SG No. 48 D_{2h}^2 $Pnnn$ [orthorhombic]

* plus set: $+[0, 0, 0]$

Table 1: Wyckoff site: `2a`, site symmetry: `222`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}\right]$	`[5,6,7,8]`

Table 2: Wyckoff site: `2b`, site symmetry: `222`

No.	position	mapping
1	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{1}{4}, \frac{3}{4}, \frac{3}{4}\right]$	`[5,6,7,8]`

Table 3: Wyckoff site: `2c`, site symmetry: `222`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[5,6,7,8]`

Table 4: Wyckoff site: `2d`, site symmetry: `222`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{3}{4}, \frac{1}{4}, \frac{3}{4}\right]$	`[5,6,7,8]`

Table 5: Wyckoff site: `4e`, site symmetry: `-1`

No.	position	mapping
1	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[1,5]`
2	$\left[0, 0, \frac{1}{2}\right]$	`[2,6]`
3	$\left[0, \frac{1}{2}, 0\right]$	`[3,7]`
4	$\left[\frac{1}{2}, 0, 0\right]$	`[4,8]`

Table 6: Wyckoff site: `4f`, site symmetry: `-1`

No.	position	mapping
1	$[0,\ 0,\ 0]$	`[1,5]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ 0\right]$	`[2,6]`
3	$\left[\frac{1}{2},\ 0,\ \frac{1}{2}\right]$	`[3,7]`
4	$\left[0,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[4,8]`

Table 7: Wyckoff site: `4g`, site symmetry: `2..`

No.	position	mapping
1	$\left[x,\ \frac{1}{4},\ \frac{1}{4}\right]$	`[1,4]`
2	$\left[\frac{1}{2}-x,\ \frac{1}{4},\ \frac{1}{4}\right]$	`[2,3]`
3	$\left[-x,\ \frac{3}{4},\ \frac{3}{4}\right]$	`[5,8]`
4	$\left[x+\frac{1}{2},\ \frac{3}{4},\ \frac{3}{4}\right]$	`[6,7]`

Table 8: Wyckoff site: `4h`, site symmetry: `2..`

No.	position	mapping
1	$\left[x,\ \frac{1}{4},\ \frac{3}{4}\right]$	`[1,4]`
2	$\left[\frac{1}{2}-x,\ \frac{1}{4},\ \frac{3}{4}\right]$	`[2,3]`
3	$\left[-x,\ \frac{3}{4},\ \frac{1}{4}\right]$	`[5,8]`
4	$\left[x+\frac{1}{2},\ \frac{3}{4},\ \frac{1}{4}\right]$	`[6,7]`

Table 9: Wyckoff site: `4i`, site symmetry: `.2.`

No.	position	mapping
1	$\left[\frac{1}{4},\ y,\ \frac{1}{4}\right]$	`[1,3]`
2	$\left[\frac{1}{4},\ \frac{1}{2}-y,\ \frac{1}{4}\right]$	`[2,4]`
3	$\left[\frac{3}{4},\ -y,\ \frac{3}{4}\right]$	`[5,7]`
4	$\left[\frac{3}{4},\ y+\frac{1}{2},\ \frac{3}{4}\right]$	`[6,8]`

Table 10: Wyckoff site: `4j`, site symmetry: `.2.`

No.	position	mapping
1	$\left[\frac{3}{4},\ y,\ \frac{1}{4}\right]$	`[1,3]`
2	$\left[\frac{3}{4},\ \frac{1}{2}-y,\ \frac{1}{4}\right]$	`[2,4]`
3	$\left[\frac{1}{4},\ -y,\ \frac{3}{4}\right]$	`[5,7]`
4	$\left[\frac{1}{4},\ y+\frac{1}{2},\ \frac{3}{4}\right]$	`[6,8]`

Table 11: Wyckoff site: `4k`, site symmetry: `..2`

No.	position	mapping
1	$\left[\frac{1}{4},\ \frac{1}{4},\ z\right]$	`[1,2]`
2	$\left[\frac{1}{4},\ \frac{1}{4},\ \frac{1}{2}-z\right]$	`[3,4]`
3	$\left[\frac{3}{4},\ \frac{3}{4},\ -z\right]$	`[5,6]`
4	$\left[\frac{3}{4},\ \frac{3}{4},\ z+\frac{1}{2}\right]$	`[7,8]`

Table 12: Wyckoff site: `4l`, site symmetry: `..2`

No.	position	mapping
1	$\left[\frac{1}{4},\ \frac{3}{4},\ z\right]$	`[1,2]`
2	$\left[\frac{1}{4},\ \frac{3}{4},\ \frac{1}{2}-z\right]$	`[3,4]`
3	$\left[\frac{3}{4},\ \frac{1}{4},\ -z\right]$	`[5,6]`
4	$\left[\frac{3}{4},\ \frac{1}{4},\ z+\frac{1}{2}\right]$	`[7,8]`

Table 13: Wyckoff site: `8m`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$\left[\frac{1}{2}-x,\ \frac{1}{2}-y,\ z\right]$	`[2]`
3	$\left[\frac{1}{2}-x,\ y,\ \frac{1}{2}-z\right]$	`[3]`
4	$\left[x,\ \frac{1}{2}-y,\ \frac{1}{2}-z\right]$	`[4]`
5	$[-x,\ -y,\ -z]$	`[5]`
6	$\left[x+\frac{1}{2},\ y+\frac{1}{2},\ -z\right]$	`[6]`
7	$\left[x+\frac{1}{2},\ -y,\ z+\frac{1}{2}\right]$	`[7]`
8	$\left[-x,\ y+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[8]`