

Crystal Data: Monoclinic. *Point Group:* 2/m. As grains < 1 mm; in scaly aggregates.

Physical Properties: *Cleavage:* Perfect on (001). *Tenacity:* Flexible. *Fracture:* n.d.
Hardness = ~3 VHN = 84.93-119.75, 102 average. D(meas.) = 2.851 D(calc.) = 2.868

Optical Properties: Transparent to translucent. *Color:* n.d. *Streak:* n.d. *Luster:* n.d.
Optical Class: Biaxial (-). $\alpha = 1.5474$ $\beta = 1.5700$ $\gamma = 1.5729$ $2V(\text{meas.}) = 36^\circ\text{-}40^\circ$
Orientation: $X = c$, $Y = b$, $Z = a$. Widely wavy extinction.

Cell Data: *Space Group:* C2/c. $a = 5.1861(7)$ $b = 8.9857(3)$ $c = 19.970(3)$ $\beta = 95.42^\circ$ $Z = 4$

X-Ray Diffraction Pattern: No. 309 pegmatite, Lushi country, Henan Province, China.
2.565 (100), 3.468 (42), 3.314 (36), 9.891 (35), 2.973 (34), 4.451 (31), 2.378 (31)

Chemistry:	(1)
SiO ₂	51.65
TiO ₂	0.01
Al ₂ O ₃	3.50
FeO	0.72
CaO	0.02
MnO	0.22
MgO	0.04
Na ₂ O	0.15
K ₂ O	11.62
Li ₂ O	3.80
Rb ₂ O	0.78
Cs ₂ O	0.53
F	3.85
H ₂ O	2.82
-O = F	1.62
Total	98.09

(1) No. 309 pegmatite, Lushi country, Henan Province, China; average electron microprobe analysis Li, Rb and Cs determined by atom absorption spectra; F and OH determined by wet analyses; corresponds to $(\text{K}_{1.01}\text{Rb}_{0.03}\text{Cs}_{0.02}\text{Na}_{0.02})_{\Sigma=1.08}(\text{Li}_{1.04}\text{Al}_{1.39}\text{Fe}_{0.04}\text{Mn}_{0.01})_{\Sigma=2.48}(\text{Si}_{3.51}\text{Al}_{0.49})_{\Sigma=4.00}[\text{O}_{9.89}(\text{OH})_{0.11}]_{\Sigma=10.00}[(\text{OH})_{1.17}\text{F}_{0.83}]_{\Sigma=2.00}$.

Mineral Group: Mica group, 2M₁ polytype.

Occurrence: In veinlets cutting and the outer zone of a granitic pegmatite dike.

Association: Quartz, an "F-dominant analog of luanshiweiite", montebrasite, pollucite, bismutotantalite, Na- and Ca-poor but Li- and OH- or F-rich tourmaline, tantalite, tantalite-Mn, trilithionite, polyolithionite(?), microlite group minerals, albite ($An \leq 4$), spodumene, oxyntromicrolite, fluorcalciomicrolite, muscovite.

Distribution: From the No. 309 rare-metal granitic pegmatite dike, Guonpo town, Lushi country, Henan Province, China.

Name: Honors Chinese pegmatitic petrologist Professor *Luanshiwei* (1928-2012).

Type Material: Geological Museum of China, Beijing (M 11797).

References: (1) Fan, G., G. Li, G. Shen, J. Xu, and J. Dai (2013) Luanshiweiite: A new member of lepidolite series. *Acta Mineralogica Sinica* 33, 713-721.