Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*. As inclusions in shock-melted micrometer-sized droplets associated with olivine and immersed in Fe-Ni-metal (likely taenite).

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

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

Cell Data: *Space Group: Imma*. a = 5.7485(4) b = 11.5761(9) c = 8.3630(7) Z = 8

X-Ray Diffraction Pattern: n.d.
2.471 (100), 2.036 (90), 1.460 (90), 2.650 (70), 2.708 (50), 2.088 (50), 2.506 (40)

Chemistry:

	(1)
SiO_2	33.23
Al_2O_3	1.27
Cr_2O_3	1.53
FeO	44.87
MgO	18.21
CaO	0.56
MnO	0.80
Na_2O	0.24
Total	100.71

(1) Suizhou L6 chondrite meteorite; average EDS analysis; corresponds to $(Fe^{2+}_{1.10}Mg_{0.80}Cr^{3+}_{0.04}Mn^{2+}_{0.02}Ca_{0.02}Al_{0.02}Na_{0.01})_{\Sigma=2.01}(Si_{0.97}Al_{0.03})_{\Sigma=1.00}O_4$.

Polymorphism & Series: Polymorph of fayalite and ahrensite.

Occurrence: In shocked meteorites.

Association: Fe-rich wadsleyite (Fa_{35-45}), fayalite, Fe-Ni-metal (likely taenite).

Distribution: In the Suizhou L6 chondrite, fall in Dayanpo, Hubei province, China (holotype) and the Quebrada Chimborazo (QC) 001 CB3.0 chondrite, found in Antofagasta, Chile (cotype).

Name: Honors Paul D. *Asimow* (b. 1969), the Eleanor and John R. McMillan Professor of Geology and Geochemistry, California Institute of Technology, USA, for his research in igneous and computational petrology and mineral physics, and for exploring the behavior of materials under shock conditions.

Type Material: Natural History Museum, University of Florence, Italy (3238/I holotype) and Goethe University, Frankfurt, Germany (cotype).

References: (1) Bindi, L., F.E. Brenker, F. Nestola, T.E. Koch, D.J. Prior, K. Lilly, A.N. Krot, M. Bizzarro, and X. Xie (2019) Discovery of asimowite, the Fe-analog of wadsleyite, in shock-melted silicate droplets of the Suizhou L6 and the Quebrada Chimborazo 001 CB3.0 chondrites. Amer. Mineral., 104, 775-778. (2) Hålenius, U., F. Hatert, M. Pasero, and S.J. Mills (2018) IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) Newsletter 46. New minerals and nomenclature modifications approved in 2018. Mineral. Mag., 82, 1376 (XRD pattern).