

Brief Bio-data

1. Name: **Vishal Chauhan**

2. Date of Birth: **26 January, 1990**

3. Current Position and Address:

Scientist

Gasification and Catalysis Research Group

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4. Educational qualifications: (Graduation and above):

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1.	B.Tech	2012	Uttar Pradesh Technical University (UPTU), Lucknow	Mechanical Engineering
2.	M.Tech	2014	National Institute of Technology, (NIT) Rourkela	Mining Engineering
3.	Ph.D	--- (pursuing)	Indian Institute of Technology (IIT), Madras	Coal Gasification & CFD modeling

5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Assistant Professor (Contract)	National Institute of Technology (NIT), Jalandhar	January 2015	September 2017	Teaching and Research
Scientist	CSIR-CIMFR, Dhanbad	September 2017	--- (present)	Research and Development

6. Work Area(s)/ Specialization: **Coal/Biomass Gasification, Fluidization, CFD modeling**

7. Major contributions: (Max. 100 words):

Research and Development activities in the area of Fluidization and Gasification in the bubbling fluidized bed using coal and biomass. Contributed in development and successfully installation of 1.5 TPD coal feed capacity oxygen-enriched air-blown pressurized fluidized bed gasification (PFBG) pilot plant and carried out the experiments with High ash Indian coal. Involved with a project of Gasification Potential Mapping (GPM) of Indian Coal and utilization strategy of other subsidiaries of Coal India Limited (CIL). Initiated the Computational Fluid Dynamics (CFD) modeling and simulation for the fluidization and gasification process. Associated in the mission mode project of 250 kg/day Syngas to Methanol Pilot Plant. Supports to the Make in India, AatmNirbhar Bharat Abhiyan.

8. No. of Research Publications:

- Papers in Journals: **04**
- In conference proceedings: **02**
- Invited lectures delivered: **01**
- Books/Chapters authored/edited: **01**

- List of best 05 publications:

1. **Chauhan V**, Chavan PD, Gupta NK, Datta S, Saha S, Sahu G. **Establishing fluidization parameters of different size of coal ash particles in bubbling fluidized bed.** *Chemical Engineering Communications*. 2021 Feb 1;208(2):210-9.
2. Datta S, **Chauhan V**, Sahu G, Chavan PD, Saha S, Gupta PK, Dutta P. **Co-gasification of high ash Indian coal-biomass blends in a pilot-scale fluidized bed gasifier.** *Biomass Conversion and Biorefinery*. 2020 Dec;10(4):831-8.
3. Kumari N, Saha S, Sahu G, **Chauhan V**, Roy R, Datta S, Chavan PD. **Comparison of CO₂ gasification reactivity and kinetics: petcoke, biomass and high ash coal.** *Biomass Conversion and Biorefinery*. 2020 Jul 22:1-4.
4. Sahu G, Saha S, Datta S, Chavan PD, **Chauhan V**, Gupta PK. **Production of biodiesel from high free fatty acids content *Jatropha curcas* oil using environment affable K–Mg composite catalyst.** *Asia-Pacific Journal of Chemical Engineering*. 2021 Feb 4:e2620.

9. List of 5 Major Contract R&D Projects:

1. **Project Title:** Gasification potential mapping of Indian coal: MCL, CCL and ECL Area. **Funding Agency:** NITI AAYOG, Govt. of India & CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad,
2. **Project Title:** Development of 1.5 TPD feed rate capacity oxygen enriched air-blown pressurized fluidized bed gasification (PFBG) pilot plant facility. **Funding Agency:** CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad.
3. **Project Title:** Establishment of fluidization cold/hot set-up experimental facility. **Funding Agency:** CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad (MLP-116/2018-19).
4. **Project Title:** Feasibility study on coal gasification project. **Funding Agency:** JSW Steel Ltd., Ballary, Karnataka.
5. **Project Title:** Coal briquetting and characterization towards gasification. **Funding Agency:** M/s Transworld Furtichem Pvt. Ltd., Navi Mumbai.

10. (a) Name of Patents/Copyrights applied/granted/commercialized:

1. **Title of the Invention:** Development of Thermogravimetric Reactor (TGR) to study weight loss during thermo-chemical reactions of solids in lump/granular/powder form in the gaseous environment of different gases and process thereof.

(b) Technologies/Products/knowhow/Services developed: N/A

11. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships received:

- **Member, Mining Engineering' Association of India (MEAI)**

12. Societal Contributions:

Conducted skill development/training program to the Bachelor's and Master's degree students and Jigyasa program to the Primary school students.