

Crystal Data: Monoclinic. *Point Group:* 2/m. As ~10 μm subhedral grains.

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

Optical Properties: Transparent. *Color:* Colorless in transmitted light. *Luster:* n.d.
Optical Class: Birefringent.

Cell Data: *Space Group:* P2₁/c. *a* = 7.95 *b* = 8.62 *c* = 10.25 *β* = 93.10° *Z* = 12
Confirmed by concurrence of electron backscatter diffraction pattern with that of synthetic equivalent.

X-ray Powder Pattern: Calculated pattern.

3.018 (100), 2.92 (83), 2.882 (52), 2.505 (46), 2.559 (42), 2.371 (31), 1.888 (29)

Chemistry:	(1)
SiO ₂	0.12
Al ₂ O ₃	64.34
MgO	<0.06
CaO	35.52
TiO ₂	0.09
Total	100.07

(1) Northwest Africa 470 (NWA470) CH3 chondrite meteorite; average electron microprobe analysis; corresponds to Ca_{1.000}(Al_{1.993}Si_{0.003}Ti_{0.002})_{1.998}O₄.

Polymorphism & Series: A high-pressure polymorph of CaAl₂O₄.

Occurrence: In a Ca,Al-rich inclusion (CAI) in a CH3 chondrite meteorite.

Association: Grossite, melilite, perovskite, gehlenite.

Distribution: From the Northwest Africa 470 (NWA470) CH3 chondrite meteorite.

Name: Honors *Dmitriy A. Ivanov* (1962-1986), a geologist, mineralogist, and petrologist who died tragically on a field expedition to study igneous rocks in the Caucasus Mountains.

Type Material: Meteorite collection, Russian Academy of Sciences, Vernadsky Institute, Moscow, Russia.

References: (1) Mikouchi, T., M. Zolensky, M. Ivanova, O. Tachikawa, M. Komatsu, L. Le, and M. Gounelle (2009) Dmitryivanovite: A new high-pressure calcium aluminum oxide from the Northwest Africa 470 CH3 chondrite characterized using electron backscatter diffraction analysis. *Amer. Mineral.*, 94, 746-750.