ELECTRON IN A NANOWIRE

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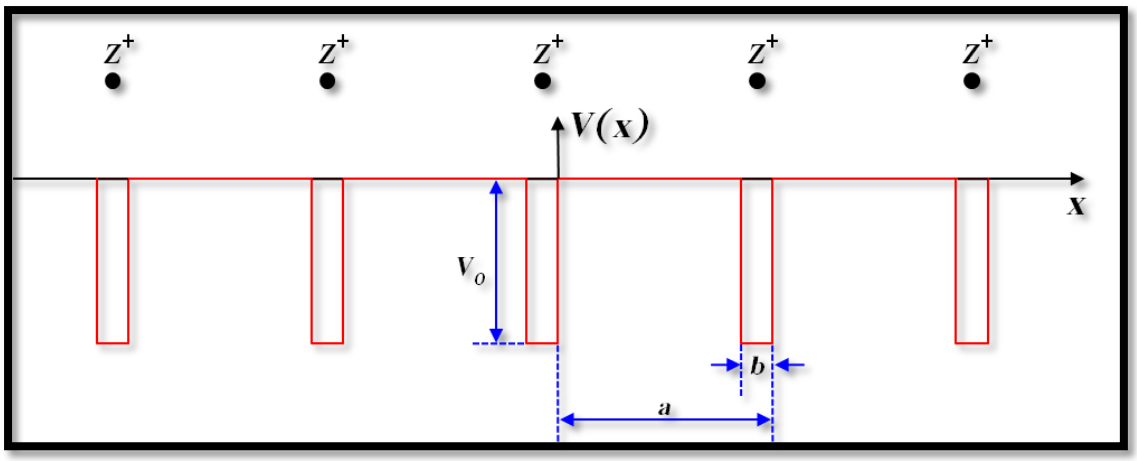
In quantum mechanics the particle like an electron which is exists in a 1-D crystal lattice. The potential which applies to an electron inside the lattice it's caused by the crystal's ions in the periodic structure of the crystal creating an electromagnetic field. This is an extension of the free electron model assuming that the potential is zero inside the lattice.

In the presentation we are gonna to discuss the Kronig-Penney model which is referred to an idealized quantum/mechanical system that contains an infinite periodic array of rectangular potential barriers. In this case we assume that the potential is created by possive ions. Also we gonna solve the Schrondinger equation of this model so we are going to find wave function and the allowed energies of this particle (electron).

At the end, we are gonna use our results to explain theoretically the structure of the nanoparticles and its properties of course. Moreover we gonna to present some applications of this model improving our technology and making our life more convenient!!!!!!



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