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Research Institute of Physics

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Researcher

🌐 Language skills

Հայերեն Русский English

📖 Publications

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

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

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 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

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

Acetone Vapors Detection Using a MWCNTs/SnO₂ Nanocomposite Material

Mikayel Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Zarine Simonyan, Davit Kananov,

Emma Khachatryan, 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

Article

Investigation of the MWCNT/SnO₂ Sensor for the Detection of Acetone Vapors

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

H. R. Hovhannisyan, D. A. Kananov

Article

Investigation of Nanostructured Fe₂O₃:ZnO Sensor by Impedance Spectroscopy

G. H. Shahkhatuni

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 385-390

Article

Flexible SnO₂ (Co)/MWCNT Sensor for Detection Low Concentrations of Hydrogen Peroxide Vapors

M. S. Aleksanyan, A. G. Sayunts, G. H. Shahkhatuni, Z. G. Simonyan, V. M. Aroutiounian,

G. E. Shahnazaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 133-139

Article

Use of Nanostructured Fe₂O₃:ZnO Film for Detection of Hydrogen

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

V. M. Aroutiounian

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 140-145

Article

Investigations of the Impedance Characteristics of a Nanostructured ZnO(La) Sensor for Hydrogen Peroxide Vapors

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

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 254-262

Article

Gas Sensor Based on ZnO Nanostructured Film for the Detection of Ethanol Vapor

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

Vladimir Aroutiounian

Chemosensors 2022 245/17

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

Article

Study of Gas Sensitivity of SnO₂ (Nb) Film in Liquefied Petroleum Gas

M. S. Aleksanyan, A. G. Sayunts, G. H. Shahkhatuni, G. E. Shahnazaryan, V. M. Aroutiounian

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 139-145

Article

Influence of Ultraviolet Rays on Sensitivity of Sensors for Acetone Vapor Detection

M. S. Aleksanyan, A. G. Sayunts, V. M. Aroutiounian, G. E. Shahnazaryan, G. H. Shahkhatuni

Journal of Contemporary Physics (Armenian Academy of Sciences) 2021 109-116

Article

Magnetron Sputtered ZnO Thin Films for Hydrogen Peroxide Vapor Detection

Mikayel ALEKSANYAN, Vladimir AROUTIOUNIAN, Valeri ARAKELYAN, Gohar SHAHNAZARYAN,

Gevorg SHAKHATUNI

Sensors & Transducers 2020 23-31

Article

Исследование сенсора на основе ZnO:La для детектирования паров перекиси водорода методом импедансной спектроскопии

Г.А. Шахатунни, В.М. Арутюнян, В.М. Аракелян, М.С. Алексанян, Г. Э. Шахназарян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2019 253-262

Article

Investigation of sensor made of ZnO:La for detection of hydrogen peroxide vapours by impedance spectroscopy method

G. H. Shakhhatuni, V. M. Aroutiounian, V. M. Arakelyan, M. S. Aleksanyan, G. E. Shahnazaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2019 188-195

Article

Conductometric sensor for hydrogen peroxide vapors detection

G. H. Shakhhatuni, V. M. Aroutiounian, V. M. Arakelyan, M. S. Aleksanyan, G. E. Shahnazaryan

Armenian Journal of Physics 2018 153-159

Conference

Hydrogen Peroxide Vapor Sensor Based on Zinc Oxide

V. M. Aroutiounian, M. S. Aleksanyan, V. M. Arakelyan, G. E. Shahnazaryan, G. H. Shakhhatuni

Patent

Ջրածնի պերօքսիդի գոլորշիներ հայտնաբերող սենսորի պատրաստման եղանակ

Ալեքսանյան Միքայել Սերյոժայի, Հարությունյան Վլադիմիր Միխայիլի, Շահնազարյան Գոհար Էմիլի,

Շահխաթունի Գևորգ Հարությունի

Patent

Ջրածնի նանոկառուցվածքին ռեզիստիվ սենսոր

Ալեքսանյան Միքայել Սերյոժայի, Սայունց Արտակ Գարեգինի, Շահխաթունի Գևորգ Հարությունի,

Սիմոնյան Չարիսե Գևորգի, Շահնազարյան Գոհար Էմիլի, Հարությունյան Վլադիմիր Միխայիլի

Patent

Ջրածնի դետեկտոր

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

Գոհար Շահնազարյան

Conference

Highly Sensitive Hydrogen Sensor Based on ZnO/MWCNTs Nanocomposite Material

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

Conference

A Chemiresistive Gas Sensor Based on SnO₂:ZnO Nanostructured Thin Film for the Detection

of Hydrogen Peroxide Vapor

Mikayel Seryozha Aleksanyan, Artak Sayunts, Gevorg Shahkhatuni, Vladimir Aroutiounian,

Gohar Shahnazaryan

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

Conference

Fabrication and Characterization of CO₂ Sensor Using ZnO<In> Nanograins

M. Aleksanyan, G. Shahkhatuni, Z. Simonyan, G. Shahnazaryan, R. Papovyan, D. Kananov, A. Grigoryan,

G. Gevorgyan, G. Stepanyan, A. Sayunts
