

SG No. 113  $D_{2d}^3$   $P\bar{4}2_1m$  [ tetragonal ]

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

Table 1: Wyckoff site: 2a, site symmetry: -4..

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

Table 2: Wyckoff site: 2b, site symmetry: -4..

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

Table 3: Wyckoff site: 2c, site symmetry: 2.mm

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

Table 4: Wyckoff site: 4d, site symmetry: 2..

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

Table 5: Wyckoff site: 4e, site symmetry: ...m

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

Table 6: Wyckoff site: **8f**, 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	$[\frac{1}{2} - x, y + \frac{1}{2}, -z]$	[5]
6	$[x + \frac{1}{2}, \frac{1}{2} - y, -z]$	[6]
7	$[\frac{1}{2} - y, \frac{1}{2} - x, z]$	[7]
8	$[y + \frac{1}{2}, x + \frac{1}{2}, z]$	[8]