

Publications

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**ГЕНЕРАЦИЯ ВЫСШИХ ГАРМОНИК С УЧЕТОМ МНОГОЧАСТИЧНОГО КУЛОНОВСКОГО
ВЗАИМОДЕЙСТВИЯ В ГРАФЕНОВОЙ КВАНТОВОЙ ТОЧКЕ**

Х. В. Седракян, А. Г. Казарян, Б. Р. Авчян, Г. А. Мусаелян, Т. М. Маркосян

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical
Physics)
2023 56–65

Article

High Harmonic Generation with Many-Particle Coulomb Interaction in Graphene Quantum Dot

Kh. V. Sedrakian, A. G. Ghazaryan, B. R. Avchyan, G. A. Musayelyan, T. M. Markosyan

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical
Physics)
2023 47–54

Article

ГАРМОНИКИ ВЫСШЕГО ПОРЯДКА В ГЕКСАГОНАЛЬНЫХ ГРАФЕНОВЫХ КВАНТОВЫХ ТОЧКАХ

Х.В. Седракян, А. Г. Казарян, Б. Р. Авчян, К.С. Погосян, Т.М. Маркосян

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical
Physics)
2023 457–466

Article

Higher-Order Harmonics in Hexagonal Graphene Quantum Dots

Kh. V. Sedrakian, A. G. Ghazaryan, B. R. Avchyan, Q. S. Poghosyan, T. M. Markosyan

Journal of Experimental and Theoretical Physics 2023 395–403

Article

Генерация высоких гармоник в треугольных квантовых графеновых точках

Б. Р. Авчян, А. Г. Казарян, К. А. Саргсян, Х. В. Седракян

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical
Physics)
2022 155–165

Article

High Harmonic Generation in Triangular Graphene Quantum Dots

B. R. Avchyan, A. G. Ghazaryan, K. A. Sargsyan, Kh. V. Sedrakyan

Journal of Experimental and Theoretical Physics 2022 125–134

Article

**High harmonic generation with many-body Coulomb interaction in rectangular graphene
quantum dots of armchair edge**

Babken R. Avchyan, Armenuhi G. Ghazaryan, Samvel S. Israelyan, Khachik V. Sedrakian

Article

High-order harmonic generation in three-dimensional Weyl semimetals with broken time-reversal symmetry

H. K. Avetissian, V. N. Avetisyan, B. R. Avchyan, G. F. Mkrtchian

Physical Review A 2022 033107/1-8

Article

On Laser-Induced High-Order Wave Mixing and Harmonic Generation in a Graphene Quantum Dot

B. R. Avchyan, A. G. Ghazaryan, K. A. Sargsyan, Kh. V. Sedrakian

JETP Letters 2022 428-435

Article

О лазерно-индуцированной генерации высших гармоник и смещении волн высокого порядка в графеновой квантовой точке

Авчян Б. Р., Казарян А. Г., Саргсян К.А., Седракян Х. В.

Письма в Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical Physics Letters)
2022 426-433

Article

Free-electron nanolaser based on graphene plasmons

H. K. Avetissian, B. R. Avchyan, H. H. Matevosyan, G.F. Mkrtchian

Laser Physics 2021 055801

Article

ОТКЛИК ВЫСШИХ ГАРМОНИК ИНТЕНСИВНОГО КОГЕРЕНТНОГО ЭЛЕКТРОМАГНИТНОГО ПОЛЯ НА ИЗМЕНЕНИЕ ТОПОЛОГИИ ПОВЕРХНОСТИ ФЕРМИ В ГРАФЕНОПОДОБНЫХ НАНОСИСТЕМАХ

Авчян Б. Р., Казарян А. Г., Саргсян К. А., Седракян Х. В.

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical Physics)
2021 1003-1012

Article

Fermi Surface Topology Signature on the High Harmonics Generation in Graphene-Like Nanostructure

B. R. Avchyan, A. G. Ghazaryan, K. A. Sargsyan, Kh. V. Sedrakian

Журнал экспериментальной и теоретической физики (Journal of Experimental and Theoretical Physics)
2021 883-891

Article

On the extreme nonlinear optics of graphene nanoribbons in the strong coherent radiation fields

Hamlet K. Avetissian, Babken R. Avchyan, Garnik F. Mkrtchian, Karine A. Sargsyan

Journal of Nanophotonics 2020 026018(1-9)

Article

Wave mixing and high harmonic generation at two-color multiphoton excitation in two-dimensional hexagonal nanostructures

H. K. Avetissian, A. K. Avetissian, B. R. Avchyan, G. F. Mkrtchian

Physical Review B 2019 035434(1-8)

Article

Microscopic nonlinear quantum theory of absorption of strong electromagnetic radiation in doped graphene

Ara Karapet Avetissian, Armenuhi Gevorg Ghazaryan, Khachik Vazgen Sedrakian,

Babken Ruben Avchyan

Journal of Nanophotonics 2018 016006/12

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Article

Multiphoton excitation and high-harmonics generation in topological insulator

H. K. Avetissian, A. K. Avetissian, B. R. Avchyan, G. F. Mkrtchian

JOURNAL OF PHYSICS-CONDENSED MATTER 2018 185302(1-7)

Article

Multiphoton excitation and harmonic generation from the quantum electrodynamic vacuum

H. K. Avetissian, A. K. Avetissian, B. R. Avchyan, G. F. Mkrtchian

Laser Physics Letters 2018 126003(1-7)

Article

Induced nonlinear cross sections of conductive electrons scattering on the charged impurities in doped graphene

Avetissian Ara K., Ghazaryan Armenuhi G., Sedrakian Khachik V., Avchyan Babken R.

Journal of Nanophotonics 2017 036004: 1-12

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Article

Collective two-boson decay of excitons in a Bose-Einstein condensate and generation of coherent photon-phonon radiation

H. K. Avetissian, A. K. Avetissian, G. F. Mkrtchian, B. R. Avchyan

Physical Review B 2017 045206/6

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Article

Enhanced high-order-harmonic generation and wave mixing via two-color multiphoton excitation of atoms and molecules

H.K. Avetissian, B.R. Avchyan, G.F. Mkrtchian

Physical Review A 2016 013856/7

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Multiphoton Excitations and Harmonics Generation in Quantum Electrodynamic Vacuum

Avetissian H.K., Avetissian A.K., Avchyan B.R., Mkrtchian G.F.

News and Reports from High Energy Density generated by Heavy Ion and Laser Beams 2015 2015 62

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Conference

Radiation Induced Nonlinear Cross Sections of Conductive Electrons Scattering on Charged Impurities in Doped Graphene

A.K. Avetissian, B.R. Avchyan, A.G. Ghazaryan, Kh.V. Sedrakian

Conference

Nonlinear Absorption Coefficient of Doped Graphene at Conductive Electrons Scattering on Charged Impurities

A.G. Ghazaryan, B.R. Avchyan, H.H. Matevosyan, Kh.V. Sedrakian

Conference

Impact of Electron-ion Coulomb Interaction in Above Threshold Ionization of Atom in Strong Medium Infrared Laser Field

Avetissian A.K., Ghazaryan A.G., Sedrakian Kh.V., Avchyan B.R.

Conference

High harmonics generation with 2D metallic carriers of topological insulators

H. K. Avetissian, A. K. Avetissian, B. R. Avchyan, G. F. Mkrtchian

Conference

Radiation induced nonlinear cross sections of conductive electrons scattering on charged impurities in bilayer graphene

A. K. Avetissian, B. R. Avchyan, A. G. Ghazaryan, Kh. V. Sedrakian

Conference

High-Harmonic Generation in Bilayer Graphene with an Electric Field Induced Band Gap

A. K. Avetissian, B. R. Avchyan, A. G. Ghazaryan, Kh. V. Sedrakian

Conference

High harmonic generation in plane graphene quantum dots with different shapes and edges

B. R. Avchyan, K. A. Sargsyan, A. G. Ghazaryan, Kh. V. Sedrakian

Conference

High harmonic generation on graphene quantum dots with collective scattering of electrons

B. Avchyan, A. Ghazaryan, S. Israelyan, Kh. Sedrakian

Conference

Optical anisotropy of high-order harmonic generation in rectangular graphene quantum dots

B. R. Avchyan, A. G. Ghazaryan, Q. S. Poghosyan, Kh. V. Sedrakian

Conference

High Harmonic Generation in (3+1)-dimensional Weyl Semimetals

Hamlet Avetissian Karo, Vagharshak Avetisyan Narek, Babken Avchyan Ruben, Garnik Mkrtchian Felix
