

Ajita Neogi

LinkedIn: <https://www.linkedin.com/in/ajita-neogi-a81107138/?originalSubdomain=i>

Google Scholar:

https://scholar.google.com/citations?hl=en&user=QyWr7x4AAAAJ&view_op=list_works&sortby=pubdate

D-345 Old Minal Residency Bhopal Madhya Pradesh, India.

Contact No.: 9752892453

Email: ajitaneogi@gmail.com

CAREER INTEREST

I aim to contribute to a respected organization that emphasizes professional development and excellence, while gaining experience and working alongside top talents in the field.

RESEARCH EXPERIENCE DURING PhD SUMMARY

- Researched and replicated the Fluid Catalytic Cracking (FCC) process, essential for oil refining.
- Utilized Particle Image Velocimetry (PIV) to analyse catalyst particle shape dynamics.
- Operated a bench-scale Gas-Solid Fluidized Bed (GSFB) for hands-on experimentation.
- Focused on optimizing gas-solid hydrodynamics to improve FCC efficiency.
- Highlighted the significant influence of catalyst particle shape on gas-solid contact.
- Enhanced internal flow structures to boost product efficiency in the oil and gas sector.

EDUCATION

Birla Institute of Technology & Science, Pilani, Rajasthan, India

PhD in Chemical Engineering, 2018-2024, Percentage: 70.00%

Honor Thesis: Particle Image Velocimetry (PIV) Investigation of the Hydrodynamics of a Bench-Scale Fluidized Bed of Geldart A Particles.

Vellore Institute of Technology (VIT), Vellore, India

Master of Technology in Nanotechnology, 2014-2016, Percentage: 77.9%

Honor Thesis: Graphene Based Materials for Direct Methanol Fuel Cells (DMFC) Application.

Duration: 12 Months (2015-2016)

SIRTS - RGPV University, Bhopal, Madhya Pradesh, India

Bachelor of Engineering in Electronics and Communication, 2010-2014, Percentage: 78.7%

Project: Microcontroller Based Home Security System.

Duration: 6 Months (2014)

PUBLICATIONS

1. Chouhan S., **Neogi A.**, Mohanta H. K., Sharma A. K., Goyal N., & Sande P. C. (25 Oct 2024). "Digital Image Analysis of Gas Bypassing and Mixing in Gas Fluidized Bed: Effect of Particle Shape " **American Institute of Chemical Engineers (AIChE)**. Quartile: Q1, Impact Factor: 3.5, H-Index: 188
2. **Neogi, A.**, Mohanta, H. K., Sharma, A. K., & Sande, P. C. (19 May 2024). "PIV investigation on the effect of gas distributor design for fluidization of Geldart A spherical particles." **Powder Technology (Elsevier)**. Quartile: Q1, Impact Factor: 4.5, H-Index: 170
3. **Neogi, A.**, Mohanta, H. K., & Sande, P. C. (15 January 2024). "Study of fluidized bed freeboard for effect of Geldart A particles shape using particle image velocimetry (PIV)." **Powder Technology (Elsevier)**. Quartile: Q1, Impact Factor: 4.5, H-Index: 170
4. **Neogi, A.**, Mohanta, H. K., & Sande, P. C. (05 January 2023). "Particle image velocimetry investigations on multiphase flow in fluidized beds: A review." **Flow Measurement and Instrumentation (Elsevier)**. Quartile: Q2, Impact Factor: 2.3, H-Index: 69
5. Dhankar, S., Mohanta, H. K., **Neogi, A.**, & Sande, P. C. (26 August 2019). "Method to predict complete product fraction TBP distributions from that of the whole crude using regression techniques: applied to shale oil." **Petroleum and Coal**. Quartile: Q4, Impact Factor: 0.4, H-Index: 18

CONFERENCE PROCEEDING

- **Neogi, A.** & Sande, P. C. "Designing the Future: Optimizing Catalyst Shapes for Sustainable Refinery Operations." International Conference on World PetroTech Congress-2024, held at NDMC Convention Centre, Parliament Street, New Delhi, India, on April 25th to 26th, 2024

ACHIEVEMENT

- Received among the Best Paper Award for presentation on "Designing the Future: Optimizing Catalyst Shapes for Sustainable Refinery Operations" by **Neogi, A.** & Sande, P. C. at the International Conference on World PetroTech Congress-2024, held at NDMC Convention Centre, Parliament Street, New Delhi, India, on April 25th to 26th, 2024.

COLLABORATIVE

- Collaboratively contributed to a team project involving fabricating lung glass models in April 2024, utilized for particle flow analysis through digital image analysis.
- Assisted in teaching during PhD work by supporting instructors in delivering lectures and practical sessions, as well as aiding in the preparation of teaching materials and evaluation of student performance.
- Maintained and calibrated laboratory equipment to ensure optimal performance and accuracy.

CERTIFICATE

- Dantec Dynamics course in “Stereo Particle Image Velocimetry technique” - October 2018 - Indian Institute of Technology Roorkee (IIT Roorkee), Uttarakhand, India
- Teaching Learning Workshop for Next Generation Academicians - September 2019 - Teaching Learning Centre, BITS Pilani, Pilani campus India
- Professional and Personal Development Workshop Specially for Women Researchers - November 2019 - BITS Pilani, Pilani campus India
- Academic Writing context - November 2020 - Library Royal Society of Chemistry and Department of Chemical Engineering, BITS Pilani, Pilani campus India
- Advanced Academic Writing Workshop - April 2022 - Department of Humanities and Social Sciences, BITS Pilani, Pilani campus India
- Poster: Investigation into the hydrodynamics of GSFB using Particle Image Velocimetry - September 2022 - Department of Chemical Engineering, BITS Pilani, Pilani campus India.

VOLUNTEER

- Young Entrepreneur's Boot (YEB) camp - October 2022 - BITS Pilani, Pilani campus, India
- Workshop on Analytical Instruments for Chemical & Environmental Engineers - WICEE 2023 - March 2023 - Department of Chemical Engineering, BITS Pilani, Pilani campus, India.

TECHNICAL SKILLS

- Matlab: Experienced with PIVLab tool for Particle Image Velocimetry analysis.
- Origin: Proficient in data analysis and graphing using Origin software.
- ImageJ: Skilled in image processing and analysis with ImageJ software.

PERSONAL INFORMATION

- Language: English, Bengali (mother tongue) and Hindi

CONTACT REFERENCE

- Prof. Priya Christina Sande (PhD Supervisor)
Contact: priya@pilani.bits-pilani.ac.in
<https://www.bits-pilani.ac.in/pilani/priya-c-sande/>
- Prof. Hare Krishna Mohanta (PhD Co-Supervisor)
Contact: harekrishna@pilani.bits-pilani.ac.in
<https://www.bits-pilani.ac.in/pilani/hare-krishna-mohanta/>

DECLARATION

I hereby declare that all the above information is true to the best of my knowledge & I will be responsible for its authenticity.

Date: 04.11.2024

Place: Bhopal

Ajita Neogi