

Muhammad Ahsan

Associate Professor
School of Chemical & Materials Engineering

Email: ahsan@scme.nust.edu.pk
Contact: 518741543
LinkedIn: www.linkedin.com/in/ahsannustian



About

Dr. Muhammad Ahsan is working as Associate Professor in the School of Chemical & Materials Engineering. Dr. Muhammad Ahsan has a PhD in Energetic Materials Engineering. Dr. Muhammad Ahsan has published 63 research articles & conference papers having a citation count of 612, carried out 3 projects and filed 0 intellectual property.

Qualifications

PhD in Energetic Materials Engineering NUST, Islamabad , Pakistan	2011 - 2016
MS in Energetic Materials Engineering NUST, Islamabad , Pakistan	2008 - 2010
BS in Mathematics BZU, Multan , Pakistan	2004 - 2008

Experience

Associate Professor School of Chemical & Materials Engineering	2022- Present
Assistant Professor School of Chemical & Materials Engineering	2022 - 2022
Assistant Professor School of Chemical & Materials Engineering	2017 - 2022
TVF National University of Sciences and Technology , NUST H-12 Islamabad Pakistan	2011 - 2017

Awards

Research Projects

National Projects	
4th ASEAN-Pakistan Conference on Materials Science (APCoMS 2025) Funding Agency: ASEAN Pakistan Collaboration Fund Amount: PKR 24,780,568.00 Status: Approved_inprocess	2025
Fabrication of fluidized bed experimental system Funding Agency: NUST Amount: PKR 300,000.00 Status: Completed	2021
Numerical Analysis of Combustion Dynamics for Coal Gasification Funding Agency: HEC Amount: PKR 303,000.00 Status: Completed	2017

International Projects

Research Articles

Experimental validation and optimization of bendable linear shaped charges with degressive explosive thickness for aerospace and defense applications <i>Muhammad Soulam Khan Muhammad Ahsan Sarah Farrukh Iftikhar Ahmad Erum Pervaiz Abdul Qadeer Malik</i> <i>Journal of Energetic Materials</i> , 1-33 Impact Factor: 1.700 Quartile: 3 DOI: https://doi.org/10.1080/07370652.2025.2495558	2025
Computational Analysis of Catalytic Combustion Using Finite Volume Method (FVM): Advantages, Constraints, and Potential Applications <i>Muhammad Ahsan Muhammad Farhan Rafi</i> <i>Engineering Proceedings</i> , Volume 67(1), Article Number 89 Impact Factor: N/A DOI: https://doi.org/10.3390/engproc2024067089	2025
Quantification of Impact of Uncertainty on Emissions in a Cement Manufacturing Plant: Surrogate Modeling-Based Approach <i>Muhammad Usman Iftikhar Ahmad Manabu Kano Farooq Ahmad Muhammad Ahsan</i> <i>ACS Omega</i> , Volume:10, Issue:9, Pages 9453-9462 Impact Factor: 3.700 Quartile: 2 DOI: https://doi.org/10.1021/acsomega.4c10194	2025
Development and Evaluation of User-Friendly Modeled Approach for Sustainable Polymer Membranes for Advanced Hemodialysis <i>Ahmed Khan Zaib Jahan Muhammad Ahsan Muhammad Bilal Khan Niazi Muhammad Nouman Aslam Khan Ahmed Sayed M. Metwally Farooq Sher</i> <i>Advanced Materials Interfaces</i> , Volume:12, Issue:1, Article Number 2400435 Impact Factor: 4.300 Quartile: 2 DOI: https://doi.org/10.1002/admi.202400435	2025
Computational Fluid Dynamics Simulation and Analysis of Non-Newtonian Drilling Fluid Flow and Cuttings Transport in an Eccentric Annulus <i>Muhammad Ahsan Shah Fahad Muhammad Shoaib Butt</i> <i>Mathematics</i> , Volume:13, Issue:1, Article Number 101 Impact Factor: 2.300 Quartile: 1 DOI: https://doi.org/10.3390/math13010101	2024
Improving Internal Combustion Engine Performance through Inlet Valve Geometry and Spray Angle Optimization: Computational Fluid Dynamics Study <i>Muhammad Ahsan Mian Noman</i> <i>Engineering Proceedings</i> , Volume 72(1), Article Number 6 Impact Factor: N/A DOI: https://doi.org/10.3390/engproc2024072006	2024
Grey-box modelling for estimation of optimum cut point temperature of crude distillation column <i>Junaid Shahzad Iftikhar Ahmad Muhammad Ahsan Farooq Ahmad Husnain Saghir Manabu Kano Hakan Caliskan Hiki Hong</i> <i>CAAI Transactions on Intelligence Technology</i> , Pages 1-15 Impact Factor: 8.4 Quartile: 1 Citations: 1 DOI: https://doi.org/10.1049/cit2.12386	2024
Integrative CFD and AI/ML-based modeling for enhanced alkaline water electrolysis cell performance for hydrogen production <i>Abdullah Sirat Sher Ahmad Iftikhar Ahmad Nouman Ahmad Muhammad Ahsan</i> <i>International Journal of Hydrogen Energy</i> , Volume 83, Pages 1120-1131 Impact Factor: 8.100 Quartile: 1 Citations: 5 DOI: https://doi.org/10.1016/j.ijhydene.2024.08.184	2024
Prediction and optimization of emissions in cement manufacturing plant under uncertainty by using artificial intelligence-based surrogate modeling <i>Muhammed Usman Iftikhar Ahmad Muhammad Ahsan Hakan Caliskan</i> <i>Environment Development and Sustainability</i> , Pages 1-25 Impact Factor: 4.700 Quartile: 2 Citations: 2 DOI: 10.1007/s10668-024-05068-5	2024
Free-Flowing Polymer-Bonded Powder Composition of Hexahydro-1,3,5-trinitro-1,3,5-triazine using Solvent-Slurry Coating <i>Muhammad Soulam Khan Muhammad Ahsan Sarah Farrukh Erum Pervaiz Abdul Qadeer Malik</i>	2024

<p><i>Polymers</i> , Volume 16(6), 841</p> <p>Impact Factor: 5.0 Quartile: 1 Citations: 1</p> <p>DOI: doi.org/10.3390/polym16060841</p>	
<p>Influence of distributor plate design on mixing characteristics of rice husk biomass in a bubbling fluidized bed gasifier: An experimental and CFD study</p> <p><i>Naveed Raza Muhammad Ahsan</i></p> <p><i>Fuel</i> , Volume 358, Part A, Article Number 129893</p> <p>Impact Factor: 7.4 Quartile: 1 Citations: 6</p> <p>DOI: https://doi.org/10.1016/j.fuel.2023.129893</p>	2024
<p>Optimizing Design and Operational Parameters for Enhanced Mixing and Hydrodynamics in Bubbling Fluidized Bed Gasifiers: An Experimental and CFD-based Approach</p> <p><i>Naveed Raza Rifat Mehdi Muhammad Ahsan Muhammad Taqi Mehran Salman Raza naqvi Emad UdDin</i></p> <p><i>Applied Sciences</i> , Volume: 13, Issue: 16, Article Number:9317</p> <p>Impact Factor: 2.7 Quartile: 2</p> <p>DOI: https://doi.org/10.3390/app</p>	2023
<p>Computational Fluid Dynamics Analysis of a Hollow Fiber Membrane Module for Binary Gas Mixture</p> <p><i>Salman Qadir Muhammad Ahsan Arshad Hussain</i></p> <p><i>Gases</i> , Volume 3(2), Pages 77-91</p> <p>Impact Factor: 0 Citations: 3</p> <p>DOI: https://doi.org/10.3390/gases3020005</p>	2023
<p>Optimization based comparative study of machine learning methods for the prediction of bio-oil produced from microalgae via pyrolysis</p> <p><i>Hafeez Ullah Zeeshan Ul Haq Muhammad Nouman Aslam Khan Salman Raza Naqvi Muhammad Ahsan Jiawei Wang</i></p> <p><i>Journal of Analytical and Applied Pyrolysis</i>, Volume 170, ID:105879</p> <p>Impact Factor: 6.437 Quartile: 1 Citations: 36</p> <p>DOI: 10.1016/j.jaap.2023.105879</p>	2023
<p>Study of ferroelectric and piezoelectric response of heat-treated surfactant-based BaTiO₃ nanopowder for high energy capacitors</p> <p><i>Gulraiz Tanvir Mohsin Saleem Hamid Jabbar Amir Hamza Muhammad Asif Hussain Muhammad Zubair Khan Abrar H. Baluch Muhammad Irfan Muhammad Shoaib Butt Faysal Naeem Abdul Ghaffar Muhammad Ahsan Muhammad Asif Rafiq Rizwan Ahmed Malik Adnan Maqbool</i></p> <p><i>Materials Science and Engineering B</i> , Volume 287, Article Number 116100</p> <p>Impact Factor: 3.407 Quartile: 2 Citations: 9</p> <p>DOI: https://doi.org/10.1016/j.mseb.2022.116100</p>	2023
<p>Prediction of optimum operating conditions of a furnace under uncertainty: An integrated framework of artificial neural network and genetic algorithm</p> <p><i>Muzammil Khan Iftikhar Ahmad Muhammad Ahsan Manabu Kano Hakan Caliskan</i></p> <p><i>Fuel</i> , Volume 330, Article Number 125563</p> <p>Impact Factor: 8.035 Quartile: 1 Citations: 20</p> <p>DOI: https://doi.org/10.1016/j.fuel.2022.125563</p>	2022
<p>An intelligent sensing system for estimation of efficiency of carbon-capturing unit in a cement plant</p> <p><i>Usman Khan Jadoon Iftikhar Ahmad Tayyaba Noor Manabu Kano Hakan Caliskan Muhammad Ahsan</i></p> <p><i>Journal of Cleaner Production</i> , Volume 377, Article Number 134359</p> <p>Impact Factor: 11.1 Quartile: 1 Citations: 11</p> <p>DOI: https://doi.org/10.1016/j.jclepro.2022.134359</p>	2022
<p>Model analysis on effect of temperature on the solubility of recycling of Polyethylene Terephthalate (PET) plastic</p> <p><i>Syed Shujaat Karim Sarah Farrukh Takeshi Matsuura Muhammad Ahsan Arshad Hussain Sehar Shakir Lai Fatt Chuah Mudassir Hasan Awais Bokhari</i></p> <p><i>Chemosphere</i> , Volume 307, Part 3, Article Number 136050</p> <p>Impact Factor: 8.943 Quartile: 1 Citations: 31</p> <p>DOI: https://doi.org/10.1016/j.chemosphere.2022.136050</p>	2022
<p>Hydrogen production optimization from sewage sludge supercritical gasification process using machine learning methods integrated with genetic algorithm</p> <p><i>Zeeshan Ul Haq Hafeez Ullah Muhammad Nouman Aslam Khan Salman Raza Naqvi Muhammad Ahsan</i></p> <p><i>Chemical Engineering Research and Design</i>, Volume 184, Pages 614-626</p> <p>Impact Factor: 4.119 Quartile: 2 Citations: 59</p> <p>DOI: https://doi.org/10.1016/j.cherd.2022.06.020</p>	2022

Comparative hydrodynamics study of fluidized bed gasifier incorporating static and rotating air distributor plates: A CFD approach <i>Naveed Raza Muhammad Ahsan Muhammad Taqi Mehran Salman Raza Naqvi Iftikhar Ahmad</i> <i>Powder Technology</i> , Volume 405, Article Number 117500 Impact Factor: 5.134 Quartile: 1 Citations: 10 DOI: https://doi.org/10.1016/j.powtec.2022.117500	2022
Process modeling and simulation of ethylene oxide production by implementing pinch and cost analysis <i>Muhammad Mubashir Muhammad Ahsan Iftikhar Ahmad Muhammad Nouman Aslam Khan</i> <i>Ain Shams Engineering Journal</i> , 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	2022
Improved super capacitive performance of hydrothermally developed Mn and Ni oxides along with activated carbon as ternary nanocomposite <i>Faiza Khalid Mohsin Saleem Hamid Jabbar Muhammad Gulraiz Tanvir Muhammad Shoaib Butt Abrar H. Baluch Abdul Ghaffar Muhammad Ahsan Rizwan Ahmed Malik Umit Alver Hussein Alrobei Zab dur Rehman Meshal Alzaid Muhammad Zubair Khan</i> <i>Journal of Physics and Chemistry of Solids</i> , Volume 161, Article Number 110467 Impact Factor: 3.995 Quartile: 2 Citations: 11 DOI: https://doi.org/10.1016/j.jpcs.2021.110467	2022
Process Modeling, Optimization and Cost Analysis of a Sulfur Recovery Unit by Applying Pinch Analysis on the Claus Process in a Gas Processing Plant <i>Muhammad Arslan Zahid Muhammad Ahsan Iftikhar Ahmad Muhammad Nouman Aslam Khan</i> <i>Mathematics</i> , Volume 10, Issues 1, Article Number 88 Impact Factor: 2.592 Quartile: 1 Citations: 13 DOI: https://doi.org/10.3390/math10010088	2021
Design and Development of a Computational Tool for a Dialyzer by Using Computational Fluid Dynamic (CFD) Model <i>Tuba Yaqoob Muhammad Ahsan Sarah Farrukh Iftikhar Ahmad</i> <i>Membranes</i> , Volume 11, Issues 12, Article Number 916 Impact Factor: 4.106 Quartile: 2 Citations: 3 DOI: https://doi.org/10.3390/membranes11120916	2021
Model-Based Quality, Exergy, and Economic Analysis of Fluidized Bed Membrane Reactors <i>Tabassam Nafees Adnan Ahmed Bhatti Usman Khan Jadoon Farooq Ahmad Iftikhar Ahmad Manabu Kano Brenno Castrillon Menezes Muhammad Ahsan Naveed ul Hasan Syed</i> <i>Membranes</i> , Volume 11, Issues 10, Article Number 765 Impact Factor: 4.106 Quartile: 2 Citations: 4 DOI: doi.org/10.3390/membranes11100765	2021
Computational Analysis of the Hydrodynamic Behavior for Different Air Distributor Designs of Fluidized Bed Gasifier <i>Naveed Raza Muhammad Ahsan Muhammad Taqi Mehran Iftikhar Ahmad Salman Raza Naqvi</i> <i>Frontiers in Energy Research</i> , Volume 9, Issues 1, Article Number 692066 Impact Factor: 4.008 Quartile: 2 Citations: 17 DOI: https://doi.org/10.3389/fenrg.2021.692066	2021
Performance Analysis of Blended Membranes of Cellulose Acetate with Variable Degree of Acetylation for CO₂/CH₄ Separation <i>Sarrah Farrukh Mohd Hafiz Dzarfan Othman Arshad Hussain Imran Ullah Khan Mohd Hafiz Dzarfan Othman Ayesha Raza Mohd Hafiz Dzarfan Othman Muhammad Ahsan</i> <i>Membranes</i> , Volume 11, Issue 4, Article Number 245 Impact Factor: 4.562 Quartile: 1 Citations: 19 DOI: https://doi.org/10.3390/membranes11040245	2021
Computational Fluid Dynamics (CFD) Modeling and Simulation of Flow Regulatory Mechanism in Artificial Kidney Using Finite Element Method <i>Tuba Yaqoob Muhammad Ahsan Arshad Hussain Iftikhar Ahmad</i> <i>Membranes</i> , Volume 10, Issue no. 7, Article 139 Impact Factor: 4.106 Quartile: 1 Citations: 11 DOI: 10.3390/membranes10070139	2020

Computational Fluid Dynamics (CFD) simulation for the prediction of the venturi scrubber performance using Finite Volume Method <i>Attaullah Muhammad Bilal Khan Niazi Muhammad Ahsan Majid Ali</i> <i>International Journal of Computing Science and Mathematics</i> , Volume 11, Issue 4, Pages 338-346 Impact Factor: - Citations: 2 DOI: 10.1504/IJCSM.2020.107601	2020
Computational Fluid Dynamics Analysis of Compressible Flow Through a Converging-Diverging Nozzle using the k-ϵ Turbulence Model <i>Muhammad Waqas Khaid Muhammad Waqas Khaid Muhammad Ahsan</i> <i>Engineering, Technology & Applied Science Research</i> , Volume 10 Issue 1 Pages 5180-5185 Impact Factor: - DOI: https://www.etasr.com/index.php/ETASR/article/view/3140/0	2020
Jute Based Bio and Hybrid Composites and Their Applications <i>Muhammad Taqi Mehran Muhammad Ahsan Ashraf Mohammed Zwawi Ramesh Kanthasamy Ali Bahadar</i> <i>Fibers</i> , Volume 7, Issue 9, Article Number 77 Impact Factor: 0 Citations: 79 DOI: 10.3390/fib7090077	2019
A Computational Fluid Dynamics Approach for the Modeling of Gas Separation in Membrane Modules <i>Salman Qadir Arshad Hussain Muhammad Ahsan</i> <i>Processes</i> , Volume 7, Issue 7, Article Number 420 Impact Factor: 2.753 Quartile: 2 Citations: 25 DOI: 10.3390/pr7070420	2019
A computational fluid dynamics (CFD) approach for the modeling of flux in a polymeric membrane using finite volume method <i>Muhammad Ahsan Arshad Hussain</i> <i>Mechanics and Industry</i> , Volume: 18 Issue: 4 Impact Factor: 0.874 Quartile: 4 Citations: 6 DOI: 10.1051/meca/2017011	2019
Numerical analysis of a gas separation of CH₄/CO₂ using hollow fiber membrane module <i>Salman Qadir Muhammad Ahsan Arshad Hussain</i> <i>Sigma Journal of Engineering and Natural Sciences</i> , NULL Impact Factor: 0 DOI: http://eds.yildiz.edu.tr/AjaxTool/GetArticleByPublishedArticleId?PublishedArticleId=2623	2018
Computational Fluid Dynamics (CFD) Analysis of Phthalic Anhydride's Yield Using Lab Synthesized and Commercially Available (V₂O₅/TiO₂) Catalyst <i>Ali Sarosh Arshad Hussain Erum Pervaiz Muhammad Ahsan</i> <i>Engineering Technology & Applied Science Research</i> , Volume 8, No. 2, Pages 2821-2826 Impact Factor: - DOI: https://etasr.com/index.php/ETASR/article/view/1954	2018
A Numerical Comparison of Soave Redlich Kwong and Peng-Robinson Equations of State for Predicting Hydrocarbons? Thermodynamic Properties <i>Bilal Hussain Muhammad Ahsan</i> <i>Engineering Technology & Applied Science Research</i> , Vol. 8, No. 1, 2018, 2422-2426 Impact Factor: 0 DOI: https://etasr.com/index.php/ETASR/article/view/1644	2018
Computational fluid dynamics based model development and exergy analysis of naphtha reforming reactors <i>Jawad Mustafa Manabu Kano Ittikhar Ahmad Muhammad Ahsan</i> <i>International Journal of Exergy</i> , Vol. 24, No. 2-4, Pages:344-363 Impact Factor: 0.993 Quartile: 4 Citations: 9 DOI: 10.1504/IJEX.2017.087696	2017
Numerical Analysis Of Flash Calculation Using Soave Redlich-Kwong Equation Of State With Matlab <i>Bilal Hussain Muhammad Ahsan</i> <i>Sigma Journal Of Engineering And Natural Sciences-Sigma Muhendislik Ve Fenbilimleri Dergisi</i> , NULL Impact Factor: 0 DOI: http://eds.yildiz.edu.tr/AjaxTool/GetArticleByPublishedArticleId?PublishedArticleId=2466	2017

- Computational Fluid Dynamics (CFD) Simulation and Comparison for Different Numbers of Baffles to Reduce Concentration Polarization Effects in Membrane Tubes** 2017
Muhammad Ahsan Arshad Hussain
Journal of Engineering and Technological Sciences, Volume 49, Issue 1, Pages 114-131
Impact Factor: 0 | Citations: 5
DOI: 10.5614/j.eng.technol.sci.2017.49.1.7
- Development Of User-defined Extension For The Simulation Of Membrane Process In Aspen Hysys** 2017
Muhammad Ahsan Olivia Meyonette Sweeney Arshad Hussain
Sigma Journal of Engineering and Natural Sciences-Sigma Muhendislik Ve Fen Bilimleri Dergisi, Volume 35, Issue 1, Pages 35-45
Impact Factor: 0
- Computational Fluid Dynamics (CFD) Modeling of Heat Transfer in a Polymeric-Membrane using Finite Volume Method** 2016
Muhammad Ahsan Arshad Hussain
Journal of Thermal Science, Volume 25, Issue 6, Pages 564-570
Impact Factor: 0.678 | Quartile: 4 | Citations: 11
DOI: 10.1007/s11630-016-0899-y
- Mathematical modelling of membrane gas separation using the finite difference method** 2016
Muhammad Ahsan Arshad Hussain
Pacific Science Review A: Natural science and engineering, Pacific Science Review A: Natural science and engineering, Volume 18, Issue 1, Pages 47–52, January 2016
Impact Factor: 0
DOI: <http://dx.doi.org/10.1016/j.psra.2016.07.001>
- Prediction of gasoline yield in a fluid catalytic cracking (FCC) riser using k-epsilon turbulence and 4-lump kinetic models: A computational fluid dynamics (CFD) approach** 2015
Muhammad Ahsan
Journal of King Saud University - Engineering Sciences, Volume 27, Issue 2, Pages 130-136
Impact Factor: 0 | Citations: 15
DOI: 10.1016/j.jksues.2013.09.001
- Mathematical modeling of helium recovery from a multicomponent fuel gas with polymeric membrane** 2015
Muhammad Ahsan Arshad Hussain
International Journal of Chemical Engineering and Applications, Volume 6, No 3, Pages 173-178
Impact Factor: 0
DOI: 10.7763/IJCEA.2015.V6.476
- A Computational fluid dynamics (CFD) comparison of 3-Lump and 4-Lump kinetic models for predicting gasoline, light gases and coke yield in fluid catalytic cracking (FCC) riser** 2015
Muhammad
Mechanics & Industry, Volume 16, Number 4, Article Number 402
Impact Factor: 0.559 | Quartile: 4 | Citations: 2
DOI: 10.1051/meca/2015016
- Numerical analysis of friction factor for a fully developed turbulent flow using k-epsilon turbulence model with enhanced wall treatment** 2014
Muhammad Ahsan
Beni-Suef University Journal of Basic and Applied Sciences, Volume 3, Issue 4, Pages 269-277
Impact Factor: 0
DOI: 10.1016/j.bjbas.2014.12.001
- Comparison of physico-chemical, advanced oxidation and biological techniques for the textile wastewater treatment** 2014
Muhammad Saqib Nawaz Muhammad Ahsan
Alexandria Engineering Journal, Volume 53, Issue 3, Pages 717-722, September 2014
Impact Factor: 0 | Citations: 146
DOI: <https://doi.org/10.1016/j.aej.2014.06.007>
- Process Design Analyses of CO₂ Capture from Natural Gas by Polymer Membrane** 2014
Arshad Hussain Habib Nasir Muhammad Ahsan
Journal of the Chemical Society of Pakistan, Volume 36, Issue 3, Pages 411-421
Impact Factor: 0.345 | Quartile: 4

Comparing Numerical Methods for Multicomponent Gas Separation by Single Permeation Unit <i>Muhammad Ahsan Arshad Hussain</i> <i>Chiang Mai Journal of Science</i> , Volume 41, Issue 1, Pages 184-199 Impact Factor: 0.371 Quartile: 3	2014
A new type of shooting method for nonlinear boundary value problems <i>Muhammad Ahsan Sarrah Farrukh</i> <i>Alexandria Engineering Journal</i> , Volume 52, Issue 4, Pages 801–805 Impact Factor: 0 Citations: 14 DOI: 10.1016/j.aej.2013.07.001	2013
An Alternate Mathematical Approach to Recover Hydrogen with High Permeate Purity from Gas Streams of Small-Medium Level Oil Refineries <i>Muhammad Ahsan Arshad Hussain</i> <i>Journal of the Chemical Society of Pakistan</i> , Volume 35, Issue 3, Pages 621-628 Impact Factor: 0.612 Quartile: 4 DOI: https://www.jcsp.org.pk/ViewByVolume.aspx?v=192&i=VOLUME%2035,%20NO3,%20JUN%202013	2013
A comparison of numerical methods used to solve cross flow model for multicomponent membrane gas separation <i>Muhammad Ahsan Arshad Hussain</i> <i>World Applied Sciences Journal</i> , Volume 22, Issue 5, Pages 703-711 Impact Factor: 0 Citations: 3 DOI: 10.5829/idosi.wasj.2013.22.05.2202	2013
An Efficient Numerical Approach for the Separation of Gases Using Membrane in a Multicomponent Gas Mixture <i>Muhammad Ahsan Arshad Hussain</i> <i>International Journal of Chemical Engineering and Applications</i> , Vol. 3, No. 6, Pages 430-433 Impact Factor: 0 DOI: -	2012
Computational fluid dynamics (CFD) prediction of mass fraction profiles of gas oil and gasoline in fluid catalytic cracking (FCC) riser <i>Muhammad Ahsan</i> <i>Ain Shams Engineering Journal</i> , Volume 3, Issue 4, Pages 403-409 Impact Factor: 0 Citations: 15 DOI: http://dx.doi.org/10.1016/j.asej.2012.04.003	2012

Conference Proceedings

- Constructive Methods for Boundary Value Problems: Optimizing Heat and Mass Transfer in Porous Materials** 2025
Muhammad Ahsan
15th ISAAC (International Society for Analysis, its Applications and Computation) Congress, res.country(124,)
Citations: N/A
DOI: <https://doi.org/10.1007/>
- Computational Analysis of Permeance Prediction for Gas Separation Membrane Using Countercurrent Flow Model** 2024
Muhammad Ahsan Thomas LETTENBICHLER
28th International Conference on Circuits, Systems, Communications and Computers (CSCC), res.country(88,)
Citations: N/A
DOI: 10.37394/232031.2024.3.5
- Machine Learning-Enabled Prediction and Optimization of Sulfur Recovery Units: A Step towards Industry 4.0 Integration** 2023
Imran Khan Husnain Saghir Muhammad Ahsan
6th Conference on Emerging Materials and Processes (CEMP 2023), Islamabad, Pakistan, 22–23 November 2023, res.country(177,)
Citations: N/A
DOI: <https://doi.org/10.3390/materproc2024017006>
- Mathematical Modeling and Simulation of Coal Gasification Process by Applying Pinch and Cost Analysis** 2022
Muhammad Ahsan Muhammad Shoaib Zafar
92nd Annual Meeting of the International Association of Applied Mathematics and Mechanics, res.country(57,)
Citations: N/A
DOI: Nil
- An alternate approach for the numerical modeling of isothermal flash calculation using Peng-Robinson equation of state** 2018
Bilal Hussain Muhammad Ahsan Arshad Hussain
International Conference on Industrial Engineering & Operations Management Pretoria / Johannesburg, South Africa, res.country(247,)
Citations: N/A
DOI: N/A
- A numerical modeling of natural gas using multistage membrane permeation** 2017
Dr. Muhammad Ahsan Dr. Arshad Hussain
22nd International Congress on Modelling and Simulation (MODSIM2017), res.country(13,)
Citations: N/A
DOI: 10.1021/i260064a005

Book Chapters

- Multi-layer Composite (MLC) Membranes Gas Transport Models and Separation Mechanisms** 2025
Syed shujaat Karim Muhammad Ahsan Xianfeng Fan Zhibin Yu Sarah Farrukh
In: *Multi-Layer Composite (MLC) Membranes for Gas Separation*, Chapter 4, Pages 159-185
Citations: N/A
DOI: https://doi.org/10.1007/978-3-031-86402-5_4
- Techno-economic Analysis of Facilitated Transport Membranes (FTMs) Based CO2 Separation Processes** 2023
Muhammad Ahsan Arshad Hussain Syed Shujaat Karim Sarah Farrukh
In: *Book on Facilitated Transport Membranes (FTMs) for CO2 Capture: Overview and Future Trends*, Chapter 9, Pages 249-265
Citations: N/A
DOI: https://doi.org/10.1007/978-3-031-21444-8_9

Editorial Activities

- Water** 2024
Reviewed Papers for Journals
Impact Factor: 3.4

Processes Reviewed Papers for Journals Impact Factor: 2.8	2024
Powder Technology Reviewed Papers for Journals Impact Factor: 4.5	2024
Processes Reviewed Papers for Journals Impact Factor: 2.8	2024
Journal of the Taiwan Institute of Chemical Engineers Reviewed Papers for Journals Impact Factor: 5.5	2024
Journal of Marine Science and Engineering Reviewed Papers for Journals Impact Factor: 2.9	2024
Gels Reviewed Papers for Journals Impact Factor: 5	2024
Processe Reviewed Papers for Journals Impact Factor: 2.8	2024
Processes Reviewed Papers for Journals Impact Factor: 3.5	2024
Journal of Marine Science and Engineering Reviewed Papers for Journals Impact Factor: 2.7	2024
Modelling Reviewed Papers for Journals Impact Factor: 1.3	2024
Symmetry Reviewed Papers for Journals Impact Factor: 2.7	2024
Symmetry Reviewed Papers for Journals Impact Factor: 2.7	2024
Powder Technology Reviewed Papers for Journals Impact Factor: 4.5	2024
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.7	2024
Processes Reviewed Papers for Journals Impact Factor: 3.5	2024
Powder Technology Reviewed Papers for Journals Impact Factor: 4.5	2024
Biomimetics Reviewed Papers for Journals Impact Factor: 4.5	2024
Journal of Cleaner Production Reviewed Papers for Journals Impact Factor: 9.7	2024

Water Reviewed Papers for Journals Impact Factor: 3.4	2024
Journal of Marine Science and Engineering Reviewed Papers for Journals Impact Factor: 2.9	2024
Atmosphere Reviewed Papers for Journals Impact Factor: 2.9	2023
Processes Reviewed Papers for Journals Impact Factor: 3.5	2023
Processes Reviewed Papers for Journals Impact Factor: 3.5	2023
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.7	2023
Processes Reviewed Papers for Journals Impact Factor: 3.5	2023
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.7	2023
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.7	2023
Sustainability Reviewed Papers for Journals Impact Factor: 3.9	2023
Processes Reviewed Papers for Journals Impact Factor: 3.5	2023
AIP Advances Reviewed Papers for Journals Impact Factor: 1.6	2023
Symmetry Reviewed Papers for Journals Impact Factor: 2.7	2023
Powder Technology Reviewed Papers for Journals Impact Factor: 5.2	2023
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.7	2023
Journal of Marine Science and Engineering Reviewed Papers for Journals Impact Factor: 2.9	2023
Agriculture-Basel Reviewed Papers for Journals Impact Factor: 3.408	2023
Powder Technology Reviewed Papers for Journals	2023

Impact Factor: 5.2	
Processes	2023
Reviewed Papers for Journals	
Impact Factor: 3.352	
Processes	2023
Reviewed Papers for Journals	
Impact Factor: 3.352	
AIP Advances	2023
Reviewed Papers for Journals	
Impact Factor: 1.697	
Mathematical Problems in Engineering	2023
Reviewed Papers for Journals	
Impact Factor: 1.430	
Applied Sciences	2023
Reviewed Papers for Journals	
Impact Factor: 2.7	
Computers in Biology and Medicine	2023
Reviewed Papers for Journals	
Impact Factor: 6.698	
AIP Advances	2023
Reviewed Papers for Journals	
Impact Factor: 1.697	
Energies	2023
Reviewed Papers for Journals	
Impact Factor: 3.252	
Proceedings of The Institution of Mechanical Engineers Part G-Journal of AE	2023
Reviewed Papers for Journals	
Impact Factor: 0.175	
Defect and Diffusion Forum	2023
Reviewed Papers for Journals	
Impact Factor: 0.483	
NUST Journal of Engineering Sciences (Vol:15, No. 2)	2022
Edited Journal Issue / Proceeding / Book	
Impact Factor: 0	
Aerospace	2022
Reviewed Papers for Journals	
Impact Factor: 2.660	
NUST Journal of Engineering Sciences	2022
Reviewed Papers for Journals	
Impact Factor: N/A	
Applied Sciences	2022
Reviewed Papers for Journals	
Impact Factor: 2.838	
AIP Advances	2022
Reviewed Papers for Journals	
Impact Factor: 1.697	
Applied Sciences-Basel	2022
Reviewed Papers for Journals	
Impact Factor: 2.8	
Membranes	2022
Reviewed Papers for Journals	
Impact Factor: 4.562	
AIP Advances	2022

Reviewed Papers for Journals Impact Factor: 1.697	
Membranes Reviewed Papers for Journals Impact Factor: 3.748	2022
Journal of Advanced Research Reviewed Papers for Journals Impact Factor: 10.479	2022
Entropy Reviewed Papers for Journals Impact Factor: 2.738	2022
NUST Journal of Engineering Sciences Reviewed Papers for Journals Impact Factor: NA	2022
AIP Advances Reviewed Papers for Journals Impact Factor: 1.697	2021
Industrial Crops and Products Reviewed Papers for Journals Impact Factor: 6.449	2021
Computation Reviewed Papers for Journals Impact Factor: 2.55	2021
Scientific Reports Reviewed Papers for Journals Impact Factor: 4.996	2021
Applied Sciences-Basel Reviewed Papers for Journals Impact Factor: 2.838	2021
Pharmacy Reviewed Papers for Journals Impact Factor: NA	2021
Reviewed Papers for Journals Impact Factor: 1.697	2021
Reviewed Papers for Journals Impact Factor: 1.548	2021
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Reviewed Papers for Journals Impact Factor: 2.22	2021
Reviewed Papers for Journals Impact Factor: 4.589	2021
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Reviewed Papers for Journals Impact Factor: 2.328	2021
Reviewed Papers for Journals Impact Factor: 3.18	2020
Reviewed Papers for Journals Impact Factor: 1.763	2020
Reviewed Papers for Journals	2020
Reviewed Papers for Journals Impact Factor: 1.949	2020
Reviewed Papers for Journals	2020
Reviewed Papers for Journals Impact Factor: 1.502	2020

Reviewed Papers for Journals	
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Reviewed Papers for Journals	
Impact Factor: 3.84	
	2019
Edited Journal Issue / Proceeding / Book	
Impact Factor: -	
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Reviewed Papers for Journals	
Impact Factor: 2.029	
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Reviewed Papers for Journals	
Impact Factor: 6.992	
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	2018
Reviewed Papers for Journals	
	2018
Reviewed Papers for Journals	
Impact Factor: 1.61	
	2018
Reviewed Papers for Journals	
Impact Factor: 0.755	
	2018
Reviewed Papers for Journals	
	2017
Reviewed Papers for Journals	

Trainings

3 Weeks workshop on Energetic Materials vis-a-vis their Chemistry, Formulation & Safety Aspects Partner: Defense/Strategic Organization Duration: 22-May-2023 to 09-Jun-2023	2023
Aging Studies of Energetic Materials (Propellant and Explosive), 13- 17 June 2022 Partner: Defense/Strategic Organization Duration: 13-Jun-2022 to 17-Jun-2022	2022