

Faculty Profile

Brief Profile:



With over 19 years of academic experience, I have had the privilege of teaching, guiding, and mentoring students across various core chemical engineering subjects.

My research is primarily focused on **sustainable and green technologies**, with special emphasis on the **valorization of organic waste, development of bioresins, materials for effluent treatment, microbial fuel cells, and renewable energy solutions**. I have contributed to consultancy projects, and I hold **granted and filed patents** in the domain of waste utilization and material innovation.

I am deeply passionate about bridging academic research with industrial application, as reflected in my collaborative work with industries and government-supported projects. With a strong inclination towards interdisciplinary research, Through my work, I aim to foster innovation, sustainability, and practical impact in the field of chemical engineering.

Personal Information

- **Name:** Dr. Vinutha Moses
- **Designation:** Assistant Professor(Senior Scale)
- **Department:** Chemical Engineering
- **Email:** vinuthamoses@rvce.edu.in
- **Phone:** 080-68188238

Google Scholar : <https://scholar.google.co.in/citations?hl=en&user=bBoiOvEAAAAJ>

ResearchGate : <https://www.researchgate.net/profile/Vinutha-Moses>

LinkedIn: <https://www.linkedin.com/in/vinutha-moses-6b099512a/>

ORCID: <https://orcid.org/0000-0002-9027-4819>

Domain of Expertise

Research Focus

- **Primary Area:** Chemical Engineering
- **Allied Areas:** Biomaterials, Bioremediation, Environment Solution, Polymer Adhesive, Composites.

Academic Qualifications

- **Ph.D.** : Chemical Engineering , Visvesvaraya Technological Institute, 2023. *ISOLATION OF BIORESIN FROM ORGANIC WASTE AND ITS APPLICATION FOR COMPOSITE LAMINATES*
- **M.Sc./M.Tech**: Chemical Engineering, Visvesvaraya Technological Institute, 2014.
- **B.E./B.Tech**: Chemical Engineering, Bangalore University, 2000.

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	R.V College of Engineering	Asst Prof	Sept 2016-till date
2.	Sapthagiri College of Engineering	Asst Prof	Oct 2012-Aug 2016
3	Sapthagiri College of Engineering	Lecturer	Aug2007-Sept2012
4	R.V College of Engineering.	Lecturer	Feb2007-June2007
5	Chola Turbo Machinery	Design Engineer	Oct 2004 - Nov 2006-

Publications & Patents

Journal Publications

1. Vinutha Moses , Glen Cletus DSouza , Archana Narula , Fatemeh Dodangeh, N. Chetan , Shyla Moses, Vinod Kumar Shivananda, Ranjeet Kumar Mishra. “Hydroxymethylfurfural(HMF): Exploring its potential as a wood resin derived from cellulose. *Progress in Engineering Science*. 1(100027):pp1-9, 2024. <https://doi.org/10.1016/j.pes.2024.100027>
2. Shilpa Hiremath, Sudeep Mudhulu, C Vidya, MN Chandrababha, **Vinutha Moses**, C Manjunatha.”Green synthesized nano-TiO₂ from Tamarindusindica leaf extract for photo-degradation of combination of dyes by suspension and immobilization on inert supports “. *Green Chemistry Letters and Reviews* .17 (1):pp 2420711,2024
3. Pradima J Britto Himamshu G, Dhanush Kote M, Deepak, Chethan Yadav L, **Vinutha Moses***, Chetan N, Shyla Moses, Vinod Kumar Shivananda, Manjula Sarode, P L Muralidhara, “ Enhancing Aesthetic and Durability: A Comprehensive Review of Paints for Refurbished Laptops”. *Bulletin For Technology*

And History Journal .24(6):pp102-127.2024 .

4. **Vinutha Moses**, P L Muralidhara, Vinod Kumar Shivananda, Harish Narayanan, Gaurav Sarkar, Janani Gayathri M R, Shriyash Raju Ranganekar. *Wutan Huatan Jisuan Jishu*. 20(6):pp1-9.2024
5. **Vinutha Moses** Manjula Sarode, Akanksha Shetty “Application of Nanotechnology in Food Industry: Review “. *Bulletin For Technology And History Journal* .24(6):pp85-102.2024 .
6. Shyla Moses Muralidhara P.L, **Vinutha Moses**, Chetan N.”Recovery And Characteristics Of Phosphate Ester Oil After Reclamation, *Journal of Petrochemical Engineering and Technology (JPET)* . 2(1):pp1-12.2024.
7. Sarode Manjula, Ikram Faraaz, Rao A V Raghavendra, **Moses Vinutha**.”A Simplified Review Of Bio-Nanocomposites In Food Packaging With Emphasis On Starch And Pla Systems “ . *Gradiva Review Journal* .9(6):pp289-297.2023
8. Naveen Veeramani, Raja Samikannu, Abhijit P Deshpande, Sheril Varghese, **Vinutha Moses**. Effects of polymeric microcapsules on self-healing composites reinforced with carbon fibers: a comparative study. *International Polymer Processing* .38(4):pp483-495.2023
9. Nidhi Bhat , **Vinutha Moses***, Chetan N, “ Economical synthesis of oxygen to combat the COVID-19 pandemic”. *Hygiene and Environmental Health Advances*. <https://doi.org/10.1016/j.heha.2023.100048>. 2023
10. **Vinutha Moses***, Archana Narula , N. Chetan , Ranjeet Kumar Mishra.” Hydroxymethyl furfural (HMF) a high strength cellulose resin for wood composite laminates”. *Cell Press, Heliyon*, <https://doi.org/10.1016/j.heliyon.2022.e1208>. 2022.
11. Shreya, N. M., Ujwal Shreenag Meda, Jagadish H. Patil, **Vinutha Moses**, and P. L. Muralidhara. "Wastewater Treatment Using Anaerobic Fluidized Bed Membrane Bioreactor Coupled with Microbial Fuel Cells for Circular Economy." *ECS Transactions* 107, no. 1: 4435.
12. Vidya, C., Harini Balasubramaniam, and **Vinutha Moses**. "Secondary Natural Fibres in Green Composites." *SPAST Abstracts* 1, no. 01,2021.
13. **Vinutha Moses** Parth Garg.” A Review on Environmental Applications of Supercritical Fluids”. *Journal of Huazhong University of Science and Technology*. 40(7):pp1-11,2021.
14. **Vinutha Moses** Madhushree R, Kailash M Y. “Harvesting Water from Atmospheric Moisture – A Review”. *Journal of Huazhong University of Science and Technology*. 40(7):pp1-33,2021.
15. **Vinutha Moses**, Bishal Dhar.” Biocolours -A New Generation Additive for Industries”. *GIS Science Journal*”. ISSN NO : 1869-9391,8(7): pp 1457-1471.2021
16. Vidya C*, Kiran Shenoy H, **Vinutha Moses**, Chetan N. “Nanomaterials For Hydrogen Generation: A Review”. *Journal of University of Shanghai for Science and Technology*.24(3):pp 22-32.2022
17. DSouza, Glen Cletus, **Vinutha Moses**, N. Chetan, Sowmya C. Mahadevaiah, and Lourdu Antony Raj.

- "Environmental Effect Studies on Aviation Contrails and Cirrus Clouds." *Environment Asia* 11, no. 2 , pp 164-171, 2018. DOI 10.14456/ea.2018.31.2018.
18. Soumya C*, Sagar S, Chethan S , **Vinutha Moses**, "Assessment of Petrol and Petroleum Derivatives Degradation by *Aspergillus Niger*", *Environment Asia*, Vol 11, *International Journal of Scientific Research in Science, Engineering and Technology*, Vol 4, Iss , pp 637-643, 2018.
 19. Anusha M, **Vinutha Moses**, Lourdu Antony Raj., "Short Communication- Enhanced Biological Phosphorus Removal.", *Emerging Trends in Chemical Engineering*, Vol 4, Iss 3, pp18–2, 2017.
 20. M.S. Shah, Chetan N., **V Moses**, Soumya C., Shobha G, "Power generation from kitchen and industrial waste water using microbial fuel cells (MFCs) with graphite cathode and anode", *Journal of Alternate Energy Sources and Technologies*, Vol. 7, Iss. 1, pp. 14-22, 2016.
 21. Archna, **V. Moses**, S. Sagar, V. Shivraj, S. Chetan, "A review on processing of waste PET (polyethylene terephthalate) plastics", *International Journal of Polymer Science Engineering*, Vol. 1, Iss. 2, pp. 1-13, 2015.
 22. M.S. Shah, **V. Moses**, "Biotechniques to reduce the green house gases", *International Journal of Engineering Research and General Science*, Vol. 3, Iss. 2, pp. 775-780, 2015.
 23. **V. Moses**, Archna, Sangam L, "Bioresins: An environment friendly product", *Emerging Trends in Chemical Engineering*, Vol. 2, Iss. 2, pp. 1-4, 2015.
 24. Soumya C, P. Avadhani, R. Vidhya, **V. Moses**, "Production of biofuel from micro algae (*Chlorellapyrenoidosa*) using vertical reactor system and effect of nitrogen on growth and lipid content", *Journal of Academia and Industrial Research*, Vol. 4, Iss. 7, pp. 179-182, 2015.
 25. Soumya C, P. Avdhani, Vidya, **V. Moses**, "In vitro investigation of antibacterial, antioxidant activity and phytochemical screening of steam distilled fruit extract of *Terminalia Chebula*", *International Journal of Pharma Bioscience*, Vol. 6, Iss. 2, pp. 430-438, 2015.
 26. Shobha G, **V. Moses**, Ananda S, "Biological synthesis of copper nanoparticles and its impact - a review", *International Journal of Pharmaceutical Science Invention*, Vol. 3, Iss. 8, pp. 28-38, 2014.
 27. .N. Mahadevappa, D. Kittayanapallya, Hanumantharaju, Pooja, Vishwanath, Suvarna, **V. Moses**, Soumya C., Shobha G., "Advanced study on application of mint oil", *International Journal of Scientific Research*, Vol. 5, Iss. 4, pp. 1-3, 2014.
 28. A. Vijayakumar, **V. Moses**, Soumya C, Shobha G, "A study on caffeine effect of tea on health", *International Journal of Scientific Research*, Vol. 5, Iss. 3, pp. 359-363, 2014.
 29. A. Vijayakumar, **V. Moses**, Soumya C, Shobha G, "Estimation of crude caffeine in different types of tea", *International Journal of Advanced Biotechnology and Scientific Research*, Vol. 25, Iss. 4, pp. 39-42, 2014.
 30. Shobha G, Soumya C, **V. Moses**, Ananda S, "Study on induced defense related enzymes in *Capsicum*

Annum infected with *Xanthomonas Vesicatoria Sps*” *International Journal of Pharmacore*, Vol. 2, Iss. 10, pp. 720-724, 2014.

31. Shobha G, Soumya C, **V. Moses**, Shashidhar K.S., “Phytochemical profile, antibacterial effects of crude aqueous leaf extract of *Datura Sps*”, *International Journal of Pharmacore*, Vol. 5, Iss. 2, pp. 273-278, 2014.

Conference Papers

1. Harshit Rathore, Pratyush Kumar, Faraaz Ikram, **Vinutha Moses*** “Integrated Waste Management System.” *International Conference on Sustainable Environment and Engineering (ICSEE’19)* ,HIT Chennai, 21st-22nd Feb 2019
2. Sudeep M, **Vinutha Moses***, “Nanotechnology-As Antibacterial and Heavy Metal Removal In Waste Water Treatment-A Review” *International Conference on Sustainable Engineering and Technology (iConset 2018)* ,ACS college Bangalore, 19th-20th April 2019. AIP Conf. Proc. 2039, 020067-1–020067-17; <https://doi.org/10.1063/1.5079026>
Published by American Institute of Physics. 978-0-7354-1765-6.
3. Sumedha Bhat, **Vinutha Moses***, Snehil Kumar B, Akshay C. B, and Rishil Rai, “Development of a bio-resin from organic waste and its application to make high strength composites” *International Conference on Sustainable Engineering and Technology (iConset 2018)* ,ACS college Bangalore, 19th-20th April 2019. AIP Conf. Proc. 2039, 020067-60–020067-69; <https://doi.org/10.1063/1.5079026>. Published by American Institute of Physics. 978-0-7354-1765-6.
4. **V. Moses**, Hemanth L.R., Suresh R, ‘Heat and mass transfer studies on electroless gold plating bath’ *An International Conference on Convergence of Science, Engineering & Management in Education and Research - A Global Perspective (II Edition) (ICCSEM 2013)*, DS College of Engineering, Bangalore, 26-27 Sept 2013.
5. Gururaj, **Vinutha Moses**, Rajani M R, ‘Regeneration Technique for horticulture from experts of mature juvenile origin through somatic embryogenesis’, *An International Conference on Convergence of Science, Engineering & Management in Education and Research - A Global Perspective (II Edition)* , (ICCSEM 2013), DS College of Engineering, Bangalore, 26-27 Sept 2013.

Books/Book Chapters

1. Vinutha Moses, Blessy Baby Mathew, Chetan N, Archana N. Natural Polymer derivatives, Blends and composites volume II, chapter 8, composites based on Natural polymers, 2018, pp, 119-156.

Patents [Filed / Published / Granted]

1. Extraction of Hydroxymethylfurfural (HMF) from Organic Waste, Patent No. 402421 Granted on 28/07/2022. Date of Filing: 07/12/2018.
2. Water Retention Agent for Soil, Patent No. 402195 Granted on 27/07/2022. Date of Filing: 11/06/2020.
3. An aerobic pyrolyzer for the generation of Guaiacol from lignin sludge Application No. 202341018953. Published Date: 27/09/2024. Filing Date: 21-03-2023.
4. A Smart Automatic Waste Segregator for Mixed Waste with Neodymium Magnets and Proximity Sensors. Application No. 202341082027. Filing Date: 02/12/2023.
5. A Novel Apparatus for Enzymatic Hydrolysis of Organic Waste to Enhance Nutrient Content. Application No. 202341082027. Filing Date: 01/01/2024.
6. Formulation of Phenol Hydroxymethylfurfural Formaldehyde Resin. Application No. 202541047567. Filing Date: 17-05-2025.

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

1. Development of Bioresin from Organic Waste and its Application to make High Tensile Composites funded by Karnataka State Council for Science and Technology 2018 of Rs. 7000.
2. Power Generation from kitchen and Industrial Waste water using Microbial Fuel Cells with Graphite Cathode and Anode funded by Karnataka State Council for Science and Technology 2014 of Rs. 9500.
3. Production of Biofuel from Soil and Wastewater Algae using Vertical Reactor System funded by Karnataka State Council for Science and Technology 2014 of Rs. 8000.

Ongoing & Completed Consultancy Projects

- Development of the prototype of Municipal Waste Segregator – Funding Agency: Greeneria Pvt Ltd Jayanagar East End Bangalore 560069, Duration: 2023, Role: PI.
- Improvisation in PFD – Funding Agency: Greeneria Pvt Ltd Jayanagar East End Bangalore 560069, Duration: 2023-2025, Role: PI.

Professional Memberships

- MIE membership The institution of Engineers (India) M-1539986.
- IFERP ID: PROF-39030983

Awards & Recognitions

- Honored by RSST for PhD completion in 2024.
- Honored by ISTE Chapter, RVCE for PhD completion in 2023.
- Guiding Best Project :Karnataka State Council for Science and Technology 2018.
- Guiding Best Project :Karnataka State Council for Science and Technology 2014.

Student Supervision

- **Ph.D. Candidates:** NIL
- **M.Tech/M.Sc. Students:** 04
- **Undergraduate Research Mentees:** 16

Professional Roles

1. Session Incharge at the 8 International Conference on Computational Systems & Information Technology for Sustainable Solutions (CSITSS), held from 7 to 9 November, 2024.
2. Recognised Reviewer of Chemical Engineering Journal Elsevier from 2022.
3. Recognised Reviewer of International Journal of Innovative Research in Technolgy, from 2025.

Teaching

Core Courses: [Current semester]

- CH364 : Heterogeneous Reaction Systems

Advanced/Lab Courses: Nil

Professional Roles

Responsibilities

Academic

- Exam Coordinator from 2018 to 2023
- Placement Coordinator from 2023-2025

Administrative:

- IPR Cell member
- Particulate Technology Lab in Charge.
- Department R&D Coordinator.

External Connect

NIL