

Periodic Table, Drawing Bohr Diagrams

Periodic Table

- The Periodic Table provides information on the physical and chemical properties of elements

The diagram shows a square box representing an element's information. On the left side, four labels with lines pointing to the box are: 'atomic number' pointing to the top-left corner, 'symbol' pointing to the middle-left side, 'name' pointing to the bottom-left side, and 'atomic mass' pointing to the bottom-left corner. On the right side, one label with a line pointing to the box is: 'ion charge(s)' pointing to the middle-right side. Inside the box, the top-left corner contains the number '22', the top-right corner contains '4+', the middle-left side contains the symbol 'Ti', the middle-right side contains '3+', the bottom-left side contains the name 'Titanium', and the bottom-right corner contains the atomic mass '47.9'.

atomic number	22	4+
symbol	Ti	3+
name	Titanium	
atomic mass	47.9	

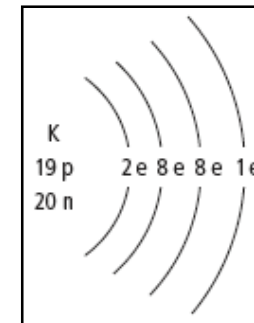
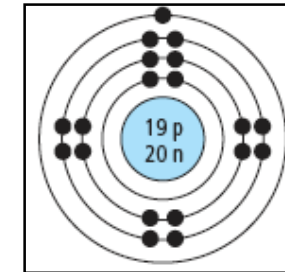
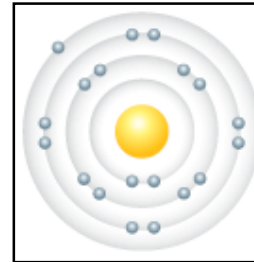
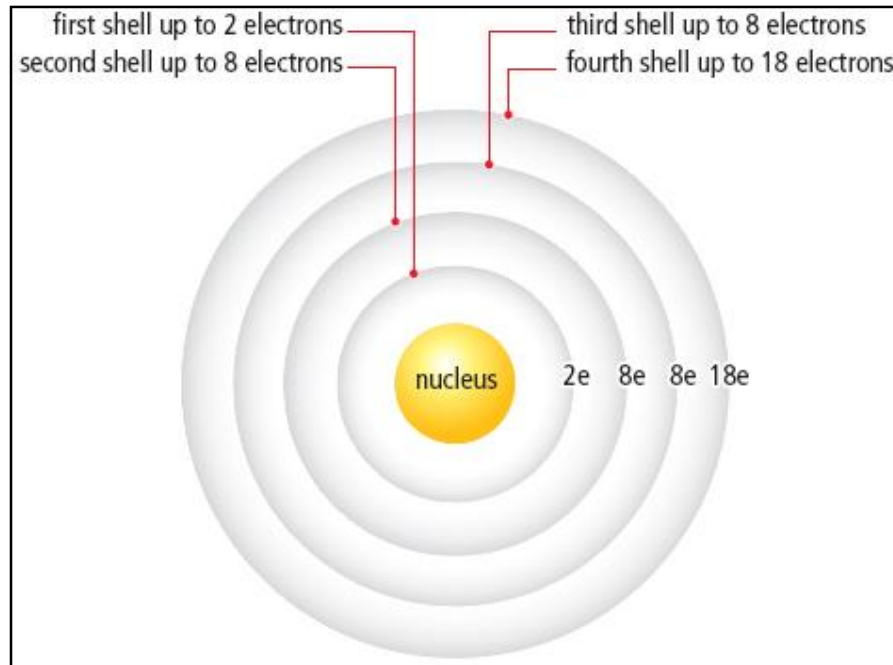
Atomic Mass - mass of average atom (including its isotopes) and is calculated using the number of protons (atomic number) and neutrons. We always round to the nearest whole number for calculations.

Atomic Number - number of protons

Ion Charge - electric charge that forms when an atom gains or loses electrons

2.3 Periodic Table and Atomic Theory

- Elements with similar properties have similar electron arrangements
- Bohr models show electron arrangement in shells or orbitals
- The arrangement of electrons in these orbitals is called electron configuration



Bohr model patterns

- Chemical families on the periodic table have the same number of **valence electrons (electrons that appear on the valence or outer most shell)**
- Elements in the same period have the same number of shells
- Period number indicates the number of electron shells

