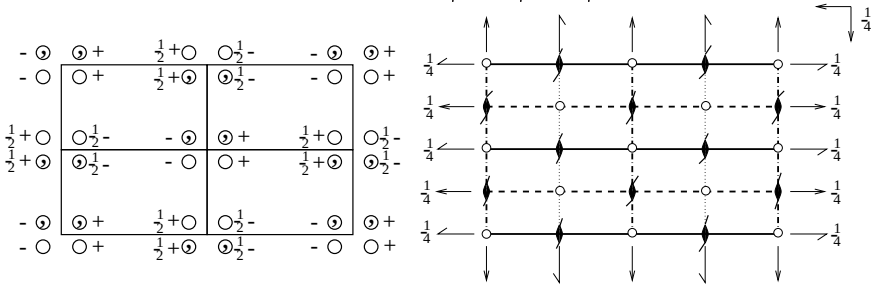
10.4. Raumgruppen (Forts.)

Auszug aus den *Internationalen Tabellen*

Cmca

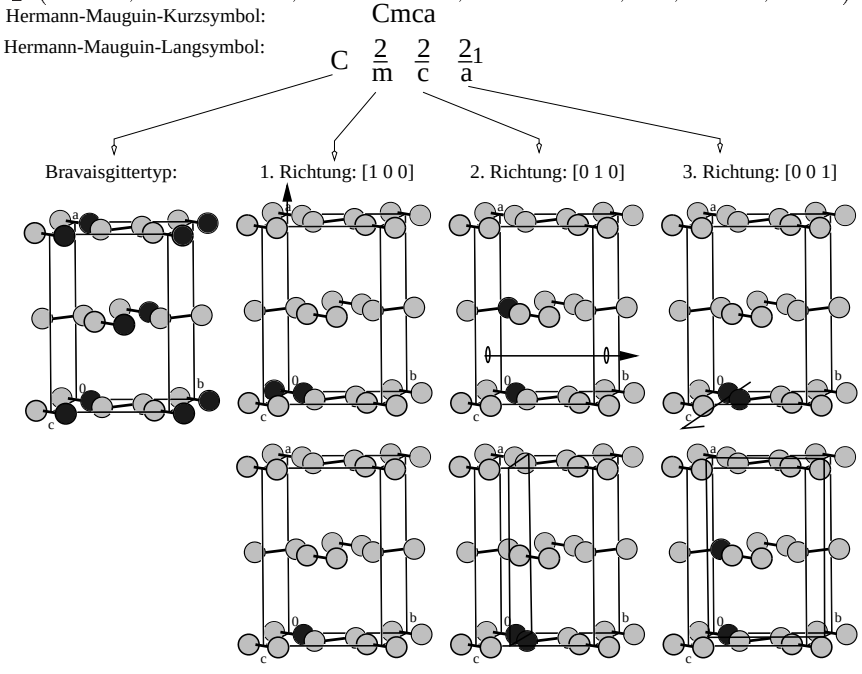
Orthorhombic mmm C 2/m 2/c 2_1/a No. 64 D_{2h}^{18}



Origin at centre (2/m)

Number of positions, Wyckoff notation, and point symmetry			Co-ordinates of equivalent positions	Conditions limiting possible reflections
			$(0,0,0;\ \frac{1}{2},\frac{1}{2},0)+$	
16	g	1	$x,y,z;\ x,\bar{y},\bar{z};\ x,\frac{1}{2}-y,\frac{1}{2}+z;\ x,\frac{1}{2}+y,\frac{1}{2}-z;$ $\bar{x},\bar{y},\bar{z};\ \bar{x},y,z;\ \bar{x},\frac{1}{2}+y,\frac{1}{2}-z;\ \bar{x},\frac{1}{2}-y,\frac{1}{2}+z.$	hkl: h+k=2n 0kl: (k=2n) h0l: l=2n; (h=2n) hk0: h=2n; (k=2n) h00: (h=2n) 0k0: (k=2n) 00l: (l=2n)
				Special: as above, plus
8	f	m	$0,y,z;\ 0,\bar{y},\bar{z};\ \frac{1}{2},y,\frac{1}{2}-z;\ \frac{1}{2},\bar{y},\frac{1}{2}+z.$	no extra conditions
8	e	2	$\frac{1}{4},y,\frac{1}{4};\ \frac{3}{4},\bar{y},\frac{3}{4};\ \frac{3}{4},y,\frac{1}{4};\ \frac{1}{4},\bar{y},\frac{3}{4}.$	hkl: h=2n; (k=2n)
8	d	2	$x,0,0;\ \bar{x},0,0,\ x,\frac{1}{2},\frac{1}{2};\ \bar{x},\frac{1}{2},\frac{1}{2}.$	hkl: k+l=2n; (l+h=2n)
8	c	$\bar{1}$	$\frac{1}{4},\frac{1}{4},0;\ \frac{1}{4},\frac{3}{4},0;\ \frac{1}{4},\frac{1}{4},\frac{1}{2};\ \frac{1}{4},\frac{3}{4},\frac{1}{2};.$	hkl: h,l=2n; (k=2n)
4	b	2/m	$\frac{1}{2},0,0;\ \frac{1}{2},\frac{1}{2},\frac{1}{2}$	
4	a	2/m	$0,0,0;\ 0,\frac{1}{2},\frac{1}{2}.$	

Symmetry of special projections

(001) pmm; a'=a/2, b'=b/2 (100) pgm; b'=b/2, c'=c (010) pmm; c'=c/2, a'=a/2

Beispiel: I_2 (Cmca, a=7.255 Å, b=4.795 Å, c=9.780 Å, I:0, 0.150,0.117)