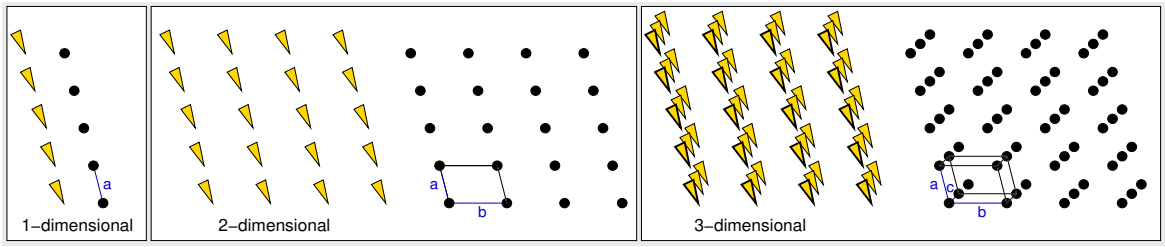
2. Kristallographie

2.1. Punktgruppen und Kristallklassen

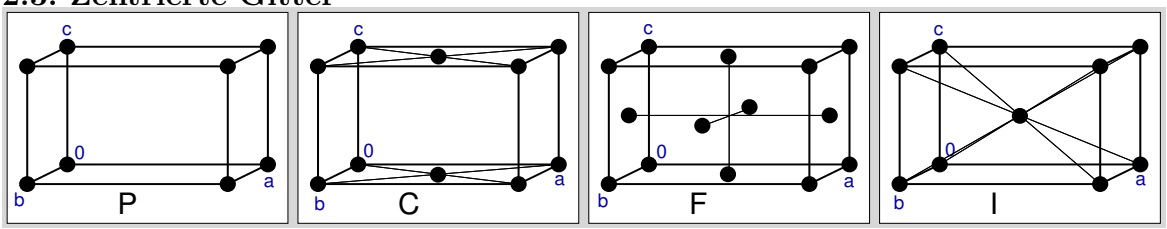
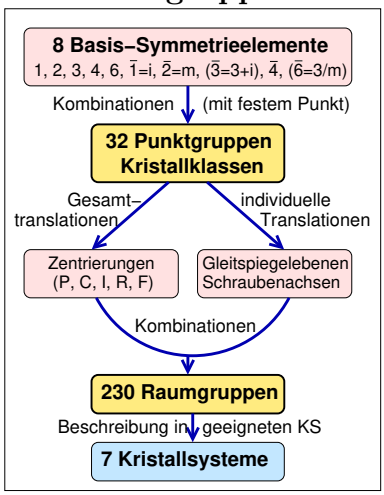
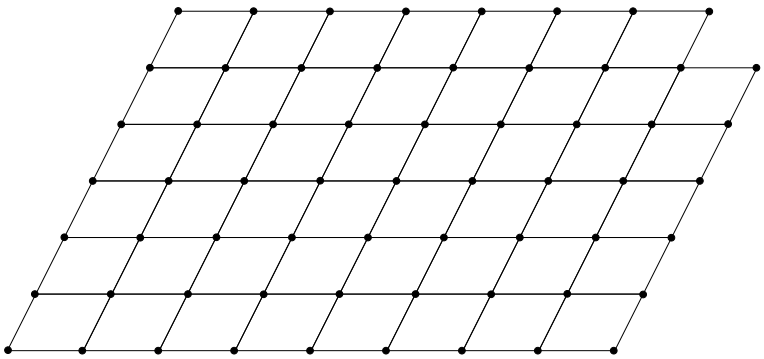
Tabelle der 3-dimensionalen Punktgruppen/Kristallklassen

Nr.	Herman-Mauguin Kurz-	Herman-Mauguin Lang-	Schön-flies-	Koordinaten-system
	Symbol			
1	1	1	C_1	triklin
2	$\bar{1}$	$\bar{1}$	C_i	$(a \neq b \neq c; \alpha \neq \beta \neq \gamma)$
3	m	1m1	C_s	monoklin
4	2	121	C_2	$(a \neq b \neq c,$
5	$\frac{2}{m}$	$1\frac{2}{m}1$	C_{2h}	$\alpha = \gamma = 90^o; \beta \neq 90^o)$
6	mm2	mm2	C_{2v}	orthorhombisch
7	222	222	D_2	$(a \neq b \neq c,$
8	mmm	$\frac{2}{m}\frac{2}{m}\frac{2}{m}$	D_{2h}	$\alpha = \beta = \gamma = 90^o)$
9	4	4	C_4	tetragonal
10	$\bar{4}$	$\bar{4}$	S_4	$(a = b \neq c$
11	$\frac{4}{m}$	$\frac{4}{m}$	C_{4h}	$\alpha = \beta = \gamma = 90^o)$
12	4mm	4mm	C_{4v}	
13	$\bar{4}$2m	$\bar{4}$2m	D_{2d}	
14	422	422	D_4	
15	$\frac{4}{m}$mm	$\frac{4}{m}\frac{2}{m}\frac{2}{m}$	D_{4h}	
16	3	3	C_3	trigonal
17	$\bar{3}$	$\bar{3}$	S_6	(hexagonale A.)
18	3m1	3m1	C_{3v}	$(a = b \neq c$
19	321	321	D_3	$\alpha = \beta = 90^o;$
20	$\bar{3}$m1	$\bar{3}\frac{2}{m}1$	D_{3d}	$\gamma = 120^o)$
21	6	6	C_6	hexagonal
22	$\bar{6}$	$\bar{6}$	C_{3h}	$(a = b \neq c$
23	$\frac{6}{m}$	$\frac{6}{m}$	C_{6h}	$\alpha = \beta = 90^o;$
24	$\bar{6}$m2	$\bar{6}$m2	D_{3h}	$\gamma = 120^o)$
25	6mm	6mm	C_{6v}	
26	622	622	D_6	
27	$\frac{6}{m}$mm	$\frac{6}{m}\frac{2}{m}\frac{2}{m}$	D_{6h}	
28	23	23	T	kubisch
29	m$\bar{3}$	$\frac{2}{m}\bar{3}$	T_h	$(a = b = c$
30	$\bar{4}$3m	$\bar{4}$3m	T_d	$\alpha = \beta = \gamma = 90^o)$
31	432	432	O	
32	m$\bar{3}$m	$\frac{4}{m}\bar{3}\frac{2}{m}$	O_h	

2.2. Translation als Symmetrieoperation



2.3. Zentrierte Gitter



2.4. Raumgruppen