

MSG No. 105.212  $P4_2mc1'$  [ Type II, tetragonal ]

Table 1: Wyckoff site: 2a, site symmetry:  $2mm.1'$

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

Table 2: Wyckoff site: 2b, site symmetry:  $2mm.1'$

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

Table 3: Wyckoff site: 2c, site symmetry:  $2mm.1'$

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

Table 4: Wyckoff site: 4d, site symmetry:  $.m.1'$

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

Table 5: Wyckoff site: 4e, site symmetry:  $.m.1'$

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

Table 6: Wyckoff site:  $8f$ , site symmetry:  $11'$ 

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