Crystal Data: Hexagonal. Point Group: 3m. As lathlike crystals, elongated along [0001], to 2 μm, found in perchloric acid-resistant residues.


Optical Properties: Transparent. Color: Colorless. Optical Class: Uniaxial (−) (synthetic). ω = 2.03 ε = 2.02

Cell Data: Space Group: P31c (synthetic). a = 7.74(2) c = 5.61(2) Z = 4

X-ray Powder Pattern: Source material not stated. 4.31 (32), 2.15 (32), 2.87 (28), 2.59 (28), 6.70 (17), 3.35 (17), 2.81 (17)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Si</td>
<td>57.2</td>
<td>60.06</td>
</tr>
<tr>
<td>N</td>
<td>42.8</td>
<td>39.94</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Indarch meteorite; by scanning transmission electron microscope, average of eight analyses; corresponding to Si_{2.79}N_{4.21}. (2) Si_{3}N_{4}.

Occurrence: A very rare component of enstatite chondrite and chondrite meteorites, probably formed by exsolution during metamorphism.

Association: Diamond, kamacite, perryite, schreibersite, trolite, spinel, chromite, hibonite, rutile.

Distribution: In the Indarch enstatite chondrite meteorite, and the Inman, Adrar, and Tieschitz chondrite meteorites.

Name: Honors Alfred Otto Carl Nier (1912–1994), Professor of Chemistry at the University of Minnesota, Minneapolis, Minnesota, USA, a founder of mass spectroscopy.
