Demicheleite-(I)  

**Crystal Data:** Orthorhombic. *Point Group:* 2/m 2/m 2/m. Crystals, acicular to stout prismatic, to 0.25 mm; with forms {110} and {111} by analogy to demicheleite-(Br).


D(meas.) = n.d. D(calc.) = 6.411


**Cell Data:** *Space Group:* Pnam. *a =* 8.4501(7)  

*b =* 10.1470(9)  

*c =* 4.1389(4)  

Z = 4

**X-ray Powder Pattern:** La Fossa crater, Vulcano Island, Sicily, Italy.  

6.490 (100), 4.346 (94), 3.896 (90), 2.709 (60), 2.161 (38), 3.243 (22), 2.999 (22)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bi</td>
<td>58.32</td>
<td>56.80</td>
</tr>
<tr>
<td>S</td>
<td>9.43</td>
<td>8.71</td>
</tr>
<tr>
<td>I</td>
<td>23.69</td>
<td>34.49</td>
</tr>
<tr>
<td>Br</td>
<td>5.66</td>
<td></td>
</tr>
<tr>
<td>Cl</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>98.11</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) La Fossa crater, Vulcano Island, Sicily, Italy; electron microprobe analysis, corresponding to Bi$_0.97$S$_{1.03}$(I$_{0.65}$Br$_{0.25}$Cl$_{0.10}$)$_{3-1.00}$. (2) BiSI.

**Occurrence:** A product of fumarolic alteration of pyroclastic breccia.

**Association:** Demicheleite-(Br), bismoclite, bismuthinite, aiolosite, godovikovite, panichiite, brontesite, adranosite.

**Distribution:** La Fossa crater, Vulcano Island, Aeolian archipelago, Sicily, Italy.

**Name:** Honors Vincenzo de Michele (b. 1936), former curator of the Natural History Museum, Milan, Italy, and suffix for its chemical composition.

**Type Material:** Department of Structural Chemistry and Inorganic Stereochemistry, University of Milan, Italy (reference collection 2009-02).
