

Abeera Ayaz Ansari

Assistant Professor

US-Pakistan Center for Advanced Studies in Energy

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About

Dr. Abeera Ayaz Ansari is working as Assistant Professor in the US-Pakistan Center for Advanced Studies in Energy. Dr. Abeera Ayaz Ansari has a PhD in Wastewater Treatment, Oxygenic Photogranules. Dr. Abeera Ayaz Ansari has published 22 research articles & conference papers having a citation count of 349, carried out 3 projects and filed 0 intellectual property.

Qualifications

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| PhD in Wastewater Treatment, Oxygenic Photogranules University of Massachusetts at Amherst , United States | 2015 - 2020 |
| MS in Biofuels, Algae Based Wastewater Treatment NUST, Islamabad , Pakistan | 2012 - 2014 |
| BE in Wastewater Treatment NUST, Islamabad , Pakistan | 2008 - 2012 |

Experience

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|---|---------------|
| Assistant Professor US-Pakistan Center for Advanced Studies in Energy | 2025- Present |
| Assistant Professor US-Pakistan Center for Advanced Studies in Energy | 2022 - 2020 |
| Assistant Professor US-Pakistan Center for Advanced Studies in Energy | 2020 - 2022 |

Awards

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| President's Gold Medal Awarded for MS Energy Systems Engineering | 2018 |
| President's Gold Medal Awarded for B.E. Environmental Engineering | 2013 |

Research Projects

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| National Projects | |
| Impact of Climate Change on the Fishery Communities dependent upon Manchar Lake, Sindh, Pakistan Funding Agency: The Pulitzer Center's Amount: PKR 1,088,100.00 Status: Approved_inprocess | 2023 |
| Ducted Wind Turbines for Urban Areas Funding Agency: NUST Amount: PKR 1,000,000.00 Status: Approved_inprocess | 2024 |
| Reclamation of Industrial Wastewater Using Novel Aeration- Free Oxygenic Photogranulation (OPG) Technology for bioenergy prospective Funding Agency: NUST Amount: PKR 990,000.00 Status: Completed | 2022 |

International Projects

- Parametric analysis and prototype development of smog-free tower for sustainable urban environment** 2025
Muhammad Hamza sana yaqub Majid Ali Mustafa Anwar Abeera Ayaz Ansari Qazi Shahzad Ali Awais Bokhari Muhammad Murtaza Separation and Purification Technology, Volume 362, Part 2, Article Number 131776
Impact Factor: 8.100 | **Quartile:** 1
DOI: <https://doi.org/10.1016/j.seppur.2025.131776>
- Investigating the impact of oxygenic photo granules (OPGs) structure on wastewater treatment and bioenergy generation** 2025
Kinza Rizwan Ali Raza Abeera Ayaz Ansari Asif Hussain Ghayoor Abbas Israf Ud Din Bilal Alam Khan Umair Yaqub Qazi Journal of Environmental Chemical Engineering, Volume 13, Issue 3, Article Number 116838
Impact Factor: 7.400 | **Quartile:** 1
DOI: [10.1016/j.jece.2025.116838](https://doi.org/10.1016/j.jece.2025.116838)
- Performance prediction of sludge volume index of oxygenic photogranule based wastewater treatment system using machine learning algorithms** 2024
Sidra Yasin Abeera Ayaz Ansari Abdul Kashif Janjua Joseph Gitau Gikonyo Ghayoor Abbas Journal of Water Process Engineering, Volume 66, Article Number 106064
Impact Factor: 6.300 | **Quartile:** 1
DOI: <https://doi.org/10.1016/j.jwpe.2024.106064>
- Current and future implications of bitcoin mining on energy and climate change** 2024
Muhammad Yousaf Bukhari Dr Abeera Ayaz Ansari Dr Muhammad Yousif Dr Muhammad Hassan Usama Hassan MRS Energy and Sustainability, Pages: 14
Impact Factor: 3.300 | **Quartile:** 3 | **Citations:** 5
DOI: [10.1557/s43581-024-00084-4](https://doi.org/10.1557/s43581-024-00084-4)
- The Coupled Effect of Light and Iron on the Photogranulation Phenomenon** 2023
Abeera Ayaz Ansari Arfa Ayaz Ansari Joseph G. Gikonyo Ahmed S. Abouhend Chul Park Environmental Science and Technology (ES&T), Volume 57, No. 24, Pages 9086-9095
Impact Factor: 11.4 | **Quartile:** 1 | **Citations:** 5
DOI: <https://doi.org/10.1021/acs.est.3c00432>
- The fate and dynamics of iron during the transformation of activated sludge into oxygenic photogranules (OPGs) under hydrodynamic batch conditions for environmental applications** 2022
Abeera Ayaz Ansari Arfa Ayaz Ansari Asif Hussain Khoja Gitau J. Gikonyo Ahmed S. Abouhend Chul Park Journal of Environmental Chemical Engineering, Volume 10, Issue 4, Article Number 108190
Impact Factor: 7.968 | **Quartile:** 1 | **Citations:** 6
DOI: <https://doi.org/10.1016/j.jece.2022.108190>
- Investigating the characterisation, kinetic mechanism, and thermodynamic behaviour of coal-biomass blends in co-pyrolysis process** 2022
Hamad Gohar Asif Hussain Khoja Abeera Ayaz Ansari Salman Raza Naqvi Rabia Liaquat Muhammad Hassan Khalil Hasni Umair Yaqoob Qazi Imtiaz Ali Process Safety and Environmental Protection, Volume 163, Pages 645-658
Impact Factor: 6.158 | **Quartile:** 1 | **Citations:** 52
DOI: [10.1016/j.psep.2022.05.063](https://doi.org/10.1016/j.psep.2022.05.063)
- Thermokinetics synergistic effects on co-pyrolysis of coal and rice husk blends for bioenergy production** 2022
Maham Tauseef Abeera Ayaz Ansari Asif Hussain Khoja Salman Raza Naqvi Rabia Liaquat William Nimmo Syed Sheraz Daood Fuel, Volume 318, Article Number 123685
Impact Factor: 6.609 | **Quartile:** 1 | **Citations:** 47
DOI: <https://doi.org/10.1016/j.fuel.2022.123685>
- Environmental Impact Assessments of the Renewable Energy Technologies Adaptation** 2022
Abdul Basit Muhammad Hassan Saira Kamwal Mustafa Anwar Syed Ali Abbas Kazmi Abeera Ayaz Ansari Pakistan Journal of Engineering and Technology, Volume 5, Number 2, Pages 100-103
Impact Factor: N/A
DOI: 2664-2042, ISSN (e): 2664-2050
- Photogranulation in a Hydrostatic Environment Occurs with Limitation of Iron** 2021
Abeera A. Ansari Arfa A. Ansari Ahmed S. Abouhend Joseph G. Gikonyo Chul Park Environmental Science and Technology (ES&T), Volume 55(15), Pages 10672-10683
Impact Factor: 11.357 | **Quartile:** 1 | **Citations:** 17

DOI: <https://doi.org/10.1021/acs.est.0c07374>

Hydrodynamic granulation of oxygenic photogranules

2021

Joseph G. Gikonyo Abeera Ayaz Ansari Ahmed S. Abouhend John E. Tobiason Chul Park
Environmental Science: Water Research & Technology, Volume 7, Pages 427-440

Impact Factor: 5.819 | **Quartile:** 1 | **Citations:** 30

DOI: <https://doi.org/10.1039/D0EW00957A>

Development of Cost-Effective Fertilizer-Based Media for the Microalgae Cultivation Aimed at Effective Biomass Production

2020

Muneeb Qayyum Asif Hussain Khoja Salman Raza Naqvi Haider Ejaz Azra Nawar Abeera Ayaz Ansari
NUST Journal of Engineering Sciences, Volume 13, No. 2, Pages 45-51

Impact Factor: 0

DOI: <https://doi.org/10.24949/njes.v13i2.628>

Growth Progression of Oxygenic Photogranules and Its Impact on Bioactivity for Aeration-Free Wastewater Treatment

2020

Ahmed S. Abouhend Kim Milferstedt Jérôme Hamelin Caitlyn S. Butler Blanca Carbajal Gonzalez Chul Park Abeera A. Ansari
Environmental Science and Technology (ES&T), Volume 54(1), Pages 486-496

Impact Factor: 9.028 | **Quartile:** 1 | **Citations:** 79

DOI: <https://doi.org/10.1021/acs.est.9b04745>

Effects of seeding density on photogranulation and the start-up of the oxygenic photogranule process for aeration-free wastewater treatment

2019

Dr. Abeera Ayaz Ansari Ahmed S. Abouhend Chul Park Ahmed S. Abouhend Chul Park
Algal Research, Volume 40, Article No.101495

Impact Factor: 4.008 | **Quartile:** 1 | **Citations:** 40

DOI: <https://doi.org/10.1016/j.algal.2019.101495>

Fermentation of Sugarcane Molasses Using Zymomonas Mobilis for Enhanced Bioethanol Production

2018

Asif Hussain Khoja Sabrina Mohidin Yahya Azra Nawar Dr. Abeera Ayaz Ansari Muneeb Qayyum
Journal of Advanced Research in Applied Sciences and Engineering Technology, Volume 11, Issue 1, Pages 31-38

Impact Factor: -

DOI: -

Physical abrasion method using submerged spike balls to remove algal biofilm from photobioreactors

2017

Asif Hussain Khoja Azra Nawar Naveed Akbar Abeera Ayaz Ansari Muneeb Qayyum Ehsan Ali
BMC Research Notes, Volume 10, Issue 1, Article Number 666

Impact Factor: - | **Citations:** 8

DOI: <https://doi.org/10.1186/s13104-017-2995-9>

Wastewater treatment by local microalgae strains for CO2 sequestration and biofuel production

2017

Dr. Abeera Ayaz Ansari Asif Hussain Khoja Azra Nawar Muneeb Qayyum Ehsan Ali
Applied Water Science, Volume 7, Issue 7, Pages 4151-4158

Impact Factor: N/A | **Citations:** 60

DOI: 10.1007/s13201-017-0574-9

Comparative study of bioethanol production from sugarcane molasses by using Zymomonas mobilis and Saccharomyces cerevisiae

2015

Asif Hussain Khoja Ehsan Ali Kashaf Zafar Dr. Abeera Ayaz Ansari Azra Nawar Muneeb Qayyum
African Journal of Biotechnology, Volume 14, Issue 31, Pages 2455-2462

Impact Factor: N/A

DOI: 10.5897/AJB2015.14569

Conference Proceedings

- Plastic recycling via catalytic pyrolysis for energy generation** 2024
Ali Raza Dr Asif Hussain Khoja Dr Abeera Ayaz Ansari Waqar ul Habib Khan Dr Salman Raza Naqvi Kinza Rizwan Ghayoor Abbas
24th IEEE International Conference on Environment and Electrical Engineering, res.country(109,)
Citations: N/A
DOI: Nil
- Socio-economic impacts of micro hydro power (MHP) electrification on the rural community of Pakistan: a case study of 150 kw MHP plant at village Lalkoo (Swat)** 2023
Bilal Ayaz Khan Dr Abeera Ayaz Ansari Dr Muhammad Yousif
5th International Conference on Sustainable Energy Technologies (ICSET 2023), res.country(177,)
Citations: N/A
DOI: <http://uspcase.uetpeshawar.edu.pk/icset-2023/>
- Bioethanol Production from sugarcane Molasses by using Zymomonas mobilis** 2014
Asif Hussain Khoja Dr. Abeera Ayaz Ansari Azra Nawar Hamza Ehsan Ehsan Ali
3rd International Conference on Energy, Environment & Sustainable Development (EESD2014), res.country(177,)
Citations: N/A
DOI: https://www.researchgate.net/publication/280925297_Bioethanol_Production_from_sugarcane_Molasses_by_using_Zymomonas_mobilis

Editorial Activities

- Bioresource Technology** 2024
Reviewed Papers for Journals
Impact Factor: 11.4
- Bioresource Technology** 2023
Reviewed Papers for Journals
Impact Factor: 11.4
- Environmental Science & Technology** 2023
Reviewed Papers for Journals
Impact Factor: 11.4
- Bioresource Technology** 2023
Reviewed Papers for Journals
Impact Factor: 11.4

Trainings

- SEC Training for Professionals on “Commercial Scale Biogas Plants”** 2021
Partner: SAARC Energy Center
Duration: 05-Aug-2021 to 27-Aug-2021
- AARDO-IIT Delhi online training program on "Clean Energy Solutions and Waste Management for Sustainable Development"** 2021
Partner: AARDO and IIT Delhi
Duration: 31-May-2021 to 18-Jun-2021