

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As tabular grains, to 20 μm .

Physical Properties: *Cleavage:* None. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = n.d.
D(meas.) = n.d. D(calc.) = 3.447

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous.
Optical Class: Uniaxial (+). $\varepsilon = 1.706(3)$ $\omega = 1.701(4)$ [synthetic $\gamma\text{-Ca}_3(\text{PO}_4)_2$]

Cell Data: *Space Group:* $R\bar{3} m$. $a = 5.258(1)$ $c = 18.727(3)$ $Z = 3$

X-ray Powder Pattern: Suizhou L6 chondritic meteorite.
2.628 (100), 2.891 (80), 1.945 (47), 1.730 (25), 1.567 (22), 2.214 (20), 1.518 (19)

Chemistry:	(1)
TiO ₂	0.06
FeO	0.28
MgO	3.27
CaO	46.62
NiO	0.08
Na ₂ O	2.57
K ₂ O	0.03
Cr ₂ O ₃	0.00
P ₂ O ₅	47.16
Total	99.90

(1) Suizhou L6 chondritic meteorite; average of 3 electron microprobe analyses; corresponding to $(\text{Ca}_{2.51}\text{Mg}_{0.29})_{\Sigma=2.80}\text{Na}_{0.28}(\text{P}_{1.01}\text{O}_4)_2$.

Polymorphism & Series: A high pressure polymorph of whitlockite.

Occurrence: Formed by solid state transformation of whitlockite in a vein of shock-melted material in a chondritic meteorite.

Association: Ringwoodite, majorite, NaAlSi₃O₈-hollandite, FeNi metal, troilite.

Distribution: From the Suizhou L6 chondritic meteorite.

Name: Honors Professor Guangzhi Tu, the founding director of the Institute of Geochemistry, Chinese Academy of Sciences (CAS).

Type Material: Geological Museum, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Wushan, China.

References: (1) Xiande Xie, M.E. Minitti, Ming Chen, Ho-kwang Mao, Deqiang Wang, Jinfu Shu, and Yingwei Fei (2003) Tuite, $\gamma\text{-Ca}_3(\text{PO}_4)_2$: a new mineral from the Suizhou L6 chondrite. *Eur. J. Mineral.*, 15, 1001-1005. (2) (2004) *Amer. Mineral.*, 89, 1832 (abs. ref. 1).