**Theoparacelsite**  
\( \text{Cu}_3\text{As}_2\text{O}_7(\text{OH}) \)

_Crystal Data:_ Hexagonal.  
_Point Group:_ \( \overline{3} 2/m \). In minute crystals, platy or finely parallel fibrous, in botryoidal crusts, to 0.5 cm; may be interstratified with other layer-structure minerals.

_Physical Properties:_  
_Cleavage:_ \{0001\}, perfect.  
_Fracture:_ Conchoidal.  
_Hardness = 3.5  
\( D(\text{meas.}) = 4.00 \quad D(\text{calc.}) = 3.95 \)

_Optical Properties:_ Translucent.  
_Color:_ Emerald-green to blue-green; pale green in thin section.  
_Streak:_ Pale green.  
_Luster:_ Vitreous.  
_Optical Class:_ Uniaxial (+); birefringence very weak.  
_Pleochroism:_ Weak.  
\( \omega = 1.759–1.760 \)  
\( \epsilon = 1.759–1.760 \)

_Cell Data:_  
_Space Group:_ \( P\overline{3}m1 \) (synthetic).  
\( a = 3.131 \quad c = 4.608 \quad Z = 1 \)

_X-ray Powder Pattern:_  
Vermion district, Greece.  
2.335 (100), 4.61 (95), 1.755 (50), 2.708 (30), 1.563 (25), 1.480 (18), 1.336 (10)

_Chemistry:_

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
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</thead>
<tbody>
<tr>
<td>NiO</td>
<td>80.21</td>
<td>80.57</td>
</tr>
<tr>
<td>H₂O</td>
<td>19.30</td>
<td>19.43</td>
</tr>
<tr>
<td>Total</td>
<td>99.51</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Vermion district, Greece; by electron microprobe, H₂O by the Penfield method.  
(2) \( \text{Ni(OH)}_2 \).

Occurrence: As coatings in chromitite in lenses in serpentinites (Vermion district, Greece); on chromite (Hagdale quarry, Scotland).

Association: Magnetite, chromite, millerite, vesuvianite, chlorite, andradite–gossular, nickeliferous serpentine minerals, calcite (Vermion district, Greece); zaratite, reevesite, honessite, hydrohonessite, nakauriite, pentlandite, heazlewoodite (Hagdale quarry, Scotland).

Distribution: From the Vermion district, 50 km west of Thessalonike, Macedonia, Greece. In the Hagdale quarry, Unst, Shetland Islands, Scotland. At the Lord Brassey mine, Heazlewood, Tasmania, Australia.

Name: For Theophrastus, (ca. 371 BC–ca. 287 BC), the first Greek mineralogist.


References:  