

Curriculum Vitae

Name : **Sanghamitra Sanyal**
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EDUCATION:

Year	Degree	Subject	Institution/University/Board	Grade
2002	M.Sc.	Chemistry	Indian Institute of Technology (Bombay)	GPA 6.94
2000	B.Sc. (Hons.)	Chemistry	St. Stephen's College, Delhi University	1 st Division (68%)
1997	A.I.S.S.E. (12th grade)	Science (P,C,M,B, Eng)	Sainik School Purulia, CBSE Board	82%
1995	A.I.S.S.C.E. (10th grade)		Sainik School Purulia, CBSE Board	73%

OTHERS QUALIFICATIONS:

Year	Exam	Institution/Organisation	Grade/Marks
2001	GRE	ETS, USA	1930/2400
2001	Subject GRE (Chemistry)	ETS, USA	760 (68 percentile)
2001	TOEFL	ETS, USA	293/300 (essay rating 6.0)
2011	CSIR-NET LS	CSIR-UGC, CSIRHRDG	Rank 32

PROFESSIONAL QUALIFICATIONS:

Experience	16 years
Publications (Papers)	International: 17
Book Chapter	1
Conference Proceedings	2
Workshops	4

Details:

EXPERIENCE:

2010 – Present Durgapur Govt. College, J.N. Avenue, Durgapur

Teaching

- Postgraduate classes in Environmental Chemistry/Green Chemistry.
- Postgraduate classes in Statistics.
- Postgraduate laboratory in Water Analysis/Soil analysis/ TLC etc.
- Postgraduate laboratory in Bioinformatics/Biostatistics.
- Guide for M.Sc. dissertation work.
- Paper setter and Examiner at Postgraduate level.

2008 – 2011 Durgapur College of Commerce and Science, Rajbandh, Durgapur -12

Teaching

- Undergraduate classes in Physical and Inorganic Chemistry
- Undergraduate classes in Biophysical Techniques.
- Undergraduate Labs (Physical/Organic/Inorganic/Environmental)
- Examiner of University Questions.
- Postgraduate classes in Biochemistry.
- Postgraduate classes in General/Inorganic/Physical Organic/Green Chemistry.
- Postgraduate classes in Biophysical Techniques (Chromatography & Spectroscopy).
- Paper setter and Examiner at Postgraduate level.

2002 – 2005 University of South Carolina

Research

- Synthesis and Characterization of Mixed metal chalcogenide clusters.
- Synthesized small metal clusters like Dimanganesedisulfideheptacarbonyl etc.
- Obtained structure from single crystals.
- Study reactivity of the clusters.
- Was Teaching Assistant for an Undergraduate Organic Chemistry Lab
- Was Teaching Assistant for an Undergraduate Theory Class

2001 Research during Masters work at Indian Institute of Technology, Bombay

- Synthesis and characterization of metal clusters
- Learn about metal cluster
- Synthesize metal clusters
- Grow single crystals for XRD studies

- Learn how to characterize them

OTHER EXPERIENCES:

- Summer 2001 Summer Project at Indian Institute of Technology, Kanpur, on green chemistry and biomimetics.

COMPUTER KNOWLEDGE:

Linux, Windows, MS Office, Open Office, Basics of : Basic, Fortran, C, Python, Linux Scripting, R, SPSS etc.

PUBLICATIONS:

1. Adams, R. D., Kwon, O.-S., & **Sanyal, S.** (2003). Syntheses and structures of selenido dimanganese and iron–manganese carbonyl cluster complexes. *Journal of Organometallic Chemistry*, 681(1–2), 258–263.
2. Adams, R. D., Captain, B., Kwon, O.-S., Pellechia, P. J., & **Sanyal, S.** (2004). Synthesis and properties of oligomers of iron–manganese carbonyl complexes with bridging disulfido ligands. *Journal of Organometallic Chemistry*, 689(8), 1370–1376.
3. Adams, R. D., Boswell, E., Miao, S., & **Sanyal, S.** (2005). Trinuclear metal clusters with three different metal atoms from the insertion of CpCo and Cp*Rh groups into the S–S bonds of [CpFeMn(CO)₅(μ-S₂)₂]. *Journal of Cluster Science*, 16(2), 117–126.
4. Banerjee, A., **Sanyal, S.**, & Sen, S. (2012). Soil phosphatase activity of agricultural land: A possible index of soil fertility. *Agricultural Science Research Journals*, 2(7), 412–419.
5. Anwesha Banerjee; **Sanghamitra Sanyal**; Sribir Sen, "Microbial urease activity of agricultural soil: enzymology and assessment of soil fertility", *Journal of Mycopathological Research* 2012 Vol. 50 No. 2 pp. 235-241
6. Sen, S., Banerjee, A., & **Sanyal, S.** (2012). The legacy of bio-molecules as a bio-fertilizer: Context of single cell fertilizer isolation and partial characterization of an amylolytic bacterium. *Nature Precedings*, 1–1.
7. Banerjee, A., Hasib, K. M., **Sanyal, S.**, & Sen, S. (2014). Cloning and expression of an amylase gene from *Bacillus* sp. isolated from an agricultural field in West Bengal, India. *African Journal of Biotechnology*, 13(32), 3281.
8. Sadhu, T., Banerjee, I., Bhattacharjee, A., **Sanyal, S.**, & Chakrabarty, J. (2020). Frying and freezing effect on nutritional quality of major carps and potential contribution to human health from fatty acid signatures. *Journal of the Indian Chemical Society*, 97(6), 941–957.
9. Sarkar, S., Mondal, K., **Sanyal, S.**, & Chakrabarty, M. (2021). Study of biochemical factors in assessing air pollution tolerance index of selected plant species in and around Durgapur industrial belt, India. *Environmental Monitoring and Assessment*, 193(8), Article 474.
10. Sarkar, S., **Sanyal, S.**, & Chakrabarty, M. (2022). Comparative study and prediction of ambient air quality of Durgapur Industrial Belt, West Bengal using time series forecast model. *Computational Ecology & Software*, 12(4), 195.
11. Banerjee, I., Sadhu, T., **Sanyal, S.**, & Chakrabarty, J. (2023). Prediction of fatty acid profile of fish skin from the fish flesh fatty acid composition: A regression modelling approach. *Proceedings of the Zoological Society*, 76(2), 179–189.
12. **Sanyal, S.**, Sarkar, S., & Chakrabarty, M. (2023). Time series analysis of groundwater quality at selected sites of Purba and Paschim Burdwan, West Bengal, India. *Environmental Monitoring and Assessment*, 195(9), Article 1039.

13. Dutta, S., Basak, S., Chatterjee, R., Biswas, M., **Sanyal, S.**, & Bandyopadhyay, A. (2025). Carboxymethyl guar gum designed with hyperbranched grafts of poly(2-methacryloyloxyethyl trimethylammonium chloride) for enhanced selective flocculation of kaolin–hematite mixture. *Journal of Polymers and the Environment*, 33(5), 2229–2248.
 14. Sarkar, S., **Sanyal, S.**, & Chakrabarty, M. (2025). Air quality study of three non-attainment zones of West Bengal: A modelling approach. *Aerosol Science and Engineering*, 1–14.
 15. **Sanyal, S.**, Sarkar, S., & Chakrabarty, M. (2026). Hybrid SARIMA-neural network frameworks for river water quality forecasting: Integrating land-use and hydrometeorological drivers across spatial scales. *Water, Air, & Soil Pollution*, 237(16), Article 916.
 16. **Sanyal, S.**, Sarkar, S., & Chakrabarty, M. (2026). Novel framework for river health assessment: Principal component-based water quality index and causal inference through regression discontinuity design. *Environmental Science and Pollution Research*, 1–28.
 17. **Sanyal, S.**, Seth, S., Mukherjee, A. K., Sarkar, S., & Chakrabarty, M. (2026). Study of spatio-temporal variation in water quality between two reservoirs on river Damodar, West Bengal, India. *Indian Journal of Environmental Protection*, 46(4), 370–380.
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BOOK CHAPTER

1. Dey, K., & **Sanyal, S.** (2023). Sustainable development for shrimp culture: A critical analysis. In *Sustainable marine food and feed production technologies* (pp. 103–120). CRC Press.
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SEMINARS / CONFERENCE PROCEEDINGS

1. Kaushik Dey, Mousumi Sar, **Sanghamitra Sanyal**, Harinath Banerjee, Mainak Bhattacharjee, Bidhan Mishra, Shouri Banerjee & Pranab Roy, (2011), Degradation of phenol by *Bacillus* sp.: Isolation strategy, Strain characteristics and Cell immobilization, National Conference on Advanced pollution control system for better environmental management, pp 52
2. Kaushik Dey, **Sanghamitra Sanyal**, Mainak Bhattacharjee & Shouri Banerjee, (2013), Production of Biofertilizer (Anabaena & Nostoc) using CO₂, National Seminar on Recent trends in Applied Sciences & Humanities, pp 79

LIST OF WORKSHOPS ATTENDED OR ORGANISED

1. “National Workshop on Zero Budget Natural Farming.” , Organised by Durgapur College of Commerce and Dept. of MSW along with ART OF LIVING, YLTP, W. BENGAL, from 10th March 2011 to 13th March 2011.
2. “Hands-on workshop in Advanced Enzymology (Rennet and Bromelain) and its impact on industries”, Organized by Durgapur College of Commerce and Science & niTza Biologicals, Hyderabad from 07/12/2012 to 10/12/2012.
3. “Workshop/Hands-on Training in Bioinformatics, Computer Aided Drug Designing & Application of Bioinformatics in Real-time.” Organized by Durgapur College of Commerce and Science & niTza Biologicals, Hyderabad from 28th November 2013 to 1st December 2013.
4. “Short-term Training Programme on Instrumental Application and Chemical Analysis for Environmental Samples”, Organized by Department of Chemistry, National Institute of Technology Durgapur, Durgapur from 24/11/2014 to 30/11/2014.

5. **Sanyal, S.** (2023, March 16–18). Time series analysis of water quality of Damodar River at selected sites of Purba Burdwan, West Bengal, India (oral presentation). 3-day International Conference on Nonlinear Dynamics and its Applications in Physical and Biological Sciences (NDAPBS-23), Durgapur Government College, Durgapur, India.
 6. **Sanyal, S.** (2024, February 21–23). Assessing Water Quality in The Damodar River: A Comprehensive Study of Indices and Influencing Factors (oral presentation). International Conference on Renewable Energy Technologies and Bio Sustainability (ICRETBS 2024), Mahishadal Raj College, Mahishadal, India.
 7. **Sanyal, S.** (2025, May 21–22). Making sense of metrics: Comparing six water quality assessment techniques (oral presentation). Two-Day International Conference “Living in Harmony: Celebrating Biodiversity for Sustainable Future,” Durgapur Government College, Durgapur, India.
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