Indite $Fe^{2+}In_2S_4$

Crystal Data: Cubic. *Point Group:* $4/m\ \overline{3}\ 2/m$. Massive, as grains, to 0.5 mm.

Physical Properties: Hardness = n.d. VHN = 309 D(meas.) = n.d. D(calc.) = 4.588

Optical Properties: Opaque. *Color:* Iron-black; in polished section, white. *Luster:* Metallic. R: (400) 26.3, (420) 26.9, (440) 27.5, (460) 27.9, (480) 28.0, (500) 27.8, (520) 27.4, (540) 27.0, (560) 26.6, (580) 26.2, (600) 25.9, (620) 25.6, (640) 25.4, (660) 25.1, (680) 24.8, (700) 24.5

Cell Data: *Space Group: Fd3m.* a = 10.618(3) Z = 8

X-ray Powder Pattern: Dzhalinda deposit, Russia.
3.20 (100), 1.877 (90), 1.085 (80), 2.05 (70), 1.028 (70), 3.76 (50), 1.384 (50)

Chemistry:

	(1)	(2)
Fe	8.84	13.50
In	59.3	55.50
S	31.85	31.00
Total	99.99	100.00

(1) Dzhalinda deposit, Russia; by microspectrographic analysis, corresponding to $Fe_{0.64}In_{2.08}S_{4.00}$.
(2) $FeIn_2S_4$.

Mineral Group: Linnaeite group.

Occurrence: Of primary hydrothermal origin, replacing botryoidal cassiterite.

Association: Cassiterite, dzhalindite.

Distribution: In the Dzhalinda deposit, Little Khingan Ridge, Far Eastern Region, Russia [TL].

Name: For the indium in its composition.

Type Material: Mining Institute, St. Petersburg, 106a/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 62579.

References: (1) Genkin, A.D. and I.V. Murav'eva (1963) Indite and dzhalindite – new indium minerals. Zap. Vses. Mineral. Obshch., 92, 445–457 (in Russian). (2) (1964) Amer. Mineral., 49, 439 (abs. ref. 1). (3) Hill, R.J., J.R. Craig, and G.V. Gibbs (1978) Cation ordering in the tetrahedral sites of the thiospinel $FeIn_2S_4$ (indite). J. Phys. Chem. Solids, 39, 1105–1111.