

# 1 Faradayův jev

$$\vec{D} = \epsilon_0 \epsilon_r \vec{E} + i\epsilon_0 \gamma \vec{B} \times \vec{E}$$

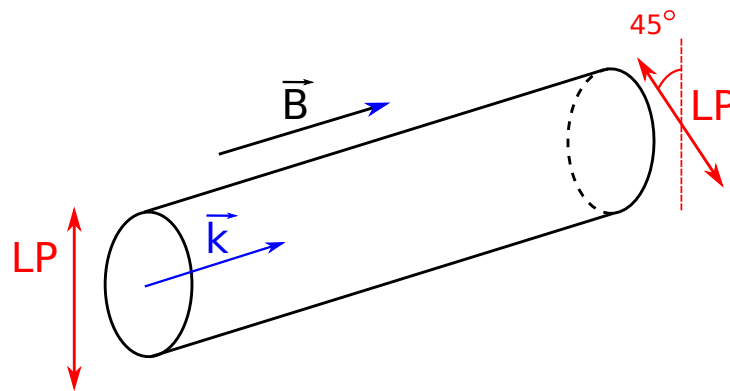
$$\vec{B} = (0; 0; B)$$

$$\vec{E} = (E_0; \pm iE_0; 0)$$

$$\begin{aligned} \vec{D} &= \epsilon_0 \epsilon_r (E_0; \pm iE_0; 0) + i\epsilon_0 \gamma (\mp iBE_0; BE_0; 0) = \epsilon_0 \epsilon_r (E_0; \pm iE_0; 0) + \epsilon_0 \gamma B (\pm E_0; iE_0; 0) = \\ &= \epsilon_0 \epsilon_r (E_0; \pm iE_0; 0) \pm \epsilon_0 \gamma B (E_0; \pm iE_0; 0) = \epsilon_0 (\epsilon_r \pm \gamma B) (E_0; \pm iE_0; 0) = \\ &= \epsilon_0 (\epsilon_r \pm \gamma B) \vec{E} \end{aligned}$$

$$n^2 = \epsilon_r \pm \gamma B$$

$$n \approx n_0 \pm \frac{\gamma B}{2n_0}$$



# 2 Optická aktivita

$$\vec{D} = \epsilon_0 \epsilon_r \vec{E} + i\epsilon_0 \xi \vec{k} \times \vec{E}$$

