

Dr. Arvind Kumar Mungray

Professor

Department of Chemical Engineering

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Research Interest: Wastewater treatment (biological), upflow anaerobic sludge blanket (UASB) reactor, Microbial fuel cell (MFC), nanotechnology, Decentralization of wastewater, Urine treatment, Waste to Energy.

Degree Obtained:

(i) **B. Tech.:** H.B.T.I. Kanpur/ SSJM Univ. Kanpur (2000) in Chemical Engineering.

(ii) **M. Tech.:** I.T.B.H.U. Varanasi (2002) in Chemical Engineering.

(iii) **Ph.D.:** I.I.T. Roorkee (2007) in Environmental Engineering

Ph.D. Thesis Title: Anionic surfactants in sewage: Fate in UASB Process, under Professor Pradeep Kumar

Employment Record: Joined as Assistant Professor in SVNIT Surat, since 15th January 2007. Currently Professor.

Sponsored research projects: 9

Publications (International/National/Journals/Conferences):

Total Citation = 2550; **h index= 29** (from Google Scholar)
= 1984; **h index = 26** (from Scopus)

- (i) Papers published/accepted in International Journals: 87 (Scopus)
- (ii) Book Chapters: 13
- (iii) Paper published in National Journals: 3
- (iii) Papers published/presented in International Conference/Seminar: 60
- (iv) Papers published/presented in National Conference/Seminar: 6

Patent Details: Patent: 2

Workshops/Summer Schools/ Winter schools/Short term Courses attended: 26

Memberships in professional bodies: 7

International Recognition: Reviewer in International Journals

Book Published: 2 (Elsevier) (EDITED)

Ph.D. Supervision: 8 (completed) + 4 (ongoing)

M. Tech. Dissertations Guided: 20

Expert Lectures delivered: 30

Start-up: 01 (URISOL Technologies Private Limited)

Vacant PhD. Positions (with Fellowship): 03

Sponsored research projects (9)

- 1 R & D Grant of the Institute (Rs. 4.14 Lacs) for “*Evaluate the performance of tertiary treatment in a full scale up-flow anaerobic sludge blanket (UASB) based sewage treatment plant (STP)*”. (**Principal Investigator: Dr. A.K. Mungray**; Co-Investigator; Dr. S. R. Patel & Dr. Z. V. P. Murthy) **Status: Completed; 2007-2008**).
- 2 R & D Grant of the Institute (Rs. 2.25 Lacs) for “*Sonocrystallization for the recovery of valuable products from dairy waste stream*”. (Co-Investigator: **Dr. A.K. Mungray**; Principal Investigator: Dr. S.R. Patel), **Status: Completed; 2007-2008**).
- 3 Naval Research Board (NRB), Defence Research and Development Organisation (DRDO) Bhavan, New Delhi, India (23.198 Lacs) for “*Application of **Benthic Microbial Fuel Cell (BMFC)** for powering Naval Sensors*”. (**Principal Investigator: Dr. A.K. Mungray**; Co-Investigator; Dr. Alka A. Mungray & Dr. K. Suresh Kumar) **Status: Sanctioned for three years, Completed, 2015-2018**).
- 4 R & D project grant of the Institute for UG student (Rs. 50,000/-) for “*Synthesis of Nanoparticles to enhance the performance of the microbial fuel cell*.” Name of the Student: Nishant Gupta & Saumya Diveti. Supervisors: Dr. A. K. Mungray & Dr. K. Suresh Kumar. (**status: Completed; Six months granted in 2014**)
- 5 R & D TEQIP Project Grant of the Institute for Assistant Professors (Rs. 9.80 Lacs) for “*Treatment of Combined Textile and Municipal Wastewater by Bio-Electrochemical Processes using Novel Cross-linked Microbial Fuel Cell (CMFC)*”. (**Principal Investigator: Dr. A. K. Mungray**; **Status: Completed. (2014-2016)**)
- 6 Mentoring a Department of Science and Technology (DST), Govt. of India, New Delhi, project (Rs. 17.05 Lacs) under Women Scientist Scheme-A (WOS-A) entitled “**Study of Microbial Consortia in Microbial Fuel Cell**” having project No: SR/WOS-A/ET-1054/2014(G). to Mrs. Ambika Srinivas Arkatkar, Duration: Three years, (**Status: Completed**). (**2015-2018**)
- 7 Integration of Septic Tank and Microbial Fuel Cell: a Novel Hybrid System for Sustainable Treatment of Domestic Wastewater. Sponsored from Science & Engineering Research Board (SERB)-DST, Government of India, New Delhi, India (Amount Rs. 31,18,000). **Principal Investigator: Dr. A. K. Mungray Status: Completed (2017-2020)**
- 8 Production of Crude oil and phosphate fertilizer from faecal sludge: A complete solution for the zero liquid discharge. Sponsored from Science & Engineering Research Board (SERB)-DST, Government of India, New Delhi, India (Amount Rs. 35,00,000). **Principal Investigator: Dr. A. K. Mungray Status: On-going (2022-2025)**
- 9 Indian Space Research Organization (ISRO), Government of India, (Rs. 17,50,000) for “A compact novel hybrid system for the human urine recycling and potable water recovery for long term human space mission”. (**Principal Investigator: Dr. Alka A. Mungray**; Co-Investigator; Dr. Arvind Kumar Mungray & Dr. S. Sonawane) **Status: Ongoing, 2022-2024**).

(i) Papers published/accepted in International Journals: 87

<https://www.scopus.com/authid/detail.uri?authorId=23485892200>

https://scholar.google.co.in/citations?hl=hi&user=fcoDoAUAAAJ&view_op=list_works&sortby=pubdate

Intellectual Property Rights: Patent Filed: Indian Patent

Patents: - (02) Granted (1: Process patent; 01: Design Patent)

(01) Design Patent applied

✓ **Process patent title:** “Hybrid Vertical up-flow forward osmosis membrane distillation system for the recovery of pure water from wastewater”

Patent No: 443081

Applicants: Dr. Asfak Patel; Dr. Alka A. Mungray; Dr. Arvind Kumar Mungray

✓ **Design patent title: Water purifier**

Patent Design No.: 348690-001

Applicants: Dr. Asfak Patel; Dr. Alka A. Mungray; Dr. Arvind Kumar Mungray

Books Published: (ELSEVIER)

1. Novel Approaches Towards Wastewater Treatment and Resource Recovery Technologies (2022).

Editors: *Dr. A. K. Mungray*, Dr. Alka Mungray, Dr. Shriram Shriram, Dr. Shirish Sonawane

<https://www.scopus.com/record/display.uri?eid=2-s2.0-85142844296&origin=resultslist&sort=plf-f>

2. Applications of Nanofluids in Chemical and Bio-medical Process Industry (2022)

Editors: Dr. Shriram Sonawane, Dr. Mohammed Hussein, *Dr. A. K. Mungray*, Dr. Shirish Sonawane

<https://www.scopus.com/record/display.uri?eid=2-s2.0-85135730800&origin=resultslist&sort=plf-f>

Present involvement:

Based on the publications coming time to time we (my group) are focused on the pilot scale study and want to make some working models which should be readily available to students and governmental bodies like Surat Municipal Corporation (SMC) to cope up with the Water and Energy scarcity. As per my research interest, I am interested to make a sustainable model for resource generation.

Recently we are also focused on the resources (Water, Nutrients as fertilizer, and electricity) generated from neat human urine. For that a novel reactor and its process is developed and accordingly we got its design and process patent, one more design patent is also in the pipeline and we have submitted its FER. Therefore, apart from the teaching and administrative duties, fortunately things are moving in a right direction by that we are receiving publications, invitations for Expert and Key note lectures, and much more. Recently I completed three Special Issues as a Guest Editor for Elsevier Publications and Springer Publication. Currently I am also a Guest Editor of Water Nexus (Elsevier) journals. This is totally based on my area of expertise in Bioelectrochemical systems.

Our group is currently working on the resource recovery (Electricity, fertilizer and fresh water) from neat Human Urine. Based on that we incorporated a startup as “**URISOL Technologies Private Limited**” with our team members. Through URISOL PVT, we received 19 lacs funding from Gujarat Government and 30 lacs approved from Government of India under IFCI. My group is also working on the **ISRO sponsored project** in which we are preparing a prototype hybrid system for the human urine recycling and potable water recovery for long term human space missions. For enhancing my fundamental knowledge. I am also engaged in Environmental Audit work for 15 industries and one Hazardous site.

International Recognition:

Worked as Guest Editor of the journal ‘Sustainable Energy Technologies and Assessments’ (Elsevier), guest Editor and Editorial Board Member of Energy NEXUS Journal (Elsevier), and guest Editor in Environmental Science and Pollution Research (ESPR) (Springer) Journal.

Research collaborations with foreign universities: Kyonggi University Republic of Korea, Delft Institute for Water Education Netherlands, University of Sharjah.

(i) Papers published/accepted in International Journals: 87

- 1 **Mungray, A.K.** and Kumar, P. Degradation of anionic surfactants during drying of UASBR sludges on sand drying beds. Journal of Environmental Management, 88(4), 2008, 995-1002. (Impact factor: 2009: 2.367)
- 2 **Mungray, A.K.** and Kumar, P. Anionic surfactants in treated sewage and sludges: Risk assessment to aquatic and terrestrial environments. Bioresource Technology, 99(8), 2008, 2919-2929. (Impact factor: 2008: 4.453)
- 3 **Mungray, A.K.** and Kumar, P. Occurrence of anionic surfactants in treated sewage: Risk assessment to aquatic environments. Journal of hazardous materials. 160(2-3), 2008, 362-370. (Impact factor: 2009: 4.144)
- 4 **Mungray, A.K.** and Kumar, P. Fate of anionic surfactants in 38 ML/d UASB based sewage treatment Plant. Journal of Environmental Engineering, American Society of Civil Engineering (ASCE) 134 (12), 2008, 1014-1022. (Impact factor 2008: 1.244)

- 5 **Mungray, A.K.** and Kumar, P. Tracing anionic surfactants through up-flow anaerobic sludge blanket based sewage treatment plants: Mass balance. *Process Safety and Environmental Protection*. 87 (4), 2009, 254-260.
(Impact factor: 2009: 1.124)
- 6 **Mungray, A.K.** and Kumar, P. Fate of Anionic Surfactants in the Environment: A Review. *International Biodeterioration and Biodegradation*. 63(8), 2009, 981-987.
(Impact factor: 2009: 2.252)
- 7 Patel, K., Sarve, A., **Mungray A. K.** Hydrodynamics of a Bench Scale Aerated Post Treatment Unit for up-flow anaerobic sludge blanket Reactor. *Chemical Product and Process Modeling*. 4(1), 2009, Article 40.
- 8 **Mungray, A.K.**, Murthy, Z.V.P., Tirpude, A.J. Post Treatment of Up-Flow Anaerobic Sludge Blanket Based Sewage Treatment Plant Effluents: A Review. *Desalination and Water Treatment*, 22 (2010) 220–237. (Impact factor: 2010: 0.852)
- 9 Dixit, A., **Mungray, A. K.**, Chakraborty, M. Photochemical oxidation of phenol and chlorophenol by UV/H₂O₂/TiO₂ process: A Kinetic Study. **International Journal of Chemical Engineering and applications**. 1(3) 2010.
- 10 **Mungray, A.K.** and Patel K. Coliforms Removal in 43 ML d⁻¹ and 100 ML d⁻¹ UASB + ASP Based Systems. *International Biodeterioration and Biodegradation*, 65, 2011, 23-28.
(Impact factor: 2009: 2.252)
- 11 **Mungray, A.K.** and Patel K. Combination of up-flow anaerobic sludge blanket reactor and a novel cascade sponge reactor for sewage treatment. *Water Science and Technology*, 63 (6), 1255-1264, 2011.
(Impact factor: 2011: 1.112)
- 12 Dixit A, Tirpude A. J., **Mungray A. K.**, Chakraborty M. Degradation of 2, 4 DCP by sequential biological – advanced oxidation process using UASB and UV/TiO₂/H₂O₂. *Desalination*, 272, 2011, 265-269.
(Impact Factor: 2012: 2.590)
- 13 Shilpa, A., **Mungray, A. K.**, Chakraborty, M. Modelling and optimization of process parameters by Taguchi method: Degradation of phenolic compounds by UV/H₂O₂/TiO₂ process. *Chemical Product and Process Modeling*. Article 18, 6(1) (2011) 1-17.
- 14 Mungray, A. A., **Mungray, A. K.**, Kulkarni, Removal of Mercury from wastewater using miceller enhanced ultrafiltration. *Research Journal of Chemistry and Environment*. 15(4), 2011.
(Impact Factor: 2009: 0.623)
- 15 Mungray, A. A., **Mungray, A. K.**, Kulkarni, Removal of heavy metals from wastewater using MEUF technique: A review. *Central European Journal of Chemistry*. 10(1), 27-48, 2012.
(Impact Factor: 2012: 1.167)

- 16 Dixit, A., **Mungray, A. K.**, Chakraborty, M. Photochemical oxidation of phenolic wastewaters and its kinetic study. *Desalination and Water Treatment*. 40 (2012) 56–62). (Impact factor: 2012: 0.852)
- 17 Singala, K. J., Mungray, A. A., **Mungray, A. K.** Degradation Behavior of Polypropylene-Organically Modified Clay Nanocomposites *Industrial & Engineering Chemistry Research*. 2012, 51 (32), 10557–10564 (Publisher: ACS Publications) (Impact factor: 2011: 2.237)
- 18 Rikame, S. S., Mungray, A. A., **Mungray, A. K.** Electricity generation from acidogenic food waste leachate using dual chamber mediator less microbial fuel cell. *International Biodeterioration and Biodegradation*. 75, 2012, 131-137. (Impact factor: 2009: 2.252)
- 19 **Mungray, A.K.** and Murthy, Z.V.P. Post treatment of up-flow anaerobic sludge blanket reactor effluents in activated sludge process based system for anionic surfactants. *Water and Environment Journal*. 28(2014) 84-94. (Impact factor: 2011: 0.792)
- 20 Paliwal, N. R., and **Mungray, A.K.** Ultrasound assisted alkaline hydrolysis of poly (ethylene terephthalate) in presence of phase transfer catalyst. *Polymer Degradation and Stability*. 98 (2013) 2094- 2101. (Impact factor: 2011: 2.770)
- 21 Saner, A. B., **Mungray, A.K.**, and Mistry, N. J. Performance of a full scale up-flow anaerobic sludge blanket reactor for the treating distillery wastewater. *Research Journal of Chemistry and Environment*. (Impact factor: 2014: 0.636)
- 22 Saner, A. B., **Mungray, A.K.**, Mistry, N. J. Treatment of distillery wastewater in an upflow anaerobic sludge blanket (UASB) reactor. *Desalination and Water Treatment*, 2016, 57(10), 4328-4344 (Impact factor: 2010: 0.987)
- 23 Pushker P., **Mungray, A.K.** Textile and Domestic Wastewater Treatment by Novel Cross-linked Microbial Fuel Cell (CMFC) Reactor. *Desalination and Water Treatment*, 2016, 57(15), 6747-6760. (Impact factor: 2014: 1.173)
- 24 Yadav, T., Mungray, A.A., **Mungray, A. K.** A comparative analysis of a TiO₂ nanoparticle dispersion in various biological extracts. *RSC Advances*, 2015, 5, 64421-64432. (Impact factor: 2015: 3.840)
- 25 Yadav, T., Mungray, A.A., **Mungray, A. K.** Dispersion of multiwalled carbon nanotubes in Acacia extract and it's utility as an antimicrobial agent. **RSC Advances**, 2015,**5**, 103956-103963. (Impact factor: 2015: 3.840)
- 26 Pardeshi, P., Mungray, A.A., **Mungray, A. K.** Determination of optimum conditions in forward osmosis using a combined Taguchi-Neural approach *Chemical Engineering Research and Design*, May 2016, 109, 215-225. (Impact factor: 2015: 2.348)
- 27 Yadav, T., Mungray, A.A., **Mungray, A. K.** Effect of Multi-walled Carbon Nanotubes on UASB Microbial Consortium. *Environmental Science and Pollution Research*, 2016, 23(5), 4063-4072. (Impact factor: 2014: 2.757)

- 28 Yadav, T., Mungray, A.A., **Mungray, A. K.** Effect of TiO₂ Nanoparticles on UASB Biomass Activity and Dewatered Sludge. *Environmental Technology*, Feb, 2017, 38(4), 413-423. (Impact factor: 2014: 1.560)
- 29 Kumar P., **Mungray, A.K.** Microbial Fuel Cell: Optimizing pH of Anolyte and Catholyte by using Taguchi Method. *Environmental Progress and Sustainable Energy*, 2017, 36(1), 120-128 (Impact factor: 2014: 1.630)
- 30 Rikame, S. S., Mungray, A.A., **Mungray, A. K.** Synthesis, characterization and application of phosphorylated fullerene/sulfonated polyvinyl alcohol (PFSP) composite cation exchange membrane for copper removal. *Separation and Purification Technology*, April, 2017, 177, 29-39. (Impact factor: 2016: 3.299)
- 31 Pardeshi, P., Mungray, A.K., **Mungray, A. A.** Polyvinyl chloride and layered double hydroxide composite as a novel substrate material for the forward osmosis membrane. *Desalination* 421, November, 2017, 149–159 (Impact factor: 2016: 4.412)
- 32 Yadav, T., Mungray, A.A., **Mungray, A. K.** Generation of TiO₂ nanoparticle-based acacia saturated eggshell biocomposite for pathogen removal. *Environmental Nanotechnology, Monitoring & Management*, May 2018, 9, 50-57. (Elsevier Publication)
- 33 Prakash, O., Pushkar, P., **Mungray, A. K.**, Mungray, A. A., Kailasa, S. K. Effect of geometrical position of a multi-anode system in power output and nutritional variation in benthic microbial fuel cells. *Journal of Environmental Chemical Engineering*. 6(1), Feb., 2018, 1558-1568. (Elsevier Publication) I F: 1.355
- 34 Prakash, O., Mungray, A. A., Kailasa, S. K., Chongdar, S., **Mungray, A. K.**, Comparison of different electrode materials and modification for power enhancement in benthic microbial fuel cells (BMFCs). *Process Safety and Environmental Protection*. 117, July 2018, 11-21 (Elsevier Publication) I F: 2018: 2.905
- 35 Rikame, S. S., Mungray, A.A., **Mungray, A. K.** Modification of anode electrode in microbial fuel cell for electrochemical recovery of energy and copper metal. *Electrochimica Acta*, June, 2018, 275, 8-17. (Impact factor: 2017: 4.798)
- 36 Pushkar, P., Prakash, O., Mungray, A. A., Kailasa, S. K., Chongdar, S., **Mungray, A. K.**, Evaluation of the Effect of Position and Configuration of Electrodes in Benthic Microbial Fuel Cell. *Fuel Cells*. Vol. 18(4), 509-517, Aug., 2018 (Wiley Publication) I F: 1.706
- 37 Pushkar, P., Prakash, O., Mungray, A. A., Kailasa, S. K., Chongdar, S., **Mungray, A. K.**, Effect of Cerium Oxide Nanoparticles Coating on the Electrodes of Benthic Microbial Fuel Cell. *Separation Science and Technology*. Vol. 54 (2), pages 213-233, Jan. 2019.(Taylor & Francis) (Impact factor: 2015: 1.240)
- 38 Imran, M., Prakash, O., Pushkar, P., Mungray, A.A., Suresh Kumar, K., Chongdar, S., **Mungray, A.K.**, Performance enhancement of benthic microbial fuel cell by cerium

- coated electrodes. *Electrochimica Acta*, Vol. 295, Feb., 2019, 58-66, (Impact factor: 5.1)
39. Pushkar, P., **Mungray, A.K.**, Synthesis of 3-Dimensional Resorcinol-Urea-Formaldehyde Carbon xerogel electrode and its application in benthic microbial fuel cell. *Electrochimica Acta*, Vol. 317, Sept., 2019, 281-288. (Impact factor: 5.1),
 40. Tiwari, A., Jain, S, Mungray, A. A., **Mungray, A. K.**, SnO₂: PANI modified cathode for performance enhancement of air-cathode microbial fuel cell, *Journal of Environmental Chemical Engineering*, vol. 8(1) February 2020, 103590. I F: 4.300
 41. Pushkar, P., **Mungray, A.K.**, Exploring the use of 3 dimensional low-cost sugar-urea carbon foam electrode in the benthic microbial fuel cell. *Renewable Energy*, Vol. 147, March 2020, Pages 2032-2042. (Impact factor: 5.439).
 42. M Chhatbar, AA Mungray, **AK Mungray**. Effect of pH variation and oxygen presence on the cathodic recovery of copper in the microbial fuel cell with bioenergy generation and wastewater treatment *Journal of Indian Chemical Society*, 97, 2020, 1714-1719.
 43. Prakash, O., Mungray, A. A., Chongdar, S., Kailasa, S. K. **Mungray, A. K.** Performance of polypyrrole coated metal oxide composite electrodes for benthic microbial fuel cell (BMFC). *Journal of Environmental Chemical Engineering*. Vol. 8(2), page 102757, April, 2020 (Elsevier Publication) I F: 1.355
 44. Arkatkar, A., **Mungray, A. K.**, Sharma, P. Bioelectrochemical behavior of a sequentially added biocatalytic coculture in a microbial fuel cell, *Journal of Basic Microbiology*, 60(7), 2020, 526-573 (Wiley Publication) Impact factor: 1.760
 45. Jain, S, Tiwari, A., **Mungray, A. K.** Modification of Clayware Ceramic Membrane for Enhancing the Performance of Microbial Fuel Cell, *Environmental Progress and Sustainable Energy*, 39(6), Nov/Dec. 2020, e13427 (Wiley Publication) Impact factor: 1.308.
 46. Patel, A., **Mungray, A. K.**, Mungray, A. A., Technologies for the recovery of nutrients, water and energy from human urine: A review, *Chemosphere*, 259, Nov., 2020, 127372 (Elsevier Publication) Impact Factor: 5.108
 47. Bhagat, M., **Mungray, A. K.**, Mungray, A. A., Effect of sound waves and inclination of membrane on the performance of the osmotic microbial fuel cell. *Water Energy Nexus*, 4, Oct., 2021, 113-122 (Elsevier Publication)
 48. Arkatkar, A., **Mungray, A. K.**, Sharma, P. Study of electrochemical activity zone of *Pseudomonas aeruginosa* in microbial fuel cell, *Process Biochemistry*, 101, Feb., 2021, 213-217 (Elsevier Publication) Impact factor: 2.952
 49. Rikame, S. S., Mungray, A.A., **Mungray, A. K.** Electrochemical recovery of metal copper in microbial fuel cell using graphene oxide/polypyrrole cathode catalyst. *International Journal of Energy Research*, 45(5), April 2021, 6863-6875 (Impact factor: 2019: 3.741)

50. Jain, S., **Mungray, A. K.**, Comparative study of different hydro-dynamic flow in microbial fuel cell stacks, *Chinese Journal of Chemical Engineering*, 32, April 2021, 423-430. (Elsevier Publication) Impact factor: 2.627.
51. Patel, A., **Mungray, A. K.**, Mungray, A. A., Recovery of high quality water from human urine using a novel vertical upflow forward osmosis reactor. *Sustainable Energy Technologies and Assessment*, 45, June 2021, 101124 (Elsevier Publication) Impact Factor: 3.451
52. Jadhav, D. A., **Mungray, A. K.**, Arkatkar, A. Kumar, S.S. Recent advancement in scaling-up applications of microbial fuel cells: From reality to practicability. *Sustainable Energy Technologies and Assessment*, June, 45, 101223, 2021 (Elsevier Publication) Impact Factor: 3.451
53. Patel, A., **Mungray, A. K.**, Mungray, A. A., A Novel Concept of Vertical Up-Flow Forward Osmosis Reactor: Design, Performance and Evaluation. *Chemosphere*, 281, Oct., 2021, 130741 (Elsevier Publication) Impact Factor: 5.108
54. Surti P., Kailasa, S. K., **Mungray, A. K.**, Genetic engineering strategies for performance enhancement of bioelectrochemical systems: A review. *Sustainable Energy Technologies and Assessment*, 47, Oct. 2021, 101332 (Elsevier Publication) Impact Factor: 3.451
55. Patel, A., Arkatkar, A., Singh, S., Rabbani, A., Solorza, M., Juana, D., Ong, E. S., Habashy, M. M., Jadhav, D. A., Rene, E.R., Mungray, A.A., Mungray, A.K.. Physico-chemical and biological treatment strategies for converting municipal wastewater and its residue to resources. *Chemosphere*, June, 282, Nov., 2021, 130881 (Elsevier Publication) Impact Factor: 5.108.
56. Dinha, NT., Nguyena, TH., **Mungray, AK.**, Duong, LD., Phuongd, NT., Nguyen, DD., Chung, WJ., Chang, SW., Tuana. PD. Biological treatment of saline domestic wastewater by using a down-flow hanging sponge reactor. *Chemosphere*, 283, Nov., 2021, 131101 (Elsevier Publication) Impact Factor: 5.108
57. Arkatkar, A., **Mungray, A. K.**, Sharma, P. Biological modification in air-cathode microbial fuel cell: Effect on oxygen diffusion, current generation and wastewater degradation. *Chemosphere*, June, 284, 2021, 131243(Elsevier Publication) Impact Factor: 5.108.
58. Pushkar, P., Mungray, A. K., Electrochemical evaluation of lab-scale chamber benthic microbial fuel cell. *Sustainable Energy Technologies and Assessment*, 48, Dec. 2021, 101655 (Elsevier Publication) Impact Factor: 5.353
59. Bhagat, M., **Mungray, A. K.**, Mungray, A. A., Performance of pilot-scale constructed wetland osmotic microbial fuel cell under different gravel conditions. *Environmental Science and Pollution Research*, 29, 66757-66767, May, 2022, (Springer Publication) IF: 5.190
60. Gupta. S. K., Rachna, Singh., B., **Mungray, A. K.**, Bharti. R., Nema, A. K., Pant, K. K., Mull, S. I., Bioelectrochemical technologies for removal of xenobiotics from wastewater. *Sustainable Energy Technologies and Assessments*. 49, Feb., 2022, 101652, (Elsevier Publication) I F: 5.353

61. Bhagat, M., **Mungray, A. K.**, Mungray, A. A., Comparative investigation of solenoid magnetic field direction on the performance of osmotic microbial fuel cell. *Materials Today Chemistry*, 24, June, 2022, 100778 (Elsevier Publication) IF: 8.301
62. Bhagat, M., **Mungray, A. K.**, Mungray, A. A., Recent advances in osmotic microbial fuel cell technology: A review. *Journal of the Indian Chemical Society*, 99(7), July 2022, 100552 (Elsevier Publication) IF: 0.243
63. Prakash, O., Mungray, A. A., Kailasa, S. K. Mungray, A. K. A novel design for the development of deployable benthic microbial fuel cells using PPy-Fe₂O₃ coated multi-anode system. *Sustainable Energy Technologies and Assessments*. 52, Part A, Aug., 2022, 102049, (Elsevier Publication) IF: 5.353
64. Sarang, P., Kohli, H.P., Mungray, A.K., Chakraborty, M. Artificial neural network approach towards the separation of ethylparaben and diclofenac using pseudo-emulsion hollow fiber strip dispersion technique. *Chemical Data Collections*, August, 40, 2022, 100890. (Elsevier Publication)
65. Jadhav, D.A., Park, S.-G., Eisa, T., Mungray, A. K., Madenli, E. C., Olabi, A. G., Abdelkareem, M.A., Chae, K.-J. Current outlook towards feasibility and sustainability of ceramic membranes for practical scalable applications of microbial fuel cells. *Renewable and Sustainable Energy Reviews*, June, 167, 112769, 2022 (Elsevier Publication) Impact Factor: 16.799
66. Surti, P.V., Kim, M.W., Phan, L.M.T., Kailasha, S. K., **Mungray, A. K.**, Park, J.P., Park, T.J. Progress on dot-blot assay as a promising analytical tool: Detection from molecules to cells. *TrAC - Trends in Analytical Chemistry*, 157, Dec., 2022, 116736 (Elsevier Publication) Impact Factor: 14.908
67. Jain, S., Mungray, A. K., Reduction in particle size of vermiculite and production of the low-cost earthen membrane to achieve enhancement in the microbial fuel cell performance, *Journal of Environmental Chemical Engineering*, 10(6) Dec. 2022., (Wiley Publication) Impact factor: 7.968
68. Arkatkar, A., Mungray, A. K., Sharma, P. Effect of Treatment on Electron Transfer Mechanism in Microbial Fuel Cell, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (Taylor & Francis Publication), 45(2), June, 2023, 3843–3858. IF: 2.902
69. Suransh, J., Jadhav, D.A., Nguyen, D.D., Mungray, A.K., Scalable architecture of low-cost household microbial fuel cell for domestic wastewater treatment and simultaneous energy recovery, *Science of the Total Environment*, 857, Jan., 2023 (Elsevier Publication) Impact factor: 10.754
70. Surti P., Kailasa, S. K., Mungray, A. K., Enhancement of electrode properties using carbon dots functionalized magnetite nanoparticles for azo dye decolorization in microbial fuel cell. *Chemosphere*, 313, Feb., 2023, 137601 (Elsevier Publication) Impact Factor: 8.943
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72. Baruah, S., Patel, A., Mungray, A. K., Mungray, A. A., Performance evaluation of deep eutectic solvent as a draw solute and vertical up-flow forward osmosis module for desalination of seawater. *Environmental Science and Pollution Research*, 30(11), March 2023, 32108 - 32116 (Springer Publication) Impact Factor: 5.190

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- 1 Yadav, T., Mungray, A.A., and **Mungray, A. K.** Fabricated Nanoparticles: Current Status and Potential Phyto-toxic Threats, A Review. Reviews of Environmental Contamination and Toxicology. 230(2014). (Impact factor: 2009: 2.477)
- 2 Arkatkar, A., **Mungray, A. K.**, Sharma, P. Conjugation of Nanomaterials and Bioanodes for Energy Production in Microbial Fuel Cell, Green Energy and Technology, March 2020, pages 169-184 (Publisher: Springer Nature Switzerland).
- 3 Arkatkar, A., **Mungray, A. K.**, Sharma, P. Effect of Microbial Growth on Internal Resistances in MFC: A Case Study. Advances in Intelligent Systems and Computing, 759, March 2019, pages 469-479 (Publisher: Springer Nature Switzerland).
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- 2 **Mungray, A.K.** and Kumar, P. The concentration and fate of anionic surfactants in UASB and ASP based STPs: Assessment of relative impacts on aquatic environment. International symposium on recent advances in water resource development and management, WRD&M, November 23 – 25, 2005, IIT Roorkee, India.
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- 9 Gaule, H., Gupta, A. and **Mungray, A.K.** Hazards and Management of E-Waste: A Review. International Conference on E-Waste Management in India A Sustainable Solution, May 18, 2007, Mumbai, India.
- 10 Konakala, P., Patel, S.R., **Mungray, A.K.** and Murthy, Z.V.P. Treatment of anaerobic reactor effluents: A comparative approach. International Conference on “Environmental Management: Scenario and Strategies to 2020” held in the Department of Chemical Engineering, Ujjain Engineering College, Ujjain (M.P.), Dec. 26-27, 2007.
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- 12 Gaule, H., Gupta, A. and **Mungray, A.K.**, Water Reduce, Reuse and Recycle: A Review. CHEMCON 2007, Kolkata, 27-30 December, 2007
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 - 14 **Mungray, A.K.** and Kumar, P. Risk Assessment to the Environment Due to Anionic Surfactants in Treated Sewages and Dried Sludge's. Environmental & Water Resources Institute (EWRI) of the American Society of Civil Engineers (ASCE), World Environmental & Water Resources Congress 2009, May 17-21 in Kansas City, Missouri, USA.
 - 15 Patel, K. and **Mungray, A. K.** Performance of 43 ML/d Up-flow Anaerobic Sludge Blanket Reactor with Activated Sludge Process as a Post treatment for Coliform removal. 4th International congress of Chemistry and Environment (ICCE-2009) at Thailand during 21-23 Jan 2010.
 - 16 Dixit, A., **Mungray, A. K.**, Chakraborty, M. Photochemical oxidation of phenol and chlorophenol by UV/H₂O₂/TiO₂ process: A Kinetic Study. 2nd International Conference on Chemical, Biological and Environmental Engineering (ICBEE 2010) at Cairo, Egypt during 2-4 November, 2010.
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 - 18 Biswas, S., **Mungray, A. K.**, Post treatment of UASB effluents by using slow sand filtration. 5th International congress of Chemistry and Environment (ICCE 2011) at Malaysia during 27 – 29 May, 2011.
 - 19 **Mungray, A. K.**, Kumar, P. Removal of Anionic Surfactants in UASB and Polishing Pond Based Sewage Treatment Plants. International congress of Environmental Research (ICER 2011) at SVNIT Surat, India during 15-17 December, 2011.
 - 20 **Mungray, A. K.**, Biswas, S. Fate of Up-Flow Anaerobic Sludge Blanket Reactor Effluents in Biologically Activated Carbon Filter. International congress of Environmental Research (ICER 2011) at SVNIT Surat, India during 15-17 December, 2011.
 - 21 Mungray, A. A., **Mungray, A. K.**, Kulkarni, S. V. Removal of Heavy Metal from Wastewater Using Surfactant by Ultrafiltration. International congress of Environmental Research (ICER 2011) at SVNIT Surat, India during 15-17 December, 2011.
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 - 23 Pushkar, P., **Mungray, A. K.** Treatment of real textile and domestic wastewater in Up-flow anaerobic sludge blanket reactor. International conference on Sustainable technologies for energy and environment in process industries, CHEMCON 2012 at

- Department of Chemical Engineering, Dr. B. R. Ambedker National Institute of Technology Jalandhar during 27-30 December, 2012.
- 24 Paliwal, N., **Mungray, A. K.** Alkaline hydrolysis of Poly(ethylene terephthalate) using ultrasound. International conference on Sustainable technologies for energy and environment in process industries, CHEMCON 2012 at Department of Chemical Engineering, Dr. B. R. Ambedker National Institute of Technology Jalandhar during 27-30 December, 2012.
 - 25 Kulkarni, S. V., Mungray, A. A., **Mungray, A. K.** TiO₂ nanoparticles coated PES membrane for separation of mercury from WW using MEUF. International conference on Sustainable technologies for energy and environment in process industries and Indo-US Joint International Conference on Energy and Environment. CHEMCON 2012 at Department of Chemical Engineering, Dr. B. R. Ambedker National Institute of Technology Jalandhar during 27-30 December, 2012.
 - 26 Yadav, T., Mungray, A. A., **Mungray, A. K.** Nanotoxicity in Microbial Population and its Utility in Pathogen Removal. 6th International congress of Chemistry and Environment (ICCE 2013) at Antwerp, Belgium during 8th -10th July, 2013.
 - 27 Kande, M., Pushkar, P., **Mungray, A. K.** Performance of Up-Flow Anaerobic Sludge Blanket (UASB) Reactor for Combined Textile and Domestic Wastewaters. 6th International congress of Chemistry and Environment (ICCE 2013) at Antwerp, Belgium during 8th -10th July, 2013.
 - 28 Saner, A. B., **Mungray, A. K.**, Mistry, N. J. Performance evaluation of full-scale up-flow anaerobic sludge blanket reactor treating distillery spent wash. 6th International congress of Chemistry and Environment (ICCE 2013) at Antwerp, Belgium during 8th -10th July, 2013.
 - 29 Dharmadhakari, S., Mungray, A. A., **Mungray, A. K.** Modification, characterization and application of proton Exchange Membrane in microbial Fuel Cell. International congress on Global Challenges: Sustainable wastewater treatment and resource recovery at Kathmandu, Nepal during 28th to 30th Oct. 2014.
 - 30 Yadav, T., Mungray, A. A., **Mungray, A. K.** Modification, characterization and application of proton Exchange Membrane in microbial Fuel Cell. International congress on Global Challenges: Sustainable wastewater treatment and resource recovery at Kathmandu, Nepal during 28th to 30th Oct. 2014.
 - 31 Thakre, V., and **Mungray, A. K.** Cross-Linked Microbial Fuel Cell For Real Textile And Municipal Wastewaters. International congress on Global Challenges: Sustainable wastewater treatment and resource recovery at Kathmandu, Nepal during 28th to 30th Oct. 2014.
 - 32 Pushker, P., and **Mungray, A. K.**, Electrochemical impedance spectroscopy (EIS) for the nanoparticle coated membranes for microbial fuel cell. International Conference on Membrane based separations (MEMSEP 2015) at M.S. University Baroda during 21-25 March 2015.
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 - 34 Yadav, T., Mungray, A. A., and Mungray, A. K., Effect of Cosmetic Based Nanowaste on Sludge and Soil Microflora. International conference on Ecology of Soil Microorganisms 2015, from 29th Nov. 29 to 3rd Dec. 2015, Prague, Czech Republic.
 - 35 Thakre, V., **Mungray., A. K.** Graphene modified anodes in a cross linked microbial fuel cell (CMFC) for the treatment of real textile wastewater and energy generation at

- the 2nd World Conference on Industrial Chemistry and Water Treatment held during May 22-23, 2017 in Las Vegas, USA.
- 36 Pushkar, P., Praksah, O., Imran., M., Mungray., A.A., Kailasha, S., **Mungray, A. K.** Effect of Cerium oxide Nanoparticles coating on the electrodes of benthic microbial fuel cell. International Conference on Nanotechnology applications: Chemical, Energy, and Environment (NACEE-2017) held at SVNIT Surat during 2017.
 - 37 Arkatkar, A., D., Mishra, P., **Mungray., A. K.** Effect of enrichment treatment on electron transfer mechanism of MFC inoculum. RECYCLE 2018, International Conference and Waste Management, 22-24 Feb., 2018, IIT Guwahati. JRF, Won Second Prize in Oral Competition.
 - 38 Prakash, O., Patel., N., Mungray, A. A., **Mungray, A. K.** Performance of dual metal oxide coated anodes for benthic microbial fuel cell reactor for bio- electricity generation. RECYCLE 2018, International Conference and Waste Management, 22-24 Feb., 2018, IIT Guwahati.
 - 39 Jain, S. **Mungray, A. K.** Development of economically viable earthen membrane using cation exchangers and Nafion solution for enhancing the performance of MFC. 4th Asia Pacific-International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting on Bioelectrochemical and electrochemical approaches for decentralized sanitation during 13-16 November, 2018 at BITS Goa Campus, K. K. Birla Goa Campus, Goa, India.
 - 40 Tiwari, A., Mungray, A. A., **Mungray, A. K.** Polyaniline/SnO₂ composite electrode for the enhancement of oxygen reduction reaction in Microbial fuel cell. 4th Asia Pacific-International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting on Bioelectrochemical and electrochemical approaches for decentralized sanitation during 13-16 November, 2018 at BITS Goa Campus, K. K. Birla Goa Campus, Goa, India.
 - 41 Arkatkar, A., Sharma, P., **Mungray, A. K.** Effect of biocatalytic Co-culture on initial bioelectrochemical behavior of MFC. 4th Asia Pacific-International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting on Bioelectrochemical and electrochemical approaches for decentralized sanitation during 13-16 November, 2018 at BITS Goa Campus, K. K. Birla Goa Campus, Goa, India.
 - 42 Pushkar, P., **Mungray, A. K.** In-situ electrochemical diffusion analysis of benthic microbial fuel cell. 4th Asia Pacific-International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting on Bioelectrochemical and electrochemical approaches for decentralized sanitation during 13-16 November, 2018 at BITS Goa Campus, K. K. Birla Goa Campus, Goa, India.
 - 43 Jain, S. **Mungray, A. K.** Performance study of membrane less septic tank microbial fuel cell. International conference on “Energy and Environmental Technologies for Sustainable Development” held at MNNIT Allahabad during Feb 14-16, 2020.
 - 44 Tiwari, A., Jain, S., Mungray, A. A., **Mungray, A. K.** Palladium nanoparticles as oxygen reduction catalyst in air cathode microbial fuel cell. International conference on “Energy and Environmental Technologies for Sustainable Development” held at MNNIT Allahabad during Feb 14-16, 2020.
 - 45 Monali, C., Mungray, A. A., **Mungray, A. K.** Effect of oxygen presence on the cathodic recovery of copper in the microbial fuel cell. International conference on “Energy and Environmental Technologies for Sustainable Development” held at MNNIT Allahabad during Feb 14-16, 2020.
 - 46 Patel A., Mungray, A. A., **Mungray, A. K.** Performance enhancement of Microbial fuel cell using forward osmosis technology: A Review. Indo-Belgium Workshop on

- Upscaling and field scale application of bioelectrochemical systems for wastewater treatment and bioenergy recovery at IIT Kharagpur, during 26- 27 February 2020.
- 47 Monali C., Mungray, A. A., **Mungray, A. K.** Performance of constructed wetland system integrated with microbial fuel cell for greywater treatment and bioelectricity generation. Indo-Belgium Workshop on Upscaling and field scale application of bioelectrochemical systems for wastewater treatment and bioenergy recovery at IIT Kharagpur, during 26- 27 February 2020.
 - 48 Jain S., **Mungray, A. K.** A comprehensive review on septic tank integrated with microbial fuel cell for the wastewater treatment. Indo-Belgium Workshop on Upscaling and field scale application of bioelectrochemical systems for wastewater treatment and bioenergy recovery at IIT Kharagpur, during 26- 27 February 2020.
 - 49 Arkatkar, A., **Mungray, A. K.**, Sharma, P. Study of electrochemical activity zone of *pseudomonas aeruginosa* in microbial fuel cell. Indo-Belgium Workshop on Upscaling and field scale application of bioelectrochemical systems for wastewater treatment and bioenergy recovery at IIT Kharagpur, during 26- 27 February 2020.
- July 2023 to June 2024**
- 50 Chhatbar, M., Mungray, A. A., Mungray, A. K., Application of carbon quantum dots (CQD) synthesized from tulsi leaves coated forward osmosis (FO) membrane to enhance the performance of Osmotic microbial fuel cell. 5th Asia-Oceania Sonochemical Society International Conference (AOSS-5, 2023) 28th – 30th September 2023, National Institute of Technology, Warangal, Telangana State, India
 - 51 Surti, P., Kailasa, S. K., Mungray, A. K., Polydopamine anchored localized growth of copper nanoparticles on carbon felt electrode for bioelectrochemical dye degradation. 5th Asia-Oceania Sonochemical Society International Conference (AOSS-5, 2023) 28th – 30th September 2023, National Institute of Technology, Warangal, Telangana State, India
 - 52 Gajera, Z. R., Mungray, A. A., Mungray, A. K., Hydrothermal carbonization of mango peels with human urine for energy generation and nutrient recovery. 5th Asia-Oceania Sonochemical Society International Conference (AOSS-5, 2023) 28th – 30th September 2023, National Institute of Technology, Warangal, Telangana State, India
 - 54 Gandhi A., Gajera, Z. R., Mungray, A. K. Optimizing a compact septic tank design for phosphate fertilizer recovery. 5th Asia-Oceania Sonochemical Society International Conference (AOSS-5, 2023) 28th – 30th September 2023, National Institute of Technology, Warangal, Telangana State, India
 - 55 Mehta, A., Mungray, A. A., Mungray, A. K., A review of vacuum membrane distillation technique for spent sulphuric acid concentration and water recovery. International Conference on “Advancements in Polymeric Materials” March 14-16, 2024 | Ahmedabad, India
 - 56 Chhatbar, M., Mungray, A. A., Mungray, A. K., Phosphorous and nitrogen recovery from source separated human urine using vermiculite incorporated cylindrical earthen separator as a cation exchange membrane in microbial fuel cell (MFC). International Conference on “Advancements in Polymeric Materials” March 14-16, 2024 | Ahmedabad, India
 - 57 Gajera, Z. R., Mungray, A. A., Mungray, A. K., Hydrothermal carbonization of mango peels with human urine for energy generation and nutrient recovery. International Conference on “Advancements in Polymeric Materials” March 14-16, 2024 | Ahmedabad, India
 - 58 Surti, P., Chhatbar, M., Kailasa, S. K., Mungray, A. A., Park, T. J., Mungray, A. K., Fabrication and characterization of nanoclay augmented novel cation exchange

- membrane. International Conference on “Advancements in Polymeric Materials” March 14-16, 2024, Ahmedabad, India
- 59 Chhatbar, M., Mungray, A. K., Mungray, A. A. Forward Osmosis Membranes: Synthesis and Application in Bio-electrochemical Systems. 2nd International Conference on Water Resources Management and Sustainability: Solutions for Arid. 26-28 February., 2024, Dubai, UAE.
- 60 Gajera, Z. R., Mungray, A. A., Mungray, A. K, Treatment of human waste for sustainable sanitation: A review. 2nd International Conference on Water Resources Management and Sustainability: Solutions for Arid. 26-28 February., 2024, Dubai, UAE.

July 2024 to June 2025

Workshops/Summer Schools/ Winter schools/Short term Courses attended: 29

Memberships in professional bodies: 6

- Life associate Member in **IChE (Indian institute of chemical engineers) (LAM-29862)**
- Life associate Member in “**The Institution of Engineers (India)**”. (AM-093702/1)
- Life Member in “**Indian Society of Technical Education**” (LM 52069)
- Life Member in “**Indian Water Resources Society**” (LM-07-6952)
- Life Member in “**Indian Environmental Association**” (LM-128)
- Fellow Membership (F.I.C.C.E.) in “**International Congress of Chemistry and Environment**” FW/A/5055
- Life Member in “**Indian Water Works Association**” (LM-010180)
- Life Member in “**Indian Membrane society**” (LM-253)
- Annual Membership in **ISMET**

Event Organized:

Sr. No.	Name of Faculty Member	Name of the associated Faculty Members	Name of Programme	Dates of Programme
1.	Dr. Arvind Kumar Mungray (Co-Coordinator)	Dr. H. K. Raval (Coordinator)	Faculty Induction Programme for newly recruited faculty	One week from 15 th January, 2008
2.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. N. J. Mistry (Coordinator) Dr. Z. V. P. Murthy (Co-coordinator)	AICTE approved STTP on “Treatment and Disposal of Wastewaters”	One week from 5 th -9 th October, 2009

		Dr. M. Chakraborty (Co-coordinator) Dr. Alka A. Mungray (Co-coordinator)		
3.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. Z. V. P. Murthy (Coordinator) Dr. N. J. Mistry (Co-coordinator) Dr. M. Chakraborty (Co-coordinator) Dr. Alka A. Mungray (Co-coordinator)	AICTE approved STTP on Anaerobic Digestion of Wastewaters	One week from 22 th – 26 th February 2010
4.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. Alka A. Mungray (Coordinator) Dr. Z. V. P. Murthy (Coordinator)	TEQIP-II Sponsored Workshop on “Nanotechnology and its application”	Three days from 19 th to 21 st April, 2013
5.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. Alka A. Mungray (Coordinator) Dr. Z. V. P. Murthy (Coordinator)	TEQIP-II Sponsored Workshop on “Advances on wastewater treatment and energy generation”	One week from 30 th Sept. – 04 th Oct., 2013
6.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. Alka A. Mungray (Coordinator)	Self-Sponsored “Waste to Wealth: Fundamentals & Hands on Experience”	One Week from 26 th to 30 th September 2016
7.	Dr. Alka A. Mungray (Coordinator)	Dr. Arvind Kumar Mungray (Coordinator)	Self-Sponsored “Advances in Membrane Developments & Hand on Experience”	One Week from 17 th to 21 st October 2016
8.	Dr. Arvind Kumar Mungray (Coordinator)	Dr. V. N. Lad (Coordinator) Dr. Alka A. Mungray (Coordinator)	TEQIP-III Sponsored Waste to Energy: Fuel Cell and Electrochemical Techniques	17 th June 2019 to 21 st June, 2019
9.	Dr. Arvind Kumar Mungray (Convener)	Dr. Alka A. Mungray Dr. V. N. Lad Dr. M. Chakraborty Dr. Jogender Singh	International Conference on Advances in Sustainable Research for Energy and Environmental Management (ASREEM-2021)	August 06 to 08, 2021 (online)

10.	Dr. Jogender Singh (Coordinator)	(Coordinators) Dr. V. N. Lad, Dr. Alka A. Mungray Dr. M. Chakraborty Dr. Arvind Mungray	Sustainable technologies and application of computational softwares (STACS-2022)	From 21-09-2022 to 25-09-2022
11.	Dr. Arvind Kumar Mungray (Convener) Dr. M. Chakraborty (Convener)	Dr. Alka A. Mungray (Coordinator) Dr. V. N. Lad (Coordinator) Dr. Jogender Singh (Coordinator) Dr. Parag Thakur (Coordinator)	Instrumentation Techniques for the Environmental Remediation & hands-on Training (ITER-2024)	One week from 9 th to 13 th May, 2024
12	Dr. Arvind Kumar Mungray (Convener) Dr. M. Chakraborty (Convener)	Dr. Alka A. Mungray (Coordinator) Dr. V. N. Lad (Coordinator) Dr. Jogender Singh (Coordinator) Dr. Parag Thakur (Coordinator)	Introduction to Chemical Engineering Softwares (ICHES-2025)	Six days Short Term Training Program (Hybrid mode) Dates: 11-12, 18-19, 25, Jan., 2025, & 1 st Feb., 2025.

Awards Received

- GATE Scholarship, University Grants Commission, 2000-2002
- MHRD Scholarship, Ministry of human resources & development, from 2002.
- First Prize (Trophy + 5000/- Rs.) in Poster Competition held at Mumbai
- organized by IICChE in an International Conference on **“E-Waste Management in India A Sustainable Solution”**.
- **“Young Engineers Award”** 2011 from Institution of Engineers India.
- Third prize in Vishav Ekta Race organized by Hindi Cell in SVNIT Campus.
- Won Silver medal in Badminton mix doubles tournament in Inter NIT sports meet at NIT Jaipur during 18-20 December, 2020.
- Won Bronze medal in Badminton Man's Double tournament in Inter NIT sports meet at NIT Jaipur during 18-20 December, 2020.

Ph.D. Supervision: 14 (8 completed)

Sr. No.	Name of Student	Year of registration	Date of completion	Ph.D topic	Supervisor	Co-Supervisor (if any)	Status
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1	Mr. Amol Balasaheb Saner (PEC)	Jan. 2010	27-06-2015	Treatment of Distillery Wastewater in UASBR and its Post treatment by MFC	Dr. N. J. Mistry	Dr. Arvind Kumar Mungray	Completed
2	Mr. Tushar Yadav (FIR)	July, 2012	21-07-2016	Toxicity and Dispersion Characteristics of Nanomaterials and their Antimicrobial applications	Dr. Arvind Kumar Mungray	Dr. Alka Mungray	Completed
3	Mr. Satish Rikame (PEC)	July, 2013	26-07-2018	Metals and energy recovery from wastewater using microbial fuel cell	Dr. Alka Mungray	Dr. Arvind Kumar Mungray	Completed
4	Mr. Priyakant Pushkar (FIR)	Dec. 2013	06-09-2019	Performance enhancement of Benthic Microbial fuel cell	Dr. Arvind Kumar Mungray	-----	Completed
5	Mrs. Ambika Arkerkar (PPF)	May, 2015	24/06/2021	Study of exoelectrogens in Microbial Fuel Cell (MFC)	Dr. Preeti Mishra, VNSGU	Dr. Arvind Kumar Mungray	Completed
6	Mr. Suransh Jain (PPF)	Aug. 2017	12/04/2023	Low cost ceramic membranes: Modification and application in microbial fuel cell	Dr. Arvind Kumar Mungray	-----	Completed
7	Alok Kumar Tiwari (D17CH007)	Aug. 2017		Electrode modification and stacking of Microbial Fuel cell	Dr. Arvind Kumar Mungray	Dr. Alka Mungray	On-going
8	Chhatbar Monali Mahendrabhai (D18CH006)	Aug 2018		Performance enhancement of Bioelectrochemical Systems for energy and resource recovery	Dr. Arvind Kumar Mungray	Dr. Alka A. Mungray	On-going
9	Patel Asfak Yunus (D18CH002)	Aug. 2018	03/05/2023	Design aspects for resource recovery from source separated human urine: A sustainable solution	Dr. Alka A. Mungray	Dr. Arvind Kumar Mungray	Completed
10	Bhagat Mandar Suresh (D18CH008)	Aug. 2018	27/04/2023	Different techniques to improve the osmotic microbial fuel cell performance	Dr. Alka A. Mungray	Dr. Arvind Kumar Mungray	Completed
11	Zavin Gajera	2019		Hydrothermal carbonization of Biomass	Dr. Arvind Kumar Mungray	Dr. Alka A. Mungray	Ongoing
14	Parini Surti	2019		MFC for Textile effluents	Dr. Suresh Kailasha	Dr. Arvind Kumar Mungray	Ongoing

M.E./M.Tech. Dissertations Guided: 23

Sr. No.	Name of Student	Year of Completion	Thesis Title	Supervisor	Co-Supervisor (if any)
1	Mr. Prakash Konakala	2007	To evaluate the performance of tertiary treatment in a full scale up-flow anaerobic sludge blanket (UASB) based sewage treatment plant	Dr. Z. V. P. Murthy	Dr. Arvind Kumar Mungray
2	Ms. Khushbu Patel	2009	Removal of Pathogens and Nutrients in up-flow anaerobic sludge blanket (UASB) based sewage treatment plants	Dr. Arvind Kumar Mungray	_____
3	Mr. Ashwin Tirpide	2010	Degradation of 2,4 Dichlorophenol by sequential anaerobic and aerobic processes	Dr. Arvind Kumar Mungray	_____
4	Mr. Aantaram N. Sarve	2010	Carboxylation of Toluene using CO ₂	Dr. Arvind Kumar Mungray	Dr. Pradip Munshi Dr. M. Chakraborty
5	Ms. Abhilasha P. Dixit	2010	Degradation of Phenolic compounds in wastewaters using advanced oxidation processes	Dr. M. Chakraborty	Dr. Arvind Kumar Mungray
6	Mr. Swarup Biswas	2011	Post treatment of UASB effluents by sand and activated carbon based filters	Dr. Arvind Kumar Mungray	_____
7	Mr. Shirang V. Kulkarni	2011	Removal of heavy metals by micellar enhanced ultrafiltration	Dr. Alka A. Mungray	Dr. Arvind Kumar Mungray
8	Ms. Ishani K. Shah	2011	Effect of aeration on UASB effluent for pathogen removal: A study	Dr. N. J. Mistry	Dr. Arvind Kumar Mungray
9	Ms. Shilpa Nandwani	2011	Experimentation and optimization of advanced oxidation processes	Dr. M. Chakraborty	Dr. Arvind Kumar Mungray
10	Mr. Jeet Trivadi	2012	Coupling of ultrasound as a pretreatment and post treatment to a UASB reactor for the removal of Bisphenol A	Dr. M. Chakraborty	Dr. Arvind Kumar Mungray
11	Mr. Satish S. Rikame	2012	Electricity generation from acidogenic food waste leachate using dual chamber mediator less microbial fuel cell	Dr. Alka A. Mungray	Dr. Arvind Kumar Mungray

12	Mr. K. P. Kannan	2012	The effect of ultrasound on the performance of anaerobic dynamic membrane bioreactor treating municipal wastewater	Dr. Alka A. Mungray	Dr. Arvind Kumar Mungray
13	Mr. Manoj J. Kanade	2012	Treatment of combined textile and domestic wastewater in an up-flow anaerobic sludge blanket reactor	Dr. Arvind Kumar Mungray	_____
14	Mr. Pragneshkumar D. Chaudhary	2012	Anaerobic digestion of lignocellulosic wastes	Dr. Arvind Kumar Mungray	_____
15	Priyakant Pushkar	2013	Bio-electricity generation and wastewater treatment of real textile wastewater and domestic wastewater by novel cross-link microbial fuel cell	Dr. Arvind Kumar Mungray	_____
16	Nutan Paliwal	2013	Valorization of industrial and urban wastes with emphasis on chemical recycling of poly(ethylene terephthalate)	Dr. Arvind Kumar Mungray	_____
17	Vijay Thakre	2014	Performance enhancement of cross-linked microbial fuel cell for wastewater treatment and bioelectricity generation.	Dr. Arvind Kumar Mungray	-----
18	Sandeep Dharmadakhari	2014	Modification in proton exchange membranes for Microbial fuel cells (MFC).	Dr. Arvind Kumar Mungray	Dr. Alka A. Mungray
19	Pradeep Kumar	2015	Microbial Fuel Cell: Effects of Electrolyte pH and Electrode Modification on Power Generation	Dr. Arvind Kumar Mungray	-----
20	Rajnish Raj	2016	Peat Treatment of septic tank effluent	Dr. Arvind Kumar Mungray	-----
21	Needhi Meshram	2017	Low cost blended earthen membranes using montmorillonite and vermiculite to enhance performances of Microbial fuel cell	Dr. Arvind Kumar Mungray	Dr. Alka A. Mungray
22	Mohammad Imran Anees Ahmad	2018	Power enhancement in BMFC by electrode modification	Dr. Arvind Kumar Mungray	-----
23	Mr. Naveen Mali	2020	Nutrients recovery in Bioelectrochemical systems	Dr. Arvind Kumar Mungray	-----

Expert lecture Delivered

- i. Expert lecture on Wastewater treatment by using UASB reactors at N. G. Patel Polytechnic, Bardoli- Navsari road, Surat.

- ii. Expert lecture on Post treatment of UASB effluents in AICTE approved STTP **“Sustainable Water and Waste Management Techniques”** conducted by the Civil Engineering Department, SVNIT, Surat, One week during 27-31 July, 2009.
- iii. Expert lecture on “Need of tertiary treatment for anaerobic wastewater treatment” in AICTE approved STTP **“Treatment and Disposal of Wastewaters”** conducted by Chemical and Civil Engineering Department, SVNIT, Surat.
- iv. Expert lecture on “Anaerobic treatment of wastewaters” in AICTE approved STTP **“Anaerobic Digestion of Wastewaters”** conducted by Chemical Engineering Department, SVNIT, Surat.
- v. Expert lecture on **“Sustainable solution for wastewater treatment”** at Kribkho.
- vi. Expert Lecture at Center for Environment Research, Vidyabharti Institute of Technology and Research Centre on **“Wastewater treatment and reuse”**
- vii. Expert Lecture on “Need of Nanotechnology in efficient wastewater treatment and energy generation” in TEQIP-2 sponsored workshop on “Nanotechnology applications in Engineering & Technology” conducted by Chemical Engineering Department, VNIT, Nagpur during 15th – 17th February, 2013.
- viii. Expert Lecture on “Nanotechnology: Need and effects” in TEQIP-2 sponsored workshop on **“Nanotechnology Applications for Sustainable Development”** conducted by Chemical Engineering Department, SVNIT, Surat during 19th – 21st April, 2013.
- ix. Expert Lecture on “Impact of Nanoparticles on biological wastewater treatment systems Nanotechnology: Need and effects” in TEQIP-2 sponsored workshop on **“Nanotechnology Applications for Sustainable Development”** conducted by Chemical Engineering Department, SVNIT, Surat during 19th – 21st April, 2013.
- x. Expert Lecture on “Sustainable Solutions for Green Energy” in TEQIP-2 sponsored workshop on **“Advanced Materials, Characterization and applications in Materials Science and Engineering”** organized by Department of Applied Chemistry, SVNIT, Surat during 2nd – 6th September, 2013.
- xi. Expert Lecture on “Treatment of wastewater by UASB and its post treatment” in TEQIP-2 sponsored workshop on **“Advances on Wastewater Treatment and Energy Generation”** conducted by Chemical Engineering Department, SVNIT, Surat during 30th Sept. – 04th Oct., 2013.
- xii. Expert Lecture on “Microbial Fuel Cell technology for waste to energy application” in TEQIP-2 sponsored workshop on **“Advances on Wastewater Treatment and Energy Generation”** conducted by Chemical Engineering Department, SVNIT, Surat during 30th Sept. – 04th Oct., 2013.
- xiii. Expert Lecture on “Water Pollution and control” at Pacific school of Engineering Surat on 24/01/2014.
- xiv. Expert lecture on “Integrated planning of sustainable wastewater management” at Civil Engineering Department, IIT Roorkee on 23/07/15.
- xv. Expert lecture on “Waste to Energy: A sustainable approach” at Chemical Engineering Department under a TEQIP sponsored STTP on Carbon Neutral Energy Sources from 9 – 13th May, 2016.

- xvi. Expert lecture on “Sustainable approaches in wastewater treatment: Microbial fuel cell” at Civil Engineering Department under a TEQIP sponsored STTP on Recent Advances in Waste Management from 23 – 27th Jan., 2017.
- xvii. Expert lecture on “Source separation: A sustainable for effective wastewater treatment” at Chemical Engineering Department under a TEQIP sponsored STTP on Advances in Separation Technology from 8th – 13th January, 2018 at Shri Guru Govind Singhji. Institute of Engineering & Technology, Nanded, MP.
- xviii. Expert lecture on “Sustainability in wastewater water treatment: Microbial Fuel cell” at Civil Engineering Department under AICTER-ISTE approved STTP on “Smart and sustainable cities: A mission toward smart India” from 4 to 9 June 2018 at Sandip Institute of Engineering & Management Nashik.
- xix. Expert lecture on “Sustainability of wastewater treatment” at Chemical Engineering Department, CGPIT Maliba Campus, UTU Tarsadi during two days workshop on environmental Pollution Control and Safety in Process Industries from 4th – 5th January, 2019.
- xx. Key note lecture on “Need of Decentralization for wastewater treatment: Microbial Fuel Cells” at Dept. of Civil Engg., College of Engineering Pune, on 1st March. 2019 during two days conference on Environmental Pollution Control and Management from 1st – 2nd March, 2019.
- xxi. Expert Lecture on “Sustainable wastewater treatment & its need” on 17th June, 2019 in TEQIP-3 sponsored workshop on “Waste to Energy: Fuel cell and Electrochemical Techniques” conducted by Chemical Engineering Department, SVNIT, Surat during 17th to 21st June, 2019.
- xxii. Expert Lecture on “MFC/BMFC, advancements and future” on 18th June, 2019 in TEQIP-3 sponsored workshop on “Waste to Energy: Fuel cell and Electrochemical Techniques” conducted by Chemical Engineering Department, SVNIT, Surat during 17th to 21st June, 2019.
- xxiii. Expert lecture on “MFC, OMFC and BMFC: Fundamentals and Future” at Dept. of Chemical Engg., SGGSIE & T, Nanded, on 7th July, 2019 during five days AICTE workshop on Waste to Energy- A Green Approach from 3rd – 7th July, 2019.
- xxiv. Expert lecture on “Need of Bioelectrochemical systems for Sustainable Wastewater Treatment: Decentralization” on 22nd July at Centre for Pollution Control & Environmental Engineering, Pondicherry University, during three days QIP workshop from July 22 - 24, 2019 on Bioelectrochemical technologies for waste to energy conversion and resource recovery.
- xxv. Expert lecture on “Bioelectrochemical Systems: MFC, BMFC, & OMFC” on 23rd July at Centre for Pollution Control & Environmental Engineering, Pondicherry University during three days QIP workshop from July 22 - 24, 2019 on Bioelectrochemical technologies for waste to energy conversion and resource recovery.
- xxvi. Expert lecture on “Materials for Bioelectrochemical systems” on 3rd January, 2020 at Technical and Applied Chemistry Department, VJTI Matunga Mumbai, during two days TEQIP-III sponsored National Symposium on Smart Synthesis Techniques for smart materials & their application in Science and engineering from January 3 to 4, 2020.

- xxvii. Key note lecture on “Need of Bioelectrochemical Systems for Sustainable Wastewater Treatment: MFC, BMFC, OMFC” on 16th Feb., 2020 in International conference on “Energy and Environmental Technologies for Sustainable Development” held at MNNIT Allahabad during Feb 14-16, 2020.
- xxviii. Key note lecture on “Sustainable Wastewater Treatment: Our Approach towards MFC, BMFC and OMFC” on 26th Feb., 2020 in Indo-Belgium Workshop on Upscaling and field scale application of bioelectrochemical systems for wastewater treatment and bioenergy recovery at IIT Kharagpur, during 26- 27 February 2020.
- xxix. Matoshri 5 th June, 2020
- xxx. Aurangabad
- xxxi. Imran, Ahmedabad 2nd December 2020 event Trends in Nanoscience and Nanotechnology” Nanotechnology for Energy and Environment, Department of Chemical Engineering, Aditya Silver Oak Institute of Technology, Ahmedabad -
- xxxii. Expert lecture on “Waste Water Treatment and its reuse” on 9th September, 20202, (Online) at Department of Biotechnology, NIT Warangal, during five days FDP from 7-11 Sept., 2020 on *Advances in Biological Wastewater Treatment Methods: Teaching and Learning Strategies*.
- xxxiii. Expert lecture on “Waste Water Treatment for Sustainable Development ” on 7th Feb., , 2021(Online) at Department of Chemical Engineering, Institute of Technology, Lucknow during five days Short term course from 06-10 Feb., 2021 on Sustainable Trends in Energy & Environment.
- xxxiv. Expert lecture on “Sustainable wastewater treatment ” on 8th Feb., , 2021(Online) at Department of Environmental Science and Engineering and Department of Chemical Engineering, Marwadi University, Rajkot, for a web series in the department.
- xxxv. Invited Talk at 5th Asian Oceanic Sonochemical Society (AOSS) Conference 2023, NIT Warangal on “Resource Recovery from Human Urine for Sustainable Sanitation” on 27-09-2023.
- xxxvi. Invited Talk at International Conference on “ADVANCEMENTS IN POLYMERIC MATERIALS” March 14-16, 2024 | AHMEDABAD, INDIA on “Phosphorous and Nitrogen recovery from source separated human urine using vermiculite incorporated cylindrical earthen separator as a Cation exchange membrane in microbial fuel cell” on 14th March, 2024.
- xxxvii. 10-06-2024 at Department of Mechanical Engineering, Five days Faculty Development Program on CleanEnergy for sustainable development, Arjun College of Tech., Coimbatore. **Waste to Resources: A Sustainable Solution**
- xxxviii. 05-06-2024 at School of Civil and Environmental Science, JSPM University Pune, **Waste to Resources: A Sustainable Solution**
- xxxix. 8-05-24, Instrumentation Techniques for the Environmental Remediation & Hands-on Training (ITER-2024) Department of Chemical Engineering, SVNIT, Surat, GUJARAT. INDIA
- xl. 24th April, 2024, Department of Chemistry, Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), “Nanotechnology application for energy and environment for sustainable development”

Administrative Responsibilities

- I. Professor In-Charge Institute Security System (2024)
- II. Chief Warden of Tagore Bhavan (2020-2022)
- III. Professor In-Charge SVPB Guest House from 2017 to 2019.
- IV. Chief Warden of Narmad Bhavan in S.V. National Institute of Technology, Surat (2015 to 2019)
- V. Hostel Warden of Hostel 2nd (Narmed Bhavan) in S.V. National Institute of Technology, Surat (2007-2008 & 2008-2009).
- VI. Hostel Warden of Hostel 10 (Raman Bhavan) in S.V. National Institute of Technology, Surat (2009-2011).
- VII. Chief Warden of Hostel 1 (Bhabha Bhavan of 800 capacity) in S.V. National Institute of Technology, Surat (2011-2012).
- VIII. Departmental Post Graduate programme In-Charge (M.Tech. Research programme) (2007-2008 & 2008-2009).
- IX. Departmental Coordinator of Technical Education Quality Improvement Programme (TEQIP) (2007-2008 & 2008-09).
- X. Member of mess tender committee (2007-2008).
- XI. Member of Institute Software Development and Implementation. (2008 -2009).
- XII. Member of Institute furniture procurement committee (2007-2008 & 2008 -2009).
- XIII. Member Secretary for the procurement of Class Room Boards & Display System for SVNIT, Surat.
- XIV. Member Secretary for the procurement of Class Room Benches for SVNIT, Surat.
- XV. Member Secretary for the procurement of Gym Equipments for SVNIT, Surat.
- XVI. Member for the procurement of Faculty Furniture for SVNIT, Surat.
- XVII. Member of hostel admission committee (2007-2008).
- XVIII. First year Divisional Coordinator of Division A (2008-2009 & 2009-2010)
- XIX. B. Tech. Final Year Faculty advisor (2008-2009 & 2009-2010)
- XX. In-charge Head of the Department (23-05-09 to 15-06-09)
- XXI. Departmental Post Graduate Program In-Charge (M. Tech. program) (2010-2011).

Dr. Arvind Kumar Mungray