

Институт физики

Վերականգնողական Էլեկտրադինամիկայի և մոդելավորման ամբիոն
Заведующий кафедрой, профессор

Publications

Статья

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

Статья

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

Статья

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

Статья

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

Статья

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

Статья

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
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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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Статья

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

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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

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

Образовательный Руководство

Ատոմային և միջուկային ֆիզիկայի ընդհանուր դասընթացի լաբորատոր աշխատանքների ուղեցույց

Հասմիկ Շահինյան, Լուսինե Ղազարյան, Արսեն Բաբաջանյան

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Статья

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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Статья

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)

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**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. БАБАДЖАНИЯН
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251-258

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COMPUTER MODELING OF MICROWAVE STRIPLINE RESONATORS FOR NON-INVASIVE SENSING

A. Zh. BABAJANYAN, B. J. MINASYAN, L. A. ODABASHYAN, Zh. A. BAGHDASARYAN, K. LEE
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Статья

**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
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Investigation of Ag Nanoparticles/Water Solutions by Microwave Stripline Sensor

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L. Odabashyan
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А. БАБАДЖАНИЯН, Т. АБРАМЯН, Р. ХАЧАТРЯН, Д. АМБАРЯН, Б. ОГАНЕСЯН, Б. МИНАСЯН,
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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
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Levon Odabashyan, Arsen Babajanyan, Zhirayr Baghdasaryan, Seungwan Kim, Jongchel Kim,
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Microwave Heating Visualization for Carbon Fibers Composite Material: Development of Tunable Microstrip Structures

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

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

«Վիճակագրական ռադիոֆիզիկա» լաբորատոր աշխատանքների ձեռնարկ
Ա. Ժ. Բաբաջանյան, Վ. Ռ. Թադևոսյան, Հ. Ս. Հարոյան, Ա. Հ. Մակարյան
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Конференция

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

Конференция

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

Конференция

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

Конференция

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

Конференция

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

Tigran Abrahamyan, Stella Sargsyan, Arsen Babajanyan, Khachatur Nerkararyan

Конференция

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

Конференция

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

Sona Nerkararyan, Arsen Babajanyan, Khachatur Nerkararyan

Конференция

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.

Конференция

Label-Free Monitoring of HbA1C by Microwaves

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

Конференция

Detection of Nanometric Vibrations by Using Opto-Mechanical Sensor

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Конференция

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

Конференция

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

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

Конференция

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

Конференция

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

Конференция

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

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Конференция

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

Конференция

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

Конференция

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

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

Конференция

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

Конференция

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

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

Конференция

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

Конференция

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
