Врам Нерсесович Мугнецян

37455245701
37493245700
vram@ysu.am

Научно-исследовательский институт физики
Руководитель группы

Образование

Учреждение	Ереванский государственный университет
Факультет	физический фалвультет
Дата	1999 - 2008
Степень / Звание	Аспирант

Ученое звание/Ученая степень

Учреждение	Ереванский государственный университет
Дата	2008
Степень / Звание	Кандидат наук
Специальность	Физико-математические науки
Научный руководитель	А.А. Киракосян
Научная тема	Theoretical investigation of the effects of interdiffusion and external fields on electronic and optical properties of semiconductor nanostructures

Знание языков

Հայերեն English Русский

Опыт работы

Учреждение	Науюная грыппа моделирования и симуляций наноструктур
Период времени	2023 до настоящего времени
Звание/степень	руководитель научной группы

Учреждение	Лаборатория физики твердого тела, Ереванский государственный университет
Период времени	2022 - 2023
Звание/степень	старший научный сотрудник

Учреждение	Кафедра физики твердого тела, Ереванский государственный университет
Период времени	2016 - 2023
Звание/степень	заведующий учебной лабораторией

Учреждение	Ереванский государственный медицинский университет

Период времени	2015 до настоящего времени
Звание/степень	преподаватель

Учреждение	Лаборатория физики твердого тела, Ереванский государственный университет
Период времени	2008 - 2022
Звание/степень	научный сотрудник

Публикации

Статья

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

Статья

Planar quantum dots: Theoretical approaches
Aram Manaselyan, Vram Mughnetsyan, Albert Kirakosyan

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

Статья

Controlling the excitation spectrum of a quantum dot array with a photon cavity
Vidar Gudmundsson, Vram Mughnetsyan, Nzar Rauf Abdullah, Chi-Shung Tang, Valeriu Moldoveanu,

Andrei Manolescu
Physical Review B 2023 115306

Статья

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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Статья

Unified approach to cyclotron and plasmon resonances in a periodic two-dimensional GaAs electron gas hosting the Hofstadter butterfly
Vram Mughnetsyan, Vidar Gudmundsson, Nzar Rauf Abdullah, Chi-Shung Tang, Valeriu Moldoveanu,

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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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Статья

Electron–hole interaction in cylindrical quantum dots
Vram Mughnetsyan, Ashot Movsisyan, Albert Kirakosyan

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Статья

Effects of a far-infrared photon cavity field on the magnetization of a square quantum dot array
Vidar Gudmundsson, Vram Mughnetsyan, Nzar Rauf Abdullah, Chi-Shung Tang, Valeriu Moldoveanu,

Andrei Manolescu

Physical Review B 2022 115308

Статья

Electronic and Magnetic Properties of Laser Dressed Quantum Dot and Ring with Rashba Spin-Orbit Coupling
Vram Mughnetsyan, Aram Manaselyan, Manuk Barseghyan, Albert Kirakosyan, Laura M. Perez,

David Laroze

Springer Proceedings in Physics (Optics and Its Applications) 2022 145-154

Статья

Interminiband absorption in a quantum ring superlattice in magnetic field with periodic vector potential
Vram Mughnetsyan, Ara Atayan, Albert Kirakosyan, Vigen Aziz-Aghchegala

Physica E: Low-dimensional Systems and Nanostructures 2020 113722(1-6)

Статья

Control of electronic and optical properties of a laser dressed double quantum dot molecule by lateral electric field
M.G. Barseghyan, V.N. Mughnetsyan, H.M. Baghramyan, F. Ungan, L.M. Perez, D. Laroze

Physica E: Low-dimensional Systems and Nanostructures 2020 114362(1-7)

Статья

Tuning of energy gap and 1D Dirac-like points in artificial graphene and boron nitride monolayer by an external electric field
Vram Mughnetsyan

Micro and Nanostructures (Previously known as Superlattices and Microstructures) 2020 106700

Статья

Effect of anisotropic strain on the electronic characteristics of an InAs/GaAs honeycomb superlattice
Vram Mughnetsyan, Albert Kirakosyan

Micro and Nanostructures (Previously known as Superlattices and Microstructures) 2019 243-251

Статья

Effect of the impurity on the Aharonov-Bohm oscillations and the intraband absorption in GaAs/ Ga1− xAlxAs 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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Статья

Exciton–Exciton Interactions in Coaxial Double Quantum Rings

Vram Mughnetsyan, Vanik Shahnazaryan, Ivan Shelykh, Hayk Sarkisyan

Nanomaterials 2019 1469(1-13)

Статья

Rashba splitting of Dirac points and symmetry breaking in strained artificial graphene
Vram Mughnetsyan, Aram Manaselyan, Manuk Barseghyan, Albert Kirakosyan, David Laroze

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Статья

Effect of interdiffusion and external magnetic field on electronic states and light absorption in Gaussian-shaped double quantum ring
V.L. Aziz Aghchegala, V.N. Mughnetsyan, A.A. Kirakosyan

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Статья

EFFECT OF DONOR IMPURITY ON AHARONOV–BOHM OSCILLATIONS IN A DOUBLE QUANTUM RING WITH GAUSSIAN CONFINEMENT
V. N. MUGHNETSYAN

Proceedings of the YSU. Physical and Mathematical Sciences 2018 205-212

Статья

Effect of interdiffusion and magnetic field on two-electron states in Gaussian-shaped double quantum rings
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Effect of Rashba spin-orbit coupling and external magnetic field on electronic minibands in highly strained one-layer quantum ring superlattice
Vram Mughnetsyan, Aram Manaselyan, Albert Kirakosyan

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Strain distribution and band structure of InAs/GaAs quantum ring superlattice
Vram Mughnetsyan, Albert Kirakosyan

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Статья

Elastic strain distribution in one layer quantum ring superlattice
V.N. Mughnetsyan, A.A. Kirakosyan

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Статья

Rashba Spin-Orbit Coupling in a Two-Dimensional Quantum Ring Superlattice
V. Mughnetsyan, A. Manaselyan, A. Kirakosyan

Micro and Nanostructures (Previously known as Superlattices and Microstructures) 2015 584-591

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Статья

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

Journal of Physics: Conference Series 2015 012017/4pp

http://iopscience.iop.org/journal/1742-6596

Статья

Effect of phonon confinement on one- and two-polar optical phonon capture processes in quantum dots
K.A. Vardanyan, A.L. Vartanian, V.N. Mughnetsyan, A.A.Kirakosyan

Physica E: Low-dimensional Systems and Nanostructures 2015 268-274

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Effect of interdiffusion on electronic states of strain-free Gaussian-shaped double quantum ring superlattice
V.L. Aziz Aghchegala, V.N. Mughnetsyan, A.A. Kirakosyan

Physica E: Low-dimensional Systems and Nanostructures 2015 30-35

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Статья

Effect of interdiffusion on nonlinear intraband light absorption in Gaussian-shaped double quantum rings
V.L. Aziz Aghchegala, V.N. Mughnetsyan, A.A. Kirakosyan

Physica E: Low-dimensional Systems and Nanostructures 2015 210-216

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Статья

Effect of interdiffusion on band structure in GaAs/Ga1-xAlxAs quantum ring superlattices
V. Mughnetsyan, A. Kirakosyan, A. Manaselyan

6-th International Conference on Nanomaterials, NANOCON-2014, Conference Proceedings 2015 47-53

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Конференция

Elastic Strain Distribution in one layer InAs/GaAs Quantum Ring Superlattice.
V.N. Mughnetsyan, A.A. Kirakosyan

Конференция

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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Конференция

Magneto-optical properties of arrayed structures of quantum dots and rings
Yeganyan Lilit, Mughnetsyan Vram, Mansoury Maryam

Конференция

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