

HOW TO DO

1. Confirm your computer is connected to an internet and then connect to a hosted run time.

Numerical Band Solutions of arbitrary periodic potentials.ipynb ☆

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Code is LENTHY, to see insightful effects directly, avoid to click [Show code](#) and restart the code by clicking play button once. Don't forget to select [view output fullscreen](#) from ⋮.

2. Run the cell .

```
# @title
from ipywidgets import interact, Dropdown

# Define all codes
def KPP():
    import numpy as np
    import matplotlib.pyplot as plt
    from scipy.integrate import quad
    from ipywidgets import interact, IntSlider, FloatSlider

    # Default parameters
    default_N_ = 10
```

3. Select the potential.

Potential: Kroning Penney Potential (KPP) ▼

Basis limit Kroning Penney Potential (KPP)

a (A) Periodic Parabolic Potential (PPP)

V0 (eV) Inverse PPP (IPPP)

b/a (rho) Periodic Gaussian Potential (PGP)

of iters Inverse PGP (IPGP)

of bands Periodic Linear Potential (PLP)

Periodic pseudo-Coulomb Potential (PpCP)

4. Select all parameters and see results.

Potential: Kroning Penney Potential (KPP) ▼

Basis limit 10

a (A) 1.00

V0 (eV) 100.00

b/a (rho) 0.50

of iters 200

of bands 5