

Parameter Dependence of Bandgaps

Shown are numerical results for the Kronig–Penney model.

- The parameter α can be varied to quantify the strength of the periodic lattice potential.



alpha:

Illustration

- red curve** shows the dispersion relation of the free electron gas, i.e. it's a parabolic function.
- The **blue curve** shows the dispersion relation with band gaps.
- The **green curve** shows the same dispersion relation in the reduced representation.