PERIODIC TABLE OF THE ELEMENTS

Group 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Shell
1 +1 -1 H [1.00784; 1.00811] 1																	2 0 He 4.002602 2	K
3 +1 Li [6.938; 6.997] 2-1	4 +2 Be 9.012182 2-2											5 +3 B [10.806; 10.821] 2-3	6 +2 +4 -4 C [12.0096; 12.0116] 2-4	7 +1 +2 +3 +4 +5 -1 -2 -3 N [14.00643; 14.00728] 2-5	8 -2 O [15.99903; 15.99977] 2-6	9 -1 F 18.9984032 2-7	10 0 Ne 20.1797 2-8	K-L
11 +1 Na 22.989770 2-8-1	12 +2 Mg 24.3050 2-8-2											13 +3 Al 26.981538 2-8-3	14 +2 +4 -4 Si [28.084; 28.086] 2-8-4	15 +3 +5 -3 P 30.973761 2-8-5	16 +4 +6 -2 S [32.059; 32.076] 2-8-6	17 +1 +5 +7 -1 Cl [35.446; 35.457] 2-8-7	18 0 Ar 39.948 2-8-8	K-L-M
19 +1 K 39.0983 -8-8-1	20 +2 Ca 40.078 -8-8-2	21 +3 Sc 44.955910 -8-9-2	22 +2 +3 +4 Ti 47.867 -8-10-2	23 +2 +3 +4 +5 V 50.9415 -8-11-2	24 +2 +3 +6 Cr 51.9961 -8-13-1	25 +2 +3 +4 +7 Mn 54.938049 -8-13-2	26 +2 +3 Fe 55.845 -8-14-2	27 +2 +3 Co 58.933200 -8-15-2	28 +2 +3 Ni 58.6934 -8-16-2	29 +1 +2 Cu 63.546 -8-18-1	30 +2 Zn 65.38 -8-18-2	31 +3 Ga 69.723 -8-18-3	32 +2 +4 Ge 72.63 -8-18-4	33 +3 +5 -3 As 74.92160 -8-18-5	34 +4 +6 -2 Se 78.96 -8-18-6	35 +1 +5 -1 Br 79.904 -8-18-7	36 0 Kr 83.798 -8-18-8	-L-M-N
37 +1 Rb 85.4678 -18-8-1	38 +2 Sr 87.62 -18-8-2	39 +3 Y 88.90585 -18-9-2	40 +4 Zr 91.224 -18-10-2	41 +3 +5 Nb 92.90638 -18-12-1	42 +6 Mo 95.96 -18-13-1	43 +4 +6 +7 Tc (98) -18-13-2	44 +3 Ru 101.07 -18-15-1	45 +3 Rh 102.90550 -18-16-1	46 +2 +3 Pd 106.42 -18-18-0	47 +1 Ag 107.8682 -18-18-1	48 +2 Cd 112.411 -18-18-2	49 +3 In 114.818 -18-18-3	50 +2 +4 Sn 118.710 -18-18 -4	51 +3 +5 -3 Sb 121.760 -18-18-5	52 +4 +6 -2 Te 127.60 -18-18-6	53 +1 +5 +7 -1 I 126.90447 -18-18-7	54 0 Xe 131.293 -18-18-8	-M-N-O
55 +1 Cs 132.90545 -18-8-1	56 +2 Ba 137.327 -18-8-2	57-71 Lanthanoids	72 +4 Hf 178.49 -32-10-2	73 +5 Ta 180.9479 -32-11-2	74 +6 W 183.84 -32-12-2	75 +4 +6 +7 Re 186.207 -32-13-2	76 +3 +4 Os 190.23 -32-14-2	77 +3 +4 Ir 192.217 -32-15-2	78 +2 +4 Pt 195.078 -32-17-1	79 +1 +3 Au 196.96655 -32-18-1	80 +1 +2 Hg 200.59 -32-18-2	81 +1 +3 Tl [204.382; 204.385] -32-18-3	82 +2 +4 Pb 207.2 -32-18-4	83 +3 +5 Bi 208.98038 -32-18-5	84 +2 +4 Po (209) -32-18-6	85 At (210) -32-18-7	86 0 Rn (222) -32-18-8	-N-O-P
87 +1 Fr (223) -18-8-1	88 +2 Ra (226) -18-8-2	89-103 Actinoids	104 +4 Rf (261) -32-10-2	105 Db (262) -32-11-2	106 Sg (266) -32-12-2	107 Bh (272) -32-13-2	108 Hs (277) -32-14-2	109 Mt (276) -32-15-2	110 Ds (281) -32-16-2	111 Rg (280)	112 Cn (285)	113 Uut (284)	114 Uuq (289)	115 Uup (288)	116 Uuh (293)	117 Uus (294)	118 Uuo (294)	-O-P-Q

	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	
Lanthanoids	+3 La 138.9055 -18-9-2	+3 +4 Ce 140.116 -19-9-2	+3 Pr 140.90765 -21-8-2	+3 Nd 144.24 -22-8-2	+3 Pm (145) -23-8-2	+2 +3 Sm 150.36 -24-8-2	+2 +3 Eu 151.964 -25-8-2	+3 Gd 157 .25 -25-9-2	+3 Tb 158.92534 -27-8-2	+3 Dy 162.500 -28-8-2	+3 Ho 164.93032 -29-8-2	+3 Er 167.259 -30-8-2	+3 Tm 168.93421 -31-8-2	+2 +3 Yb 173.054 -32-8-2	+3 Lu 174.9668 -32-9-2	-N-O-P
Actinoids	89 +3 Ac (227) -18-9-2	90 +4 Th 232.0381 -18-10-2	91 +5 +4 Pa 231.03588 -20-9-2	92 +3 +4 +5 +6 U 238.02891 -21-9-2	93 +3 +4 +5 +6 Np (237) -22-9-2	94 +3 +4 +5 +6 Pu (244) -24-8-2	95 +3 +4 +5 +6 Am (243) -25-8-2	96 +3 Cm (247) -25-9-2	97 +3 +4 Bk (247) -27-8-2	98 +3 Cf (251) -28-8-2	99 +3 Es (252) -29-8-2	100 +3 Fm (257) -30-8-2	101 +2 +3 Md (258) -31-8-2	102 +2 +3 No (259) -32-8-2	103 +3 Lr (262) -32-8-3	-O-P-Q

Key to Chart

Atomic Number → 50 +2 +4 ← Oxidation States
Symbol → Sn
2009 Atomic Weight → 118.710 -18-18-4 ← Electron Configuration

Atomic weight values are from Wieser, M.E., and Coplen, T.B., *Pure Appl. Chem.* 83, 359, 2011. See "Standard Atomic Weights (2009)" in Sec. 1 for an explanation of the IUPAC notation for atomic weight ranges. For radioactive elements that do not occur in nature, the mass number of the most stable isotope currently known is given in parentheses. Isotopes of elements 113 – 118 have been reported, but element names have not been adopted.

Metallic solids | Non-metallic solids | Liquids | Gases