Linzhiite $FeSi_2$

Crystal Data: Tetragonal. *Point Group*: 4/*m* 2/*m* 2/*m*. As irregular grains or tabular crystals to 0.5 mm.

Physical Properties: *Cleavage*: None. *Fracture*: Conchoidal. *Tenacity*: Brittle. Hardness = 6.5 D(meas.) = n.d. D(calc.) = 4.972

Optical Properties: Opaque. *Color*: Steel-gray. *Streak*: Grayish black. *Luster*: Metallic. *Optical Class*: n.d.
R: (470) 26.3, (546) 30.3, (589) 32.9, (650) 36.3

Cell Data: *Space Group*: *P*4/*mmm*. a = 2.696(1) c = 5.147(6) Z = 1

X-ray Powder Pattern: Luobusha mining district, Qusong County, Tibet, China.
2.374 (100), 5.163 (92), 1.851 (79), 1.899 (47), 1.087 (25) 1.774 (16), 1.708 (12)

Chemistry:

	(1)	(2)
Fe	49.09	49.85
Si	50.00	50.15
Al	0.64	
Mn	0.28	.
Total	100.01	100.00

(1) Luobusha mining district, Qusong County, Tibet, China; average of 12 electron microprobe analyses; corresponding to $(Fe_{0.98}Al_{0.03}Mn_{0.01})_{\Sigma=1.02}Si_{1.99}$. (2) $FeSi_2$.

Occurrence: In the heavy mineral fraction of a podiform chromitite deposit in the peridotite of an ophiolitic harzburgite. Likely the product of a strongly reducing environment and possibly are xenocrysts derived from a mantle source.

Association: Zangboite, native silicon.

Distribution: In a heavy mineral fraction from ore body 31, Group II of the Luobusha ("Luobusa") mining district, 200 km southeast of Lhasa, Qusong County, Shannan Prefecture, Tibet, People's Republic of China. From placers and drill-core samples from the Poltava series, Ukraine.

Name: For Linzhi Prefecture, near the locality that produced the first samples.

Type Material: Geological Museum of China, (M11799) and at the Institute of Geology, Academy of Geological Sciences (97-6), Beijing, People's Republic of China.

References: (1) Li, G., W. Bai, N. Shi, Q. Fang, M. Xiong, J. Yang, Z. Ma, and H. Rong (2012) Linzhiite, $FeSi_2$, a redefined and revalidated new mineral species from Luobusha, Tibet, China. European Jour. Mineral., 24, 1047-1052. (2) (2014) Amer. Mineral., 99, 1516 (abs. ref. 1).