Personal Profile

- **Name:** **Sampa Mondal**
- **Contact:** Department of Physics,
  Bankura Zilla Saradamani Mahila Mahavidyapith
  Natunchati, Bankura, 722101, West Bengal, India.
- **Phone No:** 8250514290
- **E Mail:** sampa.mondal998@gmail.com / sampa@bzsmcollege.org

Academic Position:

- **SACT** in Physics, Bankura Zilla Saradamani Mahila Mahavidyapith, Bankura, West Bengal, India.

Research Interests:

- **Nanomaterials and Nanocomposites**
- **Optical Properties of Nanomaterials**
- **Biomedical and Environmental Applications of Nanomaterials**
- **Energy Storage**
- **Medical Physics**

Education:

- **M.Sc. (2018, BU, Chhattisgarh)**
- **B.Ed. (2020, BU, West Bengal)**
- **Ph.D. (Thesis Submitted, BKU, West Bengal)**

❖ Research Publications:

1. Sampa Mondal and Baibaswata Bhattacharjee, "Amelioration of the photothermal conversion efficiency in CuS nanostructures by tailoring the surface plasmon resonance: a semi-quantitative study", Optical and Quantum Electronics, 57(6): 360 (2025). https://doi.org/10.1007/s11082-025-08279-w

2. Sampa Mondal and Baibaswata Bhattacharjee, "Tailoring the optical properties of aloe vera functionalized zinc oxide nanoparticles in quest of an ameliorated sun-blocking agent: a semi-quantitative study on photo-protection, photo-stability, antioxidant and photo-catalytic properties", Emergent Materials (2025). https://doi.org/10.1007/s42247-025-01092-x

3. Sampa Mondal and Baibaswata Bhattacharjee, "Multicolour Luminescence from Undoped ZnO Nanoparticles: An Exciting Outcome of Controlling the Annealing Atmosphere in a Facile Manner", Journal of Fluorescence (2025). https://doi.org/10.1007/s10895-025-04272-4

4. Sampa Mondal and Baibaswata Bhattacharjee, "Degradation of the Environmental Pollutant Congo Red Dye through Adsorption and Photocatalysis Owing to the Exposure of CuS Nanoflowers", Journal of Water and Environmental Nanotechnology, 9(4): 415-427 (2024). https://doi.org/10.22090/jwent.2024.04.04

5. Sampa Mondal, Nilanjana Chatterjee and Baibaswata Bhattacharjee, "Impact of Using α-Fe2O3 Nanoparticles as Dietary Supplements on the Growth of a Critically Endangered Minor Carp Puntius sarana (Hamilton, 1822)", Science and Culture, 90 (7–8): 298-301 (2024). https://doi.org/10.36094/sc.v89.2024.Impact_of_Using_α-Fe2O3_Nanoparticles.Mondal.298

❖ Conferences/Workshops/Others:

1. Sampa Mondal and Baibaswata Bhattacharjee, "Toiloring the UV Blocking Property of ZnO Nanoparticles: A Comparison with some popular commercial sunscreen products", 5th Regional Science and Technology Congress 2022-23, Bankura University, Bankura.

2. Sampa Mondal, Nilanjana Chatterjee and Baibaswata Bhattacharjee, “The Effects of Nano ZnO Dietary Supplements on the Reproductive performance of Adult Male Puntius sarana (Hamilton,1822)”, 5th Regional Science and Technology Congress 2022-23, Bankura University, Bankura. (Attended)

3. Sampa Mondal and Baibaswata Bhattacharjee, “A face-to-face comparison of UV-proptective properties of zinc oxide nanoparticles to popular commercial sunscreen”, international seminar, 2023, B. B. College, Asansol.

4. Sampa Mondal and Baibaswata Bhattacharjee, “Enhanced catalytic and photocatalytic degradation of environmental contaminant Congo red by copper sulphide nanoparticles”, national seminar, 2023, Saldiha College, Bankura.

5. Sampa Mondal and Baibaswata Bhattacharjee, “Enhanced UV-blocking properties of zinc oxide nanoparticles over commercial sunscreen products: A comparative study”, international seminar, 2023, Durgapur Govt. College, Durgapur.

6. Sampa Mondal, Nilanjana Chatterjee and Baibaswata Bhattacharjee, “Use of Fe2O3 Nanoparticles as Dietary Supplements to Get Control Over the Growth of Puntius sarana (Hamilton,1822)”, international seminar, 2024, Kazi Nazrul University, Asansol.

7. Sampa Mondal and Baibaswata Bhattacharjee, “Size-Dependent Adsorption and Photodegradation of Environmental Pollutant Remazol Black B under theExposure of CuO Nanoparticles: A Quantitative Approach”, 2nd International Conference on Renewable Energy Technologies and Bio Sustainability (ICRETBS 2025) Organized by Centre for Education Innovation and Entrepreneurship, Kolkata.

8. UGC sponsored National seminar on Advanced Instrument Used in Current Research on 20 & 21 September, 2013, organized by Ramkrishna Sarada Vidyamahapitha, Kamarpukur, Hooghly. (Attended)

❖ Short Term Courses:

- Participated in 30 hours Certificate Course on "Nanoscience and Nanotechnology" organized by the School of Materials Science and Nanotechnology, Jadavpur University and the Departments of Physics and Chemistry, Sarojini Naidu College for Women, Kolkata, Conducted from 8th August to 13th August 2022.