

Crystal Data: Cubic. *Point Group:* 23. As submicrometer grains.

Physical Properties: *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. Hardness = n.d.
D(meas.) = n.d. D(calc.) = 2.913

Optical Properties: n.d. *Color:* n.d. *Streak:* n.d. *Luster:* n.d.
Optical Class: n.d.

Cell Data: *Space Group:* $P2_13$. $a = 4.557$ $Z = 4$

X-ray Powder Pattern: Calculated pattern.

2.0384 (100), 1.8608 (50), 1.2182 (24), 3.2230 (18), 2.6316 (16), 0.8464 (15), 0.9946 (12)

Chemistry:	(1)
Si	48.5
Cr	3.2
Mn	38.4
Fe	9.9
Total	100.0

(1) IDP L2055I3; average quantitative EDX spectral analysis; corresponding to $(\text{Mn}_{0.77}\text{Fe}_{0.18}\text{Cr}_{0.05})\text{Si}$.

Polymorphism & Series: Solid solution series with FeSi.

Mineral Group: Fersilicite group.

Occurrence: Within an interplanetary dust particle, (IDP), that likely originated from a comet; likely formed as high-temperature condensates either in the early Solar System or in the outflow of an evolved star or supernova explosion.

Association: Mn-bearing forsterite, enstatite, FeNi sulfides, glass with embedded metal and sulfide grains.

Distribution: In IDP L2055I3 from the Comet 26P/Grigg-Skjellerup dust stream.

Name: Honors Donald E. *Brownlee* (b. 1943), an American astronomer and a founder of the field of cosmic dust research who is the principal investigator of the NASA Stardust Mission that collected dust samples from Comet 81P/Wild-2 and returned them to Earth.

Type Material: n.d.

References: (1) Nakamura-Messenger, K., L.P. Keller, S.J. Clemett, S. Messenger, J.H. Jones, R.L. Palma, R.O. Pepin, W. Klöck, M.E. Zolensky, and H. Tatsuoka (2010) Brownleeite: A new manganese silicide mineral in an interplanetary dust particle. *Amer. Mineral.*, 95, 221-228.