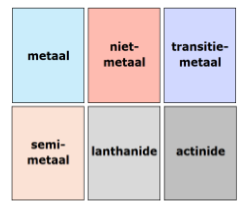
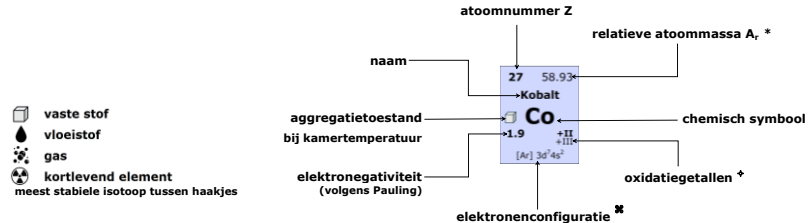


	GROEP 1 IA ALKALI- METALEN	GROEP 2 IIA AARDALKALI- METALEN	GROEP 3 IIIB	GROEP 4 IVB	GROEP 5 VB	GROEP 6 VIB	GROEP 7 VIIB	GROEP 8 VIII TRIADEN	GROEP 9 VIII TRIADEN	GROEP 10 VIII TRIADEN	GROEP 11 IB	GROEP 12 IIB	GROEP 13 IIIA AARD- METALEN	GROEP 14 IVA KOOLSTOF- GROEP	GROEP 15 VA STIKSTOF- GROEP	GROEP 16 VIA ZUURSTOF- GROEP	GROEP 17 VIIA HALOGENEN	GROEP 18 0 EDEL- GASSEN
PERIODE 1	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>1 1.008 Waterstof H 2.2 +I 1s¹</p> </div> <div style="width: 45%;"> <p>2 4.003 Helium He -- 0 1s²</p> </div> </div>																	
PERIODE 2	<p>3 6.94 Lithium Li 1.0 +I 1s²2s¹</p>	<p>4 9.012 Beryllium Be 1.6 +II 1s²2s²</p>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>5 10.81 Boor B 2.0 +III 1s²2s²2p¹</p> </div> <div style="width: 45%;"> <p>6 12.01 Koolstof C 2.6 +I +II +III +IV 1s²2s²2p²</p> </div> </div>															
PERIODE 3	<p>11 22.99 Natrium Na 0.9 +I [Ne] 3s¹</p>	<p>12 24.31 Magnesium Mg 1.2 +II [Ne] 3s²</p>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>13 26.98 Aluminium Al 1.5 +III [Ne] 3s²3p¹</p> </div> <div style="width: 45%;"> <p>14 28.09 Silicium Si 1.8 +II +III +IV [Ne] 3s²3p²</p> </div> </div>															
PERIODE 4	<p>19 39.10 Kalium K 0.8 +I [Ar] 4s¹</p>	<p>20 40.08 Calcium Ca 1.0 +II [Ar] 4s²</p>	<p>21 44.96 Scandium Sc 1.4 +III [Ar] 3d¹4s²</p>	<p>22 47.87 Titaan Ti 1.5 +II +III +IV [Ar] 3d²4s²</p>	<p>23 50.94 Vanadium V 1.6 +II +III +IV +V [Ar] 3d³4s²</p>	<p>24 52.00 Chroom Cr 1.7 +II +III +IV +V +VI [Ar] 3d⁵4s¹</p>	<p>25 54.94 Mangaan Mn 1.6 +II +III +IV +V +VI +VII [Ar] 3d⁵4s²</p>	<p>26 55.85 IJzer Fe 1.8 +II +III [Ar] 3d⁶4s²</p>	<p>27 58.93 Kobalt Co 1.9 +II +III [Ar] 3d⁷4s²</p>	<p>28 58.69 Nikkel Ni 1.9 +II +III [Ar] 3d⁸4s²</p>	<p>29 63.55 Koper Cu 1.9 +I +II [Ar] 3d¹⁰4s¹</p>	<p>30 65.38 Zink Zn 1.7 +II [Ar] 3d¹⁰4s²</p>	<p>31 69.72 Gallium Ga 1.6 +III [Ar] 3d¹⁰4s²4p¹</p>	<p>32 72.63 Germanium Ge 1.8 +II +III +IV [Ar] 3d¹⁰4s²4p²</p>	<p>33 74.92 Arseen As 2.0 +III +IV +V [Ar] 3d¹⁰4s²4p³</p>	<p>34 78.97 Seleen Se 2.4 +IV +V +VI [Ar] 3d¹⁰4s²4p⁴</p>	<p>35 79.90 Broom Br 2.8 +I +V [Ar] 3d¹⁰4s²4p⁵</p>	<p>36 83.80 Krypton Kr -- 0 [Ar] 3d¹⁰4s²4p⁶</p>
PERIODE 5	<p>37 85.47 Rubidium Rb 0.8 +I [Kr] 5s¹</p>	<p>38 87.62 Strontium Sr 1.0 +II [Kr] 5s²</p>	<p>39 88.91 Yttrium Y 1.2 +III [Kr] 4d¹5s²</p>	<p>40 91.22 Zirkonium Zr 1.3 +IV [Kr] 4d²5s²</p>	<p>41 92.91 Niobium Nb 1.6 +V +III [Kr] 4d⁴5s¹</p>	<p>42 95.95 Molybdeen Mo 2.2 +III +IV +V +VI [Kr] 4d⁵5s¹</p>	<p>43 (97) Technetium Tc 1.9 +IV +V +VI +VII [Kr] 4d⁵5s²</p>	<p>44 101.07 Ruthenium Ru 2.2 +II +III +IV +V +VI +VII [Kr] 4d⁷5s¹</p>	<p>45 102.91 Rhodium Rh 2.3 +III +IV [Kr] 4d⁸5s¹</p>	<p>46 106.42 Palladium Pd 2.2 +II +III +IV [Kr] 4d¹⁰</p>	<p>47 107.87 Zilver Ag 1.9 +I [Kr] 4d¹⁰5s¹</p>	<p>48 112.41 Cadmium Cd 1.7 +II [Kr] 4d¹⁰5s²</p>	<p>49 114.82 Indium In 1.7 +III +IV [Kr] 4d¹⁰5s²5p¹</p>	<p>50 118.71 Tin Sn 1.8 +II +III +IV [Kr] 4d¹⁰5s²5p²</p>	<p>51 121.76 Antimoon Sb 1.9 +III +IV +V [Kr] 4d¹⁰5s²5p³</p>	<p>52 127.60 Telluur Te 2.1 +IV +V +VI [Kr] 4d¹⁰5s²5p⁴</p>	<p>53 126.90 Jood I 2.5 +I +V +VII [Kr] 4d¹⁰5s²5p⁵</p>	<p>54 131.29 Xenon Xe -- 0 [Kr] 4d¹⁰5s²5p⁶</p>
PERIODE 6	<p>55 132.91 Cesium Cs 0.7 +I [Xe] 6s¹</p>	<p>56 137.33 Barium Ba 0.9 +II [Xe] 6s²</p>	<p>57 138.91 Lanthaan La 1.1 +III [Xe] 5d¹6s²</p>	<p>72 178.49 Hafnium Hf 1.3 +IV [Xe] 4f¹⁴5d²6s²</p>	<p>73 180.95 Tantaal Ta 1.5 +V [Xe] 4f¹⁴5d³6s²</p>	<p>74 183.84 Wolfraam W 1.7 +III +IV +V +VI [Xe] 4f¹⁴5d⁴6s²</p>	<p>75 186.21 Rhenium Re 1.9 +II +III +IV +V +VI [Xe] 4f¹⁴5d⁵6s²</p>	<p>76 190.23 Osmium Os 2.2 +II +III +IV +V +VI +VII [Xe] 4f¹⁴5d⁶6s²</p>	<p>77 192.22 Iridium Ir 2.2 +III +IV +V +VI [Xe] 4f¹⁴5d⁷6s²</p>	<p>78 195.08 Platina Pt 2.2 +II +III +IV [Xe] 4f¹⁴5d⁹6s¹</p>	<p>79 196.97 Goud Au 2.4 +III +IV [Xe] 4f¹⁴5d¹⁰6s¹</p>	<p>80 200.59 Kwik Hg 2.2 +I +II [Xe] 4f¹⁴5d¹⁰6s²</p>	<p>81 204.38 Thallium Tl 1.8 +III +IV [Xe] 4f¹⁴5d¹⁰6s²6p¹</p>	<p>82 207.2 Lood Pb 1.8 +II +III +IV [Xe] 4f¹⁴5d¹⁰6s²6p²</p>	<p>83 208.98 Bismut Bi 1.9 +III +IV +V [Xe] 4f¹⁴5d¹⁰6s²6p³</p>	<p>84 (209) Polonium Po [Xe] 4f¹⁴5d¹⁰6s²6p⁴</p>	<p>85 (210) Astaat At [Xe] 4f¹⁴5d¹⁰6s²6p⁵</p>	<p>86 (222) Radon Rn -- 0 [Xe] 4f¹⁴5d¹⁰6s²6p⁶</p>
PERIODE 7	<p>87 (223) Francium Fr 0.7 +I [Rn] 7s¹</p>	<p>88 (226) Radium Ra 0.9 +II [Rn] 7s²</p>	<p>89 (227) Actinium Ac 1.1 +III [Rn] 6d¹7s²</p>	<p>104 (267) Rutherfordium Rf [Rn] 5f¹⁴6d²7s² *</p>	<p>105 (268) Dubnium Db</p>	<p>106 (269) Seaborgium Sg</p>	<p>107 (270) Bohrium Bh</p>	<p>108 (269) Hassium Hs</p>	<p>109 (277) Meitnerium Mt</p>	<p>110 (281) Darmstadtium Ds</p>	<p>111 (282) Roentgenium Rg</p>	<p>112 (285) Copernicium Cn</p>	<p>113 (286) Nihonium Nh</p>	<p>114 (290) Flerovium Fl</p>	<p>115 (290) Moscovium Mc</p>	<p>116 (293) Livermorium Lv</p>	<p>117 (294) Tennessine Ts</p>	<p>118 (294) Oganesson Og -- 0</p>



* Atoommassa's volgens de International Union of Pure and Applied Chemistry (2022)
 * Oxidatiegetallen: de meest voorkomende valenties worden in vetdruk weergegeven
 * Elektronenconfiguraties volgens CRC Handbook of Chemistry and Physics (2022)
 * wijst op een onzekere elektronenconfiguratie

<p>58 140.12 Cerium Ce 1.1 +III +IV [Xe] 4f¹5d¹6s²</p>	<p>59 140.91 Praseodymium Pr 1.1 +III [Xe] 4f³6s²</p>	<p>60 144.24 Neodymium Nd 1.1 +III [Xe] 4f⁴6s²</p>	<p>61 (145) Promethium Pm [Xe] 4f⁶6s²</p>	<p>62 150.36 Samarium Sm 1.2 +II +III [Xe] 4f⁶6s²</p>	<p>63 151.96 Europium Eu 1.2 +II +III [Xe] 4f⁷6s²</p>	<p>64 157.25 Gadolinium Gd 1.2 +III [Xe] 4f⁷5d¹6s²</p>	<p>65 158.93 Terbium Tb 1.2 +III [Xe] 4f⁹6s²</p>	<p>66 162.50 Dysprosium Dy 1.2 +III [Xe] 4f¹⁰6s²</p>	<p>67 164.93 Holmium Ho 1.2 +III [Xe] 4f¹¹6s²</p>	<p>68 167.26 Erbium Er 1.2 +III [Xe] 4f¹²6s²</p>	<p>69 168.93 Thulium Tm 1.3 +III [Xe] 4f¹³6s²</p>	<p>70 173.05 Ytterbium Yb 1.1 +II +III [Xe] 4f¹⁴6s²</p>	<p>71 174.97 Lutetium Lu 1.3 +III [Xe] 4f¹⁴5d¹6s²</p>
<p>90 232.04 Thorium Th [Rn] 6d²7s²</p>	<p>91 231.04 Protactinium Pa [Rn] 5f²6d¹7s²</p>	<p>92 238.03 Uraan U [Rn] 5f³6d¹7s²</p>	<p>93 (237) Neptunium Np [Rn] 5f⁴6d¹7s²</p>	<p>94 (244) Plutonium Pu [Rn] 5f⁶7s²</p>	<p>95 (243) Americium Am [Rn] 5f⁷7s²</p>	<p>96 (247) Curium Cm [Rn] 5f⁸6d¹7s²</p>	<p>97 (247) Berkelium Bk [Rn] 5f⁹7s²</p>	<p>98 (251) Californium Cf [Rn] 5f¹⁰7s²</p>	<p>99 (252) Einsteinium Es [Rn] 5f¹¹7s²</p>	<p>100 (257) Fermium Fm [Rn] 5f¹²7s²</p>	<p>101 (258) Mendelevium Md [Rn] 5f¹³7s²</p>	<p>102 (259) Nobelium No [Rn] 5f¹⁴7s²</p>	<p>103 (262) Lawrencium Lr [Rn] 5f¹⁴7s²7p¹ *</p>