Cronusite $Ca_{0.2}CrS_2 \cdot 2H_2O$

Crystal Data: Hexagonal. *Point Group*: $\bar{3}$ 2/*m*, 3*m*, or 32. As anhedral grains, to 1 mm, in enstatite.

Physical Properties: *Cleavage*: Perfect on {001}. *Fracture*: Uneven. Hardness = 1.5 VHN = 82-109, 98 average (10 g load). D(meas.) = 2.51(3) D(calc.) = 2.55(1)

Optical Properties: Opaque. *Color*: Coal-black; gray in reflected light. *Streak*: Black. *Luster*: Submetallic. *Pleochroism*: In shades of gray. *Anisotropism*: Strong; in shades of gray. *Bireflectance*: Strong.
R_1-R_2: (400) - , (420) - , (440) 14.2-15.4, (460) 14.5-15.8, (480) 14.7-16.4, (500) 15.0-16.8, (520) 15.4-17.2, (540) 15.7-17.6, (560) 15.9-17.9, (580) 16.2-18.2, (600) 16.4-18.4, (620) 16.5-18.5, (640) 16.6-18.6, (660) 16.6-18.6, (680) 16.7-18.6, (700) 16.8-18.7

Cell Data: *Space Group*: *R*$\bar{3}$ 2/*m*, *R*3*m*, or *R*32. a = 3.326(2) c = 33.29(2) Z = 3

X-ray Powder Pattern: Norton County meteorite.
11.1 (100), 5.56 (10), 2.719 (5), 3.700 (4), 2.464 (4), 2.180 (4)

Chemistry:

	(1)
K	0.6
Ca	4.2
Cr	33.7
S	39.1
O	21
H	[2.65]
Total	[101.25]

(1) Norton County; by electron microprobe, average of six analyses, H calculated for oxygen content; corresponds to $(Ca_{0.17}K_{0.02})_{\Sigma=0.19}Cr_{1.04}S_{1.96} \cdot 2.14H_2O$.

Occurrence: In an enstatite achondrite meteorite, formed by terrestrial weathering of caswellsilverite.

Association: Enstatite, ferroan alabandite, troilite, daubréelite, iron oxyhydroxide.

Distribution: Found in the Norton County enstatite achondrite meteorite [TL].

Name: For *Cronus*, a Titan in Greek mythology, son of Uranus and Gaea, in allusion to a mixed meteoritic-terrestrial origin of the mineral.

Type Material: Mining Museum of the Mining Institute, Saint Petersburg, Russia.

References: (1) Britvin, S.N., X.Y. Guo, V.D. Kolomensky, M.M. Boldyreva, Y. Kretser, and M.A. Yagovkina (2001) Cronusite $Ca_{0.2}(H_2O)_2CrS_2$ - a new mineral from the Norton County enstatite achrondrite. Zap. Vses. Mineral. Obshch., 130(3), 29-36 (in Russian with English abs.). (2) (2002) Amer. Mineral., 87, 1510 (abs. ref. 1).