

Crystal Systems and Bravais Lattices

System	Axial lengths and angles	Bravais lattice	Lattice symbol
Cubic	Three equal axes at right angles	simple	P
	$a = b = c$	body centered	I
	$\alpha = \beta = \gamma = 90^\circ$	face centered	F
Tetragonal	Three axes at right angles, two equal lengths	simple	P
	$a = b \neq c$ $\alpha = \beta = \gamma = 90^\circ$	body centered	I
Orthorhombic	Three unequal axes at right angles	simple	P
	$a \neq b \neq c$	body centered	I
	$\alpha = \beta = \gamma = 90^\circ$	base centered	C
		face centered	F
Rhombohedral (or Trigonal)	Three equal axes, equally inclined $a = b = c$ $\alpha = \beta = \gamma \neq 90^\circ$	simple	P (R)
Hexagonal	Two equal coplanar axes at 120° , third axis at right angles $a = b \neq c$ $\alpha = \beta = 90^\circ, \gamma = 120^\circ$	simple	P
Monoclinic	Three unequal axes, one pair not at right angles $a \neq b \neq c$ $\alpha = \gamma = 90^\circ \neq \beta$	simple base centered	P C
Triclinic	Three unequal axes, unequally inclined and none at right angles $a \neq b \neq c$ $\alpha \neq \beta \neq \gamma \neq 90^\circ$	simple	P (R)