$BaMnO_{2.85}$	*hP*30	(187) *P*-6*m*2 – $n^2kjih^2g^2fa$

$BaMnO_3$ 6H [1], perovskite 6H
Structural features: Close-packed BaO_3 layers in hch_3c stacking; Mn in octahedral (O_6) voids. Units of four and two face-linked MnO_6 octahedra share vertices to form a 3D-framework. See Fig. IV.14.

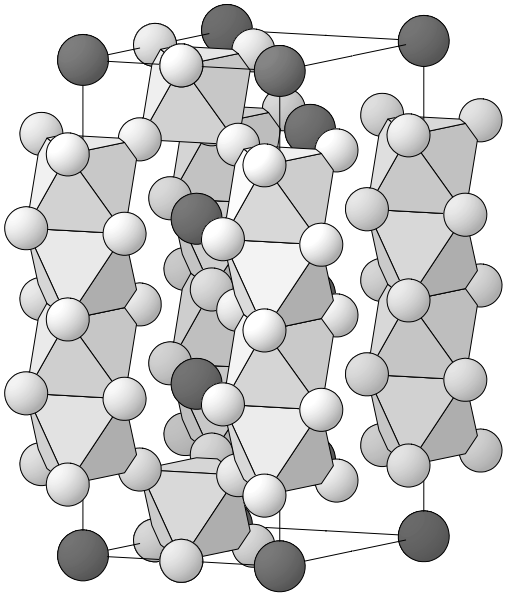

Fig. IV.14. **$BaMnO_3$ 6H**

Arrangement of MnO_6 octahedra (O atoms light) and Ba atoms (dark).

Negas T., Roth R.S. (1971) [1]
$BaMnO_3$
$a = 0.5683$, $c = 1.4096$ nm, $c/a = 2.480$, $V = 0.3943$ nm^3, $Z = 6$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	6*n*	.*m*.	0.16667	0.83333	0.16667		colinear Mn_2
O2	6*n*	.*m*.	0.83333	0.16667	0.33333		non-colinear Mn_2
O3	3*k*	*mm*2	0.16667	0.83333	$^1/_2$		non-colinear Mn_2
O4	3*j*	*mm*2	0.5	0.5	0		non-colinear Mn_2
Ba5	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.16667		cuboctahedron O_{12}
Mn6	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.08333		octahedron O_6
Ba7	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.33333		anticuboctahedron O_{12}
Mn8	2*g*	3*m*.	0	0	0.25		octahedron O_6
Mn9	2*g*	3*m*.	0	0	0.41667		octahedron O_6
Ba10	1*f*	-6*m*2	$^2/_3$	$^1/_3$	$^1/_2$		anticuboctahedron O_{12}
Ba11	1*a*	-6*m*2	0	0	0		anticuboctahedron O_{12}

Transformation from published data: *-x*,*-y*,*-z*
Experimental: powder, diffractometer, X-rays

Remarks: Phase stable at $1623 < T < 1748$ K in air; homogeneity range $BaMnO_{3-x}$, $0.10 < x < 0.15$. The cell parameters correspond to the O-poor boundary. Idealized coordinates. O vacancies not located.

References: [1] Negas T., Roth R.S. (1971), J. Solid State Chem. 3, 323-339.