

Dr. Nouman Ahmad

Assistant Professor  
School of Chemical & Materials Engineering  
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Contact:



About

Dr. Dr. Nouman Ahmad is working as Assistant Professor in the School of Chemical & Materials Engineering. Dr. Dr. Nouman Ahmad has a PhD in Computational fluid dynamics. Dr. Dr. Nouman Ahmad has published 19 research articles & conference papers having a citation count of 272, carried out 1 projects and filed 0 intellectual property.

Qualifications

PhD in Computational fluid dynamics	2014 - 2019
University of the Chinese Academy of Sciences , China	
MS in Chemical Engineering	2011 - 2014
Beijing University of Chemical Technology , China	
BS in Chemical Engineering	2005 - 2010
University of the Punjab , Pakistan	

Experience

Assistant Professor	2025- Present
School of Chemical & Materials Engineering	
Assistant Professor	2024 - 2024
School of Chemical & Materials Engineering	
Assistant Professor	2021 - 2024
School of Chemical & Materials Engineering	
Assistant Professor	2019 - 2021
Xian Jiaotong University , Xian, China	

Industry Projects

National Projects	
Lab scale production of Zeolite 4A from indigenous coal fly-ash obtained from Coal-fired Power plant	2022
Client: Industry	
Amount: PKR 2,500,000.00	
Status: Approved_inprocess	

International Projects

Research Articles

Carbon Dioxide Adsorption by Amine-Functionalized Silicalite-1 Zeolite: Impact of Amination on Surface Properties and Adsorption Efficiency	2024
Abdullah Umair Ameen Shahid Nabeel Ahmad Dr. Nouman Ahmad Dalaver Hussain Anjum	
Case Studies in Chemical and Environmental Engineering, Volume 10, Article Number 101028	
Impact Factor: N/A   Citations: 4	
DOI: https://doi.org/10.1016/j.cscee.2024.101028	
CFD modeling of CO2 capture in a non-isothermal circulating fluidized bed riser using K2CO3 solid sorbent	2024
Amolwan Sorrvichai Muhammad Adnan Nouman Ahmad Ratchanon Piemjaiswang Pornpote Piumsomboon Benjapon Chalermssinsuwan	
Journal of Environmental Chemical Engineering, Volume 12, Issue 6, Article Number 114247	
Impact Factor: 7.400   Quartile: 1   Citations: 1	
DOI: doi.org/10.1016/j.jece.2024.114247	

<b>Sensitivity analysis of a dense discrete phase model for 3D simulations of a Tapered fluidized bed</b> <i>Muhammad Adnan Nouman Ahmad Pornpote Piumsomboon Benjapon Chalermssinsuwan</i> <i>Particuology</i> , Volume:94, Page:59-83 <b>Impact Factor: 4.1   Quartile: 2</b> <b>DOI: 10.1016/j.partic.2024.07.019</b>	2024
<b>Integrative CFD and AI/ML-based modeling for enhanced alkaline water electrolysis cell performance for hydrogen production</b> <i>Abdullah Sirat Sher Ahmad Ittikhar Ahmad Nouman Ahmad Muhammad Ahsan</i> <i>International Journal of Hydrogen Energy</i> , Volume 83, Pages 1120-1131 <b>Impact Factor: 8.100   Quartile: 1   Citations: 5</b> <b>DOI: <a href="https://doi.org/10.1016/j.ijhydene.2024.08.184">https://doi.org/10.1016/j.ijhydene.2024.08.184</a></b>	2024
<b>NH3-SCR over Fe/SSZ-13 catalyst prepared by modification of natural chabazite</b> <i>Ameen Shahid Nabeel Ahmad Dr. Nouman Ahmad Sher Ahmed</i> <i>Case Studies in Chemical and Environmental Engineering</i> , Volume 10 , Article Number 100842 <b>Impact Factor: N/A</b> <b>DOI: <a href="https://doi.org/10.1016/j.csee.2024.100842">https://doi.org/10.1016/j.csee.2024.100842</a></b>	2024
<b>Coarse-graining dense discrete phase model for modeling particle dynamics in a 3D tapered fluidized bed coater: Analysis of different drag models</b> <i>Nouman Ahmad Muhammad Adnan Pornpote Piumsomboon Benjapon Chalermssinsuwan</i> <i>Journal of Food Engineering</i> , Volume 365, Article Number 111831 <b>Impact Factor: 5.5   Quartile: 1   Citations: 7</b> <b>DOI: <a href="https://doi.org/10.1016/j.jfoodeng.2023.111831">https://doi.org/10.1016/j.jfoodeng.2023.111831</a></b>	2024
<b>Aging prediction in single based propellants using hybrid strategy of machine learning and genetic algorithm</b> <i>Faizan Khalid Muhammad Nouman Aslam Khan Muhammad Abdaal Ghani Nouman Ahmad Abdullah Khurram Sattar</i> <i>Chemometrics and Intelligent Laboratory Systems</i> , Volume 245, Article Number 105058 <b>Impact Factor: 3.9   Quartile: 1   Citations: 7</b> <b>DOI: <a href="https://doi.org/10.1016/j.chemolab.2023.105058">https://doi.org/10.1016/j.chemolab.2023.105058</a></b>	2024
<b>Effect of zinc oxide and zinc oxide nanoparticles coating on urea diffusion and its release kinetics for design and development of slow-release fertilizer: an experimental and numerical investigation</b> <i>Bilal Beig Muhammad Bilal Khan Niazi Baseer Ullah Ahmed Nadeem Gondal Zaib Jahan Munir Zia Nouman Ahmad</i> <i>Journal of Coatings Technology and Research</i> , Pages 1-15 <b>Impact Factor: 2.3   Quartile: 3   Citations: 10</b> <b>DOI: <a href="https://doi.org/10.1007/s11998-023-00810-6">https://doi.org/10.1007/s11998-023-00810-6</a></b>	2023
<b>Wood as a green and sustainable alternative for environmentally friendly &amp; flexible electronic devices</b> <i>Nouman Ahmed Hizbullah Malik Muhammad Bilal Khan Niazi Waheed Miran Ahmed M. Tawfeek Zaib Jahan Emadeldin M. Kamel Muhammad Saeed Akhtar</i> <i>Chemosphere</i> , Volume 336, Article Number 139213 <b>Impact Factor: 8.8   Quartile: 1   Citations: 10</b> <b>DOI: 10.1016/j.chemosphere.2023.139213</b>	2023
<b>Numerical investigation for the suitable choice of bubble diameter correlation for EMMS/bubbling drag model</b> <i>Nouman Ahmad Jianqiang Deng Muhammad Adnan</i> <i>Chinese Journal of Chemical Engineering</i> , Volume 47, Pages 254-270 <b>Impact Factor: 3.898   Quartile: 2   Citations: 5</b> <b>DOI: <a href="https://doi.org/10.1016/j.cjche.2021.10.006">https://doi.org/10.1016/j.cjche.2021.10.006</a></b>	2022
<b>Validation and sensitivity analysis of an Eulerian-Eulerian two-fluid model (TFM) for 3D simulations of a tapered fluidized bed</b> <i>Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei</i> <i>Powder Technology</i> , Volume 396, Pages 490-518 <b>Impact Factor: 5.640   Quartile: 1   Citations: 34</b> <b>DOI: 10.1016/j.powtec.2021.08.057</b>	2022
<b>Comparative CFD modeling of a bubbling bed using a Eulerian–Eulerian two-fluid model (TFM) and a Eulerian-Lagrangian dense discrete phase model (DDPM)</b> <i>Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei</i> <i>Powder Technology</i> , Volume 383, Pages 418-442 <b>Impact Factor: 5.640   Quartile: 1   Citations: 66</b>	2021

DOI: <https://doi.org/10.1016/j.powtec.2021.01.063>

**Verification and validation of the DDPM-EMMS model for numerical simulations of bubbling, turbulent and circulating fluidized beds**

2021

Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei  
*Powder Technology*, Volume 379, Pages 69-88

**Impact Factor:** 5.640 | **Quartile:** 1 | **Citations:** 24

DOI: <https://doi.org/10.1016/j.powtec.2020.10.041>

**Multiscale modeling of bubbling fluidized bed reactors using a hybrid Eulerian-Lagrangian dense discrete phase approach**

2020

Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei  
*Powder Technology*, Volume 376, Pages 296-319

**Impact Factor:** 5.134 | **Quartile:** 1 | **Citations:** 13

DOI: <https://doi.org/10.1016/j.powtec.2020.07.111>

**Hydrodynamics in commercial-scale internally circulating fluidized beds with different central downcomer outlets**

2020

Zhenliang Meng Mengxi Liu Nouman Ahmad Wei Wang Chunxi Lu  
*Particuology*, Volume 51, Pages 120-131

**Impact Factor:** 3.067 | **Quartile:** 2 | **Citations:** 3

DOI: <https://doi.org/10.1016/j.partic.2019.09.007>

**Energy-minimization multiscale based mesoscale modeling and applications in gas-fluidized catalytic reactors**

2019

Bona Lu Niu Yan Feiguo Chen Nouman Ahmad Wang Wei Jinghai Li  
*Reviews in Chemical Engineering*, Volume 35, No. 8, Pages 879-915

**Impact Factor:** 5.315 | **Quartile:** 1 | **Citations:** 34

DOI: <https://doi.org/10.1515/revce-2017-0023>

**Extending the EMMS-bubbling model to fluidization of binary particle mixture: Parameter analysis and model validation**

2019

Nouman Ahmad Ying Tong Bona Lu Wei Wang  
*Chemical Engineering Science*, Volume 200, Pages 257-267

**Impact Factor:** 3.871 | **Quartile:** 1 | **Citations:** 24

DOI: <https://doi.org/10.1016/j.ces.2019.02.016>

**Extending the EMMS/bubbling model to fluidization of binary particle mixture: Formulation and steady-state validation**

2019

Nouman Ahmad Yujie Tian Bona Lu Kun Hong Haifeng Wang Wei Wang  
*Chinese Journal of Chemical Engineering*, Volume 27, Issue 1, Pages 54-62

**Impact Factor:** 2.627 | **Quartile:** 2 | **Citations:** 17

DOI: <https://doi.org/10.1016/j.cjche.2018.04.011>

**Ru55 nanoparticles catalyze the dissociation of H<sub>2</sub>O monomer and dimer to produce hydrogen: A comparative DFT study**

2016

Ping Cheng Yongpeng Yang Nouman Ahmad Shengli Zhang Shiping Huang  
*International Journal of Hydrogen Energy*, Volume 41, Issue 6, Pages 3844-3853

**Impact Factor:** 3.582 | **Quartile:** 1 | **Citations:** 8

DOI: <https://doi.org/10.1016/j.ijhydene.2016.01.017>