

Absorption Spectrum

With the optics features of **nextnano++**, the optical absorption spectrum can be calculated for various polarization directions.

Physics Model

Input File

Results

Transition Matrix Element

The transition matrix element $H_{ab}(\mathbf{k})$ is plotted in the function of $\vec{k}$ for a 1D structure in figure 1

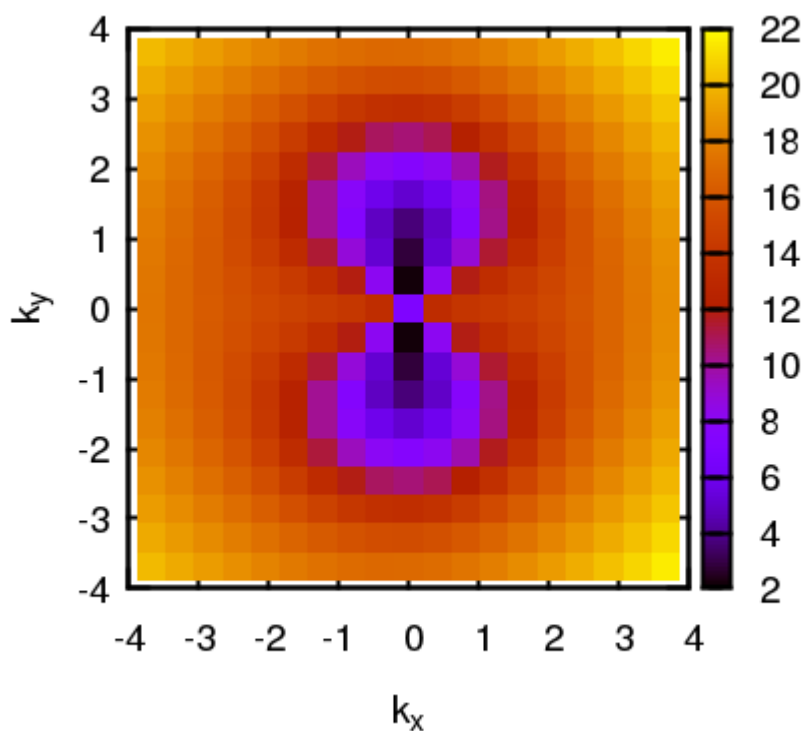


Figure 1: Transition matrix element in the $\vec{k}$ space

Eigenvalues

The first eigenfunction's energy in the k -space is plotted in figure 2 for electrons, and in figure 3 for holes.

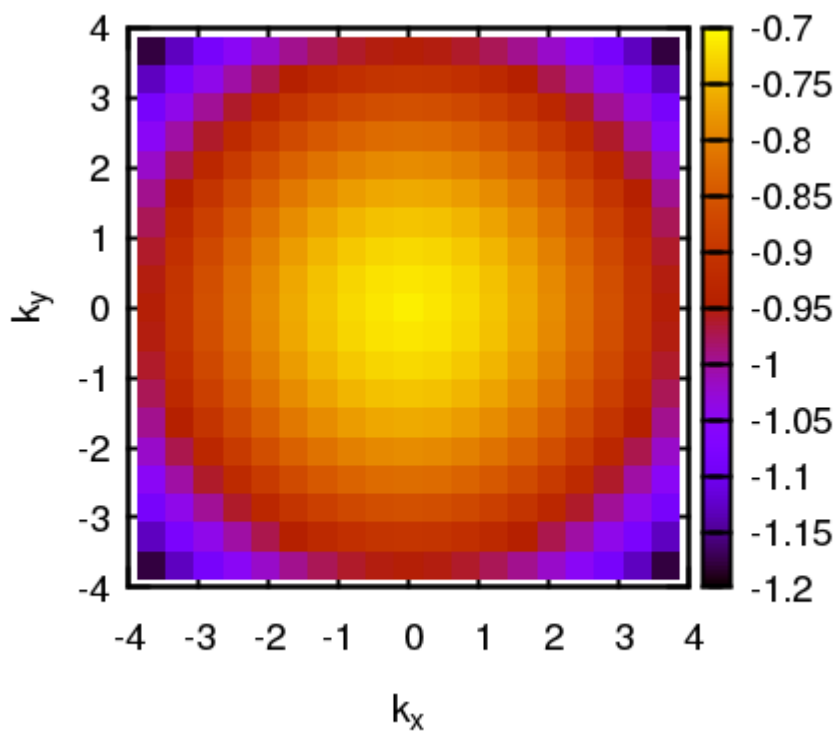


Figure 2: Energy dispersion relation in the $\vec{k}$ space for electrons

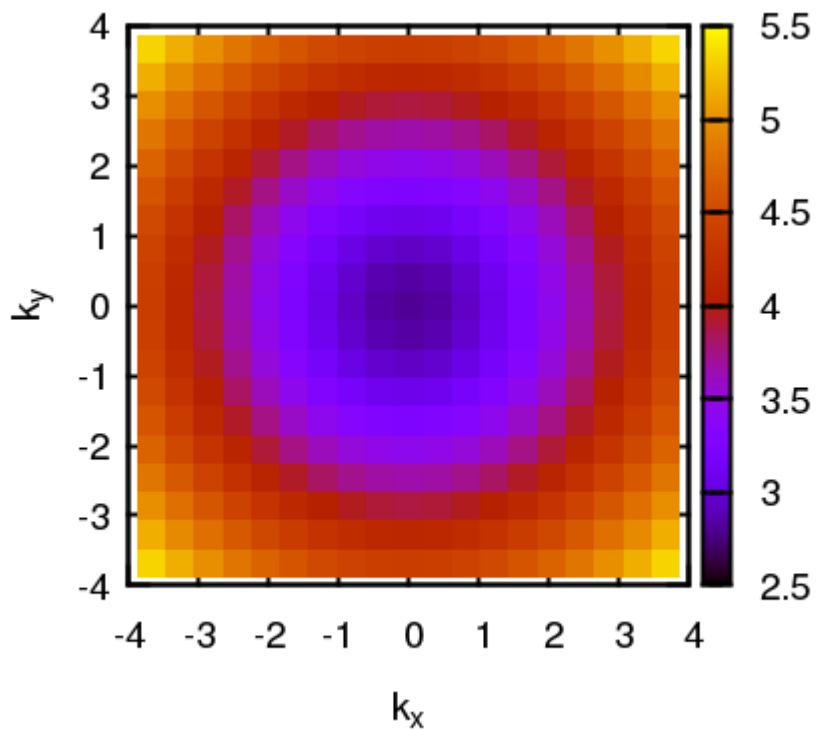


Figure 3: Energy dispersion relation in the $\vec{k}$ space for holes

From:
<https://nextnano-docu.northeurope.cloudapp.azure.com/dokuwiki/> - **nextnano.NEGF - Software for Quantum Transport**

Permanent link:
https://nextnano-docu.northeurope.cloudapp.azure.com/dokuwiki/doku.php?id=nnp:optics:absorption_spectrum&rev=1484135225

Last update: **2017/01/11 11:47**