Zarine Gevorg Simonyan

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Research Institute of Physics

Education

Institution	Yerevan State University
Faculty	Radiophysics
Date	2020 - 2022
Degree name	Masters

Institution	Yerevan State University
Faculty	Radiophysics
Date	2016 - 2020
Degree name	Bachelor

Language skills

Հայերեն Русский English

Work experience

Institution	Center of Semiconductor Devices and Nanotechnology
Period of time	2021 till now
Rank/degree	Researcher

Scientific interests

- Gas sensors
- Flexible gas sensors
- Carbon nanotubes (CNTs)

Publications

Article

Ultra-high selective hydrogen peroxide vapor sensor based on the Fe2O3/MWCNTs nanocomposite

Artak Sayunts, Rima Papovyan, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Gabriel Gevorgyan, Dušan Kopecký, Mikayel Aleksanyan

International Journal of Smart and Nano Materials 2026 2637516

https://www.tandfonline.com/doi/full/10.1080/19475411.2026.2637516

Article

Study of a Flexible ZnO/MWCNTs Thin Film Sensor for Hydrogen Peroxide Vapor Detection by Impedance Spectroscopy

Gohar Shahnazaryan, Artak Sayunts, Gevorg Shahkhatuni, Rima Papovyan, Zarine Simonyan, Gabriel Gevorgyan, Andranik Grigoryan, Dušan Kopecký, Mikayel Aleksanyan

Nanotechnology Science and Applications 2026 577983

https://doi.org/10.2147/nsa.s577983

Article

Enhanced Humidity Sensing Performance of Fe 2 O 3 :ZnO/MWCNTs Nanocomposite: Fabrication and Characterization

Artak Sayunts, Gevorg Shahkhatuni, Rima Papovyan, Zarine Simonyan, Davit Kananov, Gohar Shahnazaryan, Gabriel Gevorgyan, Andranik Grigoryan, Dušan Kopecký, Mikayel Aleksanyan

ACS Omega 2026 31627–31638

https://doi.org/10.1021/acsomega.6c02389

Article

SnO2/MWCNTs Nanostructured Material for High-Performance Acetone and Ethanol Gas Sensors

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Emma Khachaturyan, Rima Papovyan, Alena Michalcová, Dušan Kopecký

ACS Omega 2025 7283-7294

Article

Study of a Nanostructured Co-Doped SnO2 Sensor for Hydrogen Peroxide Vapor Detection Using Impedance Spectroscopy

Gohar Shahnazaryan, Mikayel Aleksanyan, Artak Sayunts, Zarine Simonyan, Rima Papovyan, Gevorg Shahkhatuni

ACS Omega 2025 14452 - 14465

Article

Fabrication and Characterization of MWCNTs Decorated ZnO Nanograins Based Sensor for Enhanced Performance Toward CO2 Gas

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Rima Papovyan, Dušan Kopecký

Advanced Materials Interfaces 2025 2500185

Article

Influence of the Growth Parameters on RF-Sputtered CNTs and Their Temperature-Selective Application in Gas Sensors

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Rima Papovyan, Dušan Kopecký

ACS Omega 2025 34733–34746

Article

Highly Sensitive Ammonia Gas Sensor Based on MWCNTs Saturated Fe2O3 Nanograins

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Andranik Grigoryan, Rima Papovyan, Dušan Kopecký

Langmuir 2025 26614–26627

Conference

Fabrication and Characterization of CO2 Sensor Using ZnO Nanograins
M. Aleksanyan, G. Shahkhatuni, Z. Simonyan, G. Shahnazaryan, R. Papovyan, D. Kananov, A. Grigoryan, G. Gevorgyan, G. Stepanyan, A. Sayunts

2025 307-308

https://www.smsi-conference.com/

Article

MWCNTs/Fe2O3:ZnO Nanocomposite Material for Chemoresistive Sensing of Hydrogen Peroxide Vapors
Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Hayk Kasparyan, Dušan Kopecky

ACS Applied Electronic Materials 2024 940-949

Article

Fabrication and characterization of highly responsive hydrogen sensor based on Fe2O3:ZnO nanostructured thin film
Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Gohar Shahnazaryan, Vladimir Aroutiounian

Measurement Sensors 2024 100984

Article

Fabrication of the Fe2O3:ZnO Based Nanostructured Sensor for LPG Detection
Mikayel Aleksanyan,, Artak Sayunts, Gevorg Shahkhatuni, Gohar Shahnazaryan, Zarine Simonyan, Davit Kananov

e-Journal of Surface Science and Nanotechnology 2024 149-156

Article

Acetone Vapors Detection Using a MWCNTs/SnO2 Nanocomposite Material
Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Emma Khachaturyan, Dušan Kopecký

ACS Applied Electronic Materials 2024 4090–4098

Article

Flexible Gas Sensor Based on the RF-Grown Fe2O3:ZnO/CNTs Material for Propylene Glycol Vapor Detection
Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov, Alena Michalcová, Lukáš Koláčný, Dušan Kopecký

ACS Applied Electronic Materials 2024 6893–6904

Article

Room Temperature Detection of Hydrogen Peroxide Vapor by Fe2O3:ZnO Nanograins
Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Hayk Kasparyan, Dušan Kopecký

Nanomaterials 2023 120

Article

Detection of hydrogen peroxide vapor using flexible gas sensor based on SnO2 nanoparticles decorated with multi-walled carbon nanotubes

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Vladimir Aroutiounian,

Emma Khachatryan

Advances in Natural Sciences: Nanoscience and Nanotechnology 2023 025001

Article

Growth, Characterization, and Application of Vertically Aligned Carbon Nanotubes Using the RF-Magnetron Sputtering Method

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Hayk Kasparyan,

Dušan Kopecký

ACS Omega 2023 20949-20958

Conference

Highly Sensitive Hydrogen Sensor Based on ZnO/MWCNTs Nanocomposite Material

M.S. Aleksanyan, A.G. Sayunts, G.H. Shahkhatuni, Z.G. Simonyan, G.E. Shahnazaryan

2023 112-113

https://www.smsi-conference.com

Patent

Ջրածնի դետեկտոր

Միքայել Ալեքսանյան, Արտակ Սայունց, Գևորգ Շահխաթունի, Զարինե Սիմոնյան,

Գոհար Շահնազարյան

2023

Article

Flexible sensor based on multi-walled carbon nanotube-SnO2 nanocomposite material for hydrogen detection

Mikayel S Aleksanyan, Artak G Sayunts, Gevorg H Shahkhatuni, Zarine G Simonyan,

Vladimir M Aroutiounian, Gohar E Shahnazaryan

Advances in Natural Sciences: Nanoscience and Nanotechnology 2022 035003

Conference

Highly Sensitive Hydrogen Gas Sensor Based on Fe2O3:ZnO Nanostructured Thin Film

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Gohar Shahnazaryan,

Vladimir Aroutiounian

2022 1

https://www.elsevier.com/events/conferences/all/measurement-sensor-systems-and-...