

Crystal Data: Hexagonal. *Point Group:* 6/m. As radial aggregates of acicular to hexagonal columnar crystals elongated along [001] to 200 μm.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = ~3 D(meas.) = n.d. D(calc.) = 3.33 Nonfluorescent.

Optical Properties: [Translucent.] *Color:* Yellowish green. *Streak:* n.d. *Luster:* [Vitreous.] *Optical Class:* Uniaxial (+). $\omega = 1.680(3)$ $\varepsilon = 1.767(3)$ *Pleochroism:* Light green to yellowish green.

Cell Data: *Space Group:* P6₃/m. $a = 13.367(2)$ $c = 5.872(2)$ $Z = 2$

X-Ray Diffraction Pattern: Ohgurusu, Kiwa-cho, Kumano City, Mie Prefecture, Japan. 11.578 (100), 4.377 (28), 2.438 (25), 3.509 (18), 2.898 (14), 2.526 (11), 3.211 (10)

Chemistry:	(1)	(2)
CuO	50.35	49.65
FeO	0.08	
CaO	0.09	
Y ₂ O ₃	0.33	
La ₂ O ₃	2.68	16.95
Ce ₂ O ₃	2.22	
Nd ₂ O ₃	2.18	
Sm ₂ O ₃	0.42	
P ₂ O ₅	14.92	22.15
As ₂ O ₅	10.21	
SiO ₂	2.08	
H ₂ O	[13.70]	11.25
Total	102.24	100.00

(1) Ohgurusu, Kiwa-cho, Kumano City, Mie Prefecture, Japan; average electron microprobe analysis, H₂O calculated; corresponds to (Cu_{5.692}Fe_{0.010}) $\Sigma=5.702$ [(La_{0.148}Ce_{0.122}Nd_{0.117}Y_{0.086}Sm_{0.022}) $\Sigma=0.495$ Ca_{0.372}] $\Sigma=0.866$ (P_{1.890}As_{0.799}Si_{0.311}) $\Sigma=3$ O_{10.320}(OH)_{7.680}·3H₂O. (2) Cu₆La(PO₄)₃(OH)₆·3H₂O.

Mineral Group: Mixite group.

Occurrence: A secondary phase derived by weathering copper sulfides. In small cavities coated by chrysocolla in quartz veins.

Association: Pseudomalachite, malachite.

Distribution: From Ohgurusu, Kiwa-cho, Kumano City, Mie Prefecture, Japan.

Name: La-dominant analogue of petersite-(Y) and petersite-(Ce).

Type Material: National Museum of Nature and Science, Japan (NSM-M45621).

References: (1) Nishio-Hamane, D., M. Ohnishi, N. Shimobayashi, K. Momma, R. Miyawaki, and S. Inaba (2020) Petersite-(La), a new mixite-group mineral from Ohgurusu, Kiwa, Kumano City, Mie Prefecture, Japan. *Journal of Mineralogical and Petrological Sciences*, 115, 286-295.