

# Tatevik Makich Sarukhanyan

Research Institute of Physics  
Group Leader

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## 🎓 Education

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of physics
<b>Date</b>	2016 - 2020
<b>Degree name</b>	PhD student

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of physics
<b>Date</b>	2014 - 2016
<b>Degree name</b>	Masters

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of physics
<b>Date</b>	2010 - 2014
<b>Degree name</b>	Bachelor

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## 🎓 Scientific Rank/degree

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<b>Institution</b>	Yerevan State University
<b>Date</b>	2023
<b>Degree name</b>	Candidate
<b>Specialty</b>	Physico-mathematical sciences
<b>Scientific Supervisor</b>	Prof. R.B. Alaverdyan
<b>Research Topic</b>	The experimental investigation of fluorescence in liquid crystalline photonic structures and polymers

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## 📁 Work experience

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<b>Institution</b>	Research Institute of Physics
<b>Period of time</b>	2024 till now
<b>Rank/degree</b>	Head of group

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## 📖 Publications

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Article

**Bacterial identification in SERS-integrated microfluidics using CNN-driven 2D classification of 1D spectra**

Lilit Melikyan, Tatevik Sarukhanyan, Mehdi Feizpour, Halewijn Van den Bosche, Thomas Demuyser, Piet Cools, Hugo Thienpont, Heidi Ottevaere  
Talanta 2025 128325

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*Article*

**Low-Loss Multimode Waveguide Bends with Direct Laser Writing in Polymer**

Tigran Baghdasaryan, Neshteh Kourian, Mushegh Rafayelyan, Tatevik Sarukhanyan  
Micromachines 2025 1361

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*Article*

**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. Oganesyanyan  
Journal of the Optical Society of America B: Optical Physics 2023 1986-1993

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*Article*

**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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*Article*

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

V. P. Mkrtchyan, L. G. Gasparyan, R. A. Alaverdyan, T. M. Sarukhanyan  
Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 379-383

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*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

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*Article*

**The Polarization of Laser Generation from the Cholesteric Liquid Crystal-Dye-Doped Polymer Layer-Cholesteric Liquid Crystal System**

T.M. Sarukhanyan  
Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 103-108

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*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

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*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

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*Conference*

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

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

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*Conference*

**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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*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

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