Crystal Data: Monoclinic. *Point Group*: 2/*m*. As acicular crystals, striated parallel to elongation, to 200 μm.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: n.d. Hardness = n.d.
D(meas.) = n.d. D(calc.) = 5.809

Optical Properties: Translucent. *Color*: Orange, slightly bluish gray with abundant orange internal reflections in reflected light. *Streak*: Orange. *Luster*: Adamantine.
Optical Class: *Anisotropism*: None observed, being masked by abundant internal reflections.
Bireflectance: Weak. Weakly light sensitive.
R_1-R_2: (470) 32.8-32.9, (546) 30.2-30.7, (589) 29.0-29.6, (650) 27.5-28.4

Cell Data: *Space Group: P*2_1/*n*. a = 13.751(1) b = 6.9350(6) c = 19.555(2) β = 94.807(4)° Z = 12

X-Ray Diffraction Pattern: Sant'Olga tunnel, Monte Arsiccio mine, Apuan Alps, Tuscany, Italy.
3.035 (s), 3.381 (mw), 2.505 (mw), 2.441 (mw), 2.160 (mw), 1.912 (mw), 1.878 (mw), 6.4 (w)

Chemistry:

	(1)	(2)
Ag	59.81	59.76
Sb	22.63	22.48
S	17.78	17.76
Total	100.22	100.00

(1) Sant'Olga tunnel, Monte Arsiccio mine, Stazzema (LU), Apuan Alps, Tuscany, Italy; average electron microprobe analysis; corresponds to $Ag_{2.996}Sb_{1.004}S_{2.996}$. (2) Ag_3SbS_3.

Polymorphism & Series: Polymorph of Ag_3SbS_3 with pyrargyrite and pyrostilpnite.

Occurrence: In a metamorphosed pyrite + baryte + iron oxide ore deposit in metadolostone.

Association: Pyrargyrite, tetrahedrite-(Hg), valentinite, probable pyrostilpnite, baryte, dolomite, quartz.

Distribution: From the Sant'Olga tunnel, Monte Arsiccio mine, Stazzema (LU), Apuan Alps, Tuscany, Italy.

Name: From the old Greek words "πυρ" (fire) and "ἀδόκητος" (unforeseen), because of the unexpected occurrence of this third polymorph of Ag_3SbS_3.

Type Material: Natural History Museum, Pisa, Italy (19913).

References: (1) Biagioni, C., L. Bindi, Y. Moëlo, C.J. Stanley, and F. Zaccarini (2022) Pyradoketosite, a new, unexpected, polymorph of Ag_3SbS_3 from the Monte Arsiccio mine (Apuan Alps, Tuscany, Italy). Amer. Mineral., 107(10), 1901-1909.