Hallimondite

$\text{Pb}_2(\text{UO}_2)(\text{AsO}_4)_2$

Crystal Data: Triclinic. Point Group: $\overline{1}$. As bladed crystals, to 0.4 mm, flattened on {110} and striated on {001} || {010} and on {100} || {001}; dominant forms include {110}, {100}, {010}, {001}; as fine-grained coatings.


Cell Data: Space Group: $P\overline{1}$. $a = 7.123$ $b = 10.469$ $c = 6.844$ $\alpha = 100^\circ34'$ $\beta = 94^\circ48'$ $\gamma = 91^\circ16'$ $Z = 2$

X-ray Powder Pattern: Michael mine, Germany; nearly identical to parsonsite. 3.42 (10b), 2.85 (8), 4.42 (6), 3.03 (6), 4.26 (5), 3.33 (5b), 7.09 (3)

Chemistry: (1) Michael mine, Germany; microchemical and spectrographic analysis confirmed Pb, U, and As as major components, P absent; formula established by the similarity of the X-ray powder pattern with that of parsonsite and synthetic $\text{Pb}_2(\text{UO}_2)(\text{AsO}_4)_2$.

Occurrence: A secondary mineral found on a museum specimen from an oxidizing As–Pb-bearing deposit, formed by alteration of galena.

Association: Hügelite, mimetite, barite, galena, quartz.

Distribution: In Germany, from the Michael mine, Weiler, near Lahr, Black Forest, and on the Bühlskopf, near Ellweiler, Rhineland-Palatinate.

Name: Honors Dr. Arthur Francis Hallimond (1890–1968), British mineralogist, London, England, for his work with secondary uranium minerals.

Type Material: n.d.