

$C_{2v}^2$ 
 $Pmc2_1$ 

No. 26

 $Pmc2_1$ 
**Generators selected** (1);  $t(1,0,0)$ ;  $t(0,1,0)$ ;  $t(0,0,1)$ ; (2); (3)

**General position**

 Multiplicity,  
 Wyckoff letter,  
 Site symmetry

Coordinates

4 c 1

 (1)  $x, y, z$  (2)  $\bar{x}, \bar{y}, z + \frac{1}{2}$  (3)  $x, \bar{y}, z + \frac{1}{2}$  (4)  $\bar{x}, y, z$ 
**I Maximal translationengleiche subgroups**

[2] $P1c1$ (7)	1; 3	
[2] $Pm11$ (6, $P1m1$ )	1; 4	<b>c, a, b</b>
[2] $P112_1$ (4)	1; 2	

**II Maximal klassengleiche subgroups**

## • Enlarged unit cell

[2] $\mathbf{a}' = 2\mathbf{a}$			
$Pmn2_1$ (31)	$\langle 2; 3 + (1, 0, 0) \rangle$	<b>2a, b, c</b>	1/2, 0, 0
$Pmn2_1$ (31)	$\langle (2; 3) + (1, 0, 0) \rangle$	<b>2a, b, c</b>	
$Pmc2_1$ (26)	$\langle 2; 3 \rangle$	<b>2a, b, c</b>	
$Pmc2_1$ (26)	$\langle 3; 2 + (1, 0, 0) \rangle$	<b>2a, b, c</b>	1/2, 0, 0
[2] $\mathbf{b}' = 2\mathbf{b}$			
$Pbc2_1$ (29, $Pca2_1$ )	$\langle 2; 3 + (0, 1, 0) \rangle$	<b>-2b, a, c</b>	
$Pbc2_1$ (29, $Pca2_1$ )	$\langle 3; 2 + (0, 1, 0) \rangle$	<b>-2b, a, c</b>	0, 1/2, 0
$Pmc2_1$ (26)	$\langle 2; 3 \rangle$	<b>a, 2b, c</b>	
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 1, 0) \rangle$	<b>a, 2b, c</b>	0, 1/2, 0
[2] $\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}$			
$Cmc2_1$ (36)	$\langle 2; 3 \rangle$	<b>2a, 2b, c</b>	
$Cmc2_1$ (36)	$\langle 3; 2 + (1, 0, 0) \rangle$	<b>2a, 2b, c</b>	1/2, 0, 0
$Cmc2_1$ (36)	$\langle (2; 3) + (0, 1, 0) \rangle$	<b>2a, 2b, c</b>	0, 1/2, 0
$Cmc2_1$ (36)	$\langle 2 + (1, 1, 0); 3 + (0, 1, 0) \rangle$	<b>2a, 2b, c</b>	1/2, 1/2, 0
[3] $\mathbf{a}' = 3\mathbf{a}$			
$Pmc2_1$ (26)	$\langle 2; 3 \rangle$	<b>3a, b, c</b>	
$Pmc2_1$ (26)	$\langle 3; 2 + (2, 0, 0) \rangle$	<b>3a, b, c</b>	1, 0, 0
$Pmc2_1$ (26)	$\langle 3; 2 + (4, 0, 0) \rangle$	<b>3a, b, c</b>	2, 0, 0
[3] $\mathbf{b}' = 3\mathbf{b}$			
$Pmc2_1$ (26)	$\langle 2; 3 \rangle$	<b>a, 3b, c</b>	
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 2, 0) \rangle$	<b>a, 3b, c</b>	0, 1, 0
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 4, 0) \rangle$	<b>a, 3b, c</b>	0, 2, 0
[3] $\mathbf{c}' = 3\mathbf{c}$			
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 0, 1) \rangle$	<b>a, b, 3c</b>	

## • Series of maximal isomorphic subgroups

[ $p$ ] $\mathbf{a}' = p\mathbf{a}$			
$Pmc2_1$ (26)	$\langle 3; 2 + (2u, 0, 0) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	<b>pa, b, c</b>	$u, 0, 0$
[ $p$ ] $\mathbf{b}' = p\mathbf{b}$			
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 2u, 0) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	<b>a, pb, c</b>	$0, u, 0$
[ $p$ ] $\mathbf{c}' = p\mathbf{c}$			
$Pmc2_1$ (26)	$\langle (2; 3) + (0, 0, \frac{p}{2} - \frac{1}{2}) \rangle$ prime $p > 2$ no conjugate subgroups	<b>a, b, pc</b>	

**I Minimal translationengleiche supergroups**

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

**II Minimal non-isomorphic klassengleiche supergroups**

## • Additional centring translations

 [2]  $Cmc2_1$  (36); [2]  $Amm2$  (38); [2]  $Bme2$  (39,  $Aem2$ ); [2]  $Ima2$  (46)

## • Decreased unit cell

 [2]  $\mathbf{c}' = \frac{1}{2}\mathbf{c}$   $Pmm2$  (25)