Lazaridisite  $\text{Cd}_3(\text{SO}_4)_3\cdot8\text{H}_2\text{O}$

**Crystal Data:** Monoclinic.  *Point Group:* 2/m.  As clusters < 0.5 mm of stacked, short prismatic and rounded crystals or crusts.


**Optical Properties:** Transparent to translucent.  *Color:* Colorless, white.  *Streak:* White  Luster: Vitreous  
*Optical Class:* Biaxial.  $\alpha = 1.552(2)$  $\beta = 1.561(2)$  $\gamma = 1.570(2)$  $2V$ (meas.) = 90(5)°  $2V$ (calc.) = 90°

**Cell Data:** *Space Group:* C2/c.  $a = 14.813(3)$  $b = 11.902(2)$  $c = 9.466(2)$  $\beta = 97.38(1)^\circ$  $Z = 4$

**X-Ray Diffraction Pattern:** Esperanza Mine, Kaminiza area, Lavrion Mining District, Greece.  6.860 (100), 5.965 (84), 3.109 (83), 3.608(82), 3.727 (78), 6.317 (72), 4.512 (58)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CdO</td>
<td>44.45</td>
<td>50.06</td>
</tr>
<tr>
<td>SO$_3$</td>
<td>31.98</td>
<td>31.21</td>
</tr>
<tr>
<td>CuO</td>
<td>3.02</td>
<td></td>
</tr>
<tr>
<td>FeO</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>MgO</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>H$_2$O</td>
<td>[19.26]</td>
<td>18.73</td>
</tr>
<tr>
<td>Total</td>
<td>100.06</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Esperanza Mine, Kaminiza area, Lavrion Mining District, Greece; average electron microprobe analysis, H$_2$O calculated; corresponds to $3[(\text{Cd}_{0.86}\text{Cu}_{0.09}\text{Fe}_{0.04}\text{Mg}_{0.01})_{2-1}\text{S}_{1.06}\text{O}_3]\cdot8\text{H}_2\text{O}$.

(2) $\text{Cd}_3(\text{SO}_4)_3\cdot8\text{H}_2\text{O}$.

**Occurrence:** A secondary mineral from the weathering of primary hawleyite and greenockite.

**Association:** Voudourisite, sphalerite, galena, edwardsite, chalcanthite, gypsum, greenockite.

**Distribution:** At the Esperanza Mine, Kaminiza area, #19 Mine, Ano Sounio area, and at the North Mine, Villia area, Lavrion Mining District, Greece.

**Name:** Honors Stathis Lazaridis (1953-2010), a mineral collector from Lavron, who contributed significantly to the current understanding of the paragenetic sequences within the Lavrion deposits.

**Type Material:** Institute for Mineralogy and Crystallography, University of Vienna, Austria, (HS13.077).

**References:** (1) Rieck, B., C.L. Lengauer, and G. Giester (2019) Voudourisite, $\text{Cd}(\text{SO}_4)\cdot\text{H}_2\text{O}$, and lazarisite, $\text{Cd}_3(\text{SO}_4)_3\cdot8\text{H}_2\text{O}$, two new minerals from the Lavrion Mining District, Greece. Mineral. Mag., 83, 551-559.