



The 3rd Specialized Scientific Conference of Physics (SSCP)

6-7 December 2023

BAGHDAD - IRAQ

Plenary Sessions

المؤتمر التخصصي الثالث للفيزياء

The 3rd Specialized Scientific
Conference of Physics (SSCP)



منهاج المؤتمر

Conference Program

Time	الأربعاء 2023/12/6		الوقت
9:30	Opening Session	الجلسة الافتتاحية	9:30
11:15	Break	إستراحة	11:15
11:30	2 nd Session	الجلسة الثانية	11:30
الخميس 2023/12/7			
9:30	1 st Session	الجلسة الأولى	9:30
11:00	Break	إستراحة	11:00
11:15	2 nd Session	الجلسة الثانية	11:15
12:15	Break	إستراحة	12:15
12:30	Closing Session and Recommendations	الجلسة الختامية والتوصيات	12:30



<http://sccp.uobaghdad.edu.iq>



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المؤتمر التخصصي الثالث للفيزياء

The 3rd Specialized Scientific
Conference of Physics (SSCP)



Research Sessions

1st Day (Dec. 6th, 2023)

1st Session

Session Place: قاعة أ.د. جاسم الحسيني

Session Chairman: Prof. Dr. Ali Abdulkareem Hussain

Session Rapporteur: Prof. Dr. Thamir Hameed Khalaf

No.	Program	المنهاج	Times
1.	Iraqi National Anthem of the Republic of Iraq	النشيد الوطني لجمهورية العراق	9:30
2.	Holly Quran Assist. Prof. Dr. Mustafa M. A. Hussein	القرآن الكريم أ.م.د. مصطفى محمد علي الحسيني	9:35
3.	Speech of Rector of University of Baghdad Prof. Dr. Munir Hamid Al-Saadi	كلمة السيد رئيس جامعة بغداد أ.د. منير حميد السعدي المحترم	9:45
4.	Speech of Dean of the College of Science Associate Prof. Dr. Raed F. Hassan	كلمة السيد عميد كلية العلوم أ.م.د. رائد فالح حسن المحترم	9:55
5.	Speech of Head Department of Physics /Conference Chairman Prof. Dr. Mohammed Kadhum Jawad	كلمة السيد رئيس قسم الفيزياء / رئيس المؤتمر أ.د. محمد كاظم جواد المحترم	10:05
6.	Speech of Chairperson, Preparatory Committee Prof. Dr. Bahaa Toama Chiad	كلمة السيد رئيس اللجنة التحضيرية أ.د. بهاء طعمة جواد المحترم	10:15
7.	Commemorative Awards and Shields	توزيع الهدايا والدرع	10:25
8.	Break	إستراحة	11:15





Research Sessions

1st Day (Dec. 6th, 2023)

2nd Session

Session Place: قاعة أ.د. جاسم الحسيني

Session Chairman: Prof. Ikram Atta Al-Ajaj

Session Rapporteur: Assist. Prof. Dr. Asmaa Shawqy Khaleel

No.	Title	Authors	Times
1.	Nano Layered Oxide: Preparation, Structural, Electrical and Dielectric behavior	Zainab Raheem Muslim, Asmaa Shawqi Khalil, Mohammed K. Jawad and Ali Qassim Kadhim	11:30
2.	Microstructural and Mechanical Properties Study of Al/SiC composite prepared by PM technique	Wasan A. Al-Taa'y, Mustafa A. Mahmood, Mohammed Ali H.Al-Beayaty and, Luma J. abbas	11:45
3.	Extended Gate Field-Effect Transistor Based on Quantum Dots Porous Silicon with Silver Nanowires for X-ray Dosimeter Applications	Abdullah Marzouq Alharbi, Naser M Ahmed and, Mus'ab S Alkasasbeh	12:00
4.	Boosting UV Light photodetector performance: Porous Silicon Enhanced with Silver Nanowires	Naser M. Ahmed, Momin S.M. Abutawahina and, Anas A. M. Alqanoo	12:15
5.	Green Synthesis and Comprehensive Characterization of ITO Nanoparticles: A Promising Approach for Gas Sensor Applications	Ahmed Y. Alam, Ahmed Kh. Abbas and, Essam M. Ibrahim	12:30
6.	Enhancing UV Photodetection Performance through Cost-Effective Deposition of Silver Nanoparticles on Silicon Substrates	Abdullah Marzouq Alharbi, Naser M. Ahmed and, Mus'ab S. Alkasasbehl	12:45





Research Sessions

1st Day (Dec. 6th, 2023)

2nd Session

Session Place: قاعة أ.د. رحيم عبد الكتل

Session Chairman: Prof. Dr. Nathera Abbas Ali

Session Rapporteur: Assist. Prof. Dr. Falah Hasan Ali

No.	Title	Authors	Times
1.	Spectroscopic study to determine the perfect common vegetable oils frying temperature	Afnan H. Al husseini, Lana T. Ali, Esraa A. Al-Dubidy and, Bahaa T. Chiad	11:30
2.	Evaluation of color properties of copper oxide thin films prepared by sol gel method	Doigu Majeed Ezzat and, Ali Ismail Salih	11:45
3.	A novel design for the preparation of Iron Oxide Nanoparticles and the study of their characterization.	Ahmed Basim Taha, Bahaa Toama Chiad, and, Mohammed Shaalan Essa	12:00
4.	CuNPs doped Silica xerogels for optimum surface plasmon resonance	Tabarak A. Al-Mashhadani, Firas J. Kadhim and, Noor Alhuda H. Hashim	12:15
5.	Verification of Heating Effect on Quality Characterization of Cooked Vegetable Oils Based on Absorption Spectrum Analyses.	Esraa A. Al-Dubidy, Lana T. Ali, Afnan H. Al husseini and, Bahaa T. Chiad	12:30
6.	Chemical Reaction Induced by Fast Glow Discharge to Produce Highly-Pure Carbon Nitride Nanostructures	Oday A. Hammadi, Oday H. Ahmed, Mohammed A. Saleh, Haydar G. Fahad, Suhaib S. Ahmed, Mohammed A. Yaseen, Mohammed K. Zaher	12:45





Research Sessions

1st Day (Dec. 6th, 2023)

2nd Session

Session Place: قاعة أ.د. علي عطية

Session Chairman: Prof. Dr. Farah T. M. Noori

Session Rapporteur: Assist. Prof. Dr. Hyder Salim Hussien

No.	Title	Authors	Times
1.	Assessment the Emission and Circumnavigation Pollution of Sulfur Oxide, Nitrogen Oxide, and Total Petroleum Hydrocarbons in North of Thi- Qar Province, Al Rifaae City, Iraq During 2015-2018 and 2023.	Jamal S. Abd Al Rukabie	11:30
2.	Study of the Concentration Effect of Reactive Oxygen and Nitrogen Species in Water Activated by Plasma on the Germination of Barley	Wafaa Abdulrazzaq Abdullah and, Hammad R. Humud	11:45
3.	Structural Characterization of Indium and Tin Nanomaterial Synthesized via Laser-Induced Plasma Spectroscopy	Haider J. Hassan	12:00
4.	Numerical simulation for the streamer discharge within Nanofluid	Noor A. Ahmed and, Thamir H. Khalaf	12:15
5.	Effect of Aluminum Dust Particles on Properties of DC Discharge in Magnetron Plasma	Shahad Emaduldeen Abdulghani, Qusay A. Abbas and, Omar Abdulsada Ali	12:30
6.	Physical Conditions Supporting the Existence of an Atmosphere of Celestial Bodies	Ibrahim A. Sadiq, Noor M. Yaseen and Suha Mousa Al-Awsi	12:45





Research Sessions

1st Day (Dec. 6th, 2023)

2nd Session

Session Place: قاعة أ.د. عبد الأمير القزاز

Session Chairman: Prof. Dr. Mohammed T. Hussien

Session Rapporteur: Prof. Dr. Raied Kamil Jamal

No.	Title	Authors	Times
1.	Investigating a filtered feedback weight in the output signal to simulate a self-learning layer in an optical neural network	Dhuha Raad Madhloom Ayser A. Hemed and, Suha Musa Khorshed	11:30
2.	A Comprehensive Literature Survey on Mineral Exploration Techniques using Remote Sensing and GIS	Mohammed A. Mohammed, Faisal G. Mohammed and, Maryam H. Ali	11:45
3.	A study of the analysis of chlorophyll -a phytoplankton in the Tigris Rivers for some regions of Iraq by using GIS techniques	Rawaa Nader Al-saedy, Jinan S. Al-Hassany and, Fouad K. Mashee Al-Ramahi	12:00
4.	Application of Machine Learning for Detection and Classification of Gastric Ulcer	Salah Mishaal Raheem and, Ziad Mohammed Abood	12:15
5.	Using MCDM techniques to identify landfill sites: A Case study Al-Garraf Qadhaa, Dhi Qar, Iraq	Mukhalad N. Altail, Wassan A. Hassan, Faisal G. Mohammed, Ebtessam F. Khanjer Sundus A. Abdullah Albakry and, Ban A. Alrazaq	12:30



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Research Sessions

2nd Day (Dec. 7th, 2023)

1st Session

Session Place: قاعة أ.د. جاسم الحسيني

Session Chairman: Prof. Dr. Abdulla M. Suhail

Session Rapporteur: Prof. Dr. Manal M. Abdullah

No.	Title	Authors	Times
1.	High-sensitivity SnS near-IR photodetector on a flexible substrate	Noor M. Ibrahim, Manal M. Abdullah and, Mohamed S. Mahdi	9:30
2.	Estimating Refractive indices of Bronquium drug based on surface plasmon resonance (SPR)	Sally K. Abbas and, Soudad S. Ahmed	9:45
3.	Tapered length effect on the operation of a semiconductor laser amplifier	Ragheed M. Ibrahim and, Ivan B. Karomi	10:00
4.	Efficiency improvement of silicon solar cells by short laser pulses	Mustafa M A Hussein and, Falah H Ali	10:15
5.	Temperature Sensor Based on Photonic Crystal Fibers Fabry Perot Interferometer	Namaa Salem Rahim and, Sudad S. Al - Bassam	10:30
6.	Chaotic Dynamics Stimulated by Filtered Optical Fiber Loop Mirror Based on Michaelson Interferometer	Mayyadah Muter Fadhala and, Suha Mousa Khorshed	10:45





Research Sessions

2nd Day (Dec. 7th, 2023)

1st Session

Session Place: قاعة أ.د. رحيم عبد الكتل

Session Chairman: Prof. Dr. Mahdi Hasan Suhail

Session Rapporteur: Prof. Dr. Issam Mohammed Ibrahim

No.	Title	Authors	Times
1.	Empirical Relationship for Studying the Dispersion Profile of the Photonic Crystal Fibres	Marwan Hafeedh Younus, Odai Falah Ameen, Muayad Abdullah Ahmed and, Yaser Yahya Kassim	9:30
2.	Improved Optical System Design of Human Eye Using Ant Colony Optimization	Suha Mousa Khorshed Mohammed Sahib Mahdi Altaei and, Noor M. Yaseen	9:45
3.	Comparison between the ensquared energy of the Butterworth low pass filter and the Butterworth high bass filter for circular aperture using the Origin program	Nada Qasim, Duha A. Kadhim, Abdul Haleem Abdul Zahara Raheem and, Ghada S. Karam	10:00
4.	Theoretical Modeling of Holmium -Doped Fiber Lasers Pumped by Laser-Diodes around 1.12μm	Fatma Ayad Raghb and, Abdulkareem H.Dagher	10:15
5.	Advancements in Prosthetic Foot Design: A Comprehensive Review on 3D Printing Technology and Composite Materials Integration	Lara E. Yousif, Mayyadah S. Abed, Aseel B. Al-Zubidi and, Kadhim K. Resan	10:30
6.	A theoretical study to improve radiotherapy for lung cancer using nanocomposites with high energies (2-15) MeV	Walaa S. Sarhan and, Nagham M. Shiltagh	10:45



Research Sessions

2nd Day (Dec. 7th, 2023)

1st Session

Session Place: قاعة أ.د. عبد الأمير القزاز

Session Chairman: Prof. Dr. M. F. A. Alias

Session Rapporteur: Prof. Dr. Hussien Khazaal Rasheed

No.	Title	Authors	Times
1.	Studying the optical and structural properties of carbon quantum dot prepared by of the electro-chemical method	Nooriyah Ahmed Abd and, Omar Adnan Ibrahim	9:30
2.	Impact of anthocyanin dye on structural, morphological and optical properties of GO-TiO ₂ thin films prepared by spray pyrolysis technique	M. J. Al-Sultani and, M. F. A. Alias	9:45
3.	Fabrication A Highly Sensitive Nano-Photonic Sensing Device to Detect Water Content in New Insulation Oil of Electrical Power Transformer Using D-Shape Fiber	Mezher H. Mezher	10:00
4.	Study of the PTh / SnO ₂ /MWCNTs nanocomposite as a gas sensor	Faten Adnan Jasim, Thamir A.A.Hassan and, Muntadher I.Rahmah	10:15
5.	Green synthesis of ZnO: ZrO ₂ nanocomposites using an extract of Ginger and Clove for antibacterial applications	M. J. Tuama and, M.F.A. Alias	10:30
6.	Investigation of the optical and structural properties of silver nanoparticles by green synthesis of beetroot extract: influence on antibacterial activity	Ashraf M. Alattar, A Wesam Al-Mufti, Jafer Fahdel Odah and, Abulfadhel Yahya Tuama Al-khafaji	10:45



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Research Sessions

2nd Day (Dec. 7th, 2023)

1st Session

Session Place: قاعة أ.د. علي عطية

Session Chairman: Assist. Prof. Dr. Zainab T. Ali Al-Shaibani

Session Rapporteur: Prof. Dr. Senaa Ibrahim Hussien

No.	Title	Authors	Times
1.	Synthesis and Characterization of Nanomaterial LiZnCu Ferrite by Auto Combustion Method	Saad Shakir Hussein and, Emad K. Al-Shakarchi	9:30
2.	Structural and magnetic characteristics of Maganese-substituted lithium ferrite via hydrothermal synthesis	Noor M. Ali, M. H. Al-timim and, D. A. Al-Jubouri	9:45
3.	Rectification Behavior of Cobalt Ferrites Nanostructures Embedded into PAN Nanofibers	Ban Abbas Rijah and, Iftikhar M. Ali	10:00
4.	Weight light photoconductive high gain of Electrospun PVA@CuO Nanofibers	Ahmed. J. NOORI and, Iftikhar M. Ali	10:15
5.	Experimental Study of Solar Still with Black Granite Gravel	Ghada Ghanim Younis	10:30
6.	Fabrication of Zinc Oxide nanorods from continuous solution feeding by thermal chemical solution deposition CSD.	Adnan. H. Alrajhi, Naser M. Ahmed and, Mohd Mahadi Halim	10:45





Research Sessions

2nd Day (Dec. 7th, 2023)

2nd Session

Session Place: قاعة أ.د. رحيم عبد الكتل

Session Chairman: Prof. Dr. Raad Abdulkareem Radhi

Session Rapporteur: Assist. Prof. Dr. Muthafar F. Jamil Al-Hilli

No.	Title	Authors	Times
1.	Investigating the Ground State Properties of ^4He , ^{12}C , ^{16}O , ^{40}Ca and ^{48}Ca nuclei Using Ginocchio Potential	Arkan R. Ridha	11:15
2.	Medical Image Segmentation Based on Region Method	Ali Jassam Mohammed and, Laith A. Al-Ani	11:30
3.	Determination the concentration of uranium in human urine at Al-Tuwaitha region	Hala M. Hamza and, Hayder S. Hussain	11:45
4.	A Study of Gamma Ray Buildup Factor for Some Metal Oxide Mixed with Epoxy	Mustafa Y. Rajabl, Kareem K. Mohammad	12:00
5.	Study of Longitudinal Electron Scattering Form Factors with the Radial Wavefunctions of Transformed Harmonic-Oscillator for some Light Nuclei	Arkan R. Ridha and, Ali Khalid	12:15
6.	The relationship between exposure to Radon in Majnoon field and lung cancer risk	Ali Khalid, Sohaib Qusay, Asia H. Al-Mashhadani and, Rana M. Yas	





Research Sessions

2nd Day (Dec. 7th, 2023)

2nd Session

Session Place: قاعة أ.د. عبد الأمير القزاز

Session Chairman: Prof. Dr. Zahida A. Dakhil

Session Rapporteur: Assist. Prof. Dr. Firas Zuhair Majeed

No.	Title	Authors	Times
1.	Sensing properties of WO₃ /Pd films synthesized by Pulsed laser deposition on a porous silicon substrate	Mayada A. Abed and, Falah A-H. Mutlak	11:15
2.	Investigate of photocatalytic activity of anatase titanium dioxide synthesized via reactive magnetron sputtering for air pollutants degradation	Ali N. Monif and, Firas J. Kadhim	11:30
3.	Effects of Operation Parameters on Particle Size of Copper Oxide Nanopowders Extracted from Thin Film Samples	Oday A. Hammadi, Oday H. Ahmed, Mohammed A. Saleh, Haydar G. Fahad, Suhaib S. Ahmed, Mohammed A. Yaseen and, Mohammed K. Zaher	11:45
4.	An Overview of Analytical Examination of the Impact of lum versus Zum Laser Wavelengths in the Manufacturing Industry	Ali Qais Abdulfattah	12:00
5.	Cu₂SnS₃ Thin Films Deposited via Automated Spray Pyrolysis System for Solar Collectors Applications	Zaid L. Hadi, Mohammed Sh. Essa and, and Bahaa T. Chiad	12:15



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Research Sessions

2nd Day (Dec. 7th, 2023)

2nd Session

Session Place: قاعة أ.د. علي عطية

Session Chairman: Prof. Dr. Adil Khalaf Hamoudi

Session Rapporteur: Assist. Prof. Dr. Osama Natiq Najj

No.	Title	Authors	Times
1.	Spectroscopic study of the nature of the fluorescent substance coated inside the tube, uv-visible and x-ray	Sadeq Hasan and, B. T. Chiad	11:15
2.	Influence of Chemical and thermal treatment on the purity of Silica Extracted from rice husk	Baha T. Chia d and, Bahaa F. Shihab	11:30
3.	Spectroscopic Study of $CoFe_{1.6}Mo_{0.4}O_4$ Prepared by Chemical Method	Sura Salah Mahdee and, Nathera A. Al-Tememe	11:45
4.	Plasma sputter deposited Nickel oxide films, optical and structural diagnosis for electrochromic applications	Zinah S. Abdulsattar and, Firas J. Kadhim	12:00
5.	Short-pulse mode-locked fiber laser	Hani J. Kbashi	12:15
6.	Hydrophilic and Hydrophobic Surfaces Produced by Lasers	A. A. Hatem and, B. G. Rasheed	12:30

