

Day-29

→ Defect Chemistry Rules -

- Site relationship given a material has to be maintained.

Eg: M_aX_b , site ratio = $a : b$ has to be maintained

- Site creations should not be violating the site relation rule

1st 2 points → site in a compound

- Mass balance

- Electroneutrality condition (ENC)

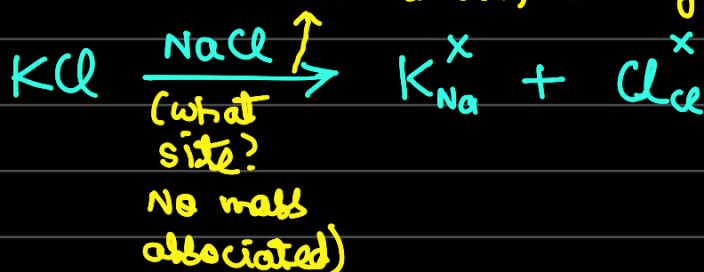
- Surface sites \Rightarrow no. of n sites \uparrow
to bulk

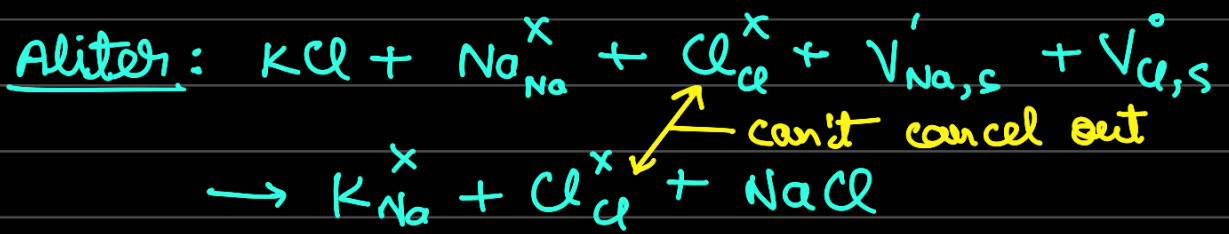
→ Internal defect reactions

→ Incorporation reactions

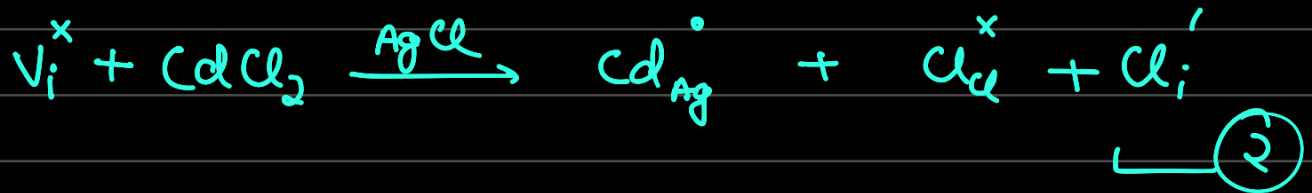
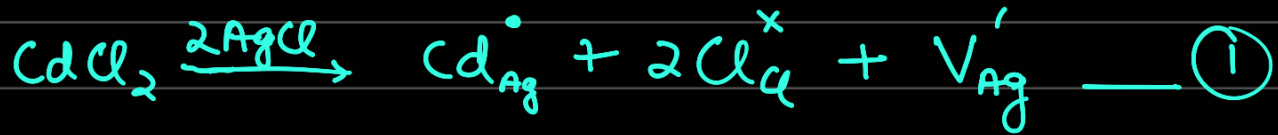
→ Salt: NaCl and KCl

(Total Salt \rightarrow KCl added to NaCl)
irreversible, so single headed arrow





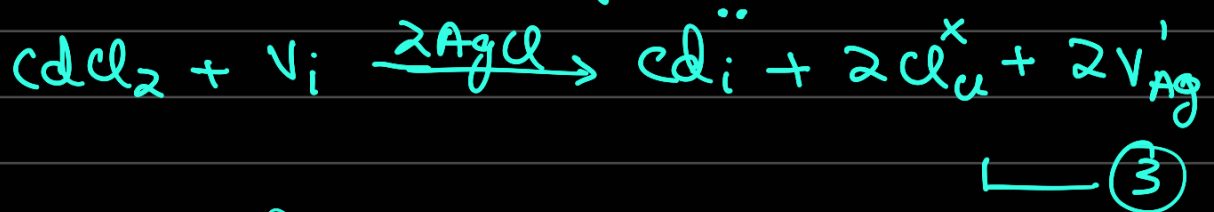
$\rightarrow CdCl_2$ in $AgCl$:



(1) : Frenkel type

(2) : Schottky or Anion Frenkel, very difficult to occur

In this case, mostly enthalpy driven.



(1) and (3) appear equiprobable.

we conduct Ag^+ ion conductivity experiment

