

$Pmc2_1$

C_{2v}^2

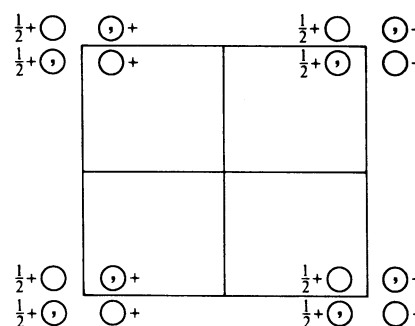
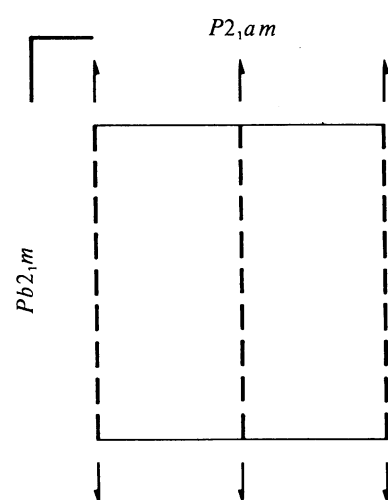
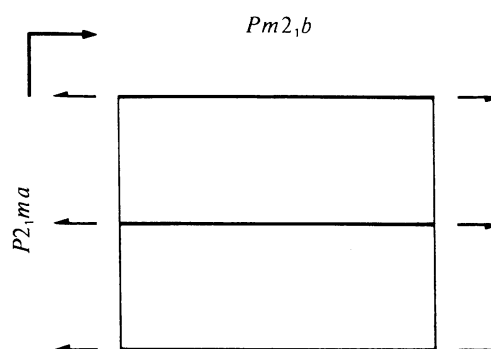
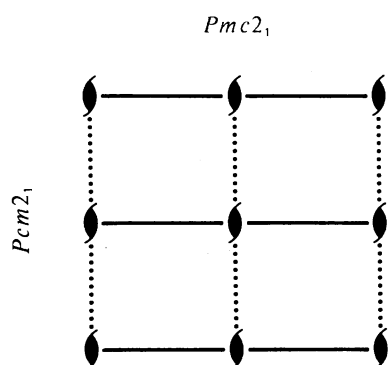
$mm2$

Orthorhombic

No. 26

$Pmc2_1$

Patterson symmetry $Pmmm$



Origin on $mc2_1$

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

Symmetry operations

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

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

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
					General:
4 <i>c</i> 1	(1) x, y, z	(2) $\bar{x}, \bar{y}, z + \frac{1}{2}$	(3) $x, \bar{y}, z + \frac{1}{2}$	(4) \bar{x}, y, z	$h0l : l = 2n$ $00l : l = 2n$
2 <i>b</i> <i>m</i> . .	$\frac{1}{2}, y, z$	$\frac{1}{2}, \bar{y}, z + \frac{1}{2}$			Special: no extra conditions
2 <i>a</i> <i>m</i> . .	$0, y, z$	$0, \bar{y}, z + \frac{1}{2}$			

Symmetry of special projections

Along [001] $p2mm$
 $\mathbf{a}' = \mathbf{a}$ $\mathbf{b}' = \mathbf{b}$
 Origin at $0, 0, z$

Along [100] $p1g1$
 $\mathbf{a}' = \mathbf{b}$ $\mathbf{b}' = \mathbf{c}$
 Origin at $x, 0, 0$

Along [010] $p11m$
 $\mathbf{a}' = \frac{1}{2}\mathbf{c}$ $\mathbf{b}' = \mathbf{a}$
 Origin at $0, y, 0$

Maximal non-isomorphic subgroups

I [2] $P1c1$ (Pc , 7) 1; 3
 [2] $Pm11$ (Pm , 6) 1; 4
 [2] $P112_1$ ($P2_1$, 4) 1; 2

IIa none

IIb [2] $Pmn2_1$ ($\mathbf{a}' = 2\mathbf{a}$) (31); [2] $Pbc2_1$ ($\mathbf{b}' = 2\mathbf{b}$) ($Pca2_1$, 29); [2] $Cmc2_1$ ($\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}$) (36)

Maximal isomorphic subgroups of lowest index

IIc [2] $Pmc2_1$ ($\mathbf{a}' = 2\mathbf{a}$) (26); [2] $Pmc2_1$ ($\mathbf{b}' = 2\mathbf{b}$) (26); [3] $Pmc2_1$ ($\mathbf{c}' = 3\mathbf{c}$) (26)

Minimal non-isomorphic supergroups

I [2] $Pmma$ (51); [2] $Pbam$ (55); [2] $Pbcm$ (57); [2] $Pnma$ (62)

II [2] $Cmc2_1$ (36); [2] $Amm2$ (38); [2] $Bme2$ ($Aem2$, 39); [2] $Ima2$ (46); [2] $Pmm2$ ($\mathbf{c}' = \frac{1}{2}\mathbf{c}$) (25)