Feiite $Fe^{2+}_2(Fe^{2+}Ti^{4+})O_5$

Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*.

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

Optical Properties: *Color*: *Streak*: *Luster*:
Optical Class:

Cell Data: *Space Group*: *Cmcm*. *a* = 2.90(3) *b* = 10.25(20) *c* = 12.50(8)

X-Ray Diffraction Pattern: Shergotty Martian meteorite.
2.668 (100), 2.084 (65), 2.177 (37), 2.548 (34), 2.562 (29), 1.499 (28), 1.669 (26)

Chemistry:

Polymorphism & Series:

Mineral Group:

Occurrence: From shock metamorphism in Martian meteorites. At the rim of a transformed ilmenite-ülvospinel grain.

Association: Liuite, tschaunerite.

Distribution: From the Shergotty and Tissint Martian meteorites.

Name:

Type Material: E. Stolper Martian Meteorite Collection, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, USA (thin section Shergotty-1).

References: (1) 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(6), 1378. (2) Morrison, S.M. and R.M. Hazen (2021) An evolutionary system of mineralogy, Part IV: Planetesimal differentiation and impact mineralization (4566 to 4560 Ma). Amer. Mineral., 10(5), 730-761.