

## Publications

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*Article*

**Study of phase objects by dynamical diffraction of a spherical X-ray wave in a crystal using a temperature gradient**

L. Levonyan, H. Manukyan

Journal of Instrumentation 2024 C02058

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*Article*

**Features of Spherical X-Ray Wave Diffraction by a Low Angle Twist Boundary Perpendicular to the Crystal Surface [Особенности дифракции сферической рентгеновской волны на малоугловой границе кручения, перпендикулярной поверхности кристалла]**

L. V. Levonyan, H. M. Manukyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 214-218

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*Article*

**X-Ray Phase Contrast in a Superlattice in the Presence of a Temperature Gradient [Рентгеновский фазовый контраст в сверхрешетке при наличии температурного градиента]**

L. V. Levonyan, H. M. Manukyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 337-341

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*Article*

**Determination of the superlattice structure factor by X-ray diffraction using a temperature gradient**

Levon Levonyan, Hasmik Manukyan

Acta Crystallographica A-Foundation and Advances 2023 14-19

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*Article*

**X-ray dynamical diffraction Talbot effect behind a crystal in free space**

Minas Balyan, Levon Levonyan, Karapet Trouni

Acta Crystallographica A-Foundation and Advances 2021 149-159

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*Article*

**Spherical-wave X-ray dynamical diffraction Talbot effect inside a crystal**

Minas K. Balyan, Levon V. Levonyan, Karapet G. Trouni

Acta Crystallographica A-Foundation and Advances 2020 494-502

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*Article*

**Study of Two-Dimensional Phase Objects by Diffraction Focusing of Cylindrical X-Ray Wave on a Superlattice With Variable Period**

L.V. Levonyan, H.M. Manukyan

*Article*

**Influence of Interdiffusion of Heteromaterials on the Diffraction Focusing of Spherical X-Ray Wave in a Superlattice**

L.V. Levonyan, H.M. Manukyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2019 203–209

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*Article*

**Рентгеновский фазовый контраст при дифракционной фокусировке сферической волны в сверхрешетке с малым периодом**

Л.В. Левонян, А.М. Манукян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2018 120-124

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*Article*

**X-ray Phase Contrast at Diffraction Focusing of a Spherical Wave in a Short-Period Superlattice**

L.V.Levonyan, H.M.Manukyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2018 92-94

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*Article*

**FEATURES OF DIFFRACTION FOCUSING OF A SPHERICAL X-RAY WAVE ON A SHORT PERIOD SUPERLATTICE**

L.V.Levonyan, H.M.Manukyan

Proceedings of the YSU A. Physical and Mathematical Sciences 2017 113-116

<http://www.y-su.am/science/en/journals>

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*Article*

**COMPARATIVE ANALYSIS OF TWO DIFFRACTION SCHEMES FOR WIDELY DIVERGENT BEAM OF X-RAY RADIATION**

K.T.Avetyan, L.V.Levonyan, H. S. SEMERJYAN

Proceedings of the YSU A. Physical and Mathematical Sciences 2017 81-84

<http://www.y-su.am/science/en/journals>

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*Article*

**ДИНАМИЧЕСКАЯ ДИФРАКЦИЯ СФЕРИЧЕСКОЙ РЕНТГЕНОВСКОЙ ВОЛНЫ НА СВЕРХРЕШЕТКЕ**

Л.В.ЛЕВОНЯН, А.М.МАНУКЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2016 95-101

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

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*Article*

**Dynamical Diffraction of Spherical X-ray Wave on a Superlattice**

L. V. Levonyan, H. M. Manukyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2016 73-78

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

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*Article*

**Study of Superlattices by Diffraction Focusing of X-ray Radiation**

L.V.Levonyan, H.M.Manukyan

Proceedings of the International Conference on Electron, Positron, Neutron and X-Ray Scattering under External Influences  
2016 101-106

<https://istina.msu.ru/collections/24207893/>

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*Article*

**ДВЕ СХЕМЫ ДИФРАКЦИИ ШИРОКО РАСХОДЯЩЕГОСЯ ПУЧКА РЕНТГЕНОВСКОГО ИЗЛУЧЕНИЯ**

М.М.Аракелян, К.Т.Аветян, Л.В.Левонян, О.С.Семерджян, О.М.Бадалян, Д.А.Зейналян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2015 118-125

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

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*Article*

**ОСОБЕННОСТИ ДВУХ СХЕМ ДИФРАКЦИИ ШИРОКО РАСХОДЯЩЕГОСЯ ПУЧКА РЕНТГЕНОВСКОГО ИЗЛУЧЕНИЯ**

М.М.Аракелян, К.Т.Аветян, Л.В.Левонян, О.С.Семерджян, О.М.Бадалян

Кристаллография (Crystallography Reports) 2015 207-211

[http://elibrary.ru/title\\_about.asp?id=7861](http://elibrary.ru/title_about.asp?id=7861)

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*Article*

**Усовершенствованная теория дифракции рентгеновских волн в условиях зеркального отражения**

М.К.Балян, Л.В.Левонян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2000 309-319

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

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*Article*

**О возможности создания короткофокусной вертикально фокусирующей рентгенодифракционной линзы**

Л.В.Левонян, М.К.Балян

Письма в журнал технической физики (Technical Physics Letters) 1993 47-50

<http://journals.ioffe.ru/journals/editors/4>

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*Article*

**Two-dimensional diffraction focusing of X-ray Radiation in Laue Geometry**

L.V.Levonyan, M.K.Balyan

PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE 1993 247-255

[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1862-6319/homepage/2231\\_ed...](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1862-6319/homepage/2231_ed...)

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*Conference*

**Study of superlattices by diffraction focusing of x-ray radiation**

L.V.Levonyan, H.M.Manukyan

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*Conference*

**Influence of Interdiffusion of Heteromaterials on the X-Ray Spherical Wave Diffraction by Superlattice**

L.V. Levonyan, H.M.Manukyan

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Conference

**Focusing of X-Rays on a surface acoustic wave in case of small grazing angles**

L.V.Levonyan

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Conference

**The peculiarities of the image contrast formed by scattered x-ray radiation**

K.T.Avetyan, L.V. Levonyan, O.S.Semerdzhyan

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**The peculiarities of the image contrast formed by scattered x-ray radiation**

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Conference

**Formation of the X-ray phase contrast under the diffraction focusing of the spherical wave on the short period superlattice**

L.V. Levonyan, H.M.Manukyan

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**Формирование рентгеновского фазового контраста при дифракционной фокусировке сферической волны в сверхрешетке с малым периодом**

Л.В.Левонян, А.М.Манукян

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Conference

**Peculiarity of X-ray Phase Contrast at Diffraction Focusing of a Spherical Wave in a Superlattice**

L.V. Levonyan, H.M. Manukyan

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**Study of two-dimensional phase objects by diffraction focusing of cylindrical X-ray wave on a superlattice with variable period**

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**Study of Phase Objects by Dynamical Diffraction of a Spherical X-ray Wave in a Crystal using a Temperature Gradient**

L.V.Levonyan, H.M.Manukyan

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**X-ray Diffraction Image of a Low-Angle Twist Boundary**

L.V. Levonyan, H.M. Manukyan

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**Two-dimensional Focusing of an X-ray Beam**

L.V. Levonyan, H.M.Manukyan

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