SG No. 136 D_{4h}^{14} $P4_2/mnm$ [tetragonal]

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

Table 1: Wyckoff site: `2a`, site symmetry: `m.mm`

No.	position	mapping
1	$[0,\ 0,\ 0]$	`[1,2,7,8,9,10,15,16]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$	`[3,4,5,6,11,12,13,14]`

Table 2: Wyckoff site: `2b`, site symmetry: `m.mm`

No.	position	mapping
1	$\left[0,\ 0,\ \frac{1}{2}\right]$	`[1,2,7,8,9,10,15,16]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ 0\right]$	`[3,4,5,6,11,12,13,14]`

Table 3: Wyckoff site: `4c`, site symmetry: `2/m..`

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ 0\right]$	`[1,2,9,10]`
2	$\left[0,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[3,4,11,12]`
3	$\left[\frac{1}{2},\ 0,\ \frac{1}{2}\right]$	`[5,6,13,14]`
4	$\left[\frac{1}{2},\ 0,\ 0\right]$	`[7,8,15,16]`

Table 4: Wyckoff site: `4d`, site symmetry: `-4..`

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ \frac{1}{4}\right]$	`[1,2,11,12]`
2	$\left[0,\ \frac{1}{2},\ \frac{3}{4}\right]$	`[3,4,9,10]`
3	$\left[\frac{1}{2},\ 0,\ \frac{1}{4}\right]$	`[5,6,15,16]`
4	$\left[\frac{1}{2},\ 0,\ \frac{3}{4}\right]$	`[7,8,13,14]`

Table 5: Wyckoff site: `4e`, site symmetry: `2.mm`

No.	position	mapping
1	$[0,\ 0,\ z]$	`[1,2,15,16]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ z+\frac{1}{2}\right]$	`[3,4,13,14]`
3	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}-z\right]$	`[5,6,11,12]`
4	$[0,\ 0,\ -z]$	`[7,8,9,10]`

Table 6: Wyckoff site: `4f`, site symmetry: `m.2m`

No.	position	mapping
1	$[x,\ x,\ 0]$	`[1,7,10,16]`
2	$[-x,\ -x,\ 0]$	`[2,8,9,15]`
3	$\left[\frac{1}{2}-x,\ x+\frac{1}{2},\ \frac{1}{2}\right]$	`[3,5,12,14]`
4	$\left[x+\frac{1}{2},\ \frac{1}{2}-x,\ \frac{1}{2}\right]$	`[4,6,11,13]`

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

No.	position	mapping
1	$[x,\ -x,\ 0]$	`[1,8,10,15]`
2	$[-x,\ x,\ 0]$	`[2,7,9,16]`
3	$\left[x+\frac{1}{2},\ x+\frac{1}{2},\ \frac{1}{2}\right]$	`[3,6,12,13]`
4	$\left[\frac{1}{2}-x,\ \frac{1}{2}-x,\ \frac{1}{2}\right]$	`[4,5,11,14]`

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

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ z\right]$	`[1,2]`
2	$\left[0,\ \frac{1}{2},\ z+\frac{1}{2}\right]$	`[3,4]`
3	$\left[\frac{1}{2},\ 0,\ \frac{1}{2}-z\right]$	`[5,6]`
4	$\left[\frac{1}{2},\ 0,\ -z\right]$	`[7,8]`
5	$\left[0,\ \frac{1}{2},\ -z\right]$	`[9,10]`
6	$\left[0,\ \frac{1}{2},\ \frac{1}{2}-z\right]$	`[11,12]`
7	$\left[\frac{1}{2},\ 0,\ z+\frac{1}{2}\right]$	`[13,14]`
8	$\left[\frac{1}{2},\ 0,\ z\right]$	`[15,16]`

Table 9: Wyckoff site: `8i`, site symmetry: `m..`

No.	position	mapping
1	$[x,\ y,\ 0]$	`[1,10]`
2	$[-x,\ -y,\ 0]$	`[2,9]`
3	$\left[\frac{1}{2}-y,\ x+\frac{1}{2},\ \frac{1}{2}\right]$	`[3,12]`
4	$\left[y+\frac{1}{2},\ \frac{1}{2}-x,\ \frac{1}{2}\right]$	`[4,11]`
5	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ \frac{1}{2}\right]$	`[5,14]`
6	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ \frac{1}{2}\right]$	`[6,13]`
7	$[y,\ x,\ 0]$	`[7,16]`
8	$[-y,\ -x,\ 0]$	`[8,15]`

Table 10: Wyckoff site: `8j`, site symmetry: `..m`

No.	position	mapping
1	$[x,\ x,\ z]$	`[1,16]`
2	$[-x,\ -x,\ z]$	`[2,15]`
3	$\left[\frac{1}{2}-x,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[3,14]`
4	$\left[x+\frac{1}{2},\ \frac{1}{2}-x,\ z+\frac{1}{2}\right]$	`[4,13]`
5	$\left[\frac{1}{2}-x,\ x+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[5,12]`
6	$\left[x+\frac{1}{2},\ \frac{1}{2}-x,\ \frac{1}{2}-z\right]$	`[6,11]`
7	$[x,\ x,\ -z]$	`[7,10]`
8	$[-x,\ -x,\ -z]$	`[8,9]`

Table 11: Wyckoff site: `16k`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$[-x,\ -y,\ z]$	`[2]`
3	$\left[\frac{1}{2}-y,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[3]`
4	$\left[y+\frac{1}{2},\ \frac{1}{2}-x,\ z+\frac{1}{2}\right]$	`[4]`
5	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[5]`
6	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ \frac{1}{2}-z\right]$	`[6]`
7	$[y,\ x,\ -z]$	`[7]`
8	$[-y,\ -x,\ -z]$	`[8]`
9	$[-x,\ -y,\ -z]$	`[9]`
10	$[x,\ y,\ -z]$	`[10]`
11	$\left[y+\frac{1}{2},\ \frac{1}{2}-x,\ \frac{1}{2}-z\right]$	`[11]`
12	$\left[\frac{1}{2}-y,\ x+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[12]`
13	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ z+\frac{1}{2}\right]$	`[13]`
14	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[14]`
15	$[-y,\ -x,\ z]$	`[15]`
16	$[y,\ x,\ z]$	`[16]`