

# Muhammad Adnan

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## About

Dr. Muhammad Adnan is working as Assistant Professor in the School of Chemical & Materials Engineering. Dr. Muhammad Adnan has a PhD in Chemical Engineering. Dr. Muhammad Adnan has published 10 research articles & conference papers having a citation count of 204, carried out 0 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Chemical Engineering</b> Beijing University of Chinese Medicine and Pharmacology , China	2014 - 2019
<b>M.E in Chemical Engineering</b> Mehran University of Engineering & Technology , Pakistan	2011 - 2014
<b>BE in Chemical Engineering</b> Balochistan University of Information Technology, Engineering & Management Sciences , Pakistan	2006 - 2010

## Experience

<b>Assistant Professor</b> School of Chemical & Materials Engineering	2025- Present
<b>Assistant Professor</b> School of Chemical & Materials Engineering	2024 - 2024
<b>Postdoctoral</b> Chulalongkorn University , Chulalongkorn University	2022 - 2023
<b>Assistant Professor</b> Xian Jiao tong University , Xian Jiao tong Univer	2019 - 2021

## Research Articles

<b>CFD modeling of CO2 capture in a non-isothermal circulating fluidized bed riser using K2CO3 solid sorbent</b> <i>Amolwan Sornvichai Muhammad Adnan Nouman Ahmad Ratchanon Piemjaiswang Pornpote Piumsomboon Benjapon Chalermssinsuwan</i> <i>Journal of Environmental Chemical Engineering</i> , Volume 12, Issue 6, Article Number 114247 <b>Impact Factor:</b> 7.400   <b>Quartile:</b> 1   <b>Citations:</b> 1 <b>DOI:</b> doi.org/10.1016/j.jece.2024.114247	2024
<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:</b> 4.1   <b>Quartile:</b> 2 <b>DOI:</b> 10.1016/j.partic.2024.07.019	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:</b> 5.5   <b>Quartile:</b> 1   <b>Citations:</b> 7 <b>DOI:</b> https://doi.org/10.1016/j.jfoodeng.2023.111831	2024
<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	2022

**Impact Factor:** 3.898 | **Quartile:** 2 | **Citations:** 5  
**DOI:** <https://doi.org/10.1016/j.cjche.2021.10.006>

**Validation and sensitivity analysis of an Eulerian-Eulerian two-fluid model (TFM) for 3D simulations of a tapered fluidized bed**

2022

*Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei*  
*Powder Technology*, Volume 396, Pages 490-518

**Impact Factor:** 5.640 | **Quartile:** 1 | **Citations:** 34  
**DOI:** [10.1016/j.powtec.2021.08.057](https://doi.org/10.1016/j.powtec.2021.08.057)

**Comparative CFD modeling of a bubbling bed using a Eulerian–Eulerian two-fluid model (TFM) and a Eulerian-Lagrangian dense discrete phase model (DDPM)**

2021

*Muhammad Adnan Jie Sun Nouman Ahmad Jin Jia Wei*  
*Powder Technology*, Volume 383, Pages 418-442

**Impact Factor:** 5.640 | **Quartile:** 1 | **Citations:** 66  
**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>

**CFD simulations of a full-loop CFB reactor using coarse-grained Eulerian–Lagrangian dense discrete phase model: Effects of modeling parameters**

2019

*Muhammad Adnan Nan Zhang Wei Wang*  
*Powder Technology*, Volume 354, Pages 615-629

**Impact Factor:** 4.142 | **Quartile:** 1 | **Citations:** 32  
**DOI:** <https://doi.org/10.1016/j.powtec.2019.06.016>

**Numerical simulation of a semi-industrial scale CFB riser using coarse-grained DDPM-EMMS modelling**

2017

*Muhammad Adnan Nan Zhang Sun Fangfang Wei Wang*  
*The Canadian Journal of Chemical Engineering*, Volume 96, Issue 6, Pages 1403-1416

**Impact Factor:** 2.100 | **Quartile:** 3 | **Citations:** 22  
**DOI:** <https://doi.org/10.1002/cjce.23071>