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Professional Experience

Apr 2021 – present	**Assistant Professor** *Gurukula Kangri (Deemed to be University), Haridwar.* Teaching & Research	Haridwar, India
May 2020 – Mar 2021	**Assistant Professor (Visiting)** *Indian Institute of Technology (ISM) Dhanbad* Teaching & Research	Dhanbad, India
May 2015 – May 2020	**INSPIRE Faculty (DST)** *Indian Institute of Technology (ISM) Dhanbad* Teaching & Research	Dhanbad, India

Education

PhD
Birla Institute of Technology
First Division

MSc
Vidyasagar University
First Division

Projects

2022 – present	**An effective strategy for algal biomass harvesting through functionalized biopolymer** *DST-SERB/Start up Grant* Grant: 28.59 Lakhs
2022 – 2024	**Biofilm forming Cyanobacteria in the deterioration of heritage of Uttarakhand** *Uttarakhand State for Council for Science & Technology (UCOST), Govt. of Uttarakhand* Grant: 8.01 Lakhs
2021 – 2023	**Arid Region Reclamation Technology with respect to Lignite Mining Areas in Kutch, Gujarat & Improving the quality and yield of salt produced by the marginal agarias of (Halwad Region) through scientific intervention and improving their income through value addition of bitterns, halophyte plantation and potable water recovery** *DST /ASACODER* Grant: 53.61 Lakhs

Publications

1. . Muthuraj, Choudhary, E., Chandan Kumar Maity, Ejjurothu Ramya Lakshmi Keerthana, Abdullahi Dahiru Datti, Banerjee, C., & Das, D. (2025). Biomass extract-mediated preparation of magnesium-doped nickel oxide nanoparticles and their in vitro bioactivities assessment. *Journal of Molecular Structure*, 1320, 139555–139555. https://doi.org/10.1016/j.molstruc.2024.139555

(IF: 4.0/Q2)

2. Kumar, S., Bithel, N., Kumar, S., Kishan, Sen, M., & Banerjee, C. (2024). Phyto-mediated synthesis of zinc oxide nanoparticles from *Clerodendrum infortunatum* L. leaf extract and evaluation of antibacterial potential. *South African Journal of Botany*, 164, 146–151. https://doi.org/10.1016/j.sajb.2023.11.029
(IF: 2.7/Q2)

3. Kumar, N., Tripathi, N., Kumar, S., Manoj Kushwaha, Banerjee, C., & Dey, S. (2023). Mangiferin from Enicostemma littorale Blume with in silico and in vitro anti-inflammatory potential. *Journal of Biomolecular Structure & Dynamics*, 1–10. https://doi.org/10.1080/07391102.2023.2253914
(IF: 2.7/Q2)

4. Kumar, N., Banerjee, C., Negi, S., & Shukla, P. (2022). Microalgae harvesting techniques: updates and recent technological interventions. *Critical Reviews in Biotechnology*, 43(3), 342–368. https://doi.org/10.1080/07388551.2022.2031089
(IF: 8.2/Q1)

5. Kumar, N., Banerjee, C., Chang, J.S., & Shukla, P. (2022). Valorization of wastewater through microalgae as a prospect for generation of biofuel and high-value products. *Journal of Cleaner Production*, 132114. https://doi.org/10.1016/j.jclepro.2022.132114
(IF: 9.8/Q1)

6. Ray, M., Kumar, V., & Banerjee, C. (2022). Kinetic modelling, production optimization, functional characterization and phyto-toxicity evaluation of biosurfactant derived from crude oil biodegrading Pseudomonas sp. IITISM 19. *Journal of Environmental Chemical Engineering*, 10(2), 107190. https://doi.org/10.1016/j.jece.2022.107190
(IF: 7.4/Q1)

7. Roy, A., Guha Ray, P., Manna, K., Banerjee, C., Dhara, S., & Pal, S. (2021). Poly(N-vinyl imidazole) Cross-Linked β-Cyclodextrin Hydrogel for Rapid Hemostasis in Severe Renal Arterial Hemorrhagic Model. *Biomacromolecules*, 22(12), 5256–5269. https://doi.org/10.1021/acs.biomac.1c01174
(IF: 5.5/Q1)

8. Kumar, N., Banerjee, C., & Jagadevan, S. (2021). Identification, characterization, and lipid profiling of microalgae Scenedesmus sp. NC1, isolated from coal mine effluent with potential for biofuel production. *Biotechnology Reports*, 30, e00621. https://doi.org/10.1016/j.btre.2021.e00621

9. Ray, M., Kumar, V., Banerjee, C., Gupta, P., Singh, S., & Singh, A. (2021). Investigation of biosurfactants produced by three indigenous bacterial strains, their growth kinetics and their anthracene and fluorene tolerance. *Ecotoxicology and Environmental Safety*, 208, 111621. https://doi.org/10.1016/j.ecoenv.2020.111621(IF : 6.2/Q1)

10. Kumar, N., Banerjee, C., & Jagadevan, S. (2020). Cationically functionalized dextrin polymer as an efficient flocculant for harvesting microalgae. *Energy Reports*, 6, 2803–2815. https://doi.org/10.1016/j.egyr.2020.09.040
(IF: 4.7/Q2)

11. Chawley, P., Banerjee, C., & Jagadevan, S. (2020). Growth of planktonic and biofilm culture of Nitrosomonas mobilis Ms1 in response to stoichiometric ammonia consumption. *International Biodeterioration & Biodegradation*, 154, 105080. https://doi.org/10.1016/j.ibiod.2020.105080
(IF: 4.1/Q2)

12. Banerjee, S., Tiwade, P. B., Sambhav, K., Banerjee, C., & Bhaumik, S. K. (2019). Effect of alginate concentration in wastewater nutrient removal using alginate-immobilized microalgae beads: Uptake kinetics and adsorption studies. *Biochemical Engineering Journal*, 149, 107241. https://doi.org/10.1016/j.bej.2019.107241
(IF: 3.7/Q2)

13. Banerjee, A., Guria, C., Maiti S, K., Banerjee, C., & Shukla, P. (2019). Carbon bio-fixation, effect of physicochemical factors and carbon supply strategies by Nannochloropsis sp. using flue gas and fertilizer. *Biomass and Bioenergy*, 125, 95–104. https://doi.org/10.1016/j.biombioe.2019.04.002
(IF: 5.8/Q2)

14. Midya, L, Patra A,S., Banerjee, C., Panda A, B., & Pal, S. (2019). Novel nanocomposite derived from ZnO/CdS QDs embedded crosslinked chitosan: An efficient photocatalyst and effective antibacterial agent. *Journal of Hazardous Materials*, 369, 398–407. https://doi.org/10.1016/j.jhazmat.2019.02.022
(IF: 12.2/Q1)

15. Kumar, N., Banerjee, C., Kumar, N., & Jagadevan, S. (2019). A novel non-starch based cationic polymer as flocculant for harvesting microalgae. *Bioresource Technology*, 271, 383–390. https://doi.org/10.1016/j.biortech.2018.09.073
(IF: 9.7/Q1)

16. Jagadevan, S., Banerjee, A., Banerjee, C., Guria, C., Tiwari, R., Baweja, M., & Shukla, P. (2018). Recent developments in synthetic biology and metabolic engineering in microalgae towards biofuel production. *Biotechnology for Biofuels*, 11(1). https://doi.org/10.1186/s13068-018-1181-1
(IF: 6.0/Q2)

17. Banerjee, A., Banerjee, C., Negi, S., Chang, J.-S., & Shukla, P. (2017). Improvements in algal lipid production: a systems biology and gene editing approach. *Critical Reviews in Biotechnology*, 38(3), 369–385. https://doi.org/10.1080/07388551.2017.1356803
(IF: 8.2/Q1)

18. Anand, V., Singh, P. K., Banerjee, C., & Shukla, P. (2017). Proteomic approaches in microalgae: perspectives and applications. *3 Biotech*, 7(3). https://doi.org/10.1007/s13205-017-0831-5

(IF: 2.0)
19. Sinha, S. K., Kumar, M., Guria, C., Kumar, A., & Banerjee, C. (2017). Biokinetic model-based multi-objective optimization of Dunaliella tertiolecta cultivation using elitist non-dominated sorting genetic algorithm with inheritance. *Bioresource Technology*, 242, 206–217. https://doi.org/10.1016/j.biortech.2017.03.146
(IF: 9.7/Q1)

20. Sarkar, A., Saha, A., Lipi Midya, Banerjee, C., Narayan Mandre, Asit Baran Panda, & Pal, S. (2017). Cross-Linked Biopolymer Stabilized Exfoliated Titanate Nanosheet-Supported AgNPs: A Green Sustainable Ternary Nanocomposite Hydrogel for Catalytic and Antimicrobial Activity. *ACS Sustainable Chemistry & Engineering*, 5(2), 1881–1891. https://doi.org/10.1021/acssuschemeng.6b02594
(IF: 7.1/Q1)

21. Banerjee, A., Subodh Kumar Maiti, Chandan Guria, & Banerjee, C. (2017). Metabolic pathways for lipid synthesis under nitrogen stress in *Chlamydomonas* and *Nannochloropsis*. *Biotechnology Letters*, 39(1), 1–11. https://doi.org/10.1007/s10529-016-2216-y
(IF: 2.0/Q3)

22. Banerjee, C., Dubey, K. K., & Shukla, P. (2016). Metabolic Engineering of Microalgal Based Biofuel Production: Prospects and Challenges. *Frontiers in Microbiology*, 7. https://doi.org/10.3389/fmicb.2016.00432
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23. Banerjee, C., Singh, P. K., & Shukla, P. (2016). Microalgal bioengineering for sustainable energy development: Recent transgenesis and metabolic engineering strategies. *Biotechnology Journal*, 11(3), 303–314. https://doi.org/10.1002/biot.201500284
(IF: 3.2/Q2)

24. Banerjee, C., Ghosh, S., Sen, G., Mishra, S., Shukla, P., & Bandopadhyay, R. (2014). Study of algal biomass harvesting through cationic cassia gum, a natural plant based biopolymer. *Bioresource Technology*, 151, 6–11. https://doi.org/10.1016/j.biortech.2013.10.035
(IF: 9.7/Q1)

25. Banerjee, C., Ghosh, S., Sen, G., Mishra, S., Shukla, P., & Bandopadhyay, R. (2013). Study of algal biomass harvesting using cationic guar gum from the natural plant source as flocculant. *Carbohydrate Polymers*, 92(1), 675–681. https://doi.org/10.1016/j.carbpol.2012.09.022
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26. Banerjee, C., Bandopadhyay, R., & Shukla, P. (2012). A Simple Novel Agar Diffusion Method for Isolation of Indigenous Microalgae Chlamydomonas sp. CRP7 and Chlorella sp. CB4 from Operational Swampy Top Soil. *Indian Journal of Microbiology*, 52(4), 710–712. https://doi.org/10.1007/s12088-012-0295-6
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27. Banerjee, C., Gupta, P., Mishra, S., Sen, G., Shukla, P., & Bandopadhyay, R. (2012). Study of polyacrylamide grafted starch based algal flocculation towards applications in algal biomass harvesting. *International Journal of Biological Macromolecules*, 51(4), 456–461. https://doi.org/10.1016/j.ijbiomac.2012.06.011
(IF: 7.0/Q2)

Declaration

I hereby declare that all the statements made in this application are true, complete & correct to the best of my knowledge & belief. Dr. Chiranjib Banerjee Scopus author's ID: 55506303400