

In this thesis there is used quantum model of electron conductivity of semiconductor nanostructures introduced in [4]. Conductivity is calculated in first order perturbation theory with addition of thermalization current. Main focus of this thesis is concerned on calculation of conductivity of crystal shaped full or hollow sphere with use of above mentioned model. Calculated equation is then used for numerical calculation of conductivity spectra of GaAs in terahertz region, that is then graphically visualised.