

32 Point Groups

System used in this volume	Point group		Schoenflies symbol	Class names	
	International symbol			Groth (1921)	Friedel (1926)
	Short	Full			
Triclinic	1 $\bar{1}$	1 $\bar{1}$	C_1 $C_i(S_2)$	Pedial (asymmetric) Pinacoidal	Hemihedry Holohedry
Monoclinic	2 m $2/m$	2 m $\frac{2}{m}$	C_2 $C_s(C_{1h})$ C_{2h}	Sphenoidal Domatic Prismatic	Holoaxial hemihedry Antihemihedry Holohedry
Orthorhombic	222 $mm2$ mmm	222 $mm2$ $\frac{2\ 2\ 2}{m\ m\ m}$	$D_2(V)$ C_{2v} $D_{2h}(V_h)$	Disphenoidal Pyramidal Dipyramidal	Holoaxial hemihedry Antihemihedry Holohedry
Tetragonal	4 $\bar{4}$ $4/m$ 422 $4mm$ $\bar{4}2m$ $4/mmm$	4 $\bar{4}$ $\frac{4}{m}$ 422 $4mm$ $\bar{4}2m$ $\frac{4\ 2\ 2}{m\ m\ m}$	C_4 S_4 C_{4h} D_4 C_{4v} $D_{2d}(V_d)$ D_{4h}	Pyramidal Disphenoidal Dipyramidal Trapezohedral Ditetragonal-pyramidal Scalenohehdral Ditetragonal-dipyramidal	Tetartohedry with 4-axis Sphenohedral tetartohedry Parahemihedry Holoaxial hemihedry Antihemihedry with 4-axis Sphenohedral antihemihedry Holohedry
Trigonal	3 $\bar{3}$ 32 $3m$ $\bar{3}m$	3 $\bar{3}$ 32 $3m$ $\frac{\bar{3}\ 2}{m}$	C_3 $C_{3i}(S_6)$ D_3 C_{3v} D_{3d}	Pyramidal Rhombohedral Trapezohedral Ditrigonal-pyramidal Ditrigonal-scalenohedral	<i>Hexagonal</i> Ogdohedry Paratetartohedry Holoaxial tetartohedry with 3-axis Hemimorphic antitetartohedry Parahemihedry with 3-axis <i>Rhombohedral</i> Tetartohedry Parahemihedry Holoaxial hemihedry Antihemihedry Holohedry
Hexagonal	6 $\bar{6}$ $6/m$ 622 $6mm$ $\bar{6}2m$ $6/mmm$	6 $\bar{6}$ $\frac{6}{m}$ 622 $6mm$ $\bar{6}2m$ $\frac{6\ 2\ 2}{m\ m\ m}$	C_6 C_{3h} C_{6h} D_6 C_{6v} D_{3h} D_{6h}	Pyramidal Trigonal-dipyramidal Dipyramidal Trapezohedral Dihexagonal-pyramidal Ditrigonal-dipyramidal Dihexagonal-dipyramidal	Tetartohedry with 6-axis Trigonal antitetartohedry Parahemihedry with 6-axis Holoaxial hemihedry Antihemihedry with 6-axis Trigonal antihemihedry Holohedry
Cubic	23 $m\bar{3}$ 432 $\bar{4}3m$ $m\bar{3}m$	23 $\frac{2\ \bar{3}}{m}$ 432 $\bar{4}3m$ $\frac{4\ \bar{3}\ 2}{m\ m\ m}$	T T_h O T_d O_h	Tetrahedral-pentagonododecahedral (= tetartoidal) Disdodecahedral (= diploidal) Pentagon-icositetrahedral (= gyroidal) Hexakistetrahedral (= hextetrahedral) Hexakisoctahedral (= hexoctahedral)	Tetartohedry Parahemihedry Holoaxial hemihedry Antihemihedry Holohedry