Muhammad Nouman Aslam Khan

Associate Professor

School of Chemical & Materials Engineering

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LinkedIn:

About

Dr. Muhammad Nouman Aslam Khan is working as Associate Professor in the School of Chemical & Materials Engineering. Dr. Muhammad Nouman Aslam Khan has a PhD in Mathematics. Dr. Muhammad Nouman Aslam Khan has published 27 research articles & conference papers having a citation count of 649, carried out 3 projects and filed 0 intellectual property.

Qualifications

PhD in Mathematics 2013 - 2018
COMSATS Institute of Information Technology , Pakistan

MS in Mathematics 2007 - 2009
COMSATS Institute of Information Technology , Pakistan

BS in Mathematics 2003 - 2007
COMSATS Institute of Information Technology , Pakistan

F.Sc in Sciences 2001 - 2003
FBISE, Islamabad , Pakistan

Matric (SSC) in Sciences 1999 - 2001
FBISE, Islamabad , Pakistan

Experience

Associate Professor 2024- Present
School of Chemical & Materials Engineering

Assistant Professor 2014 - 2024
School of Chemical & Materials Engineering

Lecturer 2010 - 2014
School of Chemical & Materials Engineering

Lecturer 2010 - 2010
COMSATS Institute of Information Technology, Islamabad, Pakistan" , CIIT, Chak Shehzad, Islamabad, Pakistan

Research Projects

National Projects

Exploration of experimental and computational synergetic analysis of 2D nanomaterials based mixed matrix membranes for carbon capture 2023

Funding Agency: National University of Sciences and Technology Islamabad Pakistan
Amount: PKR 1,000,000.00
Status: Completed

Integrated experimental & machine learning strategies to predict & optimize products from biomass/waste thermochemical conversion to bioenergy 2022

Funding Agency: Universiti Teknologi Malaysia
Amount: PKR 2,563,677.00
Status: Approved_inprocess

The application of machine learning in the chemical recycling of plastic waste 2022

Funding Agency: Royal Society
Amount: PKR 2,800,000.00
Status: Approved_inprocess

International Projects

Research Articles

Advanced Cellulose Triacetate-Based Mixed Matrix Membranes Enhanced by Bimetallic Ni-Cu-BTC MOFs for CO2/CH4 Separation 2025

Esha Asad Ayesha Raza Amna Safdar Muhammad Nouman Aslam Khan Humais Roafi
Polymers , Volume 17(16), Article Number 2258
Impact Factor: 4.900 | **Quartile:** 1
DOI: https://doi.org/10.3390/polym17162258

Machine learning approach for photocatalysis: An experimentally validated case study of photocatalytic dye degradation 2025

Hassan ali Yasir Ali Hamza Ul Haq Ali Can Guler Milan Masar Muhammad Nouman Aslam Khan Michal Machovsky Vladimir Sedlarik Ivo Kuritka
Journal of Environmental Management, Volume:386, Article Number 125683
Impact Factor: 8.000 | **Quartile:** 1
DOI: https://doi.org/10.1016/j.jenvman.2025.125683

Development and Evaluation of User-Friendly Modeled Approach for Sustainable Polymer Membranes for Advanced Hemodialysis 2025

Ahmed Khan Zaib Jahan Muhammad Ahsan Muhammad Bilal Khan Niazi Muhammad Nouman Aslam Khan Ahmed Sayed M. Metwally Farooq Sher
Advanced Materials Interfaces , Volume:12, Issue:1, Article Number 2400435
Impact Factor: 4.300 | **Quartile:** 2
DOI: https://doi.org/10.1002/admi.202400435

Adsorption Capacity Prediction and Optimization of Electrospun Nanofiber Membranes for Estrogenic Hormone Removal Using Machine Learning Algorithms 2024

Hamza Ul Haq Muhammad Nouman Aslam Khan Jawad Gul Mukkaram Vladimír Sedlařík Muhammad Yasir
Polymers for Advanced Technologies, Volume:35, Issue:11, Article Number:e6638
Impact Factor: 3.1 | **Quartile:** 2 | **Citations:** 2
DOI: https://doi.org/10.1002/pat.6638

Approximation theorems for -nonexpansive mappings in convex metric spaces by three step iterations 2024

Muhammad Nouman Aslam Khan Maliha Rashid Amna Kalsoom Naeem Saleem Madeeha Manuel De La Sen
Alexandria Engineering Journal , Volume 102, Pages 1-9
Impact Factor: 6.200 | **Quartile:** 1
DOI: https://doi.org/10.1016/j.aej.2024.05.067

Torrefied biomass quality prediction and optimization using machine learning algorithms 2024

Muhammad Hamza Naveed Jawad Gul Muhammad Nouman Aslam Khan Salman Raza Naqvi Libor Stepanec Imtiaz Ali
Chemical Engineering Journal Advances , Volume 19, Article Number 100620
Impact Factor: 5.500 | **Quartile:** 1 | **Citations:** 8
DOI: https://doi.org/10.1016/j.ceja.2024.100620

Prediction of hydrogen yield from supercritical gasification process of sewage sludge using machine learning and particle swarm hybrid strategy 2024

Muhammad Nouman Aslam Khan Zeeshan Ul Haq Hafeez Ullah Salman Raza Naqvi Usama Ahmed Muhammad Zaman Nor Aishah Saidina Amin

International Journal of Hydrogen Energy, Volume 54, 7 February 2024, Pages 512-525

Impact Factor: 7.139 | **Quartile:** 1 | **Citations:** 36

DOI: 10.1016/j.ijhydene.2023.01.033

Aging prediction in single based propellants using hybrid strategy of machine learning and genetic algorithm 2024

Faizan Khalid Muhammad Nouman Aslam Khan Muhammad Abdaal Ghani Nouman Ahmad Abdullah Khurram Sattar

Chemometrics and Intelligent Laboratory Systems, Volume 245, Article Number 105058

Impact Factor: 3.9 | **Quartile:** 1 | **Citations:** 7

DOI: https://doi.org/10.1016/j.chemolab.2023.105058

Prediction of thermal diffusivity of volcanic rocks using machine learning and genetic algorithm hybrid strategy 2023

Muhammad Nouman Aslam Khan Usman Ghafoor Abdullah Abdullah Zeeshan Ul Haq Hafeez Ullah Iftikhar Hussain Gul Asghari Maqsood

International Journal of Thermal Sciences, Volume 192, Part A, Article Number 108403

Impact Factor: 4.779 | **Quartile:** 1 | **Citations:** 6

DOI: https://doi.org/10.1016/j.ijthermalsci.2023.108403

Thermal optimization of Li-ion battery pack using genetic algorithm integrated with machine learning, 2023

Usman Ghafoor Muhammad Waqas Yaqub Muhammad Uzair Qureshi Muhammad Nouman Aslam Khan

Thermal Science and Engineering Progress, Volume 44, ID:102069, Pages:31

Impact Factor: 4.8 | **Quartile:** 1 | **Citations:** 11

DOI: 10.1016/j.tsep.2023.102069

Optimization based comparative study of machine learning methods for the prediction of bio-oil produced from microalgae via pyrolysis 2023

Hafeez Ullah Zeeshan Ul Haq Muhammad Nouman Aslam Khan Salman Raza Naqvi Muhammad Ahsan Jiawei Wang

Journal of Analytical and Applied Pyrolysis, Volume 170, ID:105879

Impact Factor: 6.437 | **Quartile:** 1 | **Citations:** 36

DOI: 10.1016/j.jaap.2023.105879

Applications of machine learning in thermochemical conversion of biomass-A review 2023

Muzammil Khan Salman Raza Naqvi Zahid Ullah Syed Ali Ammar Taqvi Muhammad Nouman Aslam Khan Wasif Farooq Muhammad Taqi Mehran Dagmar Juchelková Libor Štěpanec

Fuel, Volume 332, Part 1, Article Number 126055

Impact Factor: 8.035 | **Quartile:** 1 | **Citations:** 134

DOI: https://doi.org/10.1016/j.fuel.2022.126055

Comparative study of machine learning methods integrated with genetic algorithm and particle swarm optimization for bio-char yield prediction 2022

Zeeshan Ul Haq Hafeez Ullah Muhammad Nouman Aslam Khan Salman Raza Naqvi Abdul Ahad Nor Aishah Saidina Amin

Bioresource Technology, Volume 363, Article Number 128008

Impact Factor: 11.4 | **Quartile:** 1 | **Citations:** 54

DOI: https://doi.org/10.1016/j.biortech.2022.128008

Hydrogen production optimization from sewage sludge supercritical gasification process using machine learning methods integrated with genetic algorithm 2022

Zeeshan Ul Haq Hafeez Ullah Muhammad Nouman Aslam Khan Salman Raza Naqvi Muhammad Ahsan

Chemical Engineering Research and Design, Volume 184, Pages 614-626

Impact Factor: 4.119 | **Quartile:** 2 | **Citations:** 59

DOI: https://doi.org/10.1016/j.cherd.2022.06.020

Artificial neural networks for the prediction of biochar yield: A comparative study of metaheuristic algorithms 2022

Muzammil Khan Zahid Ullah Ondřej Mašek Salman Raza Naqvi Muhammad Nouman Aslam Khan

Bioresouce Technology, Volume 355, Article Number 127215

Impact Factor: 11.4 | **Quartile:** 1 | **Citations:** 93

DOI: https://doi.org/10.1016/j.biortech.2022.127215

An integrated framework of data-driven, metaheuristic, and mechanistic modeling approach for biomass pyrolysis 2022

Zahid Ullah Muzammil Khan Salman Raza Naqvi Muhammad Nouman Aslam Khan Wasif Farooq Muhammad Waqas Anjum Muhammad Waqas Yaqub

Hamad AlMohamadi Fares Almomani

Process Safety and Environmental Protection, Volume 162, Pages 337-345

Impact Factor: 6.158 | **Quartile:** 1 | **Citations:** 42

DOI: https://doi.org/10.1016/j.psep.2022.04.013

Process modeling and simulation of ethylene oxide production by implementing pinch and cost analysis 2022

Muhammad Mubashir Muhammad Ahsan Iftikhar Ahmad Muhammad Nouman Aslam Khan

Ain Shams Engineering Journal, Volume 13, Issue 3, Pages 101585 (1-9)

Impact Factor: 3.180 | **Quartile:** 2 | **Citations:** 8

DOI: https://doi.org/10.1016/j.asej.2021.09.012

Process Modeling, Optimization and Cost Analysis of a Sulfur Recovery Unit by Applying Pinch Analysis on the Claus Process in a Gas Processing Plant 2021

Muhammad Arslan Zahid Muhammad Ahsan Iftikhar Ahmad Muhammad Nouman Aslam Khan

Mathematics , Volume 10, Issues 1, Article Number 88

Impact Factor: 2.592 | **Quartile:** 1 | **Citations:** 13

DOI: https:// doi.org/10.3390/math10010088

Coincidence point of L-fuzzy sets endowed with graph 2018

Akbar Azam Muhammad Nouman Aslam Khan Nayyar Mehmood Stojan Radenovic Tatjana Došenovic

Revista de la Real Academia de Ciencias Exactas Fisicas y Naturales. Serie A. Matematicas , Volume 112, Issue 4, Pages 915–931

Impact Factor: 1.028 | **Quartile:** 2 | **Citations:** 4

DOI: 10.1007/s13398-017-0398-3

Coincidence of Multivalued Mappings on Metric Spaces with a Graph 2017

Muhammad Nouman Aslam Khan Akbar Azam Ljubi?sa D.R. Ko?cinac

Filomat , Volume 31, Issue 14, Pages: 4543-4554

Impact Factor: 0.635 | **Quartile:** 3 | **Citations:** 2

DOI: 10.2298/FIL1714543K

Coincidence Points of a Sequence of Multivalued Mappings in Metric Space with a Graph 2017

Muhammad Nouman Aslam Khan Akbar Azam Nayyar Mehmood

Mathematics , Volume: 5 Issue: 2, Article Number: 30

Impact Factor: N/A | **Citations:** 2

DOI: 10.3390/math5020030

On Minimal Fuzzy Ideals of Semigroups 2013

Madad Khan Feng Feng Muhammad Nouman Aslam Khan

Journal of Mathematics, Volume 2013, Article ID 475190, 5 pages

Impact Factor: N/A | **Citations:** 2

DOI: http://dx.doi.org/10.1155/2013/475190

Fuzzy Abel Grassmann's Groupoids 2010

Muhammad Nouman Aslam Khan Madad Khan

Advances in Fuzzy Mathematics, Advances in Fuzzy Mathematics, volume 3, published 2010

Impact Factor: 0

DOI: https://www.ripublication.com/afm.htm

On Anti Fuzzy Ideals in Left Almost Semigroups 2010

Madad Khan Faisal Iqbal Muhammad Nouman Aslam Khan

Journal of Mathematics Research, Vol. 2, No. 3; August 2010

Impact Factor: N/A

DOI: http://www.ccsenet.org/journal/index.php/jmr/about

Conference Proceedings

Cascade Forward Neural Network for The Prediction of Pyrolytic Gas Yield 2022

Salman Raza Naqvi Muhammad Nouman Aslam Khan Nor Aishah Saidina Amin

International Conference on Water, Energy, and Environment for Sustainability (IC-WEES) 2022, res.country(177,)

Citations: N/A

DOI: Nil

Editorial Activities

Bioresource Technology 2025
Reviewed Papers for Journals
Impact Factor: 9.7

Bioresource Technology 2025
Reviewed Papers for Journals
Impact Factor: 9.7

Bioresource Technology 2025
Reviewed Papers for Journals
Impact Factor: 9.7

Biomass Conversion and Biorefinery 2025
Reviewed Papers for Journals
Impact Factor: 3.5

Journal of Renewable and Sustainable Energy 2025
Reviewed Papers for Journals
Impact Factor: 1.9

Algal Research 2024
Reviewed Papers for Journals
Impact Factor: 4.6

International Journal of Environmental Research 2024
Reviewed Papers for Journals
Impact Factor: 2.6

Bioresource Technology 2024
Reviewed Papers for Journals
Impact Factor: 9.7

Journal of Energy Storage 2024
Reviewed Papers for Journals
Impact Factor: 9.4

Automation in Construction 2024
Reviewed Papers for Journals
Impact Factor: 10.3

Bioresource Technology 2024
Reviewed Papers for Journals
Impact Factor: 11.4

Renewable Energy 2024
Reviewed Papers for Journals
Impact Factor: 8.7

Journal of Building Engineering 2023
Reviewed Papers for Journals
Impact Factor: 6.4

Journal of Environmental Chemical Engineering 2023
Reviewed Papers for Journals
Impact Factor: 7.7

Bioresource Technology 2023
Reviewed Papers for Journals
Impact Factor: 11.889

Bioresource Technology 2023
Reviewed Papers for Journals
Impact Factor: 11.4

Bioresource Technology 2022
Reviewed Papers for Journals
Impact Factor: 11.889

Trainings

Aging Studies of Energetic Materials (Propellant and Explosive) 2024

Partner: Defense/Strategic Organization

Duration: 15-Jan-2024 to 19-Jan-2024