Kamo H. Aharonyan

Doctor of Science, Professor

In 1977 he graduated from Yerevan State University in the specialty "Physics". In 2015 he became Doctor of Science in Physics.

Teaching:

- Optical phenomena in nanostructures **(Master)**

Research areas:

- Low-Dimensional Impurity and Excitonic States
- One- and Multi-particle Properties of Semiconductor Nanostructures (quantum wells, superlattices, quantum wires, quantum dots).
- Direct Optical Transitions in Semiconductor Nanostructures.

Grants:

- British Council Grant, 1987.
- State Science Committee, RA, 2016, 2018, 2022.

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Scientific basic publications over the last 10 years:

1. K. H. Aharonyan, N.B.Margaryan. Dielectric confinement affected screened Coulomb potential in semiconductor quantum wire. 2nd Int. Symposium, Optics & its applications, Yerevan, Book of Abstracts, pp. 80-81, 2014.
2. K. H. Aharonyan, N.B.Margaryan. Screened Coulomb properties of semiconductor nanowire with dielectric confinement effect. Proc. of the 10-th Int. Conf. “Semiconductor Micro- and Nanoelectronics”, pp. 94-96, 2015.
3. K. H. Aharonyan, N.B.Margaryan. Plasmon-Phonon Coupling in lead salt semiconductor quantum well. Journal of Physics : Conf. Series, Vol. 673, pp. 012002-1 -6, 2016.

4. K. H. Aharonyan, N.B.Margaryan. Dielectric confinement influenced screened Coulomb potential for a semiconductor quantum wire. Journal of Physics : Conf. Series, Vol. 672, pp. 012009-1 -8, 2016.
5. K. H. Aharonyan, N.B.Margaryan. Binding energy of the one-sided dielectrically enhanced screened exciton in semiconductor quantum well. ՀՀ ԳԱԱ Զեկույցներ (NASA REPORTS), v.116, pp. 57-63, 2016.
6. K. H. Aharonyan, E. M. Kazaryan, E. P.Kokanyan. Coulomb interaction in the finite dielectric invironment based MOSFET structures. Proc. of the 11-th Int. Conf. “Semiconductor Micro- and Nanoelectronics”, pp. 41-47, 2017.
7. K. H. Aharonyan, E. M. Kazaryan, E. P.Kokanyan. Coulomb interaction in the finite dielectric-invironment mediateded MOSFET structures. Вестник РАУ, 1, էջ 107-114, 2017.
8. K. H. Aharonyan, E. P.Kokanyan. Coulomb interaction energy in thin oxide based MOSFET systems. Լրաբեր, գիտական հոդվածների ժողովածու – ՀԱՊՀ (Bulletin, Collection of Scientific Papers, National Polytechnic University of Armenia), h. 1, էջ 59-64, 2018.
9. K. H. Aharonyan, E. P.Kokanyan, M. Aillerie. Screened shallow impurity properties of quantum well heterosystems with high-κ dielectric barrier environment, Physica E, Vol. 113, pp. 47-53. 2019.
10. K. H. Aharonyan, E. P.Kokanyan, M. Aillerie. Energy of the screened Coulomb interaction in MOS structure with the dielectric environment of finite thickness, Լրաբեր, գիտական հոդվածների ժողովածու – ՀԱՊՀ (Bulletin, Collection of Scientific Papers, National Polytechnic University of Armenia), h. 1, էջ 62-68, 2020.
11. K. H. Aharonyan, A.Zh.Khachatryan. Plasmon mode features in PbSe-based free-standing semiconductor quantum wires. Լրաբեր, գիտական հոդվածների ժողովածու – ՀԱՊՀ (Bulletin, Collection of Scientific Papers, National Polytechnic University of Armenia), h. 1, էջ 52-57, 2021.
12. K. H. Aharonyan, E. M. Kazaryan, E. P.Kokanyan. Dielectric confinement affected exciton-polariton properties of the semiconductor nanowires. Proceedings of the 9th Int. Symposium Optics-2022, Springer Proceedings in Physics, Optics & its applications, 2022, V. 281, Ch.4, pp.47-58.
13. K. H. Aharonyan, N.E.Kokanyan, E. P.Kokanyan. Impurity Properties of Inversion Layers with Electronic and Substrate Quantum Screening. Crystals, Vol. 13, 83, pp. 1-14, 2023.