

$pb2n$

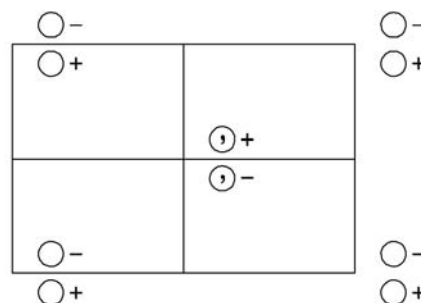
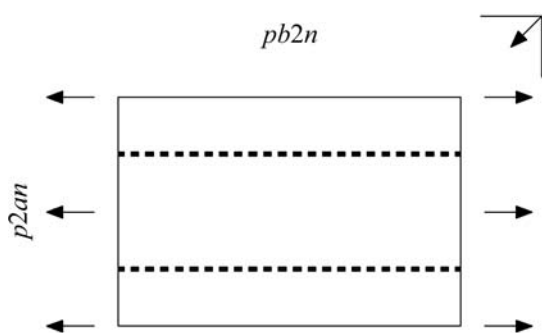
$m2m$

Orthorhombic/Rectangular

No. 34

$pb2n$

Patterson symmetry $pmmm$



Origin on $12n$

Asymmetric unit $0 \leq x \leq 1; 0 \leq y \leq \frac{1}{2}; 0 \leq z$

Symmetry operations

- | | | | |
|-------------|---------------------------|---------------------------------------|--|
| (1) 1 | (2) 2 $0, y, 0$ | (3) $b \frac{1}{4}, y, z$ | (4) $n(\frac{1}{2}, \frac{1}{2}, 0) \ x, y, 0$ |
| (1 0, 0, 0) | (2 _y 0, 0, 0) | (m_x \frac{1}{2}, \frac{1}{2}, 0) | (m_z \frac{1}{2}, \frac{1}{2}, 0) |

Generators selected (1); $t(1,0,0)$; $t(0,1,0)$; (2); (3)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
4 b 1	(1) x, y, z	(2) \bar{x}, y, \bar{z}	(3) $\bar{x} + \frac{1}{2}, y + \frac{1}{2}, z$	(4) $x + \frac{1}{2}, y + \frac{1}{2}, \bar{z}$	General: $hk: h + k = 2n$ $h0: h = 2n$ $0k: k = 2n$ Special: no extra conditions
2 a .2.	$0, y, 0$	$\frac{1}{2}, y + \frac{1}{2}, 0$			

Symmetry of special projections

Along [001] $c1m1$ $\mathbf{a}' = \mathbf{a}$ $\mathbf{b}' = \mathbf{b}$ Origin at $0, 0, z$	Along [100] $\not{c}11m$ $\mathbf{a}' = \frac{1}{2}\mathbf{b}$ Origin at $x, 0, 0$	Along [010] $\not{c}2mg$ $\mathbf{a}' = \mathbf{a}$ Origin at $0, y, 0$
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Maximal non-isotypic subgroups

I	[2] $pb11$ (12)	1; 3
	[2] $p121$ ($p211$, 8)	1; 2
	[2] $p11n$ ($p11a$, 5)	1; 4

IIa none

IIb none

Maximal isotypic subgroups of lowest index

IIc [3] $pb2n$ ($\mathbf{a}' = 3\mathbf{a}$) (34); [3] $pb2n$ ($\mathbf{b}' = 3\mathbf{b}$) (34)

Minimal non-isotypic supergroups

I	[2] $pban$ (39); [2] $pman$ (42)
II	[2] $cm2m$ (35); [2] $pb2b$ ($\mathbf{a}' = \frac{1}{2}\mathbf{a}$) (30); [2] $pm2a$ ($\mathbf{b}' = \frac{1}{2}\mathbf{b}$) (31)