

Crystal Data: Monoclinic. *Point Group:* 2/m. As platy crystals to 0.5 mm.

Physical Properties: *Cleavage:* Perfect on {001}. *Fracture:* n.d. *Tenacity:* Flexible and elastic. Hardness = 3 [Synthetic] D(meas.) = n.d. D(calc.) = 2.807

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Pearly. *Optical Class:* Biaxial (n.d.). $n = 1.532-1.537$ 2V(meas.) = 5-10°

Cell Data: *Space Group:* C2/m. $a = 5.249(4)$ $b = 9.095(5)$ $c = 10.142(5)$ $\beta = 99.96(6)^\circ$ $Z = 2$

X-ray Powder Pattern: Bayan Obo, Inner Mongolia, China. 2.41 (100), 10.03 (95), 2.59 (67), 2.90 (49), 3.37, (48), 4.51 (45), 2.62 (43)

Chemistry:	(1)	(2)
SiO ₂	58.8	58.59
Al ₂ O ₃	0.41	
MgO	24.7	24.56
FeO	1.00	
MnO	0.02	
TiO ₂	0.01	
K ₂ O	8.20	11.48
Li ₂ O	1.10	
Na ₂ O	0.06	
CaO	0.04	
BaO	0.03	
F	9.04	9.26
H ₂ O	0.17	
-O=F	3.81	3.90
Total	99.75	100.00

(1) Bayan Obo, Inner Mongolia, China; average of 15 electron microprobe analyses, SIMS analysis for Li, H₂O calculated from stoichiometry; corresponding to (K_{0.70}Li_{0.30}Na_{0.01})_{Σ=1.01}(Mg_{2.48}Fe_{0.06})_{Σ=2.54}(Si_{3.96}Al_{0.03})_{Σ=3.99}O₁₀[F_{1.92}(OH)_{0.08}]_{Σ=2.00}. (2) KMg_{2.5}Si₄O₁₀F₂.

Mineral Group: Mica group; Mg-analog of montdorite.

Occurrence: Formed in metamorphosed carbonate rock in the transition zone between dolomite and slate in a rare earth-bearing deposit.

Association: Dolomite, calcite, tremolite, norbergite, huanghoite-(Ce); with minor phlogopite, barite, bastnäsitate-(Ce), parisite-(Ce), fluorite.

Distribution: From the southern part of the East orebody, Bayan Obo, Inner Mongolia, People's Republic of China.

Name: Honors Professor Yang Zhuming (b. 1951), mineralogist and crystallographer, for his contributions to the mineralogy of the Bayan Obo deposit.

Type Material: National Museum of Nature and Science, Tokyo, Japan (NSM-MF15361) and the Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing, People's Republic of China (KDX015).

References: (1) Miyawaki, R., H. Shimazaki, M. Shigeoka, K. Yokoyama, S. Matsubara, and H. Yurimoto (2011) Yangzhumingite, KMg_{2.5}Si₄O₁₀F₂, a new mineral in the mica group from Bayan Obo, Inner Mongolia, China. *Eur. J. Mineral.*, 23, 467-473. (2) (2012) *Amer. Mineral.*, 97, 761 (abs. ref. 1).