Ayesha Raza

Assistant Professor

School of Chemical & Materials Engineering

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About

Dr. Ayesha Raza is working as Assistant Professor in the School of Chemical & Materials Engineering. Dr. Ayesha Raza has a PhD in Chemical Engineering. Dr. Ayesha Raza has published 10 research articles & conference papers having a citation count of 114, carried out 3 projects and filed 0 intellectual property.

Qualifications

PhD in Chemical Engineering 2017 - 2022
NUST, Islamabad , Pakistan

MS in membrane technology 2013 - 2015
NUST, Islamabad , Pakistan

BE in Chemical Engineering 2008 - 2012
NUST, Islamabad , Pakistan

Experience

Assistant Professor 2022- Present
School of Chemical & Materials Engineering

Lecturer 2020 - 2022
School of Chemical & Materials Engineering

Lecturer 2016 - 2020
School of Chemical & Materials Engineering

Lab Engineer 2016 - 2016
School of Chemical & Materials Engineering

Lab Engineer 2012 - 2016
School of Chemical & Materials Engineering

Lab engineer 2012 - 2016
SCME , room 325 scme nust h-12

Awards

Gold medal 2016
Achieved gold medal in MS

Hafiz e Quran 2003
Hafiz e Quran

Research Projects

National Projects

4th ASEAN-Pakistan Conference on Materials Science (APCoMS 2025) 2025

Funding Agency: ASEAN Pakistan Collaboration Fund

Amount: PKR 24,780,568.00

Status: Approved_inprocess

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

International Projects

Industry Projects

National Projects

Advancements in Adsorbent Technology for Enhanced Oxygen-Nitrogen Separation in Pressure Swing Adsorption Systems 2024

Client: ONNIOT

Amount: PKR 400,000.00

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

Fabrication and Permeation Analysis of Polysulfone (PSf) Modified Cellulose Triacetate (CTA) Blend Membranes for CO2 Separation from Methane (CH4 2023

Humais Roafi Sarah Farrukh Zarrar Salahuddin Ayesha Raza Syed Shujaat Karim Dr. Hizba Waheed

Journal of Polymers and the Environment, Pages: 17

Impact Factor: 5.3 | **Quartile:** 1 | **Citations:** 4

DOI: 10.1007/s10924-023-03125-0

Novel Cellulose Triacetate (CTA)/Cellulose Diacetate (CDA) Blend Membranes Enhanced by Amine Functionalized ZIF-8 for CO2 Separation 2021

Ayesha Raza Susilo Japip Can Zeng Liang Sarah Farrukh Arshad Hussain Tai-Shung Chung

Polymers , Volume 13(17), Article Number 2946

Impact Factor: 4.967 | **Quartile:** 1 | **Citations:** 20

DOI: 10.3390/polym13172946

Thickness Effect on Permeance of CO2/CH4 Gases in CA Coated PVDF Composite Membranes 2021

Ayesha Raza Muhammad Fahad Yousaf Sarah Farrukh Arshad Hussain

Transactions of the Indian Ceramic Society , Volume 80, Issue 2, Pages 89-95

Impact Factor: 2.355 | **Quartile:** 2 | **Citations:** 4

DOI: https://doi.org/10.1080/0371750X.2021.1880969

Advanced multiple-layer composite CTA/CDA hollow fiber membranes for CO2 separations 2021

Ayesha Raza Muhammad Askari Can zeng liang Napeng Sarah Farrukh Arshad Hussain Pai-shung chung

Journal of Membrane Science, Volume 625, Article Number 119124

Impact Factor: 10.530 | **Quartile:** 1 | **Citations:** 17

DOI: 10.1016/j.memsci.2021.119124

Performance Analysis of Blended Membranes of Cellulose Acetate with Variable Degree of Acetylation for CO2/CH4 Separation 2021

Sarrah Farrukh Mohd Hafiz Dzarfan Othman Arshad Hussain Imran Ullah Khan Mohd Hafiz Dzarfan Othman Ayesha Raza Mohd Hafiz Dzarfan Othman Muhammad Ahsan

Membranes , Volume 11, Issue 4, Article Number 245

Impact Factor: 4.562 | **Quartile:** 1 | **Citations:** 19

DOI: https://doi.org/10.3390/membranes11040245

Development of high performance amine functionalized zeolitic imidazolate framework (ZIF - 8)/cellulose triacetate mixed matrix membranes for CO2 /CH4 separation 2020

Dr. Tayyaba Noor Ayesha Raza Sarah Farrukh Arshad Hussain Imran Ullah Khan Mohd Hafiz Dzarfan Othman Muhammad Fahad Yousaf

International Journal of Energy Research, Pages 1–11

Impact Factor: 5.164 | **Quartile:** 1 | **Citations:** 32

DOI: https://doi.org/10.1002/er.5448

Synthesis, Characterization and NH3/N2 Gas Permeation Study of Nanocomposite Membranes 2017

Ayesha Raza Sarah Farrukh Arshad Hussain

Journal of Polymers and the Environment, Volume 25, Issue 1, Pages 46-55

Impact Factor: 2.572 | **Quartile:** 2 | **Citations:** 18

DOI: 10.1007/s10924-016-0783-6

Book Chapters

Introduction: MLC membranes book 2025

Syed shujaat Karim Ayesha Raza Xianfeng Fan Zhibin Yu Sarah Farrukh

In: *Multi-Layer Composite (MLC) Membranes for Gas Separation*, Chapter 1, Pages 1-30

Citations: N/A

DOI: https://doi.org/10.1007/978-3-031-86402-5_1

Graphene Nanocomposites 2021

Ayesha Raza Sarah Farrukh

In: *Handbook of Polymer and Ceramic Nanotechnology* , Pages 1-19

Citations: N/A

DOI: doi.org/10.1007/978-3-030-10614-0_81-1

Editorial Activities

Journal of Applied Polymer Science 2024

Reviewed Papers for Journals

Impact Factor: 3.12

Journal of Applied Polymer Science 2024

Reviewed Papers for Journals

Impact Factor: 3.12