

# The Periodic Table of the Elements (with Ionization Energies)

<div style="display: flex; justify-content: space-between;"> <span>1</span> <span>18</span> </div>																							
Hydrogen <b>1</b> <b>H</b> 1.01 1312																	Helium <b>2</b> <b>He</b> 4.00 2372						
		<div style="display: flex; justify-content: space-around;"> <span>13</span> <span>14</span> <span>15</span> <span>16</span> <span>17</span> </div>																					
Lithium <b>3</b> <b>Li</b> 6.94 520	Beryllium <b>4</b> <b>Be</b> 9.01 900																	Boron <b>5</b> <b>B</b> 10.81 801	Carbon <b>6</b> <b>C</b> 12.01 1087	Nitrogen <b>7</b> <b>N</b> 14.01 1402	Oxygen <b>8</b> <b>O</b> 16.00 1314	Fluorine <b>9</b> <b>F</b> 19.00 1681	Neon <b>10</b> <b>Ne</b> 20.18 2081
Sodium <b>11</b> <b>Na</b> 22.99 496	Magnesium <b>12</b> <b>Mg</b> 24.31 738																	Aluminum <b>13</b> <b>Al</b> 26.98 578	Silicon <b>14</b> <b>Si</b> 28.09 787	Phosphorus <b>15</b> <b>P</b> 30.97 1012	Sulfur <b>16</b> <b>S</b> 32.07 1000	Chlorine <b>17</b> <b>Cl</b> 35.45 1251	Argon <b>18</b> <b>Ar</b> 39.95 1521
Potassium <b>19</b> <b>K</b> 39.10 419	Calcium <b>20</b> <b>Ca</b> 40.08 590	Scandium <b>21</b> <b>Sc</b> 44.96 633	Titanium <b>22</b> <b>Ti</b> 47.88 659	Vanadium <b>23</b> <b>V</b> 50.94 651	Chromium <b>24</b> <b>Cr</b> 52.00 653	Manganese <b>25</b> <b>Mn</b> 54.94 717	Iron <b>26</b> <b>Fe</b> 55.85 763	Cobalt <b>27</b> <b>Co</b> 58.93 760	Nickel <b>28</b> <b>Ni</b> 58.69 737	Copper <b>29</b> <b>Cu</b> 63.55 746	Zinc <b>30</b> <b>Zn</b> 65.39 906	Gallium <b>31</b> <b>Ga</b> 69.72 579	Germanium <b>32</b> <b>Ge</b> 72.61 762	Arsenic <b>33</b> <b>As</b> 74.92 947	Selenium <b>34</b> <b>Se</b> 78.96 941	Bromine <b>35</b> <b>Br</b> 79.90 1140	Krypton <b>36</b> <b>Kr</b> 83.80 1351						
Rubidium <b>37</b> <b>Rb</b> 85.47 403	Strontium <b>38</b> <b>Sr</b> 87.62 550	Yttrium <b>39</b> <b>Y</b> 88.91 600	Zirconium <b>40</b> <b>Zr</b> 91.22 640	Niobium <b>41</b> <b>Nb</b> 92.91 652	Molybdenum <b>42</b> <b>Mo</b> 95.94 684	Technetium <b>43</b> <b>Tc</b> (98) 702	Ruthenium <b>44</b> <b>Ru</b> 101.07 710	Rhodium <b>45</b> <b>Rh</b> 102.91 720	Palladium <b>46</b> <b>Pd</b> 106.42 804	Silver <b>47</b> <b>Ag</b> 107.87 731	Cadmium <b>48</b> <b>Cd</b> 112.41 868	Indium <b>49</b> <b>In</b> 114.82 558	Tin <b>50</b> <b>Sn</b> 118.71 709	Antimony <b>51</b> <b>Sb</b> 121.76 834	Tellurium <b>52</b> <b>Te</b> 127.60 869	Iodine <b>53</b> <b>I</b> 126.90 1008	Xenon <b>54</b> <b>Xe</b> 131.29 1170						
Caesium <b>55</b> <b>Cs</b> 132.91 376	Barium <b>56</b> <b>Ba</b> 137.33 503	Lutetium <b>71</b> <b>Lu</b> 174.97 524	Hafnium <b>72</b> <b>Hf</b> 178.49 659	Tantalum <b>73</b> <b>Ta</b> 180.95 761	Tungsten <b>74</b> <b>W</b> 183.84 770	Rhenium <b>75</b> <b>Re</b> 186.21 760	Osmium <b>76</b> <b>Os</b> 190.23 840	Iridium <b>77</b> <b>Ir</b> 192.22 880	Platinum <b>78</b> <b>Pt</b> 195.08 870	Gold <b>79</b> <b>Au</b> 196.97 890.1	Mercury <b>80</b> <b>Hg</b> 200.59 1007	Thallium <b>81</b> <b>Tl</b> 204.38 589	Lead <b>82</b> <b>Pb</b> 207.20 716	Bismuth <b>83</b> <b>Bi</b> 208.98 703	Polonium <b>84</b> <b>Po</b> (209) 812	Astatine <b>85</b> <b>At</b> (210) 890	Radon <b>86</b> <b>Rn</b> (222) 1037						
Francium <b>87</b> <b>Fr</b> (223) 380	Radium <b>88</b> <b>Ra</b> (226) 509	Lawrencium <b>103</b> <b>Lr</b> (262) 470	Rutherfordium <b>104</b> <b>Rf</b> (267) 580	Dubnium <b>105</b> <b>Db</b> (268) ---	Seaborgium <b>106</b> <b>Sg</b> (271) ---	Bohrium <b>107</b> <b>Bh</b> (272) ---	Hassium <b>108</b> <b>Hs</b> (270) ---	Meitnerium <b>109</b> <b>Mt</b> (276) ---	Darmstadtium <b>110</b> <b>Ds</b> (281) ---	Roentgenium <b>111</b> <b>Rg</b> (280) ---	Copernicium <b>112</b> <b>Cn</b> (285) ---	Ununtrium <b>113</b> <b>Uut</b> (284) ---	Ununquadium <b>114</b> <b>Uuq</b> (289) ---	Ununpentium <b>115</b> <b>Uup</b> (288) ---	Ununhexium <b>116</b> <b>Uuh</b> (293) ---	Ununseptium <b>117</b> <b>Uus</b> (294?) ---	Ununoctium <b>118</b> <b>Uuo</b> (294) ---						

- Alkali metals
- Alkaline earth metals
- Transition metals
- Lanthanides
- Actinides
- Other metals
- Metalloids (semi-metal)
- Nonmetals
- Halogens
- Noble gases

Element name → Mercury ← Atomic #

80

Symbol → **Hg** ← Avg. Mass

First ionization energy (kJ/mol) → 1007

\*lanthanides

Lanthanum <b>57</b> <b>La</b> 138.91 538	Cerium <b>58</b> <b>Ce</b> 140.12 534	Praseodymium <b>59</b> <b>Pr</b> 140.91 527	Neodymium <b>60</b> <b>Nd</b> 144.24 533	Promethium <b>61</b> <b>Pm</b> (145) 540	Samarium <b>62</b> <b>Sm</b> 150.36 545	Europium <b>63</b> <b>Eu</b> 151.97 547	Gadolinium <b>64</b> <b>Gd</b> 157.25 593	Terbium <b>65</b> <b>Tb</b> 158.93 566	Dysprosium <b>66</b> <b>Dy</b> 162.50 573	Holmium <b>67</b> <b>Ho</b> 164.93 581	Erbium <b>68</b> <b>Er</b> 167.26 589	Thulium <b>69</b> <b>Tm</b> 168.93 597	Ytterbium <b>70</b> <b>Yb</b> 173.04 603
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\*\*actinides

Actinium <b>89</b> <b>Ac</b> (227) 499	Thorium <b>90</b> <b>Th</b> 232.04 587	Protactinium <b>91</b> <b>Pa</b> 231.04 568	Uranium <b>92</b> <b>U</b> 238.03 598	Neptunium <b>93</b> <b>Np</b> (237) 605	Plutonium <b>94</b> <b>Pu</b> (244) 585	Americium <b>95</b> <b>Am</b> (243) 578	Curium <b>96</b> <b>Cm</b> (247) 581	Berkelium <b>97</b> <b>Bk</b> (247) 601	Californium <b>98</b> <b>Cf</b> (251) 608	Einsteinium <b>99</b> <b>Es</b> (252) 609	Fermium <b>100</b> <b>Fm</b> (257) 627	Mendelevium <b>101</b> <b>Md</b> (258) 635	Nobelium <b>102</b> <b>No</b> (259) 642
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