Rudashevskyite (Fe, Zn)S

Crystal Data: Cubic. *Point Group*: $\bar{4}$ 3*m*. As xenomorphic grains, to 120 μm.

Physical Properties: *Cleavage*: None observed. *Fracture*: n.d. *Tenacity*: Brittle.
Hardness = n.d. VHN = 313-383, 353 average (20 g load). D(meas.) = n.d. D(calc.) = 3.79

Optical Properties: Opaque. *Color*: Black; gray with a brownish tint in reflected light.
Streak: Brown-black. *Luster*: Resinous to submetallic.
Optical Class: Isotropic.
R: (400) 19.5, (420) 19.5, (440) 19.5, (460) 19.5, (480) 19.6, (500) 19.8, (520) 19.9, (540) 20.2, (546) 20.3, (560) 20.5, (580) 20.7, (589) 20.8, (600) 20.9, (620) 20.9, (640) 21.1, (660) 21.1, (680) 21.1, (700) 21.2

Cell Data: *Space Group*: $F\bar{4}$ 3*m*. a = 5.426(2) Z = 4

X-ray Powder Pattern: Indarch enstatite chondrite meteorite.
3.130 (100), 1.919 (50), 1.634 (40), 1.246 (30), 1.107 (30), 1.045 (30), 2.714 (10)

Chemistry:

	(1)	(2)
Fe	37.1	30.13
Zn	24.7	35.28
Mn	2.4	
Cu	0.4	
S	35.3	34.60
Total	99.9	100.01

(1) Indarch enstatite chondrite meteorite; average of 31 electron microprobe analyses; corresponds to $(Fe_{0.61}Zn_{0.35}Mn_{0.04}Cu_{0.01})_{\Sigma=1.00}S_{1.00}$. (2) (Fe, Zn)S Fe:Zn = 1:1.

Polymorphism & Series: Partial solid-solution series with sphalerite.

Occurrence: An accessory phase in enstatite chondrite meteorites.

Association: Clinoenstatite, kamacite, troilite, oldhamite, niningerite, schreibersite, roedderite.

Distribution: From the Indarch enstatite chondrite meteorite.

Name: Honors Nickolay S. *Rudashevsky* (b. 1944), St. Petersburg, Russia, for his contributions to the study of ore minerals.

Type Material: Mineralogical Museum, Department of Mineralogy, St. Petersburg State University, St. Petersburg, Russia.

References: (1) Britvin, S.N., A.N. Bogdanova, M.M. Boldyreva, and G.Y. Aksenova (2008) Rudashevskyite, the Fe-dominant analogue of sphalerite, a new mineral: Description and crystal structure. Amer. Mineral., 93, 902-909.