

2 ore + 1 recupero

$$E(k) = \epsilon_0 \pm \sqrt{|f(k)|^2}$$

$$k_{F1} = \left(\frac{2\pi}{3a_{cc}}, \frac{2\pi}{3\sqrt{3}a_{cc}} \right)$$

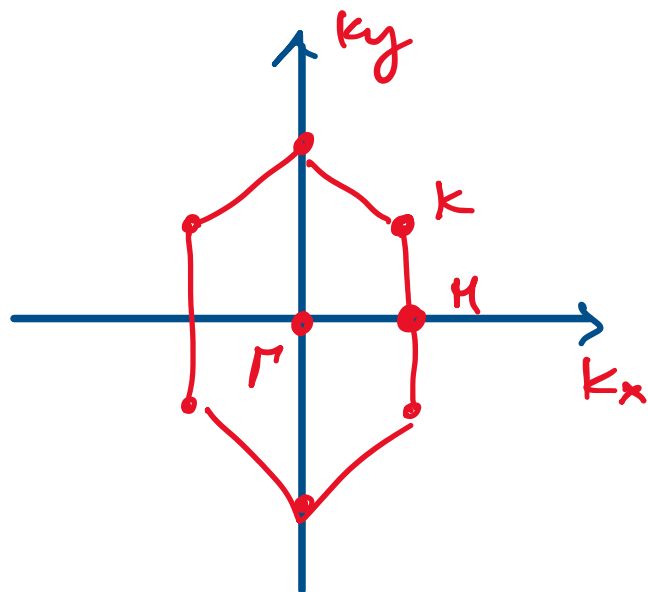
$$k_{F4} = \left(-\frac{2\pi}{3a_{cc}}, -\frac{2\pi}{3\sqrt{3}a_{cc}} \right)$$

$$k_{F2} = \left(0, \frac{4\pi}{3\sqrt{3}a_{cc}} \right)$$

$$k_{F5} = \left(0, -\frac{4\pi}{3\sqrt{3}a_{cc}} \right)$$

$$k_{F3} = \left(-\frac{2\pi}{3a_{cc}}, \frac{2\pi}{3\sqrt{3}a_{cc}} \right)$$

$$k_{F6} = \left(\frac{2\pi}{3a_{cc}}, \frac{2\pi}{3\sqrt{3}a_{cc}} \right)$$



$$k_{F2} \Rightarrow k_x = 0 + \Delta k$$

$$k_y = \frac{4\pi}{3\sqrt{3}a_{cc}}$$

$$|f(k)|_{k_{F2}}^2 \approx 1 + 4 \cos \left[\frac{a}{2} \frac{4\pi}{3\sqrt{3}a_{cc}} \right] \cos \left(\Delta k \frac{\sqrt{3}a}{2} \right) + 4 \cos^2 \left(\frac{2\pi}{3\sqrt{3}a_{cc}} \cdot \frac{a_{cc}\sqrt{3}}{2} \right) \approx$$

$$\approx 1 - 4 \cdot \frac{1}{2} \cos \left(\Delta k \frac{\sqrt{3}a}{2} \right) + 4 \cdot \frac{1}{4} = 2 - 2 \cos \left(\Delta k \frac{\sqrt{3}a}{2} \right) \approx$$

$$\approx 2 - 2 \left[1 - \frac{3}{8} a^2 \Delta k^2 \right] = 2 - 2 + \frac{3a^2}{4} \Delta k^2 = \frac{3a^2}{4} \Delta k^2$$

$$\pm \sqrt{|f(k)|^2} \approx \pm \frac{a}{2} \sqrt{3} \underbrace{\sqrt{\Delta k^2}}_{|\Delta k|} \approx E(k) |_{k_{F2}}$$

$$E(k) \approx \pm \frac{a}{2} \sqrt{3} |\Delta k| \cdot \frac{\hbar}{\hbar}$$

$$v_F \triangleq \pm \frac{a}{2} \frac{\sqrt{3}}{\hbar}$$

$$E(k) = v_F \cdot \hbar |\Delta k|$$

