

The Periodic Table of the Elements

by Robert Campion version 1.3

group 1																	18		
period 1	1																	2	
	1.00794 520.2 1s ¹ H Hydrogen																	4.002602 2372.3 1s ² He Helium	
	6.941 520.2 1s ² 2s ¹ Li Lithium	9.012182 899.5 1s ² 2s ² Be Beryllium																	20.1797 2080.7 1s ² 2s ² 2p ⁶ Ne Neon
2	22.98976 465.8 1s ² 2s ² 2p ¹ Na Sodium	24.3050 737.7 1s ² 2s ² 2p ² Mg Magnesium																	39.948 1520.6 1s ² 2s ² 2p ⁶ Ar Argon
3	39.0983 418.8 [Ar] 4s ¹ K Potassium	40.078 589.8 [Ar] 4s ² Ca Calcium	44.95591 633.1 [Ar] 3d ¹ 4s ² Sc Scandium	47.867 688.8 [Ar] 3d ² 4s ² Ti Titanium	50.9415 688.8 [Ar] 3d ³ 4s ² V Vanadium	51.9962 688.8 [Ar] 3d ⁴ 4s ¹ Cr Chromium	54.93804 717.3 [Ar] 3d ⁵ 4s ¹ Mn Manganese	55.845 762.5 [Ar] 3d ⁶ 4s ² Fe Iron	58.93319 789.4 [Ar] 3d ⁷ 4s ² Co Cobalt	58.6934 737.1 [Ar] 3d ⁸ 4s ² Ni Nickel	63.546 745.5 [Ar] 3d ⁹ 4s ¹ Cu Copper	65.38 906.4 [Ar] 3d ¹⁰ 4s ² Zn Zinc	69.723 578.8 [Ne] 3s ² 3p ¹ Al Aluminum	72.64 766.5 [Ne] 3s ² 3p ² Si Silicon	74.92160 947.0 [Ne] 3s ² 3p ³ P Phosphorus	78.96 941.0 [Ne] 3s ² 3p ⁴ S Sulfur	79.904 1139.9 [Ne] 3s ² 3p ⁵ Cl Chlorine	83.798 1350.8 [Ar] 3s ² 3p ⁶ Kr Krypton	
4	85.4678 403.0 [Kr] 5s ¹ Rb Rubidium	87.62 549.5 [Kr] 5s ² Sr Strontium	88.90585 600.0 [Kr] 4d ¹ 5s ² Y Yttrium	91.224 640.1 [Kr] 4d ² 5s ² Zr Zirconium	92.90638 682.1 [Kr] 4d ³ 5s ² Nb Niobium	95.96 684.3 [Kr] 4d ⁴ 5s ¹ Mo Molybdenum	(98) 702.0 [Kr] 4d ⁵ 5s ¹ Tc Technetium	101.07 710.2 [Kr] 4d ⁶ 5s ² Ru Ruthenium	102.9055 719.7 [Kr] 4d ⁷ 5s ¹ Rh Rhodium	106.42 804.4 [Kr] 4d ⁸ 5s ² Pd Palladium	107.8682 731.0 [Kr] 4d ⁹ 5s ¹ Ag Silver	112.441 867.8 [Kr] 4d ¹⁰ 5s ² Cd Cadmium	114.818 588.3 [Kr] 4d ¹⁰ 5s ² 5p ¹ In Indium	118.710 706.6 [Kr] 4d ¹⁰ 5s ² 5p ² Sn Tin	121.760 834.0 [Kr] 4d ¹⁰ 5s ² 5p ³ Sb Antimony	127.60 889.3 [Kr] 4d ¹⁰ 5s ² 5p ⁴ Te Tellurium	126.9044 1008.4 [Kr] 4d ¹⁰ 5s ² 5p ⁵ I Iodine	131.293 1170.4 [Kr] 4d ¹⁰ 5s ² 5p ⁶ Xe Xenon	
5	132.9054 375.7 [Xe] 6s ¹ Cs Caesium	137.327 502.9 [Xe] 6s ² Ba Barium	174.9668 523.5 [Xe] 4f ¹⁴ 5d ¹ 6s ² Lu Lutetium	178.49 658.5 [Xe] 4f ¹⁴ 5d ² 6s ² Hf Hafnium	180.9478 761.0 [Xe] 4f ¹⁴ 5d ³ 6s ² Ta Tantalum	183.84 770.0 [Xe] 4f ¹⁴ 5d ⁴ 6s ² W Tungsten	186.207 760.0 [Xe] 4f ¹⁴ 5d ⁵ 6s ¹ Re Rhenium	190.23 840.0 [Xe] 4f ¹⁴ 5d ⁶ 6s ² Os Osmium	192.22 880.0 [Xe] 4f ¹⁴ 5d ⁷ 6s ² Ir Iridium	195.084 870.0 [Xe] 4f ¹⁴ 5d ⁸ 6s ² Pt Platinum	196.9665 890.1 [Xe] 4f ¹⁴ 5d ⁹ 6s ¹ Au Gold	200.59 1007.1 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² Hg Mercury	204.3833 589.4 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹ Tl Thallium	207.2 715.6 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ² Pb Lead	208.9804 703.0 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ³ Bi Bismuth	(210) 812.1 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴ Po Polonium	(210) 890.0 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ At Astatine	(220) 1037.0 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶ Rn Radon	
6	(223) 980.0 [Rn] 7s ¹ Fr Francium	(226) 500.3 [Rn] 7s ² Ra Radium	(262) 470.0 [Rn] 5f ¹⁴ 6d ¹ 7s ² Lr Lawrencium	(261) 580.0 [Rn] 5f ¹⁴ 6d ² 7s ² Rf Rutherfordium	(262) 470.0 [Rn] 5f ¹⁴ 6d ³ 7s ² Db Dubnium	(266) 580.0 [Rn] 5f ¹⁴ 6d ⁴ 7s ² Sg Seaborgium	(264) 580.0 [Rn] 5f ¹⁴ 6d ⁵ 7s ² Bh Bohrium	(277) 580.0 [Rn] 5f ¹⁴ 6d ⁶ 7s ² Hs Hassium	(268) 580.0 [Rn] 5f ¹⁴ 6d ⁷ 7s ² Mt Meitnerium	(271) 580.0 [Rn] 5f ¹⁴ 6d ⁸ 7s ² Ds Darmstadtium	(272) 580.0 [Rn] 5f ¹⁴ 6d ⁹ 7s ² Rg Roentgenium	(285) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² Cn Copernicium	(284) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ¹ Nh Nihonium	(289) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ² Fl Flerovium	(288) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ³ Mc Moscovium	(292) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁴ Lv Livermorium	117 1008.4 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ Ts Tennessine	(294) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁶ Og Oganesson	
7	(223) 980.0 [Rn] 7s ¹ Fr Francium	(226) 500.3 [Rn] 7s ² Ra Radium	(262) 470.0 [Rn] 5f ¹⁴ 6d ¹ 7s ² Lr Lawrencium	(261) 580.0 [Rn] 5f ¹⁴ 6d ² 7s ² Rf Rutherfordium	(262) 470.0 [Rn] 5f ¹⁴ 6d ³ 7s ² Db Dubnium	(266) 580.0 [Rn] 5f ¹⁴ 6d ⁴ 7s ² Sg Seaborgium	(264) 580.0 [Rn] 5f ¹⁴ 6d ⁵ 7s ² Bh Bohrium	(277) 580.0 [Rn] 5f ¹⁴ 6d ⁶ 7s ² Hs Hassium	(268) 580.0 [Rn] 5f ¹⁴ 6d ⁷ 7s ² Mt Meitnerium	(271) 580.0 [Rn] 5f ¹⁴ 6d ⁸ 7s ² Ds Darmstadtium	(272) 580.0 [Rn] 5f ¹⁴ 6d ⁹ 7s ² Rg Roentgenium	(285) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² Cn Copernicium	(284) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ¹ Nh Nihonium	(289) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ² Fl Flerovium	(288) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ³ Mc Moscovium	(292) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁴ Lv Livermorium	117 1008.4 [Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ Ts Tennessine	(294) 580.0 [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁶ Og Oganesson	

atomic mass
or most stable mass number

1st ionization energy
in kJ/mol

chemical symbol

name

electron configuration

atomic number

electronegativity

oxidation states
most common are bold

Iron
[Ar] 3d⁶ 4s²

alkali metals

alkaline metals

other metals

transition metals

lanthanoids

actinoids

metalloids

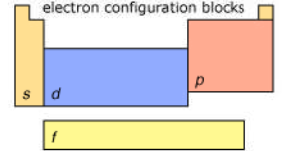
nonmetals

halogens

noble gases

unknown elements

radioactive elements have masses in parentheses



- notes
- as of yet, elements 113,115,117 and 118 have no official name designated by the IUPAC.
 - 1 kJ/mol ≈ 96.485 eV.
 - all elements are implied to have an oxidation state of zero.

138.9054 538.1 [Xe] 5d ¹ 6s ² La Lanthanum	140.116 534.4 [Xe] 4f ¹ 6s ² Ce Cerium	140.9076 527.0 [Xe] 4f ² 6s ² Pr Praseodymium	144.242 533.1 [Xe] 4f ³ 6s ² Nd Neodymium	(145) 540.0 [Xe] 4f ⁴ 6s ² Pm Promethium	150.36 544.5 [Xe] 4f ⁵ 6s ² Sm Samarium	151.964 547.1 [Xe] 4f ⁶ 6s ² Eu Europium	157.25 589.4 [Xe] 4f ⁷ 6s ² Gd Gadolinium	158.9253 585.8 [Xe] 4f ⁷ 6s ² Tb Terbium	162.500 573.0 [Xe] 4f ⁹ 6s ² Dy Dysprosium	164.9303 581.0 [Xe] 4f ¹⁰ 6s ² Ho Holmium	167.259 589.3 [Xe] 4f ¹¹ 6s ² Er Erbium	168.9342 596.7 [Xe] 4f ¹² 6s ² Tm Thulium	173.054 603.4 [Xe] 4f ¹³ 6s ² Yb Ytterbium
(227) 489.0 [Rn] 6d ¹ 7s ² Ac Actinium	232.0380 587.0 [Rn] 6d ² 7s ² Th Thorium	231.0358 588.0 [Rn] 5f ¹ 6d ¹ 7s ² Pa Protactinium	238.0289 587.6 [Rn] 5f ³ 6d ¹ 7s ² U Uranium	(237) 604.5 [Rn] 5f ⁴ 6s ² Np Neptunium	(244) 584.7 [Rn] 5f ⁶ 7s ² Pu Plutonium	(243) 578.0 [Rn] 5f ⁷ 7s ² Am Americium	(247) 581.0 [Rn] 5f ⁷ 6d ¹ 7s ² Cm Curium	(247) 601.0 [Rn] 5f ⁹ 7s ² Bk Berkelium	(251) 608.0 [Rn] 5f ¹⁰ 7s ² Cf Californium	(252) 619.0 [Rn] 5f ¹¹ 7s ² Es Einsteinium	(257) 627.0 [Rn] 5f ¹² 7s ² Fm Fermium	(258) 633.0 [Rn] 5f ¹³ 7s ² Md Mendelevium	(259) 642.0 [Rn] 5f ¹⁴ 7s ² No Nobelium