Vaniniite $Ca_2Mn^{2+}_3Mn^{3+}_2O_2(AsO_4)_4 \cdot 2H_2O$

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

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

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

Cell Data: *Space Group*: $P2_1/c$. $a = 8.9856\ (1)$ $b = 8.9472(1)$ $c = 9.9039(1)$ $\beta = 94.719(1)°$

X-Ray Diffraction Pattern: Falotta mine, Oberhalbstein valley, Graubünden, Switzerland.
2.99 (100), 3.76 (70), 1.646 (70), 3.99 (50), 1.580(50), 5.47 (40), 4.31 (40)

Chemistry:

Polymorphism & Series:

Mineral Group:

Occurrence:

Association:

Distribution: From the Falotta mine, near Rona village, Oberhalbstein valley, Graubünden, Switzerland.

Name:

Type Material: Geology Museum, University of Lausanne, Switzerland (MGL 080143 and 080144).

References: (1) Hålenius, U., F. Hatert, M. Pasero, and S.J. Mills (2018) IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) Newsletter 43. New minerals and nomenclature modifications approved in 2018. Mineral. Mag., 82(3), 780.