

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. As oriented platelets, to 30 μm , and feathery to irregular grain-boundary precipitates.

Physical Properties: Hardness = High. VHN = Probably > 1000 D(meas.) = n.d. D(calc.) = [6.09]

Optical Properties: [Opaque.] *Color:* Light gray in reflected light, with a rose-violet tint. *Optical Class:* Isotropic.

R: (481) 49.5, (546) 41.5, (590) 41.0, (644) 40.5

Cell Data: *Space Group:* $Fm\bar{3}m$. $a = 4.16(3)$ $Z = 4$

X-ray Powder Pattern: Synthetic. (ICDD 11-65).

2.068 (100), 2.394 (80), 1.463 (80), 1.249 (60), 0.9260 (60), 0.8460 (60), 0.9496 (50)

Chemistry:	(1)	(2)	(3)
Fe	0.1 – 1.8	1.9	
Mn		0.04	
Cr	76.0 – 78.0	76.3	78.78
Co		0.03	
Ni		0.3	
N	20.0 – 25.0	[21.4]	21.22
Total		[100.0]	100.00

(1) Agpalilik (Cape York) meteorite; by electron microprobe, ranges of several analyses.

(2) Descubridora meteorite; by electron microprobe, N by difference, corresponding to $(\text{Cr}_{0.96}\text{Fe}_{0.02})_{\Sigma=0.98}\text{N}$. (3) CrN.

Occurrence: As minute platelets and grain boundary precipitates in kamacite and troilite, and as similar grains ringing daubreelite in iron meteorites.

Association: Kamacite, taenite, daubreelite, troilite, sphalerite.

Distribution: First noted in the Agpalilik (Cape York) iron meteorite; since identified in more than 70 meteorites, mostly of Ga–Ge group IIIA, and also in groups I and IIA.

Name: For the Carlsberg Foundation, Copenhagen, Denmark, which supported recovery and cutting of the Agpalilik meteorite.

Type Material: University of Copenhagen, Copenhagen, Denmark, 1967,410; American Museum of Natural History, New York, New York, USA.

References: (1) Buchwald, V.F. and E.R.D. Scott (1971) First nitride (CrN) in iron meteorites. *Nature, Phys. Sci.*, 233, 113–114. (2) (1972) *Amer. Mineral.*, 57, 1311 (abs. ref. 1). (3) Axon, H.J., J. Kinder, C.W. Haworth, and J.W. Horsfield (1981) Carlsbergite, CrN, in troilite, FeS, of the Sikhote Alin meteoritic iron. *Mineral. Mag.*, 44, 107–109.