



Dr. Neelima S

Assistant Professor in Basic Sciences and Humanities

Academic Responsibilities

Institute level

- Member of Community Committed Activities Club
- Member of the Debate Club
- Member of Women Empowerment Cell
- Member of GATE Coaching Team

Department Level

- Tutor 2025-2028 ECE Batch

Education Summary

Doctor of Philosophy: School of Pure and Applied Physics,
Mahatma Gandhi University, Kottayam, Kerala (2025)

Post-Graduation: **M. Sc. Physics (2018)**
University of Calicut

Graduation: **B.Sc. Physics (2016)**
St Joseph's College Devagiri, Calicut

Academic Projects

- Confocal Microscopy Studies on Ionic Microgel Colloidal Crystal Transitions CSIR National Chemical Laboratory (NCL), Pune, India — April – June 2018 Conducted confocal microscopy experiments to analyze phase transitions in ionic microgel colloidal crystals. Gained hands-on experience in sample preparation, imaging techniques, and data analysis. Worked under the guidance of Dr. Suresh Bhat as part of a Master's project.
- Layman's Understanding of Light - An Analysis Regional Science Centre & Planetarium, Calicut — September 2015 – January 2016 Collaborated with a team to investigate how Layman's perceive concepts related to light. Designed interactive demonstrations and experiments to simplify complex physics concepts. Presented findings as part of the B.Sc. (Physics) curriculum at St Joseph's College (Autonomous), Calicut.

Journal/Papers Published

A complete list of my peer-reviewed publications can be found on my Selected publications include: [Neelima S Google Scholar](#)

- S. Neelima, S. Sreejith, S. Shajahan, A. Raj, L. Vidya, V.M. Aparna, E.K. Radhakrishnan, C. Sudarsanakumar Highly crystalline bacterial cellulose production by *Novacetimonas hansenii* strain isolated from rotten fruit *Materials Letters*, 333 (2023), 133622. DOI: 10.1016/j.matlet.2022.133622
- Neelima Sathianathan, Vipina Vinod Thazhenandayipurath, Aparna Vadakoot Mukundan, Aparna Raj, Vidya Latha, Radhakrishnan Edayileveetil Krishnankutty & Sudarsanakumar Chellappanpillai One-Pot Synthesis and Characterization of Naringenin-Capped Silver Nanoparticles with Enhanced Biological Activities *Applied Biochemistry and Biotechnology* (2025). DOI: 10.1007/s12010-025-05181-9
- Neelima Sathianathan, R.R. Karri, G. Gunavijayan, A. Raj, N.M. Mubarak, L. Vidya, A.V. Mukundan, R.E. Krishnankutty, C. Sudarsanakumar Optimisation of bacterial cellulose production by *Novacetimonas hansenii* isolated from pomegranate fruit wastes *Journal of Molecular Liquids* (2025). DOI: 10.1016/j.molliq.2025.126912
- Aparna Raj, Riju K. Thomas, L. Vidya, V. M. Aparna, S. Neelima & C. Sudarsanakumar Exploring the cytotoxicity on human lung cancer cells and DNA binding stratagem of camptothecin functionalised silver nanoparticles through multi-spectroscopic, and calorimetric approach *Scientific Reports* (2023). DOI: 10.1038/s41598-023-34997-w

Conferences Presentation

- 4th International Conference on Nanomaterials: Synthesis, Characterization, and Applications
Poster Presentation, April 2019, Mahatma Gandhi University, Kottayam, Kerala.
- 14th International Conference on Advancement in Polymeric Materials (APM 2023), Oral
Presentation
March 2023, CIPET: SARP-APDDRL, Bangalore.
- International Conference on Advanced Materials for Sustainability (ICAMS 2023), Poster
Presentation
December 21-23, 2023, University of Calicut, Kerala.
- National Conference on Functional Materials and Applications (NCFMA), Poster Presentation
Cochin University of Science and Technology, Kerala.
- Frontiers in Biomaterials and Crystallography (FBCNS) 2024, Oral Presentation, Mahatma Gandhi
University, Kottayam, Kerala.
- 6th International Symposium on Bacterial Nanocellulose (ISBNC) 2024, Poster Presentation
Donghua University, Shanghai, China.
- 16th International Workshop on Advanced Materials (IWAM) 2025, Poster Presentation
Ras Al Khaimah Center for Advanced Materials (RAK CAM), Ras Al Khaimah, United Arab
Emirates.

Workshops and meetings attended

- Workshop on Condensed Matter and Materials Science CMET Thrissur, September 2019 Faculty
Development Programme on Smart and Functional Materials NIT Calicut, August 2021
- 3-day Workshop on Research to Commercialization BIIC, Mahatma Gandhi University, November
2022
- One-Week Training Program on Uses of Sophisticated Instruments in Material Science and
Nanotechnology SMIT Sikkim, September 2022
- Three-Day National Workshop on Diffraction Data Analysis: X-ray and Electron Diffraction STIC,
CUSAT, February 2023
- Huddle Global 2022 India's Largest Beach Startup Festival Workshop on "MedTech Innovations:
From Concept to Compliance"
- Bio Connect Kerala 2023 th International Conclave and Expo on Life Sciences 7 Stakeholders
Connect Meet (SCM) Organized by KMTC in association with KVASU, July 2023

Awards and Achievements

- Selected for the Research Incubation Programme (RINP) funded by Kerala Startup Mission for developing a bacterial cellulose-based wound dressing for diabetic foot ulcers.
- Published research in reputable journals and presented at international conferences.
- Qualified JAM (Joint Admission Test for M.Sc.) with top percentile.
- INSPIRE Scholarship recipient, awarded by the Department of Science and Technology (DST), Government of India. Awarded Best Outgoing Student from the Physics department, St. Joseph's College Devagiri, Calicut.
- District-level winner of Young Innovators Programme (YIP) 4.0 under Kerala Development and Innovation Strategic Council (K-DISC).
- Best Paper Award for oral presentation on "Green and Sustainable Polymeric Systems" at APM 2023, CIPET: SARP-APDDRL Bangalore