

# DOPING - DROGGEGGIO



$10^{22}$  —  $10^{16}$

ATOMI SOSTITUZIONALI

- DONATORI
- ACCETTORI

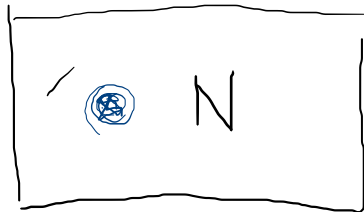
P Sb As + donatori

B Al Ga In + accettori

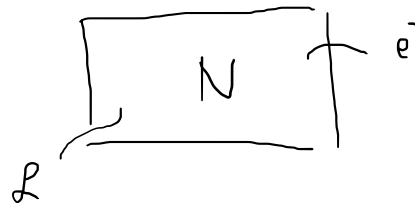
$e^-$

$h$

} cariche maggioritarie



CARICHE MINORITARIE



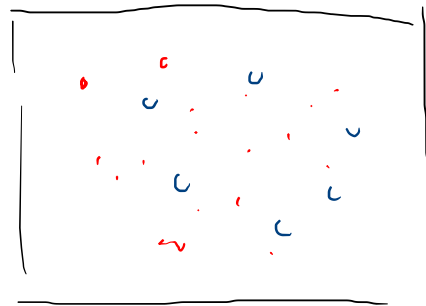
$$Si + P \quad 1 \text{ di } P \quad 1 \div 100 M \quad Si$$

$$G_{Si} \nearrow 100000$$



$$Si$$

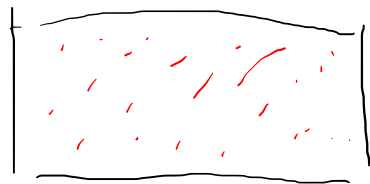
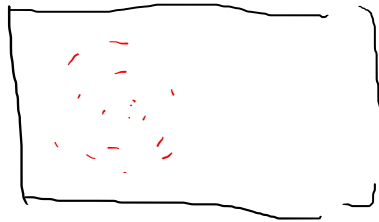
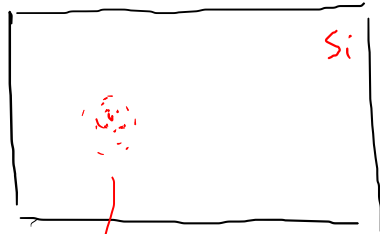
$$n_i = p_i$$



$$n_i = \frac{N_D + n_i}{\approx} \approx N_D$$

$$p_i = \frac{n_i^2}{N_D}$$

processi chimici

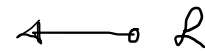


"gas"

q si muove ?



Corrente!  
di DIFFUSIONE



i di DRIFT