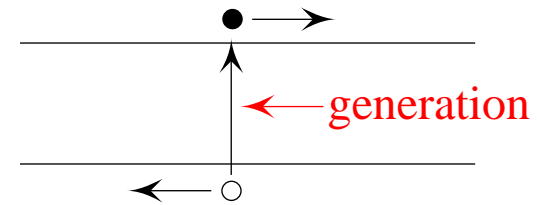
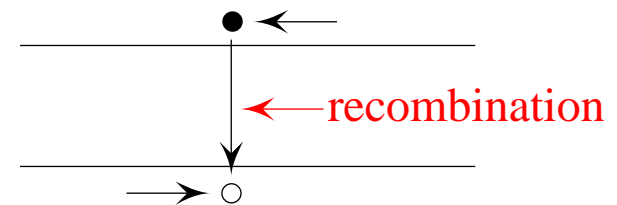


Generation and Recombination

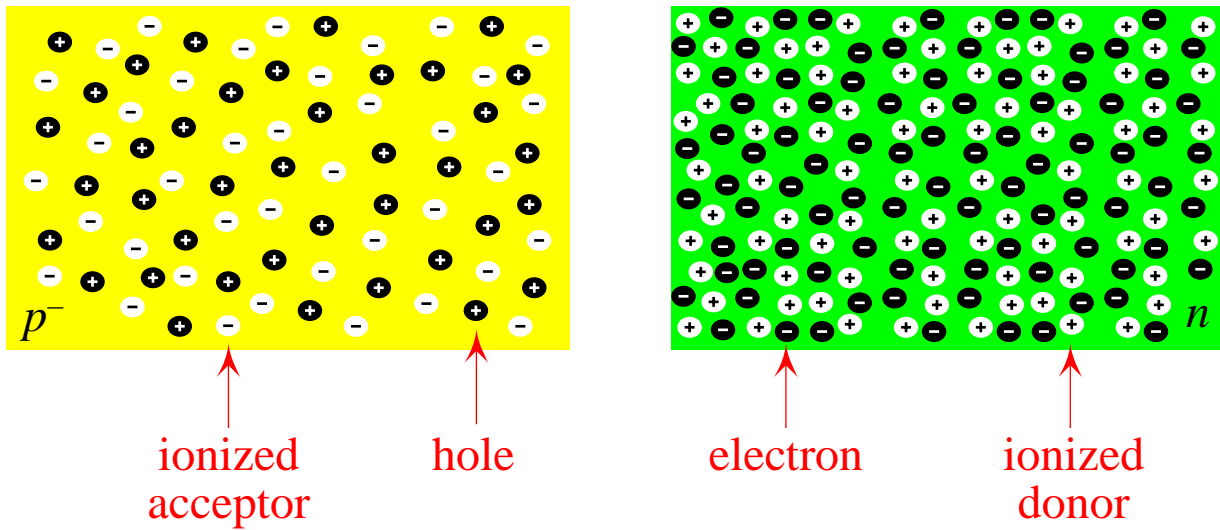
- ▶ **Generation:** a bound electron is knocked out of a covalent bond, leaving a hole behind (i.e., creating a new electron-hole pair).



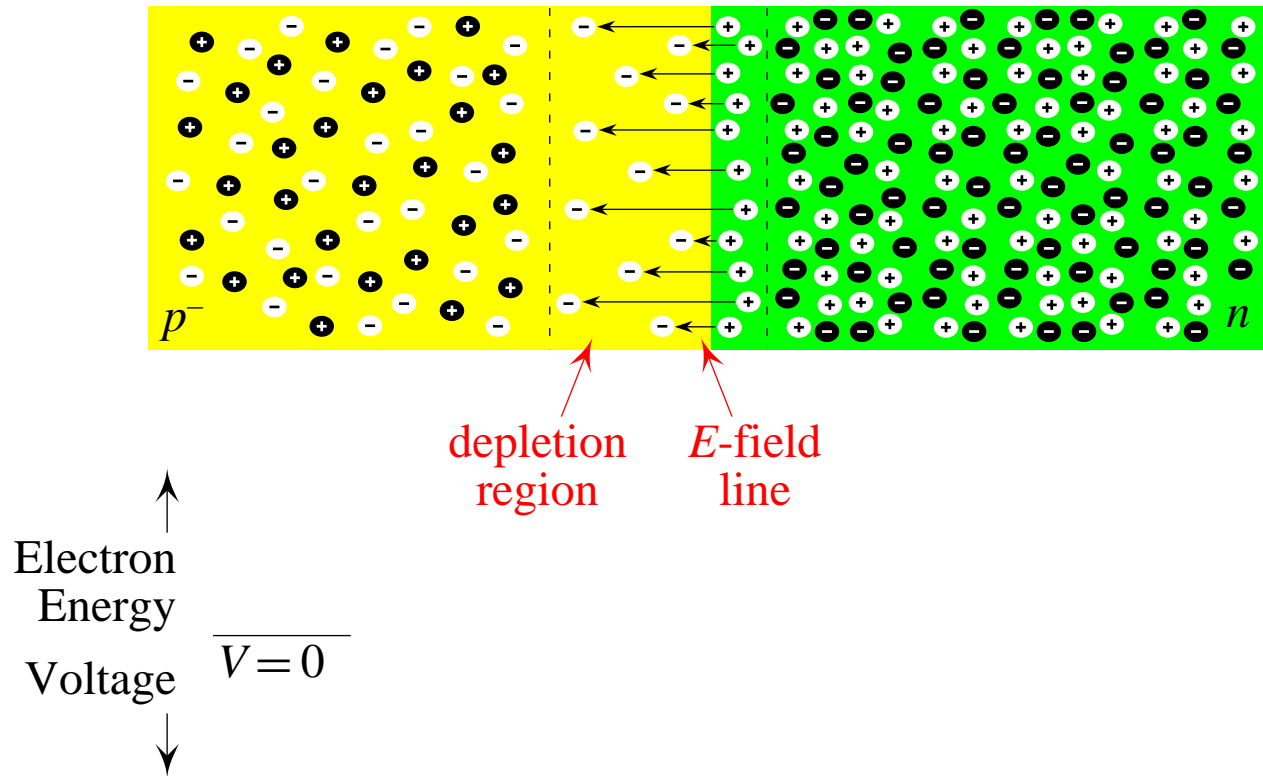
- ▶ **Recombination:** a free electron falls into an unsuspecting hole, removing both from circulation.



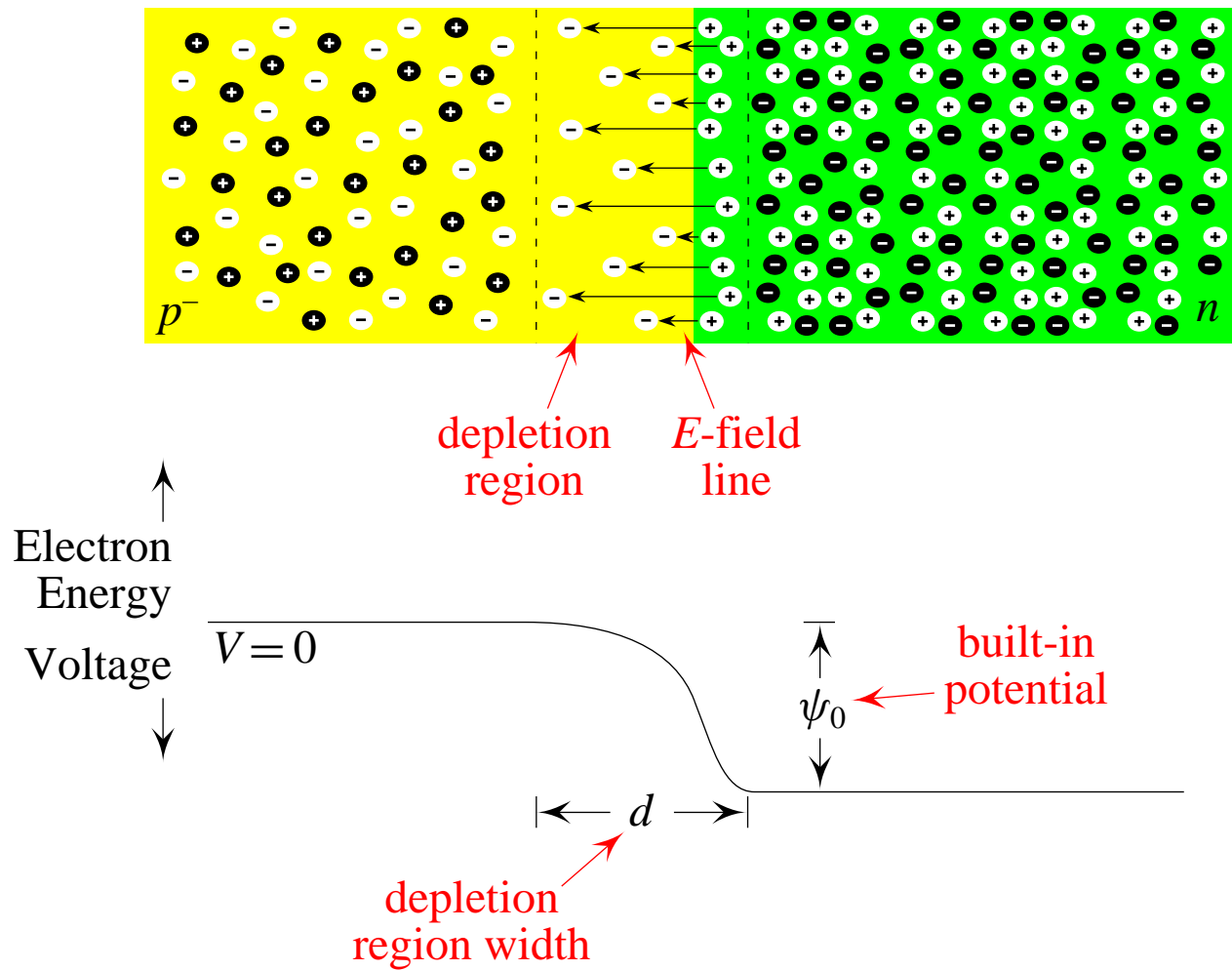
Electrostatics of a *pn* Junction



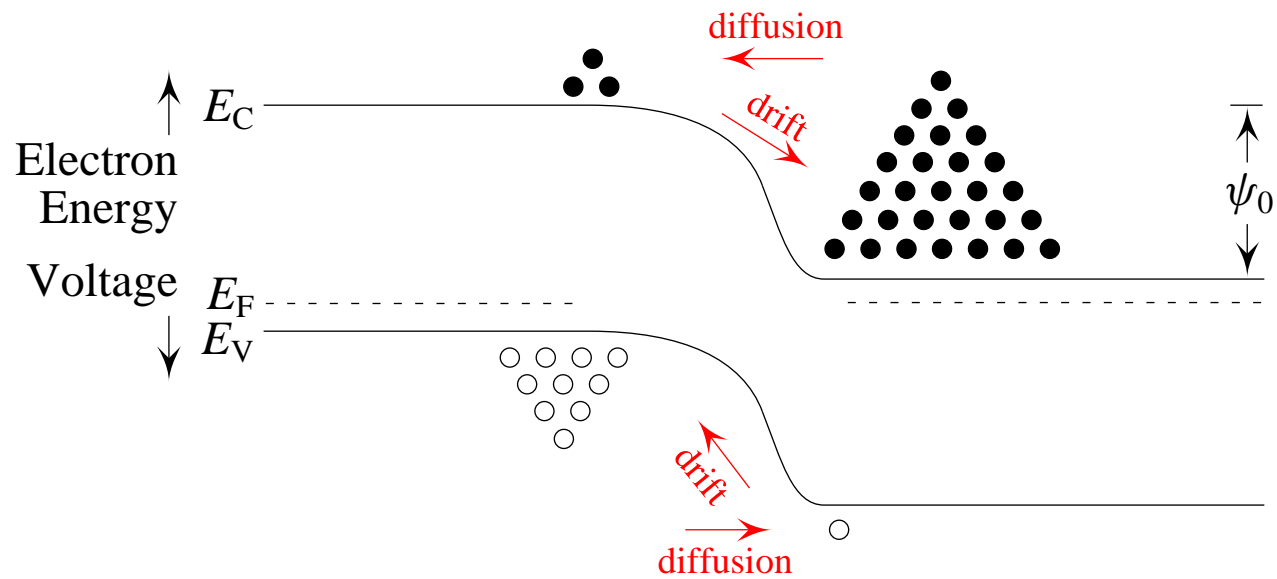
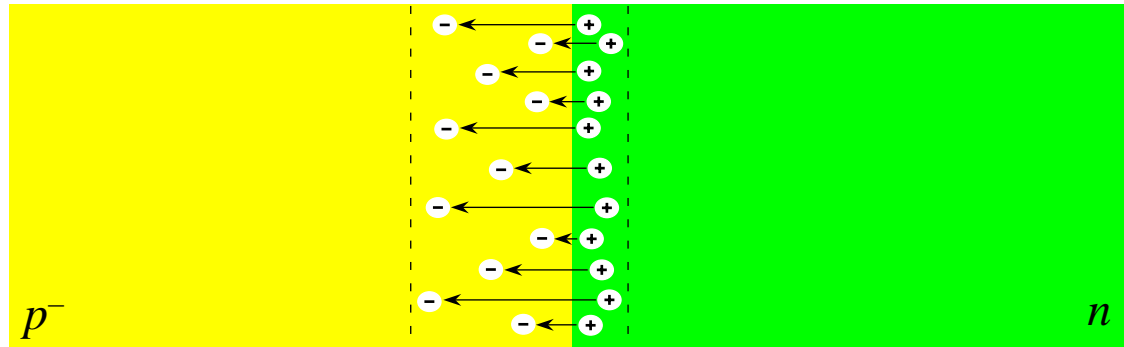
Electrostatics of a *pn* Junction



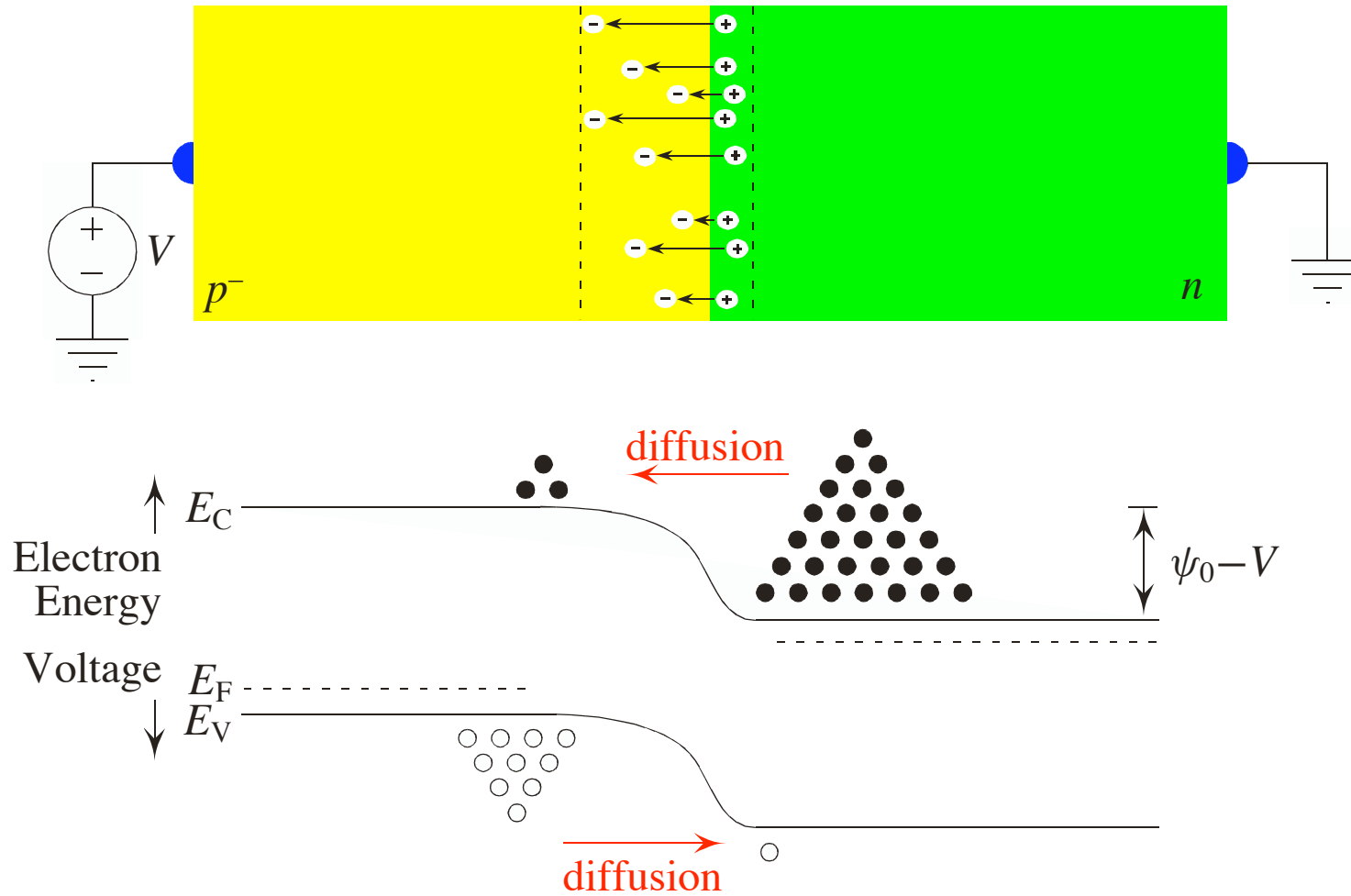
Electrostatics of a *pn* Junction



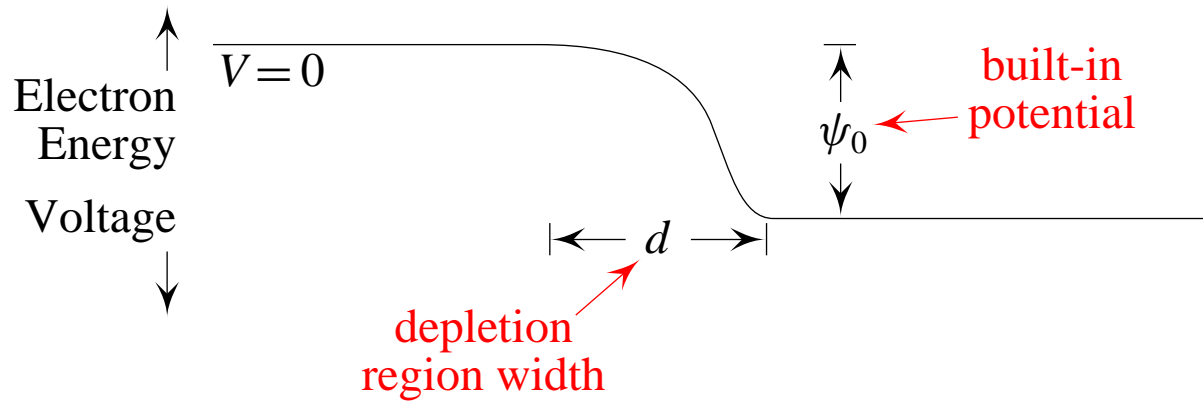
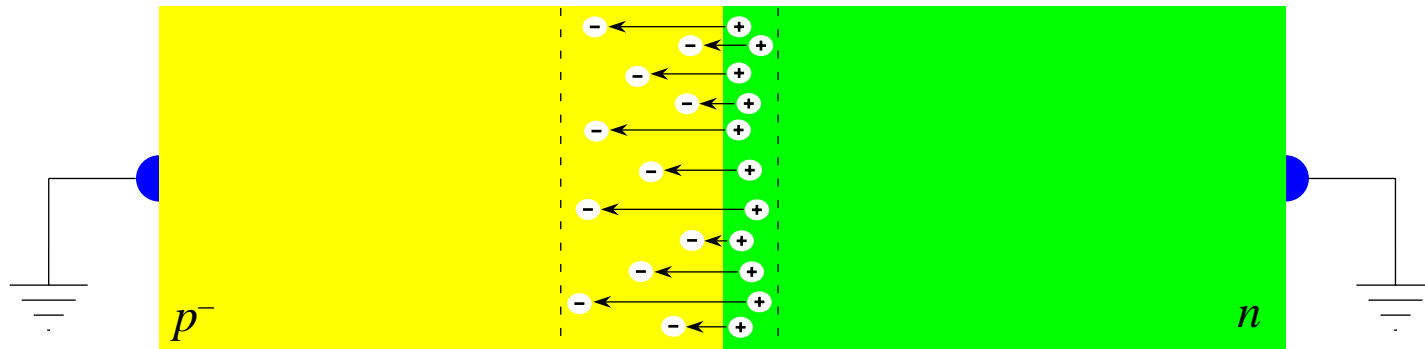
Equilibrium in a *pn* Junction



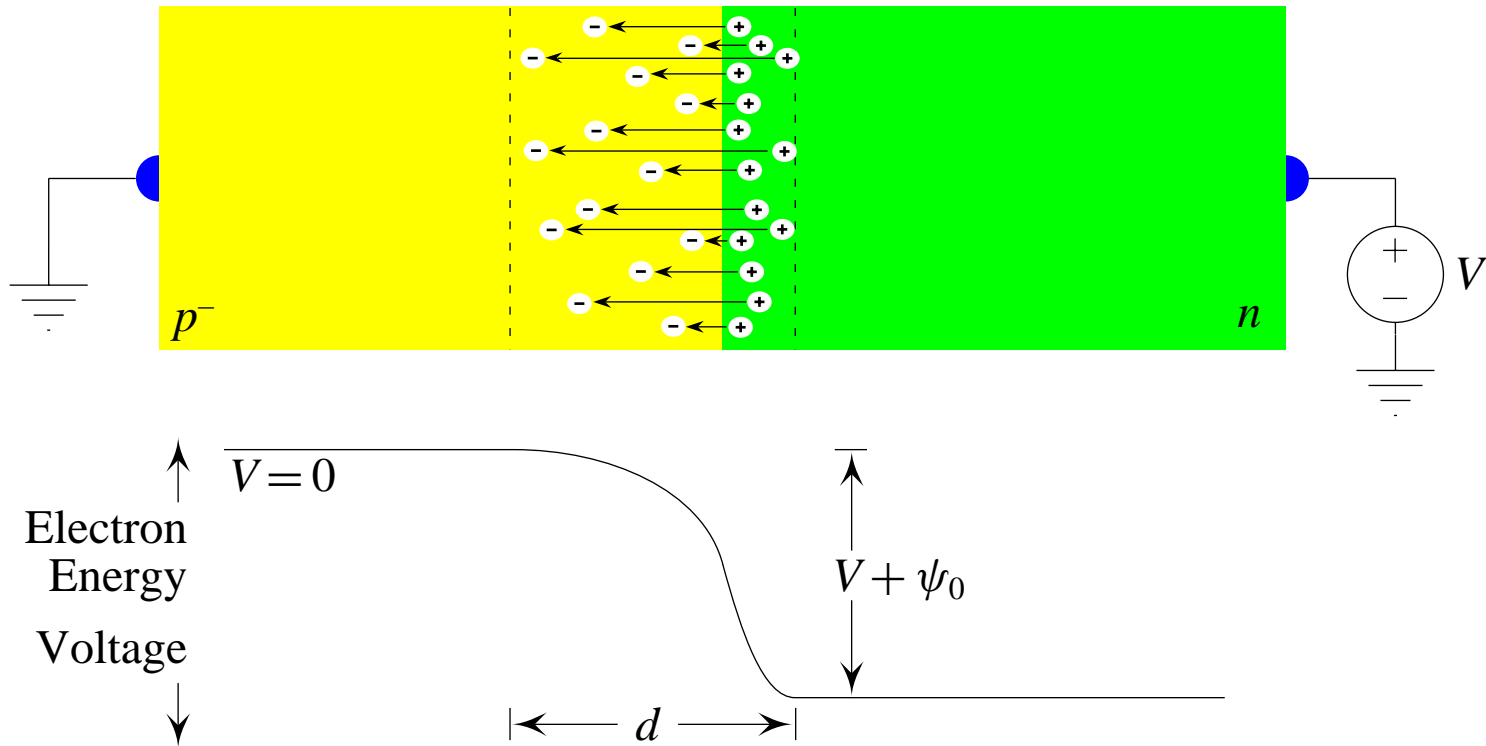
Forward-Biased *pn* Junction



Reverse-Biased *pn* Junction



Reverse-Biased *pn* Junction



Reverse Junction Leakage Current

