

Curriculum Vitae

Prashant Kumar

Nashik

Mobile No: +91 7477765777

Email: prkumar@kkwagh@edu.in/rkgpmanit@gmail.com

Objective

I seek a challenging role in an organization where I can exercise skills for academic success. Moreover, I believe that I can contribute my best capabilities for designated teaching assignment.

Work Experience

Worked as Project Technical Officer for around one month for National Institute of Technology Rourkela in Stack Monitoring Projects

Educational Qualifications

Certificate	University/ Board	Year	%/CGPA
Ph.D. in Chemical Engineering (Thesis submitted)	Indian Institute of Technology Kharagpur	2016-2022	-
M.Tech.(Chemical)	Indian Institute of Technology (Indian School of Mines) Dhanbad	2014-2016	9.01
B. Tech. (Chemical)	Maulana Azad National Institute of Technology Bhopal	2009-2013	7.39
Grade XII	Central Board of Secondary Education	2008-2006	63.0
Grade X	Central Board of Secondary Education	2004-2006	81.0

Journal Publications

- 1) Experimental investigation of hot AISI 304 steel plate with very-high mass-flux varying water temperature spray**
Prashant Kumar, Sudipto Chakraborty, Heat Transfer, Wiley, DOI: 10.1002/htj.22344
- 2) Investigation of spray cooling in an inclined nozzle-plate configuration with varying coolant temperature**
Prashant Kumar, Paras, Suparna Bhattacharyya, Sudipto Chakraborty, Experimental Heat Transfer, Taylor Francis, DOI: 10.1080/08916152.2022.2088895

3) Spray cooling investigation of very-hot AISI 304 steel plate with mono and mixed SiO₂, CuO nanofluid

Prashant Kumar, Chandan Kumar Chaurasia, Sudipa Das, Suparna Bhattacharyya, Sudipto Chakraborty

(Accepted for publication in Heat and Mass Transfer)

4) Spray cooling application of Sodium dodecyl sulfate-doped Polyaniline (SDS-doped PANI) nanofluid in hot-steel quenching

Prashant Kumar, Chandan Kumar Chaurasia, Suparna Bhattacharyya, Sudipto Chakraborty

(Under review in Experimental Heat Transfer)

5) A corrosion and tribo-failure analysis of Ni-P-Cu coated mild steel (AISI-1040) at varied copper concentration

Suparna Bhattacharyya, Deviprasanna Mohanty, *Prashant Kumar*, Suman Kalyan Das, Prasanta Sahoo, Surjya K. Pal, Sudipto Chakraborty

(Accepted for publication in Engineering Failure Analysis)

Conference Publication

1) Rice-husk-derived silica nanoparticles using optimized titrant concentration for the one-step nanofluid preparation

Prashant Kumar, Sudipto Chakraborty, DOI: 10.1007/978-981-19-7264-5_24

Review paper

1) A Review on Low-Dimensional Nanomaterials: Characterization and Applications

Paras , Kushal Yadav, Prashant Kumar, Dharmasanam Ravi Teja, Sudipto Chakraborty, Monojit Chakraborty, Soumya Sanjeeb Mohapatra, Abanti Sahoo, Mitch M. C. Chou, Chi-Te Liang, and Da-Ren Hang, DOI:10.3390/nano13010160

Book Chapter

1) Nanofluids Long-term Stability Challenges and Guidelines

Samarshi Chakraborty, *Prashant Kumar*, Sudipto Chakraborty
(DOI: 10.1039/9781839166457-00071)

Conferences

1) Co-authored paper on “Nanofluids for ultrafast cooling of steel” for 76th annual technical meeting 2022 organized by Indian Institute of Metallurgy, Hyderabad, India from 13-19 November 2022

- 2) Presented paper on **“Rice-husk derived Silica nanoparticles using optimized titrant concentration for the one-step nanofluid preparation”** in International conference CHEMCON21 at CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, India 28 December 2021
- 3) Gained insight into current trends in colloidal and polymeric systems by participating in conference on **“Advances in Colloidal and Polymeric systems (ACAPS-2020)”** organized by Colloids and Polymers Research Group, School of Chemical Engineering, VIT, Vellore, India, 22 August 2020
- 4) Co-authored paper on **“An experimental overview of different Ultrafast cooling techniques for low carbon steel (AISI 304)”** in Proceedings of International Conference on Energy and Sustainable Development, jointly organized by Jadavpur University and The Institution of Engineers, India on 14-15 February 2020
- 5) Presented paper on **“Inclination influence in pool boiling of red hot plate during immersion quenching”** in Research Scholars day 2019 organized by IIT Kharagpur
- 6) Presented paper on **“Preparation and Characterization of alumina supported Ni-Co catalysts”** in International conference CHEMCON15 at IIT, Guwahati on 19 December 2015
- 7) Presented paper on **“Study of heat transfer augmentation techniques”** in National conference on Recent Advancements of chemical engineering at NMU, Jalgaon on 4 February 2012

Workshops attended

- 1) Attended author workshop on **“How to Write and Publish Scientific Articles and Manuscripts”** jointly organized by IIT Kharagpur and Springer Nature on 27th February 2018
- 2) Attended workshop on **“Publishing in Academic Journals: An author’s Workshop”** jointly organized by Central Library, IIT Kharagpur and Taylor & Francis Group on 18th September 2019

Projects Undertaken

- 1) My doctoral research topic is **“Spray cooling of hot steel plate with nanofluid and enhanced-temperature coolant”** (Thesis submitted), which I did under the guidance of Dr. Sudipto Chakraborty (IIT Kharagpur).
- 2) My M-Tech. research topic is **“Preparation and characterization of alumina supported Ni-Co catalysts”**, which I did under the guidance of Dr. Siddhartha Sengupta (IIT (ISM) Dhanbad).

Membership

Life associate member (Member ID: LAM-43847) of Indian Institute of Chemical Engineers

Teaching assistant

- Worked as a teaching assistant for Chemical reaction engineering laboratory
- Worked as a teaching assistant for Mass transfer laboratory

- Worked as a teaching assistant for Fluid mechanics laboratory
- Worked as a teaching assistant for Mechanical operations laboratory

Characterization techniques knowledge

Well versed with characterization techniques such as: UV-vis-NIR spectrophotometer, TGA, TPR, TPD, XRD, FESEM, Zeta potential, DLS, FTIR, XRF, BET

Scholarship

- 1) Secured MHRD scholarship during M.Tech. (2014-2016)
- 2) Secured MHRD scholarship during Ph.D. (2016-2021)

Achievements

- 1) AIEEE qualified
- 2) GATE qualified

Industrial Training/Summer Training

- 1) Underwent industrial training in Polypropylene unit at IOCL, Panipat, Haryana
 - 30 days training from 28 May 2012 to 22 June 2012
 - Exposed to basics of Naphtha Cracker and associated units
 - Key Learning – Study of various parameters variation along the flash pipe of Polypropylene unit
- 2) Underwent industrial training in CIPET, Bhopal, Madhya Pradesh
 - 15 days training 29 November 2011 to 16 December 2011 in testing and manufacturing process
 - Key Learning – Injection moldings, Extrusion moldings, Blow moldings

Computer Proficiency

Operating Systems: Windows, MacBook, Android

Software: MS-Office, JMP, ASPEN, Photoshop, Inkscape, GIMP

Software Packages / Programming Language Known

- MATLAB Basics
- Python Basics

Personality Traits

- Good Communication abilities
- Punctuality, flexibility & team worker
- Proficient in English, Hindi and Maithili

Extra-curricular activities

- Served as co-coordinator in departmental fest CHEMICARNIVAL organised by the Chemical engineering department, NIT Bhopal during 15-16th October 2011
- Served as Executive member of IICHE, student chapter Bhopal (2011-2012)
- Worked as volunteer in a short-term course on “Green catalysis for industrial applications” organised by Chemical engineering department, NIT Bhopal during 07-11 May 2012

Interests

- Travelling
- Sudoku solving
- Exercise (Jogging)
- Reading Books and Novel

Personal Information

Present Address:

Siddhivinayak Apartment, 3rd floor,
Near Ram Lila Lawns, Sri Ram
Nagar, Nashik, Maharashtra, India
422006

Email:

prkumar@kkwagh.edu.in
prkumar@nit@gmail.com

Date of Birth: 1 October 1991**Nationality:** Indian**Sex:** Male**Permanent Address:**

S/o Hanuman Purbey,
Narayanpur, Vishnupur
Darbhanga - 847204, Bihar
India

References

Name	Designation	Address
Sudipto Chakraborty	Professor	Department of Chemical Engineering, Indian Institute of Technology Kharagpur, Kharagpur, W.B, 721302 Email: sc@che.iitkgp.ac.in Contact: (M) + 91-9434039520, (L) +91-3222-283942
Siddhartha Sengupta	Associate Professor	Chemical Engineering Department, Indian Institute of Technology (Indian School of Mines) Dhanbad,

		Jharkhand, 826004 Email: siddhartha@iitism.ac.in Contact: (M) + 91-9471192418, (L) 0326-223-5155
Krishna Sandilya Durbha	Assistant Professor	Chemical Engineering Department, Indian Institute of Technology (Indian School of Mines) Dhanbad, Jharkhand, 826004 Email: sandilya@iitism.ac.in Contact: (M) + 91-9471192232