

Crystal Data: Tetragonal. *Point Group:* 4/m 2/m 2/m. As irregular grains, to 0.1 mm; as lamellae.

Physical Properties: *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = n.d. VHN = 145 (50 g load). D(meas.) = n.d. D(calc.) = 4.71

Optical Properties: Opaque. *Color:* Reddish yellow; creamy white with reddish tint in reflected light. *Streak:* n.d. *Luster:* Metallic. Tarnishes brownish gray on exposure to air.

Optical Class: n.d. *Anisotropism:* Weak, dark to light gray.

R₁-R₂: (436) 25.6–31.9, (497) 29.9–36.1, (543) 33.2–39.1, (586) 36.1–41.5, (648) 39.3–44.3

Cell Data: *Space Group:* P4₂/mmm. *a* = 10.566(5) *c* = 9.749(8) *Z* = 4

X-ray Powder Pattern: Horoman massif, Samanicho, Samani-gun, Hokkaido, Japan.

2.072 (100), 1.793 (85), 1.804 (83), 3.061 (74), 1.954 (42), 1.962 (38), 2.641 (33)

Chemistry:

	(1)
Cu	6.99
Fe	43.27
Ni	16.10
Co	0.17
<u>S</u>	<u>33.04</u>
Total	99.57

(1) Horoman massif, Hokkaido, Japan; average of 8 electron microprobe analyses, corresponding to Cu_{0.85}(Fe_{6.01}Ni_{2.13}Co_{0.02})_{Σ=8.16}S_{7.99}.

Occurrence: An intergranular exsolved phase in sulfide aggregates in lherzolite in a peridotite massif.

Association: Bornite, talnakhite, copper, (Fe,Ni,Co,Cu)₉S₈, Cu₂(Fe,Ni)₇S₈.

Distribution: Horoman peridotite massif, Samanicho, Samani-gun, Hokkaido, Japan.

Name: Honors emeritus professor Asahiko Sugaki (b 1923), Tohoku University, Sendai, Japan, for his studies on sulfide phase equilibria.

Type Material: Tohoku University Museum, Sendai, Japan.

References: (1) Kitakaze, A. (2008) Sugakiite, Cu(Fe,Ni)₈S₈, A new mineral species from Hokkaido, Japan. *Can. Mineral.*, 46, 263–267. (2) (2008) *Amer. Mineral.*, 93, 1944 (abs. ref. 1).