

Dr. Shamnamol G K



Associate Professor

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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>