



# Waqed Hammed Hassan

واقد حميد حسن الموسوي

Professor

## ACADEMIC TITLES

2019-01-21 Professor

## ADMINISTRATIVE POSITIONS

2023-08-01 - Present Vice of president

## PUBLICATIONS ( 2 4 0 )

- Data-driven optimization and 4E analysis of a novel LNG-integrated gas turbine-based system using ANN-GA hybrid approaches: Enhanced hydrogen production and CO2 capture for&nbsp;...**  
*Fuel* 407, 137283, 2026 | 2026 | Cited: 6
- Modelling of the Fate and Emission of Carbon Disulfide in a Full-Scale Extended Aeration Process Using TOXCHEM Simulations**  
*Water and Environment Journal* 40 (1), 65-75, 2026 | 2026
- Spatiotemporal dynamics and future projections of aridity in a semi-arid region based on multi-model CMIP6 scenarios**  
*Theoretical and Applied Climatology* 157 (1), 20, 2026 | 2026
- Fabrication of SiW9Co3–Bi4O5Br2 photocatalysts with improved charge separation for visible-light-driven hydrogen evolution and metronidazole degradation: Characterization&nbsp;...**  
*Journal of Water Process Engineering* 83, 109471, 2026 | 2026 | Cited: 7
- Design of a Li-ion battery cooling system incorporating PCM, heat pipes, and liquid circuits using marine predator algorithm-enhanced ANN and multi-verse optimization**  
*Scientific Reports*, 2026 | 2026
- A Comprehensive Analysis of the Structural, Electronic, Mechanical, Optical, and Thermophysical Properties of GaSrX3 (X = F, Cl, Br, I, and H): DFT&nbsp;...**  
*Journal of Electronic Materials*, 1-17, 2026 | 2026 | Cited: 1
- MOF-oxide Z-scheme ZnWO4@ NH2-UiO-66 for coupled visible-light CO2 Photoreduction and pharmaceutical pollutant degradation: RSM–CCD optimization, DFT calculations and&nbsp;...**  
*Separation and Purification Technology*, 137826, 2026 | 2026 | Cited: 2
- Metal–metal interactions in trinuclear ruthenium-osmium clusters with bridging ligands: a QTAIM analysis**  
*Structural Chemistry* 37 (2), 785-796, 2026 | 2026 | Cited: 1
- Correction: GIS-based multi-criteria decision making for identifying rainwater harvesting sites**  
*Applied Water Science* 15 (6), 1-1, 2025 | 2025
- Machine learning-based exergy and environmental optimization of a photovoltaic–thermal-assisted CO2 ejector heat pump**  
*The European Physical Journal Plus* 140 (12), 1217, 2025 | 2025
- Central Composite Design Optimization of the Biological Decolorization of Cationic Dyes by Mix Algae Biomass in Bubble Column Reactor**  
*Petroleum Chemistry* 65 (9), 1057-1075, 2025 | 2025
- Coordination engineering of transition metal doped in B2CN3 electrocatalyst to enhance efficient carbon dioxide reduction reaction. Sustainable Chemistry and Pharmacy, 44, 101951**  
2025 | Cited: 56

## CONTACT

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## EDUCATION

دكتوراه (10-06-2013)

Civil Engineering-Water Resources Management

Al- Mustansarya University

## RESEARCH METRICS

h-index (Scopus) 30

h-index (GS) 35

Citations (Scopus) 2021

Citations (GS) 3086

Documents (Scopus) 135

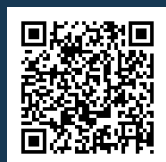
Documents (GS) 179

## AWARDS

• The best researcher in University of Kerbala

## RESEARCH INTERESTS

• Climate change; Groundwater modeling; Optimization



13. **Thermal Assessment of Maxwell–Sutterby Fluid with Bio-Convection and Activation Energy Effects induced by Riga Plate via Levenberg–Marquardt Algorithm**  
*Results in Engineering 27, 105819, 2025 | 2025 | Cited: 20*
14. **Examination of Chemical Reaction on Second-Grade Nanofluid Micropolar nanofluid due to exponential stretchable sheet: A comparative study and**  
*South African Journal of Chemical Engineering 53 (1), 373-385, 2025 | 2025 | Cited: 20*
15. **Improving the thermal performance of flat-plate solar collectors for building applications through hybrid nanofluids and vortex-inducing geometries**  
*Case Studies in Thermal Engineering 72, 106377, 2025 | 2025 | Cited: 16*
16. **GIS-based multi-criteria decision making for identifying rainwater harvesting sites**  
*Applied Water Science 15 (3), 45, 2025 | 2025 | Cited: 16*
17. **Designing a novel Ti3C2 MXene-bridged Z-scheme photocatalyst for effective H2 generation and removal of non-biodegradable norfloxacin: Optimization and mechanism insights**  
*Journal of Alloys and Compounds 1031, 181029, 2025 | 2025 | Cited: 11*
18. **Thermal assessment of Maxwell–Sutterby fluid with gyrotactic microorganisms and activation energy effects induced by Riga plate via Levenberg–Marquardt algorithm**  
*Results in Engineering 27, 105819, 2025 | 2025 | Cited: 6*
19. **Green triiron tetraoxide@ Algae (Fe<sub>3</sub>O<sub>4</sub>@ Algae) nanoparticles for highly efficient removal of lead (Pb<sup>2+</sup>), cadmium (Cd<sup>2+</sup>), and aluminum (Al<sup>3+</sup>) from&nbsp;...**  
*Environmental Science and Pollution Research, 2025 | 2025*
20. **Bio-decorated of copper nanoparticles over Arabic gum modified magnetic nanoparticles: Its catalytic activity for C-S coupling reactions**  
*Journal of Organometallic Chemistry | 2025*
21. **Study on pressure-induced band gap modulation and physical properties of direct band gap Ca<sub>3</sub>NX<sub>3</sub> (X = Cl, Br) for optoelectronic and thermoelectric applications**  
*Surfaces and Interfaces | 2025*
22. **Examination of Chemical Reaction on Second-Grade Nanofluid and Micropolar nanofluid due to exponential stretchable sheet: A comparative study**  
*South African Journal of Chemical Engineering, 2025 | 2025 | Cited: 14*
23. **Optimal rainwater harvesting locations for arid and semi-arid regions by using MCDM-based GIS techniques**  
*Heliyon 11 (3), 2025 | 2025 | Cited: 20*
24. **GIS-based multi-criteria decision making for identifying rainwater harvesting sites**  
*Applied Water Science 15 (3), 1-24, 2025 | 2025 | Cited: 11*
25. **Ultrahigh-performance NiWO<sub>4</sub> nanoparticles anchored ZnO nanoflakes as a potential electrode for energy storage applications**  
*Fuel 381, 133395, 2025 | 2025 | Cited: 9*
26. **Preparation of a novel reusable 2D-MXene with flower-like LDH composite for ultra-high adsorption of congo red and doxycycline: Stability and environmental application**  
*Journal of Water Process Engineering 76, 108288, 2025 | 2025 | Cited: 21*
27. **Fabrication of dual-functional Cs<sub>3</sub>Bi<sub>2</sub>I<sub>9</sub>-WO<sub>3</sub> S-scheme heterojunction for photocatalytic H<sub>2</sub> production and polluted water treatment: Optimization, mechanism and toxicity evaluation**  
*Journal of Alloys and Compounds 1021, 179730, 2025 | 2025 | Cited: 16*
28. **Construction of a novel coffee husk-derived biochar-supported Ce<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub>-Sb<sub>2</sub>O<sub>3</sub> composites for enhanced visible light-driven photocatalytic degradation of metronidazole and H<sub>2</sub>&nbsp;...**  
*Journal of Water Process Engineering 75, 107935, 2025 | 2025 | Cited: 11*
29. **The atomic and thermal performance of CuO nanoparticles/paraffin as phase change materials in a circular tube: Molecular dynamics simulation approach**  
*Nano-Structures & Nano-Objects 42, 101492, 2025 | 2025 | Cited: 6*
30. **Modulating the environment and metal choice doped in BC<sub>4</sub>N monolayer for carbon dioxide reduction: A computational study**  
*Chemical Engineering Journal 511, 162250, 2025 | 2025 | Cited: 6*

31. **Artificial recharge of an unconfined aquifer using treated wastewater as a climate change mitigation strategy**  
*Civil Engineering Journal 10, 319-43, 2025 | 2025 | Cited: 16*
32. **Interface engineering through embedding Co<sub>2</sub>O<sub>3</sub> nanoparticles onto MXenes layered structure for boosting supercapacitor performance**  
*Electrochimica Acta 525, 146121, 2025 | 2025 | Cited: 11*
33. **Enhanced wastewater purification and photocatalytic green energy production via a novel CaIn<sub>2</sub>S<sub>4</sub>-coupled BiFeO<sub>3</sub> nanocomposite: Characterization and mechanistic insights**  
*Journal of Water Process Engineering 75, 108048, 2025 | 2025 | Cited: 4*
34. **Effect of copper nanoparticle volume fraction on flow in a 3D lid-driven cavity with phase change materials using molecular dynamics simulation**  
*Case Studies in Chemical and Environmental Engineering 11, 101181, 2025 | 2025 | Cited: 10*
35. **Calculation of diffusion coefficient of doxycycline and naproxen adsorption on HKUST-1/ZnO/SA nanocomposite**  
*International Communications in Heat and Mass Transfer 168, 109451, 2025 | 2025 | Cited: 1*
36. **Enhanced environmental detoxification and ammonia production using a novel CeVO<sub>4</sub>/Bi<sub>4</sub>O<sub>5</sub>I<sub>2</sub> Z-type photocatalyst: Mechanistic insights, DFT calculations, and toxicity assessment**  
*Separation and Purification Technology, 135338, 2025 | 2025 | Cited: 5*
37. **High-performance multimetal broccoli-like structure MnMoO<sub>4</sub>/CoWO<sub>4</sub>/NF nanocomposite as a bifunctional electrocatalyst for efficient water splitting**  
*Journal of Electroanalytical Chemistry, 119503, 2025 | 2025 | Cited: 1*
38. **Evaluation of Hybrid MoS<sub>2</sub>-Ce<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub>/HfO<sub>2</sub> Nanostructures for Enhanced CO Evolution Rate and Efficient Tetracycline Degradation via Advanced Photocatalytic Processes under**  
*Surfaces and Interfaces, 107688, 2025 | 2025 | Cited: 3*
39. **Computational machine learning estimation of digitoxin solubility in supercritical solvent at different temperatures utilizing ensemble methods**  
*Scientific Reports 15 (1), 29248, 2025 | 2025 | Cited: 1*
40. **Numerical model to investigate the hydraulic effects of the core's dimensions and materials in the Earth dams**  
*Water Conservation Science and Engineering 10 (2), 88, 2025 | 2025 | Cited: 1*
41. **Integration of MODFLOW and Deep Learning models for Groundwater level Prediction**  
*Results in Engineering, 106268, 2025 | 2025 | Cited: 5*
42. **Non-local piezoelectricity to incorporate the influence of small-scale factors on the resonance behavior of the Mindlin piezoelectric polymeric nanoplates**  
*Case Studies in Chemical and Environmental Engineering 11, 101125, 2025 | 2025 | Cited: 1*
43. **Assessment and Treatment of Some Heavy Elements of Groundwater Wells in Karbala Province/ Iraq**  
*Warith Scientific Journal of Engineering and Technology 1 (1), 23-40, 2025 | 2025 | Cited: 1*
44. **Synergies for sustainability: Renewable energy, urban planning, and green industry in carbon emission reduction**  
*Sustainable Futures 10, 101222, 2025 | 2025 | Cited: 10*
45. **Designing a Novel Ti<sub>3</sub>C<sub>2</sub> MXene-Bridged Z-Scheme Photocatalyst for Effective H<sub>2</sub> Generation and Removal of Non-Biodegradable Norfloxacin: Optimization and Mechanism Insights**  
*Journal of Alloys and Compounds, 181029, 2025 | 2025 | Cited: 8*
46. **Green triiron tetraoxide@ Algae (Fe<sub>3</sub>O<sub>4</sub>@ Algae) nanoparticles for highly efficient removal of lead (Pb<sup>2+</sup>), cadmium (Cd<sup>2+</sup>), and aluminum (Al<sup>3+</sup>) from contaminated water: an**  
*Environmental Science and Pollution Research 32 (11), 6817-6838, 2025 | 2025 | Cited: 11*
47. **Retraction notice to " Optimal rainwater harvesting locations for arid and semi-arid regions by using MCDM-based GIS techniques"[Heliyon 11 (2025) e42090]**  
*Heliyon 11 (16), 2025 | 2025*
48. **Design, transient simulation, and multi-objective optimization using artificial neural networks and genetic algorithms of a solar-assisted building energy system integrating**  
*Journal of Energy Storage 139, 118647, 2025 | 2025 | Cited: 6*

49. **Synergizing building-integrated photovoltaic with ground-air and water-air heat exchangers for solar-powered gym cooling**  
*Scientific Reports, 2025 | 2025 | Cited: 2*
50. **Enhanced reduction of polyethylene glycol concentrations in the effluent of a full-scale MBBR processes**  
*Applied Water Science 15 (12), 317, 2025 | 2025*
51. **Techno-economic and environmental evaluations of a solar thermal-assisted chiller facility in hot desert climates**  
*Scientific Reports, 2025 | 2025 | Cited: 1*
52. **Effect of artificial recharge by pond on quality and quantity of groundwater aquifer in arid and semi-arid regions**  
*Discover Applied Sciences 7 (11), 1249, 2025 | 2025*
53. **Corrigendum to 'Evaluation of Hybrid MoS<sub>2</sub>-Ce<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub>/HfO<sub>2</sub> Nanostructures for Enhanced CO Evolution Rate and Efficient Tetracycline Degradation via Advanced Photocatalytic&nbsp;...**  
*Surfaces and Interfaces, 107850, 2025 | 2025*
54. **Evaluation of hybrid MoS<sub>2</sub>-Ce<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub>/HfO<sub>2</sub> nanostructures for enhanced CO evolution rate and efficient tetracycline degradation via advanced photocatalytic&nbsp;...**  
*SURFACES AND INTERFACES 74, 2025 | 2025*
55. **Optimization of the photocatalytic wastewater treatment process via a response surface methodology-central composite design strategy and CO<sub>2</sub> reduction using a novel Cs<sub>3</sub>Bi<sub>2</sub>I<sub>9</sub>&nbsp;...**  
*Journal of Water Process Engineering 78, 108686, 2025 | 2025 | Cited: 1*
56. **Multiplex sensing of chlorine species in water: challenges and future perspectives: a mini-review**  
*Microchemical Journal, 115491, 2025 | 2025 | Cited: 1*
57. **Projected the Impacts of Climate Change on the Unconfined Aquifer Region, Western Iraq, Using LARS-WG and CMIP6 Scenarios**  
*Water Conservation Science and Engineering 10 (2), 84, 2025 | 2025 | Cited: 1*
58. **Evaluation of the efficiency of Kerbala's rainwater drainage system in dealing with extreme rainfall events during the next decade**  
*AIP Conference Proceedings 3292 (1), 060037, 2025 | 2025*
59. **Green triiron tetraoxide@ Algae (Fe<sub>3</sub>O<sub>4</sub>@ Algae) nanoparticles for highly efficient removal of lead (Pb<sup>2+</sup>), cadmium (Cd<sup>2+</sup>), and aluminum (Al<sup>3+</sup>) from&nbsp;...**  
*Environmental Science and Pollution Research, 2025 | 2025*
60. **Modelling of the Fate and Emission of Carbon Disulfide in a Full-Scale Extended Aeration Process Using TOXCHEM Simulations**  
*Water and Environment Journal, 2025 | 2025*
61. **Synthesis and Bioactivity of Spinel Cadmium Ferrite Nano finger**  
*Warith Scientific Journal of Engineering and Technology 1 (1), 16-22, 2025 | 2025*
62. **The QTAIM and ELF approaches to chemical bonding in chalcogen-bridging tetra-manganese carbonyl clusters:[E<sub>2</sub>Mn<sub>4</sub>(CO)<sub>12</sub>]<sub>2</sub>-(E= S, se, Te)**  
*Computational and Theoretical Chemistry, 115528, 2025 | 2025 | Cited: 2*
63. **Metal-metal interactions in trinuclear ruthenium-osmium clusters with bridging ligands: a QTAIM analysis**  
*Structural Chemistry, 1-12, 2025 | 2025 | Cited: 1*
64. **Mechanical Properties of Sustainable Base Course Binder Incorporating GGBFS and Spent FCC Catalyst**  
*Civil Engineering Journal 11 (03), 2025 | 2025 | Cited: 5*
65. **Coordination engineering of transition metal doped in B<sub>2</sub>CN<sub>3</sub> electrocatalyst to enhance efficient carbon dioxide reduction reaction**  
*Sustainable Chemistry and Pharmacy 44, 101951, 2025 | 2025 | Cited: 11*
66. **Study on pressure-induced band gap modulation and physical properties of direct band gap Ca<sub>3</sub>NX<sub>3</sub> (X= Cl, Br) for optoelectronic and thermoelectric applications**  
*Surfaces and Interfaces 56, 105559, 2025 | 2025 | Cited: 35*

67. **Novel environmentally benign dual Z-scheme SrTiO<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub>/ZnO heterojunction for efficient H<sub>2</sub> evolution and polluted water treatment: Optimization, mechanism interpretations and&nbsp;...**  
*FlatChem* 50, 100841, 2025 | 2025 | Cited: 20
68. **Construction of a novel S-scheme CaIn<sub>2</sub>S<sub>4</sub>-ZnO/pine cone-derived biochar for enhanced visible-light-induced photocatalytic H<sub>2</sub>O<sub>2</sub> production and antibiotic degradation**  
*Journal of Water Process Engineering* 71, 107111, 2025 | 2025 | Cited: 22
69. **Thermal Assessment of Maxwell–Sutterby Fluid with Bio-Convection and Activation Energy Effects induced by Riga Plate via Levenberg–Marquardt Algorithm**  
*Results in Engineering*, 105819, 2025 | 2025 | Cited: 14
70. **Improving the thermal performance of flat-plate solar collectors for building applications through hybrid nanofluids and vortex-inducing geometries**  
*Case Studies in Thermal Engineering*, 106377, 2025 | 2025 | Cited: 12
71. **Prediction of heat transfer characteristics and energy efficiency of a PVT solar collector with corrugated-tube absorber using artificial neural network and group method data&nbsp;...**  
*International Communications in Heat and Mass Transfer* 157, 107829, 2024 | 2024 | Cited: 15
72. **Effect of climate change on the flooding of storm water networks under extreme rainfall events using SWMM simulations: a case study**  
*Modeling Earth Systems and Environment* 10 (3), 4129-4161, 2024 | 2024 | Cited: 13
73. **Insights into the pressure-dependent physical properties of cubic Ca<sub>3</sub>MF<sub>3</sub> (M= As and Sb): First-principles calculations**  
*Heliyon* 10 (19), 2024 | 2024 | Cited: 22
74. **Hybrid chitosan/HKUST-1 hydrogel with freezing and thawing modification as sustainable porous material for removal and selective separation of dye mixtures**  
*Journal of Environmental Chemical Engineering* 12 (5), 113696, 2024 | 2024 | Cited: 31
75. **Polypyrrole-coated zinc/nickel oxide nanocomposites as adsorbents for enhanced removal of Pb (II) in aqueous solution and wastewater: an isothermal, kinetic, and thermodynamic&nbsp;...**  
*Journal of Water Process Engineering* 64, 105589, 2024 | 2024 | Cited: 37
76. **Effect of climate change on wetland areas in west Iraq using satellite data and GIS techniques**  
*Civil Engineering Journal* 10 (9), 2966-2978, 2024 | 2024 | Cited: 34
77. **Projections of temperature and precipitation trends using CMhyd under CMIP6 scenarios: A case study of Iraq's Middle and West**  
*Atmospheric Research* 306, 107470, 2024 | 2024 | Cited: 39
78. **Strength and Durability Characteristics of Sustainable Pavement Base Course Stabilized with Cement Bypass Dust and Spent Fluid Catalytic Cracking Catalyst**  
*Infrastructures* 9 (12), 217, 2024 | 2024 | Cited: 7
79. **Simulation study of a practical approach to enhance cadmium removal via biological treatment by controlling the concentration of MLSS**  
*Scientific Reports* 14 (1), 1714, 2024 | 2024 | Cited: 17
80. **Simulation–Optimization Approach for Optimal Cut-Off Design Under the Hydraulic Structure**  
*Geotechnical and Geological Engineering* 42 (1), 465-478, 2024 | 2024 | Cited: 5
81. **Using TOXCHEM model for simulation the hydrogen sulfide behavior in a full-scale MBBR process**  
*Desalination and Water Treatment*, 100244, 2024 | 2024
82. **Forecasting changes in precipitation and temperatures of a regional watershed in Northern Iraq using LARS-WG model**  
*Open Engineering* 14 (1), 20220567, 2024 | 2024 | Cited: 12
83. **Seismic performance evaluation of concrete buttress dam (Dynamic linear analysis)**  
*Open Engineering* 14 (1), 20220566, 2024 | 2024
84. **An experimental and numerical study investigating sediment transport position in the bed of sewer pipes in Karbala**  
*Open Engineering* 14 (1), 20220505, 2024 | 2024 | Cited: 2
85. **Sediment accumulation in an 8 inch sewer pipe for a sample of various particles obtained from the streets of Karbala city, Iraq**  
*Open Engineering* 14 (1), 20240039, 2024 | 2024

86. **Author Correction: Continuous and funnel-gate configurations of a permeable reactive barrier for reclamation of groundwater laden with tetracycline: experimental and simulation&nbsp;...**  
*Scientific Reports 14, 26934, 2024 | 2024*
87. **Adsorbent made with inexpensive, local resources**  
*Open Engineering 14 (1), 20240038, 2024 | 2024 | Cited: 1*
88. **Visualizing sustainable rainwater harvesting: A case study of Karbala Province**  
*Open Engineering 14 (1), 20240009, 2024 | 2024 | Cited: 2*
89. **Evaluation of the characteristics of a separation zone at a 90° lateral intake junction predicting area dimensions using a gene expression programming technique**  
*AIP Conference Proceedings 3091 (1), 020046, 2024 | 2024*
90. **Open engineering: Effect of drain pipes on seepage and slope stability through a zoned earth dam**  
*de Gruyter, 2024 | 2024*
91. **Open engineering: Sediment accumulation in an 8 inch sewer pipe for a sample of various particles obtained from the streets of Karbala city, Iraq**  
*de Gruyter, 2024 | 2024*
92. **Open engineering: An experimental and numerical study investigating sediment transport position in the bed of sewer pipes in Karbala**  
*de Gruyter, 2024 | 2024*
93. **Open engineering: Visualizing sustainable rainwater harvesting: A case study of Karbala Province**  
*de Gruyter, 2024 | 2024*
94. **Open engineering: Seismic performance evaluation of concrete buttress dam (Dynamic linear analysis)**  
*de Gruyter, 2024 | 2024*
95. **Open engineering: Forecasting changes in precipitation and temperatures of a regional watershed in Northern Iraq using LARS-WG model**  
*de Gruyter, 2024 | 2024*
96. **Open engineering: Evaluation of the effluent concentrations of Karbala wastewater treatment plant using reliability analysis**  
*de Gruyter, 2024 | 2024*
97. **Open engineering: Adsorbent made with inexpensive, local resources**  
*de Gruyter, 2024 | 2024*
98. **The influence of drain pipe location and diameter on seepage through an earth dam**  
*Ain Shams Engineering Journal 15 (3), 102475, 2024 | 2024 | Cited: 17*
99. **A numerical study of the effect of graphene nanoparticle size on brownian displacement, thermophoresis, and thermal performance of graphene/water nanofluid by molecular&nbsp;...**  
*International Journal of Thermofluids 24, 100927, 2024 | 2024 | Cited: 8*
100. **Effect of drain pipes on seepage and slope stability through a zoned earth dam**  
*Open Engineering 14 (1), 20240040, 2024 | 2024 | Cited: 6*
101. **Continuous and funnel-gate configurations of a permeable reactive barrier for reclamation of groundwater laden with tetracycline: experimental and simulation approaches**  
*Scientific Reports 14 (1), 22907, 2024 | 2024 | Cited: 5*
102. **Using TOXCHEM model for simulation the hydrogen sulfide behavior in a full-scale MBBR process**  
*Desalination and Water Treatment 317, 100244, 2024 | 2024 | Cited: 3*
103. **Manganese Electrochemistry in a Deep Eutectic Solvent: The Effects of KBr**  
*ChemistrySelect 9 (39), e202401407, 2024 | 2024 | Cited: 1*
104. **A new approach for recycling, fabrication, and heat treatment of al base composites reinforced with rice husk ash particles**  
*International Communications in Heat and Mass Transfer 157, 107780, 2024 | 2024 | Cited: 2*
105. **Evaluation of the effluent concentrations of Karbala wastewater treatment plant using reliability analysis**  
*Open Engineering 14 (1), 20240031, 2024 | 2024 | Cited: 1*
106. **Evaluation of the effects of artificial recharge using reclaimed water on groundwater quality**  
*AIP Conference Proceedings 3091 (1), 020040, 2024 | 2024 | Cited: 1*

107. **Numerical investigation of the optimum location for a drainpipe through a zoned earth dam**  
*AIP Conference Proceedings* 3091 (1), 020044, 2024 | 2024 | Cited: 1
108. **Modeling the effects of sidestreams recycling on wastewater treatment plant performance operated by anaerobic-anoxic-oxic (A<sup>2</sup>/O) processes using GPS-X8 simulation**  
*Results in Engineering* 22, 102173, 2024 | 2024 | Cited: 5
109. **Numerical Investigation of the Local Scour for Tripod Pile Foundation.**  
*Mathematical Modelling of Engineering Problems* 11 (4), 2024 | 2024 | Cited: 5
110. **Removal of erythrosine B dye from wastewater using Ca<sub>2</sub>C and Ti<sub>2</sub>C MXenes: A theoretical study**  
*Journal of Molecular Liquids* 411, 125784, 2024 | 2024 | Cited: 11
111. **Artificial Recharge of an Unconfined Aquifer Using Treated Wastewater as a Climate Change Mitigation Strategy**  
*Civil Engineering Journal* | 2024
112. **Insights into the pressure-dependent physical properties of cubic Ca<sub>3</sub>MF<sub>3</sub> (M = As and Sb): First-principles calculations**  
*Heliyon* | 2024
113. **Modeling the effects of sidestreams recycling on wastewater treatment plant performance operated by anaerobic-anoxic-oxic (A<sup>2</sup>/O) processes using GPS-X8 simulation**  
*Results in Engineering* | 2024
114. **Polypyrrole-coated zinc/nickel oxide nanocomposites as adsorbents for enhanced removal of Pb(II) in aqueous solution and wastewater: An isothermal, kinetic, and thermodynamic study**  
*Journal of Water Process Engineering* | 2024
115. **Prediction of heat transfer characteristics and energy efficiency of a PVT solar collector with corrugated-tube absorber using artificial neural network and group method data handling models**  
*International Communications in Heat and Mass Transfer* | 2024
116. **Removal of erythrosine B dye from wastewater using Ca<sub>2</sub>C and Ti<sub>2</sub>C MXenes: A theoretical study**  
*Journal of Molecular Liquids* | 2024
117. **Optimum hydraulic design of cut-off under hydraulic structures using the simulation-optimization method**  
*Modeling Earth Systems and Environment* | 2023
118. **Preparation of coated MgFe layered double hydroxide nanoparticles on cement kiln dust and intercalated with sodium dodecyl sulfate as an intermediate layer for the adsorption of estrogen from water**  
*Chemosphere* | 2023
119. **Simulation-Optimization Approach for Optimal Cut-Off Design Under the Hydraulic Structure**  
*Geotechnical and Geological Engineering* | 2023
120. **Numerical investigation of the optimum angle for open channel junction**  
*Civil Engineering Journal* 9 (05), 1121-1131, 2023 | 2023 | Cited: 9
121. **Investigation of influence of drain pipe and cut-off on uplift pressure and exit gradient; comparison study**  
*4TH INTERNATIONAL SCIENTIFIC CONFERENCE OF ENGINEERING SCIENCES AND ADVANCES*..., 2023 | 2023 | Cited: 1
122. **Optimising design of the location and diameter of drain pipes under hydraulic structures using a numerical model**  
*5TH INTERNATIONAL CONFERENCE ON ENGINEERING SCIENCES—ICES21* 2631 (1), 020022, 2023 | 2023 | Cited: 3
123. **Overflow sanitary sewer systems during the rainy season: A case study in Al-Samawah city**  
*5TH INTERNATIONAL CONFERENCE ON ENGINEERING SCIENCES—ICES21* 2631 (1), 020012, 2023 | 2023 | Cited: 3
124. **Green Synthesis of Hybrid Iron Oxides/Graphene Immobilization on the Iron Slag for Reclamation Congo Red Dye-Water**  
*Water, Air, & Soil Pollution* 234 (12), 778, 2023 | 2023 | Cited: 12
125. **Trends, forecasting and adaptation strategies of climate change in the middle and west regions of Iraq**  
*SN Applied Sciences* 5 (12), 312, 2023 | 2023 | Cited: 46

126. **Preparation of coated MgFe layered double hydroxide nanoparticles on cement kiln dust and intercalated with sodium dodecyl sulfate as an intermediate layer for the adsorption&nbsp;...**  
*Chemosphere* 344, 140338, 2023 | 2023 | Cited: 6
127. **Case study of hydrogen sulfide release in the sulfate-rich sewage drop structure**  
*Journal of Water and Climate Change* 14 (10), 3713-3725, 2023 | 2023 | Cited: 13
128. **Investigation of influence of drain pipe and cut-off on uplift pressure and exit gradient; comparison study**  
*AIP Conference Proceedings* 2830 (1), 2023 | 2023
129. **Desalination of pigment industry wastewater by reverse osmosis using OPM-K membrane**  
*Case Studies in Chemical and Environmental Engineering*, 100401, 2023 | 2023 | Cited: 1
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