

Sn₁₀W₁₆O₄₆ [1]

Structural features: W₆O₁₉ units (six edge-linked WO₆ octahedra) share vertices with W₂O₉ units (two face-linked WO₆ octahedra) to form a 3D-framework. W₆ octahedral clusters and W₂ dumbbells. See Fig. IV.80.

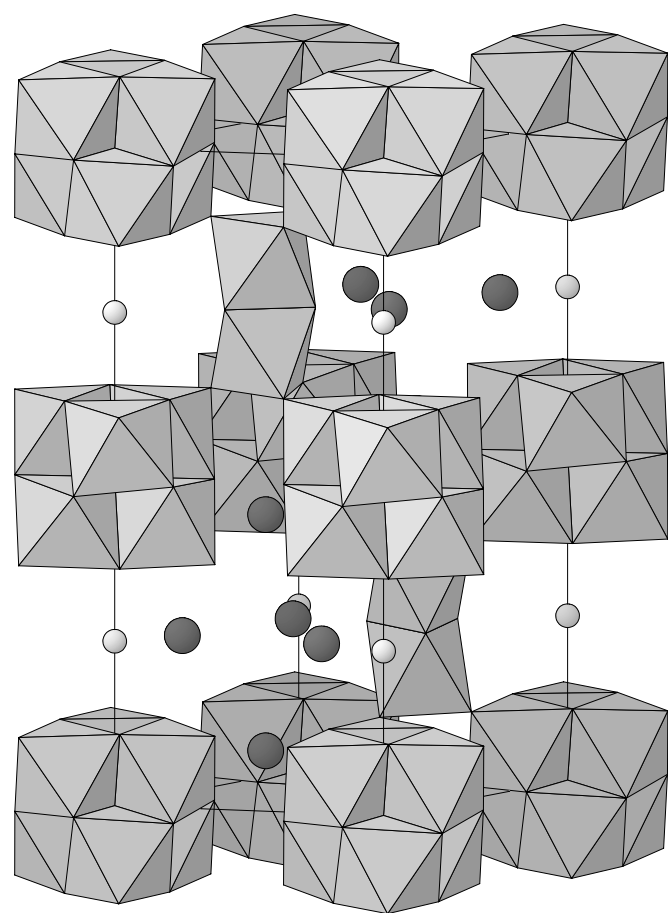


Fig. IV.80. **Sn₁₀W₁₆O₄₆**
Arrangement of WO₆ octahedra, Sn (large) and additional O (small) atoms.

Goreaud M. et al. (1980) [1]

$\text{O}_{23}\text{Sn}_5\text{W}_8$
 $a = 0.7667$, $c = 1.864$ nm, $c/a = 2.431$, $V = 0.9489$ nm³, $Z = 2$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
W1	12i	1	0.05645	0.22453	0.05991		octahedron O ₆
O2	12i	1	0.131	0.462	0.1195		non-colinear W ₂
O3	12i	1	0.245	0.186	0.1243		non-colinear W ₂
O4	12i	1	0.412	0.129	0.006		non-coplanar triangle W ₂ Sn
O5	6h	m..	0.301	0.459	1/4		non-coplanar triangle SnW ₂
Sn6	6h	m..	0.3124	0.1928	1/4		4-vertex polyhedron O ₄
W7	4f	3..	1/3	2/3	0.17023		octahedron O ₆
Sn8	4f	3..	1/3	2/3	0.5705		non-coplanar triangle O ₃
O9	2b	-3..	0	0	0		octahedron W ₆
O10	2a	-6..	0	0	1/4		coplanar triangle Sn ₃

Transformation from published data: $y, x, -z$; origin shift $0\ 0\ \frac{1}{2}$

Experimental: single crystal, diffractometer, X-rays, $R = 0.060$, $T = 294\text{ K}$

Remarks: No significant electron density was detected in Wyckoff position $2b$ in [2] ($\text{Sn}_{10}\text{W}_{16}\text{O}_{44}$).

References: [1] Goreaud M., Labbé P., Raveau B. (1980), Acta Crystallogr. B 36, 15-19. [2] Hibble S.J., McGrellis S.A. (1995), J. Chem. Soc., Dalton Trans. 1995, 1947-1949.