

## THE APPLICATION OF ADIABATIC METHOD FOR DESCRIPTION OF IMPURITY STATES IN QUANTUM NANOSTRUCTURES

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In the frame of effective mass approximation the application of adiabatic method for description of impurity states in quantum dots, wires and wells with parabolic confinement potential as well as rectangular infinitely-high potential is presented. A rate of convergence of the method and efficiency of the proposed program complex, realized by the finite element method, is demonstrated on examples of calculation of spectral characteristics of the models and new effects of resonance transmission and total reflection for the Coulomb scattering, induced by axial homogeneous magnetic field, crystal channel or quantum wire [1-4].

### **References**

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