Parascandolaite $KMgF_3$

Crystal Data: Cubic. *Point Group*: 4/*m* $\bar{3}$ 2/*m*. As cubic crystals to 0.5 mm.

Physical Properties: *Cleavage*: Perfect on {100}. *Tenacity*: n.d. *Fracture*: n.d. Hardness = n.d. D(meas.) = 3.11(1) D(calc.) = 3.123

Optical Properties: Transparent. *Color*: Colorless to white. *Streak*: n.d. *Luster*: Vitreous. *Optical Class*: Isotropic. *n* = 1.395(5)

Cell Data: *Space Group*: *Pm*$\bar{3}$ *m*. *a* = 4.003(1) Z = 1

X-ray Powder Pattern: Vesuvius, Naples, Italy.
2.001 (100), 2.831 (83), 2.311 (78), 1.415 (56), 1.633 (35), 1.206 (22), 1.267 (16)

Chemistry:	(1)
K	32.65
Mg	20.24
F	46.71
Total	99.60

(1) Vesuvius, Naples, Italy; average of 8 electron microprobe analyses; corresponds to $K_{1.01}Mg_{1.01}F_{2.98}$.

Polymorphism & Series: Forms a continuous solid solution series with neighborite.

Mineral Group: Single perovskites ABX3, neighborite subgroup.

Occurrence: A volcanic sublimate from a fumarole with temperature ~ 80° C. Also as nano-inclusions in alluvial diamonds (Brazil).

Association: Opal, cerussite, mimetite, phoenicochroite, fluornatrocoulsellite (Vesuvius).

Distribution: Found at Vesuvius, Naples, Italy on scoria from the 1944 eruption around fumarole B5. From the Juina area, Mato Grosso State, Brazil (inclusion in diamond).

Name: Honors Italian mineralogist Antonio Parascandola (1902-1977) of the Pozzuoli Aeronautical Academy, at the Istituto di Mineralogia della Facoltà di Scienze of Napoli and at the Istituto di Mineralogia e Geologia della Facoltà di Agraria of Portici (Napoli). He provided numerous observations about the conditions of formation of minerals around fumaroles.

Type Material: Reference Collection, Department of Chemistry, University of Milan, Italy (2013-04).

References: (1) Demartin, F., I. Campostrini, C. Castellano, and M. Russo (2014) Parascandolaite, $KMgF_3$, a new perovskitetype fluoride from Vesuvius. Physics and Chemistry of Minerals, 41(6), 503-514. (2) (2018) Amer. Mineral., 103, 2529 (abs. ref. 1). (3) Mitchell, R.H., M.D. Welch, and A.R. Chakhmouradian (2017) Nomenclature of the perovskite supergroup: A hierarchical system of classification based on crystal structure and composition. Mineral. Mag., 81(3), 411-461.
(4) Kaminsky, F.V., R. Wirth, and A. Schreiber (2015) A microinclusion of lower-mantle rock and other minerals and nitrogen lower mantle inclusions in a diamond. Can. Mineral., 53, 83-104.