

Crystal Data: Cubic. *Point Group:* $2/m\bar{3}$. As subhedral grains, in aggregates to 0.2 mm; massive, in veinlets.

Physical Properties: *Tenacity:* Brittle. Hardness = 3 VHN = 94–177, 117 average (20 g load). D(meas.) = n.d. D(calc.) = 10.00

Optical Properties: Opaque. *Color:* Steel-black; in reflected light, bright white with a bluish tint. *Streak:* Black. *Luster:* Metallic.

Optical Class: Isotropic. *Anisotropism:* May be weak; bluish or yellowish.

R: (400) 45.9, (420) 46.8, (440) 46.7, (460) 46.6, (480) 46.5, (500) 46.4, (520) 46.3, (540) 46.3, (560) 46.3, (580) 46.3, (600) 46.2, (620) 46.1, (640) 46.0, (660) 45.5, (680) 45.3, (700) 45.2

Cell Data: *Space Group:* $Pa\bar{3}$. $a = 6.413(4)$ $Z = 1$

X-ray Powder Pattern: Near Gaotai village, China.

1.93 (100), 1.132 (90), 1.235 (80), 1.040 (80), 0.9780 (80), 2.86 (70), 2.60 (60)

Chemistry:

	(1)	(2)
Ir	35.6	36.10
Pt	0.1	
Cu	0.2	
Te	62.8	63.90
S	0.2	
Total	98.9	100.00

(1) Near Gaotai village, China; by electron microprobe, average of nine analyses; corresponds to $(\text{Ir}_{2.96}\text{Cu}_{0.05}\text{Pt}_{0.01})_{\Sigma=3.02}(\text{Te}_{7.88}\text{S}_{0.10})_{\Sigma=7.98}$. (2) Ir₃Te₈.

Occurrence: In crushed chromite ores and placer concentrates.

Association: Iridium, osmium, osmiridium, ferrian platinum, isoferroplatinum, iridisite, erlichmanite, laurite, irarsite, shuangfengite, chengdeite, inaglyite, chromite, magnetite, gold.

Distribution: From near Gaotai village, about 200 km north-northeast of Beijing, Hebei Province, China [TL].

Name: For Gaotai village, China, near which the mineral was found.

Type Material: Geological Museum of China, Beijing, China.

References: (1) Yu Zxiang (1995) Gaotaiite – a new iridium telluride. *Acta Mineralogica Sinica*, 15(1), 1–4 (in Chinese with English abs.). (2) (1996) *Amer. Mineral.*, 81, 249–250 (abs. ref. 1).