CURRICULUM VITAE

PROF. (MRS.) SUSMITA DUTTA

PRESENT POSITION
Professor
Chemical Engineering Department
National Institute of Technology Durgapur
Durgapur – 713209, West Bengal
INDIA

ADDRESS FOR CORRESPONDENCE
C/O Mr. Saktidhar Haldar
1, Rampada Haldar Road
P.O. Barrackpur
Dist. 24 – Parganas (North)
West Bengal -700120, India

DATE OF BIRTH
19.11.1974

NATIONALITY
INDIAN

TELEPHONE NUMBER
(M) +91-9434788120
(R) +91-98300 75233

E– MAIL ADDRESS
susmita_che@yahoo.com
sdutta.che@nitdgp.ac.in

EDUCATIONAL QUALIFICATION (Starting from the most recent):

Degrees/ Examinations	Board / University	Year of Passing	Division/ Class
Ph. D. (Engg.)	Jadavpur University	2004	
M. Tech. in CHEMICAL ENGINEERING (18 – Months Course)	Indian Institute of Technology Kharagpur.	Jan. 1999	**RANKED SECOND IN THE DEPTT.**
B. Tech. in CHEMICAL ENGINEERING (3 – years Degree Course)	University of Calcutta	1997	**1st Class**
B. Sc. (Hons. in CHEMISTRY)	University of Calcutta	1994	**1st Class**
Higher Secondary (10 + 2)	W. B. C. H. S. E.	1991	**1st Divn.**
Madhyamik (10 th)	W. B. B. S. E.	1989	**1st Divn.**

RELATED INFORMATION REGARDING ACADEMIC PERFORMANCE/ ACHIEVEMENTS:

- **Score in Graduate Aptitude Test in Engineering (GATE), 1997: 90.64 percentile.**

- **Achievement: Scholarship/Fellowship/Associate-ship**

  - Awarded National Scholarship during B. Tech. Program on the basis of the performance in B. Sc. (Hons. in Chemistry) Examination.
  - Received institute scholarship during M. Tech. Program on the basis of a percentile of 90.64 in GATE 97.
  - Received Scholarship during Ph. D. Program under West Bengal Government Fellowship Scheme.
  - Selected for prestigious **Research Associate**-ship sponsored by Council of Scientific and Industrial Research (**CSIR**), Government of India.

PROFESSIONAL EXPERIENCE:

TEACHING EXPERIENCE:

Sl. No.	Institution/University	Department	Designation	From	To
1.	Jadavpur University	Instrumentation and Electronics Engg. Deptt.	Guest Faculty	Second semester of the session 2001-2002	
2.	Heritage Institute of Technology, Kolkata, affiliated to West Bengal University of Technology (WBUT)	Chemical Engineering Department	**Lecturer** (as permanent faculty member)	01/12/2003	09/11/2005
3.	University of Calcutta	Chemical Engineering Department	**Lecturer** (as permanent faculty member)	10/11/2005	14/11/07
4.	National Institute of Technology Durgapur, Durgapur	Chemical Engineering Department	**Assistant Professor**	15/11/07	14/11/10
			Associate Professor	15/11/10	15/10/18
			Professor	16/10/18	Continuing

➢ *RESEARCH ACTIVITY:*

Sl. No.	Position held	Sponsoring Agency	Duration		Place of research	Title of the Project
			From	To		
1	M. Tech Student		1997	1999	Chem. Engg. Deptt., I. I. T. Kharagpur	Studies on the liquid phase adsorption of some organic pollutants by low cost adsorbent made from sawdust
2.	Senior Research Fellow	Govt. of West Bengal, State Fellowship Scheme	11/8/99	16/6/2003	Chem. Engg. Deptt., Jadavpur University	Studies on the performance of biochemical reactors during removal of sulfur compounds and phenol through microbial route
3.	Research Associate	Council of Scientific and Industrial Research (**CSIR**), Government of India	August, 2003	Nov., 2003	Chem. Engg. Deptt., Jadavpur University	Studies on the removal of SOx through microbial route using trickle bed biofilter

➢ *PUBLICATIONS:*

DETAILED LIST OF PUBLICATIONS

BOOK:

Title: Environment Pollution and Protection
Editors: Kalyan Adhikari, Surabhi Chaudhuri, Susmita Dutta and Rajnarayan Saha
Publisher: Narosa Publishing House, New Delhi
ISBN978-81-8487-410-5
Publication Date: 2015

BOOK CHAPTERS:

I] Title: 'Recycling and Reuse of Materials and Their Products'
Editors: Prof. Yves Grohens, Kishor Kumar, Dr. Abderrahim Boudenne
Publisher: Apple Academic Press, Canada
ISBN: 9781926895277
Publication Date: January 2013

Chapter 9: "Removal of cadmium (II) from simulated solution using immobilized papain: Experiment, modeling and optimization by Response Surface Methodology", Chatterjee, S., **Dutta, S.,** and Basu, S.

Chapter 11: "Reclamation of wastes for mercury removal: A review", Bhattacharyya, A., Basu, S., and **Dutta, S**.

II] Title: Engineering Technologies for Renewable and Recyclable Materials
Editors: J. Joy, M. Jaroszewski, Praveen, K. M., S. Thomas, R. Haghi
Publisher: Apple Academic Press Inc., CRC Press, Taylor and Francis Group, Canada
ISBN: 13:978-177188-653-6
Publication Date: 2018

Chapter 11: "Removal of Mercury(II) Using Immobilized Papain: Experiment, Modeling and Optimization", A. Bhattacharyya, S. Dutta and S. Basu

III] Title: Re-Use and Recycling of Materials Solid Waste Management and Water Treatment
Editors: Jibin K. P., N. Kalarikkal, S. Thomas, A. Nzihou
Publisher: River Publishers, Denmark
ISBN: 978-87-7022-058-3 (Hardback)
Publication Date: 2019

Chapter 8: "Treatment of Whey Water from Food Processing Units Using Hybrid Methods", B. Mazumdar, G. Biswas, R. Saha and S. Dutta

IV] Title: Advances in Bioprocess Engineering and Technology
Editors: Doraiswami Ramkrishna, Sudipta Dey Bandyopadhyay, Subhabrata Sengupta, Avijit Ghosh
Publisher: Springer, Singapore
ISBN: 978-981-15-7408-5, ISBN 978-981-15-7409-2
Chapter 24: "Application of Bacillus sp. NITD 19 for Utilization of Cyanide as Nutrient Source", A. Rai, S. Mukherjee, A. Mukherjee, J. Chakrabarty P. Bhattacharya and S. Dutta

V] Title: Algae, Multifarious Applications for a Sustainable World
Editors: **Mandotra**, Sachin Kumar, **Upadhyay**, Atul Kumar, **Ahluwalia**, Amrik Singh
Publisher: Springer
ISBN: ISBN 978-981-15-7518-1
Publication Date: 2021
Chapter 06: "Parametric Modeling and Optimization of Phycoremediation of Cr(VI) Using Artificial Neural Network and Simulated Annealing" A. Rai, S. Mukherjee, A. Mukherjee, J. Chakrabarty P. Bhattacharya and S. Dutta

Chapter 13: "Microalgae Mediated Nanomaterials Synthesis", Mamta Gwala, Susmita Dutta, and Rajib Ghosh Chaudhuri

VI] Title: Removal of Pollutants from Saline Water

Editors: Shaik Feroz, Detlef W. Bahnemann
Publisher: Taylor & Francis
ISBN: ISBN 9781003185437
Publication Date: 2021
Chapter 06: "Application of Artificial Intelligence in the Treatment of Saline Water" Varghese Manappallil Joy, Shaik Feroz, Susmita Dutta, Ahmed Yousuf Khalfan Al-Busaidi, Lakkimsetty Nageswara Rao**.**

VII] Title: Applied Biotechnology for Emerging Pollutants Remediation and Energy Conversion
Editors: B. Samuel Jacob, K. Ramani, V. Vinoth Kumar
Publisher: Springer
ISBN: ISBN 978-981-99-1178-3
Publication Date: 2023
Chapter 4: "Effluent Xenobiotics and Prospects of Biogenic Zinc Oxide Nanoparticles for the Treatment of Textile Dye Effluent**"**

VIII] Title: Heavy Metal Remediation Sustainable Nexus Approach
Editors: Nitish Kumar
Publisher: Springer
ISBN: 978-3-031-53688-5
Publication Date: 2024
Chapter 4: Bioremediation of Heavy Metals—Its Pros and Cons

IX) Title: Impact of COVID-19 Waste on Environmental Pollution and Its Sustainable Management
Editors: Alok Prasad Das · Sunanda Mishra
Publisher: Springer
ISBN: 978-3-031-50839-4
Publication Date: MAY 2024
Chapter 4: Microplastic Pollution: Occurrence, Sources and Impact of COVID-19 Generated Waste

JOURNALS:

1. Kandar, B., Rai, A., Dutta, S., & Ghanta, K. C. (2024). Bioremediation of p-nitrophenol using an indigenous algal strain Tetradesmus sp. NITD18: a sustainable approach. International Journal of Chemical Reactor Engineering, 22(8), 879-891.
2. Padma, S., Srinivas, B., Mondal, B. K., Ghanta, K. C., & Dutta, S. (2024). Sustainable Approach to Reduce Lead (II) from Wastewater Using Indigenous Bacterial Strains. Journal of the Indian Chemical Society, 101223.

3. Sarkar, B., Dutta, S., & Lahiri, S. K. (2024). Multigene genetic programming approach for modelling and optimisation of removal of heavy metals from ash pond water using cyanobacterial-microalgal consortium. Indian Chemical Engineer, 1-19.
4. Sarkar, B., Lahiri, S. K., & Dutta, S. (2024). Application of multigene genetic programming and water evaporation optimization technique for modeling and optimization of removal of heavy metals from ash pond water using cyanobacterial consortium. *International Journal of Chemical Reactor Engineering*, *22*(3), 231-243.
5. Kandar, B., Rai, A., Sau, A., Ghanta, K. C., & Dutta, S. (2024). Phycoremediation of secondary treated synthetic refinery wastewater using Scenedesmus valocatus sp. NITD 23: Experiment and analysis. *Journal of Water Process Engineering*, *58*, 104910. doi.org/10.1016/j.jwpe.2024.104910
6. Sarkar, B., Dutta, S., & Lahiri, S. K. (2024). Multigene genetic programming approach for modelling and optimisation of removal of heavy metals from ash pond water using cyanobacterial-microalgal consortium. *Indian Chemical Engineer*, 1-19. doi.org/10.1080/00194506.2023.2300142
7. Sangeetha, B. M., Devi, M. G., & Dutta, S. (2023). Fabrication, characterisation and application of Poly Allyl Amine Hydrochloride/Poly Styrene Sulphonate/Zinc Oxide (PAH/(PSS/ZnO) n bilayers in the removal of pollutants from oil refinery waste water. *103*(19), 7830-7846. https://doi.org/10.1080/03067319.2021.1977284
8. Bishayee, B., Kumar, A., Lahiri, S.K., Dutta, S., Ruj, B. (2023) "Modeling, optimization and comparative study on abatement of fluoride from synthetic solution using activated laterite soil and fly ash." Groundwater for Sustainable Development, 23(4):1-13, 101016. DOI: https://doi.org/10.1016/j.gsd.2023.101016
9. Jilagam, N. K., Sau, A., Addepalli, S. V., Hens, A., Dutta, S. (2023). "Mitigation of oil spills from synthetic seawater using human hair–Experimentation, modeling and optimization." Chemometrics and Intelligent Laboratory Systems, 242, 104998. DOI: https://doi.org/10.1016/j.chemolab.2023.104998

10. Sengupta, S. L., Chaudhuri, R. G., Dutta, S. (2023). A critical review on phycoremediation of Pollutants from Wastewater–A Novel Algae Based Secondary Treatment with the Opportunities of Production of Value-Added Products, 30:114844-114872, DOI: https://doi.org/10.21203/rs.3.rs-2349815/v1

11. Sarkar, B., Dutta, S., Lahiri, S.K. (2023) "Multigene genetic programming approach for modelling and optimisation of removal of heavy metals from ash pond water using cyanobacterial-microalgal consortium." Indian Chemical Engineer, DOI: https://doi.org/10.1080/00194506.2023.2300142

12. Sarkar, B., Lahiri, S.K., Dutta, S. (2023) "Application of multigene genetic programming and water evaporation optimization technique for modeling and optimization of removal of heavy metals from ash pond water using cyanobacterial consortium." International Journal of Chemical Reactor Engineering, DOI: https://doi.org/10.1515/ijcre-2023-0105

13. Sarkar, B., Sen, S., Dutta, S., Lahiri, S.K. (2023) "Application of multi-gene genetic programming technique for modeling and optimization of phycoremediation of Cr(VI) from wastewater." Beni-Suef University Journal of Basic and Applied Science, 12:1-17. DOI: https://doi.org/10.1186/s43088-023-00365-w

14. Sarkar, B., Dutta, S., Lahiri, S.K. (2023) "Bioremediation of Cr(VI) using indigenous bacterial strains isolated from a common industrial effluent treatment plant in Vishakhapatnam." Water Science and Technology, 88(11):2889-2904. DOI: 10.2166/wst.2023.358. PMID: 38096076.

15. Bishayee, B., Rai, A., Kumar, A., Kamila, B., Ruj, B., Dutta, S., (2023), End-of-pipe treatment of secondary treated coke oven wastewater for removal of fluoride, cyanide, phenol, ammoniacal-N and nitrate using waste material:

experiment, modelling and optimization, Chemical Engineering Research and Design, DOI: https://doi.org/10.1016/j.cherd.2023.04.047.

16. Bandyopadhyay, A. , Saha, A. , Ghosh, D. , Dam, B., Samanta, A. K. and Dutta, S., (2023), Microbial repairing of concrete & its role in CO2 sequestration: a critical review, Beni-Suef University Journal of Basic and Applied Science, 12:7 https://doi.org/10.1186/s43088-023-00344-1

17. Rai, A., Bishayee, B., Dey A., Kumar, A., Lahiri, S. K., Chakrabarty, J., Dutta, S., (2023), Tertiary Treatment of Coke-oven Wastewater Using Suspended and Immobilized Whole Live Cells of Constructed Bacterial-Microalgal Consortium: Modeling and Optimization Using ANN-GA Hybrid Methodology, Water Science & Technology, Vol 87 No 3, 509 doi: 10.2166/wst.2023.023.

18. Useviciute, L., Baltrenaite-Gediene, E., Baltrenas, P. and Dutta, S., (2022), Acetone, Xylene and Ammonia removal enhancement in the biofilter packed with steam modified biochar, Journal of Environmental Engineering and Landscape Management, Vol 30, No. 3, DOI: 10.3846/jeelm.2022.17412.

19. Anjali, K.P., Raghunathan, R., Devi, G. and Dutta, S., (2022), Photocatalytic degradation of methyl red using seaweed mediated zinc oxide nanoparticles, Biocatalysis and Agricultural Biotechnology, S1878-8181(22)00111-6, Volume 43, 102384 https://doi.org/10.1016/j.bcab.2022.102384.

20. Rai, A, Kamila, B., Dutta, S. and Chakrabarty, J, (2022), Macromolecules assessment from spent biomass during phycoremediation of pollutants from coke-oven wastewater: A prospective approach for production of value added products, Journal of the Indian Chemical Society, 99 (2022) 100555, https://doi.org/10.1016/j.jics.2022.100555.

21. Joy, V. M., Feroz, S. and Dutta, S., (2022), Artificial intelligence-based multiobjective optimization of reverse osmosis desalination pretreatment using a

hybrid ZnO-immobilized/photo-Fenton process, Chemometrics, DOI: 10.1002/cem.3434

22. Sarkar, B., Dutta, S. and Lahiri, S. K. (2022), Modeling and optimization of phycoremediation of heavy metals from simulated ash pond water through robust hybrid artificial intelligence approach, Chemometrics, DOI: 10.1002/cem.3427.

23. Pramanik, S., Sarkar, B., Lahiri, S. K., Ghanta, K. C. and Dutta, S., (2022), Application of hybrid artiicial neural network (ANN)–particle swarm optimization (PSO) for modelling and optimization of the adsorptive removal of cyanide and phenol from wastewater using agro-waste-derived adsorbent, Applied Water Science, 12:184, https://doi.org/10.1007/s13201-022-01706-3

24. Bishayee, B., Rai, A., Ruj, B. and Dutta, S., "Removal of Fluoride from Synthetic Wastewater using Carbonized Saw Dust and Suspended and Immobilized culture of Pseudomonas oleovorans strain NITD 20 – A Comparative Study", accepted in Asian Journal of Water, Environment and Pollution in Feb 22, 2022.

25. Rai, A., Sen, A., Sarkar, B., Chakrabarty, J., Mondal, B. K. and Dutta, **S., (2021),** Phycoremediation of pollutants from secondary treated coke-oven wastewater using poultry litter as nutrient source: a cost-effective polishing technique, Water Science & Technology Vol 00 No 0, 1 https://doi.org/10.2166/wst.2021.433

26. Sain, M., Pramanik, S., Baltrenaite-Gediene, E, Ghanta, K. C., and Dutta, S., "Abatement of Cyanide and Ammoniacal-N from Coke-oven Wastewater Using Natural Adsorbents: A Comparative Study" accepted in Journal of The Indian Chemical Society on Oct 28, 2021. https://doi.org/10.1016/j.jics.2021.100230

27. Kumar, A., MD. Shahnawaz, Sarkar, B., Pal, S., Dutta, S., "Retention Dynamics of Multi-Metal Contaminants from Pond Ash Slurry onto Fine Grained Soil"

accepted in Journal of The Indian Chemical Society on Oct 28, 2021. https://doi.org/10.1016/j.jics.2021.100229

28. Gao, C., Xin, H., Yang, S., Li, Z., Liu, S., Xu, Bin., Zhang, T., Tongji, T., **Dutta, S**., (2022), Trends of the Algal Biofuel Research Publications: A bibliometric Approach, Journal of Environmental Engineering and Landscape Management, Volume 30, Issue 2, pp 284-300.

29. Devi, M.G., **Dutta, S.,** Al Hinai, A.T. and Feroz, S., (2021), Nano engineered biodegradable capsules for the encapsulation and kinetic release studies of ciprofloxacin hydrochloride, Journal of the Indian Chemical Society,100109, 98(8), DOI: https://doi.org/10.1016/j.jics.2021.100109

30. Joy, V.M., **Dutta, S.,** Feroz, S. and Devi, G., (2021), Nano photocatalytic treatment of seawater using TiO2 immobilized and suspension system under solar irradiation. Journal of Water Process Engineering,102263,43, DOI: https://doi.org/10.1016/j.jwpe.2021.102263

31. Sangeetha, B.M., Al Balushi, N.A.M., Devi, M.G., **Dutta, S.,** Anjali, K.P., and Al-Abri, M., (2021), Fabrication, characterization and application of polymer-based nanomaterials in the removal of pollutants from industrial effluents, Environmental Technology & Innovation, 101748, 23, DOI: https://doi.org/10.1016/j.eti.2021.101748

32. Seragadam, P., Rai, A., Ghanta, K.C., Srinivas, B., Lahiri, S.K., **Dutta,S., (2021)**, Bioremediation of hexavalent chromium from wastewater using bacteria-a green technology, Biodegradation, 1-18, DOI: https://doi.org/10.1007/s10532-021-09947-w

33. Joy, V.M., Feroz, SK., **Dutta, S**., (2021), Solar nano photocatalytic pre-treatment of seawater: process optimization and performance evaluation using response

surface methodology and genetic algorithm, Applied Water Science,1-15,11(2), DOI:https://doi.org/10.1007/s13201-020-01353-6.

34. Sarkar, B., Sharma ,U., Adhikari, K., Lahiri, S. K., Baltrenaite, E., Baltrenas P., **Dutta, S.,** (2021), "Application of Artificial Neural Network and Particle Swarm Optimization for modelling and optimization of biosorption of Lead(II) and Nickel(II) from wastewater using dead cyanobacterial biomass" accepted in Journal of the Indian Chemical Society,100039, 98(3) ,DOI: https://doi.org/10.1016/j.jics.2021.100039

35. Gwala, M., Rai, A., Ghosh Chaudhuri, R., Dutta, S., (2021), "Treatment of Hydrocarbon-rich Wastewater to Enhance Reusability of Water using a Novel Indigenous Microalgal-Bacterial Consortium Isolated from Kovalam Beach, India." Journal of Environmental Engineering, 147, 12, 04021063, https://doi.org/10.1061/(ASCE)EE.1943-7870.0001949

36. Anjali, K.P., Sangeetha, B.M., Raghunathan, R., Devi,G., **Dutta,S.,** (2021), "Seaweeds mediated fabrication of zinc oxide nanoparticles and its antibacterial, antifungal and anticancer applications", Chemistry Select , 647 –656,6(4), DOI: https://doi.org/10.1002/slct.202003517

37. Bishayee, B., Ruj, B., **Dutta, S.,** (2020), "Adsorptive Decontamination of Water Containing Fluoride using Waste Material", Journal of Indian Chemical Society, Vol 97.

38. Varghes, M. J., Feroz, S., **Dutta, S.,** (2020)," Solar nano-photocatalytic pretreatment of seawater: process optimization and performance evaluation using response surface methodology", Journal of Indian Chemical Society, Vol 97. https://link.springer.com/article/10.1007/s13201-020-01353-6

39. Upendar, G., Singh, S., Chakrabarty, J.,Ghanta, K. C.,Shahnawaz, Md.,Lahiri, S. K., **Dutta,S.,** (2020), "Application of Artificial Neural Network and Particle Swarm Optimization for modeling and optimization of CO2 sequestration using microalgae", Journal of Indian Chemical Society, 927–941, 27(3), DOI: https://link.springer.com/article/10.1007/s11269-012-0226-7

40. Varghes, M. J., Feroz, S. , **Dutta, S.,** (2020), "TiO2/photo-Fenton process for seawater pretreatment: Modeling and optimization using response surface methodology (RSM) and artificial neural networks (ANN) coupled genetic algorithm (GA)", Journal of Indian Chemical Society, Vol 97,

41. Upendar, G., Singh, S., Chakrabarty, J.,Ghanta, K. C.,Shahnawaz, Md.,Lahiri, S. K., **Dutta, S.,** (2020), "Parametric study on CO2 sequestration using cyanobacterial consortium and production of macromolecules: Experimentation, Modeling and Optimization", Water and Environment Journal, 500-513, 35(2), DOI: https://onlinelibrary.wiley.com/doi/abs/10.1111/wej.12646

42. Rai, A., Chakrabarty, J., **Dutta, S.,** (2020), "Phycoremediation of pollutants from coke-oven wastewater using Tetraspora sp. NITD 18 and estimation of macromolecules from spent biomass", Journal of Water Process Engineering, 2214-7144, 101746. DOI: https://doi.org/10.1016/j.jwpe.2020.101746

43. Rai, A., Gowrishetty, K. K., Singh, S., Chakrabarty, J., Bhattacharya, P., **Dutta, S.,** (2020), "Simultaneous Bioremediation of Cyanide, Phenol, and Ammoniacal-N from Synthetic Coke-Oven Wastewater Using Bacillus sp. NITD 19", Journal of Environmental Engineering, 0402014, 147 (1),DOI: https://doi.org/10.1061/(ASCE)EE.1943-7870.0001835

44. Tang, Y., Long, X., Wu, M., Yang, S., Gao, N., Xu, B., **Dutta, S.,** (2020), "Bibliometric review of research trends on disinfection by-products in drinking

water during 1975–2018", Separation and Purification Technology, 116741, 241, DOI: https://doi.org/10.1016/j.seppur.2020.116741.

45. Rai, A., Wadhwa, G.K., Chakrabarty, J., **Dutta, S.,** (2020) Application of Cyanobacterial Consortium to Remove Ammoniacal-N, Phenol and Nitrate from Synthetic Coke-oven Wastewater as Tertiary Treatment, Journal of Environmental Engineering, 04020062, 146, DOI: https https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29EE.1943-7870.0001731

46. Sen, S., Dutta, A., Rambabu, P., Kamila, B., Baltrėnas, P., Baltrėnaitė, E., and **Dutta,S.,** (2020),Removal of hexavalent chromium from synthetic wastewater using alginate immobilized cyanobacteria: experiment and mathematical modelling, Environmental Engineering Science, 283–294,37(4), DOI: http://doi.org/10.1089/ees.2019.0035

47. K P, A., Sangeetha, B.M., Devi, G., Raghunathan, R., **Dutta, S.,** (2019), Bioprospecting of seaweeds (Ulvalactuca and Stoechospermummarginatum): the compound characterization and functional applications in medicine- a comparative study, Journal of Photochemistry & Photobiology. B: Biology,111622, 200, DOI: https://doi.org/10.1016/j.jphotobiol.2019.111622

48. Agarwal, S., Pramanik, S., Rahaman, S., J., Ghanta, K. C., **Dutta, S.,** (2019), A cost-effective approach for abatement of cyanide using iron-impregnated activated carbon: kinetic and equilibrium study', Applied Water Science,04020143.,147(1), DOI: https://link.springer.com/article/10.1007/s13201-019-0953-5

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51. Upendar, G., Rai, A., Singh, S., Chakrabarty, J., Ghanta, K.C., **Dutta, S.,** (2019), Bio mitigation of CO_2 and extraction of biomolecules using Leptolyngbya sp., Journal of Environmental Engineering, 04019024, 145(6), DOI: https://doi.org/10.1061/(ASCE)EE.1943-7870.0001535.

52. Singh, S. Sadhu, T., **Dutta, S.,** Chakraborty, J., (2018), Influence of Polyunsaturated Fatty Acid Alkyl Esters on Biodiesel Fuel Properties: Optimization and Assessment, accepted for publication in Chemistry Select,13217-13226, 3(46), DOI: **https://doi.org/10.1002/slct.201802676**

53. Sen, S., Nandi, S. and **Dutta, S.,** (2018), Application of RSM and ANN for optimization and modeling of biosorption of chromium (VI) using cyanobacterial biomass, Applied water science, 1-12, 8(5), DOI: https://link.springer.com/article/10.1007/s13201-018-0790-y

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55. Mistry, A.N., Upendar, G., Chakrabarty, J., **Dutta, S.,** (2018), A review on biological systems for CO_2 sequestration: Organisms and their Pathways,

Environmental Progress & Sustainable Energy (Wiley),127-136,38(1), DOI: https://aiche.onlinelibrary.wiley.com/doi/10.1002/ep.12946

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L. Bhattacharya, S., Das, B., Pal A., and **Dutta**, **S.**, "Studies of adsorption of dye using low-cost adsorbent: charred bagasse," Proceedings of **National Conference of Research Scholars and Young Scientists in Chemical Engineering (CRSYS-2004)**, Indian Institute of Technology Kharagpur, Kharagpur, India September 25 – 27, 2004, 248 – 253.

LI. **Dutta**, **S.**, Chowdhury, R., and Bhattacharya, P., "Stability analysis of a biochemical system used for SO_2 removal from a simulated combustion gas mixture," Proceedings of **International Conference Energy and Environmental Technologies for Sustainable Development – 2003,** Malaviya National Institute of Technology, Jaipur**,** October 8 – 10, 2003, 225-233.

LII. **Dutta**, S., Chowdhury, R., and Bhattacharya, P., "SO_2 removal through microbial route – experiments and mathematical modeling," Proceedings of **Indian Chemical Engineering Congress- 2002 (CHEMCON 2002),** Hyderabad**,** India, December 19 – 22, 2002, 131 – 132.

LIII. **Dutta**, **S.**, Chowdhury, R., and Bhattacharya, P., "Response analysis of biochemical systems for step input with special reference to multiple steady states," Proceedings of **Indian Chemical Engineering Congress- 2002 (CHEMCON 2002),** Hyderabad**,** India, December 19 – 22, 2002, 131.

LIV. **Dutta, S.,** Bhattacharya, P., and Chowdhury, R., "Study of growth kinetics of mixed sulphate reducing bacteria culture in sulphate and sulphite growth media," Proceedings of **Indian Chemical Engineering Congress- 2001 (CHEMCON 2001),** December 19–22. 2001, 31.

LV. **Dutta**, **S.**, Chowdhury, R., and Bhattacharya, P., "Modeling and simulation of a phenol degrading biochemical system," Proceedings of **Indian Chemical Engineering Congress – 2000 (CHEMCON 2000),** Kolkata, India, December 18-21, 2000, SHE13 – SHE 16.

➢ SPONSORED PROJECTS

SPONSORED RESEARCH PROJECTS

Sl No.	Title of the Project	Sponsoring Agent	Cost (INR)	Duration (Starting year)	Status
1.	Reclamation of Steel Industry Wastewater through Phycoremediation Technique Using Microalgae and Assessment of Biofuel Production from Algal Biomass	**IMPRINT (MHRD)**	**45.1152 lakh**	**Three Years (2017)**	**Ongoing**
2.	**Phycoremediation of cyanide from coke-oven wastewater and CO2 Sequestration from Waste gas using a Mixed Consortium of Green Algae and Cyanobacteria: An Integrated Approach**	DST – Govt of India	**41.588 lakh**	2014	**Completed**
3.	**Abatement of Fluoride from Ground Water to Supply Safe Drinking Water to Rural People of West Bengal**	Department of Science & Technology, Government of West Bengal,	**12.36950 lakh**	3 Years (2013)	**Completed**
4.	**Treatment of Coke Oven Waste Water Using Hybrid Technology**	Indian Institute of Chemical Engineers	**1.0 lakh**	1 Year (2013)	**Completed**
5.	**Technology Development**	Department	**7.5 lakh**	3 years	Completed

	of Liquid Phase Adsorption of Mercury Using Low-cost Adsorbent for Better Management of Industrial Wastes	of Science and Technology, Govt. of India		(2008)	
6.	**Systematic Water Pollution Survey of River Damodar Around Durgapur – Asansol Industrial Complex and Its Impact on Domestic Water Supply**	TEQIP of N.I.T. Durgapur, under Services to Community Program	**0.65 lakh**	6 months (2008)	Completed

SPONSORED PROJECTS FOR DEVELOPMENT OF PEDAGOGICAL METHODS

The candidate has completed the pilot phase for developing suitable **pedagogical methods** for the course "**Biochemical Reaction Engineering**" as **Principal Developer**. The project was sponsored by **National Mission Project on Education (NMPE) through ICT funded by MHRD, Govt. of India.**

The candidate is developing suitable **pedagogical methods** for the course **'Mass Transfer – I'** as **Principal Developer.** The project is sponsored by **National Mission Project on Education (NMPE) through ICT funded by MHRD, Govt. of India (2013)**.

CONSULTANCY: Provided consultancy on the subject "Project Advisory Service for Solid Waste Management within ADPA region" to Asansol Durgapur Development Authority (A statutory body of the Government of West Bengal) in 2015.

➢ SUPERVISION OF RESEARCH PROJECT:

DOCTORAL RESEARCH:

Sl. No	Title of the Project	Investigator	Supervisor(s)	Status
1.	Preliminary processing of municipal solid waste and modelling of landfills	Debabrata Mukhopadhyay	**Dr. Susmita Dutta** Prof. Jyoti Prakash Sarkar	Degree Awarded
2.	Liquid Phase Adsorption of Mercury (II) Using Immobilized Enzyme	Aparupa Bhattacharyya	**Dr. Susmita Dutta** Dr. Srabanti Basu	Degree awarded
3.	Enzymatic Removal of Heavy Metals from Waste Water: Experiment and Modelling	Soumasree Chatterjee	**Dr. Susmita Dutta** Dr. Srabanti Basu	Degree Awarded
4.	Preparation and Characterization of natural degradable Nano and micro capsules using Layer-by-Layer technique	M. Geetha Devi	**Dr. Susmita Dutta** Professor S. Feroz Dr. Ashraf Al-Hinai	Degree Awarded
5.	Abatement of Fluoride from Ground Water and Wastewater	Ms. Gargi Biswas	**Dr. Susmita Dutta** Dr. Kalyan Adhikari	Degree Awarded
6.	Phycoremediation of Cr(VI) from Wastewater	Mr. Sushovan Sen	**Dr. Susmita Dutta**	Thesis submitted
7.	CO_2 Sequestration using microalgae and assessment of biomolecules production	Mr. Ganta Upendar	**Dr. Susmita Dutta** Prof. K. C. Ghanta	Thesis submitted

CONFERENCE/ WORKSHOP/ REFRESHER COURSE/ SEMINAR/ SUMMER SCHOOL ORGANIZED:

1. **Three Days National Conference** on "Environment: Pollution and Protection" at National Institute of Technology Durgapur (Jan 30 – Feb 01, 2014) as a capacity of Joint Convener.
2. **Short term course on** Bioremediation of Industrial Wastes for a Greener World (December 8 – 12, 2014) as a capacity of Coordinator.
3. **Short term course on** Zero Discharge: Recent Advancement and Sustainability (Sept 30, 2016 – Oct 04, 2016) as a capacity of Coordinator.
4. **Short term course on** Bioactive compounds from natural sources and its Health Care Applications (Jan 8 – 12, 2018) as a capacity of Coordinator.

INVITED LECTURES

"Removal of Pollutants from Simulated Waste Water with Special Reference to Heavy Metal Removal using Immobilized Enzyme", Food Science and Bioresource Technology Group Seminar Series, Dept. of Agriculture, Food and Nutritional Science, University of Alberta, Canada, March 13, 2009.

VISIT ABROAD

Laboratory training program on "2nd Generation Lipid Pyrolysis Based Biofuel Technology, Department of Agriculture, Food and Nutritional Science, University of Alberta, Canada, February 03 – March 16, 2009.

The candidate acted as '**Guest Faculty**' for delivering lectures on the Chemical Engineering modules at **Caledonian College of Engineering, Sultanate of Oman** during December 1 – December 4, 2012.

AWARDS/ HONOURS RECEIVED

1. Best Paper in Poster Session in Indian Chemical Engineering Congress- 2002 (CHEMCON 2002).

2. M. H. Shukla 1st. Prize, **2008** for the **Best Technical Paper** presented in the 60th. Annual Session (CHEMCON 2007) held in December 2007 at Kolkata.

3. Selected as a **Member of the Editorial Board** of the **Journal of Environmental Engg. and Landscape Management (Taylor and Francis) in Jan, 2019.**

4. Received **Certificate of Appreciation** for guiding **Mr. Gaurav Sen** (13/CH/22) who carried out his B. Tech Project entitled "Bioremediation of Cr (VI) using live cyanobacteria: Experimentation and kinetic modelling" and won " Second Prize" of " Ambuja's Best Home Paper or Design Project Report Awards" from IIChE in 2017.

REVIEW OF BOOKS AND JOURNALS

(a) Reviewer of "Introduction to Biochemical Engineering" by D. G. Rao, McGraw Hill, February, 2009.
(b) Reviewer of international and national journals viz., Journal of Hazardous Materials, Chemical Engineering Journal, Environmental Engineering and Management Journal, CLEAN–Soil, Air,Water, The journal of Institution of Engineers (India), International Journal of Mining Science and Technology, Indian Chemical Engineer.

Special Achievements:

One article based on her research work has been published in 'Down to Earth' magazine, September 15, 2011. The title of the article is "Peel filter" and it is authored by Ms. Megha Prakash.

Gandhabanik Sikhsha Samity (Established in 1944) has invited the candidate as 'Special Guest' for Foundation Day Celebration Programme on April 28, 2013 at Mahajati Sadan, Kolkata.

The candidate acted as an '**Expert'** in connection with the inspection of a college affiliated to West Bengal University of Technology.

OTHER RELEVANT INFORMATION:

- **Life Member** of **Indian Institute of Chemical Engineers (LM-12580)**
- **Member of Indian Institution of Engineers (M 135937-6)**
- **Fellow of the Indian Chemical Society (F/7835 (LM)**

DECLARATION

I declare that the information furnished above, are true to the best of my knowledge.

Dated : **SUSMITA DUTTA**

REFEREES:

Prof. Dr. P. Bhattacharya
Chemical Engineering Department
Heritage Institute of Technology, Kolkata
Chowbaga Road, Anandapur,
PO: East Kolkata Township,
Kolkata- 700 107, India
(M) +91-9831307892
E. Mail: pinaki_che@yahoo.com

Prof. Dr. Ranjana Chowdhury
Chemical Engineering Department
Jadavpur University,
Kolkata – 700032, India
(M): 9830359430
E. Mail: ftbe_bon@yahoo.com
ranjana.juchem@gmail.com