

Annual Review Research 2022

الاولويات البحثية لكلية العلوم

1. Research Excellence in advanced materials
2. Research in olive
3. Obtain solutions to environmental problems in Al Jouf region
4. Petrochemical and industrial
5. Theoretical Studies (**Modeling and simulation**)
6. Excellence in the scope of medical

الابحاث المنشورة طبقاً لأولويات البحثية بكلية العلوم:

- 1- Research Excellence in advanced materials (402 article (2022), **215 (2021)**)
- 2- Research in olive (24 article (2022), **24 (2021)**)
- 3- Obtain solutions to environmental problems in Al Jouf region (65 article (2022), **146 (2021)**)
- 4- Petrochemical and industrial (Two article (2022), **10 (2021)**)
- 5- Theoretical Studies, (85 articles (2022), **55 (2021)**)
- 6- Excellence in the scope of medical (38 article (2022), **21 (2021)**)

الابحاث المنشورة بقواعد البيانات : ISI& Scopus

١. اجمالي الابحاث المنشورة ٧٢٥ بحثاً

٧١٨.٢ بحث منشور في مجلات مصنفة في قاعدة البيانات Scopus

٧٠٨.٣ بحث منشور في مجلات مصنفة في قاعدة البيانات ISI

- .٤ بحثاً مصنف في Top 10 Journal .
٥. نسبة مجموع البحوث المنشورة والمصنفة في journal Q1&Q2 بنسبة ٧٧٪ من العدد الكلى للبحوث المنشورة في حين المنشور في ٢٠٢١ م بنسبة ٦١٪.
٦. نسبة البحوث المنشورة والمصنفة في journal Q1 بنسبة ٣٨,٨٪ من العدد الكلى للبحوث المنشورة في حين المنشور في ٢٠٢١ م بنسبة ٣٣,٢٪.
٧. نسبة البحوث المنشورة والمصنفة في journal Q2 بنسبة ٣٨,٢٪ من العدد الكلى للبحوث المنشورة في حين المنشور في ٢٠٢١ م بنسبة ٢٧,٨٪.
٨. نسبة البحوث المنشورة والمصنفة في journal Q3 بنسبة ١٧,٧٪ من العدد الكلى للبحوث المنشورة في حين المنشور في ٢٠٢١ م بنسبة ٤,٤٪.
٩. نسبة البحوث المنشورة والمصنفة في journal Q4 بنسبة ٤,٨٪ من العدد الكلى للبحوث المنشورة في حين المنشور في ٢٠٢١ م بنسبة ١١,٢٪.

Physics program

1- Number of Published articles in 2022

| Q1 Top 10 | Q1 | Q2 | Q3 | Q4 |
|-----------------|----|-----|----|----|
| 13 | 78 | 132 | 56 | 8 |

| ISI | Scopus | Other | Total |
|-----|--------|-------|-------|
| 274 | 279 | 3 | 282 |

| Top 100 | Top 200 | Top 500 |
|------------|------------|------------|
| 11 | 7 | 103 |

2- Patents

Patents pending registration

1-Poly (2,2`-(4-4` -bipyridyl)-benzimidazol0-carbon nanotube catalyst Docket No: 1021.50RB

2- Smart Green H2 Gas Production Hyprid system

3- Conversion of the car exhausts into hydrogen gas fuel for reused inside cars-tanks using photo-thermal catalyst perovskite nanomaterials

4-Polyaniline@ β -cyclodextrin nanocomposite: Anticancer, antibacterial and water treatment applications.

5-Solar Canal: A system for the desalination of seawater or impure water

3- List of Top 10% (IF) impacted articles in Web of Science

| Faculty member | Title of research | Journal | Rank in Category | linl |
|-------------------|---|------------------------|------------------|---|
| Numa.A. Althubiti | Characterization of the shape-staggering effect in mercury nuclei | NATURE PHYSICS | 4/86 | https://doi.org/10.1038/s41567-021-01447-1 |
| Taha.A. Taha | Inducing lattice defects in calcium ferrite anode materials for improved electrochemistry | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.01.121 |

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|--|--|---|------|---|
| | l performance in lithium-ion batteries | | | |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Poly(m-toluidine)/rolled graphene oxide nanocomposite photocathode for hydrogen generation from wastewater | International Journal of Energy Research | 1/34 | https://doi.org/10.1002/er.7963 |
| T.A.Elmosalami | Induced linear and nonlinear optical modifications of nickel cadmium borosilicate glass by sunlight irradiation | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.08.048 |
| Meshal M Alzaid | Diffusion control and surface control mechanism in hierarchical nanostructured | International Journal of Energy Research | 1/34 | https://doi.org/10.1002/er.8169 |

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| | porous zinc-based MOF material for supercapattery | | | |
| Meshal M Alzaid | Reduced graphene oxide/cobalt phosphate composites with improved electrochemical performance for supercapattery devices | International Journal of Energy Research | 1/34 | https://doi.org/10.1002/er.8636 |
| N.M.A. Hadia | Electrochemical performance of transition metal sulfide by employing different synthesis techniques for hybrid batteries | International Journal of Energy Research | 1/34 | https://doi.org/10.1002/er.8592 |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | End-group Modification of terminal acceptors on benzothiadiazole-based BT2F-IC4F molecule to establish efficient organic solar cells | Journal of Molecular Liquids | 13302 | https://doi.org/10.1016/j.molliq.2022.120770 |

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|---------------|--|------------------------|--------|---|
| T.A. Taha | Ag ₂ Se/SnTe nanorod as potential candidate for energy conversion system developed via hydrothermal route | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.10.131 |
| Meshal Alzaid | Bi-functional green-synthesis of Co ₃ O ₄ NPs for photocatalytic and electrochemical applications | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.07.138 |
| T.A. Taha | Fabrication of substituted Y-type hexaferrites/carbon dots composites for recording media and photodegradation of dye | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.06.048 |
| Z.A.Alrowaili | Influence of V ₂ O ₅ on the optical properties and radiation shielding performance of borate glass system containing Li ₂ O and ZnO | OPTIK | 11/101 | https://doi.org/10.1016/j.ijleo.2022.169790 |

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| Meshal Alzaid | Visible light induced photocatalytic activity of MnO ₂ /BiVO ₄ for the degradation of organic dye and tetracycline | Ceramics International | 3/29 | https://doi.org/10.1016/j.ceramint.2022.11.22 9 |
|---------------|--|------------------------|------|--|

4- List of articles cooperation with the best Top 100/200/500 university

| Faculty member | Title of research | Journal | Link |
|---|---|---|---|
| N. A. Althubiti | Characterization of the shape-staggering effect in mercury nuclei | NATURE PHYSICS | https://doi.org/10.1038/s41567-021-01447-1 |
| N. A. Althubiti | Producing gold at ISOLDE-CERN | Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms | https://doi.org/10.1016/j.nimb.2021.12.011 |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Bunch of Grape-Like Shape PANI/Ag ₂ O/Ag Nanocomposite Photocatalyst for Hydrogen Generation from Wastewater | Adsorption Science & Technology | https://doi.org/10.1155/2022/4282485 |
| Majed alshammari | Multi-component self-assembled molecular-electronic films: | chemical science | https://doi.org/10.1039/D2SC00078D |

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| | towards new high-performance thermoelectric systems | | |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Poly(m-toluidine)/rolled graphene oxide nanocomposite photocathode for hydrogen generation from wastewater | International Journal of Energy Research | https://doi.org/10.1002/er.7963 |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Development of CuO nanoporous material as a highly efficient optoelectronic device | Applied Physics A | https://doi.org/10.1007/s00339-022-05447-7 |
| Anowar Tozri | Critical exponents and magnetic entropy change across the continuous magnetic transition in (La, Pr)-Ba manganites | Applied Physics A volume | https://doi.org/10.1007/s00339-022-05719-2 |
| T.A.Elmosalami | The Co-precipitated preparation, characterization, and optical investigations of Cu-doped CdO nanomaterials | Physica Scripta | https://doi.org/10.1088/1402-4896/ac6210 |
| A.M.A. Mostafa | Influence of combining Al ₂ O ₃ , La ₂ O ₃ , Gd ₂ O ₃ , and Dy ₂ O ₃ with barium borosilicate glass-ceramics: a case study of gamma radiation interaction parameters | Journal of Materials Research and Technology | https://doi.org/10.1016/j.jmrt.2022.05.095 |
| T.A. Taha | Molecular engineering control defects within carbon nitride for optimized co-catalyst Pt induced photocatalytic CO ₂ reduction and NO ₂ oxidation reaction | International Journal of Hydrogen Energy | https://doi.org/10.1016/j.ijhydene.2022.01.219 |
| T.A.Elmosalami | Optical and radiation shielding features of NiO-CdO-BaO borosilicate glasses To cite this ar | Physica Scripta | https://doi.org/10.1088/1402-4896/ac7984 |

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|---|--|--|---|
| T.A. Taha | Recent progress in g-C ₃ N ₄ -Based materials for remarkable photocatalytic sustainable energy | International Journal of Hydrogen Energy | https://doi.org/10.1016/j.ijhydene.2022.04.247 |
| A. Tozri | Synthesis and investigation on the microstructural and electrical proprieties of Ni _{0.1} Co _{0.5} Cu _{0.4} Fe ₂ O ₄ ferrite prepared using sol-gel route | Journal of Solid State Chemistry | https://doi.org/10.1016/j.jssc.2022.122898 |
| T.A. Taha | Evolution of optical Tamm states in a 1D photonic crystal comprising a nanocomposite layer for optical filtering and reflecting purposes | Optical and Quantum Electronics | https://doi.org/10.1007/s11082-022-03715-7 |
| A. Tozri | Critical exponents and magnetic entropy change across the continuous magnetic transition in (La, Pr)-Ba manganites | Applied Physics A | https://doi.org/10.1007/s00339-022-05719-2 |
| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Highly crystalline hexagonal PbI ₂ sheets on polyaniline/antimony tin oxide surface as a novel and highly efficient photodetector in UV, Vis, and near IR regions | Polymers for Advanced Technologies | https://doi.org/10.1002/pat.5829 |
| T.A. Elmosalami | Exploring the impact of nickel doping on the structure and low-temperature magnetic features of cobalt nano-spinel ferrite | Applied Physics A | https://doi.org/10.1007/s00339-022-05977-0 |
| T.A. Elmosalami | Induced linear and nonlinear optical modifications of nickel cadmium borosilicate glass by sunlight irradiation | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.08.048 |

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| Abdelazim M Mebed | Multidimensional modeling assisted mining of GDB17 chemical database: A search for polymer donors for organic solar cells and machine learning assisted performance prediction | Int J Quantum Chem | https://doi.org/10.1002/qua.26991 |
| Abdelazim M Mebed | Study of optoelectronic and thermoelectric properties of double perovskites Rb ₂ AgBiX ₆ (X Br, I): by DFT approach | Eur. Phys. J. Plus | https://doi.org/10.1140/epjp/s13360-022-03222-4 |
| Meshal Alzaid | Solar Array Drive Assembly Disturbance Modeling, Jitter Analysis and Validation Tests for Precision Space-Based Operations | Journal of Vibration Engineering & Technologies | https://link.springer.com/article/10.1007/s42417-022-00688-5 |
| MAM Uosif | An In-Depth Examination of the Natural Radiation and Radioactive Dangers Associated with Regularly Used Medicinal Herbs | https://www.mdpi.com/1660-4601/19/13/8124 | https://www.mdpi.com/1660-4601/19/13/8124 |
| Z.A.Alrowaili | Boosted electron-transfer/separation of SnO ₂ /CdSe/Bi ₂ S ₃ heterostructure for excellent photocatalytic degradation of organic dye pollutants under visible light | SURFACES AND INTERFACES | https://doi.org/10.1016/j.surfin.2022.102012 |
| MAM Uosif | Distribution of Radionuclides and Radiological Health Assessment in Seih-Sidri Area, Southwestern Sinai | International Journal of Environmental Research and Public Health | . https://doi.org/10.3390/ijerph191710717 |

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|-----------------|--|--|---|
| Z.A.Alrowaili | Dynamic models for air-breathing and conventional polymer electrolyte fuel cells: A comparative study | RENEWABLE ENERGY | https://doi.org/10.1016/j.renene.2022.06.092 |
| Z.A.Alrowaili | Effect of Nb ₂ O ₅ inclusion on the radiation shielding efficiency of TeO ₂ -ZnO-LiF-NaF glass system | RADIATION PHYSICS AND CHEMISTRY | https://doi.org/10.1016/j.radphyschem.2022.10127 |
| Z.A.Alrowaili | Identification of NEK7 inhibitors: structure based virtual screening, molecular docking, density functional theory calculations and molecular dynamics simulations | JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS | https://doi.org/10.1080/07391102.2022.2113563 |
| MAm Uosif | Influence of combining Al ₂ O ₃ , La ₂ O ₃ , Gd ₂ O ₃ , and Dy ₂ O ₃ with barium borosilicate glass-ceramics: a case study of gamma radiation interaction parameters | Journal of Materials Research and Technology | https://doi.org/10.1016/j.jmrt.2022.05.095 |
| N. A. Althubiti | Influence of the dwell time in the polarization hysteresis of polymer electrolyte membrane fuel cells | ELECTROCHIMICA ACTA | https://doi.org/10.1016/j.electacta.2022.140809 |
| Z.A.Alrowaili | Optical and spectroscopic behavior of Eu ³⁺ doped heavy metal phosphate glasses | CERAMICS INTERNATIONAL | https://doi.org/10.1016/j.ceramint.2022.03.240 |
| T. A. Taha | Outstanding electrochemical behavior of reduced graphene oxide wrapped chromium sulfide nanoplates directly grown on nickel foam for supercapacitor applications | Journal of Sol-Gel Science and Technology | https://doi.org/10.1007/s10971-022-05888-9 |

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| MAM Uosif | Structure, Mössbauer, electrical, and γ -ray attenuation-properties of magnesium zinc ferrite synthesized co-precipitation method | Scientific Reports | https://doi.org/10.1038/s41598-022-17311-y |
| Z.A.Alrowaili | Synthesis and properties of tellurite based glasses containing Na ₂ O, BaO, and TiO ₂ : Raman, UV and neutron/charged particle shielding assessments | CERAMICS INTERNATIONAL | https://doi.org/10.1016/j.ceramint.2022.03.092 |
| Z.A.Alrowaili | Wet-chemical synthesis of urchin-like Co-doped CuO: A visible light trigger photocatalyst for water remediation and antimicrobial applications | CERAMICS INTERNATIONAL | https://doi.org/10.1016/j.ceramint.2022.04.159 |
| Meshal M Alzaid | Diffusion control and surface control mechanism in hierarchical nanostructured porous zinc-based MOF material for supercapattery | International Journal of Energy Research | https://doi.org/10.1002/er.8169 |
| Meshal M Alzaid | Reduced graphene oxide/cobalt phosphate composites with improved electrochemical performance for supercapattery devices | International Journal of Energy Research | https://doi.org/10.1002/er.8636 |
| Z.A.Alrowaili | A broad analysis of directly and indirectly ionizing radiation interaction parameters of PbF ₂ -CaF ₂ -Bi ₂ O ₃ -B ₂ O ₃ -Cr ₂ O ₃ glass system | PHYSICA SCRIPTA | https://doi.org/10.1088/1402-4896/ac7676 |

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|----------------|--|--------------------------------------|---|
| T.A. Taha | A facile molecular aggregation of isoquinoline based g-C3N4 for high photocatalytic performance under visible light illumination | Materials Research Bulletin | https://doi.org/10.1016/j.materresbull.2022.111865 |
| Z.A. Alrowaili | A synergistic effect of heavy metal oxides to enhance the physical, optical, and radiation-absorption properties of TeO ₂ -Li ₂ O-BaO glasses | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169189 |
| Z.A. Alrowaili | A theoretical study on the radiation shielding performance of borate and tellurite glasses | SOLID STATE SCIENCES | https://doi.org/10.1016/j.solidstatesciences.2022.106902 |
| T.A. Taha | Efficient pyrolysis process of lignin over dual catalyst bed for the production of Phenols and Aromatics | South African Journal of Botany | https://doi.org/10.1016/j.sajb.2022.05.061 |
| Meshal Alzaid | First-principles calculations to investigate "H" and "K" doped RbSrF ₃ for photovoltaic applications | Optik | https://www.sciencedirect.com/science/article/abs/pii/S0030402622011305 |
| Meshal Alzaid | Heterogeneous nanocatalyst for biodiesel fuel production: bench scale from waste oil sources | Zeitschrift für Physikalische Chemie | https://doi.org/10.1515/zpch-2021-3160 |
| Z.A. Alrowaili | Holmium(III) oxide and its significant effects on the radiation shielding performance of P ₂ O ₅ + B ₂ O ₃ + ZnSO ₄ optical glasses | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169188 |
| T.A. Taha | Mn-Based Hierarchical Polyhedral 2D/3D Nanostructures MnX ₂ (X = S, Se, Te) Derived from Mn-Based | Energy Fuels | https://doi.org/10.1021/acs.energyfuels.2c01837 |

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| | Metal–Organic Frameworks as High-Performance Electrocatalysts for the Oxygen Evolution Reaction | | |
| T.A. Taha | Nanofabrication and functional characterization of Co _{9-x} Ni _x S ₈ nanoparticles for optoelectronic applications | Optical Materials | https://doi.org/10.1016/j.optmat.2022.112561 |
| T.A. Taha | Nanostructured materials based on g-C ₃ N ₄ for enhanced photocatalytic activity and potentials application: A review | Arabian Journal of Chemistry | https://doi.org/10.1016/j.arabjc.2022.104070 |
| Z.A. Alrowaili | Optical and radiation shielding features for some phospho-silicate glasses | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169140 |
| Z.A. Alrowaili | Optical transmission quality and radiation shielding performance of TeO ₂ +ZnO+La ₂ O ₃ ternary glass system | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169625 |
| A. Atta | Oxygen beam induced modifications on the structural characteristics and physico-chemical properties of PANI/lead sulfide composite films | Inorganic Chemistry Communications | https://doi.org/10.1016/j.inoche.2022.109904 |
| Z.A. Alrowaili | Photocatalytic activity and radiation-attenuation ability of copper ions surface-doped dysprosium oxide | JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS | https://doi.org/10.1007/s10854-022-08450-z |
| Z.A. Alrowaili | Poling direction-driven tuning of piezoelectric properties of | JOURNAL OF THE AUSTRALIAN | https://doi.org/10.1007/s41779-022-00780-9 |

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|----------------|---|---|---|
| | ferroelectric materials: an experimental study | CERAMIC SOCIETY | |
| Z.A.Alrowaili | Prediction of the resistivity of YBa ₂ Cu ₃ O _{7-δ} superconductor by a highly sensitive one-dimensional phononic crystal sensor | Materials Science in Semiconductor Processing | https://doi.org/10.1016/j.mssp.2022.107109 |
| Z.A.Alrowaili | Radiation shielding performance of Co ₂ O ₃ -TeO ₂ -Li ₂ O-ZrO ₂ glass-ceramics | JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY | https://doi.org/10.1007/s41779-022-00774-7 |
| Z.A.Alrowaili | Simple, efficient and accurate method toward the monitoring of ethyl butanoate traces | OPTICAL AND QUANTUM ELECTRONICS | https://doi.org/10.1007/s11082-022-03881-8 |
| Z.A.Alrowaili | Simple, efficient and accurate method toward the monitoring of ethyl butanoate traces | OPTICAL AND QUANTUM ELECTRONICS | https://doi.org/10.1007/s11082-021-03497-4 |
| Ali Atta | Structural characteristics and optical properties of methylcellulose/polyaniline films modified by low energy oxygen irradiation | Inorganic Chemistry Communications | https://doi.org/10.1016/j.inoche.2022.109502 |
| Meshal Alzaide | Synergistic effects of Bi and N doped on ZnO nanorods for efficient photocatalysis | Materials Chemistry and Physics | https://www.sciencedirect.com/science/article/abs/pii/S0254058422007295 |
| Z.A.Alrowaili | Synthesis, characterization, dielectric and magnetic properties of substituted Y-type hexaferrites | JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS | https://doi.org/10.1007/s10854-022-08508-y |

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| Z.A.Alrowaili | Synthesis, optical properties and radiation shielding performance of TeO ₂ -Na ₂ O-BaO-WO ₃ glass system | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169167 |
| Z.A.Alrowaili | Tunable decorated flake interlayers of functionalized graphene oxide for energy storage devices | APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING | https://doi.org/10.1007/s00339-022-05707-6 |
| Meshal Alzaid | Effects of gating design on structural and mechanical properties of high manganese steel by optimizing casting process parameters | Journal of Mechanical Science and Technology | https://link.springer.com/article/10.1007/s12206-022-0715-4 |
| Meshal Alzaid | First-principles calculations to investigate structural, electronics, optical and mechanical properties of LaRu ₂ P ₂ compound for superconducting application | Molecular Simulation | https://www.tandfonline.com/doi/abs/10.1080/08927022.2022.2124297 |
| Z.A.Alrowaili | P ₂ O ₅ -Pb ₃ O ₄ -ZnO-Li ₂ CO ₃ -CuO glasses and their radiation attenuation properties for shielding applications | JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY | https://doi.org/10.1007/s41779-022-00771-w |
| Ali Atta | Physical, Optical And Radiation Shielding Properties Of Some Phosphate Glasses | Egyptian Journal of Chemistry | https://dx.doi.org/10.21608/ejchem.2021.103136.4861 |
| Z.A.Alrowaili | Processing and Characterization of Gallium-Modified Bioactive Glass Nanoparticles for Controlled Delivery of 5- | SILICON | https://doi.org/10.1007/s12633-022-01957-4 |

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|-------------------|--|---|---|
| | Fluorouracil and Vitamin D3: an Advanced Approach to Osteoporosis and Bone cancer Treatment | | |
| Meshal M Alzaid | Synthesis of ZnO/Ag/phosphorene for photocatalytic reduction of hexavalent chromium (Cr-VI) | Applied Nanoscience | https://doi.org/10.1007/s13204-022-02509-3 |
| Z.A.Alrowaili | DFT study of transition metals doped calix-4-pyrrole with excellent electronic and non-linear optical properties | COMPUTATIONAL AND THEORETICAL CHEMISTRY | https://doi.org/10.1016/j.comptc.2022.113767 |
| Majed Alshammari | Orientational control of molecular scale thermoelectricity. | Nanoscale Advances | https://doi.org/10.1039/D2NA00515H |
| N Althubiti | Producing gold at ISOLDE-CERN. NIMB | NIMB | https://doi.org/10.1016/j.nima.2022.167453 |
| Abdelazim M Mebed | Structure, half-metallic and magnetic properties of bulk and (001) surface of Rb ₂ XMoO ₆ (X = Cr, Sc) double perovskites: a DFT + U study | PPhys. Scr. 98 (2023) 015807 | https://doi.org/10.1088/1402-4896/aca56b |
| Amal Khedr | Identification and differentiation between olive oil from different Al Jouf olive field areas by optical spectroscopic techniques | AIP advances | https://doi.org/10.1063/5.0104922 |

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| Nomery Mohamed Abass Hadia (N.M.A. Hadia) | Effect of Fe doping on the structural, electrical and optical properties of Bi ₂ Te ₃ thin films | Bulletin of Materials Science | https://doi.org/10.1007/s12034-022-02855-6 |
| Z.A.Alrowaili | First-principles calculations to investigate electronic, structural, optical, and thermoelectric properties of semiconducting double perovskite Ba ₂ YBiO ₆ | MICRO AND NANOSTRUCTURES | https://doi.org/10.1016/j.micrna.2022.20739 |
| T.A. Taha | Embedding Aromatic Conjugated Monomer within Carbon Nitride for Efficient Photocatalytic Reduction Reactions | Journal of Molecular Liquids | https://doi.org/10.1016/j.molliq.2022.120617 |
| T.A. Taha | Energy conversion performance of porous ZrTe hybrid derived from chemical transformation of Zr(OH) ₄ | Fuel | https://doi.org/10.1016/j.fuel.2022.125264 |
| T.A. Taha | Enhanced photocatalytic overall water splitting from an assembly of donor-π-acceptor conjugated polymeric carbon nitride | Journal of Colloid and Interface Science | https://doi.org/10.1016/j.jcis.2022.05.139 |
| Z.a.Alrowaili | Enhancing the efficiency of Cu ₂ Te thin-film solar | Optics and Laser Technology | https://doi.org/10.1016/j.optlastec.2022.108942 |

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| | cell with WS ₂ buffer layer: A simulation study | | |
| Meshal Alzaid | Evaluation of d-block metal sulfides as electrode materials for battery-supercapacitor energy storage devices | Journal of Energy Storage | https://doi.org/10.1016/j.est.2022.105418 |
| M Alzaid | Exploring the synergy of binder free MoWS ₂ @ Ag as electrode materials for hybrid supercapacitors | Journal of Energy Storage | https://doi.org/10.1016/j.est.2022.105925 |
| T.A. Taha | Facile fabrication of CuO/Ag ₂ Se nanosized composite via hydrothermal approach for the electrochemical energy conversion system | Journal of Energy Storage | https://doi.org/10.1016/j.est.2022.105929 |
| Mohammed Ezzeldien | Realization of half-metal antiferromagnetic (HM-AFM) behaviour in double perovskite Sr ₂ CrReO ₆ on substitution of Tc at Cr site: Promising material for optoelectronics and thermoelectric applications via DFT framework | Inorganic Chemistry Communications | https://doi.org/10.1016/j.jinoche.2022.110172 |

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| Meshal Alzaid | Strategies to enhance the electrochemical performance of strontium-based electrode materials for battery-supercapacitor applications | Journal of Electroanalytical Chemistry | https://doi.org/10.1016/j.jelechem.2022.116868 |
| T.A. Taha | Synergetic effect of bismuth vanadate over copolymerized carbon nitride composites for highly efficient photocatalytic H ₂ and O ₂ generation | Journal of Colloid and Interface Science | https://doi.org/10.1016/j.jcis.2022.07.012 |
| T.A. Taha | Ag ₂ Se/SnTe nanorod as potential candidate for energy conversion system developed via hydrothermal route | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.10.131 |
| Meshal Alzaid | Bi-functional green-synthesis of Co ₃ O ₄ NPs for photocatalytic and electrochemical applications | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.07.138 |
| T.A. Taha | Fabrication of substituted Y-type hexaferrites/carbon dots composites for recording media and photodegradation of dye | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.06.048 |
| Z.A. Alrowaili | Influence of V ₂ O ₅ on the optical properties and | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169790 |

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| | radiation shielding performance of borate glass system containing Li ₂ O and ZnO | | |
| Meshal Alzaid | Visible light induced photocatalytic activity of MnO ₂ /BiVO ₄ for the degradation of organic dye and tetracycline | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.11.229 |
| T.A. Taha | A Targeted Review of Current Progress, Challenges and Future Perspective of g-C ₃ N ₄ based Hybrid Photocatalyst Toward Multidimensional Applications | Chemical Record | https://doi.org/10.1002/tcr.202200143 |
| Z.A.Alrowaili | Comparison of radiation shielding and elastic properties of germinate tellurite glasses with the addition of Ga ₂ O ₃ | JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE | https://doi.org/10.1080/16583655.2022.2038468 |
| Z.A.Alrowaili | Drug delivery of carvedilol (cardiovascular drug) using phosphorene as a drug carrier: a DFT study | JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE | https://doi.org/10.1080/16583655.2021.2021789 |
| T.A. Taha | Enhanced electrochemical performance of MgFe ₂ O ₄ /SrTiO ₃ and | Journal of Alloys and Compounds | https://doi.org/10.1016/j.jallcom.2022.166660 |

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| | MgFe2O4/SiO2 nanocomposite structures | | |
| T.A. Taha | Facile synthesis of Er-MOF/Fe2O3 nanocomposite for oxygen evolution reaction | Materials Chemistry and Physics | https://doi.org/10.1016/j.matchemphys.2022.126861 |
| Z.A.Alrowaili | Facile synthesis of rGO/PANI/ZnO ternary nanocomposites for energy storage devices | Journal of the Korean Ceramic Society | https://doi.org/10.1007/s43207-022-00250-9 |
| Meshal Alzaid | First-principles calculations to investigate "H" and "K" doped RbSrF3 for photovoltaic applications | Optik | https://doi.org/10.1016/j.ijleo.2022.169864 |
| Z.A.Alrowaili | Gamma shielding performance of the optical B2O3-based glass system | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169914 |
| Z.A.Alrowaili | Influence of BaO/ZnCl2 content on gamma transmission properties of the optical TeO2-based glass system | Optik | https://doi.org/10.1016/j.ijleo.2022.170054 |
| A. Tozri | Ni-Cu-Co ferrite synthesized using the sol-gel method: effects of the Cr ³⁺ ion concentration on its | Applied Physics A | https://doi.org/10.1007/s00339-022-06053-3 |

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| | structural, electrical, and dielectric properties | | |
| Z.A. Alrowaili | n-Type narrow band gap A(3)InAs(3) (A = Sr and Eu) Zintl phase semiconductors for optoelectronic and thermoelectric applications | JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE | https://doi.org/10.1080/16583655.2022.2099200 |
| Z.A.Alrowaili | One dimensional photonic crystal structure comprising a hyperbolic metamaterial for optical filtering purpose | Optical and Quantum Electronics | https://doi.org/10.1007/s11082-022-04291-6 |
| Z.A.Alrowaili | Optical transmission quality and radiation protection relevance of TeO ₂ -ZnO-Yb ₂ O ₃ -ZnCl glass system | OPTIK | https://doi.org/10.1016/j.ijleo.2022.170050 |
| A.M.A. Mostafa | Physical Features of High-Density Barium-Tungstate–Phosphate (BTP) Glasses: Elastic Moduli, and Gamma Transmission Factors | electronics | https://doi.org/10.3390/electronics11244095 |
| Z.A.Alrowaili | Prediction of the resistivity of YBa ₂ Cu ₃ O ₇₋₈ superconductor by a highly sensitive one- | MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING | https://doi.org/10.1016/j.mssp.2022.107109 |

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| | dimensional phononic crystal sensor | | |
| T.A. Taha | Rational design of novel dysprosium manganite sandwich layered morphology for supercapacitor applications | Chinese Journal of Physics | https://doi.org/10.1016/j.cjph.2022.08.020 |
| T.A. Taha | Structural, magnetic, and catalytic studies of microwave-combustion/ball-mill synthesized zinc ferrite nanoparticles | Inorganic Chemistry Communications | https://doi.org/10.1016/j.inoche.2022.109932 |
| Z.A.Alrowaili | Synthesis and characterization of B2O3-Bi2O3-SrO-Al2O3-PbO-Dy2O3 glass system: The role of Bi2O3/ Dy2O3 on the optical, structural, and radiation absorption parameters | MATERIALS RESEARCH BULLETIN | https://doi.org/10.1016/j.materresbull.2022.111952 |
| Z.A.Alrowaili | Synthesis and characterization of the optical MgO-BaO-B2O3-TeO2-MnO2 glass system | OPTIK | https://doi.org/10.1016/j.ijleo.2022.169679 |
| M Alzaid | Synthesis of ZnO/MoS2 heterojunction with the green Ag nanoparticles | Optical and Quantum Electronics | https://doi.org/10.21203/rs.3.rs-1648276/v1 |

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| | for the efficient sunlight photocatalytic activity | | |
| Z.A.Alrowaili | Self-assembly of 2D coordination complex of cytidine monophosphate to boost up the optical phenomena | JOURNAL OF MOLECULAR STRUCTURE | https://doi.org/10.1016/j.molstruc.2022.133655 |
| Meshal Alzaid | Solar Array Drive Assembly Disturbance Modeling, Jitter Analysis and Validation Tests for Precision Space-Based Operations | Journal of Vibration Engineering & Technologies | https://link.springer.com/article/10.1007/s42417-022-00688- |
| Z.A.Alrowaili | Synthesis, Thermal, Optical, and Radiation-Absorbing Properties of Bi ₂ O ₃ -Li ₂ O-As ₂ O ₃ -B ₂ O ₃ Glasses | Journal of Electronic Materials | https://doi.org/10.1007/s11664-022-10028-8 |
| Meshal Alzaid | Tunable optical gain characteristics of AlN/GaN/InAlN QW heterostructure under uni-axial and bi-axial pressures | physica status solidi (b) | https://doi.org/10.1002/pssb.202200479 |
| T.A. Taha | Facile synthesis of scheelite-type NdOsO ₄ directly grown on carbon cloth for oxygen evolution reaction | Journal of Solid State Electrochemistry | https://doi.org/10.1007/s10008-022-05232-9 |

5- List of funded projects

| Number of projects | Faculty members | Title of project | values |
|--------------------|------------------------|--|--------|
| DSR2022-RG-0121 | الحلو الحبيب الشمري | Energy storage polymer nanocomposites | ١٢.... |
| DSR2022-RG-0128 | Meshal Alzaid | Smart Materials Group | ١٢.... |
| DSR2022-RG-0129 | Z.A.Alrowaili | Biomedical Sensors | ١٢.... |
| DSR2022-RG-0127 | Mohamed Ameen | Solar cell cover glasses with enhanced radiation and optical properties | ١٢.... |
| DSR2022-RG-0123 | T.A. Taha | Highly efficient solar cells | ١٢.... |
| DSR2022-RG-0122 | N.M.A. Hadia | Metal oxide nanomaterials for green hydrogen production from car exhaust | ١٢.... |
| DSR2022-RG-0126 | Hani Negm | Radiation Physics and its Applications | ١٢.... |
| DSR2022-RG-0124 | Ahmed Mohamed Moustafa | Internal Dose Safety from Radiopharmaceuticals in the case of Bone Metastasis; Diagnosis and Therapy | ١٢.... |
| DSR2022-RG-0125 | Ali Atta | Polymer Based Nanocomposites for Energy Storage and Production Applications | ١٢.... |

Chemistry program

1- Number of Published articles in 2022

| Q1 Top 10 | Q1 | Q2 | Q3 | Q4 |
|-----------------|-----|----|----|----|
| 4 | 101 | 82 | 27 | 4 |

| ISI | Scopus | Other | Total |
|-----|--------|-------|-------|
| 214 | 221 | 1 | 222 |

| Top 100 | Top 200 | Top 500 |
|------------|------------|------------|
| 18 | 11 | 48 |

2- Patents

Patents pending registration

- 1- Smart Green H2 Gas Production Hyprid system

3- List of Top 10% (IF) impacted articles in Web of Science

| Faculty member | Title of research | Journal | Quartile | Rank in Category | ISI /SCOPUS/ Other |
|---------------------|---|--|----------|------------------|---|
| Hassan M. A. Hassan | Kinetics and adsorption assessment of 1, 4-dioxane from aqueous solution by thiol and sulfonic acid functionalized titanosilicate | Journal of Molecular Liquids | | 10/134 | https://doi.org/10.1016/j.molliq.2022.119786 |
| Hassan M. A. Hassan | Phosphotungestic acid and manganese containing periodic mesoporous organosilica with imidazolium ionic liquid framework: A robust and durable nanocomposite for desulfurization of aromatic sulfur in diesel fraction | Separation and Purification Technology | | 10/122 | https://doi.org/10.1016/j.seppur.2022.121624 |
| Hassan M.A. Hassan | Sulfanilic acid-functionalized magnetic GO as a robust adsorbent for the efficient adsorption of methylene blue from aqueous solution | Journal of Molecular Liquids | | 10/134 | https://doi.org/10.1016/j.molliq.2022.119603 |

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|---------------|---|---------------------------|--|------|---|
| Amr A. Essawy | Hybrid solvothermal/sonochemical-mediated synthesis of ZnO NPs generative of radical dotOH radicals: Photoluminescent approach to evaluate radical dotOH scavenging activity of Egyptian and Yemeni Punica granatum arils extract | Ultrasonics Sonochemistry | | 1/32 | https://doi.org/10.1016/j.ulsonch.2022.106152 |
|---------------|---|---------------------------|--|------|---|

4- List of articles cooperation with the best Top 100/200/500 university

| Faculty member | Title of research | Journal | link |
|--------------------|--|-------------------------------|---|
| Sabrein H. Mohamed | Detection and Identification of Adulteration in Vinegar Samples Based on Reversed-Phase High-Performance | ACS Food Science & Technology | https://doi.org/10.1021/acsfoodscitech.1c00169 |

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|--------------|--|---|---|
| | Liquid Chromatographic (RP-HPLC) Strategies | | |
| Hazim M. Ali | Fabrication of an electrochemical sensor based on gold nanoparticle-functionalized nanocarbon black hybrid nanocomposite for sensitive detection of anti-cancer drug formestane in biological and pharmaceutical samples | Journal of Electroanalytical Chemistry | https://doi.org/10.1016/j.jelechem.2022.116067 |
| Hazim M. Ali | Broad-Spectrum Antimicrobial, Antioxidant, and Anticancer Studies of Leaf Extract of Simarouba glauca DC In Vitro | Antibiotics | https://doi.org/10.3390/antibiotics11010059 |
| Hazim M. Ali | Inhibitory effect of culinary herbs Za'atar (blend of thyme, sesame seeds and sumac) marinades on the formation of polar and non-polar heterocyclic amines carcinogen in fried beef patties: Determination by SPE/UPLC-MS/MS | Journal of King Saud University - Science | https://doi.org/10.1016/j.jksus.2022.101821 |
| Hazim M. Ali | Quantitative Analysis of Abamectin, Albendazole, Levamisole HCl and Closantel in Q-DRENCH Oral Suspension Using a Stability-Indicating HPLC-DAD Method | Molecules | https://doi.org/10.3390/molecules27030764 |

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| Wael A A Arafa | Azides in the Synthesis of Various Heterocycles | Molecules | ; https://doi.org/10.3390/molecules27123716 |
| A.A.Nayl | Fabrication and Characterization of Effective Biochar Biosorbent Derived from Agricultural Waste to Remove Cationic Dyes from Wastewater | Polymers | https://doi.org/10.3390/polym14132587 |
| A.A.Nayl | Graphene Oxide@Heavy Metal Ions (GO@M) Complex Simulated Waste as an Efficient Adsorbent for Removal of Cationic Methylene Blue Dye from Contaminated Water | Materials | https://doi.org/10.3390/ma15103657 |
| A.A.Nayl | Preparation and Characterization of Magnetite Talc (Fe3O4@Talc) Nanocomposite as an Effective Adsorbent for Cr(VI) and Alizarin Red S Dye | Materials | https://doi.org/10.3390/ma15093401 |
| A.A.Nayl | Recent Progress and Potential Biomedical Applications of Electrospun Nanofibers in Regeneration of Tissues and Organs | Polymers | https://doi.org/10.3390/polym14081508 |
| A.A.Nayl | Review of the Recent Advances in Electrospun Nanofibers Applications in Water Purification | Polymers | https://doi.org/10.3390/polym14081594 |
| A.A.Nayl | Novel Pyridinium Based Ionic Liquid Promoter for Aqueous | Molecules | https://doi.org/10.3390/molecules27092940 |

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| | Knoevenagel Condensation: Green and Efficient Synthesis of New Derivatives with Their Anticancer Evaluation | | |
| ASMA M ALENAD | Efficient pyrolysis process of lignin over dual catalyst bed for the production of Phenols and Aromatics | South African Journal of Botany | https://doi.org/10.1016/j.sajb.2022.05.061 |
| Hassan M. A. Hassan | Facile synthesis of copper oxide nanoparticles (CuONPs) using green method to promote photocatalytic and biocidal applications | Journal of Molecular Liquids | https://doi.org/10.1016/j.molliq.2022.119453 |
| ASMA M ALENAD | Molecular Engineering Optimized Carbon Nitride Photocatalyst for CO ₂ Reduction to Solar Fuels | Journal of Science Advanced Materials and Devices | https://doi.org/10.1016/j.jsamd.2022.100483 |
| Asma M Alenad | Enhanced photocatalytic overall water splitting from an assembly of donor-π-acceptor conjugated polymeric carbon nitride | Journal of Colloid and Interface Science | https://doi.org/10.1016/j.jcis.2022.05.139 |
| Nadia A.A.Elkanzi | Efficient and Recoverable Bio-Organic Catalyst Cysteine for Synthesis, Docking Study, and Antifungal Activity of New Bio-Active 3,4-Dihydropyrimidin-2(1H)-ones/thiones Under Microwave Irradiation | ACS omega | https://doi.org/10.1021/acsomega.2c02449 |
| Hazim M. Ali | Environmental impact of the reported chromatographic | Microchemical Journal | https://doi.org/10.1016/j.microc.2022.107242 |

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|--------------------------------------|--|---|---|
| | methods for the determination of the first FDA-Approved therapy for COVID-19 Patients, Remdesivir: A comparative study | | |
| Hassan M.A.Hassan | Hydrothermal Assisted Synthesis of Novel NiSe ₂ /CuO Nanocomposite: Extremely Stable and Exceptional Energy Storage Performance for Faradaic Hybrid Supercapacitors | Journal of Electroanalytical Chemistry | https://doi.org/10.1016/j.jelechem.2022.116624 |
| Hassan Mohamed Ahmed Hassan | Novel lanthanum sulfide-decorated zirconia nanohybrid for enhanced electrochemical oxygen evolution reaction | Journal of Solid State Electrochemistry | https://doi.org/10.1007/s10008-022-05220-z |
| Nadia A.A.Elkanzi | Optimization of pyrazolo[1,5-a]pyrimidine based compounds with pyridine scaffold: Synthesis, biological evaluation and molecular modeling study | Arabian Journal of Chemistry | https://doi.org/10.1016/j.arabjc.2022.104015 |
| Hazim M. Ali | A comparative study of Cu-anchored 0D and 1D ZnO nanostructures for the reduction of organic pollutants in water | RSC Adv | https://pubs.rsc.org/en/content/articlehtml/2022/ra/d2ra02515a |
| Wassila Derafa | An Unexpected Single Crystal Structure of Nickel(II) Complex: Spectral, DFT, NLO, Magnetic and Molecular Docking Studies | Journal of molecular structure | https://doi.org/10.1016/j.molstruc.2022.133190 |

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| Hazim M. Ali | Impact of highly phospholipid-containing lipid nanocarriers on oral bioavailability and pharmacodynamics performance of genistein | Pharmaceutical Development and Technology | https://doi.org/10.1080/10837450.2022.2076111 |
| Hazim M. Ali | Investigation of Chemical Compositions and Biological Activities of <i>Mentha suaveolens</i> L. from Saudi Arabia | Molecules | https://doi.org/10.3390/molecules27092949 |
| Hazim M. Ali | Kinetics and Mechanism Studies of Oxidation of Dibromothymolsulfonphthalein Toxic Dye by Potassium Permanganate in Neutral Media with the Synthesis of 2-Bromo-6-isopropyl-3-methyl-cyclohexa-2,5-dienone | ACS omega | https://doi.org/10.1021/acsomega.2c01462 |
| Hazim M. Ali | Mesoporous hierarchical ZrO ₂ @rice straw-derived SiO ₂ nanocomposite for rapid adsorption and sunlight-driven photocatalytic degradation of methylene blue | Journal of Photochemistry and Photobiology A: Chemistry | https://doi.org/10.1016/j.jphotochem.2021.113758 |
| Hazim M. Ali | Simultaneous Determination of Methyl Nicotinate and Three Salicylic Acid Derivatives in Pain Relief Spray Using HPLC-DAD | Separations | https://doi.org/10.3390/separations9040093 |
| M. A. El-Hashemy | Synergistic combination of Ce (III) and iodide ions for corrosion protection of AA | Journal of Rare Earths | https://doi.org/10.1016/j.jre.2022.05.014 |

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| | 2024-T3 in acidic to neutral chloride-rich environments: Electrochemical and surface characterization studies | | |
| Hazim M. Ali | A novel spectrofluorimetric method based on a reaction with an azoisoxazoles-benzenesulfonamide derivative for determination of uranium (VI) ions in water samples | Luminescence | https://doi.org/10.1002/bio.4253 |
| A.A.Nayl | Chitosan-Functionalized-Graphene Oxide (GO@CS) Beads as an Effective Adsorbent to Remove Cationic Dye from Wastewater | Polymers | https://doi.org/10.3390/polym14194236 . |
| A.A.Nayl | Efficient, Recyclable, Heterogeneous Base Nanocatalyst for Thiazoles with Chitosan Capped Calcium Oxide Nanocomposite. | Polymers | https://doi.org/10.3390/polym14163347 |
| El Ghorab A. | LC/MS Profiling and Gold Nanoparticle Formulation of Major Metabolites from Origanum majorana as Antibacterial and Antioxidant Potentialities | PLANT Journal | https://doi.org/10.3390/plants11141871 |
| ismail Mohamed Ahmed | Nanostructured materials based on g-C3N4 for enhanced photocatalytic activity and potentials application: A | Arabian Journal of Chemistry | https://doi.org/10.1016/j.arabjc.2022.104070 |

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| | review. Arabian Journal of Chemistry | | |
| Nadia Ali Ahmed Elkanzi | Pumice as a Novel Natural Heterogeneous Catalyst for the Designation of 3,4-Dihydropyrimidine-2-(1H)-ones/thiones under Solvent-Free Conditions | Molecules | https://doi.org/10.3390/molecules27186044 |
| El Ghorab A. | Therapeutic application of carvacrol: A comprehensive review Design, synthesis and antitumor activity of novel pyrazolo[3,4-d]pyrimidine derivatives as EGFR-TK inhibitors View project enriching Meat Products By means of Bone Paste and Liver Pate View project | Food Science & Nutrition 00:1-18 | https://doi.org/10.1002/fsn3.2994 |
| A.A.Nayl | Azides in the Synthesis of Various Heterocycles | Molecules | https://doi.org/10.3390/molecules27123716 |
| Nadia Ali Ahmed Elkanzi | Green Design, Synthesis, and Molecular Docking Study of Novel Quinoxaline Derivatives with Insecticidal Potential against <i>Aphis craccivora</i> | ACS Omega | https://doi.org/10.1021/acsomega.2c03332 |
| A.A.Nayl | Synthesis and Greener Pastures Biological Study of Bis-thiadiazoles as Potential Covid-19 Drug Candidates | Arabian Journal of Chemistry | https://doi.org/10.1016/j.arabjc.2022.104101 |
| ASMA M ALENAD | Cu-Oxide Nanoparticles Catalyzed Synthesis of Nitriles | Advanced Sustainable Systems | https://doi.org/10.1002/adsu.202200263 |

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| | and Amides from Alcohols and Ammonia in Presence of Air | | |
| ASMA M ALENAD | Impact of Hybrid Fillers on the Properties of High Density Polyethylene Based Composites | POLYMER | https://doi.org/10.3390/polym14163427 |
| ASMA M ALENAD | Stable and Reusable Ni-based Nanoparticles for General and Selective Hydrogenation of Nitriles to Amines | Chemical Science | https://doi.org/10.1039/d2sc02961h |
| El Ghorab A. | Extraction of eco-friendly essential oils and their utilization in finishing polyester fabrics for fragrant and medical textiles | Journal of Engineered Fibers and Fabrics | https://doi.org/10.1177/15589250221104475 |
| Tamer H. A. Hasanin | Adsorption of Chlormethine Anti-Cancer Drug on Pure and Aluminum-Doped Boron Nitride Nanocarriers: A Comparative DFT Study | Pharmaceuticals | https://doi.org/10.3390/ph15101181 |
| Hazim M. Ali | Design of a Fischer-Tropsch multi-tube reactor fitted in a container: A novel design approach for small scale applications | Journal of Cleaner Production | https://doi.org/10.1016/j.jclepro.2022.132477 |
| Hassan M. A. Hassan | Mn-Based Hierarchical Polyhedral 2D/3D Nanostructures MnX ₂ (X = S, Se, Te) Derived from Mn-Based Metal–Organic Frameworks as High-Performance Electrocatalysts | Energy & Fuels | https://doi.org/10.1021/acs.energyfuels.2c01837 |

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| | for the Oxygen Evolution Reaction | | |
| Nadia A.A.Elkanzi | New Benzimidazole-Based Fe (III) and Cr (III) Complexes: Characterization, Bioactivity Screening, and Theoretical Implementations Using DFT and Molecular Docking Analysis | Appl Organomet Chem | https://doi.org/10.1002/aoc.6868 |
| Hassan M.A.Hassan | Preparation of PVDF-co-PAAm membrane with robust antifouling, and antibacterial performance by blending with magnetic graphene oxide | Journal of Environmental Chemical Engineering | https://doi.org/10.1016/j.jece.2022.108093 |
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| | the Removal of 4-Nitrophenol and Dyes from Water | | |
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| Hazim M. Ali | Facile Conversion of the Quinone-Semicarbazone Chromophore of Naftazone into a Fluorescent Quinol-Semicarbazide: Kinetic Study and Analysis of Naftazone in Pharmaceuticals and Human Serum | Sensors | https://doi.org/10.3390/s22166205 |
| Hazim M. Ali | High-Pressure Metal-Free Catalyzed One-Pot Two-Component Synthetic Approach for New 5-Arylazopyrazolo[3,4-b]Pyridine Derivatives | Molecules | https://doi.org/10.3390/molecules27196369 |
| amira atef ghoneim | An Efficient Procedure of Synthesis, DFT Calculation and Theoretical Investigation of 4-Thiazolidinone Fused Thiopyrimidine Derivatives as Antimicrobial Agents | POLYCYCLIC AROMATIC COMPOUNDS | https://doi.org/10.1080/10406638.2021.1934491 |
| Sabrein H. Mohamed | Approach for Quantification of Nanogram Amounts of Hepatitis-C Drugs, Sofosbuvir, and Daclatasvir based on Cerium (IV) Oxidation | Egyptian Journal of Chemistry | 10.21608/EJCHEM.2022.142020.6214 |

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| amira atef ghoneim | Design, Synthesis, Molecular Docking of Novel Substituted Pyrimidinone Derivatives as Anticancer Agents | POLYCYCLIC AROMATIC COMPOUNDS | https://doi.org/10.1080/10406638.2020.1837888 |
| Tarek A. Seaf Elnasr | Chemistry | Nanomaterials | https://www.mdpi.com/2079-4991/12/18/3249 |
| Tarek A. Seaf Elnasr | Chemistry | Nanomaterials | https://www.mdpi.com/2079-4991/12/18/3208 |
| Mohamed Hamza | Association between Productivity, Fatty Acid Profiles, Oil Bodies' Ultrastructure and Molecular Markers in Peanut (<i>Arachis hypogaea L.</i>) Cultivars | Agronomy | https://www.mdpi.com/2073-4395/10/9/1401 |
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| Tamer H. A. Hasanin | Anti-cancer Effect of <i>Hyoscyamus muticus</i> Extract via Its Activation of Fas/FasL-ASK1-p38 Pathway | Biotechnology and Bioprocess Engineering | https://doi.org/10.1007/s12257-022-0085-x |
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| Hassan M.A. Hassan | Polypyrrole-based sensors for volatile organic compounds (VOCs) sensing and capturing: A comprehensive review | Sensors and Actuators A: Physical | https://doi.org/10.1016/j.sna.2022.113933 |
| Hazim M Ali | Co-substituted Mg-Zn spinel nanocrystalline ferrites: Synthesis, characterization and evaluation of catalytic degradation efficiency for colored and colorless compounds | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.06.241 |
| Nadia A.A.Elkanzi | Design, Synthesis, and SAR Studies of Some Novel Chalcone Derivatives for Potential Insecticidal Bioefficacy Screening on <i>Spodoptera frugiperda</i> (Lepidoptera: Noctuidae) | ACS omega | https://doi.org/10.1021/acsomega.2c04814 |
| Hazim M. Ali | Effective adsorption of cadmium and lead using SO ₃ H-functionalized Zr-MOFs in aqueous medium | Chemosphere | https://doi.org/10.1016/j.chemosphere.2022.135633 |
| Tamer H. A. Hasanin | Effects of Lewis Basicity and Acidity on σ-Hole Interactions in Carbon-Bearing Complexes: A Comparative Ab Initio Study | International Journal of Molecular Sciences | https://doi.org/10.3390/ijms232113023 |
| Hassan M. A. Hassan | Fabrication of Novel Bentonite-Anthracite@ Zetag (BT-An@ Zetag) Composite for the Removal of Arsenic (V) from an Aqueous Solution | Molecules | https://doi.org/10.3390/molecules27217635 |

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|---------------------|---|---|---|
| Hazim M. Ali | Facile hydrothermal synthesis of Dy-doped NiMnO ₃ nanoflakes as a highly stable electrode for energy conversion system | Journal of Sol-Gel Science and Technology | https://doi.org/10.1007/s10971-022-05953-3 |
| Hazim M. Ali | Facile synthesis of CoFePO ₄ on eggshell membrane for oxygen evolution reaction and supercapacitor applications | Ceramics International | https://doi.org/10.1016/j.ceramint.2022.08.266 |
| Hassan M. A. Hassan | Green synthesis of magnesium oxide nanosheets by using <i>Citrullus colocynthis</i> fruit extract and its use in biofuel production | Biomass and Bioenergy 167, 106640 | https://doi.org/10.1016/j.biombioe.2022.106640 |
| Hazim M. Ali | Oil tea shell synthesized biochar adsorptive utilization for the nitrate removal from aqueous media | Chemosphere | https://doi.org/10.1016/j.chemosphere.2022.136045 |
| Hassan M. A. Hassan | Preparation and Characterization of Modified Polysulfone with Crosslinked Chitosan–Glutaraldehyde MWCNT Nanofiltration Membranes, and Evaluation of Their Capability for Salt Rejection | Polymers | https://doi.org/10.3390/polym14245463 |
| Hazim M. Ali | Triboelectric nanogenerator self-heating floor – possibility to achieve intelligence in the architecture† | Journal of Materials Chemistry A | https://doi.org/10.1039/D2TA06942C |
| Hassan M. A. Hassan | A new cadmium oxide (CdO) and copper selenide (CuSe) | Colloids and Surfaces A: | https://doi.org/10.1016/j.colsurfa.2022.130327 |

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|-------------------|--|---|---|
| | nanocomposite: An energy-efficient electrode for wide-voltage hybrid supercapacitors | Physicochemical and Engineering Aspects | |
| Nadia A.A.Elkanzi | Design, Synthesis, and SAR Studies of Some Novel Chalcone Derivatives for Potential Insecticidal Bioefficacy Screening on Spodoptera frugiperda (Lepidoptera: Noctuidae) | ACS omega | https://doi.org/10.1021/acsomega.2c04814 |
| Nadia A.A.Elkanzi | Synthesis, structural, biological, molecular docking and DFT investigation of Fe(III), Co(II), Ni(II), Cu(II) and Zn(II) complexes of the 4-[(5-oxo-4,5-dihydro-1,3-thiazol-2-yl)hydrazono]methyl}phenyl 4-methylbenzenesulfonate Schiff-base ligand | Polyhedron | https://doi.org/10.1016/j.poly.2022.116219 |

5- List of funded projects

| No | Name | Title | value |
|-----------------|----------------------|--|--------|
| DSR2022-RG-0131 | ابراهيم حوتان السعدي | (Membrane Science and Advanced Water Technology (MSAWT | ١٢.... |
| DSR2022-RG-0132 | Hassan M. A. Hassan | Hybrid Nanocomposites Materials for Energy Conversion and Water Desalination | ١٢.... |
| DSR2022-RG-0136 | Mohamed Ramadan | Fabrication of polymeric composites materials and its evaluation as adsorbent materials for wastewater treatment | ١٢.... |

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|-----------------|---------------|--|------|
| DSR2022-RG-0133 | Amr A. Essawy | Exploitation of novel monitoring, detoxification, and Solar-driven catalytic technicalities in providingimmaculate water | ٢٠٢٣ |
| DSR2022-RG-0134 | Hazim M. Ali | Application of analytical methods in food and drug protection and safety | ٢٠٢٣ |
| DSR2022-RG-0130 | A.A.Nayl | Applications of Organometallic Compounds and Nanomaterials | ٢٠٢٣ |
| DSR2022-RG-0166 | Tarek Ahmed | Evaluation of possible protective effects of Olive Extracts, stability testing and nanoformulations inregards to OCT2 inhibition in cisplatin induced nephrotoxicity in rats | ٢٠٢٣ |
| DSR2022-RG-0135 | Rasha Kamal | Development of novel electrochemical and spectroscopic sensors for thedetermination of medicaments and hazards affecting the quality of human life | ٢٠٢٣ |

Biology program

1- Number of Published articles in 2022

| Q1 Top 10 | Q1 | Q2 | Q3 | Q4 |
|-----------------|----|----|----|----|
| 1 | 44 | 20 | 21 | 9 |

| ISI | Scopus | Other | Total |
|-----|--------|-------|-------|
| 94 | 101 | 4 | 105 |

| Top 100 | Top 200 | Top 500 |
|------------|------------|------------|
| 20 | 15 | 10 |

2- List of Top 10% (IF) impacted articles in Web of Science

| Faculty member | Title of research | Journal | Quartile | Rank in Category | link |
|-------------------------|---|---------------------------------|----------|------------------|---|
| Abdulsalam A M Alkhaldi | S-Methylcysteine Ameliorates the Intestinal Damage Induced by Eimeria tenella Infection via Targeting Oxidative Stress and Inflammatory Modulator | Frontiers In Veterinary Science | Q1 | 9/146 | https://doi.org/10.3389/fvets.2021.754991 |

3- List of articles cooperation with the best Top 100/200/500 university

| Faculty member | Title of research | Journal | link |
|----------------------|--|--------------|---|
| Dr. Barakat ALRASHDI | Impact of Incorporating the Aqueous Extract of Hawthorn (<i>C. oxyanatha</i>) Leaves on Yogurt Properties and Its Therapeutic Effects against Oxidative Stress Induced by Carbon Tetrachloride in Rats | Fermentation | https://www.mdpi.com/2311-5637/8/5/200 |

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|--|---|--|---|
| Haifa Abdul Aziz S AL-Haithloul | Cultivation of the Multipurpose Tree, <i>Jatropha curcas</i> Using Recycled Water in Saudi Arabia: A forward-looking Study | Egyptian Academic Journal of Biological Sciences | https://doi.org/10.21608/EAJBSH.2021.246506 |
| Ghalia S. H. Alnusairi | Improved salt tolerance by α -tocopherol in soybean involves up-regulation of ascorbate-glutathione cycle and secondary metabolites | Journal of Applied Botany and Food Quality | https://doi.org/10.5073/JABFO.2022.095.005 |
| Haifa Abdulaziz S. Alhaithloul | Role of Electromagnetic Radiation in Abiotic Stress Tolerance, Plant Abiotic Stress Physiology | Taylor and Francis group | https://doi.org/10.1201/9781003180562 |
| Haifa Abdulaziz S. Alhaithloul | Role of Various Nanoparticles in Countering Heavy Metal, Salt, and Drought Stress in Plants | Sustainable Agriculture Reviews 53 pp 151–170Cite as | https://doi.org/10.1007/978-3-030-86876-5_6 |
| Ghalia S.H. Alnusairi | Effects of EDTA and aqueous plants extract on the developmental and stress tolerance attributes of <i>Spinacia oleracea</i> and <i>Brassica rapa</i> under sewage water regime. | Notulae Botanicae Horti Agrobotanici Cluj-Napoca | https://doi.org/10.15835/nbha50112534 |
| Mohamed Hamza | Maximizing Sesame Crop Yield via Matching the Appropriate Genotype with the Optimum Intra-Row Spacing | International Journal of Agricultural Research | https://scialert.net/abstract/?doi=ijar.2022.22.31 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Ecological risk assessment and bioaccumulation of trace element, copper, in wheat varieties irrigated with non-conventional water resources in a semi-arid tropics | Agricultural Water Management | https://doi.org/10.1016/j.agwat.2022.107711 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Efficacy of Two Natural Materials Against Some Invertebrate Pests as a Safe Alternative to Pesticides and Their Bio-Safeties on Mammalian | Journal of Biobased Materials and Bioenergy | https://doi.org/10.1166/jbmb.2022.2176 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Harnessing the Potential of <i>Bacillus altitudinis</i> MT422188 for Copper Bioremediation | Frontiers in Microbiology | https://doi.org/10.3389/fmicb.2022.878000 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Hydrogen peroxide priming alleviates salinity induced toxic effect in maize by improving antioxidant defense system, ionic homeostasis, | Molecular Biology Reports | https://doi.org/10.1007/s11033-022-07535-6 |

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| | photosynthetic efficiency and hormonal crosstalk | | |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Melatonin-Induced Protection Against Plant Abiotic Stress: Mechanisms and Prospects | Frontiers in Plant Science | https://doi.org/10.3389/fpls.2022.902694 |
| Ameena A. AL-surhanee | Protective role of antifusarial eco-friendly agents (<i>Trichoderma</i> and salicylic acid) to improve resistance performance of tomato plants | Saudi Journal of Biological Sciences | https://doi.org/10.1016/j.sjbs.2022.01.020 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Assessment of composition and spatial dynamics of weed communities in agroecosystem under varying edaphic factors | PloS one | https://doi.org/10.1371/journal.pone.0266778 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | <i>Calotropis procera</i> (L.) mediated synthesis of AgNPs and their application to control leaf spot of <i>Hibiscus rosa-sinensis</i> (L.) | Brazilian Journal of Biology | https://doi.org/10.1590/1519-6984.261123 |
| Dr. Haifa Abdul Aziz Sakit ALhaithloul | Role of calcium and magnesium on dramatic physiological and anatomical responses in tomato plants | Notulae Botanicae Horti Agrobotanici Cluj-Napoca; Cluj- | https://doi.org/10.15835/nbha50112614 |
| Dr. Barakat ALRASHDI | A flavonoid-rich fraction of <i>Monolluma quadrangula</i> inhibits xanthine oxidase and ameliorates potassium oxonate-induced hyperuricemia in rats | Environmental Science and Pollution Research | https://doi.org/10.1007/s11356-022-20274-2 |
| Dr. Barakat ALRASHDI | Effects of Fermented Camel Milk Supplemented with Sidr Fruit (<i>Ziziphus spina-christi</i> L.) Pulp on Hyperglycemia in Streptozotocin-Induced Diabetic Rats | Fermentation | https://www.mdpi.com/2311-5637/8/6/269 |
| Dr. Barakat M ALRASHDI | The Effects of Bacterial Lipopolysaccharide (LPS) on Turkey Poult: Assessment of Biochemical Parameters and Histopathological Changes | Veterinary Sciences | https://www.mdpi.com/2306-7381/9/5/240 |

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|-------------------------------------|--|---|---|
| Haifa Abdulaziz Sakit ALHAITHLOUL | Responses of wheat and barley to Acacia saligna leaf and stem extracts: influence on growth and ascorbate-glutathione cycle | Notulae Botanicae Horti Agrobotanici Cluj-Napoca | https://doi.org/10.15835/nbha50212709 |
| Dr. Barakat M ALRASHDI | Impact of Incorporating the Aqueous Extract of Hawthorn (<i>C. oxyanatha</i>) Leaves on Yogurt Properties and Its Therapeutic Effects against Oxidative Stress Induced by Carbon Tetrachloride in Rats | Fermentation | https://doi.org/10.3390/fermentation8050200 |
| Diaa Massoud | Larval cestodes infecting commercial fish of Alexandria coast along the Mediterranean Sea: morphology and phylogeny | Revista Brasileira de Parasitologia Veterinária | https://doi.org/10.1590/S1984-29612022030 |
| Fatma H Galal | The impact of electromagnetic radio waves on some biological aspects of <i>Culex</i> (<i>Culex</i>) pipiens Mosquitoes (Diptera: Culicidae) | Bioscience Research | https://www.isisn.org/BR-19-2-2022/805-810-19(2)2022BR22-19.pdf |
| Mohamed Hamza | Association between Productivity, Fatty Acid Profiles, Oil Bodies' Ultrastructure and Molecular Markers in Peanut (<i>Arachis hypogaea L.</i>) Cultivars | Agronomy | https://doi.org/10.3390/agronomy10091401 |
| Haifa Abdulaziz S. Alhaithloul | Climate Change and Ecosystems Challenges to Sustainable Development Edited By Shah Fahad, Muhammad Adnan, Shah Saud, Lixiao Nie | | https://www.routledge.com/Climate-Change-and-Ecosystems-Challenges-to-Sustainable-Development/Fahad-Adnan-Saud-Nie/p/book/9781032260686 |
| Mohamed Hamza | Conventional versus Nano Calcium Forms on Peanut Production under Sandy Soil Conditions | Agriculture | https://www.mdpi.com/2073-4395/10/9/1401 |
| Haifa Abdul Aziz Sakit AL-haithloul | Ecological risk assessment and bioaccumulation of trace element, copper, in wheat varieties irrigated with non-conventional water resources in a semi-arid tropics | Agricultural Water Management Volume 269, 1 July 2022, 107711 | https://www.mdpi.com/2077-0472/11/8/767 |
| Haifa Abdul Aziz Sakit AL-haithloul | Impact of <i>Plantago ovata</i> Forsk leaf extract on morpho-physio-biochemical attributes, ions uptake | Frontiers in Plant Science | https://www.frontiersin.org/articles/10.3389/fpls.2022.999170/full |

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|-------------------------------------|--|--|---|
| | and drought resistance of wheat (<i>Triticum aestivum</i> L.) seedlings | | |
| Mohamed Hamza | LC/MS Profiling and Gold Nanoparticle Formulation of Major Metabolites from <i>Origano majorana</i> as Antibacterial and Antioxidant Potentialities | plants | https://doi.org/10.1016/j.agwat.2022.107711 |
| Haifa Abdul Aziz Sakit AL-haithloul | Melatonin-Induced Protection Against Plant Abiotic Stress: Mechanisms and Prospects | Frontiers in Plant Science | https://doi.org/10.3389/fpls.2022.999170 |
| Haifa Abdul Aziz Sakit AL-haithloul | Morpho-physiological response of barley to assess genotypic differences of salinity tolerance under hyper arid climate | Elsevier Agricultural Water Management | https://doi.org/10.3390/plants11141871 |
| Haifa Abdul Aziz Sakit AL-haithloul | Organic amendments mitigate salinity induced toxic effects in maize by modulating antioxidant defense system, photosynthetic pigments and ionic homeostasis | Notulae Botanicae Horti Agrobotanici Cluj-Napoca | https://doi.org/10.15835/nbha50212735 |
| Haifa Abdul Aziz Sakit AL-haithloul | Phytotoxic effects of <i>Acacia saligna</i> dry leachates on germination, seedling growth, photosynthetic performance, and gene expression of economically important crops | PeerJ | https://doi.org/10.1016/j.agwat.2022.107832 |
| Taghreed S.Alnusaire | Role of Ascorbic Acid in Alleviating Abiotic Stress in Crop Plants. | In Antioxidant Defense in Plants | https://www.notulaebotanicae.ro.cortengarden.com/index.php/nbha/article/view/12735 |
| Dr. Barakat ALRashdi | Serological Investigation and Epidemiological Analysis of Bovine Leptospirosis in Egypt | Trop. Med. Infect. Dis | https://doi.org/10.3390/tropicalmed7090208 |
| Haifa Abdul Aziz Sakit AL-haithloul | Trehalose: a promising osmoprotectant against salinity stress—physiological and molecular mechanisms and future prospective | Molecular Biology Reports | https://link.springer.com/article/10.1007/s11033-022-07681-x |
| Ameena A. AL-Surhanee, | Comparative growth potential of thermophilic amylolytic <i>Bacillus</i> sp. on unconventional media food wastes and its industrial application | Saudi Journal of Biological Sciences | |

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|----------------------------|--|---|---|
| Dr.Ghalia Sattam Alnusairi | Insights into Cadmium-Induced Morphophysiological Disorders in <i>Althea rosea</i> Cavan and Its Phytoremediation through the Exogeneous Citric Acid | Journal of Agronomy | https://doi.org/10.3390/agronomy12112776 |
| Ameena A. AL-surhanee | The Antifungal Activity of Ag/CHI NPs against <i>Rhizoctonia solani</i> Linked with Tomato Plant Health. | Journals of Plants | https://www.mdpi.com/2223-7747/10/11/2283 |
| Mervat Ahmed AbdRabou | Morphological and histopathological alterations caused by meloxicam in chick fetuses | Bangladesh Journal Pharmacology | https://doi.org/10.3329/bjp.v17i4.62233 |
| Mervat Ahmed AbdRabou | Evaluation of Fertility and Embryo Implantation in Rats After the Oral Administration of <i>Salvia officinalis</i> (Sage) Extract | SOC CHILENA ANATOMIA , CASILLA 54-D, TEMUCO, CHILE, 00000 | |
| Abdulsalam A M Alkhaldi | Novel insights on the potential activity of propolis and wheat germ oil against chronic toxoplasmosis in experimentally infected mice | Biomedicine & Pharmacotherapy | https://doi.org/10.1016/j.biopha.2022.113811 |
| Diaa Massoud | Development and assessment of phospholipid-based luteolin-loaded lipid nanocapsules for skin delivery | International Journal of Pharmaceutics | https://doi.org/10.1016/j.ijpharm.2022.122375 |
| Fatma H Galal | Immune Responses of <i>Rhynchosporus ferrugineus</i> to a New Strain of <i>Beauveria bassiana</i> | Sustainability | https://doi.org/10.3390/su142013002 |
| Rasha M. Alzayed | ON-1 and BA-IX Are the Dominant Sub-Genotypes of Human Orthopneumovirus A&B in Riyadh, Saudi Arabia | Genes | https://doi.org/10.3390/genes13122288 |
| Diaa Massoud | Microscopic anatomy of the oesophagus in the southern white-breasted hedgehog (<i>Erinaceus concolor</i>) a histochemical, stereological, and scanning electron microscope study | Anatomia, Histologia, Embryologia | https://doi.org/10.1111/ahe.12887 |

4- List of funded projects

| Number of projects | Author | Title | Value |
|--------------------|-----------------------|---|--------|
| DSR2022-RG-0117 | Dr. Barakat ALRashdi | Studying the potential protective role of oleuropein coated with magnesium, zinc and selenium | ١٢.... |
| DSR2022-RG-0118 | Mousa garmoush | Antiviral peptides | ١٢.... |
| DSR2022-RG-0164 | Bassam Fares | Promising and advanced therapeutic prospects for human diseases using the superior curative abilities of stem cells and olives from Al Jouf | ١٢.... |
| DSR2022-RG-0116 | Diaa Massoud | Animal biodiversity and conservation | ١٢.... |
| DSR2022-RG-0165 | Mervat Ahmed AbdRabou | The therapeutic effects of stem cells and olive leaf extract against diabetes mellitus and its complications in pregnant rats | ١٢.... |

5- List of book or chapter published

| chapter | author | Publisher |
|--|--|-----------------------------------|
| Role of Electromagnetic Radiation in Abiotic Stress Tolerance. In Plant Abiotic Stress Physiology | Dr. Haifa Abdul Aziz Sakit ALhaithloul | Taylor & Francis Library Insights |
| Bacillus sp. R2: Promising Marine Bacterium with Chitinolytic/Agarovorant Activity and Multiple Enzymes Productivity | Cheba, Ben Amar | Springer Nature |
| Review on Microbial Bioinformatics: Novel and Promoting Trend for Microbiomics Research and Applications | Cheba, Ben Amar | Springer Nature |

Responses of Crop Plants Under
Nanoparticles Supply in
Alleviating Biotic and Abiotic
Stresses

Tagreed S

Springer

Mathematic program

1- Number of Published articles in 2022

| Q1 Top 10 | Q1 | Q2 | Q3 | Q4 |
|-----------------|----|----|----|----|
| 8 | 48 | 33 | 20 | 11 |

| ISI | Scopus | Other | Total |
|-----|--------|-------|-------|
| 112 | 116 | 0 | 116 |

| Top 100 | Top 200 | Top 500 |
|------------|------------|------------|
| 0 | 3 | 3 |

2- List of Top 10% (IF) impacted articles in Web of Science

| Faculty member | Title of research | Journal | Quartile | Rank in Category | link |
|------------------------|--|----------------------------|----------|------------------|---|
| Abdellatif Ben Makhlof | Some results on the study of Caputo–Hadamard fractional stochastic differential equations | Chaos, Solitons & Fractals | Q1 | 20090 | https://www.sciencedirect.com/science/article/abs/pii/S0960077921011115 |
| Abdellatif Ben Makhlof | New Result for the Analysis of Katugampola Fractional-Order Systems—Application to Identification Problems | Mathematics | | 24/330 | https://www.mdpi.com/2227-7390/10/11/1814 |
| Abdellatif Ben Makhlof | Stability of a time fractional advection-diffusion system | Chaos, Solitons & Fractals | | 20090 | https://www.sciencedirect.com/science/article/abs/pii/S09600779200159X |
| Abdellatif Ben Makhlof | Darboux problem for proportional partial fractional differential equations | Chaos, Solitons & Fractals | | 1/108 and 1/56 | https://doi.org/10.1016/j.chaos.2022.112906 |
| Abdellatif Ben Makhlof | Hyers–Ulam stability for a class of Hadamard fractional Itô–Doob stochastic integral equations | Chaos, Solitons & Fractals | | 1/108 and 1/56 | https://doi.org/10.1016/j.chaos.2022.112918 |
| Abdellatif Ben Makhlof | Some New Weakly Singular Integral Inequalities with Applications to Differential Equations in Frame of Tempered χ -Fractional Derivatives | Mathematics | | 21/332 | https://www.mdpi.com/2227-7390/10/20/3792 |
| Abdellatif Ben Makhlof | Stability of a fractional advection-diffusion system with conformable derivative | Chaos, Solitons & Fractals | | 1/108 | https://www.sciencedirect.com/science/article/abs/pii/S096007792008281 |

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|----------------|--|----------------------------|--|-------|---|
| Hassen Arfaoui | Stability of a fractional advection-diffusion system with conformable derivative | Chaos, Solitons & Fractals | | 1.647 | https://doi.org/10.1016/j.chaos.2022.112649 |
| | | | | | |

3- List of articles cooperation with the best Top 100/200/500 university

| Faculty member | Title of research | Journal | lnl |
|--------------------|--|---|---|
| Entesar Aljarallah | Existence and asymptotic properties of singular solutions of nonlinear elliptic equations in $\mathbb{R}^n \setminus \{0\}$ | Boundary Value Problems | https://doi.org/10.1186/s13661-022-01584-3 |
| Mohamed Kharrat | Continuation value computation using Malliavin calculus under general volatility stochastic process for American option pricing. | Turkish Journal of Mathematics | https://doi.org/10.3906/mat-2105-6 |
| M. I. Youssef | Generalized fractional delay functional equations with Riemann-Stieltjes and infinite point nonlocal conditions | Journal of Mathematics and Computer Science (JMCS), 2022, 24(1), 33-48. | http://dx.doi.org/10.22436/jmcs.024.01.04 |
| M.I. Youssef | On a method for solving nonlinear integro differential equation of order n | Journal of Mathematics and Computer Science (JMCS), 2022, 25(4), 322-340. | http://dx.doi.org/10.22436/jmcs.025.04.03 |
| Mohamed Kharrat | Monte Carlo methods for pricing American Options | Advances in Modeling and Simulation | |

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|------------------|--|-------------|---|
| Yumnah Alruwaily | Some New Weakly Singular Integral Inequalities with Applications to Differential Equations in Frame of Tempered χ -Fractional Derivatives | Mathematics | https://www.mdpi.com/2227-7390/10/20/3792 |
|------------------|--|-------------|---|

4- List of funded projects

| No | Name | Title | value |
|-----------------|------------------------|---|--------|
| DSR2022-RG-0119 | Saed Mahmoud | Mathematical Analysis and Control Systems (MACS) | ١٢.... |
| DSR2022-RG-0120 | Abdellatif Ben Makhlof | Stability for some nonlinear systems of differential equations and their applications | ١٢.... |

5- List of book or chapter published

| chapter | author | Publisher |
|---|------------------------|-----------|
| Fault Estimation for Nonlinear One-Sided Lipschitz Systems | Abdellatif Ben Makhlof | Springer |
| Observer-Based Control for Fractional-Order Systems | Abdellatif Ben Makhlof | Springer |
| Observers and Observability—Theory and Literature Overview | Abdellatif Ben Makhlof | Springer |
| On the Stability of Caputo Fractional-Order Systems: A Survey | Abdellatif Ben Makhlof | Springer |

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| State Estimation for Fractional-Order Systems | Abdellatif Ben Makhlof | Springer |
| A Brief Overview on Fractional Order Systems in Control Theory | Abdellatif Ben Makhlof | Springer |
| Some Preliminaries on Unknown Input Observers, Discontinuous Observers and Sliding Mode Observers Design | Abdellatif Ben Makhlof | Springer |