

## Институт физики

Кафедра физики твердого тела

Профессор

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### **Effect of two-dimensional non-local screening on characteristics of transition metal dichalcogenide monolayers**

Vram Mughnetsyan, Aram Manaselyan, Ashot Movsisyan, Albert Kirakosyan

Semiconductor Science and Technology 2024 045016

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### **Planar quantum dots: Theoretical approaches**

Aram Manaselyan, Vram Mughnetsyan, Albert Kirakosyan

Encyclopedia of Condensed Matter Physics (Second Edition) 2024 297-307

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### **Hofstadter-like spectrum and magnetization of artificial graphene constructed with cylindrical and elliptical quantum dots**

Maryam Mansoury, Vram Mughnetsyan, Aram Manaselyan, Albert Kirakosyan, Vidar Gudmundsson,

Vigen Aziz-Aghchegala

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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

Micro and Nanostructures (Previously known as Superlattices and Microstructures) 2022 207287

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### **Signature of miniband nodes in magneto-optical properties of one-dimensional superlattice of planar quantum rings**

Maryam Mansoury, Vigen Aziz-Aghchegala, Vram Mughnetsyan, Albert Kirakosyan, Vidar Gudmundsson

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### **Electron-hole interaction in cylindrical quantum dots**

Vram Mughnetsyan, Ashot Movsisyan, Albert Kirakosyan

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**Electronic and Magnetic Properties of Laser Dressed Quantum Dot and Ring with Rashba Spin-Orbit Coupling**

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

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**Effective tuning of isotropic and anisotropic properties of quantum dots and rings by external fields**

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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**

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**Effect of anisotropic strain on the electronic characteristics of an InAs/GaAs honeycomb superlattice**

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**Effect of the impurity on the Aharonov-Bohm oscillations and the intraband absorption in GaAs/ Ga<sub>1-x</sub>Al<sub>x</sub>As quantum ring under intense THz laser field**

M.G. Barseghyan, V.N. Mughnetsyan, L.M. Perez, A.A. Kirakosyan, D. Laroze  
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**Rashba splitting of Dirac points and symmetry breaking in strained artificial graphene**

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**Modeling of anisotropic properties of double quantum rings by the terahertz laser field**

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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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**Impurity-modulated Aharonov-Bohm oscillations and intraband optical absorption in quantum dot-ring nanostructures**

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**Effect of Phonon Confinement on Optical Phonon-Mediated Carrier Capture into CdSe/ZnS Quantum Dots**

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**Effect of interdiffusion on electronic states of strain-free Gaussian-shaped double quantum ring superlattice**

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

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**Magneto-Optical Properties of Artificial Graphene Constructed of Cylindrical and Elliptical Quantum Dots**

YEGANYAN Lilit, MUGHNETSYAN Vram, MANSOURY Maryam, KIRAKOSYAN Albert, GUDMUNDSSON Vidar

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