

FACULTY PROFILE

Prof. Meera Bai S



Professor & HOD

 meera.priyan@gmail.com

UG: T.K.M. College of Engineering, Kollam, University of Kerala, India





PG: University of Kerala, India



PhD (On going): Kalasalingam Academy of Research and Education, Tamil Nadu, India

Educational Qualifications (as per chronological order)

- 1990- B.Tech., Chemical Engineering- (4th Rank in University) from T.K.M. College of Engineering, Kollam, affiliated with the University of Kerala.
- 2000- Post Graduate Diploma in Computer Application- from IGNOU.
- 2001- Advanced Diploma in Computer Application - from IGNOU.
- 2012- M.Tech., in Biotechnology & Biochemical Engineering, University of Kerala.
- 2015- Certificate course in Process Engineering (Chemical Engineering), PETRO Institute, Affiliated to National Centre for Labour and Learning, Government of India.
- 2022- Pursing PhD in Biotechnology. Kalasalingam Academy of Research and Education

Area of Interest:

 Fermentation Technology
 Biopolymer
 Biofuels
 Bioremediation

 Algal Biorefinery
 Pyrolysis (conventional,
Microwave)

Professional Experience:

- ❖ Head of the Department, April 2021 onwards in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ Assistant professor, December 2012 onwards -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ Senior Lecturer, January 2009 to December 2012 -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ Lecturer, July 2007 to January 2009 -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ District Coordinator, Science and Technology Entrepreneurship Development Project (Jan 1999 – June 2007) –Coordinate and implement all activities of STED in the districts. Mission of employment generation through science and technology (MEGSAT) is a main project undertaken by STED.
- ❖ Guest Lecturer (1996-1998) – in the department of Polymer Science and Rubber Technology, University College of Engg, Thodupuzha.
- ❖ Guest Lecturer (1994-1996) – in the department of Industrial Chemistry, S N College, Punalur.
- ❖ Engineer Executive (March 1993 – September 1993) -- in MAS Combustible Pack Ltd. Palakkad, which is a company manufacturing combustible cartridge cases for defence purposes.
- ❖ Apprentice (August 1990- August 1991) -training in Fertilizers And Chemicals Limited, Cochin Division, Kerala, India

Grants & Funding

Research grants from KSCSTE, ANERT, KTU for student Projects.

Outreach activities

- Participated in the Indo-Japan Workshop "Frontiers in Analytical and Applied Pyrolysis for Energy and Environment" by the Centre for Outreach and Digital Education, Indian Institute of Technology, Madras from 26th to 27th February 2024
- 12 Days International Faculty Development Programme by EDII; Technopark, Kerala, India.
- 5 Days National Workshop on Problem-solving skills in Bioprocess Engineering, IIT Madras, India.
- FDP on 'Recent Development of Biopolymer and Sustainable composites for engineering applications, SBCE Pattoor, 15th-19th March 2021.
- FDP on Learning Outcome-based Approach for curriculum planning and Development, Master soft ERP Solutions- 30th January 2021.
- Three-day FDP on “Research Methodology and Scientific Writing” organized by Sree Buddha College of Engineering, Alappuzha from 29th June – 1st July 2020.
- 3-day FDP on “Communicative English Skills for Engineering Students and Faculty” Mar Baselios Institute Of Technology And Science [MBITS] in association with ASAP and TCS from 28th-30th June 2020.
- National level FDP on Waste management September, TKMCE, Kollam, 2021.

- 15 days industrial training in Kerala State Drugs and Pharmaceuticals, Cherthala, Kerala, India.
- 7 days ISO auditors Training in Sree Buddha College of Engineering.
- 15 days training in Defence Research Laboratory, Pune, India.
- 15 days industrial training in Indian Rare Earths Limited, Chavara, Kerala, India.
- 10 days design training in FACT Engineers Design Organization, Udyogamandal, Cochin, Kerala, India.

FDP/ WORKSHOP CONDUCTED/ORGANISED

Many programs are Organized, Recent events are listed below.

- International Conference on “Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications” The Department of Biotechnology and Biochemical Engineering, Department of Mechanical Engineering, and Department of Food Technology, SBCE, from November 30th to December 2nd, 2023.
- National FDP on “Novel Technological Advancement in Downstream Processing”, sponsored by APJ Abdul Kalam Technological University, Department of Biotechnology and Biochemical Engineering, SBCE, 30th January 2023 -3rd February 2023.
- National level FDP on “Research Methodology, Scientific writing and Publication ethics” sponsored by APJ Abdul Kalam Technological University, Department of Biotechnology and Biochemical Engineering, SBCE, 23-25 January 2023.
- National level FDP on Biofuels – Recent Trends and Future Prospects, Department Biotechnology and Biochemical Engineering, SBCE, September 2021.
- National Workshop on SCILAB, Department Biotechnology and Biochemical Engineering, SBCE, August 2020.
- National Workshop on Bioprocess plant Design sponsored by AICTE at Sree Buddha College of Engineering in January 2013.
- National Workshop on Entrepreneurship and Inauguration of IEDC at SBCE in 2013.

Courses taught at SBCE

Bioprocess Engineering,
Downstream Processing,
Fermentation Technology,
Fluid Flow and Particle
Technology,
Heat Transfer Operations,
Environmental Engineering,
Principles of Management,

Disaster Management,
Basic Biochemical Engineering,
Bioprocess Instrumentation,
Numerical Techniques,
C++ Programming,
Programming in C,
Engineering Properties of Food
Materials.

Research Publications

1. **Santhakumari, M. B.**, Pandi, E., Mohan, M., Daniel, A. R., & Balakrishnan, V. (2024). *Biomass: Resources and Sustainable Utilization. In Bioeconomy for Sustainability* (pp. 3-39). Singapore: Springer Nature Singapore.

2. Sajin, J. B., Devarajan Yuvarajan, T. Raja, **S. Meera Bai**, and K. K. Kalesh. "Study of thermal stability and characterization of novel bioplastic as a potential alternate for synthetic fiber replacement in polymer composite." *Biomass Conversion and Biorefinery* (2023): 1-9.
3. Vidya, S., C. Chandran, and **S. Meera Bai**. "Dye decolourization using fungal laccase: A Review." *International Journal of Innovations in Engineering and Technology* 8, no. 1 (2017): 118-123.
4. **Bai, S. Meera**, and Muhammad Nabeel. "Biodiesel from Waste Vegetable Oil-A Study on Production and Performance." *Int J Latest Trends Eng Technol* 5, no. 3 (2015)
5. **Bai, S. Meera**, and P. Prasad. "Extraction of Phytochemicals from the Stem and Leaves of the Ayurvedic Medicinal Plant *Vitexnegundo* as Possible Therapeutic against *Vibrio cholera*." *International Journal of Latest Trends in Engineering and Technology* 5, no. 1 (2015): 96-100.
6. **Bai, S. Meera**, and N. Ramachandran. "Process optimization by Placket-Burman designs for the production of protease enzyme from *Bacillus subtilis* under submerged fermentation." *Int. J. Innov. Eng. Biotechnol* 4 (2014): 34-39.

Conference Publications

1. Meera Bai. S, Merine Francis, Swathishma, Sandra Vijay, Adriel Raji Koshy and Vanavil Balakrishnan, Investigation of Thermal Characteristics of the Seaweeds Collected from Kollam Coastal Area for Utilization as a Feedstock for Bio-Oil Production, International Conference on New Horizons in Biotechnology (NHBT-2023), Organized by BRSI and CSIR National Institute for Interdisciplinary Science and Technology (NIIST), November 26-29, 2023; Trivandrum, Kerala, India.
2. Meera Bai S, Sreelakshmi Narayanankutty, Theertha Vinod, - Exploring seaweed pyrolysis for sustainable biomass utilization, International Conference on "Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications, Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from November 30th to December 2nd, 2023.
3. Adriel Raji Koshy, Merine Francis, Sandra Vijay, Swathishma, & Meera Bai S- Utilizing Seaweeds as a Sustainable Bioresource for Pyrolysis- Based Biochar Production, International Conference on "Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications", Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India, from November 30th to December 2nd, 2023.
4. Nimi Mariya Jose, Meera Bai S presented a paper entitled "Production of Bioplastic from Renewable sources-a Review at National Conference on Biotechnology Research Innovations and Opportunities (BRIO-2020) organized by Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from 18th to 19th June, 2020.
5. Sujana S Nair, Meera Bai S and Malu Ravi presented an e-poster entitled "Sustainable Bacteriological Approach for the Production of Bioplastics in a Bio-Engineered Medium" in the International Virtual Conference on Natural Products and Synthetic Biology (ICNSB

- 20) jointly organized by School of Bio sciences and Technology, Vellore Institute of Technology and Society of Chemical and Synthetic Biology, TamilNadu, India from 4th to 5 th July 2020
6. Meera Bai S and Malu Ravi, presented a paper entitled “Utilization of Low-Cost Materials in the Sustainable Production of Bioplastics: Scrap to Scope”National Conference on Biotechnology Research Innovations and Opportunities (BRIO-2020) organized by Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from 18th to 19th June, 2020.
 7. Meera Bai.S, Ramachandran Nellickal, “Media engineering for the production of protease enzyme from Bacillus Subtilis under submerged fermentation,“World Congress on Biotechnology”, 2012

Membership of Professional Bodies

- Life member in IChE (Indian Institute of Chemical Engineers)
- Life member in BRSI (Biotech Research Society of India)

Roles and Responsibilities handled

- Board of Studies Chairman – Biotechnology, Sree Buddha College of Engineering (Autonomous)
- Board of Studies member – Food Technology, APJ Abdul Kalam Technological University.
- Examination Board Chairman, Food Technology, & Biotechnology, APJ Abdul Kalam Technological University.
- Team member of the Scrutiny Board for Question paper (KTU, University of Kerala).
- Team member in university syllabus revision committee (KTU, University of Kerala).
- Team member in university evaluation committee (KTU, University of Kerala).
- Team member in NAAC / NBA accreditation committee.
- Deputy warden of Ladies hostel.
- Examination cell coordinator.
- Innovation and Entrepreneurship Development cell coordinator.


Website link:

<https://scholar.google.com/citations?hl=en&user=lqxrAY8AAAAJ>

Dr. MALU RAVI



Associate Professor

 bt.malur@sbcemail.in

UG: University of Kerala, India



PG: Periyar University, India

PhD: University of Kerala, India

Educational Qualifications (as per chronological order)

- MSc Biotechnology, Periyar University
- PhD in Biotechnology, University of Kerala
- BSc Botany and Biotechnology (twin major), University of Kerala

Area of Interest:

 Molecular Biology,
 Food Microbiology

 Biotechnology

Professional Experience:

- ❖ Associate Professor, Department of Biotechnology & Biochemical Engineering, Sree Buddha College of Engineering, Alappuzha, India , August 2017- till date
- ❖ Assistant Professor, Department of Biotechnology & Biochemical Engineering, Sree Buddha College of Engineering, Alappuzha, India , August 2015 – July 2017.
- ❖ Lecturer, Department of Biotechnology, University of Kerala, India, January 2014 - August 2015.

- ❖ Junior Research Fellow (JRF), Molecular Reproduction Unit, Rajiv Gandhi Centre for Biotechnology (RGCB), India, October 2006 - October 2008
- ❖ Project: Molecular Characterization of the fibulin variant expressed in the uterus at implantation and identification of its interacting partners during this process, Funded by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE), Government of India.
- ❖ Skilled Assistant, Department of Plant Entomology, College of Agriculture, Thiruvananthapuram, India, July 2005 - June 2006.

Grants & Funding

- Principal Investigator, Analysis of Shatavarigulam for shelflife interfering microbial flora, Funded by Kerala State Council for Science, Technology & Environment (KSCSTE) (2021).
- Principal Investigator, Conversion of egg fruit to nutritional drink and study of its neuroprotective and antimitotic properties, Funded by Kerala State Council for Science, Technology & Environment (KSCSTE) (2016).

Outreach activities

- Attended National level Faculty Development Programme on "Farm to Fork - enhancing food quality through post harvest handling" conducted by Hindustan College of Engineering and Technology from 17/05/2024 to 23/05/2024.
- Completed 14 days DBT Skill Vigyan Refresher Course for Faculties on the topic 'Gas Chromatographic Techniques in Aromatic Plants Research.' at the Central Instrumentation Facility, Jawaharlal Nehru Tropical Botanic Garden and Research Institute (KSCSTE-JNTBGRI), Palode, Thiruvananthapuram, Kerala, from January 16, 2024, to February 1, 2024.
- Completed AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Advancement of Digital Health and Medical Innovations during Pandemic" from 06/12/2021 to 10/12/2021 at Model Engineering College.
- Five Days Online Faculty Development Programme on Technological Interventions in Water Resources Management, organized by the Department of Biotechnology and Biochemical Engineering, Sree Chitra Thirunal College of Engineering and sponsored by APJ Abdul Kalam Technological University (KTU), Kerala, 6th to 10th September 2021.
- Completed one week online FDP on Biofuels – Recent trends and future prospects Department of Biotechnology and Biochemical Engineering, Sree Buddha College of Engineering from 30-08-2021 to 3-09- 2021.
- Attended Five Day Online Faculty Development Program on “Recent Trends and Developments in Food Technology” organized by Department of Food Technology, Saintgits College of Engineering, Kottayam, Kerala in association with AFSTI, Cochin Chapter from 10th to 14th August, 2020.
- Attended 7-day online FDP on NBA Accreditation Process organized by Department of Civil Engineering, MEA engineering college from 20th May to 28th May, 2020.

- Attended 6 day online FDP on Current Environmental Impacts and Sustainable Research Solutions, Department of Biotechnology and Biochemical Engineering, Sree Buddha College of Engineering from 21-07-2020 to 28-07-2020.
- Participated in the Science Academies' Science Leadership Workshop organized by the Central University of Punjab, Bathinda, India from June 22 to June 28, 2020.
- Faculty Development Programme (FDP) conducted by ICT Academy of Kerala, Sree Buddha College of Engineering, Pattoor, Kerala, India, 13–15 June, 2016.

Courses taught at SBCE

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|--|------------------------------------|
| ▪ Cell and Molecular Biology | ▪ Biochemistry |
| ▪ Microbiology | ▪ Industrial Bioprocess Technology |
| ▪ Food Microbiology | ▪ Sustainable Engineering |
| ▪ Animal and Plant Cell Technology | ▪ Sustainable Energy processes |
| ▪ Genetic Engineering | ▪ Constitution of India |
| ▪ Food quality, safety and Regulations | |

Research Publications

1. Sony K Cherian, **Malu Ravi** and G.K. Shamnamol (2019). “*Aegle marmelos Fruit Shell as a Precursor for Activated Carbon Production and its Application in Fluoride Removal*”, Journal of Advanced Research in Dynamical and Control Systems. 15-Special Issue, 2018, ISSN 1943-023X, Pg. No. 95-102.
2. **Malu Ravi**, Muraleedharan Damodaran and Gayathri Elayidam U (2017). “*Radiation induced DNA damage evaluation of insects using Comet assay*”. Journal of Entomological Research. 41 (2) : 119-124, DOI : 10.5958/0974-4576.2017.00019.6. ISSN No. 0378-9519.
3. Gayathri Elayidam U, **Malu Ravi** and Muraleedharan Damodaran (2015). “*Identification and proteomic characterization of a novel stage-specific factor from Verson's Glands in the common mormon butterfly, Papilio polytes*”. Journal of Applied Zoological Researches 26 (1), 71-77.
4. Gayathri Elayidam U, **Malu Ravi** and Muraleedharan Damodaran (2012). *Allatostatin-quantum dot ligands as efficient immunolabelling bioconjugants*. ENTOMON 37(1-4) 169–176.
5. **Malu Ravi**, Reena Shabu, Chaubey R.C, Govindan Bhaskaran and Muraleedharan Damodaran (2011). *Gamma radiation sensitivity on larvae and eggs of Common mormon butterfly, P.polytes*. ENTOMON 36 (1-4)17-28.
6. Sheela M.S., Jiji., **Malu Ravi**, Shaiju simon (2006). *Screening of okra varieties for resistance against Meloidogyne incognita*, Indian Journal of Nematology 36 (2), 292-293.
7. **Ravi, M.**, Kumar, P.G. and Laloraya, M. *Expression of fibulin 1D during embryo implantation in the uterus*. <https://www.ncbi.nlm.nih.gov/nuccore/EU543224.1>

Membership of Professional Bodies

- Member, Asian Federation of Biotechnology.
- Life member of Association for Advancement of Entomology (AAE).

Website link:

<https://scholar.google.com/citations?hl=en&user=cfB3ua4AAAAJ>

Dr. Shamnamol G K



Associate Professor

 bt.shamnamolgk@sbcemail.in

UG: Govt. Engineering College, Kozhikkode / Calicut University

PG: National Institute of Technology, Surathkal, Karnataka

PhD: APJ Abdul Kalam Technological University, India

Educational Qualifications (as per chronological order)

- Ph.D. -APJ Abdul Kalam Technological University
- M.Tech -National Institute of Technology, Surathkal, Karnataka
- B.Tech - Govt. Engineering College, Kozhikkode / Calicut University

Area of Interest:

-  Green corrosion inhibitors
-  Nanotechnology
-  Bio-fuel
-  Carbon quantum dots

Professional Experience:

- ❖ Assistant Professor, SBCE, Pattoor, June 2011-August 2023
- ❖ Associate Professor, SBCE, Pattoor, September 2023-Till date

Awards and Recognitions

- First rank holder in M-Tech (Chemical Plant Design) 2011
- Best paper award for the paper titled “Microwave assisted biodiesel production from fish oil: two-step process”; 4th International Conference on Bioenergy, Environment

and Sustainable Technologies (BEST2019) held at Arunai Engineering College, Tiruvannamalai, Tamilnadu, India during January 28-30, 2019.

- Best paper award for the paper titled “Preparation and characterization of activated carbon from Aegle Marmelos fruit Shell for fluoride removal”; 4th Kerala Technological Congress-KETCON OF KTU TECHFEST 2019 jointly organized by KTU &KSCSTE at Govt. Engineering College, Trichur during 15-17 February 2019.
- Best paper award for the paper titled “Effective Utilization of drugs as green corrosion inhibitor-A review”; National Conference on Energy and chemicals from Biomass held during 10-11, October 2019 at Pondicherry Engineering College.
- Completed 3 months CSIR summer research training program during June-August 2020 coordinated by CSIR-NEIST Jorhat.
- Best paper award for the paper titled “Assessment of the mild steel corrosion inhibition competence of Garcinia gummi-gutta leaf extract ; Evaluation of XPS, thermodynamic and kinetic parameters”; AICTE sponsored First International Conference on Sustainable practices in Engineering & Technology (IC-SPET 23) organised by Department of Civil Engineering, Sree Buddha College of Engineering, Pattoor, Alappuzha from 14th to 16th June 2023.

Grants & Funding

- “Novel Bio-coating for effective corrosion inhibition in mild steel”, Student project funding-KSCSTE (10000/- Rupees sanctioned amount-completed 2022)
- “Biosynthesis of Zinc oxide nanoparticles using banana empty fruit bunch extract for corrosion mitigation”, student project funding KTU-CERD (20,063/- rupees sanctioned amount-completed 2023)
- “Novel Technological Advancements in Downstream processing”, Five days Faculty Development program funding -KTU (2,00,000/- rupees sanctioned amount-completed on February 2023 (program coordinator)
- FDP on “Research methodology, scientific writing and publication ethics, Three days Faculty Development program funding -KTU (1,50,000/- rupees sanctioned amount-completed on January 2023 (program coordinator)
- “The corrosion inhibition prospective of collagen/zinc oxide nano-composite coating on biomedical grade 316L stainless steel in simulated body fluid”, KTU-CERD Research seed Money funding 2,00,000/- rupees sanctioned.

FDP/ WORKSHOP CONDUCTED/ORGANISED

1. “Novel Technological Advancements in Downstream processing”, Five days Faculty Development program completed on February 2023.
2. “Research methodology, scientific writing and publication ethics, Three days Faculty Development program completed on January 2023.
3. International Conference on “Smart and Green sustainable materials for Biotechnology, Biochemical and Mechanical Applications”, Three days International Conference conducted on 30th November-2nd December 2023 (Organizing Secretary)-KSCSTE funding of Rs. 1,50,000/- received.

Courses taught at SBCE

Bioprocess Plant and Equipment Design	Food Engineering Thermodynamics and Reaction Kinetics
Mass transfer operations	Design of Biological Treatment of Waste
Thermodynamics	Mathematical Applications in \\\Biotechnology
Modeling and scale up of bioreactors	
Transport Phenomena in Bioprocess	Practical Subjects Handled
Process dynamics and control	Software Lab
Bioprocess Instrumentation	Heat and Mass Transfer Lab
Chemical and Biochemical Reaction Engineering	Chemical Reaction Engineering and Process Control Lab
Principles of Chemical Engineering	Downstream Processing Lab
	Fluid Flow and Particle Technology Lab,

Research Publications

1. **G.K. Shamnamol**, J.M. Jacob, R. P, A. Raj, *Synergistic effect of salts on the corrosion inhibitive action of plant extract: a review*, Journal of Adhesion Science and Technology. 35 (2021) 133–163. <https://doi.org/10.1080/01694243.2020.1797336> (SCI indexed-impact factor 2.431)
2. **G.K. Shamnamol**, K.P. Sreelakshmi, G. Ajith, J.M. Jacob, *Effective utilization of drugs as green corrosion inhibitor-A review*, AIP Conference Proceedings. 2225 (2020). <https://doi.org/10.1063/5.0005931> (Scopus indexed)
3. **G.K. Shamnamol**, S. John, J.M. Jacob, *Experimental and theoretical evidence for effective corrosion mitigation in mild steel using novel Garcinia gummi-gutta leaf extract*, Anti-Corrosion Methods and Materials 69 (5)(2022) 540-549. <https://doi.org/10.1108/ACMM-03-2022-2630> (SCI indexed-impact factor 1.043)
4. **G.K. Shamnamol**, P. Rugma, S. John, J.M. Jacob, *Unraveling the synergistic effect of cationic and anionic salt on the corrosion inhibition performance of Garcinia gummi-gutta leaf extract against mild steel in HCl medium*, Results in Chemistry. (2022) 100728. <https://doi.org/10.1016/j.rechem.2022.100728> (ESCI and Scopus indexed)
5. Zachariah Pulluparampil Mathew, **G.K. Shamnamol**, K.P. Greeshma, Sam John, *Insight on the corrosion inhibition of nanocomposite chitosan/boron nitride integrated epoxy coating system against mild steel*, Corrosion Communications, Available online 12 January 2023. <https://doi.org/10.1016/j.corcom.2022.09.001> (Scopus indexed open access)
6. **Shamnamol G K**, Jaya Mary Jacob, Arya Krishnan, Resmi S, Sreelekshmi S; “ *An overview of green corrosion inhibitors*”; *Biotechnology for toxic remediation and Environmental sustainability* book chapter published by Taylor and Francis,30 January 2023 (CRC press, ISBN-9781003312390).
7. **Shamnamol, G. K.**, John, S., & Jacob, J. M. (2023, September). *Assessment of the mild steel corrosion inhibition competence of Garcinia gummi-gutta leaf extract: Evaluation by XPS, thermodynamic, and kinetic parameters*. In IOP Conference Series: Earth and Environmental Science (Vol. 1237, No. 1, p.012001). IOP Publishing.

8. **Shamnamol, G. K.,** John, S., & Jacob, J. M. (2023). *Exploring the Corrosion Inhibition Efficacy of Epoxy Merged Silver Nanoparticle Synthesized Using Garcinia gummi-gutta Leaf Extract Against Mild Steel in an Acidic Medium.* Journal of Bio-and Tribo-Corrosion, 9(4), 81.
9. Jose, Jincy, Rangaswamy Mohanraj, **Shamnamol GK,** Greeshma KP, and Jaya Mary Jacob. "Turn-Off Fluorescence Sensor for the Detection of Ferric Ion in Water Using Green Synthesized *Wrightia coccinea* Carbon Quantum Dot." Journal of Fluorescence (2024): 1-11.
10. Jincy Jose, Mohanraj Rangaswamy, **G.K. Shamnamol,** K.P. Greeshma, *A short review on natural precursors-Plant-based fluorescent carbon dots for the targeted detection of metal ions., Sustainable Chemistry for the Environment, 2024, 100114, ISSN 2949-8392, <https://doi.org/10.1016/j.scenv.2024.100114>.*

Membership of Professional Bodies

- Life member in IChE (Indian Institute of Chemical Engineers)
- Life member in Asian Federation of Biotechnology

Roles and Responsibilities handled

- Department association coordinator
- Student affairs Council department coordinator
- Admission promotion committee coordinator
- PG Coordinator
- Project monitoring committee coordinator
- Internal Quality Assurance Cell Coordinator

Website link:

<https://scholar.google.co.in/citations?user=o3wo-pgAAAAJ&hl=en>
<https://vidwan.inflibnet.ac.in/profile/479836>

Dr. Shilpa Lekshmi L



Assistant Professor



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UG:

PG:

PhD: Mahidol University, Thailand

Educational Qualifications (as per chronological order)

Area of Interest:

✚ Biochemistry
✚ Phytochemistry

✚ Virology
✚ Molecular Biology

Professional Experience:

Asst. Professor, MACFAST, Thiruvalla (Sep 2018- Jan 2022)

Asst Professor, Sree Buddha College of Engg (Sep 2022 - present)

FDP/ WORKSHOP CONDUCTED/ORGANISED

International Conference IC-SGMat

5 days faculty development programme

Courses taught at SBCE

Biochemistry,

Molecular Biology,

Microbiology,

Food Microbiology,

Food Chemistry,

Food Additives and Flavourings,

Design and Engineering,

Lab courses

Research Publications

Shilpa Lekshmi Leela, Chatchawan Srisawat, Gopinathan Pillai Sreekanth, Sansanee Noisakran, Pa-thai Yenchitsomanus, Thawornchai Limjindaporn, “*Drug repurposing of minocycline against dengue virus infection*”, Biochemical and Biophysical Research Communications, Volume 478, Issue 1, 2016, <https://doi.org/10.1016/j.bbrc.2016.07.029>.

Website link:

Ms. Rincy Susan Raju



Assistant Professor

PhD (ongoing): Kalasalingam Academy of Research and Education, Tamil Nadu, India

PG: Anna University, India

UG: Kerala University, India

bt.rincysr@sbcemail.in

Area of Interest

- ✚ Sustainable Foods,
- ✚ Food Safety Alternative food resources

Professional Work experience

- ❖ Assistant Professor, Sree Buddha College of Engineering ,17-7-2016-till date

Awards and Recognitions

- Awarded the best paper award in oral presentation for the paper entitled “Relative quantitation and Prokaryotic Expression of Aquaporin gene in two varieties of Oryza sativa-Pokkali and Jyothi" in National conference on Technological Advancement in Bioengineering (NCTAB'18) conducted from April 17th to 18th organized by SBCE, Pattoor.
- Attended the state level IDEA fest Phase III for entrepreneurship.

Outreach activities

Coordinator of “Jeevajala” ,drinking water quality monitoring and analysing camp conducted on 27 th and 28 th September 2018 at Pandalam in association with Pandalam municipality and water treatment Plant, Mangaram. Camp was conducted to analyse the water quality in the flood affected areas in and around Pandalam. Analysed around 200 samples from nearby areas.

FDP/ WORKSHOP CONDUCTED/ORGANISED/ ATTENDED

1. National workshop on Design of Experiments and Optimization Techniques at Sree Buddha College of Engineering from 14-18th May 2018.
2. Participated in the 31st Kerala Science Congress held during 2nd and 3rd February 2019 at Fatima Mata National College, Kollam.
3. ATAL-AICTE sponsored FDP on strategies and out comes to enhance sustainable green environment (19/Jul/2021 To 23/Jul/2021) Organized By The Department Of Chemistry, University College Of Engineering -BIT Campus, Tiruchirappalli, 2021.
4. EQIP-II Sponsored 6-Days Online Faculty Development Programme on “Advances in Biochemical, Biomedical and Bioenergy Sectors" from 19th - 24th April 2021 TKM college of Engineering, Kollam.
5. Entrepreneurship Development Program in Food Processing by MSME-Technology Development Centre (Process & Product Development Centre) Agra, Ministry of MSME, Govt. of India, June 14-18, 2021.
6. 6.One week online faculty development program on “bio fuels -recent trends and future prospects” 30th Aug-3rd September 2021 Sree Buddha College of Engineering Pattoor.
7. Five day online workshop on "Technological Interventions for the sustainable rebuilding of Kerala post flood" 8-12 March 2022 Sree Buddha College of Engineering Pattoor.
8. A five-day KTU sponsored faculty development programme on "Novel Technological Advancement in Downstream Processing" was jointly organised by the Department of Biotechnology and Biochemical Engineering and Department of Food Technology, Sree Buddha College of Engineering Pattoor from January 30th –3rd February, 2023.
9. A three-day KTU sponsored faculty development programme on & quot;Research Methodology, Scientific Writing, and Publication Ethics" was jointly organised by the Department of Biotechnology and Biochemical Engineering and Department of Food Technology, Sree Buddha College of Engineering Pattoor from January 23–25, 2023

Courses taught at SBCE

Theory subjects

Bioprocess Calculations

Bioinformatics,

Sustainable energy Process

Disaster Management

Commercialisation Marketing and

management for Engineers,

Bioprocess Engineering,

Proteomics and Genomics,

Fermentation technology,
Advanced Genetic Engineering,
Plant Biotechnology,
Industrial Biotechnology,

Food Process Technology,
Cereal and Legume Technology,
Industrial Bioprocess Technology

Lab subjects

Microbiology Lab
Bioprocess Engineering Lab
Downstream Processing Lab

Molecular Biology and Fermentation
Lab
Analytical Techniques in
Biotechnology Lab

Research Publications

Conference publications

1. Dr. C Mohan Kumar, Rincy Susan Raju, Poster presented as “Prokaryotic expression and sequence analysis of aquaporin gene in two varieties of oryza sativa pokkali and jyothi” in Environment, Genes, Health and Disease 2011 (EGHD) held in Bharathiar University, Tamil Nadu, India in 9th to 11th December 2011.
2. Rincy Susan Raju Ashwin Kumar, Athira R Nair, Ashitha S, Sajina Hussain. Characterisation of Bioactive components from petiole two varieties of Colocasia seen in Kerala, National level symposium on Trends and prospects in Bioscience and Technology Towards Sustainability , EQUILIBRIA 2017 April 17-18 .Sree Chithra Thirunal College of Engineering, Trivandrum.
3. Rincy Susan Raju, Arun R, Nisha Susan Mathew Formulation ,design and evaluation of herbal handwash From averrhoa bilimbi E2F2 2017 conducted by Sree Buddha College of Engineering, Alappuzha, 17th to 18th April.
4. Rincy Susan Raju Priya Sunny Production of oxalic acid from artocarpous hirsutus by aspergillus sp using submerged fermentation and study of the nutritional content of the fruit E2F2 Conference Sree Buddha College of Engineering, Alappuzha, 17th to 18th April.
5. Rincy Susan Raju Relative quantitation and prokaryotic expression of Aquaporin gene in two varieties of oryza sativa-Pokkali and Jyothi E2F2 Conference Sree Buddha College of Engineering, Alappuzha, 17th to 18th April.
6. Rincy Susan Raju and Arun R Presented a paper on Production of Oxalic acid from Artocarpus hirsutus by Aspergillus sp using submerged fermentation in EQUILIBRIA'18, a National level symposium conducted by Department of Biotechnology and Biochemical Engineering of Sree Chitra Thirunal College of Engineering during 23-24 March 2018.

7. Rincy Susan Raju and Nisha Susan Mathew Presented paper on Formulation, design and evaluation of herbal handwash from averrhoa bilimbi in EQUILIBRIA'18, a National level symposium conducted by Department of Biotechnology and Biochemical Engineering of Sree Chitra Thirunal College of Engineering during 23-24 March 2018.
8. Rincy Susan Raju*and Athulya Rajeev. Relative Quantitation and Sequence Analysis Of aquaporin gene in two varieties Of Oryza Sativa. BEST 2019,4th International conference on Bioenergy , Environment and Sustainable Technologies 28-30 January 2019.
9. Rincy Susan Raju. Sequence Analysis And q-PCR Studies of Aquaporin Gene In two varieties of paddy, International virtual conference on "Frontiers in Biological Research". Relative Quantitation and Sequence Analysis Of aquaporin gene in two varieties Of Oryza Sativa

Journal publication

Rincy Susan Raju, “*Characterization of bioactive components from petiole of two varieties of colocasia seen in Kerala*” in International Journal of Advance Research, Ideas and Innovations in Technology (Volume 4, Issue 2), April 2018

Roles and Responsibilities handled

1. Department Timetable coordinator
2. Department IQAC co-coordinator
3. Department Criteria coordinator NBA and NAAC
4. Department IEDC coordinator
5. Department Placement coordinator
6. Department (FT) SAC coordinator
7. Alumni Association Secretary

Weblink:

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Ms. Chinchu Elezebeth





Assistant Professor

 chinchuelezebeth@gmail.com

UG: Sree Buddha College of Engineering, University of Kerala, India

PG: METS School of Engineering, Calicut University, India

Area of Interest:

-  Bio process/food processing
-  Biochemical systems

Professional Experience:

- ❖ Assistant professor-SBCE Pattoor- (Sep 2022-till date)
- ❖ Assistant professor-METS, Mala- (May2016-Sep2022)

Awards and Recognitions

- Cleared **GATE 2013**

Publications

Biodegradable Fabric Stiffener From Cassava Waste, Nadha Anil, Swathishma, Aishwarya S, Sharan V S and **Chinchu Elezebeth**, Biotechnology & Biochemical Engineering, Sree Buddha College of Engineering and Technology, Pattoor (p.o), Nooranad, Alappuzha, Kerala-690529 at 29th ICFoST International conference

Outreach activities

- Institute consultancy services Incharge for Water Quality analysis facility of the Department of Biotechnology and Biochemical Engineering.

FDP/ WORKSHOP CONDUCTED/ORGANISED

- 3 day international conference on smart and green materials for biotechnology, biochemical and mechanical applications at sree buddha college of engineering ,pattor
- Participated in the "international conference on recent trends in molecular medicine" held at Sree Buddha college of Engineering, pattor.
- Participated in chembios'10, a national symposium in emerging trends in biochemical engineering," held at Sree Buddha college of Engineering, pattor.
- Participated in UGC Sponsored National Seminar on "Recent Advances in Biotechnology" organized by Department of Biotechnology, St. Joseph's College, Irinjalakuda, Thrissur, Kerala.
- Participated in UGC Sponsored National Seminar on "Food Safety in India- Current Issues and Career Prospects" organized by Department of Biotechnology, St. Peter's College, Kolenchery, Ernakulam, Kerala.
- Secured second prize for paper presentation in national science day celebrations sponsored by KSCSTE held at METS school of Engineering , mala
- FDP on Technological Interventions in Water Resources Management, Sree Chithirathirunlcollege of engineering, Pappanamcode, Trivandrum
- FDP on Biosensors in point of care Diagnostics: Strategies and implementation conducted by Sahrdaya college of engineering, Kodakara
- FDP on biofuels recent trends and future prospectives conducted by Sree Buddha college of Engineering, Pattor
- coordinated and Participated in KTU sponsored FDP on Research methodology and scientific writing held at Sree Buddha college of Engineering, pattor.
- coordinated and Participated in KTU sponsored FDP on downstream processing held at Sree Buddha college of Engineering, pattor.
- One week faculty induction program organised by IQAC Sree buddha college of engineering, pattor
- 7 Day National level Online Faculty Development Program on Outcome Based Education and Essential AI Tools for Teachers, organised by The Internal Quality Assurance Cell (IQAC) and The Department of Computer Science, St. Albert's College (Autonomous), Ernakulam in association with The Kerala State Higher Education Council (KSHEC)
- National workshop cum training on bioinformatics tools & software in association with E-cell IIT Kharagpur
- FDP on farm to fork enhancing food quality through post harvest handling conducted by department of food technology, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, Coimbatore.

Courses taught at SBCE

Downstream processing
Fluid flow and particle technology
Food process engineering
Food process equipment design
Sustainable engineering
Management for engineers
Engineering properties of food materials
Unit operation in food lab
Downstream processing lab
Engineering properties of food materials lab

Membership of Professional Bodies

- Life member in IChE (Indian Institute of Chemical Engineers)
- Life member in BRSI (Biotech Research Society of India)

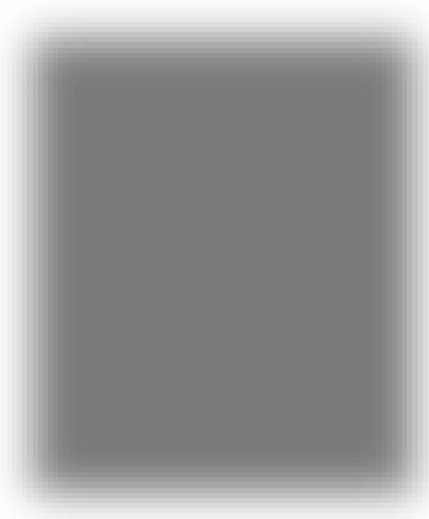
Roles and Responsibilities handled

- Consultancy (water quality analysis) coordinator
- Examination cell co-coordinator
- Department library coordinator
- Student grievance cell member
- Organizer for various departmental programs

Website link:

<https://vidwan.inflibnet.ac.in/profile/482747/NDgyNzQ3>

Ms. Athulya krishnan



Assistant Professor





athulyakrishnan07@gmail.com


UG:, Alva's College, Mangalore, India


PG: St Mary's College for Women, Thiruvalla, India

Area of Interest:

 Food processing and Preservation

 Food Packaging

 Food Quality assurance

 Nutrition and Dietetics

Professional Experience:

- ❖ Assistant professor- SBCE (Till date)
- ❖ Online Faculty, Kare campus (Aug 2022- July 2023)

Courses taught at SBCE

Post Harvest physiology & Spoilage in Food

Food microbiology

Dairy Technology

Food Toxicology

Roles and Responsibilities handled

- Class advisor

Website link:

Vidwan id: 483001

Dr. Archana Rajendran



Assistant Professor



archanaraj.89@gmail.com

UG: Anna University, India

PG: Anna University, India

PhD: Central Electrochemical Research Institute, Karaikudi, India

PDF: National Center for Cell Sciences, Pune, India

Area of Interest:

✚ Biomaterials (Metals, Ceramics, Polymers)

✚ Stem cells and Tissue Engineering.

Professional Experience:

- ❖ Assistant Professor at SBCE (August 2023- Till date)
- ❖ National Post-doctoral Fellow (SERB - N-PDF) at National Centre for Cell Science, Pune, Maharashtra. March 2021- March 2023
- ❖ Project associate in DST sponsored project, Process Engineering Division, Central Electrochemical Research Institute (CSIR-CECRI), Karaikudi, INDIA. September 2013-March 2015

Awards and Recognitions

- SERB-National Post-doctoral Fellowship to conduct research at NCCS, Pune, India
- AcSIR Best Ph.D. Thesis Award-2020 in Engineering Sciences.

- Selected for the prestigious “Prime Minister’s Fellowship for Doctoral Research” supported by Hoganäs India Pvt Ltd. along with Hoganäs AB, Sweden.
- Awarded National Fellowship for Students of Other Backward Classes (OBC), sponsored by UGC in the year 2014-15 (F./201415/NFO201415OBCKER13694/(SAIII/Website) for Doctoral Research.
- Best paper award at "National Science Day 2018" competitions held at CSIR-CECRI, on 28.02.2018.
- Best poster award at "National Science Day & Noble Day Celebrations" held at CSIR-CECRI, on 28.02.2017.
- G. S. Tendolkar best paper presentation award in International Conference on Powder Metallurgy & Particulate Materials (PM-14) for the paper titled “Silver Nanoparticle Incorporated Porous Nano-Structured Titania Layer On Ti Metal: A Candidate For Orthopedic Implant” held in Hotel Le Royal Meridien, Chennai from 23rd - 25th Jan 2014.
- Best paper award in National Seminar on Challenges in Biomaterials and research for the paper titled “Development of bioactive titanium metal with antibacterial property by simple chemical treatment approach”, held in VIT university, Vellore on 23- 24th Dec. 2013.
- Outstanding student award during B.Tech & M.Tech graduation, Anna university, Chennai, India.

Grants and funding

- Financial Assistance to Student Projects for the Government Engineering Colleges “CERD (Plan) 4181-6307-Innovative Student Project”, 2024-'25 (Ongoing)
- SERB-National Post-doctoral Fellowship to conduct research at National Centre for Cell Science, Pune, India. 2021-23(Completed)

FDP/ WORKSHOP CONDUCTED/ORGANISED

- International Conference on “Smart & Green Materials for Biotechnology, Biochemical and Mechanical Applications” (IC-SGMat), 30th -2nd Nov. 2023 at Sree Buddha College of Engineering, Pattoor, Alappuzha.

Courses taught at SBCE

Advanced Cell Culture Techniques

Biomaterials, tissue engineering and stem cells

Bioprocess Engineering

Thermodynamics and heat transfer

Industrial Safety Management

Professional Ethics

Research Publications

- 1.HG Patil, A Rajendran, N Lenka, BS Kumar, S Murugesan, S Anandhan, Dalton Transactions, 53 (2024) 7812-7827. <https://doi.org/10.1039/D3DT04305C>. IF:4.569
2. K. Venkatesan, A.G.K.Tchekep, V. C. Anadebe, A. M. Mathew, P.V Sreya, A. Rajendran, R.C Barik, D. K. Pattanayak, Journal of the Mechanical Behavior of Biomedical Materials 149, 106210 (2024).<https://doi.org/10.1016/j.jmbbm.2023.106210>.IF:3.9
- 3.S. Aiswariya , V. S. Sharan , A. M. Daniel, A. Rajendran, Indian Chemical Engineer (2024)- (Under review)
4. S. Aiswariya , V. S. Sharan , A. M. Daniel, A. Rajendran PROCEEDINGS OF THE International Conference on “Smart & Green Materials for Biotechnology, Biochemical and Mechanical Applications” (IC-SGMat) 2023, ISBN: 978-81-965345-2-3.
5. V. L. Sahadevan, S. S. Varghese, Anjitha S, A. Rajendran, Indian Chemical Engineer (2024)- (Under review)
6. K. Aadil, A. Nathani, A. Rajendran, C. S. Sharma, N. Lenka, P. Gupta, Drug Delivery and Translational Research, Drug Delivery and Translational Research (2023). <https://doi.org/10.1007/s13346-023-01396-7> . IF:5.671
7. M.M Bahir, A. Rajendran, D.K. Pattanayak, N. Lenka, RSC Adv., 13(2023) 26967-2698
<https://doi.org/10.1039/D3RA04360F> . IF:3.9
8. D. Upreti, S. Bose, A. Rajendran, N. Lenka, R. Srivastava, T.U. Patro, Chemical Engineering Journal, Chemical Engineering Journal, 464 (2023) 142738. <https://doi.org/10.1016/j.cej.2023.142738> IF: 13.273
- 9.S. D. Kumar, M. F. Anwar, A. Rajendran, Vanitha C, D. K. Pattanayak, Transactions of the Indian Institute of Metals, 76 (2023) 1789–1798. IF: 1.391
10. A. Rajendran, D. K. Pattanayak, Heliyon, HELIYON, 8 (2022), e09122. <https://doi.org/10.1016/j.heliyon.2022.e09122> IF: 2.85
11. K.Venkatesan, A. M. Mathew, P.V. Sreya, S. Raveendran, A. Rajendran, B. subramanian, D.K.Pattanayak Adv. Powder. Technol., 32 (2021) 4576-4586). <https://doi.org/10.1016/j.apt.2021.10.008>. IF:4.83
12. A. Rajendran, D. K. Pattanayak, Engineering Sciences (CSIR-CECRI), Academy of Scientific and Innovative Research (AcSIR) 2020,<http://hdl.handle.net/10603/389299>.
13. A. Rajendran, D.K. Pattanayak, 2019 J. Mater. Sci. Eng. C, 109 (2020) 110558. <https://doi.org/10.1016/j.msec.2019.110558>. IF: 7.328
- 14.A. Rajendran, D.K. Pattanayak, Adv. Powder. Technol., 31 (2020) 695-701. <https://doi.org/10.1016/j.apt.2019.11.024>. IF:4.833
- 15.S. Mandal, V.V. Das, M. Debata, A. Panigrahi, P. Sengupta, A. Rajendran, D. K. Pattanayak, S. Basu, Emergent Mater. 2(2019) 453. <https://doi.org/10.1007/s42247-019-00055-3>. IF: 1.67
- 16.A. Rajendran, U. Kapoor, J Nivedhitha, N.Lenka, D. K. Pattanayak, ACS Appl. Bio Mater., 2, 9 (2019) 3808-3819. <https://doi.org/10.1021/acsabm.9b00420>. IF: 3.25

17. A. Rajendran, G. Vinoth, J. Nivedhitha, K. M. Iyer, D. K. Pattanayak, J. Mater. Sci. Eng. C, 99 (2019) 440–449. <https://doi.org/10.1016/j.msec.2019.01.097>. IF: 7.328
18. A. Rajendran, S. Sugunapriyadharshini, D. Mishra, D. K. Pattanayak, J. Mater. Sci. Eng. C, 98 (2019) 197-203. <https://doi.org/10.1016/j.msec.2018.12.096>. IF: 7.328
19. R. Karre, B. K. Kodli, A. Rajendran, J Nivedhitha, D. K. Pattanayak, K. Ameyama, S. R. Dey, J. Mater. Sci. Eng. C, 94 (2019) 619-627. <https://doi.org/10.1016/j.msec.2018.10.006>. IF: 7.328
20. E. A. Ofudje, A. Rajendran, A. I. Adeogun , M. A. Idowu, S. O. Kareem , D. K. Pattanayak, Adv. Powder. Technol., 29 (2018) 1-8. <https://doi.org/10.1016/j.appt.2017.09.008>. IF:4.833
21. P. Narendran, A. Rajendran, M. Garhnayak, L. Garhnayak, J. Nivedhitha, K. C. Devi, D. K. Pattanayak, Colloids Surf. B, 169 (2018) 143-150. <https://doi.org/10.1016/j.colsurfb.2018.04.039>. IF:5.268
22. E. Anbazhagan, A. Rajendran, D. Natarajan, M.S. Kiran, D. K. Pattanayak, Colloids Surf. B 143 (2016) 213–223. <https://doi.org/10.1016/j.colsurfb.2016.03.009>. IF:5.268
23. V. Prabu, P. Karthick, A. Rajendran, D. Natarajan, M. S. Kiran and D. K. Pattanayak, RSC Adv., 5 (2015), 50767. <https://doi.org/10.1039/C5RA04077A>. IF:3.36
24. A. Rajendran, R. C. Barik, D. Natarajan, M.S. Kiran, D. K. Pattanayak. Ceram. Int. 40 (2014) 10831-10838. <https://doi.org/10.1016/j.ceramint.2014.03.075>. IF:3.83
25. A. Rajendran and D. K. Pattanayak. RSC Adv., 4 (2014) 61444. <https://doi.org/10.1039/C4RA13107J>. IF:3.36
26. A. Rajendran, G. Vinoth, V. Shanthi, R. C. Barik and D. K. Pattanayak. Mater. Technol., 29 (2014) B26-B34. <https://doi.org/10.1179/1753555713Y.0000000113>. IF:3.846
27. A. Rajendran, D. K. Pattanayak, Transactions of Powder Metallurgy Association of India, 40(2) (2014) 14-20, Publisher: Powder Metallurgy Association of India (PMAI).

ROLES AND RESPONSIBILITIES

Class Advisor

Website link:

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

<https://vidwan.inflibnet.ac.in/profile/483312/NDgzMzEy>

Ms. Gopika Ajit






Assistant Professor

 gopikaajit61@gmail.com

UG: Sree Buddha College of Engineering, University of Kerala, India

PG: SRM Institute of Science and Technology, India

Area of Interest:

-  Chemical Engineering
-  Separation and recovery of Metals
-  Wastewater treatment

Professional Experience:

- ❖ Assistant Professor at SBCE (Feb 2024- Till date)

Publications

1. Edward Kavitha, **Ajit Gopika**, “*Review and assessment of the separation and recovery of zinc from the aqueous stream*”, Desalination and Water Treatment, 291(2023)131-143, DOI: <https://doi.org/10.5004/dwt.2023.29487>
2. **G.K. Shamnamol**, K.P. Sreelakshmi, **G. Ajith**, J.M. Jacob, *Effective utilization of drugs as green corrosion inhibitor-A review*, AIP Conference Proceedings. 2225 (2020). <https://doi.org/10.1063/5.0005931> (Scopus indexed)

Courses taught at SBC

Fruit and vegetable processing
Food industry Waste Management

ROLES AND RESPONSIBILTIES

- Consultancy Coordinator (Water Quality analysis)

Weblink:

Dr. Tamilmani Jayabalan



Assistant Professor

 tamiljayabalan@gmail.com

UG: Coimbatore Institute of Technology, Anna University, India






PG: National Institute of Technology Tiruchirappalli (NIT Trichy), India

PhD: National Institute of Technology Tiruchirappalli (NIT Trichy), India

Educational Qualifications (as per chronological order)

- 2006-2010- B.Tech., Chemical Engineering from Coimbatore Institute of Technology, Anna University, Tamil Nadu, India.
- 2012-2014 M.Tech., Energy Engineering from National Institute of Technology, Tiruchirappalli, India
- 2016-2021- Doctor of Philosophy from National Institute of Technology, Tiruchirappalli, India

Area of Interest:

-  Biohydrogen Production
-  Bioelectrochemical systems-MEC&MFC
-  Microalgae for CO₂ Capture
-  Photobioreactors
-  Renewable Energy

Professional Experience:

- ❖ 5 years of Teaching Experience (Lecturer at MKCE, Karur, Assistant Professor SCE Tiruchengode, Assistant Professor MAMCE Trichy, Assistant Professor (Adhoc) NIT AP)

- ❖ 5 years of Research Experience (Institute research fellowship -NIT Trichy)
- ❖ 3 years of Industrial Experience (Sakthi sugars Pvt Limited, Erode and Armstrong international Private Limited, Chennai)

Awards and Recognitions

Recipient of **Budding Researcher Award 2020** from NIT Tiruchirappalli for outstanding research performance

Outreach activities

- Short term course in Fluid Mechanics, Heat Transfer and Mass transfer for the students of Sethu Institute of Technology (Autonomous), Virudhunagar, Tamil Nadu
- Visiting Faculty for CIPET-CSTS Madurai in association with Kodankulam Nuclear Power Plant, engaged in one month coaching for KKNPP Competitive Exam
- Research consultant in the area of Microbial Fuel Cell, Bioelectrochemical systems and other aspects of Chemical and Energy Engineering

Courses taught at SBCE

Fundamentals of Heat and Mass Transfer
Food Plant Layout and Design

Industrial Waste Management

Research Publications

RESEARCH ARTICLE (SCI/SCIE indexed)

Tamilmani Jayabalan, Matheswaran M, Radhakrishnan T K, Samsudeen N, “*Influence of Nickel Molybdate Nanocatalyst for Enhancing Biohydrogen Production in Microbial Electrolysis Cell Utilizing Sugar Industrial Effluent*”, Bioresource Technology, 2020 <https://doi.org/10.1016/j.biortech.2020.124284>

Boobalan T, **Tamilmani Jayabalan**, Murugan S, W Kim, Sudhakar M, Nallathambi S, Samsudeen N, Kumar P, Arun A, “*Bioelectricity generation by natural microflora of septic tank wastewater (STWW) and biodegradation of persistent petrogenic pollutants by basidiomycetes fungi: An integrated microbial fuel cell system*”, Journal of Hazardous Materials, 2021 <https://doi.org/10.1016/j.jhazmat.2021.125228>

Prabu Govindarajan, Muthukannan Duraiselvam, Manickam Matheswaran, Amrith Prabakaran, **Tamilmani Jayabalan**, Varatharajulu Muthukrishnan, “*Laser surface texturing for enhancing microbial fuel cell-based electricity generation from wastewater*”, Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2022, <https://doi.org/10.1177/09576509211068280>

Samsudeen N, Nikhil T, **Tamilmani Jayabalan**, Boobalan T, Matheswaran M, Kalaichelvi P, Arun A, Arivalagan P “*Bioelectricity generation using iron (II) molybdate nanocatalyst coated anode during treatment of sugar wastewater in microbial fuel cell*”, Fuel, 2020 <https://doi.org/10.1016/j.fuel.2020.118119>

Boobalan T, James E, Abhispa B, Arumugam N, Arivalagan P, **Tamilmani Jayabalan**, Samsudeen N, Mukesh Doble, Arun A, “*Bioelectricity generation and analysis of anode biofilm metabolites from septic tank wastewater in microbial fuel cells*”, International Journal of Energy Research, 2020 <https://doi.org/10.1002/er.5734>

Satheesh M R, Boobalan T, Dinesh G H, Abhispa B, **Tamilmani Jayabalan**, Samsudeen N, Mukesh D, Pugazhendhi A, Arun A “*Fermentative hydrogen production and bioelectricity generation from food based industrial waste: An integrative approach*”, Bioresource Technology, 2020 <http://dx.doi.org/10.1016/j.biortech.2020.123447>

Tamilmani Jayabalan, Samsudeen N, Matheswaran M, Radhakrishnan T K, Pugazhendhi A, Arun A, “*Enhanced biohydrogen production from sugar industry effluent using nickel oxide and cobalt oxide as cathode nanocatalysts in microbial electrolysis cell*”, International Journal of Energy Research, 2020 <https://doi.org/10.1002/er.5645>

Tamilmani Jayabalan, Matheswaran M, Samsudeen N “*NiCo₂O₄-graphene nanocomposites in sugar industry wastewater fed microbial electrolysis cell for enhanced biohydrogen production*”, Renewable Energy, 2020 <https://doi.org/10.1016/j.renene.2020.03.071>

Tamilmani Jayabalan, Matheswaran M, Preethi V, Samsudeen N “*Enhancing biohydrogen production from sugar industry wastewater using metal oxide/graphene nanocomposite catalysts in microbial electrolysis cell*”, International Journal of Hydrogen Energy, 2020 <https://doi.org/10.1016/j.ijhydene.2019.09.068>

Samsudeen N, Ajit P H, Muthukumar K, **Tamilmani Jayabalan** “*Bioelectricity production from kitchen wastewater using microbial fuel cell with photosynthetic algal cathode*” Bioresource Technology, 2020 <https://doi.org/10.1016/j.biortech.2019.122226>

Samsudeen N, **Tamilmani Jayabalan**, Muthukumar K “*Simultaneous bioenergy generation and carbon dioxide sequestration from food wastewater using algae microbial fuel cell*”, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 2019 <https://doi.org/10.1080/15567036.2019.1666932>

Aiswarya D S, **Tamilmani Jayabalan**, Harshiny M, Nivedhini C, Samsudeen N, Matheswaran M, “*Enhancing power generation and treatment of dairy waste water in microbial fuel cell using Cu-doped iron oxide nanoparticles decorated anode*”, Energy, 2019 <https://doi.org/10.1016/j.energy.2019.01.102>

Tamilmani Jayabalan, Matheswaran M, Samsudeen N, “*Biohydrogen production from sugar industry effluents using nickel based electrode materials in microbial electrolysis cell*”, International Journal of Hydrogen Energy, 2019 <https://doi.org/10.1016/j.ijhydene.2018.09.219>

Nithiya E M, **Tamilmani Jayabalan**, Vasumathi K K, Premalatha M “*Improved CO₂ fixation with Oscillatoria sp . in response to various supply frequencies of CO₂ supply*”, Journal of CO₂ Utilization, 2017 <https://doi.org/10.1016/j.jcou.2017.01.025>

Anjana P A, C Jaya Prakash, O Bangarraju, **Tamilmani Jayabalan**, “*Catalytic pyrolysis of algae: kinetics and thermodynamic analysis*”, Chemical Engineering Communications, 2024

AP Anantharaman, O Bangarraju, CJ Prakash, **Tamilmani Jayabalan**, “*Thermochemical behavior and kinetics study of algae pyrolysis using iron oxide catalyst*”, International Journal of Chemical Kinetics, 2023

B Thulasinathan, **T Jayabalan**, N Arumugam, MR Kulanthaisamy, W Kim, P Kumar, M. Govarthanan, Arun A “*Wastewater substrates in microbial fuel cell systems for carbon-neutral bioelectricity generation: An overview*”, Fuel 317, 123369

BOOK CHAPTER

Samsudeen N, Matheswaran M, **Tamilmani Jayabalan**, “*Microbial electrolysis cells for converting wastes to biohydrogen*”, Biovalorisation of Wastes to Renewable Chemicals and Biofuels, Elsevier, 2020 <https://doi.org/10.1016/B978-0-12-817951-2.00015-8>

Pappu, S.M.J., Gummadi, S.N., **Jayabalan, T.**, “*Modeling and optimization of microbial production of xylitol*”, Role of Microbes in Industrial Products and Processes John Wiley & Sons, Inc , 2022 <https://doi.org/10.1002/9781119901198.ch9>

Samsudeen N, Boobalan T, Arun A, Sharon M P J, Bindhya KP, **Tamilmani Jayabalan**,” *Role of Microorganisms in Bioelectrochemical Systems for Hydrogen and Bioelectricity Production*”, Role of Microbes in Industrial Products and Processes John Wiley & Sons, Inc , 2022, <https://doi.org/10.1002/9781119901198.ch11>

Membership of Professional Bodies

- Life member in ISTE (Indian Society of Technical Educati

Website link:

<https://scholar.google.com/citations?user=WXIJaTsAAAAJ&hl=en>

BINDHYA KP



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bnkp012@gmail.com

Kerala, India (34 - Female)

Scopus ID – 57208722508

EDUCATION/ ACADEMIC QUALIFICATION

- **Doctor of Philosophy** (2017-07 to 2021-07), Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli, Tamilnadu, India.
- **Master of Technology in Energy Engineering** with 8.58 CGPA (2012-07 to 2014-06) from National Institute of Technology, Tiruchirappalli, Tamilnadu, India.
- **Bachelor of Technology in Chemical Engineering** with 67.8 % (2007-08 to 2011-05) from Government Engineering College, Thrissur, Kerala, India.

PROFESSIONAL EXPERIENCE

- **Teaching** – (August 2023 – April 2024) as assistant professor (Adhoc), Dept. of Chemical Engg., GEC Thrissur, Kerala.
- **Teaching** – (August 2022 – May 2023) as assistant professor (Adhoc), Dept. of Chemical Engg., NIT Andhra Pradesh.
- **Teaching** – (July 2014-May 2016) as assistant Professor, M. Kumarasamy College of Engineering, Karur, Tamilnadu.

TEACHING/MENTOR QUALIFICATIONS

- **2023 current** – Particle Technology Safety Technologies & Management (PG), Introduction to Chemical Engineering, Process Dynamics and Control Laboratory, Heat Transfer Laboratory
- **2022-08 to 2022-12** - Chemical Process Calculations, Mathematical methods in Chemical Engineering, Mass Transfer Laboratory, Process Instrumentation and Control Laboratory.
- **2015-06 to 2016-05** - Engineering Mechanics, Basic Civil & Mechanical Engineering, Thermal Engineering Laboratory
- **2014-07 TO 2015-05** - Environmental Science & Engineering, Basic Civil & Mechanical Engineering, Principles of Management. Thermal Engineering Laboratory.

RESEARCH/PROJECT EXPERIENCE

DOCTORAL RESEARCH

Thesis Title: RECEPTOR TARGETED – HYBRID NANOCARRIER FOR MAGNETICALLY MODULATED DRUG DELIVERY

- **Development of Bio-functionalized nanocarrier materials for targeted drug delivery:** Enhance the efficacy of cancer drugs by targeted delivery employing functionalized nanocarrier materials. Development of suitable carrier materials with stimuli-responsiveness, targetability and biocompatibility along with further optimization and biological evaluation for possible applications in biomedical field.

RESEARCH PUBLICATIONS

- “Dual stimuli responsive nanohybrid carrier targeting biotin receptors for the controlled delivery of eugenol” Indian Chemical Engineering Congress (CHEMCON-2020), 27-29 December, 2020, Organized by Indian Institute of Chemical Engineers (Virtual Conference).
1. Bindhya K. Purushothaman, Muni Harsha S, P. Uma Maheswari, K.M. Meera Sheriffa Begum, (2019), Magnetic assisted curcumin drug delivery using folate receptor targeted hybrid casein-calcium ferrite nanocarrier, *Journal of Drug Delivery Science and Technology*, 52, 509-520.
 2. Bindhya K. Purushothaman, P. Uma Maheswari, K. M. Meera Sheriffa Begum, (2020), Magnetic casein-CaFe₂O₄ nanohybrid carrier conjugated with progesterone for enhanced cytotoxicity of citrus peel derived hesperidin drug towards breast and ovarian cancer, *International Journal of Biological Macromolecules.*, 151, 293-304.
 3. Rhea Muthappa, Bindhya K. Purushothaman, K. M. Meera Sheriffa Begum, P. Uma Maheswari, (2020), Kinetic Modeling and Optimization of the Release Mechanism of Curcumin from Folate Conjugated Hybrid BSA Nanocarrier, *Chemical Product and Process Modeling*, 15 (1), pp. 20190026.
 4. Bindhya K. Purushothaman, P. Uma Maheswari, K. M. Meera Sheriffa Begum, (2021), pH and magnetic field responsive protein-inorganic nanohybrid conjugated with biotin: A biocompatible carrier system targeting lung cancer cells, *Journal of Applied Polymer Science*, 138 (10), art. no. 49949.
 5. Bindhya K. Purushothaman, P. Uma Maheswari, K. M. Meera Sheriffa Begum, (2021), Milk protein inspired multifunctional magnetic carrier targeting progesterone receptors: Improved anticancer potential of soybean-derived genistein against breast and ovarian cancers, *Materials Chemistry Physics*, 272, art. no. 125055.
 6. Bindhya K. Purushothaman, P. Uma Maheswari, K. M. Meera Sheriffa Begum, (2021) Glutamic acid functionalized casein-calciumferrite magnetic nanosystem based on paired targeting effect for synergistic anticancer therapy, *Materials Letters*, art. no. 130550.
 7. P. Uma Maheswari, Rhea Muthappa, Bindhya K. Purushothaman, K. M. Meera Sheriffa Begum, (2021), Evaluation of folic acid functionalized BSA-CaFe₂O₄ nanohybrid carrier for the

controlled delivery of natural cytotoxic drugs hesperidin and eugenol”, *Journal of Drug Delivery Science and Technology*, 61, art. no. 102105.

8. Kiruthiga Ramakrishnan, Chandrasekaran Nithya, Bindhya K Purushothaman, Nitesh Kumar, Sukumaran Gopukumar, (2017), $Sb_2O_4@RGO$ Nanocomposite Anode For High Performance Sodium- Ion Batteries, *ACS Sustainable Chemistry And Engineering*, 5,6, 5090-5098.
9. Book Chapter: Samsudeen Naina Mohamed, Boobalan Thulasinathan, Arun Alagarsamy, J. Sharon Mano Pappu, Bindhya K. Purushothaman, Tamilmani Jayabalan, (2022), “Role of Microorganisms in Bioelectrochemical Systems for Hydrogen and Bioelectricity Production”, In -Role of Microbes in Industrial Products and Processes , *Wiley*.

INTERNATIONAL CONFERENCES

1. “Kinetic modeling on the release mechanism of curcumin from folate conjugated hybrid BSA nanocarrier” International Conference on Advances and Challenges for Sustainable Eco System (ICACSE), 6-8 December 2018, National Institute of Technology, Tiruchirappalli.
2. “Folic Acid Functionalized BSA-calcium Ferrite Hybrid Carrier for Controlled and Targeted Delivery of Natural Cytotoxic Agents” International Conference on Multifunctional and Hybrid Composite Materials for Energy, Environment and Medical applications (ICMHCEE-2019), 9-11 September 2019, National Institute of Technology, Tiruchirappalli.