1	2											13 (3)	14 (4)	15 (5)	16 (6)	17 (7) (halogens)	18 (8)
1 H Hydrogen 1.008 1 −1 1s¹																	2 He Helium 4.002 602 0 1s²
3 Li Lithium 6.94 1 [He]2s¹	4 Be Beryllium 9.012 183 2 (−1) [He]2s²											5 B Boron 10.81 3 (2 1 −1 −5) [He]2s² 2p¹	6 C Carbon 12.011 4 3 2 1 −1 −2 −3 −4 [He]2s² 2p²	7 N Nitrogen 14.007 5 3 −3 (4 2 1 −1 −2) [He] 2s² 2p³	8 O Oxygen 15.999 −2 (2 1 −1) [He]2s² 2p⁴	9 F Fluorine 18.998 403 −1 [He]2s² 2p⁵	10 Ne Neon 20.1797 0 [He]2s² 2p⁶
11 Na Sodium 22.989 769 1 (−1) [Ne]3s¹	12 Mg Magnesium 24.305 2 (−1) [Ne]3s²											13 Al Aluminium 26.981 538 3 (2 1 −1 −2) [Ne]3s² 3p¹	14 Si Silicon 28.085 4 −4 (3 2 1 −1 −2 −3) [Ne]3s² 3p²	15 P Phosphorus 30.973 762 5 3 −3 (4 2 1 −1 −2) [Ne]3s² 3p³	16 S Sulfur 32.06 6 4 2 −2 (5 3 1 −1) [Ne]3s² 3p⁴	17 Cl Chlorine 35.45 7 5 3 1 −1 (6 4 2) [Ne]3s² 3p⁵	18 Ar Argon 39.95 0 [Ne]3s² 3p⁶
19 K Potassium 39.0983 1 (−1) [Ar]4s¹	20 Ca Calcium 40.078 2 (−1) [Ar]4s²	21 Sc Scandium 44.955 907 3 (2 1) [Ar]4s² 3d¹	22 Ti Titanium 47.867 4 (3 2 1 −1 −2) [Ar]4s² 3d²	23 V Vanadium 50.9415 5 (4 3 2 1 −1 −3) [Ar]4s² 3d³	24 Cr Chromium 51.9961 6 3 (5 4 2 1 −1 −2 −4) ⚠ [Ar]3d⁵ 4s¹	25 Mn Manganese 54.938 043 7 4 2 (6 5 3 1 −1 −2 −3) [Ar]4s² 3d⁵	26 Fe Iron 55.845 6 3 2 (5 4 1 −1 −2 −4) [Ar]4s² 3d⁶	27 Co Cobalt 58.933 194 3 2 (5 4 1 −1 −3) [Ar]4s² 3d⁷	28 Ni Nickel 58.6934 2 (4 3 1 −1 −2) [Ar]4s² 3d⁸	29 Cu Copper 63.546 2 (4 3 1 −2) ⚠ [Ar]4s¹ 3d¹⁰	30 Zn Zinc 65.38 2 (1 −2) [Ar]4s² 3d¹⁰	31 Ga Gallium 69.723 3 (2 1 −1 −2 −4 −5) [Ar]4s² 3d¹⁰ 4p¹	32 Ge Germanium 72.630 4 2 −4 (3 1 −1 −2 −3) [Ar]4s² 3d¹⁰ 4p²	33 As Arsenic 74.921 595 5 3 −3 (4 2 1 −1 −2) [Ar]4s² 3d¹⁰ 4p³	34 Se Selenium 78.971 6 4 2 −2 (5 3 1 −1) [Ar]4s² 3d¹⁰ 4p⁴	35 Br Bromine 79.904 7 5 3 1 −1 (4) [Ar]4s² 3d¹⁰ 4p⁵	36 Kr Krypton 83.798 0 (2) [Ar]4s² 3d¹⁰ 4p⁶
37 Rb Rubidium 85.4678 1 (−1) [Kr]5s¹	38 Sr Strontium 87.62 2 (−1) [Kr]5s²	39 Y Yttrium 88.905 838 3 (2 1) [Kr]5s² 4d¹	40 Zr Zirconium 91.224 4 (3 2 1 −2) [Kr]5s² 4d²	41 Nb Niobium 92.906 37 5 (4 3 2 1 −1 −3) ⚠ [Kr]5s¹ 4d⁴	42 Mo Molybdenum 95.95 6 4 (5 3 2 1 −1 −2 −4) ⚠ [Kr]5s¹ 4d⁵	43 Tc Technetium [97] 7 4 (6 5 3 2 1 −1 −3) [Kr]5s² 4d⁵	44 Ru Ruthenium 101.07 4 3 2 (8 7 6 5 1 −2 −4) ⚠ [Kr]5s¹ 4d⁷	45 Rh Rhodium 102.905 49 3 (5 4 2 1 −1 −3) ⚠ [Kr]5s¹ 4d⁸	46 Pd Palladium 106.42 4 2 (6 5 3 1) ⚠ [Kr]4d¹⁰	47 Ag Silver 107.8682 1 (4 3 2 −1 −2) ⚠ [Kr]5s¹ 4d¹⁰	48 Cd Cadmium 112.414 2 (1 −2) [Kr]5s² 4d¹⁰	49 In Indium 114.818 3 (2 1 −1 −2 −5) [Kr]5s² 4d¹⁰ 5p¹	50 Sn Tin 118.710 4 2 −4 (3 1 −1 −2 −3) [Kr]5s² 4d¹⁰ 5p²	51 Sb Antimony 121.760 5 3 −3 (4 2 1 −1 −2) [Kr]5s² 4d¹⁰ 5p³	52 Te Tellurium 127.60 6 4 2 −2 (5 3 1 −1) [Kr]5s² 4d¹⁰ 5p⁴	53 I Iodine 126.904 47 7 5 3 1 −1 (6 4) [Kr]5s² 4d¹⁰ 5p⁵	54 Xe Xenon 131.293 0 (8 6 4 2) [Kr]5s² 4d¹⁰ 5p⁶
55 Cs Caesium 132.905 452 1 (−1) [Xe]6s¹	56 Ba Barium 137.327 2 (−1) [Xe]6s²	72 Hf Hafnium 178.486 4 (3 2 1 −2) [Xe]6s² 4f¹⁴ 5d²	73 Ta Tantalum 180.947 88 5 (4 3 2 1 −1 −3) [Xe]6s² 4f¹⁴ 5d³	74 W Tungsten 183.84 6 4 (5 3 2 1 −1 −2 −4) [Xe]6s² 4f¹⁴ 5d⁴	75 Re Rhenium 186.207 4 (7 6 5 3 2 1 −1 −3) [Xe]6s² 4f¹⁴ 5d⁵	76 Os Osmium 190.23 4 (8 7 6 5 3 2 1 −1 −2 −4) [Xe]6s² 4f¹⁴ 5d⁶	77 Ir Iridium 192.217 4 3 (9 8 7 6 5 2 1 −1 −3) [Xe]6s² 4f¹⁴ 5d⁷	78 Pt Platinum 195.084 4 2 (6 5 3 1 −1 −2 −3) ⚠ [Xe]6s¹ 4f¹⁴ 5d⁹	79 Au Gold 196.966 570 3 (5 2 1 −1 −2 −3) ⚠ [Xe]6s¹ 4f¹⁴ 5d¹⁰	80 Hg Mercury 200.592 2 1 (−2) [Xe]6s² 4f¹⁴ 5d¹⁰	81 Tl Thallium 204.38 3 1 (2 −1 −2 −5) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p¹	82 Pb Lead 207.2 4 2 (3 1 −1 −2 −4) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p²	83 Bi Bismuth 208.980 40 3 (4 3 2 1 −1 −2 −3) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p³	84 Po Polonium [209] 4 2 −2 (6 5) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p⁴	85 At Astatine [210] 1 −1 (7 5 3) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p⁵	86 Rn Radon [222] 0 (6 2) [Xe]6s² 4f¹⁴ 5d¹⁰ 6p⁶
87 Fr Francium [223] 1 [Rn]7s¹	88 Ra Radium [226] 2 [Rn]7s²	104 Rf Rutherfordium [267] 4 [Rn]7s² 5f¹⁴ 6d²	105 Db Dubnium [270] 5 [Rn]7s² 5f¹⁴ 6d³	106 Sg Seaborgium [269] 6 [Rn]7s² 5f¹⁴ 6d⁴	107 Bh Bohrium [270] 7 [Rn]7s² 5f¹⁴ 6d⁵	108 Hs Hassium [270] 8 [Rn]7s² 5f¹⁴ 6d⁶	109 Mt Meitnerium [278]	110 Ds Darmstadtium [281]	111 Rg Roentgenium [281]	112 Cn Copernicium [285] 2	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [293]	118 Og Oganesson [294]
		57 La Lanthanum 138.905 47 3 (2 1) ⚠ [Xe]6s² 5d¹	58 Ce Cerium 140.116 4 3 (2) ⚠ [Xe]6s² 4f¹ 5d¹	59 Pr Praseodymium 140.907 66 3 (4 2) [Xe]6s² 4f³	60 Nd Neodymium 144.242 3 (4 2) [Xe]6s² 4f⁴	61 Pm Promethium [145] 3 (2) [Xe]6s² 4f⁵	62 Sm Samarium 150.36 3 (2) [Xe]6s² 4f⁶	63 Eu Europium 151.964 3 2 [Xe]6s² 4f⁷	64 Gd Gadolinium 157.25 3 (2 1) ⚠ [Xe]6s² 4f⁷ 5d¹	65 Tb Terbium 158.925 354 3 (4 2 1) [Xe]6s² 4f⁹	66 Dy Dysprosium 162.500 3 (4 2) [Xe]6s² 4f¹⁰	67 Ho Holmium 164.930 329 3 (2) [Xe]6s² 4f¹¹	68 Er Erbium 167.259 3 (2) [Xe]6s² 4f¹²	69 Tm Thulium 168.934 219 3 (2) [Xe]6s² 4f¹³	70 Yb Ytterbium 173.05 3 (2) [Xe]6s² 4f¹⁴	71 Lu Lutetium 174.9668 3 (2) [Xe]6s² 4f¹⁴ 5d¹
		89 Ac Actinium [227] 3 (2) ⚠ [Rn]7s² 6d¹	90 Th Thorium 232.0377 4 (3 2 1) ⚠ [Rn]7s² 6d²	91 Pa Protactinium 231.035 88 5 (4 3 2) ⚠ [Rn]7s² 5f² 6d¹	92 U Uranium 238.028 91 6 4 (5 3 2 1) ⚠ [Rn]7s² 5f³ 6d¹	93 Np Neptunium [237] 5 (7 6 4 3 2) ⚠ [Rn]7s² 5f⁴ 6d¹	94 Pu Plutonium [244] 4 (8 7 6 5 3 2 1) [Rn]7s² 5f⁶	95 Am Americium [243] 3 (8 7 6 5 4 2) [Rn]7s² 5f⁷	96 Cm Curium [247] 3 (6 4 2) ⚠ [Rn]7s² 5f⁷ 6d¹	97 Bk Berkelium [247] 3 (4 2) [Rn]7s² 5f⁹	98 Cf Californium [251] 3 (4 2) [Rn]7s² 5f¹⁰	99 Es Einsteinium [252] 3 (4 2) [Rn]7s² 5f¹¹	100 Fm Fermium [257] 3 (2) [Rn]7s² 5f¹²	101 Md Mendelevium [258] 3 (2) [Rn]7s² 5f¹³	102 No Nobelium [259] 2 (3) [Rn]7s² 5f¹⁴	103 Lr Lawrencium [262] 3 ⚠ [Rn]7s² 5f¹⁴ 7p¹

1 H Hydrogen 1.008 1 −1 1s¹

Atomic number

Symbol

Name

Atomic weight (amu, g/mol)

Oxidation states (with rare states in brackets)

Electron configuration (anomalous configurations denoted with ⚠)

Alkali metals | Alkaline earth metals | Lanthanides | Actinides | Transition metals | Post-transition metals | Metalloids | Reactive nonmetals | Noble gases | Chemical properties unknown

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Table compiled by FLASC, 2022. Atomic weights sourced from IUPAC 2016. Electron configurations sourced from PubChem n.d. Oxidation states sourced from CompoundChem 2015. All elements have an additional implied oxidation state of 0. IUPAC classifies Zinc, Cadmium, Mercury, and Copernicium as post-transition metals; other sources may disagree and classify them as transition metals. The list of metalloids may vary – Selenium, Polonium, Astatine, Carbon, and Aluminium may be included or excluded depending on the source. Some electron configurations may vary in other sources: research literature (as opposed to chemistry textbooks) uses [Ar]4s¹ 3d⁹ for Nickel, and older sources use [Rn]7s² 5f¹⁴ 6d¹ for Lawrencium.

Sources:

Initial data, and electron configurations: https://pubchem.ncbi.nlm.nih.gov/rest/pug/periodictable/XML/?response_type=display (archive: https://web.archive.org/web/20220523153627/https://pubchem.ncbi.nlm.nih.gov/rest/pug/periodictable/XML/?response_type=display)

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More detailed oxidation states: https://www.compoundchem.com/2015/11/17/oxidation-states/ (archive: https://web.archive.org/web/20220523153614/https://www.compoundchem.com/2015/11/17/oxidation-states/) i.e. https://i0.wp.com/www.compoundchem.com/wp-content/uploads/2015/11/The-Periodic-Table-Of-Oxidation-States-2016.png?ssl=1 (archive: https://web.archive.org/web/20220523153619/https://i0.wp.com/www.compoundchem.com/wp-content/uploads/2015/11/The-Periodic-Table-Of-Oxidation-States-2016.png?ssl=1)

Electron configuration exceptions: https://www.quora.com/What-are-exceptional-cases-in-electron-configuration and https://en.wikipedia.org/wiki/Electron_configuration (archive: https://en.wikipedia.org/w/index.php?title=Electron_configuration&oldid=1084879392).

Nickel electron configuration: https://en.wikipedia.org/wiki/Nickel#Electron_configuration_dispute (archive: https://en.wikipedia.org/w/index.php?title=Nickel&oldid=1088788937)

Lawrencium electron configuration: https://en.wikipedia.org/wiki/Lawrencium (archive: https://en.wikipedia.org/w/index.php?title=Lawrencium&oldid=1083399220)

There were also several manual changes from these sources (mostly for the synthetic elements at the end) based on quick google searches, Wikipedia pages for individual elements, etc.