SG No. 42 C_{2v}^{18} $Fmm2$ [orthorhombic]

* plus set: $+[0,\ 0,\ 0]$, $+\left[0,\ \frac{1}{2},\ \frac{1}{2}\right]$, $+\left[\frac{1}{2},\ 0,\ \frac{1}{2}\right]$, $+\left[\frac{1}{2},\ \frac{1}{2},\ 0\right]$
* Wyckoff site: `4a`, site symmetry: `mm2`

Table 1: Wyckoff bond: `4a@4a`

No.	vector	center	mapping
1	$[0,\ 0,\ Z]$	$[0,\ 0,\ z]$	`[1,2,3,4]`

Table 2: Wyckoff bond: `4b@4a`

No.	vector	center	mapping
1	$[0,\ Y,\ 0]$	$[0,\ 0,\ z]$	`[1,-2,-3,4]`

Table 3: Wyckoff bond: `4c@4a`

No.	vector	center	mapping
1	$[X,\ 0,\ 0]$	$[0,\ 0,\ z]$	`[1,-2,3,-4]`

Table 4: Wyckoff bond: `8d@4a`

No.	vector	center	mapping
1	$[X,\ Y,\ 0]$	$[0,\ 0,\ z]$	`[1,-2]`
2	$[X,\ -Y,\ 0]$	$[0,\ 0,\ z]$	`[3,-4]`

Table 5: Wyckoff bond: `8e@4a`

No.	vector	center	mapping
1	$[X,\ 0,\ Z]$	$[0,\ 0,\ z]$	`[1,3]`
2	$[-X,\ 0,\ Z]$	$[0,\ 0,\ z]$	`[2,4]`

Table 6: Wyckoff bond: `8f@4a`

No.	vector	center	mapping
1	$[0,\ Y,\ Z]$	$[0,\ 0,\ z]$	`[1,4]`
2	$[0,\ -Y,\ Z]$	$[0,\ 0,\ z]$	`[2,3]`

Table 7: Wyckoff bond: `16g@4a`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[0, 0, z]$	`[1]`
2	$[-X, -Y, Z]$	$[0, 0, z]$	`[2]`
3	$[X, -Y, Z]$	$[0, 0, z]$	`[3]`
4	$[-X, Y, Z]$	$[0, 0, z]$	`[4]`

* Wyckoff site: `8b`, site symmetry: `..2`

Table 8: Wyckoff bond: `8a@8b`

No.	vector	center	mapping
1	$[X, Y, 0]$	$\left[\frac{1}{4}, \frac{1}{4}, z\right]$	`[1,-2]`
2	$[X, -Y, 0]$	$\left[\frac{1}{4}, \frac{3}{4}, z\right]$	`[3,-4]`

Table 9: Wyckoff bond: `8b@8b`

No.	vector	center	mapping
1	$[0, 0, Z]$	$\left[\frac{1}{4}, \frac{1}{4}, z\right]$	`[1,2]`
2	$[0, 0, Z]$	$\left[\frac{1}{4}, \frac{3}{4}, z\right]$	`[3,4]`

Table 10: Wyckoff bond: `16c@8b`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[\frac{1}{4}, \frac{1}{4}, z\right]$	`[1]`
2	$[-X, -Y, Z]$	$\left[\frac{1}{4}, \frac{1}{4}, z\right]$	`[2]`
3	$[X, -Y, Z]$	$\left[\frac{1}{4}, \frac{3}{4}, z\right]$	`[3]`
4	$[-X, Y, Z]$	$\left[\frac{1}{4}, \frac{3}{4}, z\right]$	`[4]`

* Wyckoff site: `8c`, site symmetry: `m..`

Table 11: Wyckoff bond: `8a@8c`

No.	vector	center	mapping
1	$[0, Y, Z]$	$[0, y, z]$	`[1,4]`
2	$[0, -Y, Z]$	$[0, -y, z]$	`[2,3]`

Table 12: Wyckoff bond: `8b@8c`

No.	vector	center	mapping
1	$[X, 0, 0]$	$[0, y, z]$	`[1,-4]`
2	$[-X, 0, 0]$	$[0, -y, z]$	`[2,-3]`

Table 13: Wyckoff bond: `16c@8c`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[0, y, z]$	`[1]`
2	$[-X, -Y, Z]$	$[0, -y, z]$	`[2]`
3	$[X, -Y, Z]$	$[0, -y, z]$	`[3]`
4	$[-X, Y, Z]$	$[0, y, z]$	`[4]`

* Wyckoff site: `8d`, site symmetry: `.m.`

Table 14: Wyckoff bond: `8a@8d`

No.	vector	center	mapping
1	$[X, 0, Z]$	$[x, 0, z]$	`[1,3]`
2	$[-X, 0, Z]$	$[-x, 0, z]$	`[2,4]`

Table 15: Wyckoff bond: `8b@8d`

No.	vector	center	mapping
1	$[0, Y, 0]$	$[x, 0, z]$	`[1,-3]`
2	$[0, -Y, 0]$	$[-x, 0, z]$	`[2,-4]`

Table 16: Wyckoff bond: `16c@8d`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[x, 0, z]$	`[1]`
2	$[-X, -Y, Z]$	$[-x, 0, z]$	`[2]`
3	$[X, -Y, Z]$	$[x, 0, z]$	`[3]`
4	$[-X, Y, Z]$	$[-x, 0, z]$	`[4]`

* Wyckoff site: `16e`, site symmetry: `1`

Table 17: Wyckoff bond: `16a@16e`

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