

Crystal Data: Monoclinic. *Point Group:* $2/m$. As micaceous grains to 0.5 mm.

Physical Properties: *Cleavage:* Perfect on $\{001\}$. *Fracture:* n.d.
Hardness = ~3 VHN = 100-130 D(meas.) = 3.20(3) D(calc.) = 3.14

Optical Properties: Translucent. *Color:* Dark reddish brown. *Luster:* n.d.
Optical Class: Biaxial (-). $\alpha = 1.592(2)$ $\beta \approx \gamma = 1.635(2)$ $2V_x =$ Very small.
Pleochroism: Strong, $X =$ pale yellow, $Y = Z =$ pale brown. *Absorption:* $X < Y \approx Z$.

Cell Data: *Space Group:* $C2/m$ (1M polytype). $a = 5.3791(7)$ $b = 9.319(1)$ $c = 10.2918(9)$
 $\beta = 100.186(9)^\circ$ $Z = 2$

X-ray Powder Pattern: Taguchi mine, Yatuhashi, Kita-shitara County, Aichi Prefecture, Japan.
10.16 (100), 2.654 (96), 3.386 (51), 1.556 (48), 2.467 (46), 2.202 (36), 3.426 (33)

Chemistry:	(1)
SiO ₂	31.40
Al ₂ O ₃	18.45
TiO ₂	0.71
FeO	2.90
MnO	22.38
MgO	7.83
BaO	2.77
K ₂ O	8.75
F	0.11
H ₂ O	[3.66]
- O = F	0.05
Total	98.91

(1) Taguchi mine, Yatuhashi, Kita-shitara County, Aichi Prefecture, Japan; electron microprobe analysis, H₂O calculated from stoichiometry; corresponds to
 $(\text{K}_{0.90}\text{Ba}_{0.09})(\text{Mn}^{2+}_{1.53}\text{Mg}_{0.94}\text{Fe}^{2+}_{0.20}\text{Ti}_{0.04}\text{Al}_{0.29})(\text{Si}_{2.54}\text{Al}_{1.46})\text{O}_{10}[(\text{OH})_{1.97}\text{F}_{0.03}]$.

Occurrence: In a strata-bound Mn ore deposit formed during regional low-P/T and contact metamorphism.

Association: Tephroite, rhodochrosite, apatite, baryte, bementite.

Distribution: From the Taguchi mine, Yatuhashi, Kita-shitara County, Aichi Prefecture, Japan.

Name: Honors Dr. Haruo *Shirozu*, Professor Emeritus of Kyushu University, for his contributions to the crystal-chemistry of sheet-silicate minerals, particularly the chlorite group.

Type Material: Graduate School of Social and Cultural Studies, Kyushu University, Fukuoka, Japan.

References: (1) Ishida, K., F.C. Hawthorne, and F. Hirowatari (2004) Shirozulite, $\text{KMn}^{2+}_3(\text{Si}_3\text{Al})\text{O}_{10}(\text{OH})_2$, a new manganese-dominant trioctahedral mica: Description and crystal structure. *Amer. Mineral.*, 89, 232-238.