

**Crystal Data:** Tetragonal. *Point Group:*  $4/m\ 2/m\ 2/m$ . As short prismatic crystals, to 0.5 mm; in globular aggregates.

**Physical Properties:** *Cleavage:* {110}, perfect. Hardness = 4.5 VHN = 292–357 (25 g load). D(meas.) = 8.5(3) D(calc.) = 8.64

**Optical Properties:** Opaque. *Color:* Black; gray in reflected light, with deep red to dark brown internal reflections. *Streak:* Black. *Luster:* Metallic.

*Optical Class:* Uniaxial. *Pleochroism:* Gray, with faint bluish tint, and brownish gray.

*Anisotropism:* Weak to distinct. *Birefractance:* Weak.

$R_1$ – $R_2$ : (482) 19.0–21.1, (545) 18.0–20.2, (589) 17.6–19.7, (659) 17.3–19.5

**Cell Data:** *Space Group:*  $P4/ncc$ .  $a = 8.511(2)$   $c = 5.823(2)$   $Z = 4$

**X-ray Powder Pattern:** Fuka, Japan.

3.191 (100), 2.695 (18), 1.947 (18), 4.26 (17), 2.913 (16), 2.404 (13), 1.728 (12)

<b>Chemistry:</b>	(1)	(2)
	Bi <sub>2</sub> O <sub>3</sub>	86.00
	CuO	13.91
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	Total	99.91
		100.00

(1) Fuka, Japan; by electron microprobe, average of six analyses; corresponding to Cu<sub>0.96</sub>Bi<sub>2.03</sub>O<sub>4.00</sub>. (2) CuBi<sub>2</sub>O<sub>4</sub>.

**Occurrence:** On calcite crystals in a calcite vein between gehlenite-spurrite skarn and limestone; thought to be of low-temperature hydrothermal origin.

**Association:** Henmilite, sillénite, bakerite, tenorite, bultfonteinite, apophyllite, cuspidine, thaumasite.

**Distribution:** From Fuka, near Bicchu, Okayama Prefecture, Japan.

**Name:** To honor Dr. Isao Kusachi (1942–), Professor of Mineralogy, Okayama University, Okayama, Japan, for his work on skarn minerals of the Fuka area.

**Type Material:** National Science Museum, Tokyo, Japan.

**References:** (1) Henmi, C. (1995) Kusachiite, CuBi<sub>2</sub>O<sub>4</sub>, a new mineral from Fuka, Okayama Prefecture, Japan. *Mineral. Mag.*, 59, 545–548. (2) (1996) *Amer. Mineral.*, 81, 517 (abs. ref. 1).