SG No. 119 D_{2d}^{9} $I\bar{4}m2$ [tetragonal]

* plus set: $+[0,\ 0,\ 0]$, $+\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$

Table 1: Wyckoff site: `2a`, site symmetry: `-4m2`

No.	position	mapping
1	$[0,\ 0,\ 0]$	`[1,2,3,4,5,6,7,8]`

Table 2: Wyckoff site: `2b`, site symmetry: `-4m2`

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

Table 3: Wyckoff site: `2c`, site symmetry: `-4m2`

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

Table 4: Wyckoff site: `2d`, site symmetry: `-4m2`

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

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

No.	position	mapping
1	$[0,\ 0,\ z]$	`[1,2,5,6]`
2	$[0,\ 0,\ -z]$	`[3,4,7,8]`

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

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

Table 7: Wyckoff site: `8g`, site symmetry: `..2`

No.	position	mapping
1	$[x,\ x,\ 0]$	`[1,7]`
2	$[-x,\ -x,\ 0]$	`[2,8]`
3	$[x,\ -x,\ 0]$	`[3,5]`
4	$[-x,\ x,\ 0]$	`[4,6]`

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

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

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

No.	position	mapping
1	$[x,\ 0,\ z]$	`[1,5]`
2	$[-x,\ 0,\ z]$	`[2,6]`
3	$[0,\ -x,\ -z]$	`[3,8]`
4	$[0,\ x,\ -z]$	`[4,7]`

Table 10: Wyckoff site: `16j`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$[-x,\ -y,\ z]$	`[2]`
3	$[y,\ -x,\ -z]$	`[3]`
4	$[-y,\ x,\ -z]$	`[4]`
5	$[x,\ -y,\ z]$	`[5]`
6	$[-x,\ y,\ z]$	`[6]`
7	$[y,\ x,\ -z]$	`[7]`
8	$[-y,\ -x,\ -z]$	`[8]`