Numerical calculation of 1D ZRP chain electrical conductivity

Stepan Botman, author

Abstrak

ABSTRAK

In this paper we present a numerical procedure for calculation of electrical conductivity in a periodic lattice of one dimensional zero range potentials with a case of dominant impurity scattering. The conductivity was previously obtained in an integral form via an approximate solution of the kinetic Kolmogorov equation. The proposed approach is based on the quadrature formula for certain type of integrals. The results are compared with the low temperature limit approximation.

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