Crystal Data: Orthorhombic. Point Group: $2/m \ 2/m \ 2/m$. As very rare crystals, to 200 µm, in starlike clusters; in fine-grained incrustations.

Physical Properties: Fracture: Conchoidal. Hardness = 3
D(meas.) = 3.05(2)  
D(calc.) = 3.06

Optical Properties: Transparent. Color: Colorless to whitish; colorless in transmitted light. 
Optical Class: Biaxial (-). Dispersion: $r \gg v$, extreme.  
$\alpha = 1.5722(3)$  $\beta = 1.5781(3)$  
$\gamma = 1.5801(1)$  $2V(meas.) = 62.8(2)^\circ$  $2V(calc.) = 60^\circ$

Cell Data: Space Group: $P2_1\ 2_1\ 2_1$. $a = 8.490(1)$  $b = 5.162(1)$  $c = 4.917(1)$  $Z = 4$

X-ray Powder Pattern: Richelsdorf, Germany. 
4.407 (100), 3.280 (100), 4.250 (80), 3.212 (80), 2.727 (80), 2.284 (80), 2.215 (80)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZnO</td>
<td>81.5</td>
<td>81.88</td>
</tr>
<tr>
<td>$H_2O$</td>
<td>19.0</td>
<td>18.12</td>
</tr>
<tr>
<td>Total</td>
<td>100.5</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Richelsdorf, Germany; by electron microprobe, average of several determinations, $H_2O$ by TGA. (2) Zn(OH)$_2$.

Polymorphism & Series: Trimorphous with ashoverite and sweetite.

Occurrence: A rare secondary mineral formed by weathering of zinc-bearing slag (Richelsdorf, Germany).

Association: Simonkolleite, hydrocerussite, diaboleite, zincite, hydrozincite, zinc (Richelsdorf, Germany); ashoverite, fluorite (near Ashover, England).

Distribution: On slag heaps from the foundry at Richelsdorf, Hesse, Germany. In a limestone quarry 200–300 m northwest of Milltown, near Ashover, Derbyshire, England.

Name: Honors Dr. Ernst Anton Wülffing (1860–1930), Professor of Mineralogy and Petrography, Heidelberg University, Heidelberg, Germany.

Type Material: Göttingen University, Göttingen; Heidelberg University, Heidelberg, Germany.