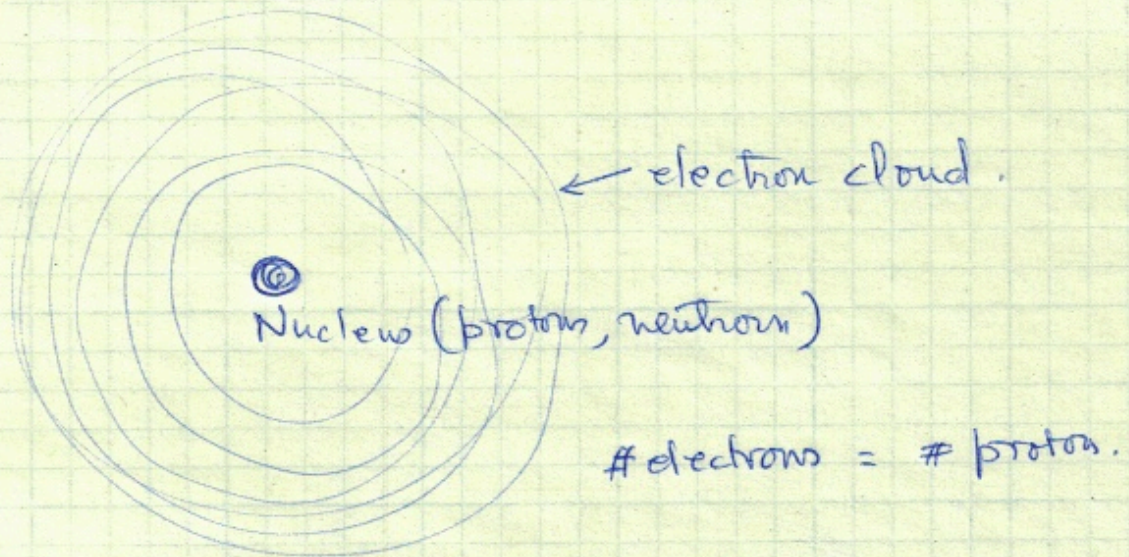


Understanding atoms

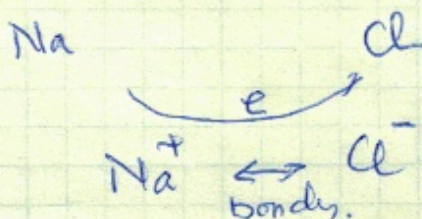


Notes

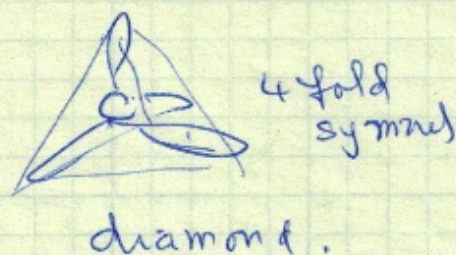
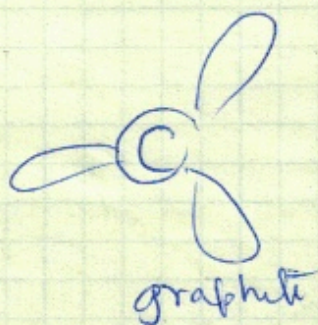
- (i) the "size" of the atom is the size of the electron cloud \leftrightarrow nucleus is very small.
- (ii) The further the electron from the nucleus the ~~more~~ weaker is its attractive force to the nucleus

(iii) Properties are determined by the # electrons in the outermost orbit. For example electron affinity or electronegativity.
(THE PERIODIC TABLE)

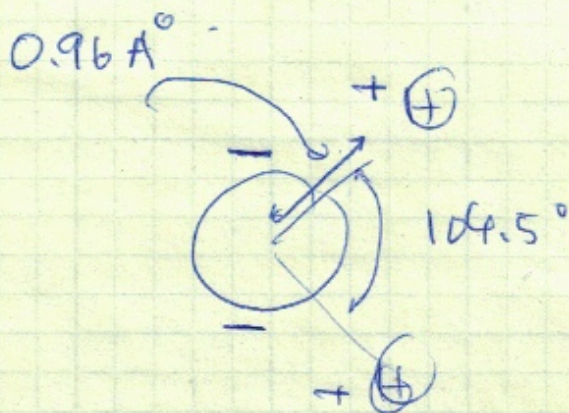
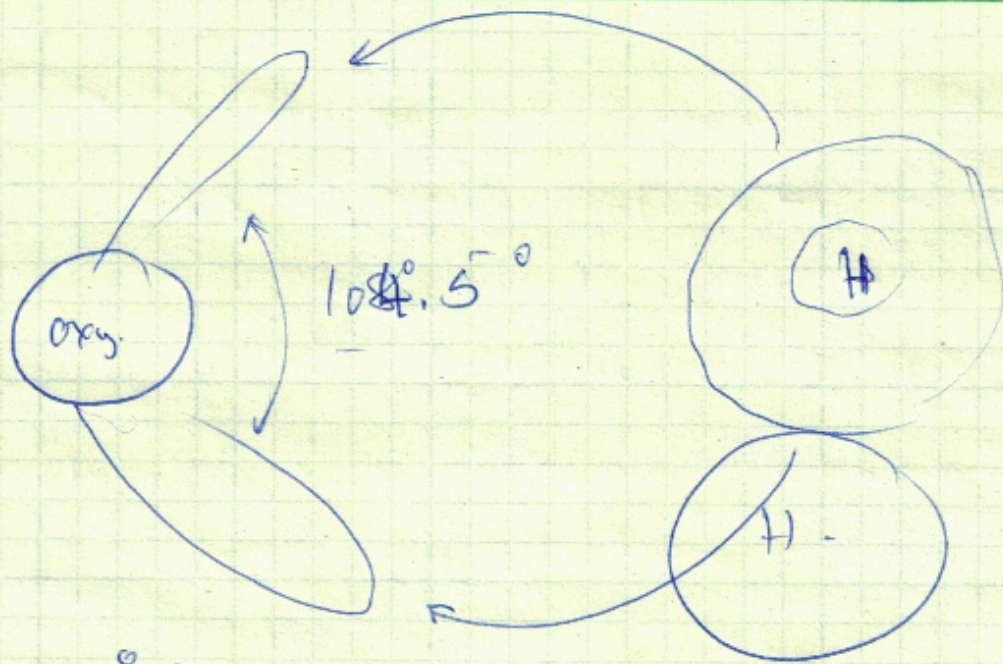
(iv) Bonding among atoms arises from exchange of electrons



(v) Electron orbitals.



(vi) orbitals may contain upto 8 electrons
→ full orbital - lower energy state.



Properties unusual

ICE forms a structure that is "open".

Water Viscosity

How do the H_2O molecules move past one another

$$D = \frac{kT}{6\pi a\eta}$$

Selectivity

hydrophobic / hydrophilic

Reactivity

polar molecules have higher solubility in water

$$D = \frac{kT}{6\pi a\eta}$$