

**Crystal Data:** Hexagonal. *Point Group:* 6/m 2/m 2/m. As cores of spheres, to 0.5 mm, surrounded by other iron minerals.

**Physical Properties:** *Tenacity:* Brittle. Hardness = n.d. VHN = 633–694 (50 g load). D(meas.) = n.d. D(calc.) = 6.43 Strongly magnetic.

**Optical Properties:** Opaque. *Color:* Steel-gray; gray with a yellow tint under reflected light. *Streak:* Black. *Luster:* Metallic.

*Optical Class:* Uniaxial. *Anisotropism:* Moderate; bluish gray to pale brown.

R<sub>1</sub>–R<sub>2</sub>: (402) 38.3–37.9, (439) 38.4–38.9, (480) 40.1–39.8, (495) 42.0–40.4, (546) 44.1–43.0, (590) 46.2–44.9, (624) 47.6–44.7, (644) 45.3–44.2, (657) 45.9–45.3

**Cell Data:** *Space Group:* [P6<sub>3</sub>/mcm] (by analogy to synthetic Mn<sub>5</sub>Si<sub>3</sub>). a = 6.759(5) c = 4.720(5) Z = 2

**X-ray Powder Pattern:** Yanshan Mountains, China.

2.00 (100), 1.94 (80), 1.92 (80), 1.282 (80), 2.21 (60), 1.050 (60), 1.375 (50)

**Chemistry:**

	(1)	(2)
Fe	75.5	76.82
Mn	0.2	
Ni	0.3	
Si	23.7	23.18
Total	99.7	100.00

(1) Yanshan Mountains, China; by electron microprobe, corresponding to (Fe<sub>4.90</sub>Ni<sub>0.02</sub>Mn<sub>0.01</sub>)<sub>Σ=4.93</sub>Si<sub>3.06</sub>. (2) Fe<sub>5</sub>Si<sub>3</sub>.

**Occurrence:** Innermost in spheres, surrounded by nickel-iron minerals and their oxidation products, apparently of extraterrestrial origin, found in placers.

**Association:** Gupeite, kamacite, taenite, magnetite, wüstite, maghemite.

**Distribution:** In the Yanshan Mountains, Hebei Province, China.

**Name:** For an eastern passageway, Xifengkou, of the Great Wall of China.

**Type Material:** Institute of Geology, Chinese Academy of Geological Sciences, Beijing, China.

**References:** (1) Yu Zuxiang (1984) Two new minerals gupeite and xifengite in cosmic dusts from Yanshan. *Acta Petrologica Mineralogica et Analytica*, 3, 231–238 (in Chinese with English abs.). (2) (1986) *Amer. Mineral.*, 71, 228 (abs. ref. 1).