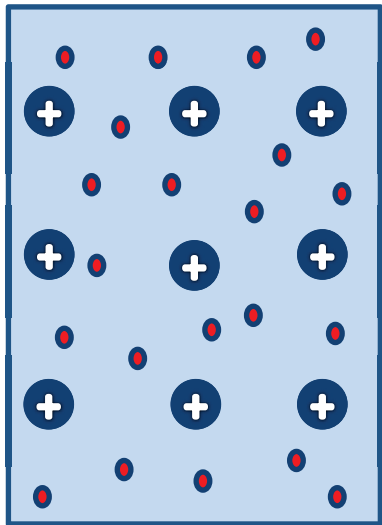
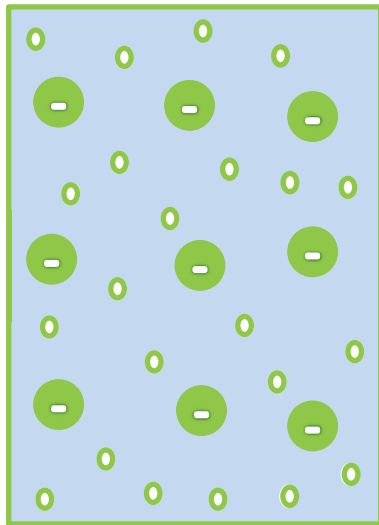


**N-Type**



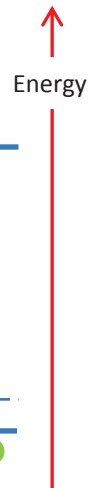
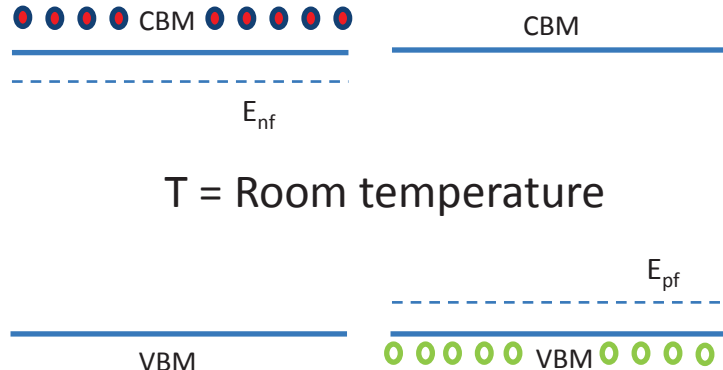
**P-Type**



**N-Type**



**P-Type**



$T = \text{Room temperature}$

CBM: Conduction band minimum

VBM: Valence band maximum

Negatively charged electrons

Positively charged immobile ions

Positively charged holes

Negatively charged immobile ions