SG No. 187 D_{3h}^{1} $P\bar{6}m2$ [hexagonal]

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

Table 1: Wyckoff site: `1a`, site symmetry: `-6m2`

No.	position	mapping
1	[0, 0, 0]	`[1,2,3,4,5,6,7,8,9,10,11,12]`

Table 2: Wyckoff site: `1b`, site symmetry: `-6m2`

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

Table 3: Wyckoff site: `1c`, site symmetry: `-6m2`

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

Table 4: Wyckoff site: `1d`, site symmetry: `-6m2`

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

Table 5: Wyckoff site: `1e`, site symmetry: `-6m2`

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

Table 6: Wyckoff site: `1f`, site symmetry: `-6m2`

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

Table 7: Wyckoff site: 2g, site symmetry: 3m.

No.	position	mapping
1	$[0,\ 0,\ z]$	[1,2,3,7,8,9]
2	$[0,\ 0,\ -z]$	[4,5,6,10,11,12]

Table 8: Wyckoff site: 2h, site symmetry: 3m.

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

Table 9: Wyckoff site: 2i, site symmetry: 3m.

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

Table 10: Wyckoff site: 3j, site symmetry: mm2

No.	position	mapping
1	$[x,\ -x,\ 0]$	[1,4,7,10]
2	$[x,\ 2x,\ 0]$	[2,5,9,12]
3	$[-2x,\ -x,\ 0]$	[3,6,8,11]

Table 11: Wyckoff site: 3k, site symmetry: mm2

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

Table 12: Wyckoff site: 6l, site symmetry: m..

No.	position	mapping
1	$[x,\ y,\ 0]$	[1,4]
2	$[-y,\ x-y,\ 0]$	[2,5]

continued ...

Table 12

No.	position	mapping
3	$[-x+y,\ -x,\ 0]$	[3,6]
4	$[-y,\ -x,\ 0]$	[7,10]
5	$[-x+y,\ y,\ 0]$	[8,11]
6	$[x,\ x-y,\ 0]$	[9,12]

Table 13: Wyckoff site: 6m, site symmetry: m..

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

Table 14: Wyckoff site: 6n, site symmetry: .m.

No.	position	mapping
1	$[x,\ -x,\ z]$	[1,7]
2	$[x,\ 2x,\ z]$	[2,9]
3	$[-2x,\ -x,\ z]$	[3,8]
4	$[x,\ -x,\ -z]$	[4,10]
5	$[x,\ 2x,\ -z]$	[5,12]
6	$[-2x,\ -x,\ -z]$	[6,11]

Table 15: Wyckoff site: 12o, site symmetry: 1

No.	position	mapping
1	$[x,\ y,\ z]$	[1]
2	$[-y,\ x-y,\ z]$	[2]
3	$[-x+y,\ -x,\ z]$	[3]
4	$[x,\ y,\ -z]$	[4]
5	$[-y,\ x-y,\ -z]$	[5]
6	$[-x+y,\ -x,\ -z]$	[6]
7	$[-y,\ -x,\ z]$	[7]
8	$[-x+y,\ y,\ z]$	[8]
9	$[x,\ x-y,\ z]$	[9]
10	$[-y,\ -x,\ -z]$	[10]
11	$[-x+y,\ y,\ -z]$	[11]

continued ...

Table 15

No.	position	mapping
12	$[x, x-y, -z]$	[12]