**Data**

**Crystal Data:** Monoclinic.  
**Point Group:** 2/m.  
Crystals are diamond-shaped and tabular on {100} to 250 μm, in subparallel to fanlike aggregates.

**Physical Properties:**  
**Cleavage:** Perfect on {100}.  
**Fracture:** Irregular.  
**Tenacity:** Brittle.  
**Hardness = 2-3**  
**D(meas.) = n.d.**  
**D(calc.) = 6.062**

**Optical Properties:**  
**Color:** Lime-green.  
**Streak:** Pale lime-green.  
**Luster:** Adamantine.  
**Optical Class:** Biaxial (+).  
\( \alpha(\text{calc.}) = 1.953 \)  
\( \beta(\text{calc.}) = 1.966 \)  
\( \gamma(\text{calc.}) = 2.039 \)  
**2V(meas.) = 47(2)°**  
**Dispersion:** strong, \( r < v \).  
**Orientation:** \( Y = b; Z^a = 34° \) (in obtuse \( \beta \)).  
**Pleochroism:** strong, \( Z = \text{pale green} << X = \text{green} < Y = \text{green} \).  
**Absorption:** \( Z << X < Y \).

**Cell Data:**  
**Space Group:** \( P2_1/c \).  
\( a = 14.3126(10) \)  
\( b = 5.2267(3) \)  
\( c = 9.4878(5) \)  
\( \beta = 106.815(7)^\circ \)  
\( Z = 2 \)

**X-ray Powder Pattern:** Bird Nest drift, Otto Mountain, San Bernardino County, California, USA.  
2.614 (100), 2.999 (97), 1.509 (83), 2.701 (79), 4.522 (66), 1.727 (65), 3.48 (62)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PbO</td>
<td>34.22</td>
<td>36.24</td>
</tr>
<tr>
<td>CaO</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>CuO</td>
<td>23.80</td>
<td>25.83</td>
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<tr>
<td>TeO₃</td>
<td>26.34</td>
<td>28.51</td>
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<tr>
<td>SO₃</td>
<td>5.74</td>
<td>6.50</td>
</tr>
<tr>
<td>H₂O</td>
<td>[2.81]</td>
<td>2.92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92.97</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

(1) Bird Nest drift, Otto Mountain, San Bernardino County, California, USA; average of 4 electron microprobe analyses, supplemented by Raman and IR spectroscopy, \( \text{H}_2\text{O} \) calculated from structure; corresponds to \( \text{Pb}_2\text{Ca}_0\text{Cu}^{2+}_9\text{Te}^{6+}_3\text{O}_{17.04}\text{H}_4.16 \).  
(2) \( \text{Pb}_2\text{Cu}^{3+}_1\text{Te}^{6+}_2\text{O}_{10}(\text{OH})_2(\text{SO}_4)(\text{H}_2\text{O}) \).

**Occurrence:** A secondary mineral in vugs in quartz formed from the partial oxidation of primary sulfides and tellurides during or following the brecciation of quartz veins.

**Association:** Khinite, cerussite, goethite, hematite.

**Distribution:** From the Bird Nest drift, SW flank of Otto Mountain, near Baker, San Bernardino County, California, USA.

**Name:** Honors Jerry A. Baird (b. 1940) of Lake Havasu City, Arizona, USA. Baird, a mineral collector for 45 years, has collected extensively at Otto Mountain and has provided numerous samples for research.

**Type Material:** Natural History Museum of Los Angeles County, Los Angeles, California, USA (64000 and 64001).

**References:**  