

# Artak Ara Avetisyan

**Research Institute of Physics**  
Laboratory of Solid State Physics  
Senior researcher

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## Education

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Physics
<b>Date</b>	1997 - 2000
<b>Degree name</b>	PhD student

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Physics
<b>Date</b>	1992 - 1997
<b>Degree name</b>	Qualified specialist

## Scientific Rank/degree

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<b>Institution</b>	Yerevan State University
<b>Date</b>	2000
<b>Degree name</b>	Candidate
<b>Specialty</b>	Physico-mathematical sciences
<b>Scientific Supervisor</b>	Kazaryan Eduard Mushegh
<b>Research Topic</b>	The influence of nonparabolicity on impurity states

## Language skills

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Հայերեն Русский English Ελληνικά Deutsch

## Work experience

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<b>Institution</b>	Yerevan State University
<b>Period of time</b>	2010 till now
<b>Rank/degree</b>	Senior Researcher

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<b>Institution</b>	Antwerp University
<b>Period of time</b>	2008 - 2010
<b>Rank/degree</b>	researcher

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**Institution** Yerevan State University  
**Period of time** 2005 - 2008  
**Rank/degree** researcher

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**Institution** Cyprus University  
**Period of time** 2003 - 2005  
**Rank/degree** researcher

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**Institution** Yerevan State University  
**Period of time** 2002 - 2003  
**Rank/degree** researcher

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**Institution** Bremen University  
**Period of time** 2001 - 2002  
**Rank/degree** researcher

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**Institution** Yerevan State University  
**Period of time** 1998 - 2001  
**Rank/degree** researcher

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## Scientific interests

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- Physics of condensed matter
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## Participation in international conferences and seminars

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**15/09/2023 -** laser physics  
**20/09/2023** IRF  
Armenia

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## Other information

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Graduated from Yerevan State University in 1997.

## Publications

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*Article*

**Shallow donor states and interlevel transitions in gapped graphene bilayers**

A .P. Djotyan, K. Mouloupoulos, A.A. Avetisyan

Semiconductor Science and Technology 2025 015012

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*Article*

**Coherent Control of a Shallow Impurity Quantum States in Graphene Monolayer by**

**Bichromatic Phase Modulated Laser Pulses: Influence of Relaxation Processes [Когерентное управление квантовыми состояниями мелкой примеси в монослое графена с помощью фазомодули]**

A.A. Avetisyan, A.P. Djotyan, G.P. Djotyan, A.L.Vartanian, A.L. Asatryan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 42-49

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*Article*

**Comparative study on polaronic quantum confinement effects in wurtzite ZnO and GaN nanowires under external fields**

Anna Asatryan, Arshak Vartanian, Serob Hayrapetyan, Tigran Ghukasyan, Artak Avetisyan, Ya-Hong Xie

Results in Physics 2025 108535

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*Article*

**Optical Transitions 1S-2P<sub>x</sub> between Lowest States of a Shallow Impurity in Graphene Monolayer [Оптические переходы 1S-2P<sub>x</sub> между уровнями мелкой примеси в монослойном графене]**

A. P. Djotyan, A. A. Avetisyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 165-171

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*Article*

**Hydrogen-Like Impurity States in Doped Bilayer Graphene: Results for Different Trial Functions [Водородоподобные примесные состояния в легированном двухслойном графене: результаты для различных пробных функций]**

A.A. Avetisyan, K. Mouloupos, A.P. Djotyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 265 - 271

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*Article*

**Coherent Control of Lowest States of a Shallow Impurity in Graphene Monolayer by Phase Modulated Laser Pulses [Когерентный контроль наинизших уровней мелкой примеси в монослойном графене с помощью модулированных по фазе лазерных импульсов]**

A. P. Djotyan, G. P. Djotyan, A. A. Avetisyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 272 - 278

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*Article*

**The Energy Levels of a Shallow Impurity in Monolayer Graphene in a Perpendicular Magnetic Field [Энергетические уровни мелкой примеси в монослойном графене в перпендикулярном магнитном поле]**

A. A. Avetisyan, A.P. Djotyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 386-390

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*Article*

**Coulomb Interaction in Graphene Systems**

A. A. Avetisyan, A. P. Djotyan

Physics of Particles and Nuclei 2023 997-1001

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*Article*

**Impurity states in gated graphene systems in a magnetic field**

A. A. Avetisyan, A. P. Djotyan

International Conference on Microwave & THz Technologies, Wireless Communications and OptoElectronics (IRPhE 2022)  
2023 46-48

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*Article*

**Interaction of Electromagnetic Field with Gated Graphene Bilayer**

A. P. Djotyan, A. A. Avetisyan, K. Mouloupoulos

Armenian Journal of Physics 2019 33-39

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*Article*

**Impurity States in Gated Graphene Bilayer in a Magnetic Field**

A.A. Avetisyan, A.P. Djotyan

Armenian Journal of Physics 2019 248-253

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*Article*

**Tunable Excitons in Bilayer Graphene with Opened Energy Gap**

A. A. Avetisyan, A. P. Djotyan, K. Mouloupoulos

Physics of Atomic Nuclei 2018 799-803

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*Article*

**Nonlinear Properties of Gated Graphene in a Strong Electromagnetic Field**

A.P. Djotyan, A.A.Avetisyan, K.Mouloupoulos

Physics of Atomic Nuclei 2017 307-314

<http://link.springer.com/journal/11450>

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*Article*

**EXCITONIC ABSORPTION IN GAPPED GRAPHENE SYSTEMS**

A.P.Djotyan, A.A.Avetisyan

Proceedings of the YSU A. Physical and Mathematical Sciences 2017 93-96

<http://www.ysu.am/science/en/journals>

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*Article*

**Tunable excitons in gated graphene systems**

A.A. Avetisyan, A.A.Djotyan, K.Mouloupoulos

Proceedings of SPIE-Progress in Biomedical Optics and Imaging 2017 1-11

<http://spie.org/publications/conference-proceedings>

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*Conference*

**COHERENT RESPONSE OF MULTILAYER GRAPHENE SYSTEMS TO LASER RADIATION:  
NONLINEAR EFFECTS AND MANY ELECTRON CORRELATIONS**

Artak Avetisyan, Djotyan Anahit

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*Conference*

**Nonlinear optical properties of gated graphene systems**

Artak Avetisyan, Djotyan Anahit

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*Conference*

**Excitonic absorption in gated graphene systems**

Artak A. Avetisyan, Anahit P. Djotyan, Konstantinos Mouloupoulos

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*Conference*

**Tunable excitonic absorption in gapped graphene systems**

A. Avetisyan, A. Djotyan, K. Mouloupoulos

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*Conference*

**Nonlinear response and tunable excitonic absorption in gapped graphene systems**

Konstantinos Mouloupoulos, Artak A. Avetisyan, Anahit P. Djotyan

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