

## Институт физики

Кафедра прикладной электродинамики и моделирования  
Заведующий кафедрой, профессор

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### **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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### **Reflective multi-layer metasurface based on half-wave plate structure for polarization control in the visible-near-infrared region**

Artyom Movsisyan, Hasmik Manukyan, Billi Minasyan, Arsen Babajanyan  
Physica Scripta 2024 095545

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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  
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**Characterization of Metal Nanoparticles Aqueous Solution by a Thermoelastic Optical Indicator Microscope**

G. Ohanyan, N. Margaryan, M. Manvelyan, L. Odabashyan, B. Minasyan, A. Movsisyan, R. Khachatryan, A. Babajanyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 187-191

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**3D Visualization Method Based on Metastructure Optical Indicator of Thermoelastic Polarization Microscope for Electromagnetic Fields in Microwave and THz Ranges**

A. Babajanyan, Zh. Baghdasaryan, H. Parsamyan, B. Friedman, K. Lee

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

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**Microwave and Joule Heating Visualization by a Thermo-Elastic Microscope for Carbon Composite Materials**

Sh. Arakelyan, A. Babajanyan, G. Berthiau, B. Friedman, K. Lee

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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, Kiejin Lee, Barry Friedman, Khachatur Nerkararyan

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

Arsen Babajanyan, Tigran Abrahamyan, Hovhannes Haroyan, Billi Minasyan, Torgom Yezekyan, Kiejin Lee, Barry Friedman, Khachatur Nerkararyan

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**Noninvasive in Vivo Evaluation of Mouse-Blood Glycemia with a Microwave Spiral Sensor**

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**Visualization of microwave near-field distribution in sodium chloride and glucose aqueous solutions by a thermo-elastic optical indicator microscope**

Arsen Babajanyan, Zhirayr Baghdasaryan, Levon Odabashyan, Jung-Ha Lee, Barry Friedman, Kiejin Lee  
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**Performance of Pentacene Based Organic Thin Film Transistor with an Octadecyltrichlorosilane Self-Assembled Monolayer Interface**

A. Babajanyan, B. Minasyan, A. Movsisyan, B. Friedman, K. Lee  
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Образовательный Руководство

**Ատոմային և միջուկային ֆիզիկայի ընդհանուր դասընթացի լաբորատոր աշխատանքների ուղեցույց**

Հասմիկ Շահինյան, Լուսինե Ղազարյան, Արսեն Բաբաջանյան  
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**Detection of Iron Nanoparticles in Aqueous Solutions by Microwave Sensor**

L. Odabashyan, N. Margaryan, G. Ohanyan, M. Manvelyan, D. Hambaryan, T. Abrahamyan, R. Khachatryan, A. Babajanyan  
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**Thermal distribution in unidirectional carbon composite material due to the direct heating and microwave influence visualized by a thermo-elastic optical indicator microscope**

Zhirayr Baghdasaryan, Arsen Babajanyan, Levon Odabashyan, Shant Arakelyan, Hanju Lee, Gerard Berthiau, Barry Friedman, Kiejin Lee  
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**Antenna Investigation by a Thermoelastic Optical Indicator Microscope: Defects Measurement and 3D Visualization of Electromagnetic Fields**

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**Real-time sensing the glucose concentration by quadratic-shaped microwave sensor**

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**Real-Time Noninvasive Measurement of Glucose Concentration Using a Modified Hilbert Shaped Microwave Sensor**

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**Microwave Heating Visualization for Carbon Fibers Composite Material: Development of Tunable Microstrip Structures**

Shant Arakelyan, Hanju Lee, Do-Suck Han, Arsen Babajanyan, Gerard Berthiau, Barry Friedman,

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**Microwave Fractal Bandpass Filters Based on Modified Hilbert Curves of the First and the Second Orders**

A. Babajanyan, H. Parsamyan, K. Lee

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**МИКРОВОЛНОВЫЕ ФРАКТАЛЬНЫЕ ПОЛОСОВЫЕ ФИЛЬТРЫ, ОСНОВАННЫЕ НА МОДИФИЦИРОВАННЫХ КРИВЫХ ГИЛЬБЕРТА ПЕРВОГО И ВТОРОГО ПОРЯДКОВ**

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**DETERMINATION OF GLUCOSE CONCENTRATION IN AQUEOUS SOLUTION BY USING MODIFIED HILBERT SHAPED MICROWAVE METAMATERIAL SENSOR**

H. A. PARSAMYAN, A. Zh. BABAJANYAN, Sh. Kh. ARAKELYAN, K. LEE

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**Performance of Pentacene-based Thin-film Transistors Fabricated at Different Deposition Rates**

Arsen Babajanyan, Jinho Hwang, Duri Kim, Meenwoo Kim, Hanju Lee, Levon Odabashyan,

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A. Babajanyan, Zh. Baghdasaryan, L. Odabashyan, H. Lee, B. Friedman, K. Lee

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**Pre-Annealing Effects on a Pentacene Organic Thin Film Transistor With a Polymer Dielectric Interface**

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**Magneto-Optical Visualization by Bi:YIG Thin Films Prepared at Low Temperatures**

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

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*Образовательный Руководство*

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