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Periodic Table of the Elements

H_2 $P6_3/mmc$ 3.776 — 6.162																	**α-^{4}He** $P6_3/mmc$ 3.531 — 5.693
Li Im3m 3.510 — —	**α-Be** $P6_3/mmc$ 2.287 — 3.583											**α-B** R3m rhomb. 5.057 — —	**C** Fd3m 3.567 — —	**α-N_2** $P2_13$ 5.644 — —	**α-O_2** C2/m 5.403 3.429 5.086	**α-F_2** C2/m — — —	**Ne** Fm3m 4.455 — —
α-Na $P6_3/mmc$ 3.767 — 6.154	**Mg** $P6_3/mmc$ 3.209 — 5.210											**Al** Fm3m 4.050 — —	**Si** Fd3m 5.431 — —	**P** Cmca 3.314 10.478 4.376	**α-S_8** Fddd 10.465 12.866 24.486	**Cl_2** Cmca 6.24 4.48 8.26	**Ar** Fm3m 5.311 — —
K Im3m 5.32 — —	**α-Ca** Fm3m 5.588 — —	**α-Sc** $P6_3/mmc$ 3.309 — 5.273	**α-Ti** $P6_3/mmc$ 2.951 — 4.684	**V** Im3m 3.024 — —	**Cr** Im3m 2.885 — —	**α-Mn** I43m 8.914 — —	**α-Fe** Im3m 2.866 — —	**α-Co** Fm3m 3.544 — —	**Ni** Fm3m 3.524 — —	**Cu** Fm3m 3.615 — —	**Zn** $P6_3/mmc$ 2.664 — 4.947	**α-Ga** Cmca 4.519 7.657 4.526	**Ge** Fd3m 5.658 — —	**α-As** R3m 4.132 — —	**Se** $P3_{1/2}21$ 4.366 — 4.959	**Br_2** Cmca 6.737 4.548 8.761	**Kr** Fm3m 5.721 — —
Rb Im3m 5.700 — —	**α-Sr** Fm3m 6.085 — —	**α-Y** $P6_3/mmc$ 3.647 — 5.731	**α-Zr** $P6_3/mmc$ 3.232 — 5.148	**Nb** Im3m 3.299 — —	**Mo** Im3m 3.147 — —	**Tc** $P6_3/mmc$ 2.743 — 4.400	**Ru** $P6_3/mmc$ 2.706 — 4.281	**Rh** Fm3m 3.804 — —	**Pd** Fm3m 3.891 — —	**Ag** Fm3m 4.086 — —	**Cd** $P6_3/mmc$ 2.979 — 5.619	**In** I4/mmm 3.253 — 4.946	**α-Sn** Fd3m 6.489 — —	**Sb** R3m 4.308 — 11.247	**Te** $P3_{1/2}21$ 4.457 — 5.927	**I_2** Cmca 7.265 4.786 9.791	**Xe** Fm3m 6.197 — —
Cs Im3m 6.14 — —	**Ba** Im3m 5.025 — —	**α-La** $P6_3/mmc$ 3.770 — 12.159	**α-Hf** $P6_3/mmc$ 3.195 — 5.051	**Ta** Im3m 3.303 — —	**W** Im3m 3.165 — —	**Re** $P6_3/mmc$ 2.761 — 4.458	**Os** $P6_3/mmc$ 2.735 — 4.319	**Ir** Fm3m 3.839 — —	**Pt** Fm3m 3.924 — —	**Au** Fm3m 4.078 — —	**α-Hg** R3m 2.993 — —	**α-Tl** $P6_3/mmc$ 3.456 — 5.525	**Pb** Fm3m 4.950 — —	**Bi** R3m 4.546 — 11.862	**α-Po** Pm3m 3.352 — —	**At**	**Rn**
Fr	**Ra**	**Ac** Fm3m 5.311 — —															

α-Ce Fm3m 4.85 — —	**α-Pr** $P6_3/mmc$ 3.673 — 11.835	**α-Nd** $P6_3/mmc$ 3.658 — 11.799	**Pm**	**α-Sm** R3m 8.996 — —	**Eu** Im3m 4.582 — —	**Gd** $P6_3/mmc$ 3.636 — 5.783	**α-Tb** $P6_3/mmc$ 3.601 — 5.694	**Dy** $P6_3/mmc$ 3.590 — 5.648	**α-Ho** $P6_3/mmc$ 3.577 — 5.616	**α-Er** $P6_3/mmc$ 3.559 — 5.587	**α-Tm** $P6_3/mmc$ 3.538 — 5.555	**α-Yb** Fm3m 5.486 — —	**α-Lu** $P6_3/mmc$ 3.503 — 5.551
α-Th Fm3m 5.084 — —	**Pa** I4/mmm 3.932 — 3.238	**α-U** Cmcm 2.848 5.858 4.946	**α-Np** Pmcn 4.723 4.887 6.663	**α-Pu** P2/m 6.183 4.822 10.963	**α-Am** $P6_3/mmc$ 3.468 — 11.240	**Cm** $P6_3/mmc$ 3.496 — 11.331	**Bk**	**Cf**	**Es**	**Fm**	**Md**	**No**	**Lw**

Element
Space group symbol
Lattice constant a
Lattice constant b
Lattice constant c

Face-centered cubic structure: $Fm3m$, O_h^5
Body-centered cubic structure: $Im3m$, O_h^9
Hexagonal close packing: $P6_3/mmc$, D_{6h}^4
Rhombohedral structure: $R\bar{3}m$, D_{3d}^5
Diamond structure: $Fd3m$, O_h^7
Right- and left-handed selenium structure: $P3_121$, D_3^4; $P3_221$, D_3^6

Source: Landolt-Börnstein, New Series Vol. III,b
Structure Data of Elements and Intermetallic Phases
(Springer, Berlin, Heidelberg 1971)

Table of Constants

Quantity	Symbol	Value	SI Unit
Velocity of light in vacuum	c	2.997925	10^{8} m s^{-1}
Permeability of vacuum	$\mu_0 = 1/\varepsilon_0 c^2$	4π	10^{-7} Vs/Am
Permittivity of vacuum	$\varepsilon_0 = 1/\mu_0 c^2$	8.854188	10^{-12} As/Vm
Proton rest mass	m_p	1.672649	10^{-27} kg
Electron rest mass	m_e	9.109534	10^{-31} kg
Elementary charge	e	1.602189	10^{-19} As
Planck's constant	h	6.626176	10^{-34} J s
Planck's constant	$\hbar = h/2\pi$	1.054589	10^{-34} J s
Flux quantum	$\Phi_0 = h/2e$	2.067851	10^{-15} J A^{-1}
Sommerfeld fine-structure constant	$\alpha = \mu_0 ce^2/2h$	7.297351	10^{-3}
Rydberg-constant	$R_\infty = \mu_0^2 m_e e^4 c^3/8h^3$	1.097373	10^{7} m^{-1}
Bohr magneton	$\mu_B = e\hbar/2m_e$	9.274078	10^{-24} Am^2
Avogadro's number	N_A	6.022045	10^{23} mol^{-1}
Atomic mass unit	$m_u = 1$ u $= (10^{-3}$ kg mol$^{-1})/N_A$	1.660566	10^{-27} kg
Boltzmann's constant	k	1.380662	10^{-23} J K^{-1}

Equivalent Values

Quantity	Symbol	Value	SI Unit
Energy equivalent of the Hertz	E[Hz] = (1 Hz)h	6.626176	10^{-34} J
Frequency equivalent of the electron volt	ν[eV] = 1 eV/h	2.417970	10^{14} Hz
Energy equivalent of the reciprocal meter	E[m^{-1}] = (1 m^{-1})hc	1.986478	10^{-25} J
Wave-number equivalent of the electron volt	σ[eV] = 1 eV/hc	8.065479	10^{5} m^{-1}
Energy equivalent of the Kelvin	E[K] = (1 K)k	1.380662	10^{-23} J
Temperature equivalent of the electron volt	T[eV] = 1 eV/k	1.160450	10^{4} K