| $Ni_3[TeO_3]_2[OH]_2$ | *hP*52 | (186) $P6_3mc$ – $d^2c^4ba$ |
|---|---|---|

**$Ni_3Te_2O_6(OH)_2$** [1]
Structural features: Columns of edge- and face-linked $NiO_6$ octahedra are interconnected via common vertices and :$TeO_3$ ψ-tetrahedra to form a 3D-framework; OH in large channels parallel to [001]. See Fig. IV.30.

Perez G. et al. (1976) [1]
$H_{0.50}Ni_3O_8Te_2$
$a$ = 1.2993, $c$ = 0.4958 nm, $c/a$ = 0.382, $V$ = 0.7249 $nm^3$, $Z$ = 4

| site | Wyck. | sym. | *x* | *y* | *z* | occ. | atomic environment |
|---|---|---|---|---|---|---|---|
| Ni1 | 12*d* | 1 | 0.0758 | 0.4308 | 0.197 | | octahedron $O_6$ |
| O2 | 12*d* | 1 | 0.335 | 0.051 | 0.341 | | non-coplanar triangle $TeNi_2$ |
| O3 | 6*c* | .*m*. | 0.208 | 0.792 | 0.376 | | non-coplanar triangle $TeNi_2$ |
| O4 | 6*c* | .*m*. | 0.399 | 0.601 | 0.063 | | single atom Te |
| O5 | 6*c* | .*m*. | 0.527 | 0.473 | 0.005 | | non-coplanar square $Ni_4$ |
| Te6 | 6*c* | .*m*. | 0.8565 | 0.1435 | 0.152 | | non-coplanar triangle $O_3$ |
| Te7 | 2*b* | 3*m*. | $^1/_3$ | $^2/_3$ | 0.243 | | non-coplanar triangle $O_3$ |
| (OH)8 | 2*a* | 3*m*. | 0 | 0 | 0.0 | | colinear $(OH)_2$ |

Transformation from published data: -*x*,-*y*,-*z*; origin shift 0 0 0.848
Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.090

Remarks: Part of H not located. Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

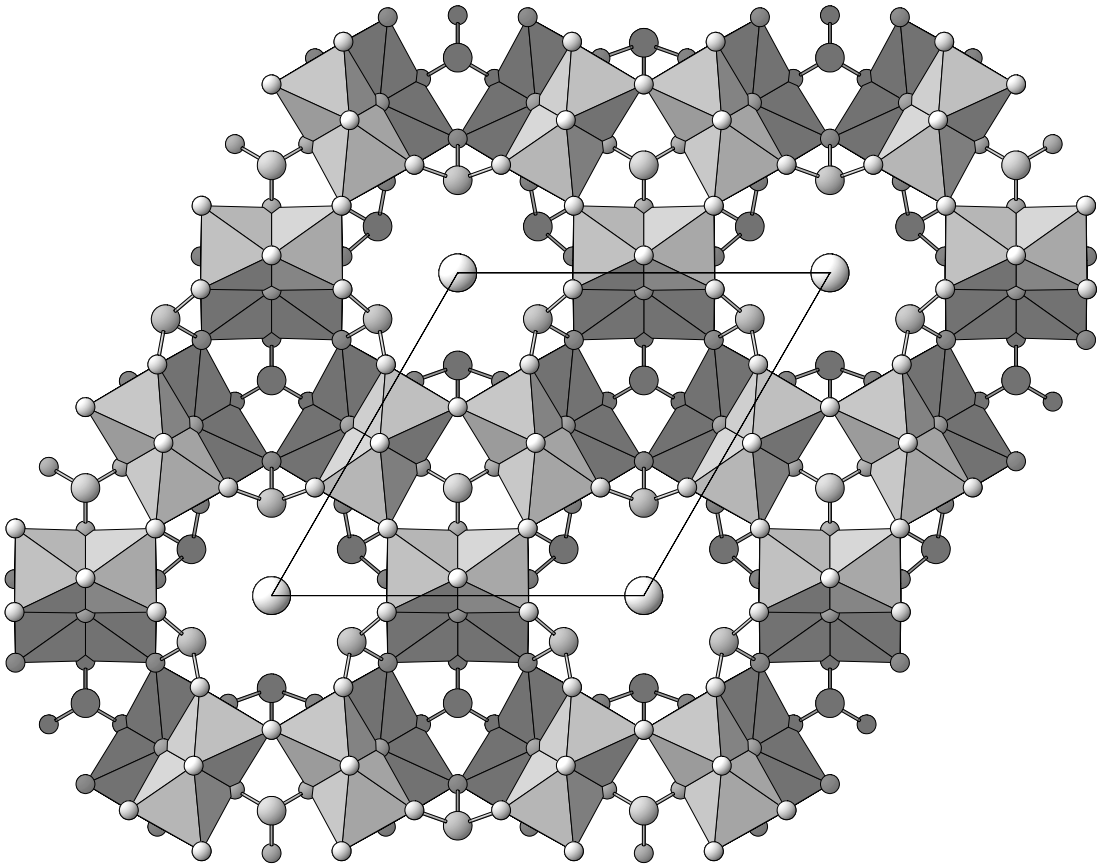

Fig. IV.30. **$Ni_3Te_2O_6(OH)_2$**

Arrangement of $NiO_6$ octahedra, :$TeO_3$ ψ-tetrahedra (Te atoms medium, O atoms small) and OH units (O atoms large) viewed along [001]. Light and dark octahedra are shifted by *c*/2.

References: [1] Perez G., Lasserre F., Moret J., Maurin M. (1976), J. Solid State Chem. 17, 143-149.