

Crystal Data: Triclinic. *Point Group:* $P\bar{1}$. As interstitial anhedral grains to 0.5 mm.
Twining: Polysynthetic common and characteristic.

Physical Properties: *Cleavage:* Indistinct. *Tenacity:* Brittle. *Fracture:* Irregular.
VHN = 176 (15 g load). Hardness = ~3 D(meas.) = n.d. D(calc.) = 6.44

Optical Properties: Opaque. *Color:* Black, white in reflected light. *Streak:* Black.
Luster: Metallic.

Optical Class: *Anisotropism:* Distinct in air and oil, brownish to bluish gray. *Pleochroism:* Weak, shades of gray.

R₁-R₂: (470) 32.8-38.3, (546) 32.2-37.5, (589) 31.7-36.9, (650) 31.4-36.6

Cell Data: *Space Group:* $P\bar{1}$. $a = 8.9736(9)$ $b = 29.334(3)$ $c = 8.4925(10)$ $\alpha = 98.369(6)^\circ$
 $\beta = 118.705(6)^\circ$ $\gamma = 90.874(6)^\circ$ $Z = 2$

X-Ray Diffraction Pattern: Verzalla, Stazzema, Apuan Alps, Tuscany, Italy.
2.233 (s), 3.214 (ms), 3.027 (ms), 2.125 (ms), 1.839 (ms), 3.595 (m), 3.429 (m)

Chemistry:	(1)	(2)
Ag	0.20	
Pb	66.34	66.48
As	6.36	6.41
Sb	8.93	9.11
Bi	0.30	
S	18.00	18.00
Total	100.13	100.00

(1) Verzalla, Stazzema, Apuan Alps, Tuscany, Italy; average electron microprobe analysis; corresponds to $\text{Ag}_{0.07}\text{Pb}_{11.96}(\text{As}_{3.17}\text{Sb}_{2.74}\text{Bi}_{0.05})_{\Sigma=5.96}\text{S}_{20.97}$. (2) $\text{Pb}_{12}(\text{As}_{3.2}\text{Sb}_{2.8})_{\Sigma=6}\text{S}_{21}$.

Polymorphism & Series: An $N = 3.5$ homologue in the jordanite homologous series and the As-dominant isotype of marcobaldiite.

Occurrence: In hydrothermal quartz veins cutting schist.

Association: Pyrite, sphalerite, quartz, baryte.

Distribution: From a prospect at Verzalla, Stazzema, Apuan Alps, Tuscany, Italy.

Name: Indicates its essential arsenic and isotypic relationship with *marcobaldiite*.

Type Material: Natural History Museum, University of Pisa, Italy (19898).

References: (1) Biagioni, C., Y. Moëlo, S. Merlini, M. Pasero, W.H. Paar, S. Vezzoni, and F. Zaccarini (2019) Arsenmarcobaldiite, $\text{Pb}_{12}(\text{As}_{3.2}\text{Sb}_{2.8})_{\Sigma=6}\text{S}_{21}$, a new $N = 3.5$ jordanite homologue from the Sant'Anna tectonic window, Apuan Alps (Tuscany, Italy). *Eur. J. Mineral.*, 31, 1067-1077.