Cuproneyite $Cu_7Pb_{27}Bi_{25}S_{68}$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As irregular or short prismatic grains to 300 μm in irregular aggregates, nests, and veinlets to 5 cm.

Physical Properties: *Cleavage*: Perfect along [001]. *Fracture*: n.d. *Tenacity*: Brittle. Hardness = ~3 VHN = 213-238, 222.5 average (25 g load). D(meas.) = n.d. D(calc.) = 7.113

Optical Properties: Opaque. *Color*: Silver-gray. *Streak*: n.d. *Luster*: Metallic.
Optical Class: *Bireflectance*: Barely visible in air and moderate in oil, grayish white with faint yellowish tints to grayish white with faint bluish tints. *Anisotropism*: Dark brownish gray to light brownish gray.
R_1-R_2: (470) 40.4-47.1, (546) 39.3-45.7, (589) 38.3-44.3, (650) 38.1-43.9

Cell Data: *Space Group*: *C*2/*m*. a = 37.432(8) b = 4.0529(9) c = 43.545(9) β = 108.800(5)° Z = 2

X-ray Powder Pattern: Calculated pattern.
2.867 (100), 3.735 (96), 3.347 (84), 2.027 (81), 2.956 (77), 3.464 (53), 3.507 (50)

Chemistry:

	(1)
Cu	3.34
Ag	0.30
Pb	40.10
Bi	39.59
Se	0.14
Te	0.12
S	16.12
Total	99.71

(1) Băiţa Bihor, Romania; average electron microprobe analysis; corresponds to $Cu_{7.1}Ag_{0.38}Pb_{26.04}Bi_{25.49}(Te_{0.12}Se_{0.23}S_{67.65})_{\Sigma=68}$.

Polymorphism & Series: Likely a continuous series with neyite.

Occurrence: In diopside skarn hosting polymetallic mineralization related to contact metamorphism.

Association: Cosalite, hammarite-friedrichite, calcite.

Distribution: At Băiţa Bihor, Romania.

Name: The prefix, *cupro*, identifies the copper analogy of *neyite*.

Type Material: Department of Mineralogy, Faculty of Geology and Geophysics, University of Bucharest, Romania (CATMIN 22/24).

References: (1) Ilinca, G., E. Makovicky, D. Topa, and G. Zagler (2012) Cuproneyite, $Cu_7Pb_{27}Bi_{25}S_{68}$, a new mineral species from Băiţa Bihor, Romania. Can. Mineral., 50, 353-370.