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## 🌐 Знание языков

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

Статья

### **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

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

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

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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 quasi-confined and interface polaron basic parameters in a wurtzite nitride quantum wire.**

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### **Effect of image charges on the impurity-bound polaronic states in colloidal quantum dots embedded in different organic matrices.**

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

M.A. Yerosyan, K.A. Vardanyan, A.L. Vartanian, A.A. Kirakosyan

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

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**Dilatational and flexural acoustic-phonon mediated spin relaxation in a two-dimensional quantum dot in the presence of perpendicular magnetic field.**

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Lyudvig Vardanyan, Arshak Vartanian, Anna Asatryan

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**Electric field effect on hot-electron energy-loss rate via LA-phonon scattering in a cylindrical quantum wire.**

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**Rashba and Dresselhaus spin-orbit coupling effects on the electronic structure of quantum wires under the influence of in-plane magnetic field.**

V. Arzumanyan, K. Vardanyan, A. Asatryan, A. Vartanian

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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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**Influence of Phonon Confinement on Optical Phonon-Mediated Carrier Capture into CdSe/ZnS/H<sub>2</sub>O Quantum Dots**

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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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**Effect of Rashba Spin-Orbit Coupling on Polaron Properties in CdSe Nanowire under Electric Field**

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**Dielectric mismatch and polaron effects on optical-absorption spectra and refractive index changes associated with impurities 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**

Arshak L. Vartanian

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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**

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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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**Phonon-Assisted Optical Absorption for Nanowires with Spin-Orbit Coupling**

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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