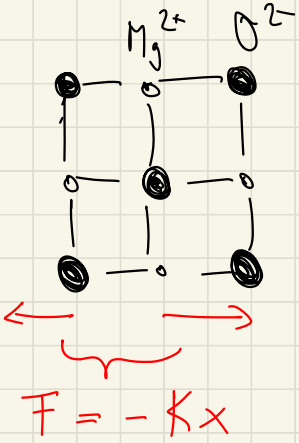
Exercise 2: MgO

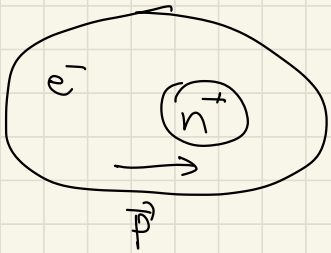
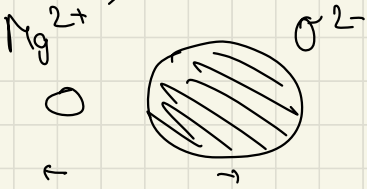


Lattice vibrations

$$\Phi_{\substack{ni \\ mj}} = -\frac{F_{ni}}{u_{mj}}$$

$$D = \left(\frac{\Phi}{\sqrt{M_n M_m}} \cdots \right)$$

Dielectric properties

e^- contribution ionic contribution

$$\vec{P}(\omega) = \varepsilon_0 \chi(\omega) \vec{E}(\omega)$$