



Dr. Sandeep Dharmadhikari
Assistant Professor

Centre/School/Special Centre: School of studies of Engineering and Technology

Department: Chemical Engineering

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[Dr. Sandeep Dharmadhikari - Google Scholar](#)

Qualifications

Ph.D. (Chemical Engineering)

National Institute of Technology Raipur, Chhattisgarh, India

M. Tech. (Chemical Engineering)

Sardar Vallabhbhai National Institute of Technology Surat, Gujarat, India.

B. Tech. (Chemical Engineering)

Institute of Technology, Bilapur, Chhattisgarh, India.

Area of Interest/Specialization

Fuel Cells, Membranes, Adsorption, Water Treatment

Experience (Teaching & Industrial): 5 years

Best Peer Reviewed Publication (up-to 10)

- **Sandeep Dharmadhikari**, Prabir Ghosh and Manivannan Ramachandran (2018), Synthesis of proton exchange membranes for dual-chambered microbial fuel cells, Journal of Serbian Chemical Society, vol. 83, pp. 611-623, [doi.10.2298/JSC170902016D](https://doi.org/10.2298/JSC170902016D).
- **Sandeep Dharmadhikari**, Prabir Ghosh, Manivannan Ramachandran and VijyendraKumar (2019), Review on proton exchange membranes and its application in microbial fuel cells, International Journal of Mechanical Engineering and Technology, vol. 9, pp. 1632-1641, [IJMET_09_13_165-libre.pdf \(d1wqtxts1xzle7.cloudfront.net\)](https://www.researchgate.net/publication/338111111_IJMET_09_13_165-libre.pdf)
- **Sandeep Dharmadhikari**, Damodhar Ghime and Vijyendra Kumar (2019), in microbial fuel cells, Effect of molecular weight on proton exchange membranes and its application with different design of dual chambered microbial fuel cells, Rasayan Journal of Chemistry, vol. 12(4), pp. 2103-2110, [doi.10.31788/RJC.2019.1245422](https://doi.org/10.31788/RJC.2019.1245422).

- Vijyendra Kumar, Neha Pandey, **Sandeep Dharmadhikari** and Prabir Ghosh (2019), Degradation of mixed dye via heterogeneous Fenton process: Studies of calcination, toxicity evaluation and kinetics, Water Environment Research, pp. 1-11, [doi.10.1002/wer.1192](https://doi.org/10.1002/wer.1192).
- Vijyendra Kumar, Titikshya Mohapatra, **Sandeep Dharmadhikari** and Prabir Ghosh (2020), A Review paper on Heterogeneous Fenton Catalyst: Types of preparation, modification techniques, factors affecting the synthesis, characterization and application in the wastewater treatment, Bulletin of Chemical Reaction Engineering & Catalysis, vol. 15(1), pp. 1-34, [doi.10.9767/bcrec.15.1.4374.1-34](https://doi.org/10.9767/bcrec.15.1.4374.1-34).
- Shreyas Gondudey, Parmesh Kumar Chaudhari, **Sandeep Dharmadhikari** and Raghwendra Singh Thakur (2020), Treatment of sugar industry effluent using electrocoagulation process: Process optimization using response surface methodology, Journal of Serbian Chemical Society, vol. 85(10) 1357–1369, [doi.10.2298/JSC200319037G](https://doi.org/10.2298/JSC200319037G).
- Kosuri Praveena, **Sandeep Dharmadhikari**, Ghoshna Jyoti and Manivannan Ramachandran (2020), Synthesis and characterization of cellulose acetate based proton exchange membranes, Journal of Indian Chemical Society, vol. 97, 1025-1028, [July-12.pdf \(indianchemicalsociety.com\)](https://doi.org/10.1002/jics.12005)
- Saurabh Meshram, Anuradha Nanewar Joshi, **Sandeep Dharmadhikari** and Raghwendra Singh Thakur (2020), Adsorption of cadmium from water using activated carbon derived from Ipomoea Carnea using chemical impregnation, Earth and Environment Science, vol. 597, 597 012005, [doi.10.1088/1755-1315/597/1/012005](https://doi.org/10.1088/1755-1315/597/1/012005).
- Prabir Ghosh, Damodhar Ghime, Titikshya Mohapatra, **Sandeep Dharmadhikari**, Neelam Sonwani, Saket Pradhan (2021), ZnO/bone-char hybrid composite: Catalyst preparation, characterization and its application, Iranian Journal of Chemistry and Chemical Engineering, [doi.10.30492/IJCCE.2021.137879.4377](https://doi.org/10.30492/IJCCE.2021.137879.4377).
- Saurabh Meshram, **Sandeep Dharmadhikari**, Raghwendra Singh Thakur, Anupama Bala Soni, Chandrakant Thakur (2023), Fixed-bed adsorption of lead from battery recycling unit wastewater-Optimization using Box-Behnken method, Journal of Hazardous Materials Advances,100297, doi.org/10.1016/j.hazadv.2023.100297.

Book Chapters:

- Jagamohan Meher, Sivakumar Durairaj, **Sandeep Dharmadhikari**, Rajanandini Meher, Future Scope of Membrane Technology in Pineapple Juice Processing, January 2023, In book: Membrane and Membrane-Based Processes for Wastewater Treatment, CRC Press, ISBN: 9781003165019, [DOI: 10.1201/9781003165019-11](https://doi.org/10.1201/9781003165019-11).
- Nitin Pawar, **Sandeep Dharmadhikari**, Vijyendra Kumar, Vijay Kumar, P.K. Chaudhari, A Combined Coagulation and Membrane Filtration Approach for Fluoride Removal January 2023, In book: Membrane and Membrane-Based Processes for Wastewater Treatment, CRC Press, ISBN: 9781003165019, [DOI: 10.1201/9781003165019-15](https://doi.org/10.1201/9781003165019-15).

- **Sandeep Dharmadhikari**, Amit Jain, Nitin Pawar, P.K. Chaudhari, Direct reuse of wastewater: problem, challenge, and future direction, January 2023, In book: Antimicrobial Resistance in Wastewater and Human Health, [DOI: 10.1016/B978-0-323-96124-0.00002-7](https://doi.org/10.1016/B978-0-323-96124-0.00002-7).

Research Supervision:

- B.Tech: 5 (completed) & 4 (ongoing)

Administrative Responsibilities:

- Committee member of games and sports committee (2019-20).
- Acted as Judge in Tech fest activities at departmental level (2019-2020).
- Co-coordinator of Students Induction Program (AICTE-SIP) committee at SoS., Engg. & Tech., GGV, Bilaspur (C.G.) (2020-21, 2021-2022).
- Committee member of GGV Alumni cell at SoS., Engg. & Tech., GGV, Bilaspur (C.G.)(2020-21, 2021-2022)
- Committee member of file handling committee of first year counseling (2020-21).
- Committee member of DRC Committee in Department of Chemical Engineering, SoS., Engg. & Tech., GGV, Bilaspur (C.G.) (2021-22, 2022-2023).
- Committee member of AICTE Committee at SoS., Engg. & Tech., GGV, Bilaspur (C.G.)(2020-21, 2021-2022)
- Counting officer-II for student council election of university level (2020-21).
- First Year Section In-charge of Department of Chemical Engineering (2021-22).
- Committee member of Entrepreneurship Cell from the Department of Chemical Engineering, SoS., Engg. & Tech., GGV, Bilaspur (C.G.) (2021-22).
- Co-coordinator of Renewable Energy Club of SoS., Engg. & Tech., GGV, Bilaspur (C.G.)(2021-22).
- Committee member of IEI student's chapter of SoS., Engg. & Tech., GGV, Bilaspur (C.G.)(2021-22).
- Faculty In-charge AICTE Students Induction Program (2020-21, 2021-2022).
- Departmental website In charge in Department of Chemical Engineering, GGV, Bilaspur (C.G.)
- Committee member of Virtual lab Committee of SoS., Engg. & Tech., GGV, Bilaspur(C.G.) (2021-22).
- B.Tech. First Year Section In-charge session 2022-23.
- Member of documentation verification committee in spot counseling for admission to B.Tech. Program in the academic session 2022-23.
- Member of documentation verification committee in JOSSA/CSAB counseling for admission to B.Tech. Program in the academic session 2022-23.
- Faculty advisor of IE (I) student's chapter in the Department of Chemical Engineering, SoS., Engg. & Tech., GGV, Bilaspur (C.G.)
- Member of Innovative and IPR Facilitation Cell (IFSC) University Level.
- Committee member of document verification committee for Electrical/Electronics and Communication Engineering, SoS., Engg. & Tech., GGV, Bilaspur (C.G.) (2022-23).
- Coordinator of Tech-Fest, SoS., Engg. & Tech., GGV, Bilaspur (C.G.) (2022-23).

Additional Information:

- Qualified in Graduate Aptitude Test in Engineering (**GATE-2012**).
- MHRD fellowship for 2 years during my M. Tech. program.
- Getting MHRD fellowship during my Ph.D.
- Successfully completed National Initiative for Technical Teachers Training (AICTE-NITTT) Programme (PHASE-I).
- Successfully completed UGC-Sponsored “Guru Dakshita” Faculty Induction Programme (Online) organized by Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur (C.G.)
- Successfully completed two week interdisciplinary refresher course in “Advances Concepts in Developing MOOCS” organized by Teaching Learning Centre, Ramanujan College, University of Delhi, India.
- Successfully completed NPTEL online certification course in “Chemical Process Control”.
- Invited Talk on “Bio-Energy: A Path Towards Sustainable Future” 18th June 2020 organized by School of Agriculture and processing science Kalasalingam Academy of Research and Education, Srivilliputhur, Tamil Nadu, India.
- Organizing Committee Member in the International Conference (Online) on “Covid Challenges of Energy and Environment Management for Sustainable Growth of Process Industries (**CCEEMSGPI-2021**)” organized by Department of Chemical Engineering, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India September 10-11, 2021.
- Conducted a special Talk on “Hands on Training on DWSIM” as Co-coordinator.
- Life Associate Member of Indian Institute of Chemical Engineers (IChE)- (LAM-61711).
- Life Associate Member of The Institution of Engineers (IEI)- (AM 1982527).
- **Patents:** There are **four** patents that have been published, and **two** that has been filed.
- 23 Workshop/Short Term Course/ Faculty Development Program attended and 15 webinar attended.
- Conducted a Webinar on “**Practical Aspects of Water Treatment Plant**” as Coordinator, Dated 19/07/22.
- Conducted a FDP on “**MATLAB-Artificial Intelligence & Optimization Techniques**” as Coordinator, Dated 21/11/2022 to 25/11/2022.
- Conducted a special talk on “**How to Prepare for Gate**” as Coordinator, Dated 17/12/22.

(Dr. Sandeep Dharmadhikari)