

Junction

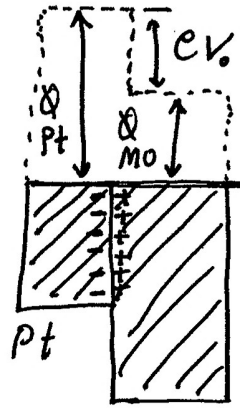
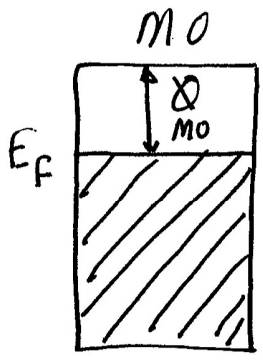
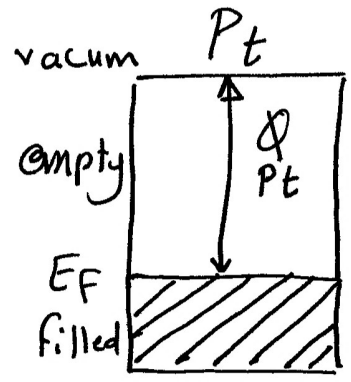
metal - metal junction

metal - semiconductor $\begin{cases} \rightarrow \text{schottky} \\ \rightarrow \text{ohmic} \end{cases}$

semiconductor junction - P-N junction

metal - metal

Junction Fermi Levels must lineup (equilibrium)



$$eV_0 = \phi_{Pt} - \phi_{Mo}$$

$$= 5.36 - 4.2$$

$$= 1.16 \text{ eV}$$

$$\Rightarrow V_0 = 1.16 \text{ V}$$

$\phi = 5.36 \text{ eV}$

$\phi = 4.2 \text{ eV}$

$\phi_{Pt} > \phi_{Mo}$

$V_0 =$ opposes further movement of electrons $\bar{e} \equiv$ junction equi.

So when we have 2 metal different in work function and form junction. we don't look how its form we say we have junction that is ideal. which means no defects.

we can see it in thermocouple (see back)