

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. Powdery, massive.

Physical Properties: Hardness = 3.5–4.5 D(meas.) = 4.6 D(calc.) = [4.58]

Optical Properties: Semitransparent. *Color:* Yellow, black to brown when admixed with impurities; pale yellow in transmitted light. *Streak:* Pale yellow, shining.

Optical Class: Isotropic. $n = 1.95$

Cell Data: *Space Group:* $Fd\bar{3}m$. $a = 10.46$ $Z = 8$

X-ray Powder Pattern: Belmont, Nevada, USA.

3.02 (100), 2.61 (70), 1.85 (70), 1.58 (70), 1.20 (50), 0.884 (50), 1.17 (40)

Chemistry:

	(1)
Sb ₂ O ₄	43.77
Ag	23.74
Cu	12.78
Fe	1.82
S	4.7
H ₂ O	7.9
Total	94.71

(1) Belmont, Nevada, USA; average of two analyses; assuming Cu, Fe, and S are contained in admixed chalcocite and pyrite, then corresponds to Ag_{1.1}Sb_{1.4}(O, OH, H₂O)_{6.3}.

Mineral Group: Stibiconite group.

Occurrence: Apparently an alteration product in the oxidized zone of some hydrothermal Ag–Sb-bearing mineral deposits, where it may constitute an ore of silver.

Association: Chalcocite, pyrite, quartz (Belmont, Nevada, USA).

Distribution: In the USA, in Nevada, in the Empire and Philadelphia districts, Belmont, 80 km northeast of Tonopah, Nye Co., and in the Black Warrior mine, near Silver Peak, Esmeralda Co.; in Arizona, at the Snyder Hill mine, Tucson Mountains, Pima Co., in the Johnny Lyon Hills, Cochise Co., and from the Red Cloud mine, Silver District, La Paz Co.

Name: To honor Carl August Stetefeldt (1838–1896), German-American mining engineer and metallurgist.

Type Material: Location of original type material is unknown; restudied on Harvard University, Cambridge, Massachusetts, 80285; National Museum of Natural History, Washington, D.C., USA, 104763.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 598 [stetefeldite]. (2) Mason, B. and C.J. Vitaliano (1953) The mineralogy of the antimony oxides and antimonates. *Mineral. Mag.*, 30, 100–112.