

**Crystal Data:** Orthorhombic. *Point Group:* 2 2 2. Crystals, tabular or lamellar on {010}, elongated along [100], to 2 mm.

**Physical Properties:** *Cleavage:* Perfect on {010}, distinct on {001}, visible on {100}. *Fracture:* Stepped. *Tenacity:* Brittle. Hardness = 2.5 VHN = 46.7–49.8 (25 g load). D(meas.) = n.d. D(calc.) = 7.42

**Optical Properties:** Opaque (?). *Color:* n.d.; in reflected light, bright white with a yellowish tint. *Streak:* n.d. *Anisotropism:* Weak to moderate; blue-green to brown. Parallel extinction. *Luster:* n.d. *Optical Class:* n.d.

R<sub>1</sub>-R<sub>2</sub>: (470) 39.2-36.7, (546) 40.3-37.3, (589) 40.7-37.9, (650) 40.8-37.9

**Cell Data:** *Space Group:* P2<sub>1</sub>2<sub>1</sub>2<sub>1</sub>. *a* = 7.7152(15) *b* = 12.838(3) *c* = 4.9248(10) *Z* = 4

**X-ray Powder Pattern:** Yanshan Mountains, Hebei Province, China. 3.03 (100), 3.24 (80), 1.865 (60), 2.14 (50), 2.27 (40), 6.40 (30), 1.423 (30)

Chemistry:	(1)	(2)
Cu	12.98	11.27
Pd	2.69	
Pt	30.04	34.60
Bi	37.65	37.70
S	17.55	17.06
Total	100.91	100.00

(1) Yanshan Mountains, Hebei Province, China; average of 8 electron microprobe analyses, corresponding to Cu<sub>1.10</sub>(Pt<sub>0.83</sub>Pd<sub>0.14</sub>)<sub>Σ=0.97</sub>Bi<sub>0.97</sub>S<sub>2.96</sub>. (2) CuPtBiS<sub>3</sub>.

**Mineral Group:** Lapieite group.

**Occurrence:** Of contact metamorphic origin, along veins in an exoskarn associated with mafic igneous rocks (garnet pyroxenite).

**Association:** From a heavy mineral concentrate with chalcopyrite, bornite, galena, carrolite, molybdenite, pyrite, tenorite, daomanite, Co-bearing malanite, sperryllite, moncheite, cooperite, damiaoite, yixunite, malyshevite.

**Distribution:** Near Sandao Village, 250 km northeast of Beijing, Yanshan Mountains, Hebei Province, China.

**Name:** Honors Chinese geologist, Li Siguang (J.S. Lee) (1889–1971), Minister of Geology of China (1952–1971), Vice President of the Chinese Academy of Sciences, and Chairman of the China National Association of the Sciences.

**Type Material:** Geological Museum of China, Beijing (cat. no. M-11031).

**References:** (1) Yu, Z., F. Cheng, and H. Ma (2009) Lisiguangite, CuPtBiS<sub>3</sub>, a new platinum-group mineral from the Yanshan Mountains, Hebei, China. *Acta Geol. Sinica*, 83, 238–244. (2) (2009) *Amer. Mineral.*, 94, 1498 (abs. ref. 1).