**Table 3.2.1.4**
Names and symbols of the 32 crystal classes

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

types of crystal form. Frequently, 48 are quoted because 'sphenoid' and 'dome' are considered as two different forms. It is customary, however, to regard them as the same form, with the name 'dihedron'.

*Name of point form* (printed in italics). There exists no general convention on the names of the point forms. Here, only one name is given, which does not always agree with that of other authors. The names of the point forms are also contained in Table 3.2.1.3. Note that the same point form, 'line segment', corresponds to both sphenoid and dome.

Column 6: *Miller indices* (*hkl*) for the symmetry-equivalent faces (edges) of a crystal form. In the trigonal and hexagonal crystal systems, when referring to hexagonal axes, Bravais–Miller indices (*hkil*) are used, with $h + k + i = 0$.

With a few exceptions, the triplets of Miller indices (*hkl*) and point coordinates $x, y, z$ are arranged in such a way as to show