



Asst. Prof. Dr.Mohammed H. Abbas

محمد هاشم عباس مشجل

Assistant Professor

ACADEMIC TITLES

2025-03-23 Assistant Professor

ADMINISTRATIVE POSITIONS

2024-02-20 - Present Head Assistant

PUBLICATIONS (79)

- Fabrication and Exploring the Morphological, Optical, and Dielectric Properties of PVA/MgO/Fe2O3 Nanocomposites for Nanoelectronics Applications.**
Nanosistemi, Nanomateriali, Nanotehnologii 24 (1), 267, 2026 | 2026 | Cited: 1
- Ameliorating and Tailoring the Morphological and Optical Properties of PEO-MnO2-SrTiO3 Solid State Nanocomposites for Electronics Fields**
Physics and Chemistry of Solid State | 2026
- Modelling and ameliorating the features of (PS-SiO2-MnO2) multifunctional films for futuristic optoelectronics applications**
Bulletin of the Chemical Society of Ethiopia 40 (5), 1043-1056, 2026 | 2026
- FABRICATION, MORPHOLOGICAL, MICROSTRUCTURAL, AND OPTICAL CHARACTERIZATION OF PS/Cu-ZnO NANOCOMPOSITES FOR ADVANCED OPTOELECTRONIC APPLICATIONS**
Journal of Chemistry and Technologies 34 (3), 900-912, 2026 | 2026
- Fabrication and Boosting the Features of PCL-PS/ZnO-MWCNTs Multifunctional Films for Optoelectronics and Photonics Applications**
Natural and Engineering Sciences 11 (2), 190-199, 2026 | 2026
- Production and Controlling the Features of Quaternary (PVA-PVP-Al2O3/SiC) Flexible Films for Nanoelectronics Devices**
Silicon 18 (3), 913-926, 2026 | 2026 | Cited: 11
- ВИГОТОВЛЕННЯ ТА МОРФОЛОГІЧНА, МІКРОСТРУКТУРНА ТА ОПТИЧНА ХАРАКТЕРИСТИКА НАНОКОМПОЗИТІВ PS/Cu-ZnO ДЛЯ ЗАСТОСУВАНЬ У ПЕРЕДОВІЙ ОПТОЕЛЕКТРОНІЦІ**
Journal of Chemistry and Technologies | 2026
- Synthesis and enhancing the microstructure, optical and dielectric features of PS-PEG-SiC-ZrO2 for optoelectronics and high energy storage applications**
Solid State Sciences | 2026 | Cited: 26
- Production and Controlling the Features of Quaternary (PVA-PVP-Al₂O₃/SiC) Flexible Films for Nanoelectronics Devices**
Silicon | 2025 | Cited: 11
- Synthesis and Enhancing the Microstructure, Optical and Dielectric Features of PS-PEG-SiC-ZrO2 for Optoelectronics and High Energy Storage Applications**
Solid State Sciences, 108169, 2025 | 2025 | Cited: 26
- FABRICATION AND TAILORING THE MORPHOLOGICAL AND ELECTRICAL FEATURES OF SILICON NITRIDE-SILICON DIOXIDE/POLYMETHYL METHACRYLATE HYBRID NANOCOMPOSITES FOR NANOELECTRONIC FIELDS**
Chemistry and Chemical Technology | 2025

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EDUCATION

دكتوراه (07-01-2021)
Solid State Physics
Ph.D

RESEARCH METRICS

h-index (Scopus)	17
h-index (GS)	18
Citations (Scopus)	1009
Citations (GS)	1106
Documents (Scopus)	53
Documents (GS)	60



12. **Synthesis and Tailoring the Morphological and Optical Features of PEO–SiO₂–Sb₂O₃ Futuristic Films for Promising Optical and Nanoelectronics Applications**
MatSci Express | 2025
13. **Fabrication and Enhancing the Features of Chitosan/SnO₂-ZnO Nanocomposites Films for Optoelectronics and Biological Applications**
Trends in Sciences 22 (10), 10534-10534, 2025 | 2025 | Cited: 11
14. **Ameliorating and Tailoring the Features of Silica-Silicon Carbide Nanoceramic Doped Polyethylene Oxide for Promising Optoelectronics Applications**
Silicon | 2025 | Cited: 39
15. **Tailoring and Boosting the Features of ZnO/GO Nanoparticles Doped PVA/PEG Polymer Blend for Optoelectronics Applications**
Trends in Sciences 22 (11), 10612-10612, 2025 | 2025 | Cited: 3
16. **Ameliorating and Tuning the Microstructure, Electronic and Optical Features of PMMA-SiC-ZnO Futuristic Nanostructures for Tailored Nanoelectronics Applications**
Silicon, 1-15, 2025 | 2025 | Cited: 18
17. **Synthesis and Tailoring the Morphological and Optical Features of PEO–SiO₂–Sb₂O₃ Futuristic Films for Promising Optical and Nanoelectronics Applications**
2025
18. **ENGINEERING THE MICROSTRUCTURE AND OPTICAL FEATURES OF SiC- MWCNTS NANOPARTICLES DOPED PVA-PAA FOR PROMISING INDUSTRIAL APPLICATIONS**
Applied Engineering Letters : Journal of Engineering and Applied Sciences | 2025
19. **Optical, morphological and structural characteristics of zinc oxide nanoparticles fabricated by laser ablation in deionized water**
Journal of Optics 54 (4), 1554-1560, 2025 | 2025 | Cited: 3
20. **Enhanced Optical Properties of PVA–CuO–Fe₂O₃ Nanocomposites for Optoelectronics Applications**
Nanosistemi, Nanomateriali, Nanotehnologii | 2024
21. **Magnetic Reversal Mode Investigation of FeCo/Cu Multilayered Nanowires with Different Cu Layer Lengths**
Journal of Superconductivity and Novel Magnetism 37 (2), 459-467, 2024 | 2024 | Cited: 5
22. **Fabrication and Enhanced Dielectric Properties of PVA–Cr₂O₃–Sb₂O₃ Nanocomposites for Electrical and Electronics Applications.**
Nanosistemi, Nanomateriali, Nanotehnologii 22 (3), 655, 2024 | 2024
23. **Boosting the Dielectric Properties of PVA/In₂O₃/SiC Nanostructures for Electronics Nanodevices.**
Nanosistemi, Nanomateriali, Nanotehnologii 22 (1), 2024 | 2024
24. **Tailoring the AC Electrical Properties of TiO₂/Si₃N₄-NPs-Doped PVP to Use in Electrical and Electronics Applications.**
Nanosistemi, Nanomateriali, Nanotehnologii 22 (2), 437, 2024 | 2024
25. **Synthesis and Improved Dielectric Properties of PVP/TiN/Si₃N₄ Nanocomposites.**
Nanosistemi, Nanomateriali, Nanotehnologii 22 (1), 147, 2024 | 2024
26. **Prepared plasmonic glass substrates via electrodeposition for detecting trace glucose: SERS, DFT, and FDTD investigations**
Plasmonics 19 (4), 2087-2096, 2024 | 2024 | Cited: 31
27. **Boosting the Dielectric Properties of PVA/In₂O₃/SiC Nanostructures for Electronics Nanodevices.**
Nanosistemi, Nanomateriali, Nanotehnologii | 2024
28. **Optical, morphological and structural characteristics of zinc oxide nanoparticles fabricated by laser ablation in deionized water**
Journal of Optics | 2024 | Cited: 3
29. **Enhanced Optical Properties of PVA-CuO-Fe₂O₃ Nanocomposites for Optoelectronics Applications.**
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30. **Exploring the Dielectric Properties of PVP/Ag/SiC Nanostructures to Use in Various Electronics Fields.**
Nanosistemi, Nanomateriali, Nanotehnologii 22 (1), 187, 2024 | 2024 | Cited: 1
31. **Fabrication and Tailoring Structural, Optical, and Dielectric Properties of PS/CoFe2O4 Nanocomposites Films for Nanoelectronics and Optics Applications**
Transactions on Electrical and Electronic Materials 25 (4), 449-457, 2024 | 2024 | Cited: 69
32. **Surface-enhanced Raman scattering (SERS) and finite difference time domain (FDTD) investigations of plasmonic and flexible filter papers for the detection of the molecular ...**
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33. **Trends in electrochemical biosensors for the early diagnosis of breast cancer through the detection of relevant biomarkers**
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34. **Fabrication and Enhanced Dielectric Properties of PVA–Cr2O3–Sb2O3 Nanocomposites for Electrical and Electronics Applications**
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35. **Enhanced dielectric properties of CeO 2/SiC-nanostructures-doped PVA to use in various electronics devices**
Nanosistemi Nanomateriali Nanotehnologii 21 (3), 562-566, 2023 | 2023 | Cited: 4
36. **Facile Fabrication and Developing the Structural, Optical and Electrical Properties of SiC/Y2O3 Nanostructures Doped PMMA for Optics and Potential Nanodevices**
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37. **Fabrication and unraveling the morphological, optical and electrical features of PVA/SnO2/SiC nanosystem for optics and nanoelectronics applications: A. Hashim ...**
Optical and Quantum Electronics 55 (7), 642, 2023 | 2023 | Cited: 119
38. **Synthesis and Unraveling the Morphological and Optical Features of PVP-Si3N4-Al2O3 Nanostructures for Optical and Renewable Energies Fields**
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39. **PREPARATION OF NANOFLUIDS FROM INORGANIC NANOSTRUCTURES DOPED PEG: CHARACTERISTICS AND ENERGY STORAGE APPLICATIONS**
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40. **EXPLORING THE OPTICAL AND ELECTRICAL CHARACTERISTICS OF MgO/SiC-H2O NANOFLUIDS FOR THERMAL ENERGY STORAGE**
East European Journal of Physics | 2023 | Cited: 13
41. **Enhanced Dielectric Characteristics of Cr2O3 Nanoparticles Doped PVA/PEG for Electrical Applications**
Revue des Composites et des Matériaux Avances | 2023 | Cited: 8
42. **Influence of titanium NPs on optical characteristics of silver nanostructure for medical and industrial fields**
AIP Conference Proceedings | 2023 | Cited: 4
43. **Improved Dielectric Properties of PVA/PEG/TiN Nanocomposites for Electronics Applications**
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44. **Review of solidification and melting performance of phase change materials in the presence of magnetic field, rotation, tilt angle, and vibration**
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45. **Solidification enhancement of phase change materials using fins and nanoparticles in a triplex-tube thermal energy storage unit: recent advances and development**
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46. **Numerical Study of the Effect of Air Bubble Location on the PCM Melting Process in a Rectangular Cavity**
Mathematical Modelling of Engineering Problems 10 (1), 71-83, 2023 | 2023 | Cited: 27
47. **Tuning magnetostatic interaction and coercivity distributions of FeCo/Cu multilayer nanowire arrays by variation of magnetic and nonmagnetic layer aspect ratios**
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48. **Controlling the Morphological, Optical and Dielectric Characteristics of PS/SiC/CeO₂ Nanostructures for Nanoelectronics and Optics Fields**
Journal of Inorganic and Organometallic Polymers and Materials 33 (1), 1-9, 2023 | 2023 | Cited: 99
49. **Investigating the optical characteristics of PEG/PVP/In₂O₃ nanocomposites films**
AIP Conference Proceedings 2591 (1), 040027, 2023 | 2023 | Cited: 1
50. **Determining the optical parameters of MnO₂ NPs doped PEG/PVP films**
AIP Conference Proceedings 2591 (1), 040028, 2023 | 2023 | Cited: 1
51. **An investigation into magnetic behavior of FeNi/Cu multilayer nanowire arrays by varying Cu deposition pulse time**
4TH INTERNATIONAL SCIENTIFIC CONFERENCE OF ALKAHEEL UNIVERSITY (ISCKU 2022, 2023 | 2023
52. **Fabrication of PVA–Fe₂O₃/Co₂O₃ Nanocomposites and Improved Dielectric Properties for Flexible Electronics Fields.**
Nanosistemi, Nanomateriali, Nanotehnologii 21 (3), 505, 2023 | 2023
53. **Exploring the AC Electrical Characteristics of ZrC-Nanoparticles-Doped PVA/PEG Blend.**
Nanosistemi, Nanomateriali, Nanotehnologii 21 (2), 273, 2023 | 2023
54. **Investigating the AC Electrical Properties of PVA/PEG/CeO₂ Nanocomposites for Dielectric Applications.**
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55. **Surface-Enhanced Raman Scattering (SERS) and Finite Difference Time Domain (FDTD) Investigations of Plasmonic and Flexible Filter Papers for the Detection of the Molecular Vibrations of Amoxicillin**
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56. **Determining the optical parameters of MnO₂ NPs doped PEG/PVP films**
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57. **Fabrication of PVA--Fe₂O₃/Co₂O₃ Nanocomposites and Improved Dielectric Properties for Flexible Electronics Fields.**
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58. **Trends in Electrochemical Biosensors for the Early Diagnosis of Breast Cancer through the Detection of Relevant Biomarkers**
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59. **Fabrication and unraveling the morphological, optical and electrical features of PVA/SnO₂/SiC nanosystem for optics and nanoelectronics applications**
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60. **Prepared Plasmonic Glass Substrates via Electrodeposition for Detecting Trace Glucose: SERS, DFT, and FDTD Investigations**
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61. **Investigating the optical characteristics of PEG/PVP/In₂O₃ nanocomposites films**
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62. **A surface-enhanced Raman scattering (SERS) biosensor fabricated using the electrodeposition method for ultrasensitive detection of amino acid histidine**
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63. **Controlling the Morphological, Optical and Dielectric Characteristics of PS/SiC/CeO₂ Nanostructures for Nanoelectronics and Optics Fields**
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64. **Facile Fabrication and Developing the Structural, Optical and Electrical Properties of SiC/Y₂O₃ Nanostructures Doped PMMA for Optics and Potential Nanodevices**
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65. **Synthesis and optical properties of PVA/ZrC nanocomposites**
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66. **Enhancement of optical parameters for PVA/PEG/Cr₂O₃ nanocomposites for photonics fields**
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67. **Enhanced dielectric properties of polyvinyl alcohol doped with ZrC Nanoparticles**
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68. **Recent Breakthroughs and Improvements in Phase Change Material Melting in a Triple-Tube Thermal Storage Unit**
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69. **A Surface-Enhanced Raman Scattering (SERS) Biosensor Fabricated Using the Electrodeposition Method for Ultrasensitive Detection of Amino Acid Histidine**
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70. **Numerical Analysis in a Lid-Driven Square Cavity with Hemispherical Obstacle in the Bottom**
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71. **Magnetization reversal properties and magnetostatic interactions of disk to rod-shaped FeNi layers separated by ultra-thin Cu layers**
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72. **Capturing dual behavior of the parallel coercivity in FeNi/Cu nanowire arrays by fine-tuning of segment thicknesses**
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73. **Fixed vortex domain wall propagation in FeNi/Cu multilayered nanowire arrays driven by reversible magnetization evolution**
Journal of Applied Physics 125 (17), 2019 | 2019 | Cited: 17
74. **Preparation Organometallic Compounds Containing Schiff Bases and Study their Electrical Properties**
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Journal of University of Babylon 21 (3), 1029-1039, 2013 | 2013
76. **Preparation organic-metallic compounds from Schiff bases and study so mechanical properties**
Journal of Asian Scientific Research 1 (8), 419, 2011 | 2011
77. **Fabrication and Boosting the Features of PCL-PS/ZnO-MWCNTs Multifunctional Films for Optoelectronics and Photonics Applications**
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78. **Preparation of Organometallic Compounds from Schiff Bases and Study their Thermal Properties as a Function of Temperatures**
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79. **Fabrication and Tailoring the Morphological and Electrical Features of Silicon Nitride-Silicon Dioxide/Polymethyl Methacrylate Hybrid Nanocomposites for Nanoelectronics Fields**
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