

Sallahuddin Panhwar

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About

Dr. Sallahuddin Panhwar is working as Associate Professor in the NUST Balochistan Campus. Dr. Sallahuddin Panhwar has a PhD in Water Nanomaterials and Biosensors. Dr. Sallahuddin Panhwar has published 42 research articles & conference papers having a citation count of 370, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Water Nanomaterials and Biosensors	2015 - 2019
Mehran University of Engineering & Technology , Pakistan	
Post Grad Diploma in Health and Safety	2012 - 2014
Mehran University of Engineering & Technology , Pakistan	
BE in Drilling and blasting methods in mining	2006 - 2011
Mehran University of Engineering & Technology , Pakistan	

Experience

Associate Professor	2025- Present
NUST Balochistan Campus	
Assistant Professor	2024 - 2024
NUST Balochistan Campus	
Assistant Professor	2023 - 2024
NUST Balochistan Campus	
Assistant Professor	2022 - 2023
NUST Balochistan Campus	
Postdoc Fellow	2023 - 2023
Gazi University Ankara, Turkey , Emniyet, Taç Sokağı No:3, 06330 Yenimahalle/Ankara, Türkiye	
16 months	2020 - 2022
Department of Civil Engineering at Balochistan University of Engineering and Technology, Khuzdar, Balochistan , Khuzdar	
Research Associate	2020 - 2020
Us-Pakistan Center for Advanced Studies in Water at Mehran University of Engineering and Technology, Jamshoro, Sindh , Mehran University of Engineering and Technology, Jamshoro, Sindh	
Research scholar	2019 - 2019
Gazi University , Gazi University, Faculty of Pharmacy, Department of Analytical Chemistry, Ankara 06330, Turkey	
Research scholar	2018 - 2018
Utah University , Metallurgical Engineering Department, University of Utah 135 S 1460 E /WBB 00412 Salt Lake City, UT 84112 USA	

Research Articles

Rapid bacterial detection through microfluidic integration with a glucometer	2025
Merve Eryilmaz Sibel Ilbasmis-Tamer Sallahuddin Panhwar Zekiye Suludere Demet Çetin Adem Zengin Ender Yıldırım Ugur Tamer Emine Kübra Tayyarcan Ismail Hakkı Boyacı Bioelectrochemistry , Volume:164, Article Number 108936 Impact Factor: 4.800 Quartile: 1 Citations: 1 DOI: https://doi.org/10.1016/j.bioelechem.2025.108936	
Investigating the Impact of Organic Loading Rates and Magnetic Nanoparticles on the Performance and Stability of Continuous Stirred Tank Reactors	2025

Asim Ali Adham Mohammed Hezam Al-Nadish Sallahuddin Panhwar Hareef Ahmed Keerio Rasool Bux Mahar Abdul Waheed
Processes , Volume:13, Issue:7, Article Number 2126

Impact Factor: 2.800 | **Quartile:** 3

DOI: 10.3390/pr13072126

Advanced Strategies to Accumulate Nitrite in Low-feed Concentrated Biological Reactors

2025

Hareef Ahmed Keerio Sallahuddin Panhwar Said Nawab Mujeeb Ur Rahman Syed Bilal Shah Sultan Suboktagin Amjad Ali
Water Air and Soil Pollution , Volume 236, Article Number 439

Impact Factor: 3.800 | **Quartile:** 1

DOI: <https://doi.org/10.1007/s11270-025-08099-4>

Assessment of potability of drinking water: an appraisal using trivariate water quality indices

2025

Ameer Asghar GhulamShabir Solangi Zouhaib Ali Sallahuddin Panhwar Hareef Ahmed Keerio Abdul Kabeer Ghanghro Mukhtar Ahmed Kanya Lal Khatri
Amjad Ali
Water Practice & Technology , Volume 20(5), Pages 1105–1119

Impact Factor: 1.800 | **Quartile:** 3

DOI: 10.2166/wpt.2025.068

Assessment of groundwater quality in Piryaloi, Pakistan: integrating GPI, SPI, and GIS for comprehensive analysis

2025

Abdul Shakoar Mahar Ghulam Shabir Solangi Altaf Alam Noonari Kanya Lal Khatri Sallahuddin Panhwar Hareef Ahmed Keerio Naila Gul Rabia Soomro
Jahanzeb Khaskheli
Water Supply , Volume:25, Issue:3, Pages 545-558

Impact Factor: 1.900 | **Quartile:** 3

DOI: <https://doi.org/10.2166/ws.2025.033>

Phage probe on RAFT polymer surface for rapid enumeration of E. coli K12

2024

Sallahuddin Panhwar Hüseyin Çelikkan Eylül Evran Esra Ekiz Kubra Ozkan Hukum Demet Çetin Zekiye Suludere Ismail Hakki Boyaci Ugur Tamer
Bioelectrochemistry , Volume: 160 , Article Number:108785

Impact Factor: 4.8 | **Quartile:** 1 | **Citations:** 3

DOI: 10.1016/j.bioelechem.2024.108785

A Fascinating Exploration into Nitrite Accumulation into low concentration Reactors using Cutting-Edge Machine Learning Techniques

2024

Hareef Ahmed Keerio Sabab Ali Shah Zouhaib Ali Sallahuddin Panhwar Ghullam Shabir Solangi Azizullah Amjad Ali Rizwan Wahab Yang-Chun Yong
Process Biochemistry , Volume 146 , Pages 160-168

Impact Factor: 3.700 | **Quartile:** 2 | **Citations:** 2

DOI: <https://doi.org/10.1016/j.procbio.2024.07.030>

Efficient banana peel powder-based bio-sorbent for moxifloxacin adsorptive removal

2024

Z. Pitafi S. A. Memon R. O. Z. Brohi Sallahuddin Panhwar Z. Siddiqui H. A. Keerio
International Journal of Environmental Science and Technology , Pages: 12

Impact Factor: 3.0 | **Quartile:** 2 | **Citations:** 3

DOI: <https://doi.org/10.1007/s13762-024-06205-3>

A Study of Mathematical Models Used in Anaerobic Digestion of Organic Refuse

2024

Asim Ali Hareef Ahmed Keerio Oshaque Ali Abro Muhammad Noor Sallahuddin Panhwar Rasool Bux Mahar
VFAST Transactions on Mathematics , Volume 12, Number 1, Pages 150-163

Impact Factor: N/A

DOI: 10.21015/vtm.v12i1.1771

Machine learning, Water Quality Index, and GIS-based analysis of groundwater quality

2024

Ghulam Shabir Solangi Zouhaib Ali Muhammad Bilal Muhammad Junaid Sallahuddin Panhwar Hareef Ahmed Keerio Iftikhar Hussain Sohu Sheeraz Gul
Shahani Noor Zaman
Water Practice and Technology , Volume 19 (2), Pages 384-400

Impact Factor: 1.600 | **Quartile:** 3 | **Citations:** 6

DOI: 10.2166/wpt.2024.014

Electrochemical Immunosensor in Combination with an Artificial Neural Network Study for Pathogenic Bacteria Detection using a Modified Glassy Carbon Electrode

2023

Sallahuddin Panhwar Hareef Ahmed Keerio Asim Ali Muhammad Muqeet Nadar Hussain Khokhar Ghulam Shabir Solangi
Applied Biochemistry and Microbiology , Volume 59, Pages 975-985

Impact Factor: 0.8 | **Quartile:** 4 | **Citations:** 1

DOI: 10.1134/S0003683823060261

Detailed evaluation of physicochemical properties and microbial activities of Hanna Lake and Spin Karez <i>Zouhaib Ali Muhammad Bilal Sallahuddin Panhwar Muhammad Sharjeel Azhar Muhammad Bilal Asif Hamza Subhani Syeda Sara Hassan</i> <i>Water Practice and Technology</i>, Volume 18, Issue 6, Pages 1500-1511 Impact Factor: 1.600 Quartile: 3 Citations: 4 DOI: https://doi.org/10.2166/wpt.2023.095	2023
Enhanced cellulose nanofiber mechanical stability through ionic crosslinking and interpretation of adsorption data using machine learning <i>Muhammad Muqheet Hammad Malik Sallahuddin Panhwar Imran Ullah Khan Fida Hussain Zeeshan Asghar Zeeshan Khatri Rasool Bux Mahar</i> <i>International Journal of Biological Macromolecules</i>, Volume 237, Article Number 124180 Impact Factor: 8.025 Quartile: 1 Citations: 6 DOI: https://doi.org/10.1016/j.ijbiomac.2023.124180	2023
Estimation of irrigation water requirement and irrigation scheduling for major crops using the CROPWAT model and climatic data <i>Shumaila Soomro Ghulam Shabir Solangi Altaf Ali Siyal Asad Golo Nabi Bux Bhatti Abdul Ghani Soomro Aneela Hameem Memon Sallahuddin Panhwar Hareef Ahmed Keerio</i> <i>Water Practice and Technology</i>, Volume 18(3), Pages 685-700 Impact Factor: 1.600 Quartile: 3 Citations: 19 DOI: https://doi.org/10.2166/wpt.2023.024	2023
Study of GIS-based groundwater potential zones for agricultural sustainability in the arid region <i>Aneela Hameem Memon Abdul Ghani Soomro Sallahuddin Panhwar Hareef Ahmed Keerio Naddar Hussain Khokhar Jumo Khan Bajkani Sabeen Siddiqui Mumtaz Ali Gadehi</i> <i>Water Practice and Technology</i>, Volume 18, Issue 3, Pages 536-546 Impact Factor: 1.6 Quartile: 3 Citations: 3 DOI: doi: 10.2166/wpt.2023.020	2023
Generation of Green Renewable Energy Through Anaerobic Digestion Technology (ADT): Technical Insights Review <i>Asim Ali Rasool Bux Mahar Sallahuddin Panhwar Hareef Ahmed Keerio Nadar Hussain Khokhar Fatimah Suja Li Rundong</i> <i>Waste and Biomass Valorization</i>, Volume 14, Issue 3, Pages 663-686 Impact Factor: 3.449 Quartile: 3 Citations: 8 DOI: https://doi.org/10.1007/s12649-022-02001-7	2023
Nitrite Accumulation at Low Ammonia Concentrations in Wastewater Treatment Plants <i>Hareef Ahmed Keerio Wookeun Bae Sallahuddin Panhwar</i> <i>Sustainability</i>, Volume 14, Issue 24, Article Number 16449 Impact Factor: 3.889 Quartile: 2 Citations: 6 DOI: https://doi.org/10.3390/su142416449	2022
Fabrication of Disposable Electrodes Based on Green Synthesized Iron Oxide Nanoparticles for Enumeration of Bacteria in Water <i>Ramsha Ijaz Syeda Sara Hassan Sallahuddin Panhwar Muhammad Younis Talpur Salah Uddin Zubair Ahmed</i> <i>Journal of the Electrochemical Society</i>, Volume 169, Number 12, Article Number 127502 Impact Factor: 4.371 Quartile: 2 Citations: 4 DOI: 10.1149/1945-7111/aca0ca	2022
Carbon Sequestration by Different Species of Trees in Tando Jam, Pakistan <i>Khalid Hussain Abdul Majeed Pirzada Muhammad Hashim Zuberi Muhammad Amin Qureshi Syeda Urooj Fatima Hareef Ahmed Keerio Sallahuddin Panhwar Asma Leghari Imran Ali</i> <i>FUUAST Journal of Biology</i>, Volume 12(2), Pages 65-72 Impact Factor: N/A DOI: 65-72	2022
Cascade Reservoirs: An Exploration of Spatial Runoff Storage Sites for Water Harvesting and Mitigation of Climate Change Impacts, Using an Integrated Approach of GIS and Hydrological Modeling <i>Abdul Ghani Soomro Sabab Ali Shah Sallahuddin Panhwar Anila Hameem Memon Raied Saad Alharabi Darya Memon Hareef Ahmed Keerio</i> <i>Sustainability</i>, Volume 14(20), Article Number 13538 Impact Factor: 3.889 Quartile: 2 Citations: 1 DOI: https://doi.org/10.3390/su142013538	2022
Estimation of nitrous oxide emissions from rice paddy fields using the DNDC model: a case study of South Korea	2022

Nadar Hussain Khokhar Imran Ali Hubdar Ali Maitlo Naeem Abbasi Sallahuddin Panhwar Hareef Ahmed Keerio Asim Ali Salah Uddin
Water Science and Technology, Volume 86, Issue 6, Pages 1308-1324

Impact Factor: 2.430 | **Quartile:** 3 | **Citations:** 3

DOI: <https://doi.org/10.2166/wst.2022.271>

Investigation of Irrigation Water Requirements for Major Crops Using CROPWAT Model Based on

2022

Climate Data

Sallahuddin Panhwar Ghulam Shabir Solangi Sabab Ali Shah Raied Saad Alharbi Hareef Ahmed Keerio Tae-Woong Kim Junaid Ahmed Memon Junaid Ahmed Memon

Water, Volume 14, Issue 16, Article Number 2578

Impact Factor: 3.530 | **Quartile:** 2 | **Citations:** 28

DOI: <https://doi.org/10.3390/w14162578>

Social and ecological climate change vulnerability assessment in the Indus delta, Pakistan

2022

Sallahuddin Panhwar Altaf Ali Siyal Ghulam Shabir Solangi Zain-ul-Abdin Siyal Pirah Siyal Hareef Ahmed Keerio Nabi Bux Bhatti

Water Practice and Technology, Volume 17(8), Pages 1666-1678

Impact Factor: N/A | **Citations:** 9

DOI: <https://doi.org/10.2166/wpt.2022.087>

Geospatial weighted overlay analysis for suitable site selection of wastewater treatment plant in landhi industrial area, Karachi

2022

Sallahuddin Panhwar Tahira Zafar Abdul Majeed Pirzada Suhail Ahmed Rajput Khalid Hassan Siraj Ahmed Sumaira Zafar Hareef Ahmed Keerio
Journal of Tianjin University Science and Technology, Volume 55, Issue 05, Pages 746-754

Impact Factor: N/A

DOI: 10.17605/OSF.IO/4WQAD

Water quality analysis of old and new Phuleli Canal for irrigation purpose in the vicinity of Hyderabad, Pakistan

2022

Muhammad Yousif Panhwar Sallahuddin Panhwar Hareef Ahmed Keerio Nadar Hussain Khokhar Sabab Ali Shah Nasreen Pathan
Water Practice & Technology, Volume: 17, Issue: 02, Pages 529–536

Impact Factor: N/A | **Citations:** 23

DOI: <https://doi.org/10.2166/wpt.2022.006>

High-Performance E. coli Antibody-Conjugated Gold Nanorods for the Selective Electrochemical Detection of Pathogens in Drinking Water

2021

Sallahuddin Panhwar Hasan ilhan Adnan Aftab Muhammad Muqeet Hareef Ahmed Keerio Ghulam Shabir Solangi Zekiye Suludere Ugur Tamer
Journal of Electronic Materials, Volume 50, Pages 7119-7125

Impact Factor: 2.047 | **Quartile:** 3 | **Citations:** 15

DOI: 10.1007/s11664-021-09247-2

A Novel Approach for Real-Time Enumeration of Escherichia coli ATCC 47076 in Water through High Multi-Functional Engineered Nano-Dispersible Electrode

2021

Sallahuddin Panhwar Adnan Aftab Hareef Ahmed Keerio Hasan Ilhan Mohammad Sarmadivaleh Ugur Tamer
Journal of the Electrochemical Society, Volume 168, Number 3, Article Number 037514

Impact Factor: 4.371 | **Quartile:** 2 | **Citations:** 16

DOI: 10.1149/1945-7111/ abec67

Influence of tailor-made TiO₂/API bentonite nanocomposite on drilling mud performance: Towards enhanced drilling operations

2020

Adnan Aftaba Muhammad Ali Muhammad Arif Sallahuddin Panhwar Noori M. Cata Saady Emad A. Al-Khdheawi Omar Mahmoud Abdul Razak Ismail Alireza Keshavarz Stefan Iglaue

Applied Clay Science, Volume 199, Article Number 105862

Impact Factor: 5.467 | **Quartile:** 1 | **Citations:** 105

DOI: <https://doi.org/10.1016/j.clay.2020.105862>

Dual Responsive Disposable Electrode for the Enumeration of Escherichia coli in Whole Blood

2020

Sallahuddin Panhwar Hasan Ilhan Syeda Sara Hassan Adem Zengin Ismail Hakkı Boyacı Ugur Tamer
Electroanalysis, Volume 32, Issue 10, Pages 2244-2252

Impact Factor: 3.223 | **Quartile:** 2 | **Citations:** 15

DOI: 10.1002/elan.202060185

Methane Production by Anaerobic Digestion of Spent Wash in Continuous Stirred Tank Reactor

2019

Sallahuddin Panhwar Abdul Razaque Sahito Ghulam Shabir Solangi Rasool Bux Mahar Jawahar Lal Mehran University Research Journal of Engineering and Technology, Volume 38, No. 3, Pages 783-790

Impact Factor: N/A

DOI: 10.22581/muet1982.1903.21

Highly Sensitive and Selective Electrochemical Sensor for Detection of Escherichia coli by Using L-Cysteine Functionalized Iron Nanoparticles 2019

Sallahuddin Panhwar Syeda Sara Hassan Rasool Bux Mahar Krista Carlson Manzoor ul Haq Rajput Muhammad Younis Talpur
Journal of the Electrochemical Society, Volume 166, Number 4, Article Number B227

Impact Factor: 3.721 | **Quartile:** 1 | **Citations:** 31

DOI: 10.1149/2.0691904jes

Synthesis of L-Cysteine Capped Silver Nanoparticles in Acidic Media at Room Temperature and Detailed Characterization 2018

Sallahuddin Panhwar Syeda Sara Hassan Rasool Bux Mahar Ali Canlier Sirajuddin Munazza Arain
Journal of Inorganic and Organometallic Polymers and Materials, Volume 28, Pages 863-870

Impact Factor: 1.637 | **Quartile:** 3 | **Citations:** 19

DOI: 10.1007/s10904-017-0748-9

Impairment of Water Quality of Phuleli Canal, Sindh Pakistan: A Review 2017

Muhammad Wajid Ijaz Rasool Bux Mahar Ghulam Shabir Solangi Sallahuddin Panhwar Abdul Khaliq Ansari
Mehran University Research Journal of Engineering and Technology, Volume 36, No. 3, Pages 681-692

Impact Factor: N/A

DOI: <https://doi.org/10.22581/muet1982.1703.23>

Fabrication of highly sensitive and selective electrochemical sensors for detection of paracetamol by using piroxicam stabilized gold nanoparticles 2017

Syeda Sara Hassan Sallahuddin Panhwar Ayman Nafady Abdullah M. Al-Enizi Sirajuddin Syed Tufail Hussain Sherazi Muhammad Siddique Kalhoro
Munazza Arain Muhammad Raza Shah M. Younis Talpur
Journal of the Electrochemical Society, Volume 164, Number 9, Article Number B427

Impact Factor: 3.662 | **Quartile:** 1 | **Citations:** 18

DOI: 10.1149/2.0811709jes

Book Chapters

Detection of chemical contaminations in food via Raman spectroscopy 2025

Sallahuddin Panhwar Uğur Tamer Hasan İlhan Hareef Ahmed Keerio Ghullam Shabir Solangi İsmail Hakkı Boyacı
In: *Raman Spectroscopy in the Food Industry*, 1st Edition, Chapter 5, Pages 146-167

Citations: N/A

DOI: 10.1201/9781003359975

Wastewater and Reuse for Agriculture 2024

Nadar Hussain Khokhar Sallahuddin Panhwar Hareef Ahmed Keerio Asim Ali Syeda Sara Hassan Salah Uddin
In: *Book on Application of Nanotechnology for Resource Recovery from Wastewater*, 1st Edition, Chapter 2, Pages 19-35

Citations: 1

DOI: 10.1201/9781003176350

Optical Based Transducers for Biosensors 2022

Hasan İlhan Sallahuddin Panhwar Ugur Tamer
In: *Book on Biosensors: Fundamentals, Emerging Technologies, and Applications*, 1st Edition, Chapter 3, Pages 57-88

Citations: N/A

DOI: <https://www.routledge.com/Biosensors-Fundamentals-Emerging-Technologies-and-Applications/Ozkan-Uslu-Sezginturk/p/book/9781032038650?srsltid=AfmBOopJdpG1MbvenVhbMzAFkjNOiJKbvJxSLdaebXD2Yie8Vtj7aQ4O>

Optical nanosensor based on surface-enhanced Raman spectroscopy for biomedical and biomarker detection applications 2021

Ugur Tamer Sallahuddin Panhwar Hasan İlhan İsmail Hakkı Boyacı
In: *Book on The Detection of Biomarkers Past, Present and the Future Prospects*, Chapter 10, Pages 255-276

Citations: 2

DOI: <https://doi.org/10.1016/B978-0-12-822859-3.00005-5>

Electroanalytical application of quantum dots in microchips 2021

Sallahuddin Panhwar Hasan İlhan Ugur Tamer
In: *Book on Electroanalytical Applications of Quantum Dot-Based Biosensors*, Chapter 11, Pages 379-393

Citations: 3

DOI: <https://doi.org/10.1016/B978-0-12-821670-5.00003-8>