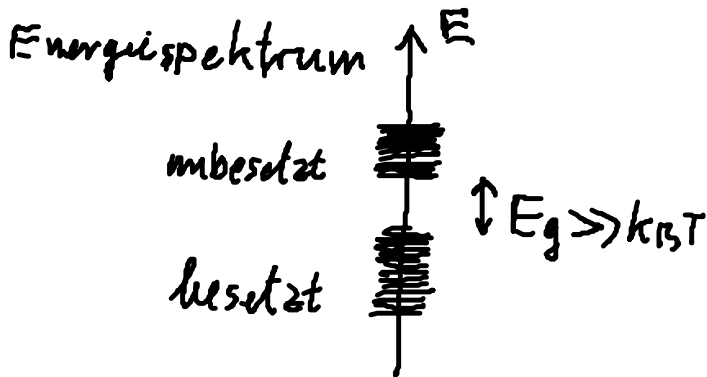
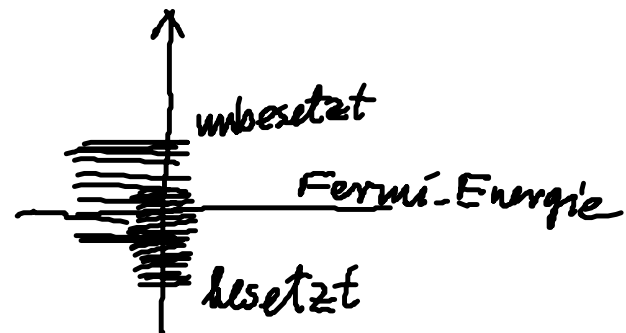


# 6.2 Kanonische Gesamtheit

## Halbleitern



## Metalle



Zustandsgleichung  $p = p(T, V)$

isobare Zustandsänderungen

$$dp = \left(\frac{\partial p}{\partial T}\right)_V dT + \left(\frac{\partial p}{\partial V}\right)_T dV = 0 \quad : \frac{1}{dT}$$

$$0 = \left(\frac{\partial p}{\partial T}\right)_V + \left(\frac{\partial p}{\partial V}\right)_T \left(\frac{\partial V}{\partial T}\right)_p$$

$$0 = p\beta - \frac{\beta}{V}\alpha V \Rightarrow \boxed{\beta\alpha = p\beta}$$

Zustandsgl. Festkörper

intrinsische Variable  $p, T, \alpha, \beta, \beta$  unabh. Stoffmenge  
extrinsische Variable  $V, N, u, F, G$  proport. Stoffmenge