Cadmoindite $CdIn_2S_4$

Crystal Data: Isometric. *Point Group:* 4/*m* $\bar{3}$ 2/*m*. As octahedral crystals to 0.15 mm, with triangle-shaped step-growth patterns on crystal faces.

Physical Properties: *Cleavage:* None. *Fracture*: Conchoidal. *Tenacity*: n.d.
Hardness = n.d. VHN = 206 (20 g load). D(meas.) = n.d. D(calc.) = 4.864

Optical Properties: Translucent. *Color:* Black to dark brown, gray in reflected light with strong reddish brown internal reflections. *Streak:* Brown. *Luster:* Adamantine.
Optical Class: Isotropic.
R: (400) 24.9, (480) 23.5, (540) 21.7, (580) 21.0, (640) 20.3, (700) 19.8

Cell Data: Space Group: *Fd*3*m*. *a* = 10.81(2) Z = 8

X-ray Powder Pattern: Kudriavy stratovolcano, north end of Iturup Isle, southern Kuril Islands.
3.27 (100), 1.91 (90), 1.107 (90), 2.07 (80), 1.045 (80), 1.246 (70), 2.70 (60)

Chemistry:

	(1)
Cd	19.98
In	49.51
S	27.53
Fe	1.71
Zn	0.77
Ge	0.29
Se	0.04
Total	99.83

(1) Kudriavy stratovolcano, north end of Iturup Isle, southern Kuril Islands; electron microprobe analysis; corresponds to $(Cd_{0.82}Fe_{0.14}Zn_{0.05})_{\Sigma=1.01}(In_{1.99}Ge_{0.02})_{\Sigma=2.01}S_{3.98}$.

Mineral Group: Sulfospinel group.

Occurrence: As the bottom layer in fumarolic sublimate crusts.

Association: Pyrite, cadmian wurtzite, rhenium disulfide, greenockite, lead-bismuth sulfide.

Distribution: From Kudriavy stratovolcano, north end of Iturup Isle, southern Kuril Islands.

Name: As the *cadm*ium analogue of *indite*.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (#317/1).

References: (1) Chaplygin, I.V., N.N. Mozgova, I.A. Bryzgalov, and A.V. Mokhov (2004) Cadmoindite $CdIn_2S_4$. A new mineral from Kudriavy Volcano (Iturup Isle, Kuril Islands). Zap.Vser. Mineral. Obshch., 133(4), 21-27 (in Russian, English abstract). (2) (2006) Amer. Mineral., 91, 216-217 (abs. ref. 1).