

Crystal Data: Orthorhombic, pseudotetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. In granular masses and as disseminated blebs, with single-crystal domains to 0.1 mm.

Physical Properties: *Fracture:* Uneven to subconchoidal. *Tenacity:* Brittle, somewhat sectile. Hardness = 2.5 VHN = 27–31 (25 g load). D(meas.) = 7.6–7.8 D(calc.) = 7.91

Optical Properties: Opaque. *Color:* Brilliant creamy white, tarnishing to bright orange; in polished section, tin-white with a faint creamy tinge. *Streak:* Shining. *Luster:* Metallic. *Pleochroism:* Weak. *Anisotropism:* Strong.

R₁–R₂: (400) 33.5–35.0, (420) 33.8–34.0, (440) 34.2–33.6, (460) 35.0–33.7, (480) 36.3–34.1, (500) 37.6–34.5, (520) 38.2–35.1, (540) 38.0–35.8, (560) 37.4–36.6, (580) 36.9–37.1, (600) 36.1–36.8, (620) 35.4–36.1, (640) 34.7–35.3, (660) 34.1–34.6, (680) 33.6–34.1, (700) 33.3–33.6

Cell Data: *Space Group:* $P4/nmm$. $a = 4.105$ $b = 20.35$ $c = 6.31$ $Z = 10$

X-ray Powder Pattern: Skrikerum, Sweden.
2.12 (10), 2.61 (7), 2.88 (5), 2.48 (4), 2.02 (2), 3.14 (1), 1.861 (1)

Chemistry:	(1)	(2)	(3)
Ag	42.20	44.4	43.04
Cu	25.41	24.5	25.36
Se	32.43	32.1	31.60
Total	100.04	101.0	100.00

(1) Argentina. (2) Hope's Nose, England; by electron microprobe. (3) CuAgSe.

Occurrence: Widely distributed in selenium deposits of hydrothermal origin; locally abundant with other selenides.

Association: Berzelianite, weissite, crookesite, clausthalite, umangite, klockmannite, tiemannite, chalcomenite, malachite, calcite.

Distribution: In Sweden, at the Skrikerum copper mine near Tryserum, Kalmar [TL]. From the Frederik VII's mine, near Julianehåb, southern Greenland. In Germany, in the Harz Mountains, from the Trogtal quarry, near Lautenthal, and at Lerbach. From Kletno, Poland. In the Czech Republic, at Bukov, near Tisnova; in the Petrovice uranium deposit, near Ždár; the Předbořice uranium deposit, near Krásna Hora; from Lasovice, and at Jáchymov (Joachimsthal). In the Chaméane uranium mine, near Vernet-la-Varenne, Puy-de-Dôme, France. From Hope's Nose, Torquay, Devon, England. In Canada, in the Martin Lake mine near Lake Athabasca, Saskatchewan, and in the Kidd Creek mine, near Timmins, Ontario. In the Cougar mine, Slick Rock district, San Miguel Co., Colorado, USA. In Argentina, from Sierra de Umango; in the Santa Brigida mine; and at Tuminico, Sierra de Cacho, La Rioja Province. From Aguas Blancas, near Copiapó, Antofagasta, Chile. At Kalgoorlie, Western Australia. A few additional minor localities are known.

Name: From the Greek for *opportunity*, because it was discovered shortly after discovery of the element selenium.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 183–184. (2) Earley, J.W. (1950) Description and synthesis of the selenide minerals. *Amer. Mineral.*, 35, 337–364. (3) Frueh, A.J., Jr., G.K. Czamanske, and C. Knight (1957) The crystallography of eucairite, CuAgSe. *Zeits. Krist.*, 108, 389–396. (4) Sindeeva, N.D. (1964) Mineralogy and types of deposits of selenium and tellurium, 48–49. (5) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 162.

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