

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. As grains, to 0.1 mm.

Physical Properties: *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle.
Hardness = 3 VHN = 130 (50 g load). D(meas.) = n.d. D(calc.) = 4.89

Optical Properties: Opaque. *Color:* Yellowish white macroscopically and in reflected light.

Streak: n.d. *Luster:* Metallic.

Optical Class: n.d. *Pleochroism:* Weak, yellowish white to pale yellowish white.

Anisotropism: Weak, dark-gray to light-gray.

R_1 - R_2 : (436) 27.1-29.6, (497) 34.4-37.9, (543) 38.9-43.6, (586) 44.9-49.8, (648) 42.2-46.9

Cell Data: *Space Group:* $P4_2/mmm$. $a = 10.089(1)$ $c = 10.402(8)$ $Z = 4$

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

3.118 (100), 1.844 (50), 1.595 (45), 1.873 (25), 3.050 (20), 5.88 (15), 2.703 (5)

Chemistry:	(1)
Cu	16.90
Fe	34.60
Ni	15.48
Co	0.16
<u>S</u>	<u>32.87</u>
Total	100.01

(1) Horoman massif, Samani-cho, Samani-gun, Hokkaido, Japan; average of 10 electron microprobe analyses, corresponding to $\text{Cu}_{2.08}(\text{Fe}_{4.84}\text{Ni}_{2.06}\text{Co}_{0.02})_{\Sigma=6.92}\text{S}_8$.

Occurrence: Filling space between silicate minerals in lherzolites of a peridotite massif.

Association: Horomanite and sugakiite as intergrowths; bornite, talnakhite, copper, troilite, heazlewoodite, pentlandite, magnetite, olivine, clino- and orthopyroxenes.

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

Name: For the region of Japan (*Samani-cho*) from which the first specimens were collected.

Type Material: Tohoku University Museum, Japan.

References: (1) Kitakaze, A., H. Itoh, and R. Komatsu (2011) Horomanite, $(\text{Fe,Ni,Co,Cu})_9\text{S}_8$, and samaniite, $\text{Cu}_2(\text{Fe,Ni})_7\text{S}_8$, new mineral species from the Horoman peridotite massif, Hokkaido, Japan. *Journal of Mineralogical and Petrological Sciences*, 106, 204-210. (2) (2014) *Amer. Mineral.*, 99, 552-553 (abs. ref. 1).