

BIO-DATA OF SMITA GUPTA



- 1. Name:** Dr. Smita Gupta
2. Designation: Associate professor
3. Highest Qualifications: Ph.D.

4. Degree Obtained:

University	Degree	Year	Field of Specialization
Institute of Engineering & Technology, C.S.J.M. University, Kanpur, U.P.	B. Tech.	2003	Chemical Engineering
H.B.T.I., Kanpur, U.P. Technical University, U.P.	M. Tech.	2006	Bio-chemical Engineering (Chemical Technology)
S.V.N.I.T SURAT	Ph.D.	2014	Chemical Engineering

5. Employment Record:.

University	Designation	Period
S.V.N.I.T. Surat	Associate Professor (GP 9500/-)	21 st December 2023 TO Till Date
S.V.N.I.T SURAT	Assistant professor (GP 8000/-)	29 th January 2019 TO 20 th December 2023
S.V.N.I.T SURAT	Assistant professor (GP 6000/-)	9 th April 2009 TO 28 th January 2019
Institute of Technology, Nirma University, Ahmedabad, Gujrat	Lecturer	31 st May 2008 TO 31 st March 2009

6. M.Tech. Dissertation Guided/Co-guided- 8

S.No.	Student Name (Admin. No.)	Year of Completion	Title of Thesis
1	Ganesh B. Thorat (Co-guide)	2015	Study on separation of isopropanol - water mixtures by using poly(vinyl) alcohol composite membranes by pervaporation.
2.	Bhagwan Pralhad Parihar (Guide)	2016	Extraction and Degradation of Endocrine Disrupting Compound Propylparaben from Aqueous Solution by PEHFSD and Photocatalytic Degradation Method
3	Pritam Khandale (Co-Guide)	2017	Separation of organic compounds by Supported Liquid Membrane
4	Mohammad Shoaib (co-Guide)	2018	Application of Nanofluids to Enhance Heat Transfer
5	Nitin Vishwakarma (Guide)	2019	Applications of multiwall carbon nanotubes as a nanofluid in enhanced oil recovery
6	Rahulkumar Shirasangi (Co-Guide)	2020	Application of Liquid Membrane for the Separation of Methylparaben
7	Srish P. Kulkarni (Co-Guide)	2023	Contemporary energy materials for efficient energy conversion
8	Shivam Alkesh Modi	2024	Synergistic extraction and degradation of reactive azo dye using emulsion liquid membrane

7. Ph.D. Guided/Co-guided: 2

Ph.D. Research Supervision:

Sr. No	Admission No	Name of Student	Title of Thesis/Area of Research	Category (FIR/PES/FRS/FSF etc.)	Role (Supervisor/Co-supervisor)	Name of all other supervisor(s), if any	Status: Ongoing/Submitted/Awarded
1	DS14CH006	Nandwani Shilpa Kulbhushan	Application of Ionic Liquids in Enhanced Oil Recovery	FIR	Supervisor	Prof. M. Chakraborty	Viva voce examination was on 25/02/2020
2	D16CH002	HIMANSHU PRADEEP KOHLI	Application of Liquid Membranes for the Separation of Organic Compounds	FIR	Co-supervisor	Prof. M. Chakraborty	Viva voce examination was on 21/06/2021

8. Publications:

- i. Papers published in International Journal: (Total No. 29) (**Annexure -i**)
- iii. Papers published/presented in International Conference/Seminar: (Total No.: 13) (**Annexure –ii**)
- iv. Papers published/presented in National Conference/Seminar: (Total No.: 2) (**Annexure -iii**)

9. Workshops/Summer Schools/ Winter schools/Short term Courses attended: 19**10. Event Organized: 6**

Sr. No.	Name of Organizing member	Name of Programme	Dates of Programme
1	Dr. M. Chakraborty & Mrs. Smita Gupta	TEQIP -II sponsored One Day workshop on “ Six-Sigma & Statistical Analytical Tools” delivered by Mr Anup Ku. Das (General Manager, RIL, Hazira)	22 nd March 2013
2	Dr. M. Chakraborty & Mrs. Smita Gupta	TEQIP -II sponsored an expert lecture on “ Process Engineering and Design” delivered by Prof S. B. Thakore (L.D. College of Engineering, Ahmedabad)	16 th April 2013
3	Dr. M. Chakraborty & Mrs. Smita Gupta	TEQIP-II sponsored One Day workshop on “ How to face an Interview and Group Discussion” by Mr. Somnath Roy Choudhury (General Manager, RIL, Hazira)	9 th September 2013
4.	Prof. P.A.Parikh Dr. M. Chakraborty Dr. Smita Gupta	TEQIP-II sponsored STTP on Carbon Neutral Energy Sources	9 th to 13 th May 2016
5.	Dr. M. Chakraborty, Dr. Smita Gupta	TEQIP-II sponsored “One Day Workshop on How to face interview and group discussion”.	12 th March 2016
6.	Prof. P.A.Parikh Dr. M. Chakraborty	TEQIP-III supported STTP on “Advances and challenges in refining and petrochemical processes”.	24 th to 28 th June 2019

11. RESPONSIBILITIES/ ACTIVITIES performed till now:

- Actively involved in different Department & Institute level committee
- Co-chairman of Prof./C Students welfare
- Member in anti ragging squad
- Internal Examiner in Board of Examiners for the viva-voce examination for the Ph.D. thesis (2 times)
- Member in Students' Election Committee
- Team Member for registration Coommittee in 11th Convocation Program
- Member-Secretary, Department Academic Advisory Committee, ChED since January 2019.
- Faculty Advisor, B.Tech. III yr & II yr ChED
- Worked as SPCCPI Lab in charge, ChED
- Coordinator: General Maintenance and cleanliness, ChED
- Co-Coordinator: Work Load & department Timetable, ChED
- Hostel warden w.e.f. May 2022.
- As Member in PI-UBA.

12. Other Information:

Area of Interest: Liquid membranes, waste water treatment, bio-chemical engineering, Enhanced Oil Recovery.

CHAPTERS PUBLISHED IN INTERNATIONAL BOOKS: 2

1. Smita Gupta, Mousumi Chakraborty and Z.V.P. Murthy, MEMBRANE SEPARATIONS: Liquid Membranes: An Overview, Elsevier Reference Module in *Chemistry, Molecular Sciences and Chemical Engineering*”, edited by Jan Reedijk, Waltham, MA: Elsevier. 30-Nov-15. DOI: 10.1016/B978-0-12-409547-2.05832-7.

2. Gupta, S., Sundar, S.K. (2024). Kinetics of Microbial Growth, Substrate Consumption, and Product Formation. In: Dhagat, S., Jujjavarapu, S.E., Sampath Kumar, N., Mahapatra, C. (eds) Recent Advances in Bioprocess Engineering and Bioreactor Design. Springer, Singapore. https://doi.org/10.1007/978-981-97-1451-3_5.

Contribution as External Examiner for M.Tech/Ph.D. Thesis Outside Institute, Member of National Panel, Reviewer of Journal, Book, Project Proposal or any such other contribution:

Sr. No.	Details of the Contribution
1	Reviewer of the following Journal: 1- Environmental Technology, 2- Chemical Engineering & Processing: Process Intensification, 3- Fuel 4- Environmental Technology & Innovation 5- Separation & Purification Technology 6- Materials Today: Proceedings 7- Results in Engineering 8- Energy & Fuels 9- Colloids and Surfaces A: Physicochemical and Engineering Aspects

Annexure-i

(i) Papers published in International Journal: 29

1. **Smita Gupta**, Mousumi Chakraborty, and Z.V.P. Murthy, Response surface modelling and optimization of mercury extraction through emulsion liquid membrane, *Separation Science and Technology*, Vol.46(No.15) (2011) 2332-2340. (Taylor & Francis Group Publication, USA) (Impact Factor: 1.088)
2. **Smita Gupta**, Mousumi Chakraborty, and Z.V.P. Murthy, Optimization of process parameters for mercury extraction through pseudo-emulsion hollow fiber strip dispersion system, *Separation and Purification Technology*, Vol.114 (2013) 43–52. DOI: 10.1016/j.seppur.2013.04.020 (Elsevier Scientific Publication, USA) (Impact Factor: 3.065)
3. **Smita Gupta**, Mousumi Chakraborty and Z.V.P. Murthy, Removal of Mercury by Emulsion Liquid Membranes: Studies on Emulsion Stability and Scale Up, *Journal of Dispersion Science and Technology*, Vol.34 (No.12) (2013) 1733-1741. DOI: 10.1080/01932691.2013.767205 (Taylor & Francis Group Publication, USA) (Impact Factor: 0.705)
4. **Smita Gupta**, Mousumi Chakraborty, and Z.V.P. Murthy, Performance study of hollow fiber supported liquid membrane system for the separation of bisphenol A from aqueous solution, *Journal of Industrial and Engineering Chemistry*, Vol. 20 (2014) 2138–2145. DOI: 10.1016/j.jiec.2013.09.043 (Elsevier Scientific Publication, USA) (Impact Factor: 3.512)
5. Gedela Ashok Kumar Naidu, **Smita Gupta**, Mousumi Chakraborty, Application of pseudo-emulsion-based hollow fiber strip dispersion for the extraction of p-nitrophenol from aqueous solutions, *Environmental Technology*, (Taylor & Francis Group Publication, USA), Vol. 37(22) (2016) 2924–2934.
6. Shilpa K. Nandwani, Naved I. Malek, V.N. Lad, Mousumi Chakraborty, **Smita Gupta**, Study on interfacial properties of Imidazolium ionic liquids as surfactant and their application in enhanced oil recovery, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, (Elsevier Scientific Publication, The Netherlands) (Impact Factor: 2.760), Vol. 516 (2017) 383-393 (Elsevier Scientific Publication, USA).
7. Bhagwan Pralhad Parihar, Mousumi Chakraborty, **Smita Gupta**, Application of pseudo-emulsion hollow fiber strip dispersion system for the removal of propylparaben from the aqueous solutions, Accepted for publication in *Desalination and Water Treatment*, (Taylor & Francis Group Publication, USA) (Impact Factor: 1.272).
8. Ganesh B. Thorat, **Smita Gupta**, Z.V.P. Murthy, Synthesis, characterization and application of PVA / ionic liquid mixed matrix membranes for pervaporation dehydration of isopropanol, Accepted for publication in *Chinese Journal of Chemical Engineering*, (Impact Factor: 1.207) doi:10.1016/j.cjche.2017.02.011.
9. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Extraction of Ethylparaben by emulsion liquid membrane: Statistical analysis of operating parameters, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 539(2018)371-381 (Impact Factor: 2.714/2016) (Elsevier Scientific Publication, USA).
10. Shilpa K. Nandwani, Mousumi Chakraborty, Hans-Jorg Bart, **Smita Gupta**, Synergism, phase behaviour and characterization of ionic liquid-nonionic surfactant 2 mixture in high salinity environment of oil reservoirs, *Fuel* **229** (2018) 167–179 (Impact Factor: 4.6) (Elsevier Scientific Publication, USA)
11. Shilpa K. Nandwani, Mousumi Chakraborty, Smita Gupta, Chemical flooding with ionic liquid and nonionic surfactant mixture in artificially prepared carbonate cores: A diffusion controlled CFD simulation. *Journal of Petroleum Science and Engineering* 173 (2019) 835–843. Impact factor: 2.382.
12. **Smita Gupta**, Application of Artificial Neural Network (ANN) for the Extraction of a Non-Steroidal Anti-Inflammatory Drug through Emulsion Liquid Membrane, *International Journal of Engineering Technology Science and Research*, 5(1) (2018) 1245-1251. ISSN 2394 – 3386 (Impact Factor: 2.12/2016).

13. Shilpa K Nandwani, Mousumi Chakraborty, **Smita Gupta**, Application of Ionic Liquid Based Viscoelastic Surfactant in Enhanced Oil Recovery Process, **International Journal of Engineering Technology Science and Research**, 5(1) (2018) 1310-1315. ISSN 2394 – 3386 (Impact Factor: 2.12/2016).
14. Shilpa K. Nandwani, Naved I. Malek, Mousumi Chakraborty, **Smita Gupta**, Potential of a Novel Surfactant Slug in Recovering Additional Oil from Highly Saline Calcite Cores during the EOR Process: Synergistic Blend of Surface Active Ionic Liquid and Nonionic Surfactant, **Energy Fuels** 2019, 33, 541–550 (ACS Publications) (Impact Factor: 3.024/2017).
15. **Smita Gupta**, Pritam B. Khandale, Mousumi Chakraborty, Application of Emulsion Liquid Membrane for the Extraction of Diclofenac and Relationship with the Stability of Water-in-Oil Emulsions, **Journal of Dispersion Science and Technology**, Accepted for publication. DOI: 10.1080/01932691.2019.1579655 (Taylor & Francis Group Publication, USA) (Impact Factor: 1.454/2017)
16. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Separation of diclofenac using pseudo-emulsion hollow fiber membrane: Optimization by Box-Behnken response surface design, *Journal of water process engineering* 32(2019)100880.
17. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Stability and performance study of emulsion nanofluid membrane: A combined approach of adsorption and extraction of ethylparaben. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 579(2019)123675.
18. Shilpa Kulbhushan Nandwani, Mousumi Chakraborty, and **Smita Gupta**, Adsorption of surface active ionic liquids on different rock types under high salinity conditions. *Scientific Reports: nature research* 9(2019)14760.
19. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Characterization and stability study of pseudo-emulsion hollow fiber membrane: Separation of Ethylparaben. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 587 (2020) 124308.
20. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Applicability of Hollow Fiber Strip Dispersion for the Removal of Metal Ions from Aqueous Streams. *Journal of Institution of Engineers India Series E* 101 (2020) 91-97.
21. Shilpa Kulbhushan Nandwani, Naved I. Malek, Mousumi Chakraborty, and **Smita Gupta**, Insight into the Application of Surface-Active Ionic Liquids in Surfactant Based Enhanced Oil Recovery Processes—A Guide Leading to Research Advances. *Energy & Fuels* 34(6)(2020)6544-6557.
22. **Smita Gupta**, Ganesh B. Thorat, Z. V. P. Murthy, Mixed Matrix PVA-GO-TiO₂ Membranes for the Dehydration of Isopropyl Alcohol by Pervaporation. *Macromolecular Research* 28(6) (2020)587-595.
23. Rahul Kumar Shirasangi, Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Separation of Methylparaben by emulsion liquid membrane: Optimization, characterization, stability and multiple cycles studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 597 (2020) 12476.
24. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Statistical analysis of operating variables for pseudo-emulsion hollow fiber strip dispersion technique: ethylparaben separation from aqueous feed stream. *Chemical Papers* 75(2021)629-640.
25. Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Comparative studies on the separation of endocrine disrupting compounds from aquatic environment by emulsion liquid membrane and hollow fiber supported liquid membrane. *International Journal of Chemical Reactor Engineering* 19(07)(2021)689-698.
26. Shilpa Kulbhushan Nandwani, Naved I. Malek, Mousumi Chakraborty, and **Smita Gupta**, A Comprehensive study based on the application of different genre of surface-active ionic liquid and alkali Combination systems in surfactant flooding. *Energy & Fuels* 34(2020)9411-9425.

27. Rahul Kumar Shirasangi, Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Separation of Methylparaben from aqueous source stream by pseudo-emulsion hollow fiber membrane strip dispersion technique: Optimization of process parameters using Grey – Taguchi method. *Chemical Engineering and Processing – Process Intensification* 161(2021)108302.

28. Srish Kulkarni, **Smita Gupta**, Jignasa V. Gohel, Incorporation of MOF UiO-66-NH₂ and polyaniline for enhanced performance of low-cost carbon-based perovskite solar cells, **Optical Materials**, Vol. 144 (2023) 114268. <https://doi.org/10.1016/j.optmat.2023.114268> (Elsevier) (Impact Factor: 3.754).

29. Srish Kulkarni, **Smita Gupta**, Jignasa V. Gohel, Contemporary neoteric energy materials to enhance efficiency and stability of perovskite solar cells: a review, **Journal of Solid State Electrochemistry**. <https://doi.org/10.1007/s10008-024-05905-7> (Springer) (Impact Factor: 2.5)

(Annexure -ii)

(iii) Papers published/presented in International Conference/Seminar: 13

1. Presented paper at International Conference on Ionic Liquids 2013, 11-13th Dec 2013, Langkawi, Malaysia: Smita Gupta, Mousumi Chakraborty, Z.V.P. Murthy, Influence of Ionic Liquid on the transport of Bisphenol A from aqueous solution through hollow fiber supported liquid membrane, conference souvenir (2013) 48.

2. Presented paper at International Conference on Desalination for the Environment: Clean Water and Energy, 22-26th May 2016, Rome, Italy: Bhagwan Pralhad Parihar, Smita Gupta and Mousumi Chakraborty, Application of Pseudo-emulsion Hollow Fiber Strip Dispersion system for the removal of propylparaben from the aqueous solutions, EDS Conference proceedings (2015)9.

3. Presented paper at MEMSEP 2015 – International conference on membrane based separations, 21-23 March 2015, The M.S. University of Baroda, Vadodara: Ganesh B. Thorat, Smita Gupta, Z.V.P. Murthy, Synthesis and characterization of hybrid membranes using Poly(Vinyl alcohol) and ionic liquids for pervaporation dehydration of isopropanol, conference souvenir (2015) 43.

4. Presented paper at 7th International Conference on Environmental Science and Technology, 10-12th June 2016, Barcelona, Spain: Ashok Naidu, Smita Gupta and Mousumi Chakraborty Extraction of Nitrophenols Using Pseudo-emulsion Based Hollow Fiber Strip Dispersion, 94, IPCBEE proceedings (2016)38-43.

5. Presented paper at 8th International Conference on Environmental Science and Technology, 12-14th June 2017 Madrid, Spain: Bhagwan Pralhad Parihar, Smita Gupta and Mousumi Chakraborty, Study on Photocatalytic Degradation of Endocrine Disrupting Compound, 78, Conference proceedings (2017) 1-4.

6. Presented paper at 8th International Conference on Environmental Science and Technology, 12-14th June 2017 Madrid, Spain: Niraj Prasad, Sumita Dasgupta, Mousumi Chakraborty, Smita Gupta, Isolation and Characterization of Biosurfactant Producing Bacteria for the Application in Enhanced Oil Recovery, 78, Conference proceedings (2017) 1-7.

7. Presented paper at International conference on paradigm shift in chemical engineering education, processes and technology organised by The Institution of Engineers (India) on 16-17th Sep 2017: Himanshu P. Kohli, Smita Gupta, Mousumi Chakraborty, Applicability of Hollow Fiber Strip Dispersion for the removal of metal ions for the treatment of waste water, International Conference Proceeding (2017) 503.

8. Presented paper at ICAEASM-2018, Osmania University, Hyderabad on 28th Jan 2018, Shilpa Nandwani, Smita Gupta and Mousumi Chakraborty Application of ionic liquid based viscoelastic surfactant in Enhanced Oil Recovery process, ISBN: 978-93-87433-10-6 (2018) 691-696.

9. Presented paper at ICAEASM-2018, Osmania University, Hyderabad on 28th Jan 2018, Smita Gupta, Application of Artificial Neural Network (ANN) for the Extraction of a Non-Steroidal Anti-Inflammatory Drug through Emulsion Liquid Membrane, ISBN: 978-93-87433-10-6 (2018) 591-697.

10. Presented paper at International conference on Advances in Chemical Engineering -2020 (AdChE-2020), University of Petroleum and Energy Studies, Dehradun on 5th to 7th February 2020, Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Studies on the removal of endocrine disrupting compounds from aqueous streams by Emulsion liquid membrane and hollow fiber supported liquid membrane, Proceeding was posted on 12th Oct 2020, Scopus.

11. Presented Paper at Indian Chemical Engineering Congress CHEMCON-2019, Indian Institute of Technology, Delhi on 15th to 19th December 2019, Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Incorporation of multiwall Carbon nanotubes to improve the performance of emulsion liquid membrane.

12. Presented paper at Royal Society of Chemistry India Western Zone Symposium and Research Scholar Meet-2019, 22-23 February 2019, Uka Tarsadia University, Bardoli, Himanshu P. Kohli, **Smita Gupta**, Mousumi Chakraborty, Removal of ethylparaben from aqueous solution using emulsion liquid membrane, Souvenir and Abstracts Book, Page 48.

13. Presented paper at Virtual International Conferences on Advances in Chemistry and Chemical Engineering-2021 (ACCE-2021), 16-17 April 2021, SVNIT, Surat, Himanshu P. Kohli, Mousumi Chakraborty, **Smita Gupta**, Separation of organic compounds by hollow fiber membrane: working, characterization and statistical studies, International Conference Proceedings, Page 136.

(Annexure- iii)

(iv) Papers published/presented in National Conference/Seminar: 1

1. Presented paper at Symposium on Desalination and Water Reuse, 22-23 January 2015, Board of Research in Nuclear Sciences (BRNS) Government of India & Indian Desalination Association, at Bhabha Atomic Research Centre (BARC), Mumbai : Smita Gupta, Mousumi Chakraborty, Z.V.P. Murthy, Stability Study of Emulsion Liquid Membrane for the Removal of Bisphenol A from Aqueous Solutions, Proceedings of Trombay Symposium on Desalination and Water Reuse (TSDWR 2015), Pp.348-355. (Received 3rd Best Poster Paper Award).