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Assistant Professor

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Research Interests

- Biological wastewater treatment, Biological nitrogen removal (Anammox Process)
- Bioremediation, Phytoremediation/Constructed Wetlands
- Waste valorization for value-added products (Biosurfactants, Biochar, Bioenergy)
- Bioprocess Design, Optimization & Kinetics

Career Highlights

- **Assistant Professor**, School of Environment & Natural Resources, Doon University, Dehradun, India. (Jul 2015 – present)
- **Postdoctoral Research Fellow**, Institute of Environmental Engineering, National Chiao Tung University (NCTU), Hsinchu, Taiwan. (2011 –2014)
- **Guest Faculty** (at the level of Assistant Professor), Centre for Biotechnology, School of Earth, Biological & Environmental Sciences, Central University of South Bihar, India. (2010 –2011)

Positions held:

- **Coordinator**, School of Biological Sciences, Doon University, Dehradun, India. (Sept 2021 – present)
- **Coordinator**, M. Tech. Environmental Technology, School of Environment & Natural Resources, Doon University, Dehradun, India. (2017 – present)

Education

- **Doctor of Philosophy** (Biotechnology), Indian Institute of Technology Guwahati (IITG), Guwahati, India, Jan, 2011.
- **Master of Technology** (Bioprocess Technology), Mumbai University Institute of Chemical Technology (Now ICT, Mumbai), Mumbai, India, 2006.
- **Bachelor of Pharmacy**, Hemwati Nandan Bahuguna Garhwal University, Srinagar, Garhwal, India, 2004.

Research/Consultancy Projects (Completed)

- *Studies on Sophorolipids (Biosurfactant) Induced Phytoremediation of Heavy Metal Contaminated Soil.* 2018-2021 (38.68 Lakh, Sponsored by SERB). Role: PI
- *Enrichment of anammox bacteria and start-up of Simultaneous Partial Nitrification, Anammox and Denitrification (SNAD) process from non-acclimated sludge.* 2017-2020 (10.0 Lakh, Sponsored by UGC). Role: PI.
- *National Mission on Himalayan Studies Fellowship Projects* (2.39 Crore, Sponsored by MoEF&CC, Govt. of India) Role: PI of four JRFs projects (Total 10 JRF and 03 RA).
- Consultancy Project: *“Training and holding for CSP Preparation, Uttarakhand.”* Support to the National Urban Sanitation Policy (SNUSP)-II (Project. No. 2013.2110.8-001.00) funded by GIZ. Role: Trainer
- Consultancy Project: Organizing International Exchange Workshop on SARS-CoV-2 Monitoring in Wastewater systems. (MGC/2021/GIZ/03) funded by GIZ under the Indo German Development Cooperation project *“Support to Ganga Rejuvenation” (SGR).* Role: Associate Expert & Resource Person

Editorial & Reviewing Experience

- **Editor of Book “Development in Wastewater Treatment Research and Processes: Bioelectrochemical Systems for Wastewater Management”** published by Elsevier. Editor: Dr. Maulin P. Shah, Dr. Susana Rodriguez Couto, Dr. Ashok Kumar Nadda and **Dr. Achlesh Daverey.** (ISBN: 9780323885058).
- **Editor of Book (Lead) “Advances in Yeast Biotechnology for Biofuels and Sustainability: Value-Added Products and Environmental Remediation Applications”** to be published by Elsevier. Editor: **Dr. Achlesh Daverey,** Dr. Kasturi Dutta, Dr. Sanket Joshi, Dr. Teresa Gea. (Expected year of publication 2023).
- **Associate Editor: Water Practice & Technology** (IWA) (2022- till date)
- **Editorial Board Member: International Biodeterioration & Biodegradation** (Elsevier) (2021 – till date); **Industrial Biotechnology** (Mary Ann Liberty) (October 2022- till date); **SN Applied Sciences** (Springer) (2018- till date); **PLOS Water** (Guest Editor) (2022 – till date)
- **Guest Editor:** *International Biodeterioration & Biodegradation* (Elsevier); *Biocatalysts and Agriculture Biotechnology* (Elsevier); *Environmental Science and Pollution Research* (Springer); *Ecotoxicology* (Springer); *Applied Biochemistry and Biotechnology* (Springer); *Environmental Monitoring and Assessment* (Springer); *SN Applied Sciences* (Springer); *Sustainability* (MDPI); *Environmental Quality Management* (Wiley); *Frontiers in Microbiology* (Frontiers)
- **Review Editor:** *Frontiers in Microbiology*; *Frontiers in Water*
- **Journal invited Reviewer-** *Water Research*; *Journal of Hazardous Materials*; *Journal of Cleaner Production*; *Bioresource Technology*; *Science of the Total Environment*; *International Biodeterioration & Biodegradation*; *Chemosphere*; *Journal of Water Process Engineering*; *Environmental Science & Pollution Research*; *Critical Review in Biotechnology*; *Trends in Biotechnology*; *Biofuels*; *Process Biochemistry*; *Microbial Ecology*; *International Journal of Hydrogen Energy*; *Applied Biochemistry and Biotechnology*; *3 Biotech*; *Water Air & Soil Pollution*; *Clean: Soil, Air, Water* etc.

Awards/Scholarships/Academic Achievements

- Awarded with “**Hiyoshi Environmental Award 2022**” by Hiyoshi Corporation, Japan for the outstanding contribution for the fundamental research on Environmental Conservation and Protection in India (November, 2022).
- Received the “**Excellence in Research of the Year-2022**” award from the Hon’ble Cabinet Minister of Technical Education & Forest (Uttarakhand) on behalf of Hon’ble Chief Minister of Uttarakhand (5th September 2022).
- **Enlisted in the top 2% Scientists of the World (single year 2020) prepared by Stanford University, 2021.**
- Received the “**Best Researcher of the Year 2021 Award**” from the Vice Chancellor, Doon University, Dehradun, India.
- Awarded **Postdoctoral Fellowship** from National Science Council (NSC), Taiwan and National Chiao Tung University, Taiwan (Jun 2011-Feb, 2014).
- Awarded the **Best Poster Award** under young scientist category in the 5th CESE conference held during 9-13th Sep, 2012, Melbourne, Australia.
- Awarded with full financial support (*Twice*) under the “**ITS**” scheme by the Department of Science and Technology (DST), India, for presenting research work in the “CESE” Conference held at Kunming, China, in Nov 2017 and “BioMicroWorld” Conference held at Lisbon, Portugal, in Dec 2009.
- Selected for **Outstanding Post-Doctoral Researchers from China and India** (*Selected to pursue postdoc at Tel Aviv University but fellowship not availed*) in 2015 from Planning and Budgeting Committee, Council for Higher Education in Israel.
- **Member (Lifetime Full Member)**, International Society for Development and Sustainability (ISDS), Japan (2021-)
- **Member**, International Association of Hydrological Sciences (IAHS), U.K. (2020 -)

Keynote lectures/Invited Talks/Special Lectures Delivered

1. Delivered a Keynote Lecture on “Anammox – Start-up Challenges and Applications in Nitrogen Removal from Wastewater” at “International Symposium on Sustainable Urban Environment” (ISSUE 2022) held on 13-14 October 2022 at UPES, Dehradun, **India**.
2. Invited to deliver a talk on “Anionic Surfactants: Environmental Toxicity and Remediation Methods” in an Indo-German Science and Technology Center (IGSTC) supported workshop “SuWaRec: Securing sustainable treatment for drinking water production and water recycling with focus on anionic contaminants” at Hamburg University of Technology (TUHH), **Germany** during 20th – 22nd July 2022.
3. Delivered an invited talk on “Sphorolipids induced phytoremediation of heavy metal contaminated sites” 3rd International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2022) held at NIT Rourkela, **India** on 20-24 June 2022.
4. Delivered an invited talk on “Utilization of pine needle biomass for environmental sustainability” at National Conference on Society, Environment and Sustainable Development (NCSESD-2022) held at Government College Nagrota Bagwan, Kangra, **India** during March 16-17, 2022.

5. Delivered an invited talk [*virtual*] on “Valorization of waste pine needles for environmental remediation” at International Conference on “Current Trends in Waste Treatment, Reuse & Valorisation” held at Sandip University, Nashik, **India** on February 25-27, **2022**.
6. Delivered an invited talk [*virtual*] on “Valorization of waste biomass as biochar to enhance phytoremediation of metal contaminated soil” at International Conference on “Advances in Energy, Environment for Sustainable Development” (AEESD-2022) held at Siksha ‘O’ Anusandhan (Deemed to be University) Bhubaneswar, **India** on January 7-8, **2022**.
7. Delivered a talk on “SARS-CoV2 in Wastewater: Challenges for Developing Countries” at International Exchange on Monitoring of SARS-CoV-2 in Wastewater, organized by GIZ under the Indo German Development Cooperation project “Support to Ganga Rejuvenation” (SGR) in cooperation with National Mission for Clean Ganga (NMCG), **India** on 11-12 November **2021**.
8. Delivered an invited talk on “Sopholipid: A potential biosurfactant for environmental applications” at 2nd International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020) held at NIT Rourkela, **India** on 05-07 March **2020**.
9. Delivered an invited talk on “Effects of biosurfactant amendment on the plant’s growth and heavy metal stress” at National Conference “Recent Advances in Energy, Environment and Health Sciences” (RAEEHS-2019) held at Siksha ‘O’ Anusandhan (Deemed to be University) Bhubaneswar, **India** on October 18-19, **2019**.
10. Delivered an invited talk on “Utilization of noxious weed *Lantana camara* for its management” at International Conference on Bioprocess for Sustainable Environment and Energy” (ICBSEE-2018) held at NIT Rourkela, **India** on 6-7 December **2018**.
11. Delivered an invited talk on “Sopholipids: Production & Applications” at a workshop “Challenges and Advances in Novel Drug Delivery System” Organized by Institute of Research Development Training (IRDT) at Government Polytechnic Piyhuwala, Dehradun, **India** on 26th May **2016**.
12. Delivered an invited lecture on “Water and Wastewater Analysis: Sampling, Storage & Analysis” at a One Day Training Workshop on “Modern Analytical techniques in Environmental Science” organized by Doon University, **India** on 17th May **2016**.
13. Delivered an invited lecture on “Anammox: Process Assessment and Applications in Treating Real Wastewaters” in the 2nd Symposium on “Biological Nitrogen Removal Mechanisms and Process Analysis” of Environmental Engineering Symposium Series at Institute of Environmental Engineering, NCTU, **Taiwan**, 1^{4th} Jan **2013**.
14. Delivered an invited lecture on “Nitrous oxide emission during biological nitrogen removal from wastewater” in the Symposium on sustainable wastewater treatment: microbes & environment at Institute of Environmental Engineering, NCTU, **Taiwan**, 2nd Nov **2011**.
15. Delivered a talk on “Commercial production of biosurfactants - obstacles and possible solutions” in a “Biotalk a lecture series” at Department of Biotechnology, IIT Guwahati, **India**, 11th Sep **2009**.

List of Publications

(A) Books

1. “Development in Wastewater Treatment Research and Processes: **Bioelectrochemical Systems for Wastewater Management**”. **Editors:** Dr. Maulin P. Shah, Dr. Susana Rodriguez Couto, Dr. Ashok Kumar Nadda and **Dr. Achlesh Daverey. (2022) (ISBN: 9780323885058)**.

(B) In International Journals (60)

1. V. Shah, V. Soni, **A. Daverey*** (Accepted) Valorization of banana peel as biochar and assessment of its effect in biochar assisted phytoremediation of cadmium contaminated soil by using the Taguchi method. *Biomass Conversion and Biorefinery* (IF: 4.05).
2. A. Priya, S. Naseem, D. Pandey, A. Bhowmick, M. Attrah, K. Dutta, E.R. Rene, S.K. Suman, **A. Daverey***. (2023). Innovative strategies in algal biomass pretreatment for biohydrogen production. *Bioresource Technology*, 369, 128446 (IF: 11.88).
3. D. Negi, S. Verma, S. Singh, **A. Daverey***, J.G. Lin (2022) Nitrogen Removal via Anammox process in Constructed Wetland - A comprehensive review. *Chemical Engineering Journal*, 473(2), 135434. (IF: 16.74).
4. D. Pandey, **A. Daverey**, K. Dutta*, K. Arunachalam* (2022) Bioremoval of toxic malachite green from water through simultaneous decolorization and degradation using laccase immobilized biochar. *Chemosphere*, 297, 134126. (IF: 8.94).
5. P. Dani, K. Naudiyal, V. Shah, **A. Daverey*** (2022) Effect of raw sewage sludge and sewage sludge biochar on soil physicochemical properties and seed germination of *Solanum lycopersicum*. *Environmental Quality Management* 32(2), 101-109 (Cite score: 2.3).
6. N. Panigrahy, A. Priyadarshini, M.M. Sahoo, A.K. Verma, **A. Daverey**, N.K. Sahoo* (2022) A comprehensive review on eco-toxicity and biodegradation of phenolics: Recent progress and future outlook". *Environmental Technology & Innovation*, 27, 102423. (IF: 7.75).
7. D. Pandey, **A. Daverey**, K. Dutta*, K. Arunachalam* (2022) Enhanced adsorption of Congo red dye onto polyethyleneimine impregnated biochar derived from pine needles. *Environmental Monitoring and Assessment*, 194, 880. (IF: 3.33).
8. M.M., Sahoo, S., Raut, **A. Daverey**, N.K., Sahoo* (2022) Co-metabolic biodegradation of 4-bromophenol in a mixture of pollutants system by *Arthrobacter chlorophenicus* A6. *Ecotoxicology*, 31, 602-614 (IF: 2.93).
9. S., Gupta, P., Thapliyal, V., Shah, **A. Daverey*** (2022). Optimization of bio-calcification process for a newly isolated urease producing bacterial strain *Advenelle* sp. AV1. *Geomicrobiology*, 39 (3-5), 242-248. (IF: 2.41)
10. S., Singh, D., Pandey, S. Saravanabhupathy, **A. Daverey***, K., Dutta, K., Arunachalam (2022) Liquid wastes as a renewable feedstock for yeast biodiesel production: Opportunities and challenges. *Environmental Research*. 207, 112100 (IF: 8.43)
11. A. Priya, K. Dutta, **A. Daverey*** (2022). A comprehensive biotechnological and molecular insight into plastic degradation by microbial community. *Journal of Chemical Technology & Biotechnology*. 97 (2), 381-390 (IF: 3.7).
12. D. Pandey, **A. Daverey***, K. Dutta, V.K. Yata, K. Arunachalam (2022) Valorization of waste pine needle biomass into biosorbents for the removal of methylene blue dye from water: Kinetics, equilibrium and thermodynamics study. *Environmental Technology & Innovation*, 25, 102200. (IF: 7.75).
13. S., Patnaik, S., Saravanabhupathy, S., Singh, **A. Daverey**, K. Dutta* (2022) Multi-objective optimization for biomass and lipid production by oleaginous bacteria using vegetable waste as feedstock. *Environmental Engineering Research*. 27(3), 210061 (IF: 3.93).
14. A. Daverey, K., Dutta, S. Joshi, **A. Daverey*** (2021) Sophorolipid: A glycolipid biosurfactant as a potential therapeutic agent against COVID-19. *Bioengineered*, 12 (2), 9550-9560. (IF: 6.83).

15. S., Shukla, R., Khan, **A. Daverey*** (2021). Synthesis and characterization of magnetic nanoparticles, and their applications in wastewater treatment: A review. *Environmental Technology & Innovation*, **24**, 101924. (IF: 7.75).
16. S. Manori, V. Shah, V. Soni, K. Dutta, **A. Daverey*** (2021). Phytoremediation of cadmium contaminated soil by *Bidens pilosa*: Impact of pine biochar amendment. *Environmental Science and Pollution Research*, **28**, 58872–58884 (IF: 5.19).
17. D., Singh, P., Sharma, U., Kumar, **A. Daverey***, K. Arunachalam (2021) Effect of forest fire on soil microbial biomass and their enzymatic activity in oak and pine forests of Uttarakhand Himalaya, India. *Ecological Processes*. **10**, 29. (IF: 4.39)
18. P. Verma, **A. Daverey***, A. Kumar, K. Arunachalam (2021) Microbial Fuel Cell – A Sustainable Approach for Simultaneous Wastewater Treatment and Energy Recovery. *Journal of Water Process Engineering*. **40**, 101768. (IF: 7.34)
19. **A. Daverey***, K. Dutta (2021) COVID-19: Eco-friendly Hand Hygiene for Human and Environmental Safety. *Journal of Environmental Chemical Engineering*, 9(2), 104754. (IF: 7.96).
20. D. Dimri, **A. Daverey**, A. Kumar, and A. Sharma* (2021) Monitoring water quality of River Ganga using multivariate techniques and WQI in upper Ganga basin of Uttarakhand, India. *Environmental Nanotechnology, Monitoring & Management*, **15**, 100375 (Cite Score: 7.3).
21. S. Verma, **A. Daverey***, J.G. Lin (2021) Successful start-up of anammox process from activated sludge and anaerobic sludge in a sequencing batch reactor using an unconventional strategy. *International Biodeterioration & Biodegradation*. **156**, 105132. (IF: 4.9).
22. V. Shah, **A. Daverey*** (2021) Effects of sophorolipids augmentation on the plant growth and phytoremediation of heavy metal contaminated soil. *Journal of Cleaner Production*, 280 (1) 124406. (IF: 11.07).
23. D. Pandey, S. Verma, P. Verma, B. Mahanty, K. Dutta, **A. Daverey***, K. Arunachalam (2021) SARS-CoV-2 in wastewater: Challenges for developing countries. *International Journal of Hygiene and Environmental Health*, 231, 113634. (IF: 7.4).
24. A. Sahoo, B. Mahanty, **A. Daverey**, K. Dutta* (2020) Nattokinase production from *Bacillus subtilis* using cheese whey: Effect of nitrogen supplementation and Dynamic modelling. *Journal of Water Process Engineering*, 38, 101533. (IF: 7.34)
25. P. Pokhriya, R., Rajput, P. Nautiyal, P., Panwar, D. Pandey, **A. Daverey**, A. Arunachalam*, V. Shridhar, K. Arunachalam (2020) Impact assessment of textile effluent on health and microbiota of agricultural soil in Bhagwanpur (Uttarakhand), India. *SN Applied Sciences*, 2(9), pp.1-10. (Cite score: 2.7)
26. V. Shah, **A. Daverey***. (2020) Phytoremediation: A multidisciplinary approach to clean up heavy metal contaminated soil. *Environmental Technology & Innovation*. 18, 100774. (IF: 7.75).
27. D. Pandey, **A. Daverey***, K. Arunachalam (2020) Biochar: Production, Properties and Emerging role as a Support for Enzyme Immobilization. *Journal of Cleaner Production*. 255, 120267. (IF: 11.07).
28. A.R. Behera, K. Dutta*, P. Verma, **A. Daverey**, D.K. Sahoo (2019) High lipid accumulating bacteria isolated from dairy effluent scum grown on dairy wastewater as potential biodiesel feedstock. *Journal of Environmental Management*, 252, 109686 (IF: 8.9).
29. P. Jimenez-Penalver, A. Rodriguez, **A. Daverey**, X. Font, T. Gea* (2019) Use of wastes for sophorolipids production as a transition to circular economy: state of the art and perspectives. *Reviews in Environmental Science and Bio/Technology*, 18:413-435. (IF: 14.2).

30. **A. Daverey***, D. Pandey, P. Verma, S. Verma, V. Shah, K. Dutta, K. Arunachalam (2019). Recent advances in energy efficient biological treatment of municipal wastewater. *Bioresource Technology Reports*, 7, 100252. **(Cite Score: 6.3)**
31. **A. Daverey***, N. Tiwari, K. Dutta (2019). Utilization of extracts of *Musa paradisiaca* (banana) peels and *Dolichos lablab* (Indian bean) seeds as low-cost natural coagulants for turbidity removal from water. *Environmental Science and Pollution Research*, 26 (33): 34177-34183. **(IF: 5.19)**.
32. S. Verma, **A. Daverey***, A. Sharma (2019). Wastewater treatment by slow sand filters using uncoated and iron coated fine sand: impact of hydraulic loading rate and media depth. *Environmental Science and Pollution Research*, 26 (33): 34148-34156 **(IF: 5.19)**.
33. H.P. Gupta, S. Arora, S. Verma, **A. Daverey*** (2019). Evaluation of corncob as a bio-carrier for the enrichment of anammox bacteria using activated sludge as seed. *Biocatalysis and Agricultural Biotechnology*. 19, 101140. **(Cite Score: 6.2)**.
34. S. Patel, A. Homaei*, S. Patil, **A. Daverey** (2019). Microbial biosurfactants for oil spill remediation: Pitfalls and potentials. *Applied Microbiology and Biotechnology*, 103 (1): 27-37. **(IF: 5.56)**.
35. S. Rawat, **A. Daverey*** (2018). Characterization of household solid waste and current status of municipal waste management in Rishikesh, Uttarakhand. *Environmental Engineering Research*, 23 (3): 323-329. **(IF: 3.93)**
36. S. Maurya and **A. Daverey*** (2018) Evaluation of plant-based natural coagulants for municipal wastewater treatment. *3 Biotech*, 8, 77. **(IF: 2.89)**.
37. G. Kishore, A.D. Kadam, **A. Daverey**, K. Arunachalam* (2018). Isolation and evaluation of cultivation conditions of *Euglena* sp. from Western Himalaya for biofuel production. *Biofuels*, 9 (2): 221-228. **(IF: 2.73)**.
38. S. Verma, **A. Daverey***, A. Sharma (2017). Slow sand filtration for water and wastewater treatment - a review. *Environmental Technology Reviews*. 6: 47-58. **(Cite Score: 5.3)**
39. Y.C. Liang, **A. Daverey***, Y.T. Huang, S. Sung, J.G. Lin. (2016). Treatment of semiconductor wastewater using single-stage partial nitrification and anammox in a pilot-scale reactor. *Journal of the Taiwan Institute of Chemical Engineers*. 63: 236-242. **(IF: 5.47)**
40. **A. Daverey**, K. Pakshirajan* (2016). Treatment of dairy wastewater containing high amount of fats and oils in a yeast bioreactor system under Batch, fed-batch and continuous operation. *Desalination and Water Treatment*, 57 (12), 5473-5479. **(IF: 1.2)**
41. **A. Daverey**, Y.C. Chen, K. Dutta, Y.T. Huang, J.G. Lin* (2015). Start-up of simultaneous partial nitrification, anammox and denitrification (SNAD) process in sequencing batch biofilm reactor using novel biomass carriers. *Bioresource Technology*, 190: 480-486. **(IF: 11.88)**
42. **A. Daverey**, P. C. Chei, K. Dutta, J. G. Lin* (2015). Statistical analysis to evaluate the effects of temperature and pH on anammox activity. *International Biodeterioration and Biodegradation*. 102: 89-93. **(IF: 4.9)**
43. **A. Daverey**, Y.C. Chen, S. Sung, J.G. Lin* (2014). Effect of zinc on anammox activity and performance of simultaneous partial nitrification, anammox and denitrification (SNAD) process. *Bioresource Technology*, 165: 105-110. **(IF: 11.88)**
44. **A. Daverey**, Y.C. Chen, Y.C. Liang, J.G. Lin* (2014). Short-term effects of monoethanolamine and copper on the activities of anammox bacteria. *Sustainable Environment Research*, 24 (5): 325-331. **(IF: 4.3)**
45. K. Dutta, **A. Daverey**, J.G. Lin* (2014). Evolution retrospective for alternative fuels: First to fourth generation. *Renewable Energy*, 69: 114-122. **(IF: 8.63)**

46. **A. Daverey**, N.T. Hung, K. Dutta, J.G. Lin* (2013). Ambient temperature SNAD process treating anaerobic digester liquor of swine wastewater. *Bioresource Technology*, 141: 191-198. (IF: 11.88)
47. **A. Daverey**, S.H., Su, Y.T. Huang, S.S. Chen, S. Sung, J.G. Lin* (2013). Partial nitrification and anammox process: A method for high strength optoelectronic industrial wastewater treatment. *Water Research*, 47: 2929-2937. (IF: 13.4)
48. **A. Daverey**, S.H. Su, Y.T. Huang, J.G. Lin* (2012). Nitrogen removal from opto-electronic wastewater using the simultaneous partial nitrification, anaerobic ammonium oxidation and denitrification (SNAD) in sequencing batch reactor. *Bioresource Technology*, 113:225-231. (IF: 11.88)
49. L.A. Lu, Y.S. Ma, **A. Daverey**, J.G. Lin* (2012). Optimization of Photo-Fenton process parameters on carbofuran degradation using central composite design. *Journal of Environmental Science and Health-Part B*, 47 (6), 553-561. (IF: 2.5)
50. **A. Daverey**, K. Pakshirajan*, S. Sumalatha (2011). Sophorolipids production by *Candida bombicola* using dairy industry wastewater. *Clean Technologies and Environmental Policy*. 13 (3), 481-488. (IF: 4.7)
51. **A. Daverey**, K. Pakshirajan* (2011). Pretreatment of synthetic dairy wastewater using the sophorolipid-producing yeast *Candida bombicola*. *Applied Biochemistry and Biotechnology*, 163 (6), 720-728. (IF: 3.0)
52. **A. Daverey**, K. Pakshirajan* (2010). Sophorolipids from *Candida bombicola* using mixed hydrophilic substrates: production, purification and characterization. *Colloids and Surfaces B: Biointerfaces*, 79 (1), 246-253. (IF: 5.99)
53. S. Singh, K. Pakshirajan*, **A. Daverey** (2010). Enhanced decolourization of Direct Red – 80 dye by the white rot fungi *Phanerochaete chrysosporium* employing sequential design of experiments. *Biodegradation*, 21 (4), 501-511. (IF: 3.73)
54. S. Singh, K. Pakshirajan*, **A. Daverey** (2010). Screening and optimization of media constituents for decolourization of Mordant Blue-9 dye by *Phanerochaete chrysosporium*. *Clean Technologies and Environmental Policy*, 12 (3), 313-323. (IF: 4.7)
55. **A. Daverey**, K. Pakshirajan* (2010). Kinetics of growth and enhanced sophorolipids production by *Candida bombicola* using a low cost fermentative medium. *Applied Biochemistry and Biotechnology*, 160 (7), 2090 – 2101. (IF: 3.0)
56. **A. Daverey**, K. Pakshirajan* (2009). Production, characterization, and properties of sophorolipids from the yeast *Candida bombicola* using a low-cost fermentative medium. *Applied Biochemistry and Biotechnology*, 158, (3), 663-674. (IF: 3.0)
57. **A. Daverey**, K., Pakshirajan* (2009). Production of sophorolipids by the yeast *Candida bombicola* using simple and low-cost fermentative media. *Food Research International*, 42, (4), 499 – 504. (IF: 7.42)

Editorial

58. A. Sarkar*, K. Dutta, **A. Daverey** (2022). Surface and groundwater pollution: Monitoring and remediation methods. **Environmental Quality Management**.
59. **A. Daverey***, K. Dutta, A. Sarkar (2021). Bio/processes for Sustainable Environment and Clean Energy. *Environmental Science and Pollution Research*, 28, 58817–58818 (IF: 4.223).
60. K. Dutta*, A. Sarkar, A. Kiran, **A. Daverey** (2020). Preface to the first International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-2018). *Biocatalysis and Agricultural Biotechnology*. 23, 101465 (Cite Score: 5.19).

**Corresponding author*

(C) In Book as Chapter (14)

1. D. Kumai, **A. Daverey**, K. Dutta (2022) Microbial Electrochemical Based Constructed Wetlands Technologies for Wastewater Treatment: Reality, Challenges, and Future Prospects. In: Kumar V., Kumar M. (Eds) Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development. **Elsevier**, Netherlands (ISBN: 978-0-323-91180-1).
2. R. Gautam, J. Nayak, **A. Daverey**, U. K. Ghosh (2022) Chapter 1: Emerging sustainable opportunities for waste to bioenergy: an overview. In: Hussain C.M., Singh, S., Goswami, L. (Eds) Waste-to-Energy Approaches Towards Zero Waste. (pp. 1-55). **Elsevier**, Netherlands (ISBN: 978-0-323-85387-3).
3. S. Verma, **A. Daverey** (2021) Chapter 13: Anammox Process: role of reactor systems for its application and implementation in wastewater treatment plants. In: Mohammad A.W., Ang W.L. (Eds) Integrated and Hybrid Process Technology for Water and Wastewater Treatment Plants. (pp. 273-292). **Elsevier**, Netherlands (ISBN: 978-0-12-823031-2).
4. D. Pandey, S. Singh, K. Dutta, **A. Daverey**, K. Arunachalam (2021) Chapter 22: Biochar-Based Nanocomposites: A Sustainable Solution for Water and Wastewater Treatment. In: Sarma H., Joshi S.J., Prasad R., Jampilek J. (Eds). Biobased Nanotechnology for Green Applications. Nanotechnology in the Life Sciences. *Eds*: Publisher: **Springer**. (ISBN: 978-3-030-61984-8).
5. P. Verma, D. Pandey, U. Krishnaswamy, K. Dutta, **A. Daverey**, K. Arunachalam (2021) Simultaneous Wastewater Treatment and Carbon Capture for Energy Production. In: Pant D., Kumar Nadda A., Pant K.K., Agarwal A.K. (Eds) Advances in Carbon Capture and Utilization. Energy, Environment, and Sustainability. **Springer**, Singapore (ISBN: 978-981-16-0637-3)
6. R. Khan, S. Shukla, **A. Daverey**, C.M. Hussain (2021) Chapter 23: Future of Functionalized Magnetic Nanoparticles in Analytical Chemistry. In: C.M. Hussain (*Ed.*) Analytical Applications of Functionalized Magnetic Nanoparticles. (pp. 574-595). Publisher: **Royal Society of Chemistry** (ISBN: 978-1-83916-210-7).
7. S. Goswami, A. Kushwaha, L. Goswami, N. Singh, U. Bhan, **A. Daverey**, C.M. Hussain (2021) Chapter 9: Biological treatment, recovery, and recycling of metals from waste printed circuit boards. In: C.M. Hussain (*Ed.*) Environmental Management of Waste Electrical and Electronic Equipment. Publisher: **Elsevier**, Netherlands (ISBN: 978-0128224748).
8. **A. Daverey**, K. Dutta, A. Sarkar (2019) An overview of analytical methodologies for environmental monitoring. In: Tools, Techniques and Protocols for Monitoring Environmental Contaminants. *Eds*: S. K. Brar, K. Hegde and V. L. Pachapur. Publisher: **Elsevier**, Netherlands, pp. 3-17 (ISBN: 978-0-12-814679-8).
9. S. Arora, **A. Daverey** (2018) Technological Development in Anaerobic Treatment and Management of Municipal Wastewater. In: Handbook of Environmental Engineering. *Eds*: R.Y., Surampalli, S.K., Brar, T.C., Zhang, K., Hegde, R., Pulicharla, M., Verma. Publisher: **McGraw-Hill** Global Education Holdings, LLC, pp. 219-225 (ISBN: 978-1259860225).
10. M. Kumar, **A. Daverey**, J.D. Gu, J.G. Lin (2017) Anammox Process. In: Current Developments in Biotechnology and Bioengineering: Biological Treatment of Industrial Effluents. *Eds*: Duu-Jong Lee, Veeriah Jegatheesan, Hao Huu Ngo, Patrick C. Hallenbeck and Ashok Pandey. Publisher: **Elsevier**, Netherlands, pp. 381-407 (ISBN: 978-0444636652).
11. J.G. Lin, **A. Daverey**, K. Dutta, W. Guo, and H. Ngo (2016) Anammox: A Sustainable Technology for Nitrogen Removal and Water Recycling. In: Green Technologies for Sustainable Water Management. *Eds*: Huu Hao Ngo; Wenshan Guo; Rao Y. Surampalli; and Tian C. Zhang. Publisher:

American Society for Civil Engineers (ASCE), USA, pp. 419-453. doi: 10.1061/9780784414422.ch12 (ISBN: 9780784414422)

12. J.G. Lin, K., Dutta, **A. Daverey**, W. Guo and H. Ngo (2016) Wastewater: A Potential Resource of Energy. *In: Green Technologies for Sustainable Water Management. Eds.: Huu Hao Ngo; Wenshan Guo; Rao Y. Surampalli; and Tian C. Zhang. Publisher: American Society for Civil Engineers (ASCE), USA, pp. 789 - 828. doi: 10.1061/9780784414422.ch23 (ISBN: 9780784414422)*
13. K. Dutta, B. Mahanty, **A. Daverey**, I.S. Sundari, S. Sen (2016) Biorefinery and Possible Negative Impacts on the Food Market. *In: Platform Chemical Biorefinery: Future Green Chemistry. Eds.: Satinder K. Brar, Saurabh J. Sarma, Kannan Pakshirajan. Publisher: Elsevier, Netherlands, pp. 323-333 (ISBN: 978-0128029800).*
14. **A. Daverey**, K. Pakshirajan (2011). Recent advances in bioremediation of contaminated soil and water using microbial surfactants. *In: Microbes and Microbial Technology. Eds.: Iqbal Ahmad, Farah Ahmad, John Pichtel. Publisher: Springer, Germany, p. 207 - 228. (Citations: 3) (ISBN: 978-1441979308)*

(D) Conference Proceedings (Full papers)

1. S. Arora, **A. Daverey**. Inventory of the Wooden Alien Flora of Uttarakhand Himalayas: A Review. *Proceedings of the Himalayan Researchers Consortium Vol. 1(1), 2018.*
2. S. Verma, **A. Daverey**, A. Sharma (2016). Slow sand filtration for greywater treatment. In the Proceedings of National Conference on *Environmental Pollution and Its Impact on Regional Climate Change* (EPRCC-2016), 11-12 March, Anantapuram, **India**, pp. 91-94.
3. S.H. Su, **A. Daverey**, J.G. Lin, D.M. Lee (2013). Application of simultaneous partial nitrification and anammox process for treatment of high strength nitrogen containing optoelectronic wastewater. In the *Proceedings of 86th Annual Water Environment Federation Technical Exhibition and Conference*, Chicago, IL, **USA**, pp 1888-1906. (Citations: 1)

List of conferences

Abstract/Extended abstracts in Conference Proceedings

1. A. Daverey*. Sophorolipid: A potential biosurfactant for environmental applications. 2nd International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020). March 05-07, 2020, Rourkela, Odisha, **India**.
2. V. Shah*, Sheetal, V. Soni, A. Daverey. Effects of pine biochar amendment in soil on the growth and phytoremediation ability of *Bidens pilosa*. 2nd International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020). March 05-07, 2020, Rourkela, Odisha, **India**.
3. S. Verma*, A. Daverey, J.G. Lin. Successful start-up of anammox from activated sludge and anaerobic sludge in a sequencing batch reactor. 2nd International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020). March 05-07, 2020, Rourkela, Odisha, **India**.
4. P. Verma*, A. Daverey, K. Arunachalam. Microbial fuel cells as a bio-electrochemical system for energy generation through wastewater. Indian Analytical Congress-2019 (An International Analytical Conference and Exhibition), December 12-14, 2019, Noida, **India**. ***Best poster award.**
5. V. Shah, A. Daverey*. Effects of Biosurfactant amendment on the plant's growth and heavy metal stress. National Conference on Recent Advances in Energy, Environment and Health Sciences (RAEEHS), 18-19 October, 2019 at Sikha O Anusandhan Deemed University, **Bhubaneswar**.

6. S. Arora, A. Daverey*, V.K. Varshney. Utilization of noxious weed *Lantana camara* for its management. International conference on bioprocess for sustainable environment and energy (ICBSEE-INDIA-2018). December 06-07, 2018, NIT Rourkela, Odisha, **India**.
7. V. Shah*, Achlesh Daverey, Phytoremediation: A multidisciplinary approach to cleanup heavy metal contaminated soil - A Review. International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2018). December 06-07, 2018, Rourkela, Odisha, **India**.
8. S. Verma*, H.P. Gupta, S. Arora, Achlesh Daverey, Feasibility of Activated Sludge as Seed for the Enrichment of Anammox Bacteria- A Preliminary Study. International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2018). December 06-07, 2018, Rourkela, Odisha, **India**.
9. S. Arora*, KN Balodi, A. Daverey. Rethinking biological invasion management and economic development in a Himalayan state. Workshop on economic and ecological aspects of Invasive Alien Species (IAS) February 21-23, 2018, Kolkata, **India**.
10. S. Verma, A. Daverey*, A. Sharma. Wastewater treatment by slow sand filters using uncoated and iron coated fine sand: impact of hydraulic loading. International Conference on Challenges in Environmental Science & Engineering (CESE-2017). Kunming, **China**, 11-15 Nov, 2017.
11. N. Tiwari, A. Daverey*, S. Verma. Utilization of extracts of banana peels and *Dolichos lablab* seeds as low-cost natural coagulants for turbidity removal from wastewater. International Conference on Challenges in Environmental Science & Engineering (CESE-2017). Kunming, **China**, 11-15 Nov, 2017.
12. S. Rawat, A. Daverey*. Characterization of Household Solid Waste and Current Status of Municipal Waste Management in Rishikesh, Uttarakhand. National Conference on Waste to Energy, Carbon Capture and Storage (NCWECCS 2017). Rourkela, **India**, 3-5 Aug, 2017.
13. J.G. Lin, A. Daverey, Y.T., Chen, Y.L. Wu, C. F. Chuang, J. C. Chu, W.Y. Liu. Effect of Feeding Rates on N₂O Emission in an Anammox-based Reactor. IWA Nutrient Removal and Recovery 2015: moving innovation into practice. Gdańsk, **Poland** 18-21 May, 2015.
14. A. Daverey, P.C. Chei, K. Dutta, J.G. Lin. Statistical analysis to evaluate the effects of temperature and pH on Anammox activity. CESE-2014, 7th International Conference on Challenges in Environmental Sciences and Engineering, Johor Bahru, **Malaysia** 12-16 Oct., 2014.
15. A. Daverey, Y.C. Chen, K. Dutta, Y.T. Huang, J.G. Lin. Fast Start-up of Simultaneous Partial Nitrification, Anammox and Denitrification (SNAD) Process in Sequencing Batch Biofilm Reactor. CESE-2014, 7th International Conference on Challenges in Environmental Sciences and Engineering, Johor Bahru, **Malaysia** 12-16 Oct., 2014.
16. A. Daverey, Y.C. Liang, S. Sung, J.G. Lin. Nitrogen removal from Tetramethylammonium hydroxide (TMAH) containing wastewater by CANON process. CESE-2013, Daegu, **S. Korea**, 29 Oct-02 Nov., 2013, pp 59.
17. A. Daverey, Y.C. Chen, S. Sung, J.G. Lin. Effect of zinc on anammox activity and performance of simultaneous partial nitrification, anammox and denitrification (SNAD) process. CESE-2013, Daegu, **S. Korea**, 29 Oct-02 Nov., 2013, pp 60.
18. S.H. Su, A. Daverey, J.G. Lin,* D.M. Lee. Application of simultaneous partial nitrification and anammox process for treatment of high strength nitrogen containing optoelectronic wastewater, WEFTEC, 2013, Chicago, Illinois, **USA**, 05 - 09 Oct., 2013.
19. A. Daverey, Y.C. Chen,* Y.C Liang, J. Bae, J.G. Lin. Short-term effects of monoethanolamine and copper on the activities of anammox bacteria, International Conference on Sustainable Environmental Technologies, Manila, **Philippines**, 30 Sep. - 01 Nov., 2013, pp 98-99.

20. A. Daverey, Y.C. Liang, J.G. Lin*. Application of CANON process to treat semiconductor wastewater, ICoN3, 3rd International Conference on Nitrification, Tokyo, **Japan**, 2-5 Sep. 2013, pp 83.
21. A. Daverey, J.G. Lin*. Anammox in Taiwan: First Observation to Applications. The Second International Anammox Symposium, IANAS 2013, Seoul, **Korea**, 11-12 Jun. 2013, pp 23-24.
22. A. Daverey, Y.C., Chen*, J. Bae, J.G. Lin. Fast start-up of simultaneous partial nitrification, anammox and denitrification (SNAD) process in sequencing batch biofilm reactor. The Second International Anammox Symposium, IANAS 2013, Seoul, **Korea**, 11-12 Jun. 2013, pp 46.
23. A., Daverey, S.H., Su, Y.T., Huang, J.G., Lin*. Anammox based single reactor systems for nitrogen removal from optoelectronic wastewaters. 17th European Nitrogen Cycle Meeting, **Oslo**, 26-28 Sep., 2012, pp 29.
24. N.T. Hung, A. Daverey,* J.G. Lin. Treatment of anaerobically digested liquor of swine wastewater by simultaneous partial nitrification, anaerobic ammonium oxidation and denitrification (SNAD) process under ambient temperature. CESE-2012, Melbourne, **Australia**, 9-13 Sep., 2012, pp 20.
25. C.S. Lu, A. Daverey,* J.G. Lin. Simultaneous anaerobic removal of sulfate and ammonium from the synthetic wastewater. CESE-2012, Melbourne, **Australia**, 9-13 Sep., 2012, 95. ***Best paper award.**
26. Y-C. Liang, K. Dutta, A. Daverey, J.G. Lin*. A pilot study of wastewater treatment by partial nitrification and anammox process. CESE-2012, Melbourne, **Australia**, 9-13 Sep., 2012, pp 6.
27. K. Dutta*, A. Daverey, J.G. Lin. Alternative fuel different options: progression from first generation to fourth generation. CESE-2012, Melbourne, **Australia**, 9-13 Sep., 2012, pp 95.
28. A. Daverey*, K. Pakshirajan, S. Sumanlatha. Utilization and pretreatment of dairy industry wastewater by *Candida bombicola* for the production of sophorolipids. III International Conference on Environmental, Industrial and Applied Microbiology, "BioMicroWorld", December 2 - 4, 2009, Lisbon, **Portugal**.
29. A. Daverey, K. Pakshirajan*. Utilization of agricultural wastes for the production of sophorolipids by *Candida bombicola*. 1st International conference on Recycling and Reuse of Materials, "ICRM 2009", July 17 - 19, 2009, Kottayam, **India**.
30. A. Daverey*, K. Pakshirajan, P. Sangeetha. Sophorolipids production by *Candida bombicola* using synthetic dairy wastewater. International Conference on Energy and Environment, "Enviro-Energy 2009", March 19 - 29, 2009, Chandigarh, **India**.
31. A. Daverey, K. Pakshirajan*. Production of sophorolipids by the yeast *Candida bombicola* using simple and low-cost fermentative media. International Congress on Bioprocesses in Food Industries & 5th BRSI Convention of the Biotech Research Society, November 6-8, 2008, Hyderabad, **India**.
32. A. Daverey,* K. Pakshirajan. Production and characterization of sophorolipid by *Wickerhamiella domercqiae* NRRL Y-6992 grown on a synthetic medium. Chemference-2008, July 5-6, 2008, Kanpur, **India**.
33. A. Daverey,* K. Pakshirajan. Screening of media constituents for sophorolipid production using *Wickerhamiella domercqiae* by Plackett-Burman design technique. 48th Association of Microbiologists of India Annual conference, December 18-21, 2007, Chennai, **India**.
34. B. Baburajan*, A. Daverey, S. Chettiar, V. N. Telvekar. Development of Process for Preparing Chiral Drug Intermediate: Butyrolactone. International Conference on Advances in Drug Discovery Research 11th ISCBC, February 24 - 26, 2007, Aurangabad, **India**.
35. A. Daverey,* V. N. Telvekar. Synthesis of new chemical entities from carbohydrate and activity testing. XX Carbohydrate Conference November 24 - 26, 2005, Lucknow, **India**.