

Bond energy in kJ

- ◆ E that is needed to break bonds **OR**
- ◆ Amount E released when two or more atoms binds chemically to form a stable molecule..

Wat is it influenced by

- ◆ Size of the atom (Larger atom $\rightarrow$ longer bonds $\therefore$ weaker)
- ◆ Length of bonds (longer = weaker)
- ◆ Bonding order (increasing strength $\rightarrow$ single, double bonds and triple bonds)

Electrical E_p change by
formation of molecules

Bonding length (BL)

Distance between to cores of two atoms that is bound.

Short bond $\rightarrow$ strong, more E needed to break.

What is influenced by it

- ☀ Reaction change $\rightarrow$ larger atom $\therefore$ longer BL
- ☀ Bonding order $\rightarrow$ higher rank $\therefore$ shorter BL

Bonds form if it can reach a lower E_p value than repulsive atoms.

P = atoms far from each other

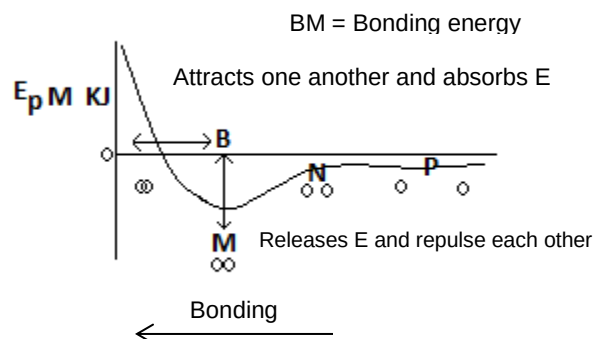
$$E_p = 0$$

N = $E \downarrow$ decreases neem as it moves closer due to attraction forces.

M = Lowest E value $\therefore$ most stable position for e^- to divide. It is the bonding energy.

B = E_p on its lowest $\therefore$ Is called bonding length.

Where E between atoms is the lowest, two atom cores forms a bond.



Bonding energy =
negative value due to the
addition of E to break the
bond.