

Dr. Sankha Chakrabortty

Ph.D. (Gold Medalist and Japan Hiyoshi Young Leaf Awardee)

Contacts:

sankha.nit@gmail.com

sankha.chakrabortty@kiitbiotech.ac.in

Cell: +91-7602380154

+91-9614633977

Contact Address:

School of Biotechnology,

KIIT Deemed to be University

Campus-11, Patia, Bhubaneswar,

Odisha, PIN- 751024, India



Scholar ID:

1. Scopus link : <https://www.scopus.com/authid/detail.uri?authorId=55885507100>
2. Google Scholar : <https://scholar.google.co.in/citations?user=4tbvw6wAAAAJ&hl=en>
3. Research Gate : https://www.researchgate.net/profile/Sankha_Chakrabortty2
4. Orcid ID : <https://orcid.org/0000-0001-7719-8586>
5. Web of Science Researcher ID: P-1531-2019

Current Position (since 22nd July, 2019)

Assistant Professor, School of Chemical Engineering & Biotechnology
KIIT Deemed to be University, Bhubaneswar, Odisha, India

Job Experience (Overall: 8 Years after Ph.D.)

- Working as an Assistant Professor in KIIT University, Bhubaneswar, Odisha, since 22nd July, 2019.
- Worked as **National Post-Doctoral Fellow** (PDF/2017/000609) for 2 years at CSIR-Central Mechanical Engineering Research Institute Durgapur under DST (SERB) sponsored research grant.
- Worked as a Process Engineering for three months in Graphite India Limited Durgapur.

Educational Qualifications

2017 (Aug.)-2019 (July): Post-Doctoral Study (2 years)

Project Title: Capture and Conversion of CO₂ to Methanol through Photocatalyst and Solar driven Membrane System
Implemented Institute: CSIR-Central Mechanical Engineering Research Institute Durgapur
Mentor Name: Dr. Biswajit Ruj, Chief Scientist and Former Head, EEG Lab, CSIR-CMERI, Durgapur
Funded by: Scientific and Engineering Research Board-Department of Science and Technology (SERB-DST)

2011 (Aug.)-2017 (April): Doctoral Study

Ph.D. in *Chemical Engineering*, National Institute of Technology Durgapur, India.

Date and year of Award: **12th April, 2017**

Thesis: A Techno-Economic Feasibility Study in Developing and Implementing Arsenic and Fluoride Abatement Technology

Name of Supervisors: 1. Prof. Parimal Pal (HAG Professor & Former Head, Department of Chemical Engineering)
2. Prof. Mousumi Roy (Professor & Former Head, Department of Management Studies)

Areas of specialization: Water Treatment, Membrane Technology, Modeling-simulation.

Funded by: DST-INSPIRE Fellowship (DST/INSPIRE Fellowship/2012/271)

2009 (Aug.)-2011 (May): P.G Study (Gold Medalist)

M.Tech in *Chemical Engineering*, National Institute of Technology Durgapur, India. University Topper, First class with distinction (CGPA-8.23).

Thesis: A Techno-economic feasibility study on arsenic removal from contaminated groundwater by membrane- integrated hybrid treatment system.

2005 (Aug.)-2009 (May): U.G Study

B. Tech in *Chemical Engineering*, Durgapur Institute of Advanced Technology & Management (under WBUT), First class (CGPA-8.84).

Thesis: Method of achieving optimum product purity in a Distillation column using CHEMCAD.

Achievements/Distinctions/Honored

1. Awarded as “**STE Best Innovation Award-2024 for Granted US Patent**” by Save the Environment (STE), India, December, 2024.
2. Awarded as “**Best Researcher-2024**” by STEM Research Society, HPU, November 2024.
3. Invited as **Panel Member** in **9th Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19th January, 2024.
4. Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in **9th Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19th January, 2024.
5. Awarded as “**Best Oral Presentation**” in **2nd International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023)**, RGKIT, Gajababu, September, 2023.
6. Honored as **Workshop Chair** the “**2nd International Conference on Environment, Renewable Energy and Green Chemical Engineering**”, China, 8-10th September
7. Awarded as “**Scientists of the Year Award @SASE-BHU 2023**” by National Environmental Science Academy, India, 2023.
8. Awarded as “**Hiyoshi Young Leaf Award 2022**” from Hiyoshi Corporation (Japan), November, 2022.
9. **Award for “Excellence in Research”** in **10th Faculty Branding Awards-2022**, Education-expo TV, August, 2022.
10. Awarded as “**STE Young Researcher Award-2021 (Faculty Category)**” by Save the Environment (STE), India, January-2022
11. Honored as **Guest Lecturer** in the Amirkabir University of Technology (Autumn School, Wastewater Filtration), Tehran, Iran, 19th December, 2021
12. Awarded as “**Environmentalist of the Year-2021**” by National Environmental Science Academy, India, Dec. 2021
13. Awarded as “**Young Scientist 2020**” by National Environmental Science Academy, India, December 2020
14. Achieved “**Start-Up Research Grant**” under UGC-FACULTY RESEARCH PROMOTION SCHEME, 2020
15. Awarded as “**Dr. DS Kothari Post Doc Fellow**” (Post-Doc), University Grant Commission (UGC), 2019
16. Awarded as **National Post-Doctoral Fellow** (Post-Doc), SERB-DST, Government of India, 2017
17. **Best Research Paper Award** (One Plaque and 1000-euro cash prize), SPRINGER Publisher, 2016.
18. **DST-INSPIRE Fellowship** for doctoral study (for university Topper), Department of Science and Technology, 2012
19. **Gold Medal and Rank Certificate** (University topper) National Institute of Technology Durgapur, 2011.
20. Qualified **Graduate Aptitude Test in Engineering (GATE-2011)**, Ministry of Human Resource Development (MHRD), Score: 496, All India Rank: 446: Percentile: 97.5

Editorial Board Member:

- ❖ Associate Editor of Journal of Applied Biomaterials & Functional Materials, Sage Publisher, Scopus
- ❖ Associate Editor of Scientific Report, Nature, SCI/Scopus
- ❖ Associate Editor of South African Journal of Chemical Engineering, Elsevier, Scopus
- ❖ Associate Editor of Chemicals Paper, Springer Nature, SCI/Scopus
- ❖ Associate Editor of PLOS WATER Journal
- ❖ Editorial Board Member of Current Indian Science, Bentham Science
- ❖ Editorial Board Member of Water Emerging Contaminants & Nanoplastics Journal, Scopus
- ❖ Editorial Board Member of Discover Applied Sciences, Springer, Scopus
- ❖ Editorial Board Member of Journal of Service Science and Management
- ❖ Editorial Board Member of Environmental Technology Reviews, Taylor and Francis, Scopus
- ❖ Editorial Board Member of Nanotechnology for Environmental Engineering, Springer Nature
- ❖ Editorial Board Member of Universal Journal of Green Chemistry, Universal Wiser Publisher.
- ❖ Advisory Board Member of Heliyon Chemical Engineering Journal, Cell Press
- ❖ Editorial Board Member of Air, Soil and Water Research Journal, Sage Publisher, Scopus
- ❖ Associate Editor, Industrial Bioresource Engineering, Universal Wiser Publisher, Singapore
- ❖ International Youth Editorial Board Member of Carbon Research Journal, Springer Nature
- ❖ International Journal of Pharmacology and Pharmaceutical Technology
- ❖ International Journal of Chemistry in Building Materials
- ❖ Specialist Reviewer of International Journal of Environmental Science and Technology (Springer)

Book Editing:

- ❖ Chakrabortty, S., Nayak, J., Banerjee, S., & Shah, M.P. (Eds.). (2024). Agricultural Biomass for the Synthesis of Value-Added Materials (1st ed.). CRC Press. <https://doi.org/10.1201/9781003407713>
- ❖ Metal value recovery from industrial waste using advanced physico-chemical treatment technologies, Papita Das, Parimal Pal, Jayato Nayak, **Sankha Chakrabortty**, Drimitous Gyncopious, 1st Edition - November 1, 2024, ISBN: 9780443218842, eBook ISBN: 9780443218835
- ❖ Advanced Bio-separation of Industrial Wastes: Sustainable Recovery of High-Value Metal Ions, Jayato Nayak, **Sankha Chakrabortty**, Suraj K Tripathy, Maulin P Shah (2024, CRC press, T & F), ISBN: 9781032541792
- ❖ Environmental Friendly Green Technologies for Improvement of Heavy Crude Oil Flow Assurance, Shirsendu Banerjee, **Sankha Chakrabortty**, Jayato Nayak, Suraj K Tripathy, Maulin P Shah, Springer Nature, DOI: <https://doi.org/10.1007/978-3-031-86701-9>, eBook ISBN978-3-031-86701-9Published: 19 May 2025
- ❖ Microreactor Technology: Bridging Modern Science and Research with Advanced Technology, Satyabrata Si, Sankha Chakrabortty, Jayto Nayak, Suraj Kumar Tripathy, CRC Press. (To be published in 2025)

Guest Lectures Delivered: 07

- ❖ Delivered Guest Lecture to the **Amirkabir University of Technology (Autumn School, Wastewater Filtration)**, Tehran, Iran, 19th December, 2021
- ❖ Delivered Guest Lecture in "**Environmental Technology NewsHour (Episode 2)**" event, Thailand.
- ❖ Delivered Guest Lecture in a **Faculty Development Programme** organized by Sandip University, Madhubani and SR University, Warangal 27th July, 2022.
- ❖ Delivered Guest Lecture as a workshop chair in the "**2nd International Conference on Environment, Renewable Energy and Green Chemical Engineering**", China, 8-10th September
- ❖ Delivered Invited Lecture in "**National Conference on Environment, Water, Agriculture, Sustainability and Health (Ewash-2023): Strategizing A Greener Future & 5th Annual Meet of STE**", 22nd - 23rd December, 2023, SWAMI RAMA HIMALAYAN UNIVERSITY, Jolly Grant, Dehradun, Uttarakhand
- ❖ Served as a **Panelist in 9th Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19th January, 2024.
- ❖ Delivered Guest Lecture to **Advanced Recovery of the Battery Materials and REE from Ores and Wastes Workshop**, Future Industries Institute, University of South Australia, 23rd February, 2023

Technical Expert and Mentor:

- ❖ BIRAC (DBT. Govt of India) sponsored BIG Calls (17-21): **Total proposal reviewed: 154**
- ❖ Masters Thesis Reviewer and External Examiner-2025, ICT-IOCL Bhubaneswar
- ❖ Masters Thesis Reviewer and External Examiner-2024, ICT-IOCL Bhubaneswar
- ❖ Masters Thesis Reviewer and External Examiner-2023, ICT-IOCL Bhubaneswar
- ❖ Masters Thesis Reviewer and External Examiner-2023, ICT-Jalna
- ❖ National Advisor for International Journal of Environment & Health Sciences
- ❖ Committee Member of 3rd International Conference on Trends in Material Science and Inventive Materials
- ❖ Committee Member of 4th International Conference on Inventive Material Science and Applications
- ❖ Committee Member of 5th International Conference on Trends in Material Science and Inventive Materials
- ❖ Committee Member of 6th International Conference on Inventive Material Science and Applications
- ❖ Reviewer and Committee Member of 3rd International Conference on "Advanced Technologies for Industrial Pollution Control (ATIPC-2022)"
- ❖ Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in 9th Annual Sustainability Summit at XIM University, Bhubaneswar, 18-19th January, 2024.

Number of Conference Organized as Organizing Secretary and Co-Convenor: 07

- ❖ International Conference on Promoting Environmental Technologies for Waste Management and Sustainable Development (WMSD-2021); Date: 12-13 December 2021, Venue: Hybrid mode (Online & at Kalinga Institute of Industrial Technology, Bhubaneswar, Odisha), Funded by : BCKIC
- ❖ 1st International Conference on Green Energy & Sustainable Environmental Technology (GESET-2022), KIIT University, Bhubaneswar, September, 2022, Funded by: SERB and NABARD

- ❖ International Conference on “Environment, Water, Agriculture, Sustainability and Health (ewash-2022): Strategizing a Greener Future” (EWASH-2022)
- ❖ 2nd International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023), RGKIT, Gajibabad, September, 2023.
- ❖ National Conference on Environment, Water, Agriculture, Sustainability and Health (Ewash-2023): Strategizing A Greener Future & 5th Annual Meet of STE, 22nd - 23rd December, 2023, SWAMI RAMA HIMALAYAN UNIVERSITY, Jolly Grant, Dehradun, Uttarakhand
- ❖ National Conference on SHASHWAT SRISHTI SANRAKSHAN 2024, “A Pledge for Protecting World against Natural Hazards: Agro-Biotechnological Approach, Organized by Save the Environment, Kolkata in association with ICAR-Central Agroforestry Research Institute, Indian Society of Agroforestry and SSCE, New Delhi, 22nd and 23rd of August, 2024
- ❖ National Conference on ENVIRONMENT, WATER, AGRICULTURE, SUSTAINABILITY AND HEALTH (EWASH-2024): INTEGRATED INDIGENOUS TECHNOLOGICAL ADVANCEMENT FOR ATMANIRBHAR BHARAT, Department of Applied Sciences, Visvesvaraya Technological University, Muddenahalli, Chikkaballapur - 562101, Organized by Save the Environment, Kolkata, 13-14 DECEMBER 2024

Number of Event Organized: 04

- ❖ Organised “Voice of BT” contest supported from Novozymes, 2021
- ❖ Organized workshop on IPR under National IP Awareness Programme initiated by UGC, GOI, August, 2022.
- ❖ Organized SERB-TARE review meeting as Member, 30-31st August, 2022.
- ❖ Organized 8th Annual Biotechnology Industry Conclave-2022 as Member, 23rd and 24th September, 2022.

Technical Sessions Chaired :

- ❖ International Conference on Promoting Environmental Technologies for Waste Management and Sustainable Development (WMSD-2021), November 2021.
- ❖ International Conference on Green Energy & Sustainable Environmental Technology (GESET-2022), September, 2022.
- ❖ Invited as **Panel Member** in **9th Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19th January, 2024.
- ❖ Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in **9th Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19th January, 2024.

Sponsored Projects

Sponsoring Agency	Title of the Project	Period	Amount (Lakhs)	Status
Ministry of Mines and NALCO, Government of India	Setting up of pilot cum demonstration plant for recovery of alumina and value-added products from fly ash	3 Years (2024-2027)	392	Ongoing (CO-PI)
Department of Science and Technology, Govt. of India	Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (DST_FIST)	3 Years (2023-2026)	100	Ongoing (CO-PI)
National Aluminium Company Limited (NALCO), Government of India	Development of Analytical Protocol for Qualitative and Quantitative Analysis of Mineral phases of Bauxite and Bauxite Residue	1.5 years (2023-2024)	34 (including GST)	Completed (PI)
National Mineral Development Corporation, Govt. of India	Feasibility studies for preparation of fused magnesia from Kimberlite tailings	1.5 Years (2023-2024)	72 (including GST)	Ongoing (CO-PI)
University Grant Commission (UGC), Government of India	Green Synthesis of Vanillin by Solar Photo-catalytic Reforming of Lignocellulosic Biomass	2 Years (2021-2023)	10	Completed (PI)
Ministry of Mines, Government of India	Fabrication of Al ₂ O ₃ containing cellulose based Ag NPs encapsulated Collagen	2 Years	30	Completed (CO-PI)

	dressing and investigation of its Therapeutic Opportunities in Diabetic Wound Healing	(2022-2024)		
SERB, DST, Government of India	Capture and Conversion of CO ₂ to Methanol through Photocatalyst and Solar driven Membrane System	2 Years (2017-2019)	20	Completed (PI)
M/S Satyam Iron & Steel Co. Pvt. Ltd. and M/S Satyam Smelters (P) Ltd.	Installation of 2 Nos Improved Iron Removal Plant on Market Seeding at Satyam Iron & Steel Co. Ltd.	06 months	2	Completed (CO-PI)

Publications: 82; Citations: 2060; h-index-25; i-10-index-41, Total Impact Factor: 470)

1. Ramesh Kumar, Prasenjit Chakraborty, Prashant Kumar Singh, **Sankha Chakrabortty**, Suraj K. Tripathy, Ganesh Dattatraya Saratale, Manish Kumar, Alak Kumar Ghosh, Byong-Hun Jeon, Emerging approaches on biomass and water-based hydrogen production and downstream recovery pathways: A review on recent challenges and prospects, *Reviews in Environmental Science and Bio/Technology*, Just accepted, **Impact Factor: 10.6 (Q1)**
2. Ramesh Kumar, Kung- Won Choi, Moonis Ali Khan, Goutam Biswas, Soon Ho Cho, **Sankha Chakrabortty**, Suraj K. Tripathy, Kyoung- Yeol Kim, Byong- Hun Jeon, Sustainable lithium extraction from liquid ores using membrane-based technologies: a review, *Environmental Chemistry Letters*, 2025, <https://doi.org/10.1007/s10311-025-01871-2>, **Impact Factor: 21 (Q1)**
3. Pranjal, Gobinda Chandra Mahapatra, Anurag Panda, **Sankha Chakrabortty**, Shirsenu Banerjee, Amrita Mishra, Ramesh Kumar, Byong-Hun Jeon, Cecilia Stålsby Lundborg, Suraj K. Tripathy, AI-driven optimization of the Heterogeneous Sono-Fenton Process for Intensification of Bacterial Inactivation, *Journal of Environmental Chemical Engineering*, 2025, <https://doi.org/10.1016/j.jece.2025.118784>, **Impact Factor: 7.2 (Q1)**
4. Anuradha Upadhyaya, Anurag Pandaa, Somagni Roya, Ramesh Kumarb, Marta Oteroc, Prasenjit Chakraborty, Santoshi Mohantaa, Shirsenu Banerjeea, Moonis Ali Khane, Sashikant Nayaka, Somnath Chowdhuryf, Byong-Hun Jeonb, **Sankha Chakraborttya,*** Suraj K. Tripathya*, Parametric optimizations of genotoxic dye sorption using zinc-activated rice straw derived cellulose: A study aligned with Circular Economy Goals (SDG 12), *Cellulose Journal*, <https://doi.org/10.1007/s10570-025-06665-x>, **Impact Factor: 4.9 (Q1)**
5. Abhrajit Chatterjee, Anurag Panda, Subhasis Patra, Anuradha Upadhyaya, Shirsenu Banerjee, Amrita Mishra, Moonis Ali Khan, Ramesh Kumar, Byong-Hun Jeon, **Sankha Chakrabortty***, Suraj K. Tripathy, Porosity Refinement and Intensification of Triarylmethane Dyes Adsorption on Bauxite Residue via Chemical Activation: Parametric Optimization and Theoretical Insights, *Arabian Journal of Chemistry*, doi:10.25259/AJC_141_2025, **Impact Factor: 5.2 (Q1)**
6. Prithviraj Karak, Afsona Parveen, Anindya Modak, Atin Adhikari, **Sankha Chakrabortty**, Microplastic Pollution: A Global Environmental Crisis Impacting Marine Life, Human Health, and Potential Innovative Sustainable Solutions, *Int. J. Environ. Res. Public Health* 2025, 22(6), 889; <https://doi.org/10.3390/ijerph22060889>, **Impact Factor: 4.2 (Q2)**
7. Bisheswar Karmakar, **Sankha Chakrabortty**, Ramesh Kumar, Gopinath Halder, Biodiesel synthesis from Ricinus communis and Pongamia pinnata oil blends by injecting superheated methanol – isopropanol mixtures: Optimization through CCD and ANN approaches, *Renewable Energy*, Volume 249, 15 August 2025, 123223, <https://doi.org/10.1016/j.renene.2025.123223>, **Impact Factor: 9 (Q1)**
8. Chaturmukha Pattnaik, Sanjib Roy, Ramesh Kumar, Pallabi Pahari, Byong-Hun Jeon, Shirsenu Banerjee, **Sankha Chakrabortty* & Suraj K. Tripathy**, Pulsations in gas–liquid mass transfer: a comprehensive review in the enhancement of CO₂ absorption, *Environmental Technology Reviews*, 14:1, 213-239, DOI: 10.1080/21622515.2025.2468349
9. Sanjib Roy, Chaturmukha Pattnaik, Ramesh Kumar, Shirsenu Banerjee, Jayato Nayak, Somnath Chaudhuri, Sayantan Sarkar, Moonis Ali, Byong-Hun Jeon, **Sankha Chakrabortty***, Suraj K Tripathy, AI-Driven Parametric Optimization of Gas-Liquid Absorption for the Intensification of CO₂ Capture under a Gas-phase Pulsation Condition, *Chemical Engineering and Processing - Process Intensification*, Volume 209, March 2025, 110183, <https://doi.org/10.1016/j.cep.2025.110183>, **Impact Factor: 4.2 (Q1)**
10. Chaturmukha Pattnaik, Ramesh Kumar, Moonis Ali Khan, Pallabi Pahari, Anirban Banik, Byong-Hun Jeon, Shirsenu Banerjee, **Sankha Chakrabortty***, Suraj K Tripathy, A multi-approach study on CO₂ absorption in packed beds: Theoretical, experimental, and CFD perspectives on gas phase pulsation, *Journal of Industrial and Engineering Chemistry*, <https://doi.org/10.1016/j.jiec.2024.11.046>, **Impact Factor: 6.2 (Q1)**
11. Prasenjit Chakraborty, Ramesh Kumar, Avishek Banerjee, Sankha Chakrabortty*, Madhubonti Pal, Anuradha Upadhyaya, Somnath Chowdhury, Moonis Ali Khan, Byong-Hun Jeon, Suraj K Tripathy, Alak Kumar Ghosh,

12. Innovations in poly(3-hydroxybutyrate-co-3-hydroxyvalerate) and nanocomposites for sustainable food packaging via biochemical biorefinery platforms: A comprehensive review Pinaki Dey, Dibyajyoti Haldar, Chhavi Sharma, Jayita Chopra, Sankha Chakrabortty, Kevin Joseph Dilip, International Journal of Biological Macromolecules, Volume 283, Part 1, December 2024, 137574, doi.org/10.1016/j.ijbiomac.2024.137574, **Impact Factor: 7.2 (Q1)**

13. Gude Ramesh, Biswajit Ruj, Bhaskar Bishayee, Rishya Prava Chatterjee, Ramesh Kumar, Moonis Ali Khan, Byong-Hun Jeon, Jayato Nayak and **Sankha Chakrabortty***, Enhancing Selenium Removal Using Pre-Treated Natural Clay: Experimental Investigation and Predictive Modeling, Environmental Research Communications, DOI 10.1088/2515-7620/ad8a23, **Impact Factor: 2.5 (Q2)**

14. Elouan Voisin, Santosh Thakur, Jayato Nayak, **Sankha Chakrabortty***, Parimal Pal, Application of neural network in prediction of acetic acid yield by Acetobacters, South African Journal of Chemical Engineering, Volume 50, October 2024, Pages 427-436, <https://doi.org/10.1016/j.sajce.2024.10.001>

15. Sanjib Roy, Ramesh Kumar, Argha Acooli, Snehagni Roy, Abhrajit Chatterjee, Sujoy Chattaraj, Jayato Nayak, Byong-Hun Jeon, Aradhana Basu, Shirsedu Banerjee, **Sankha Chakrabortty***, Suraj K. Tripathy, Transforming Nanomaterial Synthesis through Advanced Microfluidic Approaches: A Review on Accessing Unrestricted Possibilities, J. Compos. Sci. 2024, 8(10), 386; <https://doi.org/10.3390/jcs8100386>, **Impact Factor: 3 (Q2)**

16. Bikram Basak, Ramesh Kumar, Rahul S. Tanpure, Amrita Mishra, Suraj K. Tripathy, **Sankha Chakrabortty**, Hyun-Seog Roh, Krishna Kumar Yadav, Woojin Chung, Byong-Hun Jeon, Roles of engineered lignocellulolytic microbiota in bioaugmenting lignocellulose biomethanation, Renewable and Sustainable Energy Reviews 207 (2025) 114913, <https://doi.org/10.1016/j.rser.2024.114913> **Impact Factor: 13.9 (Q1)**

17. Krishnendu Adhikary, Shweta Kumari, Prity Chatterjee, Riya Dey, Rajkumar Maiti, **Sankha Chakrabortty**, Deepika Ahuja and Prithviraj Karak*, Unveiling bisphenol A toxicity: human health impacts and sustainable treatment strategies, Horm Mol Biol Clin Invest (De-Gruyter), 2024, <https://doi.org/10.1515/hmbci-2024-0034>

18. Anwesha Dey, Ramesh Kumar, Bhramar Dutta, Rajib Bandopadhyay, **Sankha Chakrabortty**, Moonis Ali Khan, Rijuta Ganesh Saratale, Ganesh Dattatraya Saratale, Byong Hun Jeon, Alak K. Ghosh, Synthesis, Kinetics, Mechanisms, and Bioactivity Evaluations of a Novel Zn(II) Complex, RSC Advance, RSC Adv., 2024, 14, 28693, DOI: 10.1039/d4ra03356f, **Impact Factor: 4.2 (Q1)**

19. Jyotishikha Mohapatra, Ramesh Kumar, Bikram Basak, Rijuta Ganesh Saratale, Ganesh Dattatraya Saratale, Amrita Mishra, Suraj K Tripathy, Byong-Hun Jeon, **Sankha Chakrabortty***, A review on generation, composition, and valorization of dairy processing sludge: A circular economy-based sustainable approach, Journal of Industrial Engeering and Chemistry, <https://doi.org/10.1016/j.jiec.2024.08.045>, **Impact Factor: 6.2 (Q1)**

20. Pranjal, Gobinda Chandra Mahapatra, **Sankha Chakrabortty**, Shirsedu Banerjee, Somnath Chowdhury, Moonis Ali Khan, Ramesh Kumar, Byong-Hun Jeon, Amrita Mishra, Cecilia Stålsby Lundborg, Suraj K. Tripathy, Intensifying inactivation strategies: Insights into the role of ultrasound on the inactivation of antibiotic resistant *Acinetobacter baumannii* via Photo-Fenton reaction, Chemical Engineering Journal 497 (2024) 154670, <https://doi.org/10.1016/j.cej.2024.154670>, **Impact Factor: 15.3 (Q1)**

21. Swati Sucharita Singh, Bhumika Jena, Snehagni Roy, Sashikant Nayak, Susanta Kumar Behera, **Sankha Chakrabortty**, Suraj K. Tripathy, Moonis Ali Khan, Ramesh Kumar, Byong-Hun Jeon, Cecilia Stålsby Lundborg, Amrita Mishra, Sprayable biogenic Ag-collagen nanocomposites with potent antibacterial and antibiofilm activity for *Acinetobacter baumannii* infected wound healing under hyperglycemic condition, Chemical Engineering Journal, 490, 2024, 151788, <https://doi.org/10.1016/j.cej.2024.151788>, **Impact Factor: 15.3 (Q1)**

22. Anurag Panda, Anuradha Upadhyaya, Ramesh Kumar, Argha Acooli, Shirsedu Banerjeea, Amrita Mishra, Moonis Ali Khan, Somnath Chowdhury, Byong-Hun Jeon, **Sankha Chakrabortty***, Suraj K. Tripathy, Chemical activation of phosphogypsum exhibits enhanced adsorption of malachite green from aqueous solution due to porosity refinement, Frontiers in Chemical Science and Engineering, Front. Chem. Eng. 2024, 18(11): 124 <https://doi.org/10.1007/s11705-024-2475-4>, **Impact Factor: 4.5 (Q1)**

23. Bhumika Jena, Swati Sucharita Singh, **Sankha Chakrabortty**, Susanta Kumar Behera, Suraj K. Tripathy, Cecilia Stålsby Lundborg, Ramesh Kumar, Moonis Ali Khan, Byong Hun Jeon, Amrita Mishra, Understanding the antibacterial mechanism of a phytochemical derived from *Urginea Indica* against Methicillin-Resistant *Staphylococcus aureus*: A phytochemical perspective to impede antibiotics resistance, Journal of Industrial and Engineering Chemistry, 2024, <https://doi.org/10.1016/j.jiec.2024.04.049>, **Impact Factor: 6.2 (Q1)**

24. Ramesh Kumara, Jayato Nayakb, Somnath Chowdhury, Sashikant Nayak, Shirsedu Banerjee, Bikram Basak, Masoom Raza Siddiqui, Moonis Ali Khan, Rishya Prava Chatterjee, Prashant Kumar Singh, WooJin Chung, Byong-Hun Jeon,

Sankha Chakrabortty*, Suraj K Tripathy, Optimizing Methanol Synthesis from CO₂ using Graphene-based Heterogeneous Photocatalyst under RSM and ANN-driven Parametric Optimization for achieving better suitability, RSC Advances, 2024, 14, 12496–12512, **Impact Factor: 3.9 (Q1)**

25. Prasenjit Chakraborty, Ramesh Kumar, **Sankha Chakrabortty**, Shouvik Saha, Sujoy Chattaraj, Somagni Roy, Avishek Banerjee, Suraj K. Tripathy, Alak Kumar Ghosh, Byong-Hun Jeon, Technological advancements in the pretreatment of lignocellulosic biomass for effective valorization: A review of challenges and prospects, Journal of Industrial and Engineering Chemistry, 2024, <https://doi.org/10.1016/j.jiec.2024.03.025>, **Impact Factor: 6.2 (Q1)**

26. Shirsenu Banerjee, Anirban Banik, Vinay Kumar Rajak, Tarun Kanti Bandyopadhyay, Jayato Nayak, Michał Jasinski, Ramesh Kumar, Byong-Hun Jeon, Masoom Raza Siddiqui, Moonis Ali Khan, **Sankha Chakrabortty**, and Suraj K. Tripathy, Two-Phase Crude Oil–Water Flow Through Different Pipes: An Experimental Investigation Coupled with Computational Fluid Dynamics Approach, <https://doi.org/10.1021/acsomega.3c05290>, ACS Omega, 2024. **Impact Factor: 4.20 (Q1)**

27. Ramesh Kumara, Elinah Awino, Dorcas Wanja Njeri, Aradhana Basu, Sujoy Chattaraj, Jayato Nayak, Snehagni Roy, Gausal A Khan, Byong Hun Jeona, Alak Kumar Ghosh, **Sankha Chakrabortty***, Suraj K. Tripathy, Advancing antibiotics removal techniques: Photocatalytic membrane systems in pharmaceutical wastewater-A comprehensive review, Journal of Water Process Engineering, 2024, <https://doi.org/10.1016/j.jwpe.2024.104838>, **Impact Factor: 7.00 (Q1)**

28. Susanta Kumar Behera; Gausal A. Khan; Swati Sucharita Singh; Bhumika Jena; Kali Sashank; Srinivas Patnaik; Ramesh Kumar; Byong-Hun Jeon; **Sankha Chakrabortty**; Suraj K. Tripathy, Antibacterial Efficacy of ZnO/Bentonite (Clay) Nanocomposites against Multidrug-Resistant *Escherichia coli*, ACS Omega, 2024-01-04, DOI: 10.1021/acsomega.3c07950, **Impact Factor: 4.20 (Q1)**

29. Ankita Mukherjee, Biswajit Ruj, Anup Kumar Sadhukhan, Partha Pratim Gupta, **Sankha Chakrabortty**, Rishyprava Chatterjee, Bhaskar Bishayee, Eco-synthesis, characterization and application of waste plastics pyrolysis char in arsenic removal from contaminated water: An integrated circular framework with parametric response surface methodology optimization-cum-artificial neural network model, Journal of Environmental Chemical Engineering, December 2023, 111824, <https://doi.org/10.1016/j.jece.2023.111824>, **Impact Factor: 7.96 (Q1)**

30. A review on recent advancements in the removal of phenol and pharmaceutical compounds, Ho Soonmin, Sie Yon Lau, Abdul Zahir, **Sankha Chakrabortty**, Ajala Oluwaseun Jacob, International Journal of Chemical and Biochemical Sciences, IJCBS, 24(5) (2023): 783-792, **(Q4)**

31. Anwesha Dey, Ramesh Kumar, Bhramar Dutta, Rajib Bandopadhyay, **Sankha Chakrabortty**, Moonis Ali Khan, Byong Hun Jeon, Alak Kumar Ghosh, Synthesis, Kinetics, Reaction Mechanism and Bio-activity Assays of a Dimeric Palladium Complex, ACS Omega. 2023 Dec 5; 8(48): 45653–45667, 10.1021/acsomega.3c05944, **Impact Factor: 4.2 (Q1)**

32. Chaturmukha Pattanaik, Sujoy Chattaraj, Somagni Roy, Ramesh Kumar, Masoom Raza Siddiqui, Moonis Ali Khan, Pallabi Pahari, Shirsenu Banerjee, Byong-Hun Jeon, **Sankha Chakrabortty***, Suraj K. Tripathy, Intensification of absorption rate of carbon dioxide and ammonia in a simulated packed (Stephens–Morris) column using pulsed gas phase under optimized parametric conditions, Chemical Engineering and Processing - Process Intensification, Volume 194, December 2023, 109583, DOI: <https://doi.org/10.1016/j.cep.2023.109583>, **Impact Factor: 4.2 (Q1)**

33. Behera, Meerambika; Chakrabortty, Sankha; Alqahtani, Fatimah; Nayak, Jayato; Banerjee, Shirsenu; Kumar, Ramesh; Jeon, Byong-Hun; Tripathy, Suraj K., CuO/TiO₂/ZnO NPs Anchored Hydrogen Exfoliated Graphene: To Comprehend the Role of Graphene in Catalytic Reduction of p-Nitrophenol, ACS Omega, <https://doi.org/10.1021/acsomega.3c03859>, 2023, **Impact Factor: 4.2 (Q1)**

34. Ramesh Kumar, **Sankha Chakrabortty**, Prasenjit Chakrabortty, Jayato Nayak, Chengjia Liu, Moonis Ali Khan, Geon-Soo Ha, Kwang Ho Kim, Moon Son, Hyun-Seog Roh, Suraj K. Tripathy, Byong-Hun Jeon, Sustainable recovery of high-valued resources from spent lithium-ion batteries: A review of the membrane-integrated hybrid approach, Chemical Engineering Journal, Volume 470, 15 August 2023, 144169, doi.org/10.1016/j.cej.2023.144169, **Impact Factor: 15.3 (Q1)**

35. **Sankha Chakrabortty**, Ramesh Kumarc, Jayato Nayak, Byong-Hun Jeon, Shashi Kant Dargar, Suraj K. Tripathy, Parimal Pal, Geon-Soo Ha, Kwang Ho Kim, Michał Jasiński, Green synthesis of MeOH derivatives through in situ catalytic transformations of captured CO₂ in a membrane integrated photo-microreactor system: a state-of-art review for carbon capture and utilization, Renewable & Sustainable Energy Reviews, Volume 182, August 2023, 113417, <https://doi.org/10.1016/j.rser.2023.113417>, **Impact Factor: 16.8. (Q1)**

36. Susanta Kumar Behera, Mashael Huwaike, Bhumika Jena, Maulin P Shah, **Sankha Chakrabortty**, Suraj K. Tripathy, Amrita Mishra, Fabrication of ZnO/Gypsum/Gelatine nanocomposites films and their antibacterial mechanism against *Staphylococcus aureus*, Biotechnology and Genetic Engineering Reviews, DOI: 10.1080/02648725.2023.2216419,

Impact Factor: 4.2 (Q2)

37. Fatimah Othman Alqahtani, Nazish Parveen, Gausal A. Khan, Meerambika Behera, **Sankha Chakrabortty***, Suraj K. Tripathy (2023): Synthesis, characterization and application of BR@Ag nanocomposite material for high degree reduction of p-nitro phenol under a suitable condition, *Biotechnology and Genetic Engineering Reviews*, DOI: 10.1080/02648725.2023.2216071, **Impact Factor: 4.2 (Q2)**

38. Ramesh Kumar, Chengjia Liu, Geon-Soo Ha, Kwang Ho Kim, **Sankha Chakrabortty**, Suraj K. Tripathy, Young-Kwon Park, Moonis Ali Khan, Krishna Kumar Yadav, Marina M.S. Cabral-Pinto, Byong-Hun Jeon, A novel membrane-integrated sustainable technology for downstream recovery of molybdenum from industrial wastewater Resources, *Conservation & Recycling* 196 (2023) 107035, <https://doi.org/10.1016/j.resconrec.2023.107035>, **Impact Factor: 13.6 (Q1)**

39. Meenaxi Malhotra, **Sankha Chakrabortty**, Madhubanti Pal, Parimal Pal, A Single Functionalized Graphene Nanocomposite in Cross flow Module for Removal of Multiple Toxic Anionic Contaminants from Drinking Water *Environ Sci Pollut Res*. 2023 May;30(24):65250-65266. doi: 10.1007/s11356-023-26937-y, 2023, **Impact Factor: 5.2 (Q1)**

40. Ramesh Kumar, Aradhana Basu, Bhaskar Bishayee, Rishya Prava Chatterjee, Meeraambika Behera, Wei Lun Ang, Parimal Pal, Maulin Shah, Suraj K. Tripathy, Selvaraj Ambika, V. Aruna Janani, **Sankha Chakrabortty***, Jayato Nayak, Byong-Hun Jeon, Management of tannery waste effluents towards the reclamation of clean water using an integrated membrane system: A state-of-the-art review, *Environmental Research*, Volume 229, 15 July 2023, 115881, 2023, <https://doi.org/10.1016/j.envres.2023.115881>, **Impact Factor: 8.9 (Q1)**

41. Pranjali, Soujanya Ghosh, Ramesh Kumar, **Sankha Chakrabortty**, Amrita Mishra, Byong-Hun Jeon, Suraj K. Tripathy, Homogenous Sono-Fenton reaction can trigger long term bactericidal effect against *Acinetobacter baumannii* due to residual stress induced by reactive oxygen species, *Chemical Engineering Journal*, Volume 464, 15 May 2023, 142556, 10.1016/j.cej.2023.142556 **Impact Factor: 16.6 (Q1)**

42. Nitika Tiwari, **Sankha Chakrabortty**, Kundan Samal, Sanjib Moulick, Benu Gopal Mohapatra, Sasmita Samanta, P.K. Mohapatra, Kali Sanjaye, Jayato Nayak, Shirsenu Banerjee, Suraj K. Tripathy, Photocatalytic degradation of malachite green using TiO_2 and ZnO impregnated on fecal sludge derived biochar, *Journal of the Taiwan Institute of Chemical Engineers*, doi.org/10.1016/j.jtice.2023.104800, **Impact Factor: 5.9 (Q1)**

43. Biswajit Ruj, Preetam Kumar Mondal, Swarup Ranjan Debberma, Bhaskar Bishayee, Rishyaprava Chatterjee, Jayato Nayak, **Sankha Chakrabortty***, Reutilization of ferro-arsenic waste sludge for the development of concrete blocks through solidification: conservation of natural aggregates with policy suggestion, *Biotechnology and Genetic Engineering Reviews*, 2023 Mar 2;1-28. doi: 10.1080/02648725.2023.2182040. **Impact Factor: 4.2 (Q2)**

44. Pinaki Dey, **Sankha Chakrabortty**, Dibyajyoti Haldar, Vivek Rangarajan, Sowmya Ashok, On-site enriched production of cellulase enzyme using rice straw waste and its hydrolytic performance evaluation through systematic dynamic modeling, *Environmental Science and Pollution Research*, 2023, <https://doi.org/10.1007/s11356-022-24797-6>, **Impact Factor: 4.8 (Q1)**

45. Swati Sucharita Singh; Susanta Kumar Behera; S Rai, Suraj K. Tripathy, Amrita Mishra, **Sankha Chakrabortty***, A critical review on nanomaterial based therapeutics for diabetic wound healing, *Biotechnology and Genetic Engineering Reviews*, 2023, DOI: 10.1080/02648725.2022.2161732, **Impact Factor: 4.2 (Q2)**

46. Bhumika Jena; Swati Sucharita Singh; Susanta Kumar Behera; Smrutirekha Mishra; **Sankha Chakrabortty**, Dayanidhi Meher; Bansidhar Mulia; Suraj K. Tripathy; Ramesh Kumar; Amrita Mishra, Byong-Hun Jeon; Cecilia Stålsby Lundborg, To decipher the phytochemical agent and mechanism for *Urginea indica* mediated green synthesis of Ag nanoparticles and investigation of its antibacterial activity against Methicillin-Resistant *Staphylococcus aureus*, *Environmental Research Journal*, Volume 216, Part 4, 1 January 2023, 114700, **Impact Factor: 8.9. (Q1)**

47. Jayato Nayak, Aradhana Basu, Pinaki Dey, Ramesh Kumar, Anuradha Upadhyaya, Sanchari Ghosh, Bhaskar Bishayee, Smruti Rekha Mishra, Suraj K. Tripathy, Shirsenu Banerjee, Madhubanti Pal, Parimal Pal, Snehasish Mishra, Bikram Basak, Byong-Hun Jeon, **Sankha Chakrabortty***, Transformation of agro-biomass into vanillin through novel membrane integrated value-addition process: a state-of-art review, *Biomass Conversion and Biorefinery*, <https://doi.org/10.1007/s13399-022-03283-6>, **Impact Factor: 4.2. (Q2)**

48. Ramesh Kumar, Bikram Basak, Parimal Pal, **Sankha Chakrabortty**, Young-Kwon Park, Moonis Ali Khan, WooJin Chung, SoonWoong Chang, Yongtae Ahn, Byong-Hun Jeon, Feasibility assessment of bioethanol production from humic acid-assisted alkaline pretreated Kentucky bluegrass (*Poa pratensis L.*) followed by downstream enrichment using direct contact membrane distillation, *Bioresource Technology*, Volume 360, September 2022, 127521, **Impact Factor: 11.21 (Q1)**

49. Pinaki Dey, **Sankha Chakrabortty**, Dibyajyoti Haldar, A Sowmya, Vivek Rangarajan, Héctor A Ruiz, Kinetic model supported improved and optimized submerged production strategy of cellulase enzyme from newspaper waste biomass,

50. Sanjay Sarkar, Nitika Tiwari, Meerambika Behera, **Sankha Chakrabortty**, Kavya Jhingran, Kali Sanjay, Shirsenu Banerjee, Suraj K. Tripathy, Facile synthesis, characterization and application of magnetic Fe3O4-coir pith composites for the removal of methyl violet from aqueous solution: Kinetics, isotherm, thermodynamics and parametric optimization, Journal of the Indian Chemical Society 99 (2022) 100447, **Impact Factor: 0.29 (Q4)**

51. Meerambika Behera, Nitika Tiwari, Shirsenu Banerjee, Abdul Rauf Sheik, Manish Kumar, Madhubanti Pal, Parimal Pal, Rishya Prava Chatterjee, **Sankha Chakrabortty**, Suraj K. Tripathy, Ag/biochar nanocomposites demonstrate remarkable catalytic activity towards reduction of p-nitrophenol via restricted agglomeration and leaching characteristics, Colloids and Surfaces A: Physicochemical and Engineering Aspects 642 (2022) 128616, DOI: <https://doi.org/10.1016/j.colsurfa.2022.128616>, **Impact Factor: 5.60 (Q2)**

52. Biswajit Ruj, Bhaskar Bishayee, Rishya Prava Chatterjee, Ankita Mukherjee, Arup Saha, Jayato Nayak, **Sankha Chakrabortty***, An economical strategy towards the managing of selenium pollution from contaminated water: a current state-of-the-art review, Journal of Environmental Management, 2021, Volume 304, 15 February 2022, 114143. <https://doi.org/10.1016/j.jenvman.2021.114143>, **Impact Factor: 8.91 (Q1)**

53. Bhaskar Bishayee, Biswajit Ruj, Santanu Nandi, Rishya Prava Chatterjee, Aparajita Mallick, Prasenjit Chakraborty, Jayato Nayak, **Sankha Chakrabortty***, Sorptive elimination of fluoride from contaminated groundwater in a fixed bed column: a kinetic model validation based study, Indian Journal of the Chemical Society, Volume 99, Issue 1, January 2022, 100302, <https://doi.org/10.1016/j.jics.2021.100302>, **Impact Factor: 0.29 (Q4)**

54. Bhaskar Bishayee, Rishya Prava Chatterjee, Biswajit Ruj, **Sankha Chakrabortty***, Jayato Nayak, Strategic management of nitrate pollution from contaminated water using viable adsorbents: An economic assessment-based review with possible policy suggestions, Journal of Environmental Management, Volume 303, 1 February 2022, 114081, <https://doi.org/10.1016/j.jenvman.2021.114081>, **Impact Factor: 8.91 (Q1)**

55. Sanjay Sarkar, Nitika Tiwari, Aradhana Basu, Meerambika Behera, Bhaskar Das, **Sankha Chakrabortty**, Kali Sanjay, Mrutyunjay Suar, Tapan Kumar Adhya, Shirsenu Banerjee, Suraj K. Tripathy, Sorptive removal of malachite green from aqueous solution by magnetite/coir pith supported sodium alginate beads : Kinetics, isotherms, thermodynamics and parametric optimization, Environmental Technology & Innovation, 2021, <https://doi.org/10.1016/j.eti.2021.101818>, **Impact Factor: 7.75 (Q1)**

56. Meerambika Behera, Nitika Tiwari, Aradhana Basu, Smruti Rekha Mishra, Shirsenu Banerjee, **Sankha Chakrabortty** Suraj K. Tripathy, Maghemite/ZnO nanocomposites: A highly efficient, reusable and non-noble metal catalyst for reduction of 4-nitrophenol, Advanced Powder Technology, 2021, <https://doi.org/10.1016/j.apt.2021.06.005>, **Impact Factor: 4.91 (Q1)**

57. Facile synthesis, characterization and application of heterogeneous Al@Si materials for adsorptive mitigation of fluoride: optimization and cost analysis, Bhaskar Bishayee, Biswajit Ruj, **Sankha Chakrabortty***, Jayato Nayak, Environmental Nanotechnology Monitoring & Management, 2021, 10.1016/j.enmm.2021.100490, 2021, pp. 100490, **Impact Factor: 5.86 (Q1)**

58. Biswajit Ruj, **Sankha Chakrabortty***, Jayato Nayak, Rishyaprava Chatterjee, A treatment of arsenic sludge generated from groundwater treatment plant: A review towards a sustainable solution, South African Journal of Chemical Engineering 37 (2021) 214–226, **Impact Factor: 5.64 (Q1)**

59. Meeraambika Behera, Shirsenu Banerjee, Jayato Nayak, **Sankha Chakrabortty***, Suraj K Tripathy, A review on the treatment of textile industry waste effluents towards the development of efficient mitigation strategy: material and integrated photo-catalytic system design, Journal of Environmental Chemical Engineering (Elsevier), <https://doi.org/10.1016/j.jece.2021.105277>, **Impact Factor: 7.96 (Q1)**

60. **Sankha Chakrabortty***, Jayato Nayak, Parimal Pal, Ramesh Kumar, Prasenjit Chakraborty, Separation of COD, Sulphate and Chloride from Pharmaceutical Wastewater using Membrane Integrated System:Transport Modeling towards Scale-Up, Journal of Environmental Chemical Engineering,vol. 8, 104275, 2020, DOI: 10.1016/j.jece.2020.104275 (Elsevier, SCIE Journal), **Impact Factor: 7.96 (Q1)**

61. **Sankha Chakrabortty***, Jayato Nayak, Ramesh Kumar, Shirsenu banerjee, Prasenjit Chakraborty, Moumita Sardar, Parimal Pal, Biswajit Ruj, Photocatalytic Conversion of CO₂ to Methanol using Membrane-Integrated Green Approach: A Review on Capture, Conversion and Purification, Journal of Environmental Chemical Engineering, Volume 8, Issue 4, August 2020, 103935, doi.org/10.1016/j.jece.2020.103935 (Elsevier, SCIE Journal), **Impact Factor: 7.96 (Q1)**

62. **Sankha Chakrabortty***, Jayato Nayak, Parimal Pal, Ramesh Kumar, Shirsenu Banerjee, Preetam Kumar Mondal, Madhubanti Pal, Biswajit Ruj, Catalytic conversion of CO₂ to biofuel (methanol) and downstream separation in membrane-integrated photoreactor system under suitable conditions, International Journal of Hydrogen Energy, Volume 45, Issue 1,675-690, 2020 doi.org/10.1016/j.ijhydene.2019.10.220, **Impact Factor: 7.13 (Q1)**

63. Parimal Pal, Moumita Sardar, Madhubanti Pal, **Sankha Chakrabortty**, Jayato Nayak, Modeling of Forward Osmosis-

Nanofiltration Integrated Process for Treatment and Recirculation of Leather Industry, Computers & Chemical Engineering, Volume 127, 99-110, 2019, Citations Number: 00. DOI: 10.1016/j.compchemeng.2019.05.018, Impact Factor: 4.13. (Q2)

64. Mousumi Roy, Lassi Linnanen, **Sankha Chakrabortty**, Parimal Pal, Developing a closed-loop water conservation system and model through circular economy approach, *Water Resources Management* (Springer), 33, 4157–4170, 2019, DOI: 10.1007/s11269-019-02347-z, **Impact Factor: 3.51. (Q1)**

65. Jayato Nayak, Parimal Pal, **Sankha Chakrabortty**, Pinaki Dey, Ramesh Kumar, Shirsendu Banerjee & Jenish Soosai Antony, Advanced Operation and Control in Graphical User Interface of a Membrane-integrated Hybrid Biochemical Process for Acetic Acid Production, *Journal of Indian Chemical Engineer* (Taylor & Francis), doi.org/10.1080/00194506.2019.1701572 (Q3)

66. Nayak J, Pal P, Roy Z, **Chakrabortty S**, Dey P, Pandey S, Varma S.A.K, Subashini K, Concentration Enrichment of Fermentation Derived Acetic Acid: Transport Modeling of Forward Osmosis-Nanofiltration Integrated System, *Chemical Product and Process Modeling*, Volume 15, Issue 11, March 2020 Article number 20190019 (Q4)

67. M. Pal, **S. Chakrabortty**, J. Nayak and P. Pal, Removing toxic contaminants from groundwater by graphene oxide nanocomposite in a membrane module under response surface optimization, *Int. J. Environ. Sci. Techno* (Springer, SCI Journal), 16, 4583–4594, 2019, Citations Number: 01. DOI: 10.1007/s13762-018-1924-3, Impact Factor: 2.86. (Q3)

68. **S. Chakrabortty**, M. Roy & P. Pal, Removal of fluoride from contaminated groundwater by cross flow nanofiltration: Transport modeling and economic evaluation, *Desalination* (Elsevier, SCI), 313, 115–124, 2013, DOI: 10.1016/j.desal.2012.12.021, **Impact Factor: 11.21 (Q1)**

69. **Sankha Chakrabortty**, Madhubonti Pal, Mousumi Roy, Parimal Pal, Water treatment in a new flux-enhancing, continuous forward osmosis design: Transport modelling and economic evaluation towards scale up, *Desalination* (Elsevier, SCI), 365, 329–342, 2015, Citations Number: 11. DOI: 10.1016/j.desal.2015.03.020, **Impact Factor: 11.21 (Q1)**

70. P. Pal, **S. Chakrabortty** & L. Linnanen, A nanofiltration–coagulation integrated system for separation and stabilization of arsenic from groundwater, *Science of the Total Environment* (Elsevier, SCI) 476–477, 601–610, 2014, **Best Research Paper in Arsenic Research Domain in the year of 2014-2016**, Citations Number: 46. DOI: 10.1016/j.scitotenv.2014.01.041, **Impact Factor: 10.69 (Q1)**

71. **S. Chakrabortty** & M. Sen & P. Pal, Arsenic removal from contaminated groundwater by membrane-integrated hybrid plant: optimization and control using Visual Basic platform, *Environment Science & Pollution Research* (Springer, SCI), 21(5):3840–57, 2014, Citations Number: 12. DOI: 10.1007/s11356-013-2382-6, **Impact Factor: 4.22 (Q1)**

72. **Sankha Chakrabortty**, Madhubonti Pal, Mousumi Roy & Parimal Pal, Fluoride in groundwater: low-cost separation and stabilization by response surface optimization, *International Journal of Environment Science and Technology* (Springer, SCI), 13:813–824, 2016, Citations Number: 02. DOI: 10.1007/s13762-015-0904-0, **Impact Factor: 2.86. (Q3)**

73. Ritwik Thakura, **Sankha Chakrabortty** & Parimal Pal, Treating complex industrial wastewater in a new membrane-integrated closed loop system for recovery and reuse, *Clean Technology Environ Policy* (Springer, SCI Journal), 17:2299–2310, 2015, **Best Research Paper Award-2015: SPRINGER**, Citations Number: 08. DOI: 10.1007/s10098-015-0971-4, **Impact Factor: 3.53. (Q2)**

74. M. Roy & **S. Chakrabortty**, Developing a sustainable water resource management strategy for a fluoride-affected area: a contingent valuation approach, *Clean Technology Environment Policy* (Springer, SCI), 16:341–349, 2014, Citations Number: 10. DOI: 10.1007/s10098-013-0624-4, **Impact Factor: 3.53 (Q2)**

75. Madhubonti Pal, **Sankha Chakrabortty**, Parimal Pal & Lassi Linnanen, Purifying fluoride-contaminated water by a novel forward osmosis design with enhanced flux under reduced concentration polarization, *Environment Science & Pollution Research* (Springer, SCI), 22(15):11401-11, 2015, Citations Number: 04. DOI: 10.1007/s11356-015-4333-x, **Impact Factor: 5.22 (Q1)**

76. P. Pal, **S. Chakrabortty** & M. Roy, Arsenic Separation by a Membrane-Integrated Hybrid Treatment System: Modeling, Simulation, and Techno- Economic Evaluation, *Separation Science and Technology* (Taylor & Francis, SCI), 47, 1091–1101, 2012, Citations Number: 22. DOI: 10.1080/01496395.2011.652754, **Impact Factor: 2.47. (Q3)**

77. Parimal Pal, **Sankha Chakrabortty**, Jayato Nayak, Suman Senapati, A Flux-Enhancing Forward Osmosis-Nanofiltration Integrated Treatment System for the Tannery Wastewater Reclamation, *Environmental Science and Pollution Research* (Springer, SCI Journal), 24(18):15768-15780, 2017, Citations Number: 05. DOI: 10.1007/s11356-017-9206-z, **Impact Factor: 5.22. (Q1)**

78. Parimal Pal, Pallabi Das, **Sankha Chakrabortty**, Ritwik Thakura, Dynamic modelling of a Forward Osmosis-nanofiltration integrated system for hazardous wastewater, *Environment Science & Pollution Research* (Springer, SCI),

79. Parimal Pal & Ritwik Thakura & **Sankha Chakrabortty**, Performance analysis and optimization of an advanced pharmaceutical wastewater treatment plant through a visual basic software tool (PWWT.VB), Environment Science & Pollution Research (Springer, SCI), 23(10):9901-17, 2016, Citations Number: 02. DOI: 10.1007/s11356-016-6238-8, **Impact Factor: 5.22. (Q1)**

80. R. Kumar & **S. Chakrabortty** & P. Pal, Membrane-integrated physico-chemical treatment of coke-oven wastewater: transport modelling and economic evaluation, Environment Science & Pollution Research (Springer, SCI), 22(8):6010-23, 2014, Citations Number: 10. DOI: 10.1007/s11356-014-3787-6, **Impact Factor: 5.22. (Q1)**

81. R. Kumar, P. Bhakta, **S. Chakrabortty**, P. Pal, Separating cyanide from coke waste-water by cross flow nanofiltration, Separation Science and Technology (Taylor & Francis, SCI), 46, 2119–2127, 2011, Citations Number: 36. DOI: 10.1080/01496395.2011.594479, Impact Factor: 2.47. (Q3)

82. Parimal Pal, Ramesh Kumar, D. Vikrama Chakravarthi, **Sankha Chakrabortty**, Modeling and simulation of continuous production of L (+) glutamic acid in a membrane-integrated bioreactor, Biochemical Engineering Journal (Elsevier, SCI), 106, 68–86, 2016, Citations Number: 10. DOI: 10.1016/j.bej.2015.11.008, Impact Factor: 4.30. (Q1)

* Corresponding Author: 29 Papers

Patents: 14 (Granted-7, Filed-7)

1. Gausal A Khan, **Sankha Chakrabortty**, Suraj K Tripathy, Shirsedu Banerjee, Ultrasound-assisted method for high-yield cellulose extraction from raw rice straw without the need for bleaching step, **USPTO (US Patent), Application number: 18/429,102, 31/01/2024, Granted, Issue Date: 10/29/2024, Patent Number: 12129314, US12129314B1**
2. PAL, Parimal, **CHAKRABORTTY, Sankha**, A high flux low energy osmotic system for arsenic removal at low cost, Patent no: **333616, 1003/KOL/2014 (Granted)**
3. **CHAKRABORTTY, Sankha** and RUJ, Biswajit, A process for the development of hydrogen exfoliation graphene based photocatalyst, Patent No. : **406569 Grant Date: 14.09.2022 201811046955 (Granted)**
4. **CHAKRABORTTY, Sankha** and RUJ, Biswajit, A process for the synthesis of graphene based nano-catalyst and use thereof in high methanol production, **201811047387, 16/12/2019, Patent no.: 449316, 04/09/2023 (Granted)**
5. RUJ, Biswajit, DEBBARMA, Swarup Ranjan, **CHAKRABORTTY, Sankha** and MONDAL, Preetam Kumar, A composition for high strength concrete blocks utilizing arsenic and iron-rich sludge and a process for the preparation thereof, Patent No. **452156, Date: 15/09/2023, 201911040875, 10/10/2019 (Granted)**
6. RUJ, Biswajit, DEBBARMA, Swarup Ranjan, **CHAKRABORTTY, Sankha** and MONDAL, Preetam Kumar, Thermal treatment towards safe disposal of arsenic-rich sludge and its process thereof, **202011009039, 03/03/2020 Patent No: 547729, Granted Date: 13/08/2024 (Granted)**
7. RUJ, Biswajit, DEBBARMA, Swarup Ranjan, **CHAKRABORTTY, Sankha** and SAHA, Arup, A composition for high strength concrete blocks utilizing fluoride rich sludge and a process for the preparation thereof, **201913053662, 24/12/2019, / Patent No: 555664; Granted Date: 02/12/2024 (Granted)**
8. Nitika Tiwari, Sanjay Sarkar, Kali Sashank, Kundan Samal, Sanjib Moulick, Benu Gopal Mohapatra, Shirsedu Banerjee, **Sankha Chakraborty**, Sasmita Samant, P. K. Mohapatra, Suraj Kumar Tripathy, Metal doped fecal sludge biochar for treatment of water, **E106/5/2022/KOL (202231000798), 06/01/2022**
9. Meerambika Behera, Shirsedu Banerjee, Smrutirekha Mishra, Arvind Tripathy, **Sankha Chakraborty**, Suraj Kumar Tripathy, A NOVEL NANO-COMPOSITE FOR CATALYTIC REDUCTION OF ORGANIC MOLECULES, **202231035673, Date: 22/06/2022**
10. Gausal A Khan, Sankha Chakrabortty, Anuradha Upadhyaya, Suraj K Tripathy, Shirsedu Banerjee, Kshipra Misra, Cellulose-ZnO composite for wastewater treatment, **USPTO (US Patent), Application number: 18/417, 583, 19/01/2024**
11. M.S Panda, A. Tripathy, S.K Tripathy, **S Chakrabortty**, S. Banerjee, CO₂ capture and methanol production using a packed bed absorber integrated microchannel photoreactor, **202431095676, Filing Date: 04/12/2024**
12. M.S Panda, A. Tripathy, S.K Tripathy, **S Chakrabortty**, S. Banerjee, aluminum-graphene composite using the master composite homogenization (mch) process, **202431096133, Filing Date: 05/12/2024.**
13. M.S Panda, S. Jena, S.Mohanta, A. Mishra, S.K Tripathy, **S Chakrabortty**, S. Banerjee, Biodegradable polymer-zno composite coated recycled aluminium sheet and method of preparation thereof, **202531051952, Filing Date: 29/05/2025.**
14. S.S Singh, A.Mishra, S.K. Tripathy, **S. Chakrabortty**, A process for the synthesis of metal oxide-based

Book Chapters Published:

1. **Sankha Chakrabortty**, Jayato Nayak, Shirsenu Banerjee, Ramesh Kumar, Parimal Pal, Prasenjit Chakraborty, Ishita Sarkar, Amit Kumar, "Green Synthesis of Food Flavouring Agents" of book name "Green Innovation, Sustainable Development, and Circular Economy", Editors: Nitin Kumar Singh, Siddhartha Pandey, Himanshu Sharma, Sunkulp Goel, Chapter 5, CRC Press, Taylor & Francis, 2020, ISBN No.: 9780367441746 (Published)
2. **Sankha Chakrabortty**, Jayato Nayak, Parimal Pal, Biswajit Ruj, Prasenjit Chakraborty, "Nanomaterials for CO₂ Capture: An introduction" of book name "Nanomaterials for CO₂ Capture, Storage, Conversion and Utilization" Editor: Tuan Anh Nguyen, Chapter 13, Elsevier Book, ISBN No.: 9780128228944 (Published)
3. **Sankha Chakrabortty**, Jayato Nayak, Sirsenu Banerjee, Parimal Pal, Jenish Soosai Antony, Siddharth Pandey, Nitin Kumar Singh, "Application of non-conventional methods in food for obtaining bioactive components", Springer Nature (Published), DOI: 10.1007/978-981-16-8125-7_17, ISBN: 978-981-16-8125-7
4. **Sankha Chakrabortty**, Jayato Nayak, Prasenjit Chakraborty, "Chemical Stabilization of Oil by Elastomizers" of book name "Advances in oil-water separation: A complete guide for physical, chemical, and Biological processes" Elsevier Book (Published), <https://doi.org/10.1016/B978-0-323-89978-9.00022-7>
5. Ramesh Kumar, Rashmi Dhurandhar, **Sankha Chakrabortty**, Alak Kumar Ghosh, "Downstream process: Towards cost/energy effectiveness", Elsevier Book, <https://doi.org/10.1016/B978-0-12-822810-4.00012-9> (Published)
6. Ramesh Kumar, Rashmi Dhurandhar, **Sankha Chakrabortty**, Bikram Basak, Alak Kumar Ghosh, "Techno-economic analysis of biofuel production: concept, steps and tools" Elsevier Book, <https://doi.org/10.1016/B978-0-12-822810-4.00002-6> (Published)
7. **Sankha Chakrabortty**, Jayato Nayak, Sanchari Ghosh, Meeraambika Behera, Prasenjit Chakraborty, Shirsenu Banerjee, Suraj K Tripathy, "Utilization of biomass derived materials for the development of sustainable abatement technology" of book Biomass-Derived Materials for Environmental Application, Elsevier Book (Accepted).
8. Jayato Nayak, Sampriti Nayak, **Sankha Chakrabortty**, Pinaki Dey, Parimal Pal, Siddhartha Pandey, Amit Kumar, "Aerobic synthesis of value added organic acid: Routes towards sustainable Industrialization" of book name "Green Innovation, Sustainable Development, and Circular Economy", Editors: Nitin Kumar Singh, Siddhartha Pandey, Himanshu Sharma, Sunkulp Goel, Chapter 5, CRC Press, Taylor & Francis, 2020, ISBN No.: 9780367441746 (Published)
9. Ishita Sarkar, **Sankha Chakrabortty**, Parimal Pal, "Removal of arsenic and fluoride from water using novel technologies" of book name "Water Treatment: A Historical Perspective on Technological Development and Future Landscape", Wiley Press, ISBN Number: 9781119479987, (Published)
10. Jayato Nayak, **Sankha Chakrabortty**, Prasenjit Chakraborty, Parimal Pal, Sdihath Pandey, "Clean Water Reclamation from Tannery Industrial Wastewater in Integrated treatment schemes: A substantial review towards a viable solution", of book name "Integrated and Hybrid Process Technology for Water and Wastewater Treatment", Elsevier Book, Published, <https://doi.org/10.1016/B978-0-12-823031-2.00007-0>
11. Jayato Nayak, **Sankha Chakrabortty**, "MOFs based advanced materials for gaseous adsorption: Sustainable environmental remediation" of book "Novel Materials for Environmental Remediation Applications: Adsorption and Beyond", Elsevier Book, Pages 185-205, 978-0-323-91894-7, 2023.
12. Ramesh Kumar, Prasenjit Chakraborty, **Sankha Chakrabortty**, Bikram Basak, Byong-Hun Jeon, "Synergy of textile dyeing wastewater treatment along with water reclamation: a membrane-enabled sustainable approach" of book name "Advances in sustainable technologies for the treatment of textile wastewater" Elsevier Book, Pages 279-302, 978-0-323-91235-8, 2023.
13. Shirsenu Banerjee, Nitika Tiwari, **Sankha Chakrabortty**, Mrutyunjay Suar, Tapan Kumar, Adhya Suraj Kumar Tripathy, "Zeolites for environmental purposes" of book name Novel Materials for Environmental Remediation Applications: Adsorption and Beyond, Elsevier Book, 978-0-323-91894-7.
14. **Sankha Chakrabortty**, Jayato Nayak, Prasenjit Chakraborty, "Application of Electrospun Polymeric Nanofibrous Membranes for Water Treatment", of book titled "Industrial Wastewater Treatment Using Emerging Technologies for Sustainability", Springer Natrure, DOI: 10.1007/978-3-030-98202-7_4, 978-3-030-98202-7
15. **Sankha Chakrabortty**, Jayato Nayak, Parimal Pal, Meerambika Behera, Shirsenu Banerjee, Suraj K Tripathy, "Application of membrane integrated systems for industrial waste effluent treatment, Resource Recovery in Industrial Waste waters" (Volume 3) (Sillanpaa_Khadir_Gurung), Elsevier (Under Review), 978-0-323-95327-6, 2023
16. **Sankha Chakrabortty**, Jayato Nayak, Parimal Pal, Prasenjit Chakraborty, Shirsenu Banerjee, Suraj K Tripathy, Role of biochar in the removal of organic and inorganic contaminants from wastewater, Book name "Synergistic Approaches for Bioremediation of Environmental Pollutants: Recent Advances and Challenges" Elsevier, Edited by Riti Kapoor and Dr. Maulin Shah, Pages 79-99, 978-0-323-91860-2
17. Shirsenu Banerjee, **Sankha Chakrabortty**, Suraj K Tripathy, Advances in nitrogen-based dye removal technologies by biochar, Book name "Synergistic Approaches for Bioremediation of Environmental Pollutants: Recent Advances and Challenges" Elsevier, Chapter 13, Edited by Riti Kapoor and Dr. Maulin Shah, Pages 101-121, 978-0-323-91860-2, 2022
18. **Sankha Chakrabortty**, Jayato Nayak, Prasenjit Chakraborty, Microbial Treatment of Pharmaceutical wastewater:

challenges and scope, Book name “Microbial Approaches for Pharmaceutical Wastewater Recycling and Management for Sustainable Development: Present Status, Challenges, And Opportunities”, Chapter 17, Edited by VINEET KUMAR, JOGINDER SINGH, CRC Press (Taylor and Francis), DOI: 10.1201/9781003231738-18

19. **Sankha Chakrabortty**, Jayato Nayak, Sirsendu Banerjee, Parimal Pal, Jenish Soosai Antony, Siddharth Pandey, Nitin Kumar Singh, “Application of Non-Conventional Methods in Food for Obtaining Bioactive Components”, book name “Recent Advances in Food Biotechnology”, DOI: 10.1007/978-981-16-8125-7_17
20. Sanchari Ghosh, Sankha Chakrabortty, Jayato Nayak, Prasenjit Chakraborty, Meerambika Behera, Shiesendu Banerjee, Suraj K Tripathy, “Utilization of biomass-derived materials for sustainable environmental pollutants remediation” Biomass-Derived Materials for Environmental Applications, 2022, Pages 405-420, <https://doi.org/10.1016/B978-0-323-91914-2.00022-2>
21. Suman Saha, Baddi Prasad, Jayato Nayak, **Sankha Chakrabortty**, Siddharth Pandey, Nitin Kumar Singh, Hirendrasinh Padhiyar, Gaurav Sanghvi, Synthesis, Characterization, and Beneficial Effects of Green Antioxidant for Food Industry, book name “Recent Advances in Food Biotechnology” DOI: 10.1007/978-981-16-8125-7_13
22. Bishnu Dev Patra, Sweta Behera, Smrutirekha Mishra, **Sankha Chakrabortty**, and Shirsendu Banerjee, Structure-Property Relationship of Alginic Polymers and Its Biomedical Applications, In: Properties and Applications of Alginic, Editor: Michael Y. Wilkerson, ISBN: 979-8-88697-371-6, 2022 Nova Science Publishers, Inc.
23. Krishnendu Adhikary, Riya Sarkar, Sriya Choudhury, Sankha Chakrabortty, Prithviraj Karak, Insights into the Adverse Effects of Bisphenol A on the Environment and Human Health, Book Name “A Basic Overview of Environment and Sustainable Development” [Volume: 2]. ISBN: 978-81-962683-8-1; pp. 313-336; Published online: 17th December, 2023, <https://doi.org/10.52756/boesd.2023.e02.021>, International Academic Publishing House

Paper published in SCOPUS Indexed Journals:

1. **Sankha Chakrabortty**, Parimal Pal, Biswajit Ruj, Solar Energy Application on Methanol Production and Purification—A Concise Review, AIP Conference Proceeding, 2039, 020050-1–020050-6, DOI: 10.1063/1.5079009, 2018 (SCOPUS Indexed).
2. **Sankha Chakrabortty**, Biswajit Ruj, Parimal Pal, and Jayato Nayak, Development of integrated photo-catalyst adsorbent (IPCA) for simultaneous capture and conversion of CO₂ to methanol, AIP Conference Proceedings 2105, 020006 (2019); <https://doi.org/10.1063/1.5100691>, 2019.
3. **Sankha Chakrabortty**, Biswajit Ruj, Parimal Pal, Synthesis of Methanol through Photocatalytic Conversion of CO₂: A Green Chemistry Approach, World Academy of Science, Engineering and Technology, International Journal of Bioengineering and Life Sciences Vol:13, No:1, 2019, ISNI:0000000091950263
4. Jayato Nayak, Parimal Pal, Zunipa Roy, **Sankha Chakrabortty**, Pinaki Dey, Siddhartha Pandey, S. Anand Kumar Varma, K. Subashini, Concentration Enrichment of Fermentation Derived Acetic Acid: Transport Modeling of Forward Osmosis-Nanofiltration Integrated System, Chemical Product and Process Modeling. 2019; 20190019 (DE GRUYTER Publisher).
5. M Behera, N Tiwari, S Banerjee, **S Chakrabortty**, S Tripathy, BR05-Bauxite Residue Supported Ag Nanoparticles: A Highly Effective and Recyclable Catalyst for Hydrogenation of p-Nitrophenol, TRAVAUX 49, Proceedings of the 38th International ICSOBA Conference, 16 – 18 November 2020

Conference Attended:

1. **Sankha Chakrabortty**, Parimal Pal, Transport modeling of arsenic separation by a nano membrane based hybrid process, Chemical Engineering Conference (CHEMCON-2012), I.I.Ch.E., Page no. 311, DR B R Ambedkar National Institute of Technology, Jalandhar, 27-30 Dec. 2012
2. **Sankha Chakrabortty**, Mousumi Roy and Parimal Pal, Removal of Fluoride from Contaminated Groundwater by a Cross-Flow Membrane-Integrated System: Dynamic Modelling towards Scale-up, Chemical Engineering Conference (CHEMCON-2013), I.I.Ch.E., Page no. 132, ICT, Mumbai, 27-30 Dec. 2013
3. **Sankha Chakrabortty**, Mousumi Roy, Parimal Pal, Nanofiltration based Hybrid Process for the Separation of Arsenic from Contaminated Groundwater: A Model based Approach. International Conference on Membranes and Applications, Page no. 48, CSIR-CGCRI, Kolkata Nov. 2013
4. **Sankha Chakrabortty**, Mousumi Roy, Parimal Pal, A techno-waste management of arsenic rejection, Chemical Engineering Conference (CHEMCON-2014), I.I.Ch.E., Page no. 484 Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology, Chandigarh, 27-30 Dec. 2014
5. **S. Chakrabortty**, M. Roy and P. Pal, Removal of Arsenic by Forward Osmosis: A Novel Design towards Enhanced flux under Reduced Concentration Polarization. Chemical Engineering Conference (CHEMCON-2015), I.I.Ch.E., Page no. 35, IIT Guwahati, 27-30 Dec. 2015
6. **Sankha Chakrabortty**, Parimal Pal, Biswajit Ruj, Solar Energy Application on Methanol Production and

Purification—A Concise Review, 1st International Conference on Sustainable Engineering and Technology (1st ICONSET-2018), Page-18, ACS College of Engineering, Bengaluru, 18th to 20th April, 2018.

7. **Sankha Chakrabortty**, Parimal Pal, Biswajit Ruj, Capture and Conversion of CO₂ to Methanol using a Novel Nanocomposite Material, 71th Annual Session of Indian Institute of Chemical Engineers (CHEMCON-2018), I.I.Ch.E., Page no. 1, DR B R Ambedkar National Institute of Technology, Jalandhar, 27-30 Dec. 2018.
8. **Sankha Chakrabortty, Biswajit Ruj, Parimal Pal, Jayato Nayak**, Development of Integrated Photo-Catalyst Adsorbent (IPCA) for Simultaneous Capture and Conversion of CO₂ to Methanol, International Conference on Trends in Material Science and Inventive Materials (ICTMIM 2019), 28-29 March, 2019, JCT college of Engineering, Coimbatore, 2019.
9. **Sankha Chakrabortty**, Biswajit Ruj, Parimal Pal, A Critical Review of methanol production from CO₂: Photocatalytic conversion and purification, 2nd Regional Science and Technology Congress, 2017 (WR), West Bengal.
10. R. Thakura, **S. Chakrabortty** and P. Pal, Integrated Forward Osmosis–Nanofiltration (FO–NF) System for the Treatment of Pharmaceutical Wastewater. Chemical Engineering Conference (CHEMCON-2015), I.I.Ch.E., Page no. 578, IIT Guwahati, 27-30 Dec. 2015
11. Ramesh Kumar, Parimal Pal, **Sankha Chakrabortty**, D. Vikrama Chakravarthi, L-glutamic acid manufacturing in hybrid plant: New approaches in downstream bioprocessing, National Symposium on Multiphase Flow (NSMF 2016), Page no.-62, NIT Durgapur, Feb. 2016.
12. Madhubonti Pal, **Sankha Chakrabortty**, Parimal Pal, Treatment of Fluoride Contaminated Groundwater by a FO-NF based Integrated System, 70th Annual Session of Indian Institute of Chemical Engineers CHEMCON – 2017, Dept. of Chemical Engineering, Haldia Institute of Technology, 27-30 Dec. 2017.
13. Jayato Nayak, **Sankha Chakrabortty**, Parimal Pal, Purification of Fermentation-derived Acetic Acid by Nanofiltration: Transport Modeling 70th Annual Session of Indian Institute of Chemical Engineers CHEMCON – 2017, Dept. of Chemical Engineering, Haldia Institute of Technology, 27-30 Dec. 2017.
- 14.

Students under Supervision:

- **Number of PhD Student Guidance: Awarded/Submitted: 02; Ongoing: 06**

1. Awarded Scholar Name: MEERAMBIKA BEHERA,
Thesis Title: Processing of supported Metal and Metal Oxide Nanoparticles for catalytic applications
Date of Viva-Voce Examination: 26.06.2023

2. Awarded Scholar Name: CHATURMUKHA PATTNAIK
Thesis Title: Gas-Liquid Absorption in Packed Column with and without Pulsed Gas Phase
Date of Viva-Voce Examination: 11.09.2024

- **Number of PG Student Guidance: Awarded: 04**
- **Number of UG Student Guidance: 08**

Faculty Development Programme (FDP) Attended

1. Faculty Developed Programme on Blended Learning-2020, Organized by KIIT University, 22-28th June, 2020.
2. AICTE Sponsored Online Six Day Short Term Training Program-III on “Sustainable Design of Chemical Process Plants by Using ASPEN PLUS and ASPEN HYSYS Simulating Tools” conducted by Centre for Disaster Mitigation and Management (CDMM), Vellore Institute of Technology (VIT), Vellore, Tamil Nadu, India during 21-09-2020 to 26-09-2020.
3. AICTE Training And Learning (ATAL) Academy Online FDP on "Waste Technology" from 2020-9-21 to 2020-9-25 at Giani Zail Singh Campus College of Engineering & Technology MRSPTU.
4. AICTE Training And Learning (ATAL) Academy Online FDP on "Waste Technology" from 2020-11-23 to 2020-11-27 at BMS Engineering College, Bengaluru.
5. AICTE Training And Learning (ATAL) Academy Online FDP on "Alternate Fuels" from 2020-12-08 to 2020-12-12 at University College of Engineering, Anna University.
6. AICTE Training And Learning (ATAL) Academy Online FDP on "Novel Material" from 2021-01-04 to 2021-01-08 at

Malavya National Institute of Technology Jaipur.

7. AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "PLASTICS RECYCLING AND WASTE MANAGEMENT" from 2021-06-14 to 2021-06-18 at CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING AND TECHNOLOGY (CIPET).
8. AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Novel Applications of Waste Technology Systems for Sustainable future" from 02/08/2021 to 06/08/2021 at M S RAMAIAH INSTITUTE OF TECHNOLOGY.
9. Faculty Development Programme On "Practical Aspects of ICT Tools & Online Teaching in Current Scenario", Organized By: Research Foundation of India, RFI Care & Arena Animation Indore, Date: 19-25 August 2022

Workshop Attended

1. Instrumental Application and Chemical Analysis of Environmental Samples, Organized by Department of Chemistry, National Institute of Technology Durgapur, June, 2016
2. Emerging Trends of Waste Management and Valorization (ETWMV-2016), Organized by Department of Chemical Engineering, National Institute of Technology Durgapur, July, 2016
3. MHRD, Govt. of INDIA sponsored GIAN (Global Initiative of Academic Networks) course "Managing the Transition towards Low-Carbon Society", Organized by Department of Management Studies, National Institute of Technology Durgapur, 21 - 27 November 2016
4. Introduction to Mass Transfer Operations, Organized by UDEMY INC., USA, Course Hours: 13 hours, June 20th to July 5th, 2020.
5. Attended an online course on "ASPEN PLUS-GETTING STARTED", Organized by UDEMY INC., USA, Course Hours: 4.5 hours, July 10-16th, 2020.
6. DST-SERB sponsored National Workshop on Advances in Materials, Manufacturing and processing of Bio-Scaffolds for Tissue Engineering Applications, Vellore Institute of Technology, Vellore, Tamil Nadu, 27.04.2022 to 01.05.2022

Journal Reviewing:

1. Process Safety and Environmental Protection (Elsevier Publisher): 06
2. Journal of Water Process and Engineering (Elsevier Publisher): 10
3. Science of Total Environment (Elsevier Publisher): 09
4. Journal of Environmental Chemical Engineering (Elsevier Publisher): 07
5. Eco-toxicology and Environmental Safety (Elsevier Publisher): 03
6. Environmental Science and Pollution Search (Springer): 06
7. International Journal of Energy Research (Wiley Publisher): 02
8. Water Science and Technology (IWA Publisher): 14
9. International Journal of Environmental Science and Technology (Springer): 28
10. Journal of Engineering Science and Technology Review : 02
11. Chemical Product and Process Modeling: 01
12. International Journal of Membrane Science and Technology: 01
13. International Journal of Nano-particle Research: 03
14. Chemical Papers, Springer: 03
15. Carbon Research Journal: 02
16. Heliyon Journal: 03
17. Environmental Pollution: 02
18. Biotechnology and Genetic Engineering Reviews: 02
19. Canadian Journal of Chemical Engineering: 02
20. Desalination : 03
21. Water, Air, & Soil Pollution: 02
22. Plos One: 01
23. Plos Water: 01
24. Nano Paper: 02
25. Journal of Environmental Management: 02
26. Journal of Biological Macromolecules: 01
27. Others: >30

Membership with Professional Bodies

- Life membership of Indian Institute of Chemical Engineers (Membership Number: LM-65320)

- Life membership of National Environmental Science Academy (L/M Number: 2053)
- Life membership of Save the Environment Society (L/M Number: 0075)
- Life Membership of International Water Association (IWA Publisher) (Membership number: 1606951)
- Life membership Asia Society of Researchers (Senior Member Number: R219022601)
- Life membership of International Association of Engineers (Membership Number: 120928).
- Life membership of Scientific and Technical Research Association (Membership Number: STRA-M19400)
- Life membership of Teaching and Education Research Association: Membership Number (TERA-M19970)
- Life membership of HKCBEE Society (Membership Number: 202344)

Industrial Experience

3 Months in GRAPHITE INDIA LIMITED - DURGAPUR (Process Engineer)

Softcomputing based Skills:

- ✓ Modeling-Simulation of Membrane Technology
- ✓ Process Controle using VB.NET/VISUAL BASIC
- ✓ Process Optimizations using ANN/RSM
- ✓ Detailed Project Report (DPR) Preparation of a Chemical Process

Academic References

Prof. Parimal Pal (Ph.D. Supervisor)

HAG Professor, Chemical Engineering
Department of Chemical Engineering, NIT Durgapur, Durgapur-713209, India
Email: parimalpal2000@yahoo.com; Cell: 09434469750

Prof. Papita Das (PDF Mentor)

Professor and Ex. Head, Chemical Engineering
Department of Chemical Engineering, Jadavpur University, Jadavpur, Kolkata, West Bengal 700032
Email: papita.das@jadavpuruniversity.in; Cell: 09903739855

Dr. Biswajit Ruj (PDF Mentor)

Chief Scientist & Former Head
Environmental Engineering Group
CSIR-Central Mechanical Engineering Research Institute, M.G. Avenue, Durgapur-713209, WB, India
Email: biswajitruj@yahoo.co.in, bruj@cmeri.res.in ; Cell: 09474372196

Personal and other details

- Father's Name : Mr. Debidas Chakraborty
- Mother's Name : Mrs. Kanika Chakraborty
- Sex : Male
- Nationality : Indian
- Date of Birth : 06/04/1987
- Birth Place : Balijuri, Birbhum, WB, India

Permanent Address:

C/O- Debidas Chakraborty, House number: 9/3, Pramodnagar, Kururiadanga, Durgapur, 713203, West Bengal

I hereby declare that the above mention information is correct up to my knowledge and I bear the responsibility for the

correctness of the above mentioned particulars.

Date:

Place: Bhubaneswar


SANKHA CHAKRABORTTY