

Vahram Patvakan Mkrtchyan

Research Institute of Physics

Laboratory of Solid State Physics

Researcher

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Education

Institution	Yerevan State University
Faculty	Faculty of Physics, solid state physics department
Date	1985 - 1988
Degree name	PhD student

Institution	Yerevan State University
Faculty	Faculty of Physics, solid state physics department
Date	1980 - 1985
Degree name	Qualified specialist

Scientific Rank/degree

Institution	Yerevan State University
Date	1992
Degree name	Candidate
Specialty	Physico-mathematical sciences
Scientific Supervisor	Bezirganyan Petros
Research Topic	Studies of images of various combinations imperfections of X-ray interferometric systems

Language skills

Հայերեն Русский English

Work experience

Institution	Yerevan State University
Period of time	2018 till now
Rank/degree	Researcher

Institution	Ministry of education and science
Period of time	2017 - 2018
Rank/degree	Deputy Minister

Institution National Assembly of Armenia
Period of time 2014 - 2017
Rank/degree Parliament Member

Institution Yerevan State University
Period of time 2006 - 2014
Rank/degree Senior researcher

Institution Yerevan water and sewage CJSC, Mashtots branch
Period of time 2004 - 2006
Rank/degree Director

Institution Ministry of State Property Management
Period of time 2000 - 2004
Rank/degree Head of Department

Institution Yerevan State University
Period of time 1988 - 2000
Rank/degree Researcher

Scientific interests

- X-Ray interferometry, Liquid crystals, material science
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Publications

Article

Double-Slit X-Ray Dynamical Diffraction in the Transmitted Beam [Рентгеновская динамическая дифракция на двух щелях в проходящем пучке]

A. P. Aivazyan, M. K. Balyan, S. A. Petrosyan, V. P. Mkrtchyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 101-107

Article

Investigations of the Structure and Morphology of CsPbBr₃ Films Deposited by Vacuum Thermal Evaporation [Исследования структуры и морфологии пленок CsPbBr₃, осажденных методом вакуумного термического испарения]

L. A. Matevosyan, S. A. Petrosyan, V. P. Mkrtchyan, A. P. Aivazyan, V. S. Harutyunyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 202-209

Article

X-ray dynamical diffraction wavefront division interferometer (double-slit diffraction) with an asymmetric monochromator

Vahram Mkrtchyan, Minas Balyan, Sargis Petrosyan, Ashot Aivazyan

Acta Crystallographica A-Foundation and Advances 2025 438-448

Article

Measurements of the geometrical characteristics and refractive index of specimens made with X-ray interferometers

Vahram Mkrtchyan, Ashot Aivazyanyan, Sargis Petrosyan, Minas Balyan

Journal of Applied Crystallography 2024 499-502

Article

Investigation of structural and optical properties of CsPbBr₃ films synthesized by single-source vacuum evaporation method

Valeri Harutyunyan, Lenrik Matevosyan, Vahram Mkrtchyan, Gayane Pluzyan, Sargis Petrosyan,

Anna Tokmajyan

IET Conference Proceedings 2024 38-41/208333

Article

Residual stress on ettringite crystals in mature Type K shrinkage-compensating cement pastes

Valeri S. Harutyunyan, Ashot P. Aivazyanyan, Vahram P. Mkrtchyan, Paulo J.M. Monteiro,

Ana Paula Kirchheim, Sebastian Prinz

Construction and Building Materials 2023 132892

Article

Observation of Electroconvection in Nematic Liquid Crystals by X-Ray Interferometric Method

V. P. Mkrtchyan, L. G. Gasparyan, R. A. Alaverdyan, T. M. Sarukhanyana

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 379-383

Article

Наблюдение электроконвекции в нематических жидких кристаллах рентгеноинтерферометрическим методом

Л.Г. Гаспарян, В.П. Мкртчян, Р.Б. Алавердян, Т.М. Саруханян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 561-567

Article

ДВОЙНОЕ ЛУЧЕПРЕЛОМЛЕНИЕ РЕНТГЕНОВСКИХ ЛУЧЕЙ В НЕМАТИЧЕСКИХ ЖИДКИХ КРИСТАЛЛАХ ПОД ВОЗДЕЙСТВИЕМ ВНЕШНЕГО ЭЛЕКТРИЧЕСКОГО ПОЛЯ

Л.Г.Гаспарян, В.П.Мкртчян, Т.К. Дадалян, П.С. Петросян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2019 513-518

Article

Investigation of the influence of electric field on the anisotropy of nematic liquid crystals by means of X-ray interferometric method

T. K. Dadalyan, L. G. Gasparyan, V. P. Mkrtchyan

ԵՊՀ Գիտական տեղեկագիր, Բնական գիտություններ 2017 97-100

<http://ysu.am/science/hy/1355990920>

Article

Исследование влияния внешнего электрического поля на анизотропию нематических жидких кристаллов методом рентгеновской интерферометрии

В.П.Мкртчян, Л.Г.Гаспарян, Т.К. Дадалян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2017
52-58
<http://www.flib.sci.am/eng/Fizika/Frame.html>

Article

Residual stress on ettringite crystals in expansive cement paste

V.S.Harutyunyan, A.P.Aivazyan, V.P.Mkrtchyan

Proceedings of the YSU A. Physical and Mathematical Sciences 2017 105-108

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

Article

Investigation of the influence of external electric field on the anisotropy of nematic liquid crystals by X-Ray interferometry

L. G. Gasparyan, V. P. Mkrtchyan, T. K. Dadalyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 271-275

Article

Study of an anisotropy of nematic liquid crystals in X-ray frequency range

V.P.Mkrtchyan, L.G.Gasparyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2015 388-393

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/11958>

Article

Исследование анизотропии нематических жидких кристаллов в области рентгеновских частот.

Л.Г.Гаспарян, В.П.Мкртчян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2015
520-528

<http://www.flib.sci.am/eng/Fizika/Frame.html>

Article

Measurement of the refractive index of nematic liquid crystals 5CB by means of x-ray interferometry

Mkrtchyan V. P., Gasparyan L. G., Dadalyan T. K., Balyan M. K., Kuyumchyan A. V.

Proceedings of SPIE - The International Society for Optical Engineering 2014 920714

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

Article

ЗАВИСИМОСТЬ РЕНГЕНОДИФРАКЦИОННЫХ КАРТИН ОТ ПЕРВИЧНОГО ПАДАЮЩЕГО ПУЧКА

Л.Г. Гаспарян, В.П. Мкртчян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2013
285-290

Article

Study of the X-ray anisotropy of materials via X-ray interferometry

V.P.Mkrtchyan, L.G.Gasparyan, M.K.Balyan

Inorganic Materials 2011 1676-1680

<http://link.springer.com/journal/10789>

Article

Исследование рентгено-оптической анизотропии материалов рентгеноинтерферометрическим методом

Л.Г.Гаспарян, В.П.Мкртчян, М.К.Балян

Заводская лаборатория. Диагностика материалов. 2010 27-31

Article

Искусственная ультразвуковая анизотропия кристаллов в области рентгеновских частот

Л.Г. Гаспарян, В.П. Мкртчян, М.К. Балян, А.С. Мелконян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2007 242-249

Article

Температурная искусственная анизотропия кристаллов в области рентгеновских частот

Л.Г. Гаспарян, В.П. Мкртчян, М.К. Балян, А.Г. Григорян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2006 374-378

Article

X-ray Diffraction Investigations of Microstructure of calcium Hydroxide Crystallites in the Interfacial Transition Zone of Concrete

Valeri S.Harutyunyan, Vahram P.Mkrtchyan, Minas K.Balyan, Ashot P.Aivazyan, Eduard S. Abovyan,

Paulo J.M.Monteiro

Journal of the American Ceramic Society 2003 2162-2166

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1551-2916](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1551-2916)

Article

Micro strain distribution in calcium hydroxide present in the interfacial transition zone

V.S.Harutyunyan, V.P.Mkrtchyan, M.K.Balyan, E.S.Abovyan, P.J.M.Monteyro

Cement and Concrete Research 2000 709-713

<http://www.journals.elsevier.com/cement-and-concrete-research>

Article

Влияние внешних воздействий на Брэгг-Лауэвскую дифракцию рентгеновских лучей

Л.Г.Гаспарян, В.П. Мкртчян, А.Г. Григорян, М.К.Балян, С.А. Валасанян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2000 28-37

Article

Исследование особенностей дифракции X-лучей в сочетаниях Брэгг-Лауэвских отражений

Л.Г.Гаспарян, В.П.Мкртчян, М.К.Балян, А.Г.Григорян, С.А.Валасанян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 1999 162-171

<http://www.flib.sci.am/eng/Fizika/Frame.html>

Conference

Investigation of the anisotropy nematic liquid crystals in X-ray frequency range

Gasparyan L.G., Mkrtchyan V.P.

Conference

Study of microstructural peculiarities and deformation state of ettringite crystals in Type K cement pastes by FTIR spectroscopy, optical microscopy, combined SEM-EDS, and XRD techniques

V.S. Harutyunyan, A.P. Aivazyan, P.J.M. Monteiro, A.P. Kirchheim, V.P. Mkrtchyan

Conference

Measurement of the Refractive Index of Nematic Liquid Crystals 5CB by Means of X-ray Interferometry

V.P.Mkrtchyan, L.G.Gasparyan, T.K.Dadalyan, M.K.Balyan, A.V.Kuyumchyan

Conference

Nano Fabrication of Compound Bifocal Zone Plate for X-ray Optics

A.V.Kuyumchyan, A.Y.Suvorov, T.Ishikawa, V.V.Aristov, E.V.Shulakov, A.A.Isoyan, N.A.Kuyumchyan,

V.P.Mkrtchyan

Conference

ДВОЙНОЕ ЛУЧЕПРЕЛОМЛЕНИЕ РЕНТГЕНОВСКИХ ЛУЧЕЙ В НЕМАТИЧЕСКИХ ЖИДКИХ КРИСТАЛЛАХ ПОД ВОЗДЕЙСТВИЕМ ВНЕШНЕГО ЭЛЕКТРИЧЕСКОГО ПОЛЯ

Л.Г. Гаспарян, В.П. Мкртчян, Т.К. Дадалян

Conference

X-Ray Double Refraction Through Nematic Liquid Crystals Under Influence of an External Electric Field

V. P. Mkrtchyan, L.G.Gasparyan, T.K.Dadalyan

Conference

Double-Slit X-ray Dynamical Diffraction in the Transmitted and Diffracted Beams

A. P. Aivazyan, M. K. Balyan, S. A. Petrosyan, V. P. Mkrtchyan
