

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . As fan-shaped groups of bladed crystals to 0.4 mm.

**Physical Properties:** *Cleavage:* Perfect on {010}. *Fracture:* Uneven. *Tenacity:* Brittle. *Hardness* = 6 VHN = 788 (15 g load). D(meas.) = n.d. D(calc.) = 4.517

**Optical Properties:** Transparent. *Color:* Pale orange. *Streak:* White. *Luster:* Pearly. *Optical Class:* Biaxial (-).  $n(\text{calc.}) = 2.04$   $\alpha = \text{n.d.}$   $\beta = \text{n.d.}$   $\gamma = \text{n.d.}$   $2V(\text{calc.}) = 50(5)^\circ$

**Cell Data:** *Space Group:*  $Fmmm$ .  $a = 7.4105(4)$   $b = 20.0675(11)$   $c = 21.4471(11)$   $Z = 8$

**X-ray Powder Pattern:** Monte delle Basse, Euganei Hills, Padua, Italy. 3.05 (100), 3.66 (60), 2.84 (50), 3.16 (30), 2.98 (25), 1.85 (25), 1.82 (25)

Chemistry:	(1)
SO <sub>3</sub>	0.51
Nb <sub>2</sub> O <sub>5</sub>	34.51
Ta <sub>2</sub> O <sub>5</sub>	0.89
V <sub>2</sub> O <sub>3</sub>	0.05
P <sub>2</sub> O <sub>5</sub>	0.85
SiO <sub>2</sub>	6.10
TiO <sub>2</sub>	14.77
SnO <sub>2</sub>	0.04
ZrO <sub>2</sub>	0.11
FeO	0.63
MnO	0.01
CaO	6.07
BaO	26.75
SrO	4.92
Na <sub>2</sub> O	0.70
H <sub>2</sub> O	0.74
F	0.15
<u>-O=F<sub>2</sub></u>	<u>0.06</u>
Total	97.74

(1) Monte delle Basse, Euganei Hills, Padua, Italy; average of 7 electron microprobe analyses supplemented by Raman spectroscopy, H<sub>2</sub>O calculated from structure analysis; corresponding to  $(\text{Ba}_{1.93}\text{Ca}_{1.20}\text{Sr}_{0.52}\text{Na}_{0.25}\text{Fe}^{2+}_{0.10})_{\Sigma=4.00}(\text{Nb}_{2.88}\text{Ti}_{2.05}\text{Ta}_{0.07}\text{Zr}_{0.01}\text{V}^{5+}_{0.01})_{\Sigma=5.02}\text{SiO}_{17}[(\text{P}_{0.13}\text{Si}_{0.12}\text{S}_{0.07})_{\Sigma=0.32}\text{O}_{0.66}(\text{OH})_{0.66}][\text{F}_{0.09}(\text{OH})_{0.23}]_{\Sigma=0.32}$ .

**Occurrence:** As part of skarn and calc-silicate metamorphic rocks with rare sanidine xenoliths near the contacts with rhyolite and trachite.

**Association:** Diopside, titanite.

**Distribution:** From Monte delle Basse, Euganei Hills, south of Galzignano Terme, Padua, Italy.

**Name:** Honors Professor Vittorio Tazzoli (b. 1938), Department of Earth Science, University of Pavia, Italy, in recognition of his contribution to the fields of mineralogy and crystallography, particularly in the area of pyroxenes.

**Type Material:** Mineral Museum, Padua, Italy (MMP M9426).

**References:** (1) Cámara, F., F. Nestola, L. Bindi, A. Guastoni, F. Zorzi, L. Peruzzo, and D. Pedron (2012) Tazzoliite: a new mineral with a pyrochlore-related structure from the Euganei Hills, Padova, Italy. *Mineral. Mag.*, 76(4), 827-838. (2) (2015) *Amer. Mineral.*, 100, 1330 (abs. ref. 1).