

Roman Bakhshi Allahverdyan

Institute of Physics

Chair of Optics

Head of the chair, professor

☎ 37496361198

37493361198

23-30

(060) 71-03-30

✉ ralaverdyan@ysu.am



Language skills

Հայերէն Русский English

Publications

Article

Multimode Robust Lasing in a Dye-Doped Polymer Layer Embedded in a Wedge-Shaped Cholesteric

Tatevik M. Sarukhanyan, Hermine Gharagulyan, Mushegh S. Rafayelyan, Sergey S. Golik,

Ashot H. Gevorgyan, Roman B. Alaverdyan

Molecules 2021 6089

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

Lasing peculiarities in cholesteric multilayer structure with dye-doped polymer film depending on the concentration of laser dye and pumping energy

T. M. Sarukhanyan, H. S. Gharagulyan, M. L. Sargsyan, H. Grigoryan, R. S. Hakobyan, A. H. Gevorgyan,

R. B. Alaverdyan

Molecular Crystals and Liquid Crystals 2020 15-25

Article

Spectral Peculiarities of Multilayer Cholesteric Wedge-Cell System with Dye-Doped Polymer Layer

H. Gharagulyan, T. M. Sarukhanyan, A.V. Ninoyan, A. H. Gevorgyan, R. B. Alaverdyan

Optics and Spectroscopy 2020 1644-1648

Article

Light-induced hydrodynamic reorientation of hybrid aligned nematic liquid crystals caused by direct volume expansion

T. Dadalyan, K. Petrosyan, R. Alaverdyan, R. Hakobyan

Liquid Crystals 2019 694-699

Article

Light energy accumulation by cholesteric liquid crystal layer at oblique incidence

M.S. Rafayelyan, H. Gharagulyan, T. M. Sarukhanyan, A.H. Gevorgyan, R. S. Hakobyan, R.B. Alaverdyan
Liquid Crystals 2019 1079-1090

Article

Light-induced multi-wavelength lasing in dye-doped chiral nematic liquid crystals due to strong pumping illumination

Tigran Dadalyan, Zhirayr Ninoyan, Inge Nys, Roman Alaverdyan, Jeroen Beeckman, Kristiaan Neyts

Liquid Crystals 2018 1272-1278

Article

Tuning the lasing wavelength of dye-doped chiral nematic liquid crystal by fluid flow

T. Dadalyan, R. Alaverdyan, Zh. Ninoyan, O.Willekens, J. Beeckman, I.Nys

Liquid Crystals 2017 372-378

<http://www.tandfonline.com/loi/tlct20#.V4iQbUt97cc>

Article

Экспериментальное исследование конвекции марангони в наножидкостях

Г. С. Геворгян, К. А. Петросян, Р. С. Акопян, Р. Б. Алавердян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 490-494

Article

Polarized light in anisotropic medium with twisting

R. B. Alaverdyan, A. L. Aslanyan, L. S. Aslanyan, G. S. Gevorgyan, S. Ts. Nersisyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2015 137-143

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

Article

Enhanced physical properties of nematics doped with ferroelectric nanoparticles

M.R. Hakobyan, R.B. Alaverdyan, R.S. Hakobyan, Yu.S. Chilingaryan

Armenian Journal of Physics 2014 11-18

<http://ajp.asj-oa.am/>

Article

Лазерно-индуцированные термокапиллярные волны в изотропных и анизотропных жидкостях

Р. С.Акопян, М.Р.Акопян, Р.Б.Алавердян, Ю.С.Чилингарян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2014 230-240

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

Article

Thermomechanical Effects in Hybrid and Cylindrical-Hybrid Oriented Nematic Liquid Crystals

Rafik S. Hakobyan, Mariam R. Hakobyan, Roman B. Alaverdyan

Molecular Crystals and Liquid Crystals 2014 152-162

<http://www.tandfonline.com/loi/gmcl20>

Article

Volume Expansion Mechanism of Laser-Induced Hydrodynamic Reorientation

R.S.Hakobyan, M.R.Hakobyan, R.B.Alaverdyan, Yu.S.Chilingaryan

Article

Гравитационный и термокапилляр-ный механизмы возбуждения гидродинамических движений в жидких кристаллах лазером с пространственно периодической структурой интенсивности

Р.С.Акопян, М.Р.Акопян, Р.Б.Алавердян, Ю.С.Чилингарян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2014 177-189

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

Manual

Լույսի քվեռացումը և նրա հետազոտումը

Ասլանյան Լ.Ս., Ալավերդյան Ռ.Բ.

2014 69

Article

Наблюдение двух областей селективного отражения света от тонкой пленки холестерического жидкого кристалла

Алавердян Р. Б., Дадалян Т. К., Чилингарян Ю. С.

Квантовая Электроника (Quantum Electronics) 2013 433-434

<http://www.quantum-electron.ru/pa.phtml?page=geninfo>

Article

CHIRAL PHOTONIC STRUCTURES WITH ANISOTROPIC DEFECT CONTROLLED BY HYDRODYNAMIC FLOW

R. B. Alaverdyan, T. K. Dadalyan

Armenian Journal of Physics 2013 55-60

<http://ajp.asj-oa.am/>

Article

Spectral investigation of chiral photonic structure with laser dye-doped isotropic polymer film

Alaverdyan R. B., Dadalyan T. K., Chilingaryan Yu. S., Karapetyan A. S., Hovhannisyan T. M.,

Hovhannisyan S. I.

Proceedings of SPIE - The International Society for Optical Engineering 2012 847518

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

Article

Luminescence spectrum thermal properties of Rhodamine 6G doped polymethyl metacrylate film sandwiched between cholesteric liquid crystal layers

Alaverdyan R. B., Dadalyan T. K., Karapetyan A. S., Torosyan N. S.

Journal of Physics: Conference Series 2012 1-4

<http://iopscience.iop.org/journal/1742-6596>

Article

Study of cholesteric liquid crystal - Rhodamine 6G doped polymethyl methacrylate thin film - Cholesteric liquid crystal system

Alaverdyan R. B., Dadalyan T. K., Hayrapetyan N. A.

Conference

Experimental and Theoretical Investigation of Polarization Plane Rotation of Light in Nanoparticle-Enriched Chiral liquid-crystalline Photonic Structures with an Anisotropic Defect Layer

A.H. Gevorgyan, H. Gharagulyan, M.S. Rafayelyan, R.B. Alaverdyan

Conference

Asymmetric Transmission liquid-crystals of Two Cholesterics with Different Pitches and Chiralities

A.H. Gevorgyan, M.S.Rafayelyan, Zh.V.Ninoyan, Hermine Gharaguiyan, R.B.Alaverdjan

Conference

Nonreciprocal Transmission in Electro-Tunable Cholesterics

H. Gharagulyan, M. S. Rafayelyan, A. H. Gevorgyan, R. B. Alaverdyan

Conference

Optical Properties of Polymer-Dispersed Cholesteric Liquid- Crystalline Wedge-Cell

H. Gharagulyan, R. B. Alaverdyan, A. H. Gevorgyan, Zh. V. Ninoyan, T. M. Sarukhanyan

Conference

Lasing in Cholesteric-Polymer Wedge-Cell System

T. M. Sarukhanyan, R. B. Alaverdyan, A. H. Gevorgyan, H. Gharagulyan

Conference

Characteristics of photonic band gap edge lasing in Cholesteric Liquid Crystals

T. K. Dadalyan, R.B. Alaverdyan, T.M. Sarukhanyan

Conference

Light energy accumulation by cholesteric liquid crystal layer at oblique incidence

M.S. Rafayelyan, H. Gharagulyan, T. M. Sarukhanyan, A.H. Gevorgyan, R.B. Alaverdyan

Conference

Lasing polarization peculiarities in cholesterics separated by dye-doped polymeric layer

T.M. Sarukhanyan, H. Gharagulyan, A.H. Gevorgyan, R.B. Alaverdyan

Conference

Investigation of the influence of direct volume expansion on optical properties of Nematic Liquid Crystal layer

T.K. Dadalyan, K. A. Petrosyan, R. S. Hakobyan, R. B. Alaverdyan

Conference

Tuning the lasing wavelength in dye-doped chiral photonic structure with pitch gradient by means of hydrodynamic flow

Zh. Ninoyan, T. Dadalyan, R. Alaverdyan

Conference

Spatial evolution of light polarization in wedge-shaped cholesteric liquid crystal cell

R. Alaverdyan, L. Aslanyan, G. Gevorgyan, H. Gharagulyan, H. Hovakimyan, Zh. Ninoyan

Conference

Non-linear control of lasing wavelength in dye-doped chiral photonic structures by means of light

T. Dadalyan, Zh. Ninoyan, R. Alaverdyan, I. Nys, J. Beeckman, K. Neyts

Conference

Lasing in three-layer cholesteric-dye-doped polymer-cholesteric sandwich cell

T.M. Sarukhanyan, H. Gharagulyan, R.B. Alaverdyan, A.H. Gevorgyan

Conference

The role of the geometric phase in cholesteric with a defect layer toward multimodal robust lasing

T.M. Sarukhanyan, M.S. Rafayelyan, H. Gharagulyan, R.B. Alaverdyan, S.S. Golik, A.H. Gevorgyan
