Muhammad Zeeshan Ali Khan

Associate Professor

Institute of Environmental Sciences & Engineering

Email: mzalikhan@iese.nust.edu.pk

Contact: 519085435

LinkedIn:



About

Dr. Muhammad Zeeshan Ali Khan is working as Associate Professor in the Institute of Environmental Sciences & Engineering. Dr. Muhammad Zeeshan Ali Khan has a PhD in Air Pollution. Dr. Muhammad Zeeshan Ali Khan has published 51 research articles & conference papers having a citation count of 1498, carried out 2 projects and filed 1 intellectual property.

Qualifications

PhD in Air Pollution Asian Institute of Technology , Thailand M.E in Air Pollution Asian Institute of Technology , Thailand	2009 - 2013
	2007 - 2009
B.Sc (Hon) in Chemical Engineering N.W.F.P University of Engineering & Technology Peshawar , Pakistan	2000 - 2005
Experience	
Associate Professor Institute of Environmental Sciences & Engineering	2020- Present
Assistant Professor Institute of Environmental Sciences & Engineering	2014 - 2020
Assistant Professor Institute of Environmental Sciences & Engineering	2014 - 2014
Associate Professor NUST , H12 Islamabad, Pakistan	2020 - 2022
Assistant Professor National University of Science and Technology (NUST), Pakistan , lese, Scee, Nust, H-12 Campus	2014 - 2020
Apprentice Engineer Fauji fertilizers, Pakistan , Goth Machi, Sadiq Abad, Pakistan	2006 - 2007
Awards	
SCEE Best researcher 2019 Best researcher Award 2019 for SCEE	2020
HEC Overseas MS leading to PhD Scholarship	2007

Research Projects

National Projects Satellite remote sensing of total PM and selected PM components in Islamabad, Pakistan 2015 Funding Agency: COMSTECH TWAS Amount: PKR 1,440,000.00 Status: Completed Source apportionment of ambient particulate matter in central Pakistan 2019 Funding Agency: HEC Amount: PKR 11,085,000.00 Status: Completed **International Projects Research Articles** Energy potential assessment and geospatial site suitability analysis for crop residue-based power 2024 plants in Pakistan Salsabeel Fatima Muhammad Zeeshan Ali Khan Sustainable Production and Consumption, Volume:45, Page:488-508 Impact Factor: 12.1 | Quartile: 1 | Citations: 4 DOI: 10.1016/j.spc.2024.01.023 2024 Solar energy resource mapping, site suitability and techno-economic feasibility analysis for utility scale photovoltaic power plants in Afghanistan Javeedullah Hamad Momina Ahmad Muhammad Zeeshan Ali Khan Energy Conversion and Management, Volume 303, Article Number: 118188 Impact Factor: 10.4 | Quartile: 1 | Citations: 19 DOI: 10.1016/j.enconman.2024.118188 Performance comparison of a photosynthetic and mechanically aerated microbial fuel cell for 2023 wastewater treatment and bioenergy generation using different anolytes Zia Ullah Waqas Qamar Zaman Zeshan Sheikh Muhammad Zeeshan Ali Khan Waheed Miran Jiansheng Li Muhammad Abdul Nasir Khan Shanza Shabbir Journal of Water Process Engineering, Volume 56, Article Number 104358 Impact Factor: 7.0 | Quartile: 1 | Citations: 6 DOI: 10.1016/j.jwpe.2023.104358 2023 An integrated Geographic Information System and Analytical Hierarchy process based approach for site suitability analysis of on-grid hybrid concentrated solar-biomass powerplant Huma Naeem Abbasi Muhammad Zeeshan Ali Khan Renewable and Sustainable Energy Reviews, Volume:187, Article Number: 113786 Impact Factor: 15.9 | Quartile: 1 | Citations: 9 DOI: 10.1016/j.rser.2023.113786 2023 A comparative techno-economic analysis of combined oil and power production from pyrolysis and co-pyrolysis plants utilizing rice straw and scrap rubber tires Shoaib Raza Khan Muhammad Zeeshan Ali Khan Salsabeel Fatima Daniel Ciolkosz Ioanna Dimitriou Hongyue Jin Fuel. Volume 348. Article Number 128639 Impact Factor: 8.035 | Quartile: 1 | Citations: 18 DOI: doi.org/10.1016/j.fuel.2023.128639 Life cycle multi-objective (geospatial, techno-economic, and environmental) feasibility and potential 2023 assessment of utility scale photovoltaic power plants Momina Ahmad Muhammad Zeeshan Ali Khan Junaid Aziz Khan Energy Conversion and Management, Volume 291, Article Number 117260 Impact Factor: 10.4 | Quartile: 1 | Citations: 27 DOI: 10.1016/j.enconman.2023.117260 Comparative analysis of indoor air quality in offices with different ventilation mechanisms and 2023 simulation of ventilation process utilizing system dynamics tool Ayesha Asif Muhammad Zeeshan Ali Khan Journal of Building Engineering, Volume 72, Article Number 106687

Impact Factor: 7.144 | Quartile: 1 | Citations: 14 **DOI:** https://doi.org/10.1016/j.jobe.2023.106687

Synthesis and two-step KOH based activation of porous biochar of wheat straw and waste tire for adsorptive exclusion of chromium (VI) from aqueous solution; thermodynamic and regeneration study Usama Jamil Muhammad Zeeshan Ali Khan Shoaib Raza Khan Sara Saeed Journal of Water Process Engineering, Volume 53, Article Number 103892 Impact Factor: 7.0 Quartile: 1 Citations: 22 DOI: 10.1016/j.jwpe.2023.103892	2023
Simplistic Comparative Analytical Methodology for Accuracy Determination of In-Cylinder Convective Heat Transfer Coefficient Models of Diesel Engine Operating with Water Injection using Experimental Pressure Signals Asad Asghar Janjua Sami Ur Rahman Shah Emad Ud Din Jawad Aslam Muhammad Zeeshan Ali Khan Xavier Tauzia Arabian Journal for Science and Engineering, Pages 1-14 Impact Factor: 2.807 Quartile: 2 Citations: 2	2023
DOI: https://doi.org/10.1007/s13369-023-07627-w	
Multi-objective optimization of concentrated solar power plants from an energy-water-environment nexus perspective under distinct climatic conditions – Part B: Environ-economic analysis Momina Ahmad Muhammad Zeeshan Ali Khan Journal of Cleaner Production, Volume 385, Article Number 135689 Impact Factor: 11.072 Quartile: 1 Citations: 28 DOI: https://doi.org/10.1016/j.jclepro.2022.135689	2023
Investigating the gender differences in indoor thermal comfort perception for summer and winter seasons and comparison of comfort temperature prediction methods Ayesha Asif Muhammad Zeeshan Ali Khan Shoaib Raza Khan Nabia Farrukh Sohail Journal of Thermal Biology, Volume 110, Article Number 103357 Impact Factor: 3.189 Quartile: 1 Citations: 29 DOI: doi.org/10.1016/j.jtherbio.2022.103357	2022
Application of low-cost natural zeolite catalyst to enhance monoaromatics yield in co-pyrolysis of wheat straw and waste tire Absar Ahamed Shoaib Raza Khan Muhammad Zeeshan Ali Khan Journal of the Energy Institute, Volume 105, Pages 367-375 Impact Factor: 6.470 Quartile: 2 Citations: 8 DOI: https://doi.org/10.1016/j.joei.2022.10.014	2022
Multi-objective optimization of concentrated solar power plants from an energy-water-environment nexus perspective under distinct climatic conditions – Part A: Techno-economic analysis Momina Ahmad Muhammad Zeeshan Ali Khan Journal of Cleaner Production, Volume 375, Article Number 134099 Impact Factor: 11.1 Quartile: 1 Citations: 18 DOI: doi.org/10.1016/j.jclepro.2022.134099	2022
A techno-economic study to evaluate the impacts of feedstock ratio on commercial scale co-pyrolysis plants of biomass and waste tire Shoaib Raza Khan Muhammad Zeeshan Ali Khan Daniel Ciolkosz Juliana Vasco-Correa Journal of Analytical and Applied Pyrolysis, Volume 17, Article Number 105699 Impact Factor: 6.437 Quartile: 1 Citations: 20 DOI: doi.org/10.1016/j.jaap.2022.105699	2022
Observed and predicted precipitation variability across Pakistan with special focus on winter and premonsoon precipitation Fasiha Safdar Muhammad Fahim Khokhar Fatimah Mehmood Muhammad Zeeshan Ali Khan Muhammad Arshad Environmental Science and Pollution Research, Pages 1-21 Impact Factor: 5.8 Quartile: 1 Citations: 16 DOI: https://doi.org/10.1007/s11356-022-22502-1	2022
Operation of microalgal horizontal twin layer system for treatment of real wastewater and production of lipids Sahar Saleem Zeshan Rashid Iftikhar Muhammad Arshad Muhammad Zeeshan Ali Khan Muhammad Hassan Journal of Water Process Engineering, Volume 48, Article Number 102932 Impact Factor: 7.340 Quartile: 1 Citations: 7 DOI: 10.1016/j.jwpe.2022.102932	2022

2021

Ahmad Hassan Muhammad Zeeshan Ali Khan Muhammad Faraz Bhatti Atmospheric Pollution Research , Volume 12, Issue 8, Article Number 101136

Muhammad Zeeshan Ali Khan Mika Sillanpaa Bilal Asif Sidra Iftekhar

Promoted three-way catalytic activity of the Co3O4/TiO2 catalyst by doping of CeO2 under real engine

Impact Factor: 4.352 | Quartile: 2 | Citations: 33 DOI: https://doi.org/10.1016/j.apr.2021.101136

operating conditions

Impact Factor: 4.831 Quartile: 2 Citations: 6 DOI: doi.org/10.1016/j.apr.2021.101088	
A comprehensive study on upgradation of pyrolysis products through co-feeding of waste tire into rice straw under broad range of co-feed ratios in a bench-scale fixed bed reactor Shoaib Raza Khan Muhammad Faheem Khokhar Zeshan Muhammad Zeeshan Iftikhar Ahmad Biomass Conversion and Biorefinery, Pages 1-15 Impact Factor: 4.987 Quartile: 1 Citations: 18 DOI: doi.org/10.1007/s13399-021-01434-9	2021
Trends of Aerosol Optical Thickness Using VIIRS S-NPP During Fog Episodes in Pakistan and India Muhammad Umar Salman Atif Mark L. Hildebrandt Ali Tahir Muhammad Azmat Muhammad Zeeshan Ali Khan Atmosphere, Volume 12(2), Article Number 242 Impact Factor: 3.110 Quartile: 3 Citations: 2 DOI: https://doi.org/10.3390/atmos12020242	2021
Effect of structural promoters on calcium based sorbents from waste derived sources Azra Nawar Majid Ali Mariam Mahmood Mustafa Anwar Muhammad Zeeshan Ali Khan Materials Today Communications, Volume 24, Article No. 101075 Impact Factor: 3.383 Quartile: 2 Citations: 12 DOI: 10.1016/j.mtcomm.2020.101075	2020
Indoor temperature, relative humidity and CO2 monitoring and air exchange rates simulation utilizing system dynamics tools for naturally ventilated classrooms Ayesha Asif Muhammad Zeeshan Ali Khan Building and Environment, Volume 180, Article Number 106980 Impact Factor: 6.456 Quartile: 1 Citations: 43 DOI: https://doi.org/10.1016/j.buildenv.2020.106980	2020
Exploring the suitability of MERRA-2 reanalysis data for wind energy estimation, analysis of wind characteristics and energy potential assessment for selected sites in Pakistan Muhammad Zeeshan Ali Khan R. Rabbani Renewable Energy, Volume 154, Article Number 1240e1251 Impact Factor: 8.001 Quartile: 1 Citations: 46 DOI: https://doi.org/10.1016/j.renene.2020.03.100	2020
Thermal Comfort and Ventilation Conditions in Healthcare Facilities - Part 1: An Assessment of Indoor Environmental Quality (IEQ) Mawara Khan Muhammad Jamaluddin Thaheem Musfira Khan Ahsen Maqsoom Muhammad Zeeshan Ali Khan Environmental Engineering and Management Journal, Volume 19, No. 6, Pages 917-933 Impact Factor: 0.916 Quartile: 4 DOI: http://www.eemj.icpm.tuiasi.ro/pdfs/vol19/no6/2_289_Khan_19.pdf	2020
Enhancement of hydrocarbons production through co-pyrolysis of acid-treated biomass and waste tire in a fixed bed reactor Shoaib Raza Khan Muhammad Zeeshan Ali Khan Ahsan Masood Waste Management, Volume 106, Pages 21-31 Impact Factor: 7.145 Quartile: 1 Citations: 61 DOI: https://doi.org/10.1016/j.wasman.2020.03.010	2020
Investigating use of metal-modified HZSM-5 catalyst to upgrade liquid yield in co-pyrolysis of wheat straw and polystyrene Madiha Razzaq Muhammad Zeeshan Ali Khan Sara Qaisar Hera Iftikhar Bushra Muneer Fuel , Volume 257, Article Number 116119 Impact Factor: 5.578 Quartile: 1 Citations: 100 DOI: 10.1016/j.fuel.2019.116119	2019
Influence of in-situ and ex-situ HZSM-5 catalyst on co-pyrolysis of corn stalk and polystyrene with a focus on liquid yield and quality Bushra Muneer Sara Qaisar Madiha Razzaq Hera Iftikhar Muhammad Zeeshan Ali Khan Journal of Cleaner Production, Volume 237, Article Number UNSP 117762	2019

Atmospheric Pollution Research, Volume 12, Issue 7, Article Number 101088

Impact Factor: $7.246 \mid$ Quartile: $1 \mid$ Citations: 98

DOI: 10.1016/j.jclepro.2019.117762

Ayesha Asif Muhammad Zeeshan Ali Khan Muhammad Jahanzaib

Building and Environment, Volume 133, Pages 83-90 Impact Factor: 4.820 | Quartile: 1 | Citations: 96

Doi: 10.1010/j.buildenv.2016.01.042	
Influence of waste tire addition on wheat straw pyrolysis yield and oil quality Muhammad Zohaib Farooq Muhammad Zeeshan Ali Khan Saeed Iqbal Naveed Ahmed Syed Asfand Yar Shah	2018
Energy, Volume 144, Pages 200-206	
Impact Factor: 5.537 Quartile: 1 Citations: 73 DOI: 10.1016/j.energy.2017.12.026	
Effect of synthesis route on catalytic properties and performance of Co3O4/TiO2 for carbon monoxide	2017
and hydrocarbon oxidation under real engine operating conditions	
Waleed Ahmad Tayyaba Noor Muhammad Zeeshan Ali Khan	
Catalysis Communications , Volume: 89, Pages: 19-24	
Impact Factor: 3.463 Quartile: 2 Citations: 38 DOI: 10.1016/j.catcom.2016.10.012	
Estimation of light duty vehicle emissions in Islamabad and climate co-benefits of improved emission	2016
standards implementation	
Izhar Hussain Shah Muhammad Zeeshan Ali Khan	
Atmospheric Environment, Volume 127, Pages 236-243	
Impact Factor: 3.629 Quartile: 1 Citations: 23 DOI: 10.1016/j.atmosenv.2015.12.012	
Relationship of MISR component AODs with black carbon and other ground monitored particulate	2015
matter composition	
Muhammad Zeeshan Ali Khan Nguyen Thi Kim Oanh	
Atmospheric Pollution Research, Volume 6, Issue 1, Pages 62-69	
Impact Factor: 1.401 Quartile: 3 Citations: 9 DOI: 10.5094/APR.2015.008	
Assessment of the relationship between satellite AOD and ground PM10 measurement data	2014
considering synoptic meteorological patterns and Lidar data	
N.T. Kim Oanh Muhammad Zeeshan Ali Khan	
Science of the Total Environment, Volume 473, Pages 609-618	
Impact Factor: 4.099 Quartile: 1 Citations: 19	
DOI: 10.1016/j.scitotenv.2013.12.058	
Conference Proceedings	
Efficient mapping of flood hazards, using drones and aerial imaging techniques: State of the art and shortcomings	2023
Muhammad Farhan Nazir Salman Atif Muhammad Zeeshan Ejaz Hussain	
3rd Flagship International Conference on Water, Energy, and Environment for Sustainability (IC-WEES 2023), res.country(177,)	
Citations: N/A	
DOI: 10.3389/978-2-8325-1237-1	
Editorial Activities	
Renewable Energy	2023
Reviewed Papers for Journals	
Impact Factor: 8.7	
Energy	2023
Reviewed Papers for Journals	
Impact Factor: 9	
Energy Conversion and Management	2023
Reviewed Papers for Journals	
Impact Factor: 10.4	
Journal of Analytical and Applied Pyrolysis	2023
Reviewed Papers for Journals	
Impact Factor: 6.437	
Journal of Building Engineering	2023
Reviewed Papers for Journals	
Impact Factor: 7.144	

Journal of Analytical and Applied Pyrolysis Reviewed Papers for Journals Impact Factor: 6.437	2023
Journal of Cleaner Production Reviewed Papers for Journals Impact Factor: 11.072	2023
Energy Reviewed Papers for Journals Impact Factor: 8.857	2023
Polityka Energetyczna Reviewed Papers for Journals Impact Factor: 1.82	2022
Journal of Cleaner Production Reviewed Papers for Journals Impact Factor: 11.072	2022
Journal of Cleaner Production Reviewed Papers for Journals Impact Factor: 11.072	2022
Energy Reviewed Papers for Journals Impact Factor: 8.857	2022
Reviewed Papers for Journals Impact Factor: 5.541	2022
Reviewed Papers for Journals Impact Factor: 4.987	2022
Reviewed Papers for Journals Impact Factor: 4.987	2021
Reviewed Papers for Journals Impact Factor: 7.147	2021
Reviewed Papers for Journals Impact Factor: 5.263	2021
Reviewed Papers for Journals Impact Factor: 5.389	2021
Reviewed Papers for Journals Impact Factor: 4.987	2021
Reviewed Papers for Journals Impact Factor: 1.962	2021
Reviewed Papers for Journals Impact Factor: 3.447	2021
Reviewed Papers for Journals Impact Factor: 4.987	2021
Reviewed Papers for Journals Impact Factor: 4.987	2021

Reviewed Papers for Journals Impact Factor: 4.012

Intellectual Property

Copyrights

Patents

A Solar (Thermal) - Electric Hybrid Space Heating System

Status: Filed

2019

Industrial Designs

Trademarks

Trainings

Three Day Master Class in Residence on Regional Approaches to Air Quality and the Environment (Phase-2) in Collaboration of PDC-NUST

2021

Partner: USEFP and PUAN

Duration: 15-Jun-2021 to 18-Mar-2022

Three Day Master Class in Residence on Regional Approaches to Air Quality and the Environment (Phase-1)

2021

Partner: USEFP and PUAN

Duration: 10-Feb-2021 to 09-Jul-2021