

2023/2024 SU research publications which contribute to SDGs

Goal 6: Clean water and sanitation

Au-based core-shell nanoparticles for wastewater treatment and hydrogen production:

An insight

Verma, R., Aljohani, K., Aljohani, B.S.E., ...Thakur, P.K., Pallavi, P.

Journal of Molecular Structure, 2025

Article • *Open access*

Sustainable treatment of oil produced water using novel methods – A review

Jabri, F.A., Muruganandam, L., Natarajan, R.

Journal of Hazardous Materials Advances, 2025

Article

TiO₂-embedded dual-layer mullite hollow fiber membranes for efficient removal of

Persistent organic pollutants from wastewater

Olabode Raji, Y., Othman, M.H.D., Chinedu Mamah, S., ...Kurniawan, T.A., Yinn Wong, K.

Separation and Purification Technology, 2025

Article

Biochemical, Molecular Characteristics, and Bioremediation Properties of Mn²⁺-

Resistant Thermophilic Bacillus Strains

Patil, A., Sharma, Y., Khandelwal, V., Natarajan, R., Arya, M.

Waste and Biomass Valorization, 2025

Article • *Open access*

High-Performance Photocatalytic Degradation—A ZnO Nanocomposite Co-Doped with

Gd: A Systematic Study

Alasmari, A., Alresheedi, N.M., Alzahrani, M.A., ...Ismail, A., Aboraia, A.M.

Catalysts, 2024

Review • *Open access*

Overview of Sustainable Water Treatment Using Microbial Fuel Cells and Microbial

Desalination Cells

Farahani, H., Haghighi, M., Behvand Usefi, M.M., Ghasemi, M.

Sustainability (Switzerland), 2024

Review

Remediation of tetracycline pollution using microplastics, green materials, membranes and sonocatalysts: a review

Sivanesan, J., Sivaprakash, B., Natarajan, R., ...Liew, R.K., Lam, S.S.

Environmental Chemistry Letters, 2024

Review • *Open access*

Advanced methods for treating gemfibrozil and carbamazepine in wastewater: a review

Sivanesan, J., Rameshwar, S.S., Sivaprakash, B., ...Osman, A.I., Al-Muhtaseb, A.H.

Environmental Chemistry Letters, 2024

Review

Revolutionizing wastewater treatment: Unveiling the efficacy of self-cleaning dual-layer membrane systems

Raji, Y.O., Othman, M.H.D., Raji, M.A., ...Ismail, N.J., A.F., I.F.B.

Journal of Environmental Chemical Engineering, 2024

Article

Modeling Monthly Evaporation in Different Climates Using ANN–COOT Hybrid Algorithm

Alempour Rajabi, F., Ahmadi, E., Ibrahim, O.R.A., Mohamed Al Maghawry, S., Aghamajidi, R.

Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2024

Article • Open access

Optimizing microbial fuel cells with multiple-objectives PSO and type-2 fuzzy neural networks

Reza Chalak Qazani, M.R., Ghasemi, M., Asadi, H.

Fuel, 2024

Article

Bioremediation of turquoise blue by Mangifera indica — particle swarm optimization and kinetic modeling

Deshannavar, U.B., Sivaprakash, B., Natarajan, R., ...Karanth, M., Naykar, T.

Biomass Conversion and Biorefinery, 2024

Article

Enhanced water production and improving solar water distillation efficiency of double-slope solar stills: Modeling and validation

Almajali, T.A.H., Ismail, F.B., Kazem, H.A., ...Al Shurafa, S.M., Al-Muhsen, N.F.

Thermal Science and Engineering Progress, 2024

Review

Metal oxide nanobiochar materials to remediate heavy metal and dye pollution: a review

Akash, S., Rameshwar, S.S., Natarajan, R., Manivasagan, R., Vo, D.V.N.

Environmental Chemistry Letters, 2024

Article

Forecasting of lake water level based on a hybrid model of innovative gunner algorithm

Mirzania, E., Roshni, T., Hasanpour Kashani, M., Bickici, B., Ibrahim, O.R.A.

Acta Geophysica, 2024

Article

Maximizing energy via solar-powered smart irrigation: An approach utilizing a single-axis solar tracking mechanism

Ismail, F.B., Rahmat, M.A.A., Kazem, H.A., Al-Obaidi, A.S.M., Ridwan, M.S.

Irrigation and Drainage, 2024

Article

Complex network analysis of groundwater level in Sina Basin, Maharashtra, India

Bharti, V., Roshni, T., Jha, M.K., Ghorbani, M.A., Ibrahim, O.R.A.

***Environment, Development and Sustainability*, 2024**

Article

Valorization of sugarcane bagasse cellulose to synthesize novel graphene oxide-based

composite for remediation of atrazine – Optimization studies

Balasubramani, K., Sarojini, G., Natesan, S., ...Yusuf, M., kamyab, H.R.

***Journal of Environmental Chemical Engineering*, 2024**

Article

Solving the fouling mechanisms in composite membranes for water purification: An

advance approach

Ezaier, Y., Hader, A., Latif, A., ...Natarajan, R., Ibrahim, H.H.

***Environmental Research*, 2024**

Review

Recent strategies for enhancing the performance and lifespan of low-cost ceramic

membranes in water filtration and treatment processes: A review

Omar, N.M.A., Othman, M.H.D., Tai, Z., ...Abdullah, H.B., Wong, K.Y.

***Journal of Water Process Engineering*, 2024**

Review

Biohythane as a sustainable fuel – A review on prospective synthesis based on feedstock

preprocessing, optimization approach and circular economy concept

Sivanesan, J., Vijayalakshmi, A., Sivaprakash, B., Natarajan, R.

***Process Safety and Environmental Protection*, 2024**

Review

Enhanced mitigation of acidic and basic dyes by ZnO based nano-photocatalysis:

current applications and future perspectives

Saif Al Essai, K.R., Moheyelden, R.E., Bosu, S., Natarajan, R., Manivasagan, R.

***Environmental Geochemistry and Health*, 2024**

Article

Nanocomposite ceramic membranes as novel tools for remediation of textile dye waste

water – A review of current applications, machine learning based modeling and future

perspectives

Solaiman, J.M., Natarajan, R., Yusuf, M., kamyab, H.R.

***Journal of Environmental Chemical Engineering*, 2024**

Review

Sustainable remediation of pesticide pollutants using covalent organic framework – A

review on material properties, synthesis methods and application

Sujatha, S., Natarajan, R., S, S., R, A., M, R.

***Environmental Research*, 2024**

Article

Comparative study of energy production and treatment of municipal and dairy wastewater via microbial fuel cell technology: process evaluation towards optimization
Mohammadi, M., Ghasemi, M., Sedighi, M.

Biomass Conversion and Biorefinery, 2024

Book Chapter

Implementation of Smart Irrigation Systems

Yousif, J.H., Al-Kindi, G.A.H., Kayed, A.K., Srivastava, D.K.

Smart Agritech: Robotics, AI, and Internet of Things (IoT) in Agriculture, 2024

Review

Exploring the Future of Solar Stills: Recent Breakthroughs in Performance

Enhancement

Almajali, T.A.H., Ismail, F.B., Gunnasegaran, P.A.L., Al Shurafa, S.M., Kazem, H.A.

Separation and Purification Reviews, 2024

Article

Biomass - metal oxide nano composite for the decontamination of phenol from polluted environment - parametric, kinetics and isotherm studies

Al-Ajmi, A.S.S., Bosu, S., Natarajan, R.

Environmental Research, 2024

Article

Biomass derived green carbon dots for sensing applications of effective detection of metallic contaminants in the environment

Bosu, S., Natarajan, R., Suresh, S., Raut, N.B.

Chemosphere, 2023

Article

Sustainable remediation of toxic congo red dye pollution using bio based carbon nanocomposite: Modelling and performance evaluation

Sarojini, G., Kannan, P., Balasubramani, K., Natarajan, R., Manivasagan, R.

Chemosphere, 2023

Article • Open access

Adsorptive removal of acid red 18 dye from aqueous solution using hexadecyl-trimethyl ammonium chloride modified nano-pumice

Kasraee, M., Dehghani, M.H., Hamidi, F., ...Natarajan, R., Solangi, N.H.

Scientific Reports, 2023

Review

Environmental Remediation of Agrochemicals and Dyes Using Clay Nanocomposites: Review on Operating Conditions, Performance Evaluation, and Machine Learning Applications

Bosu, S., Natarajan, R., Lam, S.S., Vasseghian, Y.

Reviews of Environmental Contamination and Toxicology, 2023

Article

Analysis and prediction of microbial fuel cell behaviour using MLP and SVR

Ghasemi, M., Reza Chalak Qazani, M.R., Lennon, C.W., Sedighi, M.

Journal of the Taiwan Institute of Chemical Engineers, 2023

Article

Hybrid COOT-ANN: a novel optimization algorithm for prediction of daily crop

reference evapotranspiration in Australia

Mirzania, E., Hasanpour Kashani, M., Golmohammadi, G., Ibrahim, O.R.A., Saroughi, M.

Theoretical and Applied Climatology, 2023

Review

Remediation of tetracycline pollution using MXene and nano-zero-valent iron materials:

a review

Rameshwar, S.S., Sivaprakash, B., Natarajan, R., Mohamed, B.A., Vo, D.V.N.

Environmental Chemistry Letters, 2023

Article

Performance enhancement of solar distillation system works in harsh weather

conditions: An experimental study

Chaichan, M.T., Kazem, H.A., Al-Waeli, A.H., ...Omara, Z.M., Sopian, K.B.

Thermal Science and Engineering Progress, 2023

Article

Emerging waste-to-wealth applications of fly ash for environmental remediation: A

review

Nguyen, H.H.T., Nguyen, H.T.T., Ahmed, S.F., ...Al-Gheethi, A.A.S., Vo, D.V.N.

Environmental Research, 2023

Article • Open access

Effects of Metal Waste Strips on Strength Characteristics of Road Base Material

Ibrahim, O.R.A., Sinani, M.A., Sinani, I.A., ...Al Badi, A., Maghawry, S.A.

Sustainability (Switzerland), 2023

Review

Environmental sustainability and ions removal through electrodialysis desalination:

Operating conditions and process parameters

Sedighi, M., Behvand Usefi, M.M., A.F., I.F.B., Ghasemi, M.

Desalination, 2023

Article

Hydrogen based membrane bioreactor for environmental remediation of pollutants-

Review on applications and mechanism

Bosu, S., Natarajan, R., Manivasagan, R., Raut, N.B., Vasseghian, Y.

International Journal of Hydrogen Energy, 2023

Article

Biotransformation as a tool for remediation of polycyclic aromatic hydrocarbons from polluted environment - review on toxicity and treatment technologies

Akash, S., Sivaprakash, B., Natarajan, R., Selvankumar, T.

***Environmental Pollution*, 2023**

Review

Advanced techniques for enhancing solar distiller productivity: a review

Chaichan, M.T., Kazem, H.A., Al-Waeli, A.H., ...Fayad, M.A., Sopian, K.B.

***Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 2023**

Article

Techniques for remediation of pharmaceutical pollutants using metal organic

framework - Review on toxicology, applications, and mechanism

Sivaprakash, B., Natarajan, R., Singaramohan, D., Ramkumar, V., Elakiya, B.T.

***Chemosphere*, 2022**

Review • *Open access*

Challenges and Construction Applications of Solid Waste Management in Middle East

Arab Countries

Ibrahim, O.R.A., Al-Kindi, G.A.H., Qureshi, M.U., Maghawry, S.A.

***Processes*, 2022**

Article

Microbial electro deionization for waste water treatment – A critical review on methods,

applications and mechanism

Akash, S., Sivaprakash, B., Natarajan, R.

***Environmental Research*, 2022**

Article

Remediation of pharmaceutical pollutants using graphene-based materials - A review on

operating conditions, mechanism and toxicology

Akash, S., Sivaprakash, B., Natarajan, R., Muthusamy, G., Elakiya, B.T.

***Chemosphere*, 2022**

Article • *Open access*

Agricultural Irrigation Control using Sensor-enabled Architecture

Abdalgader, K., Yousif, J.H.

***KSII Transactions on Internet and Information Systems*, 2022**

Article

Enhanced remediation of lead (II) and cadmium (II) ions from aqueous media using

porous magnetic nanocomposites - A comprehensive review on applications and

mechanism

Bosu, S., Natarajan, R., Manivasagan, R.

***Environmental Research*, 2022**

Review

A comprehensive review on membranes in microbial desalination cells; processes,

utilization, and challenges

Ghasemi, M., Sedighi, M., Usefi, M.M.B.

***International Journal of Energy Research*, 2022**

Article

Applications of submerged and staged membrane systems for pollutant removal from effluents and mechanism studies – a review

Sivaprakash, B., Natarajan, R., Reshmi, A., Annadurai, A., Varjani, S.J.

***Chemosphere*, 2022**

Article

Waste heat recovery at low temperature from heat pumps, power cycles and integrated systems – Review on system performance and environmental perspectives

Nandhini, R., Sivaprakash, B., Natarajan, R.

***Sustainable Energy Technologies and Assessments*, 2022**

Article

Potential risks and approaches to reduce the toxicity of disinfection by-product – A review

Muthu Kumara Pandian, A., Rajamehala, M., Singh, M.V.P., Sarojini, G., Natarajan, R.

***Science of the Total Environment*, 2022**

Article

Remediation of emerging metal pollutants using environment friendly biochar- Review on applications and mechanism

Berslin, D., Reshmi, A., Sivaprakash, B., Natarajan, R., P, S.K.

***Chemosphere*, 2022**

Article

Performance evaluation of polymer-marine biomass based bionanocomposite for the adsorptive removal of malachite green from synthetic wastewater

Sarojini, G., Venkatesh Babu, S., Natarajan, R., Manivasagan, R.

***Environmental Research*, 2022**

Article

Statistical modeling and optimization of tannery wastewater treatment in a fluidized bed bioreactor with low density biomass support

Gopalakrishnan, B., Muthukumarapandian, A., Sujatha, S., ...Natarajan, R., Manivasagan, R.

***Modeling Earth Systems and Environment*, 2022**

Review

A review on biochar production from different biomass wastes by recent carbonization technologies and its sustainable applications

Seow, Y.X., Tan, Y.H., Mubarak, N.M., ...Ibrahim, M.L., Ghasemi, M.

***Journal of Environmental Chemical Engineering*, 2022**

Article • Open access

Experimental and Mathematical Models for Real-Time Monitoring and Auto Watering Using IoT Architecture

Yousif, J.H., Abdalgader, K.

***Computers*, 2022**

Article

Application of a polymer-magnetic-algae based nano-composite for the removal of methylene blue – Characterization, parametric and kinetic studies

Sarojini, G., Babu, S.V., Natarajan, R., Manivasagan, R., Pugazhendhi, A.

Environmental Pollution, 2022

Article

Separation of manganese from water using hybrid nanocomposite to control water pollution: kinetic and equilibrium modelling

Natarajan, R., P, S.K., Al Qasmi, F., Manivasagan, R.

International Journal of Environmental Analytical Chemistry, 2022

Article • Open access

Petroleum refinery wastewater treatment using rgo-biochar composite parametric studies and neural network modeling

Natarajan, R., Al Shibli, F., Manivasagan, R.

Desalination and Water Treatment, 2021

Article • Open access

Recovery of zinc from electroplating wastewater using green emulsion liquid membrane

Manivasagan, R., Natarajan, R., Sujatha, S.

Water Supply, 2021

Article

Sustainable removal of cadmium from contaminated water using green alga –

Optimization, characterization and modeling studies

Jayakumar, V., Govindaradjane, S., P, S.K., Natarajan, R., Manivasagan, R.

Environmental Research, 2021

Article • Open access

Carbon nanotube/pt cathode nanocomposite electrode in microbial fuel cells for wastewater treatment and bioenergy production

Ghasemi, M., Sedighi, M., Tan, Y.H.

Sustainability (Switzerland), 2021

Article

Green synthesis of bio-functionalized nano-particles for the application of copper removal – characterization and modeling studies

Muthu Kumara Pandian, A., Gopalakrishnan, B., Manivasagan, R., Natarajan, R., Karthikeyan, C.

Environmental Research, 2021

Article • Open access

Treatment of methanol industry effluent using algal biomass, Gelidium omanense-kinetic modeling

Natarajan, R., P, S.K., Manivasagan, R., Qasmi, F.A.

Chemical Engineering Journal Advances, 2021

Article

Microbial fuel cell for oilfield produced water treatment and reuse: Modelling and process optimization

Mohammadi, M., Sedighi, M., Natarajan, R., Hassan, S.H., Ghasemi, M.

Korean Journal of Chemical Engineering, 2021

Article • *Open access*

Effect of operating parameters on dye wastewater treatment using prosopis cineraria and kinetic modeling

Natarajan, R., Manivasagan, R.

Environmental Engineering Research, 2020

Goal 7: Affordable and clean energy

Precision biochar yield forecasting employing random forest and XGBoost with Taylor diagram visualization

Uppalapati, S., Paramasivam, P., Kilari, N., ...Dabelo, L.H., Gupta, R.

***Scientific Reports*, 2025**

Article • *Open access*

Dynamic energy cost prediction for industrial and commercial buildings using advanced machine learning and multi-pricing models

Waqas Khan, Q.W., Khan, A.N., Misbah, B., Ahmad, R., Kim, D.

***Journal of Building Engineering*, 2025**

Article • *Open access*

The resilience of green bonds to oil shocks during extreme events

Rehman, M.U., Nautiyal, N., Zeitun, R.M., Vo, X.V., Ghardallou, W.

***Journal of Environmental Management*, 2025**

Article

INTERNET OF THINGS FOR MONITORING AND OPTIMISATION OF STAND-ALONE SYSTEMS IN RURAL AREA: AN EXPERIMENTAL CASE

Ismail, F.B., Azahar, N.A.H., Dihrab, S.S., Al-Bazi, A., Kazem, H.A.

***Journal of Engineering Science and Technology*, 2025**

Article • *Open access*

Addressing fabrication challenges in perovskite-silicon tandem solar cells with advanced simulation techniques

Kumar, R., Kanjariya, P.V., Abu-jrai, A.M., ...Shah, S.K., Khairandish, M.I.

***Materials for Renewable and Sustainable Energy*, 2025**

Erratum

RETRACTED: Implications of a smart grid-integrated renewable distributed generation capacity expansion strategy: The case of Iraq (Renewable Energy (2024) 221,

(S0960148123016683), (10.1016/j.renene.2023.119753))

Hassan, Q., Khadom, A.A., Algburi, S., ...Salman, H.M., Jaszczur, M.

***Renewable Energy*, 2025**

Article • *Open access*

A novel machine learning approach for numerical simulation on the hybrid nanofluid flow past a converging/diverging channel: Properties of tantalum and alumina nanoparticles

Shilpa, B., Singh Chohan, J.S., Nagappan, B.B., ...Abdullaeva, B.S., Khan, M.I.

***Partial Differential Equations in Applied Mathematics*, 2025**

Article • *Open access*

Consensus-Driven Hyperparameter Optimization for Accelerated Model Convergence in Decentralized Federated Learning

Khan, A.N., Waqas Khan, Q.W., Rizwan, A., Ahmad, R., Kim, D.
Internet of Things (The Netherlands), 2025
Review

Recent Developments in Catalytic CO₂-to-Ethanol Conversion Technologies
Ahmed, A.T., Sekac, T., Altalbawy, F.M., ...Abosaoda, M.K., Abbas, J.M.
ChemistrySelect, 2025
Article

Experimental study of photovoltaic-thermoelectric systems using thermal interface materials and natural cooling
Al Shurafa, S.M., Ismail, F.B., Kazem, H.A., Almajali, T.A.H., Ee Sann, T.
Applied Thermal Engineering, 2025
Article

BackFillMe: An Energy and Performance Efficient Virtual Machine Scheduler for IaaS Datacenters
Zakarya, M., Gillam, L., Qazani, M.R.C., ...Salah, K.H., Rana, O.F.
IEEE Transactions on Services Computing, 2025
Review • Open access

Dust mitigation methods and multi-criteria decision-making cleaning strategies for photovoltaic systems: Advances, challenges, and future directions
Gandomzadeh, M., Yaghoubi, A.A., Hoorsun, A., ...Gavagsaz-Ghoachani, R., Kazem, H.A.
Energy Strategy Reviews, 2025
Article • Open access

Optimal nanofluid selection for photovoltaic/thermal (PV/T) systems in adverse climatic conditions
Chaichan, M.T., Kazem, H.A., Mahdi, M.T., ...Khadom, A.A., Sopian, K.B.
Case Studies in Thermal Engineering, 2025
Article

An analytical solution of MHD non-Newtonian fluid flow over a stretching surface with mixed convection and porous media
Rekha, M.B., Raghunatha, K.R., K, V., Kedia, A., Singh Chohan, J.S.
Multiscale and Multidisciplinary Modeling, Experiments and Design, 2025
Article • Open access

A fuzzy cloud theory-based stochastic model for multi-carrier energy hubs in grid-connected and islanded operations
Quteishat, A.M., Younis, M.A.A., Safari, A., Jahangiri, A.
Electrical Engineering, 2025
Article

Resource-efficiency actions and financial performance: Exploring the moderating role of production cost
Ahmad, M.I., Naseem, M.A., Battisti, E., Rehman, R.U., Giovando, G.
Business Ethics, the Environment and Responsibility, 2025

Article

Double Skin Bio-thermal Insulation with Radiation Reflector Cool Roof to Enhance Energy Efficiency and Indoor Comfort Conditions in Extreme Climates

Kumar, V.V.

International Journal of Renewable Energy Research, 2024

Review • *Open access*

Utilizing UAVs in Wireless Networks: Advantages, Challenges, Objectives, and Solution Methods

Sobouti, M.J., Mohajerzadeh, A.H., Adarbah, H.Y., Rahimi, Z., Ahmadi, H.

Vehicles, 2024

Review • *Open access*

Overview of Sustainable Water Treatment Using Microbial Fuel Cells and Microbial Desalination Cells

Farahani, H., Haghighi, M., Behvand Usefi, M.M., Ghasemi, M.

Sustainability (Switzerland), 2024

Article • *Open access*

Evaluation of photovoltaic thermal system performance with different nanoparticle sizes via energy, exergy, and irreversibility analysis

Chaichan, M.T., Kazem, H.A., Abd, H.S., Al-Waeli, A.H., Sopain, K.

Case Studies in Thermal Engineering, 2024

Review

Extraction strategies for lignin, cellulose, and hemicellulose to obtain valuable products from biomass

Wang, L., Li, G., Chen, X., ...Peng, W.X., Li, H.

Advanced Composites and Hybrid Materials, 2024

Review • *Open access*

Energy enhancement of building-integrated photovoltaic/thermal systems: A systematic review

Kazem, H.A., Chaichan, M.T., Al-Waeli, A.H., ...Alnaser, N.W., Alnaser, W.E.

Solar Compass, 2024

Article • *Open access*

Gradient-based optimization for parameter identification of lithium-ion battery model for electric vehicles

Almousa, M.T., Gomaa, M.R., Ghasemi, M., Louzazni, M.

Results in Engineering, 2024

Article

The Effect of Various Wedge Flap Configurations on the Performance of Wind Turbine Airfoil

Abdalkarem, A.A.M., Fazlizan, A., Muzammil, W.K., ...Wong, K., Kazem, H.A.

Iranian Journal of Science and Technology - Transactions of Mechanical Engineering, 2024

Review • *Open access*

Advancements in biohydrogen production - a comprehensive review of technologies, lifecycle analysis, and future scope

Sanghvi, A.H., Manjoo, A., Rajput, P., ...Natarajan, R., Abrar, I.

RSC Advances, 2024

Conference Paper • *Open access*

A review on the effects of nano-additives in alternative fuel for CI engines, on performance and emission characteristics

Tamilselvan, S., Prakash, N.B., Boopathy, S., ...Singh, R., Kumar, R.

E3S Web of Conferences, 2024

Conference Paper • *Open access*

Environmental Impact Assessment of Biofuel Production: A Life Cycle Analysis of Key Indicators and Mitigation Strategies

Usanova, K.I., Siri, D., Rao, P.K., ...Sharma, P., Kumar, R.

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Article • *Open access*

A comprehensive review of vibration-based analysis for wind turbine condition monitoring

Al-Hinai, A.H., Varaprasad, K.C., Kumar, V.V.

Mechanical Engineering for Society and Industry, 2024

Review

Recent advancements in solar photovoltaic tracking systems: An in-depth review of technologies, performance metrics, and future trends

Kazem, H.A., Chaichan, M.T., Al-Waeli, A.H., Sopian, K.B.

Solar Energy, 2024

Article

Environmental pollution, innovation, and financial development: an empirical investigation in selected industrialized countries using the panel ARDL approach

Hussain, M., Rehman, R.U., Bashir, U.

Environment, Development and Sustainability, 2024

Article • *Open access*

Modeling and optimization of a photovoltaic cell system with battery storage for supply energy requirement

Majid, S.H., Singh Chohan, J.S., Nouby, G.M., ...Alhadrawi, M., Shamel, A.

AIP Advances, 2024

Article

Performance enhancement of photovoltaic/thermal collector semicircle absorber tubes using nanofluid and NPCM

Maseer, M.M., Ismail, F.B., Kazem, H.A., ...Al-Gburi, K.A.H., Chaichan, M.T.

Renewable Energy, 2024

Article

BP-biphenylene monolayers: A promising anode material for high-performance magnesium-ion batteries

Zainul, R., Basem, A.A., Nemah, A.K., ...Chahar, M., Elmasry, Y.A.

Inorganic Chemistry Communications, 2024

Review

Sustainable treatment of landfill leachate: a review on methods

al-Balushi, F., Ibrahim, O.R.A., Natarajan, R.

International Journal of Environmental Science and Technology, 2024

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Optimizing microbial fuel cells with multiple-objectives PSO and type-2 fuzzy neural networks

Reza Chalak Qazani, M.R., Ghasemi, M., Asadi, H.

Fuel, 2024

Article • Open access

Advancing Sustainable Development through the lens of Energy Efficiency: A

Systematic Literature Review

Aktar, M.A., Ali Dhahi, A.A.K., Abdullahi, U.

International Journal of Energy Economics and Policy, 2024

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Climate Change Mitigation Through Innovative Solar-Powered Car Ventilation System

Design and Evaluation for the Malaysian Context

Ismail, F.B., Kazem, H.A., Suhailie, M.A.B., Chaichan, M.T.

Evergreen, 2024

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Determinants and Outcomes of Green Technology Innovation Adoption among Third-

Party Logistics Firms in China: A SEM-ANN Analysis

Liu, S., Ramayah, T., Hati, S.R.H.

Systems, 2024

Article • Open access

Experimental investigation of performance, emission, and combustion characteristics of a diesel engine using blends of waste cooking oil-ethanol biodiesel with MWCNT

nanoparticles

Sonachalam, M., Manieniyam, V., SenthilKumar, R., ...Khan, T.M., Almakayeel, N.M.

Case Studies in Thermal Engineering, 2024

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Battery thermal management system by employing different phase change materials with SWCNT nanoparticles to obtain better battery cooling performance

Ren, J., Rasheed, R.H., Bagheritabar, M., ...Salahshour, S., Toghraie, D.

Case Studies in Thermal Engineering, 2024

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Performance evaluation of solar photovoltaic/thermal system performance: An experimental and artificial neural network approach

Kazem, H.A., Chaichan, M.T., Abd, H.S., ...Mohamed Abdelaziz, I.I., Khadom, A.A.

Case Studies in Thermal Engineering, 2024

Article

Performance Analysis of a Proposed Hybrid Energy Generation and Green Hydrogen Production System for Al Mazunah in Oman

Al-Busaidi, A.S., Hinai, M.A.A., Hinai, A.H.A., ...Kazem, H.A., Sabareesaan, K.J.

International Journal of Engineering Trends and Technology, 2024

Article • Open access

Employing Artificial Intelligence for Enhanced Microbial Fuel Cell Performance through Wolf Vitamin Solution Optimization

Farahani, H., Ghasemi, M., Sedighi, M., Raut, N.B.

Sustainability (Switzerland), 2024

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Enhanced water production and improving solar water distillation efficiency of double-slope solar stills: Modeling and validation

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