Ognitite NiBiTe

Crystal Data: Hexagonal. *Point Group*: 3m. As an irregular 80 µm grain.

Physical Properties: Cleavage: n.d. Tenacity: n.d. Fracture: n.d. Hardness = n.d. D(meas.) = n.d. D(calc.) = 8.75

Optical Properties: Opaque. *Color*: Black, creamy white in reflected light. *Streak*: Black. *Luster*: Metallic.

Optical Class: Distinctly anisotropic. Slightly to distinctly bireflectant. Pleochroism: Creamy white to slightly lighter creamy white.

R₁-R₂: (470) 52.4-53.2, (546) 54.6-55.1, (589) 56.4-56.7, (650) 58.7-58.9

Cell Data: Space Group: P3m1. a = 3.9332(4) c = 5.3920(6) Z = 1

X-Ray Diffraction Pattern: Calculated pattern.

2.880 (100), 2.110 (30), 1.968 (30), 1.589 (20), 3.39 (15), 1.625 (15), 5.39 (10)

Chemistry:

	(1)	(2)
Ni	17.05	14.85
Fe	0.07	
Cu	0.14	
Pd	0.14	
Te	32.53	32.28
Bi	49.64	52.87
Total	99.57	100.00

(1) Ognit complex, Irkutskaya oblast, Eastern Sayans, Russia; average electron microprobe analysis; corresponds to $(Ni_{1.11}Cu_{0.008}Fe_{0.005}Pd_{0.005})_{\Sigma=1.13}Bi_{0.90}Te_{0.97}$. (2) NiBiTe.

Occurrence: In dunite in zones of disseminated Cu-Ni-PGE sulfide mineralization.

Association: Chalcopyrite, native bismuth, hessite, altaite, magnetite.

Distribution: From the Ognit (or Medek) dunite-wehrlite complex, southern margin of the Siberian Craton, Irkutskaya oblast, Eastern Sayans, Russia.

Name: For the *Ognit* complex, where the studied material was collected.

Type Material: Natural History Museum, University of Florence, Italy (3292/I).

References: (1) Barkov, A.Y., L. Bindi, N. Tamura, G.I. Shvedov, B. Winkler, C.V. Stan, W. Morgenroth, R.F. Martin, F. Zaccarini, and C.J. Stanley (2019) Ognitite, NiBiTe, a new mineral species, and Co-rich maucherite from the Ognit ultramafic complex, Eastern Sayans, Russia. Mineral. Mag., 83, 695-703.