

**Crystal Data:** Monoclinic. *Point Group:* 2/m. Acicular to fibrous, elongated on [001], to 0.5 mm and 2–3 μm thick; often as spherulites (rarely to 1 mm). Typically as botryoidal crusts of spherulitic clusters and parallel- or radial-columnar aggregates, to 1 mm thick.

**Physical Properties:** *Cleavage:* Perfect, probably on {02̄1}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 3.5–4 D(meas.) = n.d. D(calc.) = 3.60

**Optical Properties:** Transparent. *Color:* Pale-green, colorless; aggregates brownish-green. *Streak:* White. *Luster:* Vitreous.

*Optical Class:* Biaxial (–). α = 1.673(3) β = 1.770(5) γ = 1.780(5) 2V(meas.) = 10(5)°

**Cell Data:** *Space Group:* P2<sub>1</sub>/a. a = 12.396(1) b = 9.407(1) c = 3.2152(3) β = 97.78° Z = 1

**X-ray Powder Pattern:** Dronino iron meteorite, Russia.

2.645 (100), 3.73 (80), 5.15 (60), 6.14 (40), 2.361 (40), 2.171 (40)

<b>Chemistry:</b>	(1)
MgO	0.1
FeO	68.8
NiO	0.6
CO <sub>2</sub>	19.8
<u>H<sub>2</sub>O</u>	<u>10.9</u>
Total	100.2

(1) Dronino iron meteorite, Russia; electron microprobe analysis, H<sub>2</sub>O by modified Penfield method, CO<sub>2</sub> by selective sorption, corresponding to (Fe<sup>2+</sup><sub>1.97</sub>Ni<sub>0.02</sub>Mg<sub>0.01</sub>)<sub>Σ=2.00</sub>(CO<sub>3</sub>)<sub>0.93</sub>(OH)<sub>2.14</sub>·0.18 H<sub>2</sub>O.

**Occurrence:** In a terrestrially altered meteorite fragment.

**Association:** Kamacite, taenite, chromite, troilite, goethite, akaganeite, hematite, hibbingite, reevesite, honessite, undetermined Fe-Ni sulfides.

**Distribution:** In cavities in the Dronino ataxite iron meteorite, collected near Dronino, Kasimov district, Ryazan' Oblast, 350 km southeast of Moscow, Russia.

**Name:** Honors Nikita V. Chukanov (b. 1953), Russian physicist and mineralogist.

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

**References:** (1) Pekovi, I.V., N. Perchiazzi, S. Merlino, V.N. Kalachev, M. Merlini, and A.E. Zadov (2007) Chukanovite, Fe<sub>2</sub>(CO<sub>3</sub>)(OH)<sub>2</sub>, a new mineral from the weathered iron meteorite Dronino. *Eur. J. Mineral.*, 19, 891–898. (2) (2008) *Amer. Mineral.*, 93, 1687 (abs. ref. 1).