

Ֆիզիկայի ինստիտուտ

Կիրառական էլեկտրադինամիկայի և մոդելավորման ամբիոն
Ամբիոնի վարիչ, պրոֆեսոր

📖 Հրատարակումներ

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

Հոդված

Characterization of interaction phenomena of electromagnetic waves with metamaterials via microwave near-field visualization technique

Zhirayr Baghdasaryan, Arsen Babajanyan, Barry Friedman, Kiejin Lee
Scientific Reports 2023 18457

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3D visualization of microwave electric and magnetic fields by using a metasurface-based indicator

Zhirayr Baghdasaryan, Arsen Babajanyan, Henrik Parsamyan, Barry Friedman, Seungwan Kim, Jung-Ha Lee, Kiejin Lee
Scientific Reports 2022 6150

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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
NanoWorld Journal 2022 S4

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

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

Springer Proceedings in Physics (Optics and Its Applications) 2022 69-77

Հոդված

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

Journal of Physics D: Applied Physics 2022 445001

Հոդված

Microwave response phase control of a graphite microstrip

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

Carbon 2022 151-156

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

A. Babajanyan, B. Minasyan, L. Odabashyan, S. Kim, J. Kim, J.-H. Lee, B. Friedman, K. Lee

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 47-54

Հոդված

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

Scientific Reports 2021 2589

Հոդված

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

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 208-213

ՈՒՏՈՒՄՆԱԿԱՆ ձեռնարկ

Ատոմային և միջուկային ֆիզիկայի ընդհանուր դասընթացի լաբորատոր աշխատանքների ուղեցույց

Հասմիկ Շահինյան, Լուսինե Ղազարյան, Արսեն Բաբաջանյան

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Հոդված

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

Journal of Contemporary Physics (Armenian Academy of Sciences) 2020 171-175

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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
Measurement 2020 107189(1-7)

Հոդված

**ОБНАРУЖЕНИЕ НАНОЧАСТИЦ ЖЕЛЕЗА В ВОДНЫХ РАСТВОРАХ С ПОМОЩЬЮ
МИКРОВОЛНОВОГО СЕНСОРА**

Л. ОДАБАШЬЯН, Н. МАРГАРЯН, Г. ОГАНЯН, М. МАНВЕЛЯН, Д. АМБАРЯН, Т. АБРААМЯН, Р. ХАЧАТРЯН,
А. БАБАДЖАНЯН
Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2020
251-258

Հոդված

COMPUTER MODELING OF MICROWAVE STRIPLINE RESONATORS FOR NON-INVASIVE SENSING

A. Zh. BABAJANYAN, B. J. MINASYAN, L. A. ODABASHYAN, Zh. A. BAGHDASARYAN, K. LEE
Proceedings of the YSU. Physical and Mathematical Sciences 2019 60-64

Հոդված

**Antenna Investigation by a Thermoelastic Optical Indicator Microscope: Defects Measurement
and 3D Visualization of Electromagnetic Fields**

Arsen Babajanyan, Shant Arakelyan, Hanju Lee, Seungwan Kim, Gerard Berthiau, Barry Friedman,
Kiejin Lee
IEEE ANTENNAS AND PROPAGATION MAGAZINE 2019 27-31

Հոդված

Investigation of Ag Nanoparticles/Water Solutions by Microwave Stripline Sensor

A. Babajanyan, T. Abrahamyan, R. Khachatryan, D. Hambaryan, B. Hovhannisyanyan, B. Minasyan,
L. Odabashyan
Journal of Contemporary Physics (Armenian Academy of Sciences) 2019 196-202

Հոդված

**ИССЛЕДОВАНИЕ РАСТВОРОВ НАНОЧАСТИЦ Ag В ВОДЕ С ПОМОЩЬЮ МИКРОВОЛНОВОГО
ПОЛОСКОВОГО СЕНСОРА**

А. БАБАДЖАНЯН, Т. АБРАМЯН, Р. ХАЧАТРЯН, Д. АМБАРЯН, Б. ОГАНЕСЯН, Б. МИНАСЯН,
Л. ОДАБАШЯН
Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2019
263-271

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

A. Zh. BABAJANYAN, B. A. HOVHANNISYAN, D. S. HAMBARYAN, L. A. ODABASHYAN
Proceedings of the YSU. Physical and Mathematical Sciences 2019 132-137

Հոդված

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

Levon Odabashyan, Arsen Babajanyan, Zhirayr Baghdasaryan, Seungwan Kim, Jongchel Kim,
Barry Friedman, Jung-Ha Lee, Kiejin Lee
Sensors 2019 5525(1-11)

Հոդված

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,

Kiejin Lee

IEEE Transactions on Microwave Theory and Techniques 2018 883-888

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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

Journal of Contemporary Physics (Armenian Academy of Sciences) 2018 146-151

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

Г. ПАРСАМЯН, А. БАБАДЖАНЫАН, К. ЛЕЕ

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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,

Zhirayr Baghdasaryan, Kiejin Lee, Deokjoon Cha

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Glucose Aqueous Solution Sensing by Modified Hilbert Shaped Microwave Sensor

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

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Visualization of Microwave Heatingformesh-Patterned Indium-tin-Oxide by a Thermo-Elastic Optical Indicator Microscope

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

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Direct imaging of the SSD and USB memory drives heating by thermo-elastic optical indicator microscopy

Shant Arakelyan, Hanju Lee, Yeonghun Jeong, Arsen Babajanyan, Barry Friedman, Kiejin Lee

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Characterization of Anisotropic Electrical Conductivity of Carbon Fiber Composite Materials by a Microwave Probe Pumping Technique

Hanju Lee, Ogsen Galstyan, Arsen Babajanyan, Barry Friedman, Gerard Berthiau, Jongchel Kim,

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Effects of Thermal Preparation on Copper Phthalocyanine Organic Light Emitting Diodes

Sul A. Choi, Kyungchul Kim, Su Jin Lee, Hanju Lee, Arsen Babajanyan, Barry Friedman, Kiejin Lee

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Direct Current Imaging Using a Magneto-Optical Sensor

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

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Nondestructive Label-Free Mapping of DNA Bioassay Using a Near-Field Scanning Microwave Microscope

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Specifications of Rabi oscillations in the quantum emitters systems coupled to the localized plasmon polaritons

A. Zh. Babajanyan, S. Kh. Nerkararyan

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

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Ogsen Galstyan, Hanju Lee, Arsen Babajanyan, Arsen Hakhoumian, Barry Friedman, Kiejin Lee
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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
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«Վիճակագրական ռադիոֆիզիկա» լաբորատոր աշխատանքների ձեռնարկ
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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

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In Vitro Monitoring of HbA1C by a Microwave Biosensor
Seungwan Kim, Jongchel Kim, Armen Abrahamyan, Arsen Babajanyan, Jung-Ha Lee, Barry Friedman,
Kiejin Lee

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Nondestructive label-free mapping of DNA bioassay using a near-field scanning microwave microscope
Arsen Babajanyan, Barry Friedman, Kiejin Lee

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Microwave and Joule Heating Visualization by Thermo-Elastic Sensor for Carbon Fibers Composite Material
Kiejin Lee, Shant Arakelyan, Hanju Lee, Sunghoon Jeon, Do-Suck Han, G. Berthiau, Arsen Babajanyan

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

Arsen Babajanyan, Sul A Choi, Kyungchul Kim, Hanju Lee, Barry Friedman, Kiejin Lee

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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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Microwave Characterization of Complex Dielectric Permittivity Dependence on Glucose Concentration in Blood Serum and Aqueous Solution

Babajanyan A., Lee K., Kim S., Kim J., Friedman B., Arakelyan Sh., Parsamyan H.

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Label-Free Monitoring of HbA1C by Microwaves

Babajanyan A., Kim S., Kim J., Abrahamyan A., Friedman B., Lee K.

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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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Noninvasive In Vitro Monitoring of Hba1c with a Microwave Biosensor

Arsen Babajanyan, S. Kim, J. Kim, Shant Arakelyan, K. Lee, J.-H. Lee, B Friedman

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Detecting Defects in Sub-Skin-Depth Metallic Layers by a Thermo-Elastic Sensor

Arsen Babajanyan, Shant Arakelyan, Hanju Lee, Kiejin Lee, Barry Friedman

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Effect of Pentacene Deposition Rate on OTFT

Arsen Babajanyan, Jinho Hwang, Duri Kim, Meenwoo Kim, Levon Odabashyan, Zhirayr Baghdasaryan, Seungwan Kim, Jongchel Kim, Hanju Lee, Kiejin Lee, Deokjoon Cha

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Characterization of Heat Distribution and Microwave Absorption in a Carbon Composite Material by a Thermo-Elastic Optical Indicator Microscope

Aarsen Babajanyan, Zhirayr Baghdasaryan, Levon Odabashyan, Hanju Lee, Seungwan Kim, Jongchel Kim, Jinho Hwang, Duri Kim, Meenwoo Kim, Deokjoon Cha, Kiejin Lee

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Real-Time Noninvasive Measurement of Glucose Concentration Using a Modified Hilbert

Shaped Microwave Fractal Sensor

Arsen Babajanyan, Levon Odabashyan, Zhirayr Baghdasaryan, Seungwan Kim, Jongchel Kim, Jinho Hwang, Meenwoo Kim, Hanju Lee, Deokjoon Cha, Kiejin Lee, Duri Kim

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3D visualization of electromagnetic fields and thermal distribution by the thermo-elastic optical indicator microscope

A. Babajanyan, K. Lee, Zh. Baghdasaryan, L. Odabashyan, S. Kim, J. Kim, Gerard Berthiau, B. Friedman

Գիտաժողովի նյութ

Noninvasive in-vitro monitoring of D-glucose concentration by using a microwave fractal sensor

A. Babajanyan, L. Odabashyan, Zh. Baghdasaryan, T. Abrahamyan, N. Harutyunyan, S. Kim, J. Kim, B. Friedman, K. Lee

Գիտաժողովի նյութ

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

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

Գիտաժողովի նյութ

Characterization of Ag nanoparticles concentration in aqueous solution by microwave biosensor

Arsen Babajanyan, Zh. Baghdasaryan, T. Abrahamyan, L. Odabashyan, H. Lee, D. Kim, M. Kim, S. Kim, K. Lee

Գիտաժողովի նյութ

Microwave and Joule heating visualization by a thermo-elastic sensor for carbon composite materials

Shant Arakelyan, Arsen Babajanyan, Gerard Berthiau, Barry Friedman, Kiejin Lee

Գիտաժողովի նյութ

Detecting Low Dose of Glucose in the Microwave Range By Using Thermoelastic Optical Indicator Microscope

Tigran Abrahamyan, Nelli Babajanyan, David Hambaryan, Hasmik Manukyan, Arsen Babajanyan, Kiejin Lee

Գիտաժողովի նյութ

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
