PG No. 23 C_{6h} $6/m$ [hexagonal]

* Wyckoff site: `2a`, site symmetry: `6..`

Table 1: Wyckoff bond: `2a@2a`

No.	vector	center	mapping
1	$[0, 0, Z]$	$[0, 0, z]$	`[1,2,3,4,5,6]`
2	$[0, 0, -Z]$	$[0, 0, -z]$	`[7,8,9,10,11,12]`

Table 2: Wyckoff bond: `6b@2a`

No.	vector	center	mapping
1	$[X, Y, 0]$	$[0, 0, z]$	`[1,-4]`
2	$[-Y, X-Y, 0]$	$[0, 0, z]$	`[2,-5]`
3	$[-X+Y, -X, 0]$	$[0, 0, z]$	`[3,-6]`
4	$[-X, -Y, 0]$	$[0, 0, -z]$	`[7,-10]`
5	$[Y, -X+Y, 0]$	$[0, 0, -z]$	`[8,-11]`
6	$[X-Y, X, 0]$	$[0, 0, -z]$	`[9,-12]`

Table 3: Wyckoff bond: `12c@2a`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[0, 0, z]$	`[1]`
2	$[-Y, X-Y, Z]$	$[0, 0, z]$	`[2]`
3	$[-X+Y, -X, Z]$	$[0, 0, z]$	`[3]`
4	$[-X, -Y, Z]$	$[0, 0, z]$	`[4]`
5	$[Y, -X+Y, Z]$	$[0, 0, z]$	`[5]`
6	$[X-Y, X, Z]$	$[0, 0, z]$	`[6]`
7	$[-X, -Y, -Z]$	$[0, 0, -z]$	`[7]`
8	$[Y, -X+Y, -Z]$	$[0, 0, -z]$	`[8]`
9	$[X-Y, X, -Z]$	$[0, 0, -z]$	`[9]`
10	$[X, Y, -Z]$	$[0, 0, -z]$	`[10]`
11	$[-Y, X-Y, -Z]$	$[0, 0, -z]$	`[11]`
12	$[-X+Y, -X, -Z]$	$[0, 0, -z]$	`[12]`

* Wyckoff site: `6b`, site symmetry: `m..`

Table 4: Wyckoff bond: `6a@6b`

No.	vector	center	mapping
1	$[X, Y, 0]$	$[x, y, 0]$	`[1,10]`
2	$[-Y, X-Y, 0]$	$[-y, x-y, 0]$	`[2,11]`

continued ...

Table 4

No.	vector	center	mapping
3	$[-X+Y, -X, 0]$	$[-x+y, -x, 0]$	`[3,12]`
4	$[-X, -Y, 0]$	$[-x, -y, 0]$	`[4,7]`
5	$[Y, -X+Y, 0]$	$[y, -x+y, 0]$	`[5,8]`
6	$[X-Y, X, 0]$	$[x-y, x, 0]$	`[6,9]`

Table 5: Wyckoff bond: `6b@6b`

No.	vector	center	mapping
1	$[0, 0, Z]$	$[x, y, 0]$	`[1,-10]`
2	$[0, 0, Z]$	$[-y, x-y, 0]$	`[2,-11]`
3	$[0, 0, Z]$	$[-x+y, -x, 0]$	`[3,-12]`
4	$[0, 0, Z]$	$[-x, -y, 0]$	`[4,-7]`
5	$[0, 0, Z]$	$[y, -x+y, 0]$	`[5,-8]`
6	$[0, 0, Z]$	$[x-y, x, 0]$	`[6,-9]`

Table 6: Wyckoff bond: `12c@6b`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[x, y, 0]$	`[1]`
2	$[-Y, X-Y, Z]$	$[-y, x-y, 0]$	`[2]`
3	$[-X+Y, -X, Z]$	$[-x+y, -x, 0]$	`[3]`
4	$[-X, -Y, Z]$	$[-x, -y, 0]$	`[4]`
5	$[Y, -X+Y, Z]$	$[y, -x+y, 0]$	`[5]`
6	$[X-Y, X, Z]$	$[x-y, x, 0]$	`[6]`
7	$[-X, -Y, -Z]$	$[-x, -y, 0]$	`[7]`
8	$[Y, -X+Y, -Z]$	$[y, -x+y, 0]$	`[8]`
9	$[X-Y, X, -Z]$	$[x-y, x, 0]$	`[9]`
10	$[X, Y, -Z]$	$[x, y, 0]$	`[10]`
11	$[-Y, X-Y, -Z]$	$[-y, x-y, 0]$	`[11]`
12	$[-X+Y, -X, -Z]$	$[-x+y, -x, 0]$	`[12]`

* Wyckoff site: `12c`, site symmetry: `1`

Table 7: Wyckoff bond: `12a@12c`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[x, y, z]$	`[1]`
2	$[-Y, X-Y, Z]$	$[-y, x-y, z]$	`[2]`
3	$[-X+Y, -X, Z]$	$[-x+y, -x, z]$	`[3]`
4	$[-X, -Y, Z]$	$[-x, -y, z]$	`[4]`

continued ...

Table 7

No.	vector	center	mapping
5	$[Y,\ -X+Y,\ Z]$	$[y,\ -x+y,\ z]$	[5]
6	$[X-Y,\ X,\ Z]$	$[x-y,\ x,\ z]$	[6]
7	$[-X,\ -Y,\ -Z]$	$[-x,\ -y,\ -z]$	[7]
8	$[Y,\ -X+Y,\ -Z]$	$[y,\ -x+y,\ -z]$	[8]
9	$[X-Y,\ X,\ -Z]$	$[x-y,\ x,\ -z]$	[9]
10	$[X,\ Y,\ -Z]$	$[x,\ y,\ -z]$	[10]
11	$[-Y,\ X-Y,\ -Z]$	$[-y,\ x-y,\ -z]$	[11]
12	$[-X+Y,\ -X,\ -Z]$	$[-x+y,\ -x,\ -z]$	[12]