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English Русский Deutsch

## 📖 Публикации

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### **Intermediate interaction theory of the Dirac fermions with plasmon-surface LO-phonon excitations in the monolayer graphene on polar substrate**

Arshak L.Vartanian

Journal of Physics and Chemistry of Solids 2022 110790

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### **Simultaneous effects of the confinement of polar optical phonons and spin-orbit coupling on the free carrier absorption of a nanowire**

A.L. Vartanian, T.K. Ghukasyan, A.L. Asatryan, K.A. Vardanyan, A.A. Kirakosyan

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Статья

### **Polaronic effects on the electron Raman scattering in a spherical anisotropic quantum dot**

T.K. Ghukasyan, A.L. Asatryan, L.A. Vardanyan, A.A. Kirakosyan, A.L. Vartanian

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### **External electric and magnetic field effects on the polaron in a wurtzite nitride nanowire embedded in a nonpolar matrix**

Anna L. Asatryan, Ashot H. Movsisyan, Arshak L. Vartanian

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Образовательный Руководство

### **Պինդ մարմնի ֆիզիկայի լաբորատոր աշխատանքներ. մաս 2**

Արթուր Կիրակոսյան, Արշակ Վարդանյան, Աննա Ասատրյան, Արամ Մանասեյան,

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### **Polaronic effects on the impurity-related linear and nonlinear optical properties in a nanowire with magnetic field**

Arshak L. Vartanian, Tigran K. Ghukasyan

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**Possible Frohlich surface polaron formation in graphene on a polar substrate**

Arshak L. Vartanian

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**Effect of spin-orbit coupling on the hot-electron energy relaxation in nanowires**

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**Influence of image charge effect on the binding energy of hydrogen-like donor impurity in a near-surface quantum well under transverse electric field**

A.L. Vartanian, A.L. Asatryan, A.A. Kirakosyan, K.A. Vardanyan

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A.L. Vartanian, A.L. Asatryan, L.A. Vardanyan

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**Polaron and dielectric mismatch effects on impurity-related optical absorption and refractive index changes in a spherical quantum dot**

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**Spin relaxation mediated by spin-orbit and acoustic phonon interactions in a single-electron two-dimensional quantum dot**

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**Energy loss rate of hot electrons due to polar-optical phonon modes in a semiconductor nanowire under transverse electric field**

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**EFFECTS OF ELECTRIC FIELD AND IMAGE CHARGES ON THE IMPURITY-RELATED OPTICAL ABSORPTION COEFFICIENTS IN A SPHERICAL QUANTUM DOT**

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**The influence of electric field on the interface polaron properties in a wurtzite nitride nanowire.**

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**The influence of electric field on the quasi-confined and interface polaron basic parameters in a wurtzite nitride quantum wire.**

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### **Phonon confinement effect on the polaron states in a double quantum ring structure in the presence of electric and magnetic fields**

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### **Պինդ մարմնի ֆիզիկայի խնդիրներ, Մաս I**

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### **Spin-orbit interaction enhanced polaron effect in wurtzite semiconductor quantum well.**

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### **Spin Relaxation in the Presence of Spin-Orbit Interactions in Single Electron Quantum Dots Embedded in a Suspended Phonon Cavity**

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**Influence of image charge effect on impurity-related optical absorption coefficient in a spherical quantum dot.**

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**Confined and interface polar optical phonon-limited electron mobility in quantum wires in the presence of perpendicular electric field.**

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**Image charge effect on oscillator strength and intradonor absorption spectra under external electric field in quantum dots.**

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**The influence of the transverse electric field on the hot electron energy loss rate via polar-optical phonons in nanowires**

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**Magnetic field control of phononmediated decoherence of spin-based qubit in two-dimensional quantum dot embedded in a suspended slab**

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**Wurtzite-nitride quantum wires under electric and magnetic fields: Polaron basic parameters**

A.L. Asatryan, L.A. Vardanyan, A.A. Kirakosyan, A.L. Vartanian

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Электронный материал

**Պինդ մարմնի ֆիզիկայի լաբորատոր աշխատանքներ**

Ալբերտ Կիրակոսյան, Արշակ Վարդանյան, Աննա Ասատրյան, Արամ Մանասեյան,

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**Exciton-Phonon Interaction in Elliptically Shaped Core-Shell Quantum Dots: Resonant Raman Scattering**

Asatryan A.L., Vardanyan L.A., Vartanian A.L.

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Ghukasyan T. K., Asatryan A.L., Vardanyan K.A., Kirakosyan A.A., Vartanian A.L.

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**First-order Raman spectra induced by the Fröhlich excitation-lattice interaction in a non-spherical core/shell nanocrystals**

Anna Asatryan, Ashot Movsisyan, Siranush Avetisyan, Tatevik Hayriyan, Arshak Vartanian

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**Exciton Resonant Raman Scattering in Colloidal Quantum Dots: The Role of the Frohlich-Type Interaction**

A. Asatryan, A. Movsisyan, L. Vardanyan, A. Vartanian

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**Intermediate Coupling Theory of the Dirac Fermions with Plasmon-Surface Polar Optical Phonon Excitations in the Monolayer Graphene on Polar Substrate**

Arshak Vartanian

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