Հերմինե Սաշայի Ղարագուլյան

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Ֆիզիկայի ինստիտուտ
Օպտիկայի և ֆոտոնիկայի ամբիոն
Ասիստենտ

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Հրապարակումներ

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Polyvinylpyrrolidone planarized liquid crystalline 1T-WS2/rGO hybrid nanocomposites-based humidity sensing platform

A. Vasil’ev, M. Zhezhu, S. Gyozalyan, L. Avanesyan, Y. Grigoryan, A.A. Kuzanyan, A.A. Hovhannisyan, Mohamed Aly Saad Aly, D.A. Ghazaryan, H. Gharagulyan

Journal of Science Advanced Materials and Devices 2026 101115

https://www.sciencedirect.com/science/article/pii/S2468217926000201

Հոդված

Enhancement of mechanical properties of graphene oxide fibers via liquid crystalline phase formation and flake size optimization

M. Zhezhu, G. Baghdasaryan, G. Gevorgyan, S. Gyozalyan, Y. Grigoryan, K. Margaryan, H. Gharagulyan

Materials Letters 2026 140242

https://www.sciencedirect.com/science/article/pii/S0167577X26002016

Հոդված

Perovskite nanocubes confined in Mesoporous Metal Organic Framework Facilitates Photocatalytic CO2 Reduction

Nwaji Njemuwa, Boka Fikadu Banti, Magdalena Osial, Hermine Gharagulyan, Amrita Jain, Jaebeom Lee, Michael Giersig

Microporous and Mesoporous Materials 2026 114191

https://doi.org/10.1016/j.micromeso.2026.114191

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Liquid Crystalline 2D Hybrid Nanomaterials for Sensing Applications

Hermine Gharagulyan

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https://indico.cern.ch/event/1631801/

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Dual effect of L-Cysteine on the reorientation and relaxation of Fe3O4-decorated graphene oxide liquid crystals

M. Zhezhu, Y. Melikyan, V. Hayrapetyan, A. Vasil'ev, H. Gharagulyan

Heliyon 2025 e43010

Հոդված

L-cysteine polymorph coatings for THz sensing metasurfaces
M. Zhezhu, A. Vasil'ev, H. Parsamyan, T. Abrahamyan, G. Baghdasaryan, S. Gyozalyan, D. Ghazaryan,

H. Gharagulyan

Results in Physics 2025 108351

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Chemical vapor deposition synthesis of (GeTe)n(Sb2Te3) gradient crystalline films as promising planar heterostructures
M. Zhezhu, A. Vasil'ev, M. Yapryntsev, E. Ghalumyan, D.A. Ghazaryan, H. Gharagulyan

Materials Science in Semiconductor Processing 2025 109863

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Revisiting THz absorption in GO and rGO liquid crystalline films
A. Vasil’ev, M. Zhezhu, H. Parsamyan, G. Baghdasaryan, M. Sargsyan, D.A. Ghazaryan, H. Gharagulyan

Optics & Laser Technology 2025 113628

Գիտաժողովի նյութ

Liquid Crystalline Nanosystems for Advanced Optoelectronics
Hermine Gharagulyan, Alexey Vasil’ev, Marina Zhezhu, Sara Gyozalyan, L. Avanesyan, V. Mehrabyan

2025 34-35

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ELECTRON-BEAM DRIVEN MICROPATTERNING OF L-CYSTEINEFUNCTIONALIZED CHALCOGENIDES
Sara Gyozalyan, L Avanesyan, V Mehrabyan, M Zhezhu, A Vasil'ev, H Gharagulyan

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Lilit Avanesyan, S Gyozalyan, V Mehrabyan, M Zhezhu, A Vasil'ev, H Gharagulyan

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L. Avanesyan, A. Vasil'ev, M. Zhezhu, H. Parsamyan, G. Baghdasaryan, M. Sargsyan, D. A. Ghazaryan,

H. Gharagulyan

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Liquid Crystalline Nanosystems: Research Directions, Methods, and Achievements
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Sara Gyozalyan, Lilit Avanesyan, Valentina Mehrabyan

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https://indico.cern.ch/event/1548886/

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https://indico.cern.ch/event/1548886/

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Resonances Induced by Structural Asymmetry in the THz Domain and Their Applications
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https://indico.cern.ch/event/1548886/

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Optical Properties of Chitosan-Functionalized Graphene Oxide
Valentina Mehrabyan, Gayane Baghdasaryan, Adrine Sahakyan, Marina Zhezhu, Alexey Vasil'ev,

Hermine Gharagulyan
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Terahertz Response of Liquid Crystalline GO and rGO Thin Films
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Maksim Sargsyan, Davit A. Ghazaryan, Hermine Gharagulyan

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E-beam induced micropattern generation and amorphization of L-cysteine-functionalized graphene oxide nano-composites
Y. Melikyan, H. Gharagulyan, A. Vasil'ev, V. Hayrapetyan, M. Zhezhu, A. Simonyan, D.A. Ghazaryan,

M.S. Torosyan, A. kharatyan, J. Michalicka, M. Yeranosyan

Colloids and Interface Science Communications 2024 100766-7

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Improving the electro-optical properties of MoS2/rGO hybrid nanocomposites using liquid crystals
A. Vasil'ev, Y. Melikyan, M. Zhezhu, V. Hayrapetyan, M.S. Torosyan, D.A. Ghazaryan, M. Yeranosyan,

H. Gharagulyan
Materials Research Bulletin 2024 113036

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Broadband THz metasurface bandpass filter/antireflection coating based on metalized Si cylindrical rings
Karen Simonyan, Hermine Gharagulyan, Henrik Parsamyan, Ashot Khachatryan, Mkrtich Yeranosyan

Semiconductor Science and Technology 2024 095012

Գիտաժողովի նյութ

Manipulating Optical Features of MoS2-decorated rGO Nanosystems
Hermine Gharagulyan, A. Vasil'ev, M. Zhezhu, Y. Melikyan

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Studying Graphene Oxide Stability Depending on Particle Sizes
Yeghvard Melikyan, A. Vasil'ev, M. Zhezhu, H. Gharagulyan

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Marina Zhezhu, A. Vasil'ev, Y. Melikyan, H. Gharagulyan

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Stability Controlling of L-arginine- and L-nitroarginine-Functionalized Graphene Oxide
Yeghvard MELIKYAN, Alexey VASIL’EV, Marina ZHEZHU, Elen MNATSAKANYAN, Deren PETROSYAN,

Mkrtich YERANOSYAN, Ruben APREYAN, Hermine GHARAGULYAN

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Functionalized Graphene Oxide Liquid Crystalline Systems Under External Fields
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Essential L-Amino Acid-Functionalized Graphene Oxide for Liquid Crystalline Phase Formation
H. Gharagulyan, Y. Melikyan, V. Hayrapetyan, Kh. Kirakosyan, D.A. Ghazaryan, M. Yeranosyan

Materials Science and Engineering B 2023 116564

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Strong light absorption and absorption absence in photonic crystals with helical structure in an external static magnetic field
A. H. Gevorgyan, N. A. Vanyushkin, I. M. Efimov, A. O. Kamenev, S. S. Golik, H. Gharagulyan,

T. M. Sarukhanyan, Malek G. Daher, K. B. Oganesyan

Journal of the Optical Society of America B 2023 1986-1993

Գիտաժողովի նյութ

Controlling Possibilities of Functionalized Graphene Oxide Liquid Crystalline Microdroplets
Gharagulyan Hermine, Melikyan Yeghvard, Vasilev Alexey, Hayrapetyan Vardan, Khachatryan Ashot,

Apreyan Ruben, Yeranosyan Mkrtich

2023 24 - 24

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Filtering of terahertz radiation by a metasurface structure
Simonyan Karen, Parsamyan Henrik, Gharagalyan Hermine, Khachatryan Ashot, Yeranosyan Mkrtich

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Magnetically Induced Transparency in Media with Helical Dichroic Structure
Mushegh S. Rafayelyan, Gvidon K. Matinyan, Hermine Gharagulyan, Tatevik M. Sarukhanyan,

Meruzhan Z. Hautyunyan, Ilya M. Efimov, Nikolay A. Vanyushkin, Sergey S. Golik, Ashot H. Gevorgyan

MATERIALS 2021 2172

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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

Գիտաժողովի նյութ

Lasing polarization peculiarities in cholesterics separated by dye-doped polymeric layer
T.M. Sarukhanyan, H. Gharagulyan, A.H. Gevorgyan, R.B. Alaverdyan

2021 30-31

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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

2021 46 - 46

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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

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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

Գիտաժողովի նյութ

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

2019 125

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Lasing in three-layer cholesteric-dye-doped polymer-cholesteric sandwich cell
T.M. Sarukhanyan, H. Gharagulyan, R.B. Alaverdyan, A.H. Gevorgyan

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Optical Properties of Polymer-Dispersed Cholesteric Liquid- Crystalline Wedge-Cell
H. Gharagulyan, R. B. Alaverdyan, A. H. Gevorgyan, Zh. V. Ninoyan, T. M. Sarukhanyan

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Lasing in Cholesteric-Polymer Wedge-Cell System
T. M. Sarukhanyan, R. B. Alaverdyan, A. H. Gevorgyan, H. Gharagulyan

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Nonreciprocal Transmission in Electro-Tunable Cholesterics
H. Gharagulyan, M. S. Rafayelyan, A. H. Gevorgyan, R. B. Alaverdyan

2017 51-51

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Spatial evolution of light polarization in wedge-shaped cholesteric liquid crystal cell
R. Alaverdyan, L. Aslanyan, G. Gevorgyan, H. Gharagulyan, H. Hovakimyan, Zh. Ninoyan

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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

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Diffusion in liquid crystals of two cholesterics with different pitches.
Ashot H. Gevorgyan, Roman B. Alaverdyan, Hermine Gharagulyan, Mushegh S. Rafayelyan,

Hayarpi Grigoryan

Journal of Nanophotonics 2015 093591(1-12)

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

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

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