

Ֆիզիկայի ինստիտուտ  
Տնօրեն

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### **Resonant conversion of THz waves with orthogonal polarization upon transmission through a woven mesh**

Tigran Abrahamyan, Henrik Parsamyan, Davit Manukyan, Khachatur Nerkararyan

Applied Optics 2025 123-128

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### **Resonant enhancement and confinement of microwave field in coupled conductive rod systems**

Tigran Abrahamyan, Gor Ohanyan, David Hambaryan, Artyom Movsisyan, Henrik Parsamyan,

Hovhannes Haroyan, Arsen Babajanyan, Khachatur Nerkararyan

Physica Scripta 2025 025515

Հոդված

### **Dielectric coated conductive rod resonantly coupled with a cut transmission line as a tunable microwave bandstop filter and sensor**

David Hambaryan, Tigran Abrahamyan, Henrik Parsamyan, Artyom Movsisyan, Bill Minasyan,

Hovhannes Haroyan, Arsen Babajanyan, Kiejin Lee, Barry Friedman, Khachatur Nerkararyan

Heliyon 2024 e24477

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### **Highly dispersive transmission conditions for a conductive rods-based ultrathin bilayer metastructure**

Tigran Abrahamyan, Gor Ohanyan, David Hambaryan, David Kalantar, Henrik Parsamyan,

Hovhannes Haroyan, Arsen Babajanyan, Kiejin Lee, Khachatur Nerkararyan

Journal of Physics D: Applied Physics 2024 355108

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### **High dispersion and bistability of the light transmission through a bilayer metasurface with resonant plasmonic elements**

Davit Manukyan, Henrik A. Parsamyan, Khachatur Nerkararyan

Applied Surface Science 2024 161105

Հոդված

### **Resonant detection of surface microwaves using dielectric-coated conductive rods coupled with a cut Goubau line**

Tigran Abrahamyan, Gor Ohanyan, Hovhannes Haroyan, Arsen Babajanyan, Khachatur Nerkararyan

IET Conference Proceedings 2024 11-14

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### **Tunable ultra-broadband terahertz metamaterial absorber based on vanadium dioxide strips**

Lilit Gevorgyan, Hovhannes Haroyan, Henrik Parsamyan, Khachatur Nerkararyan  
RSC Advances 2023 11948-11958

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**Dark-probe scanning near-field microscopy**

Henrik Parsamyan, Torgom Yezekyan, Khachatur Nerkararyan, Sergey I Bozhevolnyi

New Journal of Physics 2023 103015

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**Broadband tunable mid-infrared absorber based on conductive strip-like meta-atom elements**

Henrik Parsamyan, Hovhannes Haroyan, Khachatur Nerkararyan

Materials Today Communications 2022 103692

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**Analysis of bistability at the coupling between waveguide and whispering gallery modes of a nonlinear hemicylinder**

Henrik Parsamyan, Khachik Sahakyan, Khachatur Nerkararyan

Journal of Physics D: Applied Physics 2022 165102

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**Resonant Interaction Between Microwaves and Thin Conducting Microstructure with Finite Length**

T. Abrahamyan, H. Haroyan, D. Hambaryan, H. Parsamyan, K. Lee, A. Babajanyan, Kh. Nerkararyan

NanoWorld Journal 2022 S5

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**Surface-standing-wave formation via resonance interaction of a finite-length conductive rod with microwaves**

Tigran Abrahamyan, Hovhannes Haroyan, David Hambaryan, Henrik Parsamyan, Arsen Babajanyan,

Kiejun Lee, Barry Friedman, Khachatur Nerkararyan

Journal of Physics D: Applied Physics 2022 445001

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**Microwave response phase control of a graphite microstrip**

Arsen Babajanyan, Tigran Abrahamyan, Hovhannes Haroyan, Billi Minasyan, Torgom Yezekyan,

Kiejun Lee, Barry Friedman, Khachatur Nerkararyan

Carbon 2022 151-156

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**GRAPHITE-INSULATOR-METAL BASED METAMATERIAL ABSORBER AT X-BAND**

D. Hambaryan, L. Gevorgyan, H. Parsamyan, A. Yesayan, H. Haroyan, Kh. Nerkararyan

IEEE Xplore 2022 15-17

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Հոդված

**Միկրոալիքային խոցող գեներ. տեսության և կառուցվածքի որոշ հարցեր**

Հ. Ս. Հարոյան, Խ. Վ. Ներկարարյան, Ա. Ա. Հախումյան, Ա. Հ. Մակարյան, Կ. Ռ. Միրզոյան

Հայկական Բանակ 2021 67-82

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**Light control in a hemicylindrical whispering gallery microcavity-parallel plate waveguide system**

Hovhannes Haroyan, Henrik Parsamayn, Khachatur Nerkararyan

Optics Communications 2020 126122(1-5)

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**Broadband microwave absorption based on the configuration resonance of wires**

Henrik Parsamyan, Hovhannes Haroyan, Khachatur Nerkararyan

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**Core-shell particles as efficient broadband absorbers in infrared optical range**

KHACHATUR V. NERKARARYAN, ANDREY B. EVLYUKHIN, SERGEY I. BOZHEVOLNYI

Optics Express 2019 17474-17481

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**Efficient broadband infrared absorbers based on core-shell nanostructures**

Khachatur V. Nerkararyan, Sergey I. Bozhevolnyi, Henrik A. Parsamyan

Journal of the Optical Society of America B: Optical Physics 2019 2643-2649

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**Dynamics of a quantum emitter resonantly coupled to both external field and localized surface plasmon**

Khachatur V. Nerkararyan, Torgom S. Yezekyan, Sergey I. Bozhevolny

Physical Review B 2018 045401(1-6)

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**Semicylindrical microresonator: excitation, modal structure, and Q-factor**

H. HAROYAN, H. PARSAMYAN, KH. NERKARARYAN, T. YEZEKYAN

Applied Optics 2018 6309-6313

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**Dynamics of a Quantum Emitter Coupled to a Metal Nanostructure in the Presence of External Resonant Field**

K.V. Nerkararyan, T.S. Yezekyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2018 332-337

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**Numerical Analysis of Light Non-Resonant Transmission Through a Sub- Wavelength Slit at Angular Incidence**

Kh. Sahakyan, Kh. Nerkararyan

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**Waveguide resonator with high quality factor excited through the subwavelength slit**

Khachik Sahakyan, Hovhannes Haroyan, Kh. Nerkararyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 45-52

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**Phase-shifted response of plasmonic nanostructures: Implications to luminescence upconversion**

Khachatur V. Nerkararyan, Torgom S. Yezekyan, Sergey I. Bozhevolnyi

Journal of Luminescence 2017 595-598

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**Characteristics of Light Transfer in the Connected Conical Waveguides With the Same Symmetry Axis**

Shant Arakelyan, Tigran Abrahamyan, Arsen Babajanyan, Khachatur Nerkararyan

Applied Optics 2016 3854-3857

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**Enhanced nonresonant light transmission through subwavelength slits in metal**

ANDERS PORS, KHACHATUR V. NERKARARYAN, KHACHIK SAHAKYAN, SERGEY I. BOZHEVOLNYI

Optics Letters 2016 242-245

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Հոդված

**Sensitive Detection of Nano-Scale Vibrations by the Metal-Coated Fiber Tip at the Liquid-Air Interface**

A. J. Babajanyan, T. A. Abrahamyan, H. A. Minasyan, Kh. V. Nerkararyan

International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering 2015 651-654

<https://www.waset.org/journal/Mechanical>

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**Аналитическое описание тороидального резонатора высокой добротности в терагерцовой области частот**

Т. А. Арутюнян, А. Ю. Варданян, А. А. Ахумян, Х. В. Неркарян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2012

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**Detection of Resonant Oscillations of the Liquid Surface by using a Tapered Fiber Opto-Mechanical Sensor**

Tigran Abrahamyan, Stella Sargsyan, Arsen Babajanyan, Khachatur Nerkararyan

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**The Resonant Coupling of the Quantum Dots in the Environment of Metal Nanoparticle at Optical Frequencies**

Sona Nerkararyan, Arsen Babajanyan, Khachatur Nerkararyan

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## **Whispering-Gallery Microresonator with a New Easy and Controllable Excitation Method**

H. Parsamyan, H. Haroyan, Kh. Nerkararyan

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### **Detection of Nanometric Vibrations by Using Opto-Mechanical Sensor**

Arsen Babajanyan, Tigran Abrahamyan, Shant Arakelyan, Khachatur Nerkararyan

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### **Sensing of silver nanoparticles in aqueous solutions by using an optical fiber probe-tip**

A. Babajanyan, T. Abrahamyan, R. Khachatryan, Kh. Nerkararyan

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### **Dielectric-Coated Conductive Rod Resonantly Coupled with a Cut Goubau Line as a Sensitive Microwave Sensor**

Tigran Abrahamyan, Hovhannes Haroyan, David Hambaryan, Artyom Movsisy, Henrik Parsamyan,

Arsen Babajanyan, Khachatur Nerkararyan, Kiejin Lee

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*Գիտաժողովի նյութ*

### **Realizing multiple bound states in the continuum in optical and THz metasurfaces**

T. Abrahamyan, H. Parsamyan, D. Hambaryan, Kh. Nerkararyan

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