Lusine Rafik Aloyan

Institute of Physics
Chair of Condensed Matter Physics
Associate professor

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Associate professor

Research Institute of Physics
Կոնդենսացված վիճակի ֆիզիկայի կենտրոն
Մակրոմոլեկուլների ֆիզիկայի լաբորատորիա
Scientific Worker

29-30
aloyan@ysu.am

Education

Institution	Yerevan State University
Faculty	Molecular Physics
Date	2002 - 2006
Degree name	PhD student

Institution	Yerevan State University
Faculty	Physics
Date	2000 - 2002
Degree name	Masters

Institution	Yerevan State University
Faculty	Physics
Date	1996 - 2000
Degree name	Bachelor

Scientific Rank/degree

Institution	Yerevan State University
Date	2008
Degree name	PhD
Scientific Supervisor	Yeva Dalyan
Research Topic	The role of side substituents in the complex formation of pyridyl porphyrins with DNA.

Language skills

English Русский

Work experience

Institution	Yerevan State University
Period of time	2024 till now
Rank/degree	Associate Professor

Publications

Article

The Influence of X-ray Radiation on DNA and Platinated DNA Complexes in the Presence of Porphyrin

A. Avetisyan, L. Mkrtchyan, S. Khosrovyan, M. Avetisyan, G. Ananyan, L. Aloyan

Radiation Physics and Chemistry 2026 113890

https://www.sciencedirect.com/science/article/pii/S0969806X26003002?via%3Dihub

Article

Investigating the impact of metalloporphyrins on DNA damage during electron beam irradiation

A. Avetisjan, L. Mkrtchyan, S. Khosrovyan, L. Aloyan

Nuclear Instruments and Methods in Physics Research Section A Accelerators Spectrometers Detectors and Associated Equipment
2025 170328

Article

INFLUENCE OF CATIONIC PORPHYRINS ON CISPLATIN-MODIFIED DNA

G. V. Ananyan, Ye. B. Dalyan, L. R. Aloyan, A. A. Avetisyan, N. H. Karapetyan

Proceedings of the YSU B Chemical and Biological Sciences 2025 43–56

Article

Enhanced DNA damage induced by ultrashort electron beams in the presence of a Cu-containing porphyrin

L. Aloyan, H. Margaryan, P. Karataev

Nuclear Instruments and Methods in Physics Research Section A Accelerators Spectrometers Detectors and Associated Equipment
2024 169099

Conference

Investigating the Impact of Metalloporphyrins on DNA Damage During Eletron Beam Irradiation

A. Avetisyan, L. Aloyan, L. Mkrtchyan, S. Khosrovyan

2024 148 - 148

https://www.lnf.infn.it/conference/channeling2024/

Conference

The investigation of irradiation effect on DNA/cisplatin complexes in presence of AgTOEPyP4 Porphyrin by absorption spectroscopy method

Ani Avetisyan, Lusine Mkrtchyan, Lusine Aloyan

2024 86-87

https://indico.cern.ch/event/1400449/

Conference

Investigation of irradiated DNA/porphyrin complexes by optical methods
Lusine Aloyan, Ani Avetisyan

2024 46 - 47

https://indico.cern.ch/event/1400449/

Study manual

Պարույր-կծիկ անցումը ԴՆԹ-ի մոլեկուլում
Լուսինե Ալոյան
2024 50

Article

Spectral Study of the Binding of TMetAlPyP3 and ZnTMetAlPyP3 Porphyrins to DNA
L. R. Aloyan, A. A. Avetisyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 99–103

Article

Influence of Cation Porphyrins on DNA Damage during Irradiation by X-rays
L Aloyan, A Avetisyan, V Arakelyan, H Margaryan

Journal of Physics Conference Series 2023 012009

Article

Photovoltaic Tweezers Based on Optical Holography: Application to 2D Trapping of DNA Molecules on a Lithium Niobate Crystal
Lusine Aloyan, Yeva Dalyan, Lusine Tsarukyana, Anahit Badalyan, Rafael Drampyan

Optical Memory and Neural Networks 2023 S384–S395

Conference

Влияние мультипликативного шума на выходной сигнал ДНК-биосенсора
Алоян Л., Аракелян В.Б., Парсаданян М.А., Вардеванян П.О.

2023 40 - 41

http://rusbiophysics.ru/db/conf.pl

Conference

Influence of Cation Porphyrins on DNA Damage during Irradiation by X-rays
L.R. Aloyan, A.A. Avetisyan, V.B. Arakelyan, H.G. Margaryan

2023 53 - 53

https://school.iapp.am/publications/book_of_abstract/

Conference

The Influence of Porphyrins on DNA Damage Induced by Electron Beam
L. Aloyan, V. Arakelyan, A. Avetisyan, H. Margaryan

2023 131 - 131

https://conference.iapp.am/

Conference

Bessel Beam Assisted Photovoltaic Trapping of Micro/nanoobjects on a Lithium Niobate Crystal

L. Aloyan, Y. Dalyan, L. Tsarukyan, A. Badalyan, R. Drampyan

2022 13 - 14

https://ipr.sci.am/pl/conferences/archive.html

Conference

Optical Techniques for the Study of DNA–porphyrin Interactions
L. Aloyan, Y. Dalyan

2022 45-46

https://ipr.sci.am/pl/conferences/archive.html

Article

FLAP Collaboration: Tasks and Perspectives.Study of Fundamentals and New Applicationsof Controllable Generation of Electromagnetic Radiationby Relativistic Electrons Using Functional Materials
L. Aloyan, A. Avetisyan, Y. Dalyan, L. Grigoryan, N. Karapetyan, V. Kocharyan, A. Mkrtchyan,

A. Movsisyan, A. Saharian, A. Shahbazyan, A. Baldin, 37

Physics of Particles and Nuclei Letters 2021 338–353

Conference

The DNA Damage Induced by X-Ray Irradiation in the Presence of Porphyrins
L.R. Aloyan, H.G. Margaryan

2021 88

http://conference.iapp.am/?module=article&utility=show_article&id_article=30

Conference

Ionizing radiation effects on biological molecules
L.R. Aloyan
2021 107 - 107

https://conference.iapp.am/publications/abstract/

Article

Formation of Parallel X-ray Beams with Controllable Quantity and Distances
T.R. Muradyan, E.H. Bagdasaryan, S.M. Petrosyan, H.H. Samsonyan, L.R. Aloyan, A.V. Shahverdyan,

V.R. Kocharyan
Armenian Journal of Physics 2020 175-179

Conference

The influence of CuTOEPyP4 porphyrin on DNA damage induced by high energy electron beam radiation.
L. R. Aloyan, Y. B. Dalyan, S.G Haroutiunian

2019 85-86

https://www.jbsdonline.com/albany-2019-20th-conversation-c4330.html

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Conference

The influence of FeTOEPyP4 porphyrins on DNA damage induced by high energy electron beam radiation.
L.R. Aloyan, Y.B. Dalyan, S.G. Haroutiunian

2019 68

https://nrpm.yerphi.am/

Conference

INFLUENCE OF CATION PORPHYRINES ON DNA DAMAGE DURING ELECTRON BEAM IRRADIATION

L.R. Aloyan, Y.B. Dalyan, S.G Haroutiunian

2019 109-110

https://anam2019.org/

Conference

High energy electron beam radiation influence on DNA in the presence of porphyrins

L.R. Aloyan, L.G. Aslanyan, Y.B. Dalyan

2018 38-39

http://physecolab.ysu.am/workshop2018/

Article

Focusing of X-Rays inside a single crystal under the temperature gradient

L. R. Aloyan, V. V. Margaryan, K. T. Hayrapetyan, S. N. Noreyan, V. A. Khachatryan, A. A. Kiziridi

Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 264-270

Conference

The DNA Damage Induced by Higher Energy Electrons in Presence of Porphyrins

L. R. Aloyan, L.G. Aslanyan, Y. B. Dalyan

2017 36

http://www.molbiol.sci.am/wrkshp1_gen

Article

AREAL low energy electron beam applications in life and materials sciences.

V.M. Tsakanov, R.M.Aroutiounian, G.A.Amatuni, L.R.Aloyan, L.G.Aslanyan, V.Sh. Avagyan, N.S.Babayan, V.V.Buniatyan, Y.B.Dalyan, H.D.Davtyan, M.V. Derdzyan, B.A.Grigoryan, N.E.Grigoryan, L.S.Hakobyan, S.G.Haroutyunian, V.V. Harutiunyan, K.L.Hovhannesyan, V.G.Khachatryan, N.W.Martirosyan, G.S. Melikyan, A.G.Petrosyan, V.H.Petrosyan, A.A.Sahakyan, V.V.Sahakyan, A.A.Sargsyan, A.S.Simonyan, S.Sh.Tatikyan, G.V.Tsakanova, E.Tsovyan, A.S.Vardanyan, V.V.Vardanyan, A.S.Yeremyan, H.N.Yeritsyan, G.S.Zanyan

Nuclear Instruments and Methods in Physics Research Section A Accelerators Spectrometers Detectors and Associated Equipment
2016 248-253

http://www.journals.elsevier.com/nuclear-instruments-and-methods-in-physics-res...

Conference

INFLUENCE OF PORPHYRINS ON DNA DAMAGE INDUCED BY HIGHER ENERGY ELECTRONS

L.R. Aloyan

2016 10-11

Article

New Porphyrins/Calf Thymus DNA Complexes. Their Thermostability

Lusine ALOYAN, Yeva DALYAN, Aleksey GOGOLEV

Advanced Materials Research 2015 554-558

Article

X-ray diffraction method for determination of interplanar spacing and temperature

distribution in crystals under an external temperature gradient
V. R. Kocharyan, A. S. Gogolev, A. E. Movsisyan, A. H. Beybutyan, S. G. Khlopuzyan, L. R. Aloyan

Journal of Applied Crystallography 2015 853-856

Conference

Development of anticancer drug transporter on base of gold nanoparticles
L.R.Aloyan, Y.B.Dalyan

2015 70-71

Article

The stability of DNA–porphyrin complexes in the presence of Mn(II) ions.
G. Ananyan, A. Avetisyan, L. Aloyan, Y. Dalyan

Biophysical Chemistry 2011 96-101

http://www.elsevier.com/locate/biophyschem
