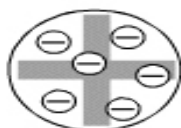


Atomic Structure

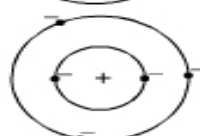
1904
Plum Pudding Model
Electrons embedded in positive charge



1911
Rutherford Experiment
Tiny, very dense, positive nucleus
Diffuse electron cloud (unexplained)

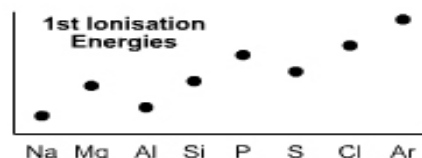


1913
Bohr Planetary Model
A first explanation of atomic spectra
Primitive first atom



physics

chemistry

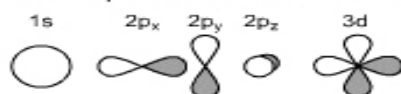


Na Mg Al Si P S Cl Ar

Quantum Numbers	4p	3d	4s	3p	3s	2p	2s	1s
	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—

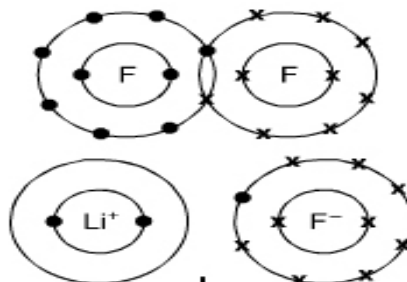
1924
De Broglie: Electron is a wave

1926
Schrodinger Wave Equation
Explanation of 1s, 2s, 2p, etc.
Orbitals perceived to have shape:



Molecular Orbital Theory
FMO Theory

1916-23
Lewis Octet Theory
Covalent bonding
(Ionic bonding)



Mechanistic Theory
Electron accountancy
Lewis acids, Lewis bases
Electron pairs
Electrophiles, Nucleophiles
Radicals
Curly arrows
E2, S_N2, S_EAr, etc.
VSEPR