

IRAQI JOURNAL OF APPLIED PHYSICS

Volume (20) Issue (3) July 2024

CONTENTS



About Iraqi Journal of Applied Physics (IJAP)	1
Instructions to Authors	2
A Detailed Evaluation of Zn:Cu Co-Doping Impacts on the Performance of Nanostructured CdO Thin Films Roaa J. Mohammed, Jasim M. Mansoor, Asaad A. Kamil	469-476
Characterization of Nickel and Nickel Oxide Nanoparticles Prepared by Laser Ablation Technique: Effect of Laser Wavelength and Energy Bushra M. Ghdhaib, Sahar N. Rashid	477-484
Enhanced Gas Sensing Performance of Plasma-Treated Tin-Zinc–Oxide Thin Films Deposited by Spray Pyrolysis Amer A. Ramadhan, Moahmmmed M. Hameed, Moahmmmed O. Salman, Eman M. Nasir	485-492
Enhancement Cathode Electrode of PPy by GO to Applied for Supercapacitor Firas J. Hameed, Isam M. Ibrahim	496-499
Physical and Magnetic Properties of $Ni_{1-x}Cd_xFe_2O_4$ Ferrites Synthesized by Glycine-Nitrate Auto-Combustion Process We'am Sami	500-504
Optical Properties of CuS/Porous Silicon Heterojunction Ahmed A. Ahmed, Najat A. Dahham, Ghazwan G. Ali	505-510
Investigation of Photocatalytic Activity of Anatase Titanium Dioxide Prepared by DC Reactive Magnetron Sputtering for Air Pollutants Degradation Ali N. Munif, Firas J. Kadhim	511-516
Investigating the Potential of Al_2O_3 Nanocomposites for Innovative Self-cooling Photovoltaic Technology Mohammed H. Al-Dharob, Ammar A. Hamad, Ahmed Y. Qasim, Omar A. Abdulrazzaq, Ahmed A. Alwan	517-522
Silver Nanoparticles Effects on Methyl Orange Dye Photocatalysis for Environmental Applications Hamsa N. Naser, Rafea T. Ahmed, Jinan A. Abd, Nada A. Mohammed	523-528
Effect of Magnetic Field on Self-focusing and Stimulated Raman Scattering of q-Gaussian Laser Beam in Plasma Ahmed S. Ahmed, Hyder A. Salih, Khaleel I. Hassoon	529-534
Environmental Radioactive Contamination Assessment in the Water Samples of Nineveh Province Azhaar A. Ali, Malik H. Kheder, Rajaa A. Basheer	535-539
Effect of Material Irradiated Type and Spot Size on Spot Center Temperature of a Diode-Pumped Solid State Laser Ragheed M. Ibrahim, Musab S. Mohammed	540-544
Effectiveness of Nuclear Track Detectors irradiation by Laser on Recording Concentration and Track Diameter of Alpha Particles Emitted from Radon Malik H. Kheder	545-548
Synthesis of Zinc Nanoparticles on Various Substrates Using Direct Current Sputtering Method Iman H. Hadi, Doaa Sulaiman, Ban A. Bader	549-552
Uranium Concentrations Investigation in the chicken and their parts samples Using CR-39 detector in Nineveh Province, Iraq Hanaa N. Azeez, Azhaar A. Ali, Malik H. Kheder	553-556
Study the Effect of Etching Time on the Morphology of Porous Silicon Surfaces Manufactured via Photochemical Etching Islam N. Yousif, Malak J. Ali, Ismael T. Tlayea	557-560

Environmental and Radioactive Contamination in the Village of Kabarli in the Nineveh Plain Region in Iraq Aaraf Kh. Thannon, Malik H. Kheder, Yasir Y. Kassim, Hanaa N. Azeez	561-564
Unraveling the Influence of Hydrofluoric Concentration on the Morphology of Porous Silicon Surfaces Fabricated through Photochemical Etching using Sunlight Islam N. Yousif, Ahmed T. Abdulhameed, Amenah M. Essmat, Abdulrahman I. Ahmed	565-568
Determination of radon concentrations, surface emission rate and mass emission rate radon in the surface soils of the city of Tuzharmatu in Governorate of Salah Al-Din Asmaa A Aziz, Nada F Tawfiq, Lukman A. Hussein	569-572
Polypyrrole-Functionalized MWCNT Heterojunctions for Gas Detection Mohammed K. Jawad, Farah T.M. Noori, Seenaa I. Hussein, Nadia A. Ali, Zainab R. Muslim, Manal A. Saleh	573-576
Characterization of the Radioactivity of Natural Radionuclides in Some Building Materials using a High-Purity Germanium Detector Saad A. Essa, Kareem K. Mohammad, Yaseen H. Mahmood	577-580
The Optical and Structural Properties of Thermally Vaporized Composite Thin Films Muayyad N. Fathula, Azhaar A. Ali, Malik H. Kheder	581-583
Evaluate the Output Radiation of Light Curing Sources in Dental Offices Across the Left Side of Nineveh Province Muna Y. Slewa, Fatin M. Hamam, Rafal Z. Bahnam	584-586
A Study of Optical Properties of Tetraborate Glass Containing MgO Aynoor B. Kamal, Zainab Q. Mosa, Abeer N. Kadhim, Islam N. Yousif	587-589
The Influence of Bi on Compounds on Their Structural and Electrical Properties Muayyad N. Fathula, Azhaar A. Ali, Siham J. Al-Faris, Rajaa A. Basheer	590-592

Contents

IRAQI JOURNAL OF APPLIED PHYSICS

Volume (20) Issue (3B) August 2024

CONTENTS



About Iraqi Journal of Applied Physics (IJAP)

Instructions to Authors

Output Power Dynamic Range in Presence of Semiconductor Optical Amplifier Dynamics Mustafa M. Abid, Adnan H. Mohammed	593-599
A Simple and Economical Method to Prepare Cu/CuO/Cu ₂ O NPs for Biomedical Applications Wedian K. Abad, Hassan H. Darwoysh, Ahmed N. Abd	600-604
Preparation and Characterization of Ag/CdTeQDs/PS/c-Si/Ag Heterojunction for Photodetector Applications Hala R. Hassan, Mohammed J.M. Ali, Ahmed N. Abd	605-610
Effect of Yttrium Doping on Structural and Microscopic Characteristics of Barium Titanate Musaab R. Feza'a, Abbas K. Saadon	611-616
Preparation of Silver Oxide Nanoparticles by Salvia Rosmarinus Extract for Biomedical Applications Wedian K. Abad, Hind K.K.S. Al-Whaili, Ahmed N. Abd	617-622
Microbial and Chemical Synthesis of Cobalt Oxide Nanoparticles and Their Antimicrobial Activities Muneer H.J. Alzubaidy, Firas M.D. Al-Jaafari, Wedian K. Abad, Ahmed N. Abd	623-627
Effect of Partial Replacement of Copper with Zinc on Dielectric Properties of PbSr ₂ Ca ₂ Cu ₃ O Compound Naba F. Hamady, Shatha H. Mahdi	628-632
Effect of Cold Plasma Jetting on Optical Properties and Surface Morphology of CuO Thin Films Prepared by RF Magnetron Sputtering Basim A. Zachi, Abdul H.A. Khadayeir, Ziad M. Abood	633-637
Synthesis of Tin Oxide Nanoparticles by Celery Leaves Extract for Antibacterial Activity Bashaer S. Faris, Ahmed N. Abd, Basaad H. Hamza	638-642
Temperature Sensor Based on Photonic Crystal Fiber Fabry-Perot Interferometer Namaa S. Rahim, Soudad S. Ahmed	643-646
Biosynthesis of Manganese Oxide Nanoparticles Prepared by Saffron Plant Extract Noor-Alhuda R. Ali, Majid H. Hassouni	647-650
Antimicrobial Activity of Al ₂ O ₃ Nanoparticles Prepared by Simple Chemical Method Thaer A. Mezher, Hameed H. Ahmed, Adil H. Dhari	651-654

Synthesis of FeO/Cu Nanocrystalline Alloy by Combining FeCl ₃ and Cu ₂ NO ₃ Salts with Oats Extract for Methylene Blue Dye Degradation Duha A. Abid, Maisam A. Abdul Resool, Batool Z. Fahim, Abdul H.A.Z. Raheim, Ihab A. Thabet, Muslim A. Abid, Wisam J. Aziz	655-658
Structural and Electrical Properties of Zintl Antimonite Compounds, YbA ₂ Sb ₂ (A=Zn, Cd, Mn) Prepared by Solid State Microwave Technique Abraham M. Jasim, A. Hmood	659-662
Evaluation of Thermal and Mechanical Performance of β -Tri-Calcium Phosphate Milad A.R. ALhammashi, Fadhil K. Farhan, Hashim A. Yusr	663-667
Effect of Temperature and Time on Etching to Form Porous Silicon Ahmed K. Al-Kadumi, M. Al-Baghdadi	668-670
Effect of Temperature Substrate on Structural, Optical, and Electrical Properties of Zinc Sulfide Thin Films Prepared by Thermal Chemical Spray Sabah S. Hamdi, Huda S. Ali	671-674
Synthesis, Characterization and Spectroscopic Diagnostic of Copper Prepared by Plasma Technique Abdulrhman H. Shaker, Kadhim A. Aadim	675-680
Enhancement of Power Conversion Efficiency for Perovskite Solar Cells Using ZnO-G-Ge as Electron Transport Layer Najlaa L. Tubena, Majid R. Al-Bahrani	681-686
Ag-PVP nanofiber for UV Photodetector Produced by Electrospinning Technique Marwan S. Abdul Hamid, Isam M. Ibrahim	687-692
Investigation into the Corrosion Behavior of Medical Grade Titanium Ti6Al4V Samples Abdualkhalq H. Mohammed, Hanaa E. Jasim	693-695
Plasma Instability Effect in Magnetron Sputtering Discharges Using Bohm Diffusion Analysis Murad M. Kadhim, Qusay A. Abbas	696-700
Experimental and Simulation Investigation of AlGaIn/CdS/p-Si Solar Cell Performance Bashar M. Salih, Asmiet Ramizy	701-706
Synthesis and Characterization of Magnesium–Carbon Nanoparticles by Exploding Wire Method in Liquid Duaa A. Uamran, Hadeel O. Ismael, Hammad R. Humud	707-710
Effect of Acidity on Electrodeposition of Nickel Manganese Alloy Hizia Merkoun, Kamel Hachama	711-714

Contents