

$pm2_1n$

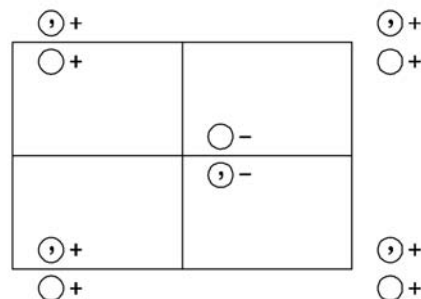
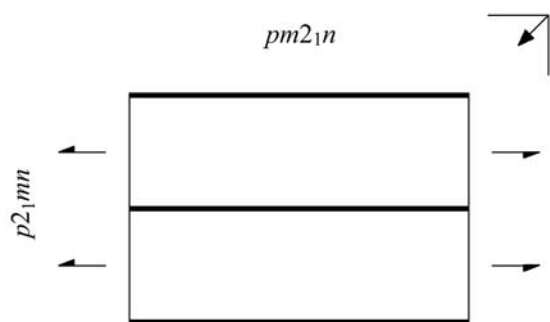
$m2m$

Orthorhombic/Rectangular

No. 32

$pm2_1n$

Patterson symmetry $pmmm$



Origin on $m1n$

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

Symmetry operations

- (1) 1 (2) $2(0, \frac{1}{2}, 0) \frac{1}{4}, y, 0$ (3) $n(\frac{1}{2}, \frac{1}{2}, 0) x, y, 0$ (4) $m 0, y, z$

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) $\bar{x} + \frac{1}{2}, y + \frac{1}{2}, \bar{z}$ (3) $x + \frac{1}{2}, y + \frac{1}{2}, \bar{z}$ (4) \bar{x}, y, z

General:

$$hk: h + k = 2n$$

$$h0: h = 2n$$

$$0k: k = 2n$$

Special: no extra conditions

2 a $m..$ $0, y, z$ $\frac{1}{2}, y + \frac{1}{2}, \bar{z}$

Symmetry of special projections

Along [001] $c1m1$

$\mathbf{a}' = \mathbf{a}$ $\mathbf{b}' = \mathbf{b}$

Origin at $0, 0, z$

Along [100] $\not\neq 11g$

$\mathbf{a}' = \mathbf{b}$

Origin at $x, 0, 0$

Along [010] $\not\neq 2mg$

$\mathbf{a}' = \mathbf{a}$

Origin at $\frac{1}{2}, y, 0$

Maximal non-isotypic subgroups

I [2] $pm11$ (11) 1; 4
[2] $p12_11$ ($p2_111, 9$) 1; 2
[2] $p11n$ ($p11a, 5$) 1; 3

IIa none

IIb none

Maximal isotypic subgroups of lowest index

IIc [3] $pm2_1n$ ($\mathbf{a}' = 3\mathbf{a}$) (32); [3] $pm2_1n$ ($\mathbf{b}' = 3\mathbf{b}$) (32)

Minimal non-isotypic supergroups

I [2] $pman$ (42); [2] $pmmn$ (46)

II [2] $cm2m$ (35); [2] $pm2_1b$ ($\mathbf{a}' = \frac{1}{2}\mathbf{a}$) (28); [2] $pm2a$ ($\mathbf{b}' = \frac{1}{2}\mathbf{b}$) (31)