Chemi

Crystal Data: Monoclinic. Point Group: 2/m. As euhedral to subhedral crystals, to 20 µm.

Physical Properties: *Cleavage*: n.d. *Tenacity*: n.d. *Fracture*: n.d. Hardness = n.d. VHN = n.d. D(meas.) = n.d. D(calc.) = 4.09

Optical Properties: Opaque. *Luster*: n.d. *Color*: n.d. *Streak*: n.d. *Optical Class*: n.d. R₂-R₁: n.d.

Cell Data: Space Group: C2/m. a = 12.84(1) b = 3.44(1) c = 5.94(1) $\beta = 117(1)^{\circ}$ Z = 2

X-Ray Diffraction Pattern: Indarch meteorite. 2.057 (100), 2.646 (92), 1.716 (78), 5.251 (52), 2.977 (47), 1.720 (47), 2.625 (46)

stry:		(1)	(2)
-	S	43.85	44.52
	Cr	35.53	36.10
	Fe	18.94	19.38
	Mn	0.68	
	Ca	0.13	<u>.</u>
	Total	99.13	100.00

(1) Indarch meteorite; average electron microprobe analysis; corresponds to $Fe_{0.99}Mn_{0.04}Ca_{0.01}Cr_{1.99}S_{3.98}$. (2) $FeCr_2S_4$.

Polymorphism & Series: Dimorph of daubréelite.

Mineral Group: The Fe-analogue of brezinaite.

Occurrence: From an EH4 enstatite chondrite meteorite. Probably formed from daubréelite at high-shock pressures during collisions on the parent body.

Association: Troilite, clinoenstatite, tridymite.

Distribution: From the Indarch meteorite, fell on 7 April 1891 at Shusha, Azerbaijan.

Name: Honors Michael E. *Zolensky* (b. 1955), planetary scientist, cosmochemist, and mineralogist at NASA's Johnson Space Center, USA, for his contributions to research on extraterrestrial materials, including enstatite chondrites.

Type Material: Meteorite collection, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, USA (ICM1 and ICM3) and the National Museum of Natural History, Washington, D.C., USA (USNM 7926. U).

References: (1) Ma, C. and A.E. Rubin (2022) Zolenskyite, FeCr₂S₄, a new sulfide mineral from the Indarch meteorite. Amer. Mineral., 107, 1030-1033.