

# Tigran Arsen Abrahamyan

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Ֆիզիկատեխնիկական հետազոտությունների կենտրոն

Head of laboratory

## Language skills

Русский English

## Publications

*Article*

### **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

*Article*

### **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

*Article*

### **L-cysteine polymorph coatings for THz sensing metasurfaces**

M. Zhezhu, A. Vasil'ev, H. Parsamyan, T. Abrahamyan, G. Baghdasaryan, S. Gyoalyan, D. Ghazaryan,

H. Gharagulyan

Results in Physics 2025 108351

*Article*

### **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

*Article*

### **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

*Article*

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

*Manual*

**Պիտափորձի ավտոմատացում LabVIEW միջավայրում**  
Տիգրան Աբրահամյան, Հենրիկ Պարսամյան

2023 93

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*Article*

**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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*Article*

**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

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*Article*

**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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*Article*

**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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*Article*

**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

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2020

251-258

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*Article*

**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

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*Article*

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

## **ПОЛОСКОВОГО СЕНСОРА**

А. БАБАДЖАНЫАН, 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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*Article*

### **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

<https://www.osapublishing.org/ao/home.cfm>

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*Article*

### **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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*Conference*

### **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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*Conference*

### **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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*Conference*

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

Arsen Babajanyan, Tigran Abrahamyan, Shant Arakelyan, Khachatur Nerkararyan

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*Conference*

### **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

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*Conference*

### **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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*Conference*

### **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

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*Conference*

**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,

Kiejn Lee

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*Conference*

**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, Kiejn Lee

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*Conference*

**Resonant interaction between microwaves and thin conducting microstructure with finite length**

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

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*Conference*

**Resonances Induced by Structural Asymmetry in the THz Domain and Their Applications**

Sara Gyoalyan, Marina Zhezhu, Alexey Vasil'ev, Henrik Parsamyan, Tigran Abrahamyan,

Gayane Baghdasaryan, Davit A. Ghazaryan, Hermine Gharagulyan

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*Conference*

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

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

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