

SG No. 176  $C_{6h}^2$   $P6_3/m$  [ hexagonal ]

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

Table 1: Wyckoff site: 2a, site symmetry:  $-6..$

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

Table 2: Wyckoff site: 2b, site symmetry:  $-3..$

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

Table 3: Wyckoff site: 2c, site symmetry:  $-6..$

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

Table 4: Wyckoff site: 2d, site symmetry:  $-6..$

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

Table 5: Wyckoff site: 4e, site symmetry:  $3..$

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

Table 6: Wyckoff site: 4f, site symmetry:  $3..$ 

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

Table 7: Wyckoff site: 6g, site symmetry:  $-1$ 

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

Table 8: Wyckoff site: 6h, site symmetry:  $m..$ 

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

Table 9: Wyckoff site: 12i, site symmetry:  $1$ 

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

*continued ...*

Table 9

No.	position	mapping
12	$[-x + y, -x, \frac{1}{2} - z]$	[12]