SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
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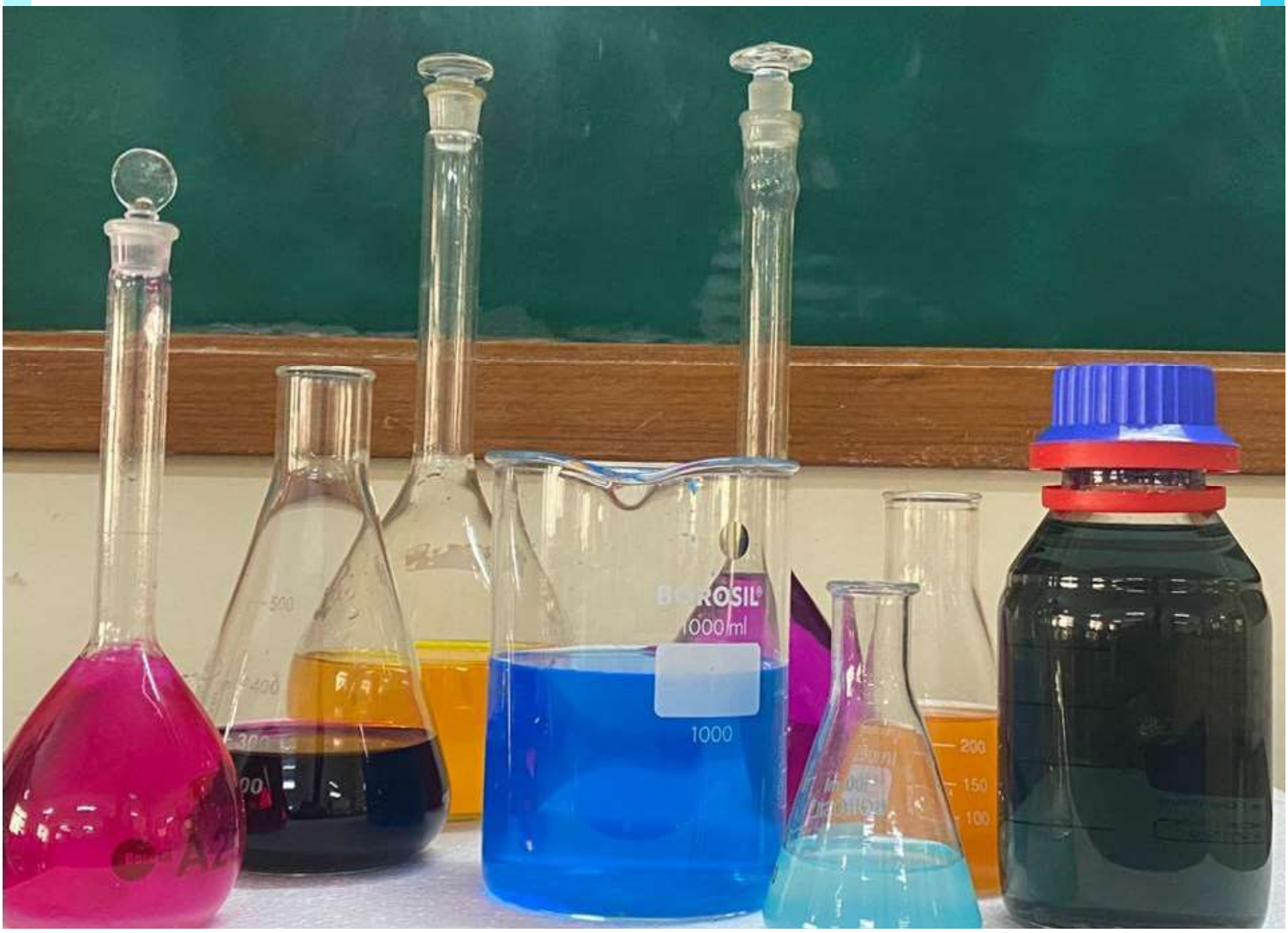
CHEMICAL CHRONICLE

NEWSLETTER

Volume 1, Issue 2 (January to June 2022)



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https://www.srmist.edu.in/engineering/department-of-chemical-engineering/about-the-department

Message from the Chairperson
School of Bioengineering

Dr. M. Vairamani
Chairperson, School of Bioengineering, CET, SRMIST

It is a pleasure to know that the Department of Chemical Engineering, School of Bioengineering, SRM Institute of Science and Technology has come up with the second issue of the newsletter, "Chemical Chronicle". This issue of the newsletter aims to project the various activities associated with the students and faculty of the Department of Chemical Engineering during the period from January to June 2022. A periodic consolidation of milestones achieved by the department helps motivate the team spirit and also indicates the areas of refinement and growth to be planned in future. Since both academia and research elucidate a need for traversing across departments to cultivate a multidisciplinary attitude, I am sure that this newsletter will pave way for many such collaborations.

I congratulate the team involved in putting together the newsletter "Chemical Chronicle" and hope to witness the continual growth of the Department of Chemical Engineering through this medium.

From the HoD's Desk

Dr. K. Suresh
Head of the Department, Chemical Engineering

Dear Reader,

Greetings!

I am delighted to present the second issue of 'Chemical Chronicle', the official newsletter of the Department of Chemical Engineering, College of Engineering and Technology, SRMIST. This newsletter brings to you the highlights of the department activities such as research contributions, awards/prizes won, conferences, workshops, technical talks organized, and the recent placement records of our students.

The second issue of Chemical Chronicle serves to showcase all the aspects of growth of the department observed over a period of six months from January to June 2022. The students, faculty, and supporting staff have always put in their best efforts for the growth of the department and this period is no exception. There has been a remarkable increase in the research output of the department both in terms of quality and quantity. The number of patents filed and granted has increased considerably. The placement season for the final year students (2022 batch) was a very fruitful one resulting in a very high placement record of 84 %. The semester was a particularly engaging one that saw a number of department conferences, workshops, and project expos organized for the benefit of the students and research scholars. I hope we continue this wonderful journey together learning from our experiences and striving to achieve the best in whatever we pursue.

I wholeheartedly thank the students, parents, alumni, research scholars, faculty, and the non-teaching staff of the Department of Chemical Engineering, for being a part of this incredible journey and solicit your support in all our future endeavours to carry the department to a higher pedestal. I am thankful to the management for providing a conducive environment to synergise our strengths towards fulfilling the objectives of the department and the institute as a whole. I am sure this compilation consisting of our efforts will help to periodically review, retrospect and plan to improve our performance in a better manner.

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Editorial Team

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Ms. B. Anitha
Secretary to HoD
Chemical Engineering

Student Contributors

Mohamed Irfana

Kanishka G

About the Department

The Department of Chemical Engineering was started in the year 1995 offering B. Tech. degree programme in Chemical Engineering as one of the core departments of SRM Engineering College under the University of Madras. The department started offering a post-graduate programme, M. Tech. (Chemical Engineering) since 2002-2003. From the academic year 2003-2004, the department started functioning under SRM Institute of Science and Technology. The department now offers B. Tech. (Chemical Engineering), M. Tech. (Chemical Engineering) and Ph.D. (part time and full time) under SRM Institute of Science and Technology. So far, 24 batches of B. Tech. students and 19 batches of M. Tech. students have graduated from this department with meritorious performance. Presently, the department has 15+ Ph.D. scholars working on various socially relevant projects.

Vision of the Department

To utilize Chemical Engineering and Technology and ensure overall socio-economic growth, welfare, and progress of Indian society and the World-at-large by supporting Academia, Industries through Research and Development, Consultancy and graduating high-quality Chemical Engineers

Mission of the Department

1. To facilitate high quality education, well grounded in the fundamental and applied areas of engineering necessary for learners to contribute effectively to chemical and allied industries

2 .To educate, prepare, inspire and mentor learners with the technical and professional skill-set necessary to excel as professionals, grow in their careers and contribute to chemical engineering science and technology

3. To inculcate social-responsibility in learners and train them to contribute effectively to science and society

Publications

The **faculty** members along with their **students** have published **38 papers** and **10 book chapters** in refereed journals and books respectively during the period, January to June 2022. The Department of Chemical Engineering congratulates its faculty members and students for their tremendous efforts towards contribution for publication in peer reviewed journals/books.

Publications	January to June 2022	Academic year 2021-2022
Number of Publications	38	63
Number of Corresponding Author Publications	32 (84 %)	51 (81 %)
Number of Science Citation Indexed (SCI) Publications	29 (76 %)	51 (81 %)
Highest Impact Factor	14.224	14.224
Average Impact Factor	3.917	3.428

Dr. Paromita Chakraborty
Publication with Highest IF: 14.224
Highest Number of Book Chapters: 6

[1] P. Rajasulochana, **G. Yaswanth,** P. Senthil Kumar, S. Mahalaxmi, Fahira Tasneem, **P. Muthamilselvi, Ashish Kapoor*, "Paper-based microfluidic colorimetric sensor on a 3D printed support for quantitative detection of nitrite in aquatic environments", Environmental Research.** 208 (2022) 112745. https://doi.org/10.1016/J.envres.2022.112745. **(SCI, IF : 6.498).**

[2] Chandran Murugan, Vignesh Sundararajan, Sahabudeen Sheik Mohideen, **S. Anandhakumar*, "Controlled decoration of nanoceria on the surface of MoS_2 nanoflowers to improve the biodegradability and biocompatibility in *Drosophila melanogaster* model", Nanotechnology.** 33 (2022). https://doi.org/10.1088/1361-6528/ac4fe4. **(SCI, IF : 3.874).**

[3] **S. Samdavid,** T. Renganathan, K. Krishnaiah, **"Hydrodynamics of co-current downward liquid-liquid system with packing", Korean Journal of Chemical Engineering.** 39 (2022) 86–95. https://doi.org/10.1007/s11814-021-0950-x. **(SCI, IF : 3.309).**

[4] **R. Thilakavathi, K. Suresh*, "Influence of viscosity on the thermal behavior of fluids in a sealed can", Alexandria Engineering Journal.** 61 (2022) 7833–7842. https://doi.org/10.1016/j.aej.2022.01.038. **(SCI, IF : 3.732).**

[5] **Paromita Chakraborty*,** Sarath Chandra, M.V. Dimmen, R. Hurley, S. Mohanty, G.K. Bharat, E.H. Steindal, M. Olsen, L. Nizzetto, **"Interlinkage Between Persistent Organic Pollutants and Plastic in the Waste Management System of India: An Overview", Bulletin of Environmental Contamination and Toxicology.** (2022). https://doi.org/10.1007/s00128-022-03466-x. **(SCI, IF : 2.151).**

[6] Moitraiyee Mukhopadhyay, **Mohammed Jalal, G. Vignesh, Muhammed Ziauddin,** S. Sampath, G.K. Bharat, L. Nizzetto, **Paromita Chakraborty*, "Migration of Plasticizers from Polyethylene Terephthalate and Low-Density Polyethylene Casing into Bottled Water: A Case Study From India", Bulletin of Environmental Contamination and Toxicology.** (2022) 1–7. https://doi.org/10.1007/s00128-022-03474-x. **(SCI, IF : 2.151).**

[7] R. Jeyalakshmi, **S. Vishali,** Gadah Albasher, Ohoud Alamri, Nouf Alsultan, **S. Kiruthika*, "Process optimization of struvite recovered from slaughterhouse wastewater and its fertilizing efficacy in amendment of biofertilizer", Environmental Research.** 211 (2022) 113011. https://doi.org/10.1016/j.envres.2022.113011. **(SCI, IF : 6.498).**

[8] **M. Magesh Kumar*, Hawale Pawan Narayan, "Synergetic effects of mixing parameters, settling characteristics and process kinetics on coagulation treatment of tannery industry wastewater", Chemical Papers.** 76 (2022) 4169–4188. https://doi.org/10.1007/s11696-022-02156-6. **(SCI, IF : 2.097).**

[9] **Adithya Sridhar,** Akash Balakrishnan, **Meenu Mariam Jacob,** Mika Sillanpaa, **D. Nanditha*, "Global impact of COVID-19 on agriculture: role of sustainable agriculture and digital farming", Environmental Science and Pollution Research.** (2022). https://doi.org/10.1007/s11356-022-19358-w. **(SCI, IF : 4.223).**

[10] Bharat Bhargawa, Varsha Sharma, M R Ganesh, Francesca Cavalieri, Muthupandian Ashokkumar, B. Neppolian, **S. Anandhakumar*, "Lysozyme microspheres incorporated with anisotropic gold nanorods for ultrasound activated drug delivery", Ultrasonics Sonochemistry.** 86 (2022) 106016. https://doi.org/10.1016/j.ultsonch.2022.106016. **(SCI, IF : 7.491).**

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[12] Manjula Rajagopal, **P. Muthamilselvi*, Ashish Kapoor, "Water management for irrigation scheduling by computing evapotranspiration using ANFIS modelling", Desalination and Water Treatment.** 251 (2022) 123–133. https://doi.org/10.5004/dwt.2022.28290. **(SCI, IF : 1.254).**

[13] **E. Poonguzhali*, Fathima Aadilah Mohamed Ali, Ashish Kapoor*, S. Prabhakar, "Performance of membrane assisted solvent extraction with homologous solvents for the removal and recovery of phenol", Desalination and Water Treatment.** 251 (2022) 64–78. https://doi.org/10.5004/dwt.2022.28117. **(SCI, IF : 1.254).**

[14] **P. Muthamilselvi*,** V. Saravanan, P. Balamurugan, R. Rajeshkannan, M. Dilipkumar, **"Removal of chlorophenol using a batch and airlift inner loop bioreactor using *Aspergillus fumigatus*", Desalination and Water Treatment.** 251 (2022) 114–122. https://doi.org/10.5004/dwt.2022.28288. **(SCI, IF : 1.254).**

[15] A. Gayathri, **S. Kiruthika,** V. Selvarani, M.S. AlSalhi, S. Devanesan, W. Kim, B. Muthukumaran, **"Evaluation of iron-based alloy nanocatalysts for the electrooxidation of ethylene glycol in membraneless fuel cells", Fuel.** 321 (2022) 124059. https://doi.org/10.1016/j.fuel.2022.124059. **(SCI, IF : 6.609).**

[16] **Mohamed Nayeem Nazeer Hussain,** P. Letchoumanane, **S. Prabhakar, S. Kiruthika*, "Effective recovery of struvite from wastewater by electrochemical process", Desalination and Water Treatment.** 251 (2022) 146–156. https://doi.org/10.5004/dwt.2022.28328. **(SCI, IF : 1.254).**

[17] **G. Keerthiga*, Akash Balakrishnan, S. Kiruthika, "Response surface methodology based optimization of photocatalytic degradation of 2,4-dichlorophenoxyacetic acid", Desalination and Water Treatment.** 251 (2022) 57–63. https://doi.org/10.5004/dwt.2022.28114. **(SCI, IF : 1.254).**

[18] P. Mullai, **S. Vishali*,** E. Sobiya, **"Studies on the application of algae biomass as an adsorbent in the treatment of industrial Azadirachtin insecticide wastewater", Desalination and Water Treatment.** 251 (2022) 7–17. https://doi.org/10.5004/dwt.2022.27888. **(SCI, IF : 1.254).**

[19] **S. Vishali*, S. Picasso, M. Rajdeep, B. Debom, "Evaluation of the performance of an agricultural residue Cyamopsis tetragonolobus (guar gum) in toxic paint industry, effluent treatment using continuous fixed-bed adsorption column", Desalination and Water Treatment.** 251 (2022) 105–113. https://doi.org/10.5004/dwt.2022.28167. **(SCI, IF : 1.254).**

[20] **S. Vishali*,** P. Mullai, S. Mahboob, K. Al-Ghanim, A. Sivasankar, **"Elucidation the influence of design variables on coagulation–flocculation mechanisms in the lab-scale bio-coagulation on toxic industrial effluent treatment", Environmental Research.** 212 (2022) 113224. https://doi.org/10.1016/j.envres.2022.113224. **(SCI, IF : 6.498).**

[21] **I. Becky Miriyam, K. Anbalagan*, M. Magesh Kumar**, **"Phthalates removal from wastewater by different methods – a review", Water Science and Technology.** 85 (2022) 2581–2600. https://doi.org/10.2166/wst.2022.133. **(SCI, IF : 1.915).**

[22] **D. Harishwar, S. N. Amresh, S. Prabhakar,** V. Murugan, **M. Magesh Kumar*, "Performance analysis of operating multi-stage flash distillation unit coupled with nuclear power plant", Desalination and Water Treatment.** 251 (2022) 134–145. https://doi.org/10.5004/dwt.2022.28295. **(SCI, IF : 1.254).**

[23] Punitha Shanmugam, Guru Prasad Kuppuswamy, David Chidambaram, Ramji Kalidoss, **S. Anandhakumar*,** Yuvaraj Sivalingam*, **"Influence of gas adsorption on the surface photovoltage of Au nanorods embedded polymer coated ZnO nanorods under visible light irradiation", Ceramics International.** (2022). https://doi.org/10.1016/j.ceramint.2022.05.091. **(SCI, IF : 4.527).**

[24] Adithya Sridhar, Vijay Vaishampayan, P. Senthil Kumar, **P. Muthamilselvi, Ashish Kapoor*, "Extraction techniques in food industry: Insights into process parameters and their optimization", Food and Chemical Toxicology.** 166 (2022) 113207. https://doi.org/10.1016/j.fct.2022.113207. **(SCI, IF : 6.023).**

[25] K. Ronnie Rex, **Paromita Chakraborty*, "Legacy and new chlorinated persistent organic pollutants in the rivers of south India: Occurrences, sources, variations before and after the outbreak of the COVID-19 pandemic", Journal of Hazardous Materials.** 437 (2022) 129262. https://doi.org/10.1016/j.jhazmat.2022.129262. **(SCI, IF : 14.224).**

[26] P. Mullai, **S. Vishali,** E. Sobiya, **"Experiments and adaptive-network-based fuzzy inference system modelling in a hybrid up-flow anaerobic sludge blanket reactor to assess industrial azadirachtin effluent quality", Bioresource Technology.** 358 (2022) 127395. https://doi.org/10.1016/j.biortech.2022.127395. **(SCI, IF : 9.642).**

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[28] **Paromita Chakraborty*,** P.G. Vinod, J.H. Syed, B. Pokhrel, G. K Bharat, A.R. Basu, T. Fouzder, M. Pasupuleti, M. Urbaniak, V.P. Beskoski, **"Water-sanitation-health nexus in the Indus-Ganga-Brahmaputra River Basin: need for wastewater surveillance of SARS-CoV-2 for preparedness during the future waves of pandemic", Ecohydrology and Hydrobiology.** 22 (2022) 283–294. https://doi.org/10.1016/j.ecohyd.2021.11.001. **(SCI, IF : 3.215).**

[29] **Neeraj K. Gupta*,** Shivani Gupta, **Aschalew Tedesse, "Influence of acrylonitrile butadiene elastomer as polymeric co-agent for crosslinking poly(vinyl chloride) by gamma radiation", Journal of Polymer Research.** 29 (2022). https://doi.org/10.1007/s10965-022-02974-y. **(SCI, IF : 3.097).**

[30] **G. Keerthiga*, Adithya Sridhar, "Batch extraction kinetics and total phenolic content estimation of *Syzygium cumini L.* bark", Indian Chemical Engineer.** (2022) 1–11. https://doi.org/10.1080/00194506.2022.2046512. **(Scopus, SNIP : 0.709).**

[31] P. Mullai, **S. Vishali,** P. Kobika, K. S. Dhivya, A. Mukund, M. Sriraaman, **"Biochar Production And Its Basket Full Of Benefits - A Review", ECS Transactions.** 107 (2022) 18747–18752. https://doi.org/10.1149/10701.18747ecst. **(Scopus, SNIP : 0.267).**

[32] Krisha D, M. Chamundeeswari, **K. Tamilarasan*, "Hybrid Composite Photocatalysts Membrane System For Industrial Water Treatment And Renewable Energy Applications", ECS Transactions.** 107 (2022) 19069–19076. https://doi.org/10.1149/10701.19069ecst. **(Scopus, SNIP : 0.267).**

[33] G. Sudha, **V. Ganesh*, "Enzymatic Degradation of Polycarbonates: Response Surface Methodology (RSM) Based Approach", Journal of Physics: Conference Series.** 1979 (2021). https://doi.org/10.1088/1742-6596/1979/1/012006. **(Scopus, SNIP : 0.395).**

[34] **Praneeti Mitra, Utkarsh Sharma, M. Magesh Kumar, S. Samdavid*, "Hydrodynamics and mixing characteristics of packed bed biofilm reactor with varying voidage", Journal of Physics: Conference Series.** 1979 (2021). https://doi.org/10.1088/1742-6596/1979/1/012008. **(Scopus, SNIP : 0.395).**

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[36] S. M. Sambavi, **S. Vishali,** M. Asthika, M. Sriraaman, P. Mullai, **"Bioconversion of Food Waste with Cosubstrate to Electricity using Microbial Fuel Cell", Journal of Physics: Conference Series.** 1979 (2021). https://doi.org/10.1088/1742-6596/1979/1/012011. **(Scopus, SNIP : 0.395).**

[37] P. Rajasulochana, S. Fahiratasneem, **Ashish Kapoor,** M. K. Chandan, **"A Glimpse on Possible Detection Tools and Vaccines for Mitigation and Management of COVID-19", Journal of Physics: Conference Series.** 1979 (2021). https://doi.org/10.1088/1742-6596/1979/1/012012. **(Scopus, SNIP : 0.395).**

[38] **S. Vishali*, J. Sandhiya, Divya, K. Aarthi, Abhilash, "Performance evaluation of coconut shell originated activated carbon as an adsorbent on the paint factory effluent treatment", Journal of Physics: Conference Series.** 2007 (2021). https://doi.org/10.1088/1742-6596/2007/1/012067. **(Scopus, SNIP : 0.395).**

Book Chapters Published

[1] **E. Kavitha, S. Vishali*, "Advanced Functional Membranes for Water Purification",** in: **Materials Research Foundations, Materials Research Forum LLC,** 120 (2022) 214–236. https://doi.org/10.21741/9781644901816-7.

[2] **E. Kavitha, S. Kiruthika, S. Vishali*, "Advanced Functional Membranes for Energy Applications",** in: **Materials Research Foundations, Materials Research Forum LLC,** 120 (2022) 237–266. https://doi.org/10.21741/9781644901816-8.

[3] **M. Magesh Kumar*, "Optimisation and Modeling Approaches for the Textile Industry Water Treatment Plants", Industrial Wastewater Treatment, Springer, Cham.** 106 (2022) 285–307. https://doi.org/10.1007/978-3-030-98202-7_11.

[4] Jalal Bayar, Muhammad Zaffar Hashmi, Muhammad Abdullah Khan, Siwatt Pongpiachan, Xiaomei Su, **Paromita Chakraborty, "Emerging Issue of Microplastic in Sediments and Surface Water in South Asia: A Review of Status, Research Needs, and Data Gaps", Microplastic Pollution. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham.** (2022) 3-19. https://doi.org/10.1007/978-3-030-89220-3_1.

[5] K. Pavithra, Avanti Roy-Basu, Girija Bharat, **Paromita Chakraborty*, "A Review on Distribution and Removal Techniques for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Water and Wastewater", Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques, Springer, Cham.** (2022) 389–408. https://doi.org/10.1007/978-3-030-95443-7_17.

[6] Shruthi R, Omkar Gaonkar, R Mohan Kumar, **Debayan Mazumdar,** Peramaiah Karthik, Sunil Kumar, Neppolian Bernardshaw, **Paromita Chakraborty*, "Effective Removal of Naphthalene Adsorbed on Biochar by Low-Frequency Ultrasonication in a Customized Reactor", Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques, Springer, Cham.** (2022) 323–337. https://doi.org/10.1007/978-3-030-95443-7_14.

[7] Prachi Rajput, **Paromita Chakraborty,** Pooja Devi, "**Optical Techniques for Monitoring Persistent Organic Pollutants in Water and Wastewater", Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques, Springer, Cham.** (2022) 179–199. https://doi.org/10.1007/978-3-030-95443-7_9.

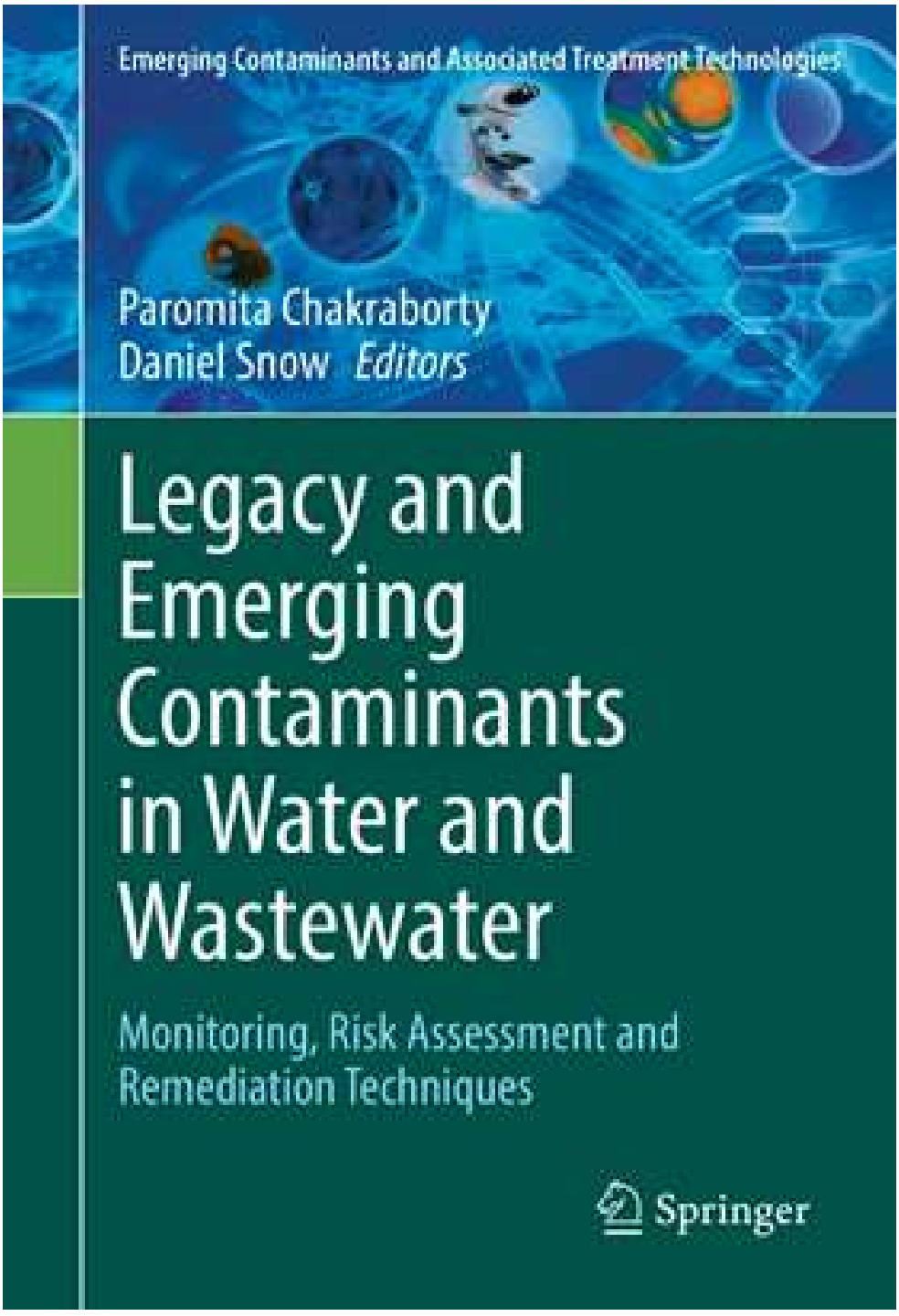
[8] Bhupandar Kumar, Premanjali Rai, **Paromita Chakraborty, "Pharmaceuticals in Indian Aquatic Environment: Risk and Implications for Management", Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques, Springer, Cham.** (2022) 47–76. https://doi.org/10.1007/978-3-030-95443-7_3.

[9] **Moitraiyee Mukhopadhyay, Paromita Chakraborty*, "An overview on selected plasticizers in the aquatic environment of China and India". Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques, Springer, Cham.** (2022) 161–178. https://doi.org/10.1007/978-3-030-95443-7_8.

[10] **Akash Balakrishnan, P. Muthamilselvi*, Ashish Kapoor, S. Prabhakar, "Emerging Contaminants in Wastewater and Associated Treatment Technologies". Legacy and Emerging Contaminants in Water and Wastewater, Emerging Contaminants and Associated Treatment Technologies, Monitoring, Risk Assessment and Remediation Techniques. Springer, Cham.** (2022) 231–261. https://doi.org/10.1007/978-3-030-95443-7_11.

Book Editor

Dr. Paromita Chakraborty* and Dr. Daniel Snow are the **editors** of the Book titled **Legacy and Emerging Contaminants in Water and Wastewater: Monitoring, Risk Assessment and Remediation Techniques** in the Book Series **Emerging Contaminants and Associated Treatment Technologies. Springer Cham.** https://doi.org/10.1007/978-3-030-95443-7.



Patents Granted

S. No.	Inventors	Title of the Patent	Date of Grant	Patenting Agency, Application Number and Patent Number
1	Dr. M.P. Rajesh*, Dr. Mukund Shankar	PROCESS FOR PRODUCING CRUDE BIODIESEL USING PROTIC IONIC LIQUIDS	31/01/2022	Indian Patent Office, 201741034757, 388148
2	Dr. S. Vishali*, Dr. E. Poonguzhali	A PROCESS FOR TREATMENT OF LAUNDRY WASTEWATER	28/02/2022	Indian Patent Office, 201941004457, 390852
3	Dr. Paromita Chakraborty*, Elvis Dsouza	A POLYMER PENCIL	30/05/2022	Indian Patent Office, 201641005428, 398097

Total Patents Granted for the Academic Year 2021 – 2022

4

Dr. M. P. Rajesh, Dr. Ashish Kapoor, Dr. S. Vishali, Dr. E. Poonguzhali & **Dr. Mukund Shankar** received Felicitation Award for Indian Patent Granted from July 2021 to March 2022 on World Intellectual Property Day Function – 26th April 2022 organized by the SRM Innovation, Incubation and Entrepreneurship Centre (SIIEC), SRM IST Centre for Intellectual Asset Protection, SRMIST, Kattankulathur.

Patent Published

S. No.	Inventors	Title of the Patent	Date of Publishing	Patenting Agency, Application Number
1	Dr. B. Muthukumaran A. Gayathri V. Selvarani **Dr. S. Kiruthika** S. Durga M. Priya L. Pournan	**Stoichiometry Effects in Proton-Exchange-Membrane-Fuel-Cells**	18.02.2022	**Indian Patent Office,** 202241007775 A

Projects Sanctioned

S. No.	Principal Investigator	Project Title	Funding Agency	Sanctioned Amount
1	**Dr. S. Anandhakumar**	**Multifunctional Hydrogen Bonded Thermo-Responsive Nanocapsules: An Indigenous Carrier System for Cancer Theranostics and Anti-viral Applications?**	**DST-SERB (Core Research Grant)**	**21.98 Lakhs**
2	**Dr. S. Anandhakumar**	**MoS_2 Based Nanozymes: A Controlled Decoration of MoS_2 Nanoflower Surface for Improving Photothermal Heat Generation and Free Radical Scavenging Ability for Skin Cancer Therapy**	**Association Commonwealth Universities, UK**	**4.86 Lakhs**

Hearty Congratulations! **Dr. S. Anandhakumar**

Awards / Achievements - Faculty

- **Dr. Paromita Chakraborty** received the **"Best Environmental Researcher Award - 2022"** for her valuable contribution towards our Environment on **World Environment Day - 2022** organized by the Centre for Environmental Nuclear Research and the Directorate of Research, SRMIST.

- **Dr. Paromita Chakraborty** has been awarded in recognition for her **research paper publication in a Nature Indexed Journal** during the Research Day held on 28th February 2022 organized by SRMIST.

Technical Expert Members

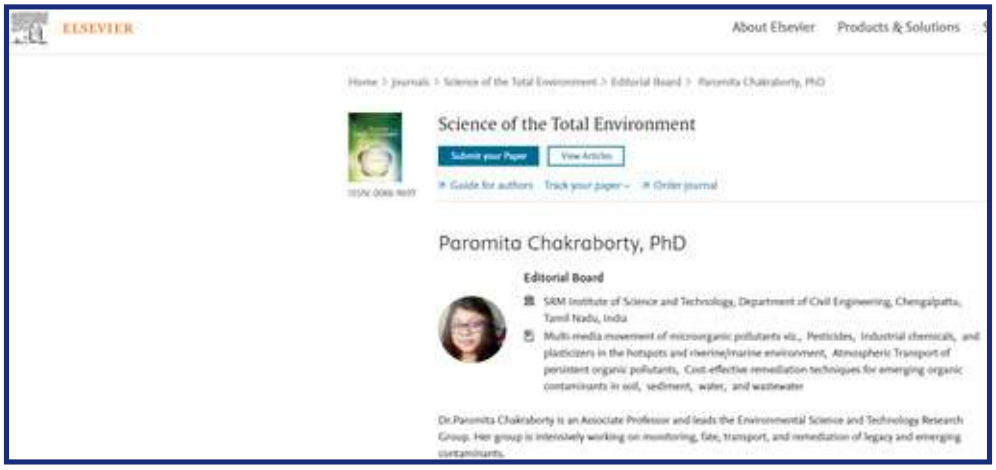
[1] **Dr. S. Vishali** has been selected as an **Expert Member** in a Committee for Continuous Ambient Air Quality Monitoring Stations (CAAQMAS) for Tamil Nadu Pollution Control Board (TNPCB), Maraimalai Nagar from 12.01.2022.

[2] **Dr. K. Tamilarasan** has been appointed as an **Academic Expert Member** for Board of Studies meeting in the Department of Chemical Engineering, Hindusthan College of Engineering and Technology, Coimbatore and the meeting was held on 28.01.2022.

[3] **Dr. S. Vishali** has been selected as a **National Scientific Committee Member** for International Conference on Challenges in Chemical and Biochemical Engineering for Sustainable Development (CBSD) organized by Department of Chemical Engineering, Annamalai University, Chidambaram, Tamil Nadu from 23.03.2022 to 24.03.2022

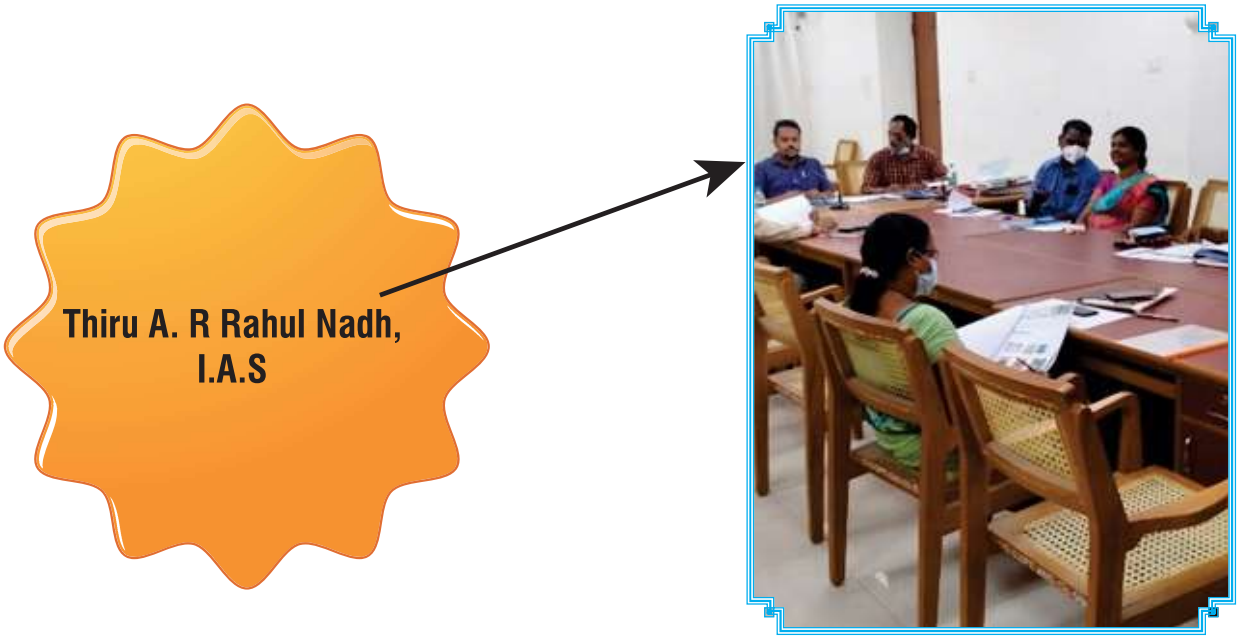
[4] **Dr. M. P. Rajesh** has been appointed as an **Adjunct Faculty** in the Department of Biotechnology, Manipal Institute of Technology, Manipal - 576104, Karnataka from 22.04.2022.

[5] **Dr. Paromita Chakraborty** is the **Editorial Board member** of the Journal, Science of the Total Environment, Elsevier Publication (Impact Factor: 10.753).



[6] **Dr. S. Prabhakar** has been appointed as an Esteemed Member for the First and Second Stage **Project Evaluation Committee meeting for WTI 2021** on Desalination Technologies.

[7] **Dr. S. Vishali** has been appointed as a **selection committee member** for the "TAMIL NADU GREEN CHAMPION AWARD (TNGCA)" - A District Level Award Committee, by The Collectorate office of Chengalpattu, from 25.04.2022.



Dr. S. Vishali in the selection committee meeting for the **"TAMIL NADU GREEN CHAMPION AWARD"** with Chengalpattu District Collector Thiru A. R. Rahul Nadh I.A.S., at the Collectorate office of Chengalpattu.

Invited Talks Delivered

[1] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Water-Health Nexus for Endocrine-Disrupting Chemicals"** for **National Science Day 2022** virtually, organized by Wilson College, Mumbai, on 4th March, 2022.

[2] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Persistant Organic Pollutants in Indian Environment-Atmospheric Monitoring and Analytical Techniques"** as part of **"Advanced Training Program on Analytical Geochemistry"** virtually, organized by CSIR-National Geophysical Research Institute, Telangana, on 8th March, 2022.

[3] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Elimination of Single-Use Plastics"** virtually, organized by Chattisgarh Environment Conservation Board and Consumer Education Research Centre on 9th March, 2022.

[4] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Water- Health Nexus for Endocrine-Disrupting Chemicals: New Challenges Related to COVID-19 Pandemic"** virtually, organized by J.C. Bose University of Science and Technology, YMCA, Faridabad on 10th March 2022.

[5] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Toxic plastic additive residues in River Ganga and the Sundarban wetland: Pollution sources and risk assessment"** in the **5 day Faculty Development Program (FDP)** on **"Sustainability, Conservation & Protection of Water Resources"** organized by Centre for Ocean Research (COR), Col. Dr. Jeppiaar Research Park, jointly with the Centre for Remote Sensing and Geoinformatics and Department of Civil Engineering, Sathyabama Institute of Science and Technology (SIST) on 22nd – 26th March, 2022.

[6] **Dr. Paromita Chakraborty** delivered an Invited Talk on **"Water- Health Nexus for Endocrine-Disrupting Chemicals: New Challenges After the Outbreak of COVID-19 Pandemic"** on 27th May, 2022 towards the **"IPTIF's Ananta Medha Webinar Series"** organized by IIT Palakkad Technology IHub Foundation (IPTIF).

[7] **Dr. Paromita Chakraborty** was a part of the organizing committee and also delivered an expert talk in **"World Sustainable Development Summit, 2022"** inaugurated by the **Hon'ble Prime Minister of India,** as part of the EDIFY and INOPOL projects in collaboration with **"Norwegian Institute for Water Research", "The Energy and Resources Institute".**


WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2022
Reducing plastic and chemical pollution to the marine environment
18th February, 2022 (2:45 PM IST)| Virtual Hall: Bhadra
Dr. Rajeshwara Rao, IAS
Special Secretary, NITI Aayog
GOI
Dr. Marianne Olsen,
Research Director, NIVA
INOPOL
Dr Suneel Pandey,
Director, Waste Management,
TERI
Mr. Erlend Draget,
Sr. Advisor, Norwegian
Ministry of Climate &
Environment
Dr. Paromita Chakraborty
Associate Professor,
SRMIST
Dr. Merete Grung,
Research Scientist,
NIVA
Mr. Suresh Padmanabhan,
Strategy Advisor, Indorama
Ventures Public Co. Ltd.
Dr. Rachana Arora, Team Leader,
Circular Economy Solutions
Preventing MArine Litter, GIZ
Dr. Girija Bharat
Founder, Director,
Mu Gamma Consultants
Dr Rachel Hurley
Research Scientist,
NIVA
wsds.teriin.org

Resource Persons

[1] **Dr. E. Poonguzhali, Dr. K. Suresh, Dr. E. Kavitha, Dr. S. Vishali, Dr. K. Deepa & Dr. B. Karunanithi** contributed as a **Judge for Oral Paper Presentation** in the **Virtual National Conference on Materials for Energy and Sustainability (MES – 2022),** organized by the Department of Chemical Engineering, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur on the Afternoon Session of 20th January 2022.

[2] **Dr. S. Kiruthika** contributed as an **Assessor for Oral Presentation** in the **Anveshan Students Research Convention 2022,** organized by the College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur on the Forenoon Session of 14th February 2022.

[3] **Dr. Ashish Kapoor** contributed as a **Session host and Judge for Oral Presentation** in the **International Conference on Novel Materials and Technologies for Energy and Environmental Applications (NMTE2A 2022),** organized by the Department of Chemical Engineering, Birla Institute of Technology & Science, Pilani – Hyderabad Campus, on 18th February 2022.

[4] **Dr. S. Vishali & Dr. K. Deepa** contributed as **Panel Judges for Oral Presentation** in the **Research Day 2022,** organized by the SRM Institute of Science and Technology, Kattankulathur on the Forenoon Session of 24th February 2022.

[5] **Dr. Ashish Kapoor Chaired a Session on Process Modelling, Optimization & Intensification and been a Judge for Oral Presentation** in the **1st International Virtual Conference on Sustainable Water 2022 (ICSW 2022),** organized by the Department of Chemical Engineering, KPR Institute of Engineering and Technology, Coimbatore on 23rd March 2022.

[6] **Dr. S. Vishali Chaired a Session and has been a Judge for Oral Presentation** in the **4th International Conference on "Challenges in Chemical and Biochemical Engineering for Sustainable Development (CBSD)",** organized by the Department of Chemical Engineering, Annamalai University, Chidambaram, Tamil Nadu on 23rd March 2022.

Conference Presentations - Faculty

S. No.	Faculty Name	Title of the Paper Presented	Event Name	Organized by	Date
1.	Dr. S. Kiruthika	Electrochemical nutrient recovery from land fill leachate for sustainable food production systems - An alternative to traditional fertilizers	National Conference on Sustainable Chemistry and Renewable Energy	Universal Intellectuals Trust, Villupuram - 605 602, Tamil Nadu, India	26th February, 2022
2.	Dr. E. Kavitha	Studies on the separation and recovery of heavy metals from galvanizing industry effluent	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022
3.	Dr. E. Poonguzhali	Separation of phenol from wastewater by membrane assisted solvent extraction	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	22nd March, 2022
4.	Dr. E. Poonguzhali	A comparative study on the optimization of conventional and membrane assisted solvent extraction using response surface methodology	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022
5.	Dr. K. Sofiya	Study the extraction of natural components of aqueous phase rose oil using membrane solvent extraction	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022
6.	Dr. S. Kiruthika	Recovery of valuable nutrients as struvite from wastewater using bio electrochemical system for sustainable wastewater management: A systematic review	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022

7.	**Dr. S. Vishali**	**Studies on the treatability of the natural Coagulant on the laundry wastewater**	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022
8.	**Dr. D. Nanditha**	**Experimental study for the removal of methylene blue dye using PVDF -PTFE membrane by vacuum membrane distillation**	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022
9.	**Dr. S. Vishali**	**Optimization studies on the evaluation of Moringa oleifera as an effective green coagulant for grey water treatment**	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	KPR Institute of Engineering and Technology (KPRIET), Coimbatore	23rd March, 2022

- **Dr. Ashish Kapoor,** presented a paper entitled **"Coagulopathy and Covid-19: A Quantitative Review on the Influence of Coronavirus"** at the International Conference on Biomedical Engineering and Computing Technologies (ICBECT 2022), organized by the Department of Biomedical Engineering, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur on 23rd March 2022 and **won First Prize/Best Paper Award.**


SRM

International Conference on Biomedical Engineering and Computing Technologies ICBECT 2022

CERTIFICATE

OF APPRECIATION

This is to certify that Mr/Ms/Dr Ashish Kapoor of SRM Institute of Science and Technology Kattankulathur has received Best Paper Award in the International Conference on Biomedical Engineering and Computing Technologies ICBECT 2022 held during March 23rd to 25th, 2022 at Dept of Biomedical Engineering, SRM Institute of Science and Technology, Kattankulathur.

Paper Code & Title: 059 - Coagulopathy and Covid-19: A Quantitative Review on the Influence of Coronavirus on the Human Blood Coagulation Parameters

DEAN - SBE HOD - BME CONVENER

Hearty Congratulations! **Dr. Ashish Kapoor**

Conference Presentation - Students

S. No.	Name	Title of the Paper Presented	Event Name	Organized by	Date
1.	**Simran Kaur Oberoi**	**Electrode configuration for salt in water electrolytes for remote power applications**	Virtual National Conference Materials for Energy and sustainability (MES-22)	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	20th – 21st January, 2022
2.	**Aiswarya Babu**	**Studies on the Treatability of the Natural Coagulant on the Laundry Wastewater**	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), Coimbatore	22nd -23rd March, 2022
3	**Aiswarya Babu**	**Studies on the Treatability of the Natural Coagulant on the Laundry Wastewater**	International Conference on Challenges in Chemical and Biochemical Engineering for Sustainable Development (CBSD)	Department of Chemical Engineering, Annamalai University, Chidambaram, Tamil Nadu	23rd - 24th March, 2022
4	**Hariprasath T/ R. Karthik/ Akaash Kumar R. D.**	**Optimization studies on the evaluation of *Moringa oleifera* as an effective green coagulant for grey water treatment**	International Virtual Conference on Sustainable Water 2022 (ICSW 2022)	Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), Coimbatore	22nd-23rd March, 2022
5.	**Hariprasath T/ R. Karthik/ Akaash Kumar R. D.**	**Optimization studies on the evaluation of *Moringa oleifera* as an effective green coagulant for grey water treatment**	International Conference on Challenges in Chemical and Biochemical Engineering for Sustainable Development (CBSD)	Department of Chemical Engineering, Annamalai University, Chidambaram, Tamil Nadu	23rd - 24th March, 2022
6.	**G. Kanishka**	**Sustainable Green Solution of Industrial wastewater**	National Conference on Environmental and Sustainable Technologies (NEST – 2022)	Department of Chemical Engineering, Vel Tech High Tech Dr. Rangarajan Dr. Sakunthala Engineering College	28th – 29th April, 2022
7.	**Aaditya Sarin**	**Trends in Carbon Capture, Utilization and Storage (CCUS) Technologies and status in India**	Chemflux 9.0, A National Level Technical Symposium	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	3rd – 4th March, 2022

8.	**Alice Jasmine D**	**Renewable biofuel production from the agriculture waste biomass by a sustainable process**	Research Day, 2022	SRMIST, Kattankulathur	28th February, 2022
9.	**Alice Jasmine D**	**Sustainable biofuel synthesis from the agriculture waste biomass by an eco-friendly approach**	Dr. Paarivendhar Research Colloquium (DPRC – 2022)	SRMIST, Kattankulathur	24th March, 2022
10.	**Abinaya M.B.**	**Highly-efficient organic pollutants degradation and synchronous power generation in a sustainable hybrid photocatalytic fuel cell system**	Research Day, 2022	SRMIST, Kattankulathur	28th February, 2022

Students Achievements - Award / Prize Won

S. No.	Name	Title of the Paper Presented	Event Name	Organized by/ Date	Award / Prize Won
1.	Abinaya Stalinraja	Copper Supported Nitrogen doped Titanium Nanotubes for Electrochemical Reduction of CO2 to Hydrocarbons	Virtual National Conference on Materials for Energy and sustainability (MES-22)	Department of Chemical Engineering, CET, SRMIST, Kattankulathur 21.01.2022	First Prize for Paper Presentation
2.	Abinaya Stalinraja	Copper Supported Nitrogen Doped Titanium Nanotubes for Electrochemical Reduction of CO2 to Hydrocarbons	Research Day - 2022	SRMIST, Kattankulathur 28.02.2022	Gold Medal for Paper Presentation
3	Abinaya Stalinraja	Metal Supported Titanium Nanotubes for Electrochemical CO2 reduction to Hydrocarbons	Dr. Paarivendhar Research Colloquium (DPRC-2022)	SRMIST, Kattankulathur 26.03.2022	First Prize for Poster Presentation
4	Hariprasath T/ R. Karthik/ Akaash Kumar R. D.	Optimization studies on the evaluation of Moringa oleifera as an effective green coagulant for grey water treatment	International Conference on Challenges in Chemical and Biochemical Engineering for Sustainable Development (CBSD)	Department of Chemical Engineering, Annamalai University, Chidambaram, Tamil Nadu 24.03.2022	Received Best Paper award for Oral Presentation
5.	Simran Kaur Oberoi	Formation of a microfluidic enabled saltwater device	CHEM PROJECT EXPO 2022	Department of Chemical Engineering, CET, SRMIST, Kattankulathur 11.05.2022	Secured First Place in Project Presentation
6.	Gauri Sengar/ Hitesh Saranjeet Singh	Low cost colorimetric sensor for detection of food toxins and its validation	CHEM PROJECT EXPO 2022	Department of Chemical Engineering, CET, SRMIST, Kattankulathur 11.05.2022	Secured Second Place in Project Presentation
7.	Bhavya Ghorawat	Production of methanol from CO_2 and Natural gas	CHEM PROJECT EXPO 2022	Department of Chemical Engineering, CET, SRMIST, Kattankulathur 11.05.2022	Secured Second Place in Project Presentation
8.	Rishabh Garg/ Darshan Sanjay Rathi/ Rahul Kumar	Micellar enhanced ultrafiltration studies on metal working fluid waste water	CHEM PROJECT EXPO 2022	Department of Chemical Engineering, CET, SRMIST, Kattankulathur 11.05.2022	Secured Second Place in Project Presentation

9.	**Gopika L**	**Process Safety Management (PSM)**	Online Internship Program (OIP)	Indian Institute of Chemical Engineers, Kolkata 25.02.2022 to 27.04.2022	Secured A+ Grade
10.	**Rahul Adithya C**				Secured A Grade

- **Ms. Gauri Awasthi** was selected to participate in the British Council Going Global Summer School on **"Responsible Research and Innovation in India's Energy-Water-Food-Health Nexus"** organized jointly by IIT Kharagpur and The University of Edinburgh from 13.06.2022 to 01.07.2022.

- **Mr. Arkaprava Roy** has been selected as the Organizer of Initiatives and Machination for Aarush, on 20.05.2022

Kudos to all the students and

Special wishes to the Ph.D. Scholar **Ms. Abinaya Stalinraja** who bagged 3 first prizes in this semester

Mentoring Students for Competitive Events

Dr. G. Keerthiga was the faculty mentor for the team of **Mr. Amaan Sait, Ms. Sahana Sadhukhan, Mr. Srinivas Renganathan, Ms. Simran Kaur Oberoi,** worked on **"Salt Water Lamp for Portable Applications",** Materials Next 2022 organized by Tata Steel.

Events Participated by faculty

S. No.	Faculty Name	Event Name	Organizer	Title	Date
1.	**Dr. K. Deepa & Dr. S. Sam David**	**Refresher Programme**	College of Engineering and Technology, SRMIST, Kattankulathur	Faculty Refresher and Assimilation Programme (FRAP) FRAP 2022	10th – 11th January, 2022
2.	**Dr. B. Karunanithi**	**Virtual National Conference**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Materials for Energy and sustainability (MES-22)	20th – 21st January, 2022
3	**Dr. K. Deepa**	**Training Program**	Intellectual Property Office, Government of India	IP Awareness/ Training Program	18th March, 2022
4	**Dr. S. Vishali**	**Lecture Series**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Fundamentals of Biofuel Production Processes	25th -29th April, 2022
5.	**Dr. S. Vishali Dr. E. Poonguzhali Dr. Ashish Kapoor**	**World Intellectual Property Day Seminar**	Centre for Intellectual Asset Protection (CIAP), SRM Innovation, Incubation and Entrepreneurship Centre (SIIEC), SRMIST, Kattankulathur	Significance of IP in the START-UP Road Map	26th April, 2022
6.	**Dr. K. Deepa**	**Workshop**	Department of Basic Sciences and Humanities, BVRIT Hyderabad College of Engineering for Women, Hyderabad	National Level Online Workshop on Origin Software	28th May, 2022
7.	**Dr. M. P. Rajesh Dr. P. Muthamilselvi Dr. S. Kiruthika Dr. E. Poonguzhali Dr. D. Nanditha**	**Faculty Development Program**	University of Engineering & Management (UEM), Jaipur	Holistic Development and Outcome Based Education in the Light of NEP - 2020	13th - 19th June, 2022

Events Participated by Students

S. No.	Student Name	Event Name	Organizer	Title	Date
1	Gauri Sengar/ Swathik Sajesh/ Varnika Singh/ Sarthak Asthana/ Deepa D/ Abinaya Stalinraja	Virtual National Conference	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Materials for Energy and Sustainability (MES-22)	20th – 21st January, 2022
2	Meghana Mahadeo Hattarke	Online Short-Term Course	Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering, CET, SRMIST, Kattankulathur	Materials Testing	8th – 10th January, 2022
3	Deepa D/ Kaviya V	International Webinar	Institute of Innovations, Thiruvannamalai	Computer Aided Drug Design	23rd January, 2022
4	Pagilla Varshith Reddy/ Palak Kachhawah/ Aswathy Remesh/ Tramila Bhattacharjee/ Kanishka G	Virtual Outreach Program	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	What is Chemical Engineering?	18th – 19th February, 2022
5	R. Srivarsan	Technical Guest Lecture	Material Advantage Student Chapter, SRMIST	Applications of Fluid Mechanics in Oil and Gas Industry	12th February, 2022
6	Lokesh Kumaran	Online FDP on account of The World Water Day 2022	Centre for Ocean Research, Satyabhama Institute of Science and Technology	Sustainability, Conservation & Protection of Water Resources	22nd to 26th March, 2022
7	Kanishka G	Olympiad	National Engineering Olympiad (NEO)	6th National Engineering Olympiad	29th March, 2022
8	Abinaya Stalinraja	International Symposium	Department of Chemistry, CET, SRMIST, Kattankulathur	What Paradigm shift can we expect in materials chemistry in the next decade- From fundamental to translational research (MCFTR – 2022)	29th - 30th March, 2022

9	**Abinaya Stalinraja**	**Faculty Development Programme**	Department of Physics and Nanotechnology, SRMIST, Kattankulathur	Recent Advances in Functional Materials: Design, Development and Applications	9th - 13th March, 2022
10	**Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Photography	3rd – 4th March, 2022
11	**Melvin Abraham Aji / Shriram S/ Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Workshop on Introduction to MATLAB	3rd – 4th March, 2022
12	**Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Chem Task	3rd – 4th March, 2022
13	**Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Extraction	3rd – 4th March, 2022
14	**Palak Kachhawah/ Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Ideathon	3rd – 4th March, 2022
15	**Shriram S/ Melvin Abraham Aji/ Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	Workshop on Climate Change and Nanotechnology	3rd – 4th March, 2022
16	**Aaditya Sarin**	**Chemflux 9.0, A National Level Technical Symposium**	Department of Chemical Engineering, CET, SRMIST, Kattankulathur	BGMI	3rd – 4th March, 2022

The following students of IV Year B. Tech. Chemical Engineering participated in the **CHEM PROJECT EXPO 2022** organized by the Department of Chemical Engineering, CET, SRMIST, Kattankulathur on 11th May 2022.

S. No.	Student Name
1	Ms. Gauri Sengar
2	Mr. Bhavya Ghorawat
3	Ms. Mohamed Asif Irfana
4	Mr. Clement Dion Julian
5	Mr. Arjun K Yadav
6	Mr. Soumava Bisi
7	Mr. Vaibhav Shrivastava
8	Mr. Noel Abraham Thomas
9	Mr. Chandan Upadhyay
10	Mr. Tanmay Rajwade
11	Mr. Rishabh Garg
12	Mr. Ritvik B Panicker
13	Ms. Swati Mishra
14	Mr. Mohith Nalam
15	Ms. Simran Kaur Oberoi
16	Mr. Nandyala V V S S P Karthikeya
17	Mr. Adarsh
18	Mr. Darshan Sanjay Rathi
19	Mr. Jannabhatla Nydhruva Kameswara Prasad
20	Mr. Hitesh Saranjeet Singh
21	Mr. Sajal Sudhir Srivastava
22	Mr. Peddireddy Murali Ganesh
23	Mr. Rahul Kumar

Online Courses Completed

[1] **Dr. Ashish Kapoor,** completed an Online Course in **Coursera** titled **"AI FOR EVERYONE"** on 21.02.2022.

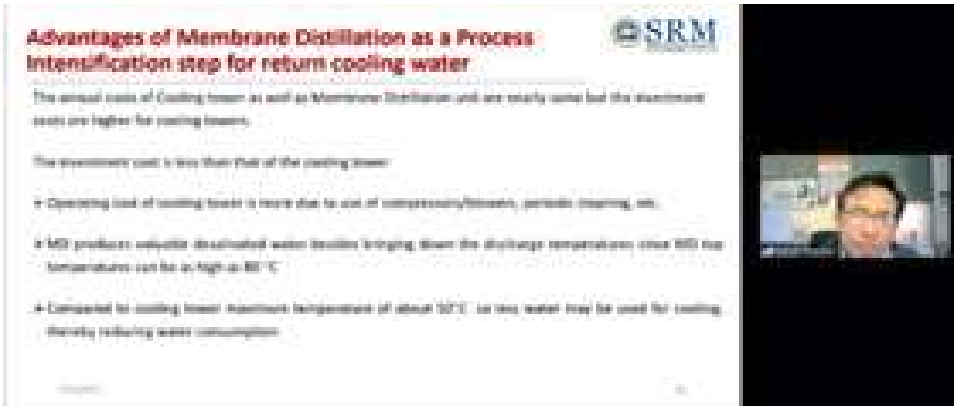
[2] **Rajeshwaran N,** completed an Online Course in **Coursera** titled **"Everyday Excel Part I"** offered by the **Department of Chemical and Biological Engineering, University of Colorado** on 18.01.2022.

[3] **Ishaan Davariya,** completed an Online Course in **Sololearn** titled **"SQL"** on 24.02.2022.

Ph.D. Awarded

Ms. D. Nanditha successfully completed her Ph.D. public viva-voce examination on 12th January 2022 at SRM Institute of Science and Technology, Kattankulathur.

Title: **Studies on Membrane Distillation for Value Recovery and Mitigation of Thermal Pollution**



Supervisor: Dr. S. Prabhakar and Co – Supervisor: Dr. Ashish Kapoor

Ph.D. Progress Details of Research Scholars

(DC Meeting-I/ Comprehensive Viva/ Pre Ph.D.-Presentation/ Synopsis Meeting/ Synopsis Submission/ Thesis Submission/ Oral Viva Voce)

S. No.	Name of the Research Scholar with Category	Name of the Supervisor	Area of Research	Research Progress	Date
1.	**Mr. Satyanarayan (Part-Time External)**	**Dr. M.P. Rajesh**	Sustainable Environment	DC Meeting - I	09.02.2022
2.	**Ms. P. Pavitra (Full Time)**	**Dr. Ashish Kapoor/ Dr. P. Muthamilselvi**	Emerging Contaminant Removal	DC Meeting - I	19.02.2022
3.	**Mr. Hussain Albattah Al Husni (Full Time)**	**Dr. K. Suresh**	Thermal Processing of Heterogeneous Food Products in a Sealed Container with Headspace	DC Meeting - I	22.02.2022
4.	**Ms. R. Thilakavathi (Full Time)**	**Dr. K. Suresh**	Numerical Analysis of Heat Transfer Behavior in Thermal Processing of Homogeneous Liquid Foods	Pre Ph.D.- Presentation	23.02.2022
				Synopsis Meeting	06.05.2022
				Synopsis Submission	12.05.2022
5.	**Mr. K. Selvam (Part Time - Internal)**	**Dr. B. Karunanithi**	Theoretical and Experimental Studies on the Formation of Hollow Fiber Membrane	Thesis Submission	05.03.2022
6.	**Ms. Udita Gulia (Full Time)**	**Dr. M. P. Rajesh**	Bioprocessing	DC Meeting - I	18.03.2022

Initiation in bringing an Industry for Placement

Dr. E. Poonguzhali has initiated interaction with the Industry, **Hettich Group, Chennai** and around **10 SRMIST students have been offered placement in April 2022.**

On Campus Placements January to June 2022 (2018 – 2022 Batch)

S. No.	Name of the Student	Company Placed	Designation	CTC
1.	 Mr. Darshan Rathi	Sterlite Copper	Graduate Engineering Trainee	7.95 Lakhs
2.	 Mr. Sajal Srivastava	Sterlite Copper	Graduate Engineering Trainee	7.95 Lakhs
3.	 Mr. Arjun Yadav	The Tech Destiny	Business Development Associate/Marketing Executive	8 Lakhs
4.	 Mr. Perumal	The Tech Destiny	Business Development Associate/Marketing Executive	8 Lakhs
5.	 Mr. Aswin Shegar C. D.	Nayara Energy Ltd.	Assistant Manager	6.5 Lakhs

6.	 Mr. Murali Ganesh Peddireddy	Nayara Energy Ltd.	Assistant Manager	6.5 Lakhs
7.	 Mr. Rupesh Raaman P.	Cognizant	GenC – Hiring 2022	4 Lakhs
8.	 Mr. Mohith Nalam	Cognizant	GenC – Hiring 2022	4 Lakhs
9.	 Ms. Charurathy R.	Cognizant	GenC – Hiring 2022	4 Lakhs

Number of students registered for placements	51
Total number of students placed (Academic Year 2021 - 2022)	43
Placement Percentage	84
Average Salary Package (INR)	7.09 Lakhs

Hearty Congratulations dear students!

We are indeed proud of 2018 - 2022 batch for 84 % on campus placements

Wishing you all the best and many more success in your future endeavours!

Admitted for Higher Studies (Batch 2018 - 2022)

S. No.	Name of the Student	Degree	University
1.	 Mr. Adarsh	M. Sc. Management	University of Edinburgh Scotland
2.	 Mr. B. Sudarshan	Masters in Chemical and Petroleum Engineering (Specialization in Chemical Engineering)	University of Calgary Canada
3.	 Mr. Ridhul Rajeev	M. Sc. in Advanced Chemical Engineering	University of Edinburgh Scotland
4.	 Mr. Hitesh Saranjeet Singh	M. Eng. in Chemical Engineering (Specialization in Process System)	University of Waterloo Canada
5.	 Mr. Rajkumar Selvaraj	M. Eng. in Environmental Engineering	University of Windsor Canada

6.	 Mr. Aditya Nair	M. Eng. in Chemical and Petroleum Engineering	University of Calgary Canada
7.	 Ms. Mohamed Asif Irfana	M. S. in Environmental Engineering	Georgia Institute of Technology United States
8.	 Ms. Yuvashree I	Masters in Chemical Engineering	University of Waterloo Canada
9.	 Ms. Nadella Dimple Kranthi	M. Eng. Chemical Engineering	Rutgers University United States
10.	 Ms. Tanya Sharma	Masters in Food Science and Technology	University of Queensland Australia

Semester Abroad Program (SAP)

SRMIST provides an opportunity to experience global education by sending meritorious students abroad for one or more semesters to world-renowned Universities. The following two students of III - Year, VI Semester B. Tech. Chemical Engineering program have recently completed their Semester Abroad Program (March 2022 - July 2022) from the **Universiti Malaysia Pahang (UMP) – Malaysia.**

S. No.	Name
1	Sarthak Asthana
2	Srivarsan R K

Sarthak Asthana & Srivarsan R K in Universiti Malaysia Pahang (UMP) – Malaysia.

Department Events Organized

[1] Two-days **Virtual National Conference** on **"Materials for Energy and Sustainability - MES – 2022"** was organized on 20th and 21st January 2022 by the Department of Chemical Engineering.

Convener

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Co-Conveners

Dr. K. Anbalagan, Assistant Professor, Chemical Engineering

Dr. M. Magesh Kumar, Assistant Professor, Chemical Engineering

Dr. G. Keerthiga, Assistant Professor, Chemical Engineering

[2] Two-day **Outreach Programme** (virtual mode) on **"What is Chemical Engineering?"** was organized on 18th and 19th February 2022 by the Department of Chemical Engineering.

Convener

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Coordinators

Dr. K. Sofiya, Assistant Professor, Chemical Engineering

Dr. M. P. Rajesh, Professor, Chemical Engineering

[3] Two-day **National Level Technical Symposium "CHEMFLUX 9.0"** was organized on 3rd and 4th March 2022 by the Department of Chemical Engineering.

Convenor

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Co-Convenor

Dr. E. Kavitha, Assistant Professor, Chemical Engineering

Student Co-ordinators

Indrani Das (III Year B.Tech. Chemical Engineering)

Afeez Ahamed (III Year B.Tech. Chemical Engineering)

[4] Online **Alumni Talk** on **"Life after graduation from SRM"** was organized on 11th March 2022 by the Department of Chemical Engineering.

Organising Committee

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Dr. M. P. Rajesh, Professor, Chemical Engineering

Dr. A. Rathinam, Director, Alumni Affairs, SRMIST

Coordinators

Dr. D. Nanditha, Assistant Professor, Chemical Engineering

Dr. G. Keerthiga, Assistant Professor, Chemical Engineering

[5] **World Water Day** was celebrated on 22nd March 2022 organized by the Department of Chemical Engineering, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur in association with the Indian Desalination Association (InDA – SZ), National Institute of Ocean Technology (NIOT) and KPR Institute of Engineering and Technology.

Convenor

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

The First Issue of the Department Newsletter **"Chemical Chronicle"** was released on the occasion of World Water Day 2022 (22nd March, 2022) by **Dr. G A Ramadass** (Director, NIOT, Chennai), Dr. Satish R Wate (Former director, CSIR-NEERI, Nagpur), Mr. Sriram Kulkarni (Director, Technochem Group, Mumbai) and Dr. M Vairamani (Chairperson, SBE, SRM IST, Kattankulathur).

[6] **Orientation Program for Freshers** was organized on 28.03.2022 by the Department of Chemical Engineering.

Coordinator

Dr. D. Nanditha, Assistant Professor, Chemical Engineering

[7] **Six-day Lecture Series (Webinar)** on **"Fundamentals of Biofuel Production Processes"** was delivered by **Dr. Debabrata Das** under INAE-AICTE Distinguished Visiting Professorship Scheme, was organized from 25th to 30th April 2022 by the Department of Chemical Engineering in association with Directorate of Research, SRM Institute of Science and Technology.

Convenor

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Coordinator

Dr. M. P. Rajesh, Professor, Chemical Engineering

[8] Farewell for 2018 to 2022 Batch and Fresher's party for 2020 to 2024 Batch, **ALOHA 2022** was organized on 6th May 2022 by the Students of III Year B.Tech. Chemical Engineering.

Coordinator

Dr. G. Keerthiga, Assistant Professor, Chemical Engineering

[9] **Chem Project Expo 2022** was organized on 11th May 2022 by the Department of Chemical Engineering.

Coordinators

Dr. K. Anbalagan, Assistant Professor, Chemical Engineering

Dr. E. Kavitha, Assistant Professor, Chemical Engineering

[10] **Euphoria – 2022, Fresher's Day** for 2021 to 2025 Batch, was organized on 19th May 2022 by the Students of II Year B.Tech. Chemical Engineering.

Coordinator

Dr. K. Sofiya, Assistant Professor, Chemical Engineering

[11] **The Student Counselling Cell** of the Department of Chemical Engineering was Inaugurated on 3rd June, 2022 by **Adv. M. LOURDU SAVIO,** Advocate Madras High Court; Former Fellow, Office of Human Rights commission, Geneva, UN and presented his views on **"The Need of Social Engineering for Aspiring Engineers".**

Convenor

Dr. Ashish Kapoor, Head of the Department, Chemical Engineering

Coordinators

Dr. K. Anbalagan, Assistant Professor, Chemical Engineering

Mr. K. Selvam, Assistant Professor, Chemical Engineering

Dr. S. Kiruthika, Assistant Professor, Chemical Engineering

[12] The Department of Chemical Engineering organized a Farewell for **Dr. B. Karunanithi,** Professor, Chemical Engineering on 10th February 2022.

Dr. B. Karunanithi was the first faculty member to get retired from the department with an experience of about 25 years. The staff members were thankful for all the help and support given by him.

[13] The Department of Chemical Engineering organized a Farewell for **Dr. Ashish Kapoor,** Head of the Department, Chemical Engineering on 29th June 2022.

Members Present

Staff members of Chemical Engineering

Dr. M. Vairamani, Chair Person, School of Bioengineering

Dr. Varshini Karthik, Head of the Department, Biomedical Engineering

Dr. M. Ramya, Head of the Department, Genetic Engineering

Dr. Gurumoorthy, Head of the Department, Food Process Engineering

A great applause to all the Conveners, Co-conveners and the organizing committee members for their tremendous efforts towards the successful completion of all the events!

Alumni Achievements

We are happy to share that our Chemical Engineering Alumni **G. Maanasa (2014 – 2018 Batch)** has scaled **Antarctica and planted our SRM flag** on the last continent she had set her heart on conquering. **SRM IST provided sponsorship for her expedition, aimed at the conservation and protection of the continent.** We wish her every success in all her future endeavours. We thank the Vice Chancellor and Registrar for their unstinted support and encouragement to make this project into a reality.

SRM alumna reaches Antarctica

Maanasa Gopal in Antarctica

SPECIAL CORRESPONDENT
CHENNAI

Maanasa Gopal, an alumna of SRM Institute of Science and Technology (SRMIST), visited Antarctica recently as part of the Climate Force International Antarctica Expedition 2022.

She was among the youth representing various countries who have been working on climate policy, action, research, and awareness with global climate experts in Antarctica.

Ms. Gopal completed her B.Tech in Chemical Engineering in 2018 and runs a start-up in Singapore. She hoisted the SRMIST Flag to mark the expedition.

Message from Alumni

Department of Chemical Engineering - SRM University is one of the important choices I made in my career path. It happened to be a good decision with great faculty and good practical sessions, which made me strong in basic concepts of Chemical Engineering. I am thankful to the Department of Chemical Engineering, SRM University.

- Somnath Ravi Kumar Sharma
Operations Manager
Bharat Petroleum Corporation Limited
Mumbai, Maharashtra, India
B. Tech. (2011-2015)

Hi Everyone,
I am Picasso Sengupta, a 2017 graduate from the Department of Chemical Engineering, SRM University. My experience of 4 years at SRM University is beyond words. The quality of education and faculty at the Department is one of the best in the country and life at SRM is more than just Engineering books and assignments. The faculties make sure that the students get the best-in-class experience which accounts for an all-round development of an individual. Besides the brand SRM, the R&D opportunities the college offers, numerous Student Exchange facilities with top colleges of the globe makes the Department of Chemical Engineering at SRM University the premier institution of the country. Every top MNC visits the campus regularly each year for the quality graduates the Department offers. I feel indebted to my faculty members and the Department for propelling my career growth and providing me with the best opportunities.

- Picasso Sengupta
Management Consultant
Strategy & Operations
(Metal and Mining Practice)
KPMG India
B. Tech. (2013 - 2017)

The Chemical Engineering Team

Students' Corner

This section showcases the research activities of B. Tech Chemical Engineering students.

Magnetic Nanocatalysts: Synthesis and Catalytic Role of Fe3O4 and Fe3O4-EDTA Nanoparticles

Mohamed Irfana

Organic dyes from textile, paint, printing, and food industries are major contaminants of waste water sources and soil. The toxic dyes have to be reduced or degraded before it gets discharged into the water. The nanocatalyst, Fe3O4 coated with EDTA was prepared and characterized by HRSEM, VSM and FTIR. The reduction of methylene blue dye was studied both in the presence and absence of Fe3O4 and Fe3O4-EDTA nanoparticles. Reusability tests showed that both Fe3O4 and Fe3O4-EDTA catalysts were regenerated 5 times with a minor difference in their catalytic reduction rates. Both the types of nanoparticles showed very high catalytic activity resulting in >90% degradation of methylene blue dye.

Keywords: Nanocatalyst, magnetic nanoparticles, dye degradation, regeneration

A Short Review on Applications of Reverse Osmosis Water Wastage on Hydroponics

Kanishka G.

Reverse Osmosis (RO) is a membrane-based process technology to purify water by separating the dissolved solids from the feed stream resulting in permeate and reject stream for a wide range of applications in domestic as well as industrial applications. This RO technology is used to remove dissolved solids, color, organic contaminants, and nitrate from the feed stream. Hence RO technology is used in the treatment of water and hazardous waste, separation processes in the food, beverage, and paper industry, as well as recovery of organic and inorganic materials from chemical processes as an alternative method. This paper intends to provide an overall vision of RO technology as an alternative method for treating wastewater in different Industrial applications. The present short review shows the applicability of the RO system for treating effluents from the beverage industry, distillery spent wash, groundwater treatment, recovery of phenol compounds, and reclamation of wastewater treatment indicating efficiency and applicability of RO technology.

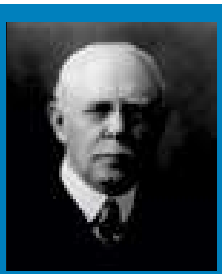
We can convert the waste-water discharge from RO purifiers into green gold. It is really simple to build and maintain a simple low-cost hydroponics system to grow greens at home. Hydroponics is a method of crop production that has been successfully used for the growth of vegetables and flowers. It uses a nutrient solution and generally controlled environmental conditions which makes it more energy-intensive, yet more productive than conventional agriculture. Hydroponic systems It was found that many examples exist of successful experiments: however, full scale examples are still limited. With the recent interest in vertical farming and the production of rice , potatoes , cabbage, lettuce, tomatoes and cucumbers. The main advantages of hydroponics over soil culture are more efficient nutrition regulation, availability in regions of the world having no arable land, efficient use of water and fertilizers, ease and low cost of sterilization of the medium, and higher-density planting, leading to in-creased yields per acre.

Famous Chemical Engineers

George E Davis is often regarded as the 'founding father' of Chemical Engineering, No list of Chemical Engineers is complete without him. George shaped the world of Chemical Engineering as it emerged in the late 1800s; with George coining the term 'Chemical Engineering'. The first Chemical Engineering course was delivered by George at the University of Manchester in 1887 in the form of 12 lectures covering various aspects of industrial chemical practice – this kick started the revolution that spawned generations of world-changing Chemical Engineers.

George E Davis

Arthur D Little is often thought of as the 'American father' of Chemical Engineering. He developed the concept of unit operations (a basic step in a process that involves a physical change or chemical transformation like evaporation or filtration), and used it to define the role of Chemical Engineering and explain industrial chemical processes. However, it was Arthur's passion for researching and improving processes that made him and his company such as success. He was an advocate of the benefits of science and its capacity to transform life for the better – that Chemical Engineers really can make a difference.



Arthur D Little

Perry's is the go to handbook for Chemical Engineers. However, this book would have been possible without John H. Perry for whom the book is named – as he edited its first edition – published in 1934. John went on to edit two more editions of Perry's, until his son, Robert H. Perry, took over the family tradition for the fourth edition in 1963, until his death. John was a physical chemist and Chemical Engineer and was known for his development of improved catalysts for sulfuric acid production. However, it is his book that truly shaped the world and has been the key source of knowledge Chemical Engineers for over 70 years.

John H. Perry

In 1951, George Rosenkranz, a Chemical Engineer at the Mexican chemicals company Syntex, with Luis Miramontes and chemist Carl Djerassi, led the development of a substance they called norethindrone – or progesterone – which they used to make one of the first two combined oral contraceptive pills. Their work was started by Russell Marker who succeeded in revolutionising the progesterone production process. However, after Russell left Syntex, George and his team had to recreate Russell's process and re-start the large-scale production of progesterone. George was also a pioneer of steroidal pharmaceuticals and his discoveries are still used today.

George Rosenkranz

திருக்குறள்

ஞாலம் கருதினுங் கைகூடுங் காலம்
கருதி இடத்தாற் செயின்.

பொருள்

உரிய காலத்தையும் இடத்தையும் ஆய்ந்தறிந்து செயல்பட்டால் உலகமேகூடக் கைக்குள் வந்துவிடும்.

Transliteration

Gnaalam Karudhinung Kaikootung Kaalam Karudhi Idaththaar Seyin

Translation

The pendant world's dominion may be won, in fitting time and place by action done.

Explanation

Though (a man) should mediate (the conquest of) the world, he may accomplish it if he acts in the right time and at the right place.