

$\bar{4}4_1$

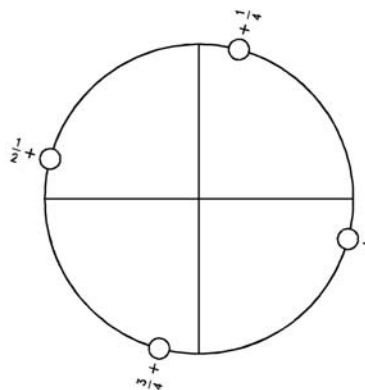
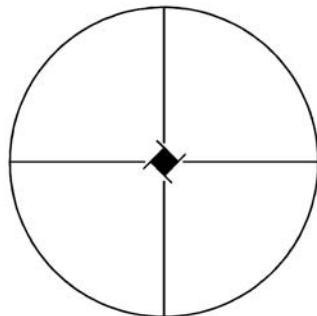
4

Tetragonal

No. 24

$\bar{4}4_1$

Patterson symmetry $\bar{4}4/m$



Origin on 4_1

Asymmetric unit $0 \leq x; 0 \leq y; 0 \leq z \leq 1$

Symmetry operations

- | | | | |
|----------------------|--|--|---|
| (1) 1
(1 0, 0, 0) | (2) $2(\frac{1}{2})$ 0, 0, z
(2_z 0, 0, $\frac{1}{2}$) | (3) $4^+(\frac{1}{4})$ 0, 0, z
(4_z^+ 0, 0, $\frac{1}{4}$) | (4) $4^-(\frac{3}{4})$ 0, 0, z
(4_z^{-1} 0, 0, $\frac{3}{4}$) |
|----------------------|--|--|---|

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

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
					General:
4 <i>a</i> 1	(1) x, y, z	(2) $\bar{x}, \bar{y}, z + \frac{1}{2}$	(3) $\bar{y}, x, z + \frac{1}{4}$	(4) $y, \bar{x}, z + \frac{3}{4}$	$l : l = 4n$

Symmetry of special projections

Along [001] 4	Along [100] $\bar{4}11g$	Along [110] $\bar{4}11g$
Origin at 0,0,z	$\mathbf{a}' = \mathbf{c}$ Origin at $x, 0, 0$	$\mathbf{a}' = \mathbf{c}$ Origin at $x, x, 0$

Maximal non-isotypic non-enantiomorphic subgroups

I [2] $\bar{4}112_1$ (9) 1; 2

IIa none

IIb none

Maximal isotypic subgroups and enantiomorphic subgroups of lowest index

IIc [3] $\bar{4}_3$ ($\mathbf{c}' = 3\mathbf{c}$) (26); [5] $\bar{4}_1$ ($\mathbf{c}' = 5\mathbf{c}$) (24)

Minimal non-isotypic non-enantiomorphic supergroups

I [2] $\bar{4}_1 22$ (31)

II [2] $\bar{4}_2$ ($\mathbf{c}' = \frac{1}{2}\mathbf{c}$) (25)