

# Dr. Sankha Chakraborty

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

## Contacts:

[sankha.nit@gmail.com](mailto:sankha.nit@gmail.com)

[sankha.chakraborty@kiitbiotech.ac.in](mailto:sankha.chakraborty@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



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## 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\\_Chakraborty2](https://www.researchgate.net/profile/Sankha_Chakraborty2)
4. Orcid ID : <https://orcid.org/0000-0001-7719-8586>
5. Web of Science Researcher ID: P-1531-2019

## Current Position (since 22<sup>nd</sup> 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 22<sup>nd</sup> 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 CO<sub>2</sub> 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: **12<sup>th</sup> 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 **9<sup>th</sup> Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19<sup>th</sup> January, 2024.
4. Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in **9<sup>th</sup> Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19<sup>th</sup> January, 2024.
5. Awarded as **“Best Oral Presentation”** in 2<sup>nd</sup> International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023), RGKIT, Gajjiabad, September, 2023.
6. Honored as **Workshop Chair** the “2<sup>nd</sup> International Conference on Environment, Renewable Energy and Green Chemical Engineering”, China, 8-10<sup>th</sup> 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 10<sup>th</sup> 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, 19<sup>th</sup> December, 2021
12. Awarded as **“Environmentalism 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:**

- ❖ Chakraborty, 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 Chakraborty**, Drimitous Gyncoplous, 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 Chakraborty**, 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 Chakraborty**, Jayato Nayak, Suraj K Tripathy, Maulin P Shah, Springer Nature, DOI: <https://doi.org/10.1007/978-3-031-86701-9>, eBook ISBN 978-3-031-86701-9 Published: 19 May 2025
- ❖ Microreactor Technology: Bridging Modern Science and Research with Advanced Technology, Satyabrata Si, Sankha Chakraborty, 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, 19<sup>th</sup> 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 27<sup>th</sup> July, 2022.
- ❖ Delivered Guest Lecture as a workshop chair in the "**2<sup>nd</sup> International Conference on Environment, Renewable Energy and Green Chemical Engineering**", China, 8-10<sup>th</sup> September
- ❖ Delivered Invited Lecture in "**National Conference on Environment, Water, Agriculture, Sustainability and Health (Ewash-2023): Strategizing A Greener Future & 5<sup>th</sup> Annual Meet of STE**", 22<sup>nd</sup> - 23<sup>rd</sup> December, 2023, SWAMI RAMA HIMALAYAN UNIVERSITY, Jolly Grant, Dehradun, Uttarakhand
- ❖ Served as a **Panelist in 9<sup>th</sup> Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19<sup>th</sup> 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, 23<sup>rd</sup> 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 3<sup>rd</sup> International Conference on Trends in Material Science and Inventive Materials
- ❖ Committee Member of 4<sup>th</sup> International Conference on Inventive Material Science and Applications
- ❖ Committee Member of 5<sup>th</sup> International Conference on Trends in Material Science and Inventive Materials
- ❖ Committee Member of 6<sup>th</sup> International Conference on Inventive Material Science and Applications
- ❖ Reviewer and Committee Member of 3<sup>rd</sup> International Conference on "Advanced Technologies for Industrial Pollution Control (ATIPC-2022)"
- ❖ Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in 9<sup>th</sup> Annual Sustainability Summit at XIM University, Bhubaneswar, 18-19<sup>th</sup> 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
- ❖ 1<sup>st</sup> 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)
- ❖ 2<sup>nd</sup> International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023), RGKIT, Gajabad, September, 2023.
- ❖ National Conference on Environment, Water, Agriculture, Sustainability and Health (Ewash-2023): Strategizing A Greener Future & 5<sup>th</sup> Annual Meet of STE, 22<sup>nd</sup> - 23<sup>rd</sup> 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, 22<sup>nd</sup> and 23<sup>rd</sup> 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, 30-31<sup>st</sup> August, 2022.
- ❖ Organized 8<sup>th</sup> Annual Biotechnology Industry Conclave-2022 as Member, 23<sup>rd</sup> and 24<sup>th</sup> 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 9<sup>th</sup> **Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19<sup>th</sup> January, 2024.
- ❖ Invited as an **Evaluator for Research Colloquium Oral and Poster Competitions** in 9<sup>th</sup> **Annual Sustainability Summit** at XIM University, Bhubaneswar, 18-19<sup>th</sup> January, 2024.

### **Sponsored Projects**

<b>Sponsoring Agency</b>	<b>Title of the Project</b>	<b>Period</b>	<b>Amount (Lakhs)</b>	<b>Status</b>
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 Photocatalytic Reforming of Lignocellulosic Biomass	2 Years (2021-2023)	10	Completed (PI)
Ministry of Mines, Government of India	Fabrication of Al <sub>2</sub> O <sub>3</sub> 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 <sub>2</sub> 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**, Shirsendu 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 Roy, Ramesh Kumarb, Marta Oteroc, Prasenjit Chakrabortyd, Santoshi Mohantaa, Shirsendu 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, Shirsendu 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, Shirsendu Banerjee, **Sankha Chakrabortty\*** & Suraj K. Tripathy, Pulsations in gas–liquid mass transfer: a comprehensive review in the enhancement of CO<sub>2</sub> absorption, Environmental Technology Reviews, 14:1, 213-239, DOI: 10.1080/21622515.2025.2468349
9. Sanjib Roy, Chaturmukha Pattnaik, Ramesh Kumar, Shirsendu Banerjee, Jayato Nayak, Somnath Chaudhuri, Sayantan Sarkar, Moonis Ali , Byong- Hun Jeon, **Sankha Chakraborttya\***, Suraj K Tripathy, AI-Driven Parametric Optimization of Gas-Liquid Absorption for the Intensification of CO<sub>2</sub> 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, Shirsendu Banerjee, **Sankha Chakrabortty\***, Suraj K Tripathy, A multi-approach study on CO<sub>2</sub> 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 Chakraborty, Kevin Joseph Dilip, International Journal of Biological Macromolecules, Volume 283, Part 1, December 2024, 137574, [doi.org/10.1016/j.ijbiomac.2024.137574](https://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 Chakraborty\***, 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 Chakraborty\***, 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, Sneha Roy, Abhrajit Chatterjee, Sujoy Chattaraj, Jayato Nayak, Byong-Hun Jeon, Aradhana Basu, Shirsendu Banerjee, **Sankha Chakraborty\***, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty\***, A review on generation, composition, and valorization of dairy processing sludge: A circular economy-based sustainable approach, Journal of Industrial Engineering and Chemistry, <https://doi.org/10.1016/j.jiec.2024.08.045>, **Impact Factor: 6.2 (Q1)**
20. Pranjal, Gobinda Chandra Mahapatra, **Sankha Chakraborty**, Shirsendu 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, Sneha Roy, Sashikant Nayak, Susanta Kumar Behera, **Sankha Chakraborty**, 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, Shirsendu Banerjee, Amrita Mishra, Moonis Ali Khan, Somnath Chowdhury, Byong-Hun Jeon, **Sankha Chakraborty\***, 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. Sci. Eng. 2024, 18(11): 124 <https://doi.org/10.1007/s11705-024-2475-4>, **Impact Factor: 4.5 (Q1)**
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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, Shirsendu 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, Shirsendu 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 Chakraborty, Anuradha Upadhyaya, Suraj K Tripathy, Shirsendu 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 Chakraborty**, S. Banerjee, CO<sub>2</sub> 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 Chakraborty**, 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 Chakraborty**, 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. Chakraborty**, A process for the synthesis of metal oxide-based

## **Book Chapters Published:**

1. **Sankha Chakraborty**, Jayato Nayak, Shirsendu 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 Chakraborty**, Jayato Nayak, Parimal Pal, Biswajit Ruj, Prasenjit Chakraborty, "Nanomaterials for CO<sub>2</sub> Capture: An introduction" of book name "Nanomaterials for CO<sub>2</sub> Capture, Storage, Conversion and Utilization" Editor: Tuan Anh Nguyen, Chapter 13, Elsevier Book, ISBN No.: 9780128228944 (Published)
3. **Sankha Chakraborty**, Jayato Nayak, Shirsendu Banerjee, Parimal Pal, Jenish Soosai Antony, Siddhartha 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, Jayato Nayak, Sanchari Ghosh, Meeraambika Behera, Prasenjit Chakraborty, Shirsendu 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, Sampriya Nayak, **Sankha Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, "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 Chakraborty**, 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. Shirsendu Banerjee, Nitika Tiwari, **Sankha Chakraborty**, 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 Chakraborty**, 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 Nature, DOI: 10.1007/978-3-030-98202-7\_4, 978-3-030-98202-7
15. **Sankha Chakraborty**, Jayato Nayak, Parimal Pal, Meerambika Behera, Shirsendu 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 Chakraborty**, Jayato Nayak, Parimal Pal, Prasenjit Chakraborty, Shirsendu 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. Shirsendu Banerjee, **Sankha Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty, 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 Chakraborty**, 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 Chakraborty**, and Shirsendu Banerjee, Structure-Property Relationship of Alginate Polymers and Its Biomedical Applications, In: Properties and Applications of Alginate, Editor: Michael Y. Wilkerson, ISBN: 979-8-88697-371-6, 2022 Nova Science Publishers, Inc.
23. Krishnendu Adhikary, Riya Sarkar, Sriya Choudhury, Sankha Chakraborty, 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 Chakraborty**, 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 Chakraborty**, Biswajit Ruj, Parimal Pal, and Jayato Nayak, Development of integrated photo-catalyst adsorbent (IPCA) for simultaneous capture and conversion of CO<sub>2</sub> to methanol, AIP Conference Proceedings 2105, 020006 (2019); <https://doi.org/10.1063/1.5100691>, 2019.
3. **Sankha Chakraborty**, Biswajit Ruj, Parimal Pal, Synthesis of Methanol through Photocatalytic Conversion of CO<sub>2</sub>: A Green Chemistry Approach, World Academy of Science, Engineering and Technology, International Journal of Bioengineering an Life Sciences Vol:13, No:1, 2019, ISNI:0000000091950263
4. Jayato Nayak, Parimal Pal, Zunipa Roy, **Sankha Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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 Chakraborty**, 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. Chakraborty**, 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 Chakraborty**, Parimal Pal, Biswajit Ruj, Solar Energy Application on Methanol Production and

- Purification—A Concise Review, 1<sup>st</sup> International Conference on Sustainable Engineering and Technology (1<sup>st</sup> ICONSET-2018), Page-18, ACS College of Engineering, Bengaluru, 18<sup>th</sup> to 20<sup>th</sup> April, 2018.
7. **Sankha Chakraborty**, Parimal Pal, Biswajit Ruj, Capture and Conversion of CO<sub>2</sub> to Methanol using a Novel Nanocomposite Material, 71<sup>th</sup> 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 Chakraborty**, **Biswajit Ruj**, **Parimal Pal**, **Jayato Nayak**, Development of Integrated Photo-Catalyst Adsorbent (IPCA) for Simultaneous Capture and Conversion of CO<sub>2</sub> 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 Chakraborty**, Biswajit Ruj, Parimal Pal, A Critical Review of methanol production from CO<sub>2</sub>: Photocatalytic conversion and purification, 2<sup>nd</sup> Regional Science and Technology Congress, 2017 (WR), West Bengal.
  10. R. Thakura, **S. Chakraborty** 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 Chakraborty**, 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 Chakraborty**, Parimal Pal, Treatment of Fluoride Contaminated Groundwater by a FO-NF based Integrated System, 70<sup>th</sup> 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 Chakraborty**, Parimal Pal, Purification of Fermentation-derived Acetic Acid by Nanofiltration: Transport Modeling 70<sup>th</sup> 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, 22-28<sup>th</sup> 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 20<sup>th</sup> to July 5<sup>th</sup>, 2020.
5. Attended an online course on "ASPEN PLUS-GETTING STARTED", Organized by UDEMY INC., USA, Course Hours: 4.5 hours, July 10-16<sup>th</sup>, 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 Control 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](mailto: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](mailto: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](mailto:biswajitruj@yahoo.co.in), [bruj@cmeri.res.in](mailto: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:

A handwritten signature in black ink, appearing to read 'Sankha Chakraborty', is written over a light blue rectangular background.

Place: Bhubaneswar

**SANKHA CHAKRABORTTY**