) = [3.22] Pale yellow fluorescence under LW and SW UV.

Optical Properties: Transparent to translucent. *Color:* Colorless to white, may be pale yellow or pale green; colorless in transmitted light. *Luster:* Vitreous.

Optical Class: Uniaxial (+). *Dispersion:* Strong; exhibits anomalous interference colors.

$\omega = 1.655\text{--}1.662$ $\epsilon = 1.656\text{--}1.663$

Cell Data: *Space Group:* $I\bar{4}$. $a = 7.0952$ $c = 6.104$ $Z = 2$

X-ray Powder Pattern: Franklin, New Jersey, USA.

3.56 (100), 1.818 (52), 2.640 (48), 5.02 (20), 4.67 (20), 2.833 (19), 2.336 (17)

Chemistry:

	(1)	(2)
As ₂ O ₅	38.05	38.58
B ₂ O ₃	11.86	11.68
CaO	37.62	37.65
H ₂ O	12.42	12.09
Total	99.95	100.00

(1) Franklin, New Jersey, USA. (2) Ca₂B(AsO₄)(OH)₄.

Occurrence: A late-stage mineral in pegmatites cutting a metamorphosed stratiform zinc orebody (Franklin, New Jersey, USA); with zeolites in leucitic lava (Capo di Bove, Italy).

Association: Hedyphane, friedelite, pyrochroite, franklinite, willemite, rhodonite, datolite, axinite, jarosewichite, samfowlerite, flinkite, hodgkinsonite, hetaerolite, hausmannite, groutite, kentrolite, garnet, barite (Franklin, New Jersey, USA); phillipsite, chabazite, calcite (Capo di Bove, Italy); natronambulite, gypsum, barite, calcite (Kombat mine, Namibia); svabite, magnetite, sphalerite, garnet, calcite (Siberia, Russia).

Distribution: From Franklin, Sussex Co., New Jersey, USA. In the Klodeborg mine, Arendal, Norway. At Capo di Bove, and Vallerano, Strada Laurentina, near Rome, Lazio, Italy. In the Kombat Cu–Pb–Ag mine, 49 km south of Tsumeb, Namibia. In the Killik, Hisarcık, and Espey borate mines, near Emet, Kütahya Province, Turkey. In Russia, from the Solongo boron deposit, Buryatia. At Fuka, near Bicchu, Okayama Prefecture, Japan.

Name: To honor Lazard Cahn (1865–1940), mineral collector and dealer, Colorado Springs, Colorado, USA, who first noted the species.

Type Material: Harvard University, Cambridge, Massachusetts, 90010, 90015, 90016, 90019; National Museum of Natural History, Washington, D.C., USA, 95568.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 386–387. (2) Embrey, P.G. (1960) Cahnite from Capo di Bove, Rome. Mineral. Mag., 32, 666–668. (3) Prewitt, C.T. and M.J. Buerger (1961) The crystal structure of cahnite. Amer. Mineral., 46, 1077–1085. (4) Malinko, S.V. (1966) The first find of cahnite in the USSR. Doklady Acad. Nauk SSSR, 166, 695–697 (in Russian). (5) Dunn, P.J. (1995) Franklin and Sterling Hill, New Jersey. No publisher, n.p., 660–663.