

**Crystal Data:** Monoclinic. *Point Group:* 2/m. Acicular to fibrous, elongated on [001], to 0.5 mm and 2–3  $\mu\text{m}$  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  $\{0\bar{2}1\}$ . *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 (–).  $\alpha = 1.673(3)$   $\beta = 1.770(5)$   $\gamma = 1.780(5)$   $2V(\text{meas.}) = 10(5)^\circ$

**Cell Data:** *Space Group:*  $P2_1/a$ .  $a = 12.396(1)$   $b = 9.407(1)$   $c = 3.2152(3)$   $\beta = 97.78^\circ$   $Z = 1$

**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
H <sub>2</sub> O	10.9
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  $(\text{Fe}^{2+}_{1.97}\text{Ni}_{0.02}\text{Mg}_{0.01})_{\Sigma=2.00}(\text{CO}_3)_{0.93}(\text{OH})_{2.14} \cdot 0.18 \text{H}_2\text{O}$ .

**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,  $\text{Fe}_2(\text{CO}_3)(\text{OH})_2$ , a new mineral from the weathered iron meteorite Dronino. *Eur. J. Mineral.*, 19, 891–898. (2) (2008) *Amer. Mineral.*, 93, 1687 (abs. ref. 1).