Dr. PRAVEEN KUMAR C.S.
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ACADEMIC QUALIFICATIONS

- Ph.D. Environmental Science, Mahatma Gandhi University, Kottayam, 2022, Awarded.
- M. Phil Environment Management, Mahatma Gandhi University, Kottayam, 2013.
- M.Sc. Environmental Science & Management, Mahatma Gandhi University, Kottayam, 2011.
- B.Sc. Botany, Mahatma Gandhi University, Kottayam, 2009.

WORK EXPERIENCE

POST-DOCTORAL RESEARCH

Awarded the prestigious Chief Minister's NavaKerala Post-Doctoral Fellowship, State Government of Kerala, and currently serving as Post-Doctoral Researcher engaged in innovative studies on "microalgae-assisted fuel cells for wastewater treatment and bioelectricity generation"

PROJECT FELLOW
National Centre for Earth Science Studies. Trivandrum

ESHS MANAGER

Worked as ESHS (Environment Social Health and Safety) officer in Kerala State Transport Project funded by World Bank.

ENVIRONMENTAL AUDITOR
Worked as an Environmental Auditor, conducting comprehensive environmental audits in various colleges, including assessment of water quality, soil health, biodiversity status, waste management practices, and overall campus sustainability performance. Evaluated environmental compliance and resource management practices and provided recommendations to improve ecological conservation and sustainable development initiatives within academic institutions.

PARTICIPANT
Indian Arctic Expedition 2017, Indian Ocean Hydrothermal expedition 2017.

AWARDS

- Awarded the prestigious Rajiv Gandhi National Fellowship (RGNF) by the University Grants Commission, Government of India, for pursuing full-time Ph.D. research in Environmental Science under the SC category (2016–2021).

- Awarded Third Prize in Poster Presentation at the International Conference on Water: From Pollution to Purification (ICW 2024) held at Mahatma Gandhi University, Kottayam, Kerala, India, for the poster titled "A Multifunctional Approach for Simultaneous Wastewater Treatment and Bioenergy Production."

- Selected among the Top Ten Best Poster Presentations at the International Conference on Advanced Materials and Sustainable Technologies for Environmental Remediation (IC-AMSTER 2026) held at Mahatma Gandhi University, Kottayam, for the poster titled "Synergistic Role of Riboflavin and Biochar-Based Modified Electrodes in Microbial Assisted Electrical Systems for Environmental Remediation."

PROJECTS COMPLETED

- M.Sc Project: A Preliminary Study on the Cultivation of Mixed Microalgae Culture and its Potential for Biodiesel Production
- M.Phil Project: A Comparative study on the lipid production by selected freshwater and marine microalgae under different experimental conditions and its potential for biodiesel production
- Ph.D.: Wastewater treatment and use of spent biomass for selected biological applications: A study using two freshwater microalgae. *Chlamydomonas reinhardtii* and *Planktochlorella nurekis*
- Post-doc: Microalgae Assisted Fuel Cell for Wastewater Treatment and Bioelectricity Generation.

SEMINARS & CONFERENCES

1. **C.S. Praveen Kumar** and V.P Sylas "Phycoremediation and Lipid Production Potential of *Chlorella* sp. International conference on water: from pollution to purification. Kottayam, 23-26 December 2015.
2. **C.S. Praveen Kumar** and V.P Sylas "An experimental study on the cultivation of mixed microalgal culture and its potential for lipid production." Presented a paper in Kerala Environmental Congress. Mammen Mappila Town Hall, Kottayam, 6-8 May 2015.
3. **C.S. Praveen Kumar** and V.P Sylas. "Phycoremediation of Cashew Nut Processing Wastewater using two native microalgae and subsequent lipid production." Kerala science congress, Calicut University, Malappuram, 28-30 January 2015.
4. **C.S. Praveen Kumar,** V. Ambily, J. Mechery, D. M. Thomas and V.P Sylas. Paper and pulp mill wastewater treatment using indigenous microalgae, *chlorella sp.* and *chlamydomonas sp*. and subsequent lipid production. International conference on water: from pollution to purification. Kottayam, India. 12-15 December 2016.
5. **C.S. Praveen Kumar**, Jerry Mechery, Daniya M.Thomas, V. Ambily and V.P. Sylas. Phycoremediation of cashew nut processing wastewater and pulp and paper mill effluent: Analysis of heavy metals using ICP-MS. Third international conference on frontiers of mass spectrometry, Kottayam. 11-14 December 2017.
6. **C.S. Praveen Kumar**, Jerry Mechery, Raisa Kabeer and V.P Sylas. Phycoremediation of cashew nut processing wastewater and pulp and paper mill effluent using native *chlorella* sp. 29th Kerala Science Congress, MarThoma college, Thiruvalla, 28-30 January 2017.
7. **Praveen Kumar C.S.,** J. Mechery, V. Ambily, D.M Thomas and V.P. Sylas "Wastewater Treatment And Subsequent Lipid Production Potential Of Freshwater Microalga, *Chlorella* Sp. National seminar at Vazhoor NSS college. 4-5 February 2016.
8. **C.S. Praveen Kumar,** Jerry Mechery, V. Ambily and V.P. Sylas. Treatment of Cashew Nut Processing Waste Water Using Two Microalgae – A Comparative Analysis. International conference on water. Kottayam, India. 07-10 December 2018.
9. **C.S. Praveen Kumar**, Jerry Mechery, Raisa Kabeer and V.P Sylas. Phycoremediation of pulp and paper mill effluent using *Planktochlorella nurekis.* Kerala science congress. Fathima Mata College, Kollam. 02-03 February 2019.
10. **C.S. Praveen Kumar**, Ambily V. and V.P. Sylas. Antibacterial and antioxidant properties of the extracts of *Planktochlorella nurekis* and *Chlamydomonas reinhardtii.* National conference on bioprospecting of algae: Resources, conservation and utilization. Central University of Kerala,

Kasargod. 1-2 August 2019.

11. **C.S. Praveen Kumar** and V.P. Sylas. Effect of light intensity in the algae based treatment of pulp and paper mill effluent: an experimental study. Proceedings of International conferences on photochemistry and sustainable energy (ICPSE), Alappuzha. 16-19 October 2019.
12. **C.S. Praveen Kumar,** Ambily V., Raisa Kabeer and V. P. Sylas. Identification of bioactive compounds from the extracts of *Planktochlorella nurekis* and *Chlamydomonas reinhardtii* using LC-Q-ToF-MS and GC-MS. International conference on mass spectrometry, School of environmental sciences, Kottayam. 4-7 December 2019.
13. **C.S. Praveen Kumar** and V.P. Sylas. Phyco-synthesized iron nanoparticle using *Planktochlorella nurekis* and its potential for acetaminophen remediation. International Conference on Water: From Pollution to Purification., (online), Kottayam, Kerala, India. 12-14 December 2021.
14. **C.S. Praveen Kumar,** Mahesh Mohan, A.P. Thomas and V.P. Sylas. Green microalga in fuel cell technology: A multifunctional approach for simultaneous wastewater treatment and bioenergy production. International Conference on Water from Pollution to Purification, Kottayam, Kerala, 12-15 December 2024.
15. **C.S. Praveen Kumar,** Microalgae Assisted Fuel cell for Sustainable Wastewater Treatment and Renewable Energy Generation. International Conference on Towards a Sustainable Future: Scientists and Sages Meet, M.G. University, Kottayam, Kerala, 6-8 October 2025.
16. **C.S. Praveen Kumar**, Mahesh Mohan, V.P. Sylas, A.P. Thomas. Synergistic Role of Riboflavin and Biochar-Based Advanced Electrodes in Microalgae Assisted Fuel Cells for Sustainable Environmental Remediation. International Conference on Advanced Materials and Sustainable Technologies for Environmental Remediation. M.G. University, Kottayam, Kerala, 12-15 February 2026.

PUBLICATIONS

1. **Sasi, P.K.C.,** Ambily Viswanathan, J. Mecherry., Thomas, D. M., Jacob, J. P., & Paulose, S. V. (2020). Phycoremediation of Paper and Pulp Mill Effluent using *Planktochlorella nurekis* and *Chlamydomonas reinhardtii*–A Comparative Study. *Journal of Environmental Treatment Techniques*, *8*(2), 809-817.
2. **Kumar, C. P**., Sylas, V. P., Cyril, N., Ambily, V., Sunila, C. T., Sreekanth, N. P., & Rayaroth, M. P. (2021). Acetaminophen removal using green synthesized iron nanoparticles with a fresh water microalga, *Planktochlorella nurekis*. Nano-Structures & Nano-Objects, *26*, 1-11. 10.1016/j.nanoso.2021.100700.
3. **Kumar, C. P**., Sylas, V. P., Mechery, J., Ambily, V., Kabeer, R., & Sunila, C. T. (2023). Phycoremediation of cashew nut processing wastewater and production of biodiesel using *Planktochlorella nurekis* and *Chlamydomonas reinhardtii*. *Algal Research*, *69*, 102924. IF:5.0. 10.1016/j.algal.2022.102924.
4. **Kumar, C. P.,** Sylas, V. P., Cyril, N., Mechery, J., Anila, B. N., Ambily, V., ... & Sunila, C. T. (2026). Antibacterial, antioxidant and cytotoxic activities of two freshwater microalgae, *Planktochlorella nurekis* and *Chlamydomonas reinhardtii*. *Pharmacological Research-Natural Products*, 11, 100766. https://doi.org/10.1016/j.prenap.2026.100766.
5. **Kumar, C. P**., Mohan, M., Sylas, V. P., Thomas, A. P., Mechery, J., & Mohan, N. (2026). Role of microalgae in fuel cell based wastewater treatment and bioelectricity generation. *Discover Water*. https://doi.org/10.1007/s43832-026-00404-4.
6. Asharose, Saizen, I., & **Sasi, P. K. C**. (2015). Awareness Workshop as an Effective Tool and Approach for Education in Disaster Risk Reduction: A Case Study from Tamil Nadu, India. *Sustainability*, 7(7). 8965-8984, IF:4.2. **https://doi.org/10.3390/su7078965**

7. Zachariah, E. J., Sabulal, B., Nair, D. N. K., Johnson, A. J., & **Kumar, C. S. P.** (2016). Carbon dioxide emission from bamboo culms. *Plant Biology*, *18*(3), 400-405. IF: 3.4. 0.1111/plb.12435.
8. Kabeer, R., Varghese, R., Kochu, J. K., George, J., **Sasi, P. C.,** & Poulose, S. V. (2014). Removal of Copper by *Eichhornia crassipes* and the Characterization of Associated Bacteria of the Rhizosphere System. *Environment Asia*, *7*(2), 19-29. 10.14456/ea.2014.20.
9. Mechery, J., Thomas, D. M., **Kumar, C. P**., Joseph, L., & Sylas, V. P. (2019). Biohydrogen production from acidic and alkaline hydrolysates of paddy straw using locally isolated facultative bacteria through dark fermentation. *Biomass Conversion and Biorefinery*, 11, 1263–1272. IF: 4.3. 10.1007/s13399-019-00515-0.
10. Mechery, J., **Kumar, P.C. S.**, Nair, D. K., & Sylas, V. P. (2014). Biohydrogen production by microbial communities isolated from biogas plant slurry using glucose as substrate. *International Journal of Current Research*, 6(12), 10942 -10945. http://www.journalcra.com.
11. Kabeer, R., VP, S., **CS, P**. K., AP, T., V, S., EK, R., KR, B. (2022). Role of heavy metal tolerant rhizosphere bacteria in the phytoremediation of Cu and Pb using Eichhornia crassipes (Mart.) Solms. *International Journal of Phytoremediation*, 24 (11), 1120-1132. IF:3.1. 10.1080/15226514.2021.2007215.
12. Viswanathan, A., **Kumar, P.C.S**., & Sylas V.P. (2024). In vitro study on the stress induced biomass and lipid production by marine diatom, *Chaetoceros muellerii* OQ390046. *Afrcan Journal Biological Sciences* 6(15), 4532-4566. https://doi.org/10.53555/AJBR.v27i3.4322.
13. Ambily, V., **Praveenkumar, C. S**., Sumayya Asharaf, S. K. L., Anila, B. N., & Sylas, V. P. (2024). Comprehensive Analysis of Antibacterial and Antiproliferative Activities, and Characterization of Bioactive Compounds in The Marine Diatom, *Chaetoceros muellerii* OQ390046. *27*(3), 1955-1961. https://doi.org/10.53555/AJBR.v27i3.4322.