## **The Bravais Lattice Types**

**Lattice System** Dirichlet cells also known as H-R Dirichlet domains Voronoi domains Federov parallelohedra hexagonal Wigner-Seitz cell rhom bohedral tetragonal or thorh ombic orthorh ombic monoclinic cubic 01B R1 M1B truncated octahedron hR (rrr sss) oF (rrs rrt) cl (rrr rrr) (rst rst) mC (rrs ttu) aP (rst uvw) mC (rst rsu) (rrr rrs) aP, type 1 Ο2 M2A M2B \* A2 elongated (rr0 rrs) mC (rs0 rst) dodecahedron ol (rs0 srt) mC (rs0 stu) aP (rs0 tuv) R3 М3 О3 **A3** Federov truncated octahedron cF (rr0 rr0) hR (rr0 sr0) ol (rs0 rs0) mC (rs0 ts0) aP (rs0 tu0) ol, type 3 cF, type 3 М4 H4 **H4** 04 hexagonal prism hP (00r rrs) oS (00r sst) mP (00r stu) hP, type 4 **O**5 cuboid (000 rrs) oP (000 rst) cP (000 rrr)

## \*Not a full-dimensional Bravais type

O3 is a 2-D manifold between O2 and O1B M3 is a 3-D manifold between M2A and M1B M2B is a 3-D manifold between M1A and M1B

[modified after Delone, Galiulin, and Shtogrin, 1975]