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Статья

Exciton-optical phonon coupling in non-spherical quantum dots: A resonant Raman study of InP/ZnSe nanocrystals

A.L. Vartanian, A.L. Asatryan, A.H. Movsisyan, L.A. Vardanyan, N. Del Fatti, F. Valle'e

Computational Materials Science 2025 113394/11

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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

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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

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

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Possible Frohlich surface polaron formation in graphene on a polar substrate

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

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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. Vartanian, A. Asatryan, L. Vardanyan

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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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Influence of spin-orbit interactions on the polaron properties in wurtzite semiconductor quantum well

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

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

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

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

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

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Effect of Rashba and Dresselhaus spin-orbit interactions on the polaron properties in wurtzite semiconductor quantum dot in the presence of external fields.

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

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Confined acoustic phonon-mediated spin relaxation in a two-dimensional quantum dot in the presence of perpendicular magnetic field.

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Electron capture processes in quantum dots due to one- and two-phonon assisted transitions: The role of optical phonon confinement.

A.L. Vartanian, K.A. Vardanyan, V.N. Mughnetsyan, A.A. Kirakosyan

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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.

Arshak Vartanian, Karen Vardanyan, Armen Stepanyan, Albert Kirakosyan

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Impurity-bound polaronic states under an external electric field in quantum dots: Image charge effect.

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.

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

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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.

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

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Influence of Phonon Confinement on Optical Phonon-Mediated Carrier Capture into CdSe/ZnS/H₂O Quantum Dots

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

Arshak Vartanian, Anna Asatryan, Lyudvig Vardanyan

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Quasi-one-dimensional Fröhlich polaron with spin-orbit Rashba and Dresselhaus couplings

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

Arshak Vartanian, Tigran Ghukasyan, Levon Samsonyan

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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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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 Fröhlich-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
