### Periodic System of Elements

First conceived by Dimitri Mendeleev (1869)

#### Table

| Group | Period | Element | Atomic Number | Atomic Radius (Å) | Covalent Radius (Å) | Electron Configuration | Oxidation State | Density (g/cm³) | Electric Conductivity (Ω⁻¹ cm⁻¹) | Electronegativity (Pauling's number) | Specific Heat Capacity (J/g K) | Electron Affinity (eV) | Electronegativity (Mossbauer effect) | Electronegativity (Onset potential) | Electronegativity (Hartree) | Halogen Energetic Gap (eV) | Radii Difference (Å) | Stability | Intermolecular Forces | Transition Metals | Noble Metals | Noble Gases |
|-------|--------|---------|---------------|------------------|---------------------|----------------------|----------------|----------------|-------------------------------|--------------------------------|----------------------------|----------------|--------------------------------|--------------------------------|----------------------------|-------------------|----------------|----------------------|------------------|----------------|-----------------|
| I     | 1      | H       | 1             | 1.008            | 1.23               | [H]                  | 0              | 0.0899         | 1.097                        | 1.17                          | 0.97                       | 0.000126        | 0.20             | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Li      | 3             | 6.941            | 1.86               | [He]                 | 1              | 0.581          | 1.40             | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Be      | 4             | 9.012            | 1.57               | [He]                 | 1              | 0.965          | 1.20             | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Mg      | 5             | 12.002           | 2.00               | [He]                 | 1              | 1.31           | 1.50             | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Na      | 6             | 11.595           | 1.72               | [He]                 | 1              | 1.99           | 1.80             | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | K       | 7             | 19.171           | 1.54               | [Ar]                 | 1              | 3.74           | 2.4               | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Cs      | 8             | 39.19         | 1.85               | [Kr]                 | 1              | 5.48           | 3.0               | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Fr      | 9             | 85.468          | 2.41               | [Xe]                 | 1              | 8.68           | 4.2               | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |
|      |        | Ra      | 10            | 226.025         | 3.07               | [Xe]                 | 1              | 11.37          | 5.7               | 1.17                          | 0.97                       | 0.000313        | 0.137            | 0.97                          | 0.77                          | 0.77                  | 10.17            | 1.08               | Hydrogen Bonding | Transition Metals |

#### Notes
- s-electron shell can be occupied by at most 2 electrons; p-electron shell by at most 6 electrons; d-electron shell by at most 10 electrons; f-electron shell by at most 14 electrons; Noble gases have 2 (He), 10 (Ne), 18 (Ar), 36 (Kr), 54 (Xe), and 86 (Rn) electrons.
- Noble gases: 2 (He), 10 (Ne), 18 (Ar), 36 (Kr), 54 (Xe), and 86 (Rn) electrons.