



Dr. Amal Krishna Saha



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CAREER OBJECTIVE

To work with full devotion, dedication, and hard work for the development of the organization and widen up my horizons of skill and intellect to meet the challenges of the academic and industries by active participation in the research and development (R&D) field.



CURRENT JOB DESCRIPTION

- **Job Position:** Manager (Process Head) at Geengine Environmental technologies Pvt. Ltd. (June 2021 to Present).
- **Job responsibilities:** Monitoring water quality, conducting wastewater sample analysis, report preparation, filter press day to day operation monitoring (Sludge handling) and operations and maintenances of 20 MLD Common effluent treatment plant (CETP) at Kolkata leather complex.



EDUCATION

➤ PhD. In Environmental Science

Indian Institute of Technology (Indian School of Mines), Dhanbad 2021 Thesis Title: Application of modified nano zero-valent iron (nZVI) for dehalogenation of endosulfan.

Course work completed during PhD.

- Research Methodology & Statistics
- Water Supply and Treatment
- Solid and Hazardous Waste Management and Land Reclamation

➤ M.Sc. (Post-graduation)

Assam University, Silchar India 2012

M.Sc. (Ecology and Environmental Science).

➤ Advance Diploma

"Occupational Safety, Health and Environment Management Programs" National Institute of Fire Safety Engineering, Nagpur 2017.



SKILLS

➤ Research skills

- Planning and conducting experiments and carrying out fieldwork, writing research papers, excellent analytical skills on determining water qualitative and quantitative parameter.

➤ Hands-on experience on instruments

- Gas chromatography (GC)
- Gas chromatography mass spectrometry (GC- MS)
- High-Performance Liquid Chromatography (HPLC)
- Fourier Transform Infrared Spectroscopy (FTIR) Analysis
- Total Organic Carbon Analyser
- Flame Photometer
- Spectrophotometer
- Microwave Digestion
- Particle Size Analyser
- Zeta potential Analyser

➤ Knowledge of software use

- QGIS (Preparation of maps)
- SPSS (Applications of statistical tools)
- Matlab (Data extraction and model development)
- MS-office (All types of documentation)

➤ Knowledge of programing language

- Python (Data extraction and model development)
- Arduino (for environmental related sensor data acquisition and automation)
- PHP & HTML

➤ Knowledge of models and its application

- Response surface methodology (process optimization)
- Artificial neural network(ANN)
- Principal component analysis (PCA)
- Statistical Tools (hypothesis testing, correlation, etc.)
- Reaction kinetics and Adsorption isotherm



CERTIFICATES

- Qualified UGC-NET, 2013 December (Roll No-44890005)
- Qualified ASRB-NET, 2013.



PUBLICATION

Journal publication:

Upadhyay, S., **Saha, A. K.**, & Sinha, A. (2019). High carbon iron filings (HCIF) and metal reducing bacteria (*Serratia* sp.) co-assisted Cr (VI) reduction: Kinetics, mechanism and longevity. *Journal of Environmental Management*, 236, 388-395. DOI: <https://doi.org/10.1016/j.jenvman.2019.02.015>

Saha, A. K., Sinha, A., & Pasupuleti, S. (2018). Modification, Characterization and Investigations of Key Factors Controlling the Transport of Modified Nano Zero Valent Iron (nZVI) in Porous Media. *Environmental Technology*, 1-35 DOI: <https://doi.org/10.1080/09593330.2018.1426637>

Mondal, S. K., **Saha, A. K.**, & Sinha, A. (2018). Removal of ciprofloxacin using modified advanced oxidation processes: Kinetics, pathways and process optimization. *Journal of Cleaner Production*, 171, 1203-1214. DOI: <https://doi.org/10.1016/j.jclepro.2017.10.091>

Sharma, S. and **Saha, A. K.**, (2017). Statistical analysis of rainfall trends over Damodar River basin, India. *Arabian Journal of Geosciences*, 10(15). DOI: <https://doi.org/10.1007/s12517-017-3096-8>

Ritika Mukherjee, Rahul Kumar, Alok Sinha, Yangdup Lama, and **Amal Krishna Saha**, (2015). A Review on Synthesis, Characterization, and Applications of Nano Zero Valent Iron (nZVI) for Environmental Remediation, *Critical Reviews in Environmental Science and Technology*, 1-24. DOI: <https://doi.org/10.1080/10643389.2015.1103832>

Amal Krishna Saha and Alok Sinha, (2015). Current trend on application of Zero-Valent Iron (ZVI) for Dehalogenation of Organo Chlorine Pesticides. *Discovery*, 40(183), 167-174. ISSN 2278 -5469 EISSN 2278-5450.

Book chapter publish:

Amal Krishna Saha, Vhatkar Shashikant Shivaji Ramesh Oraon. (2021). 'Nanoscale Zero Valent Iron (nZVI): A promising nanoparticle for environmental contamination remediation' *Management of Contaminants of Emerging Concern (CEC) in Environment*. Elsevier Paperback, ISBN: 9780128222638, eBook ISBN: 9780128222645.

Amal Krishna Saha, Vhatkar Shashikant Shivaji Ramesh Oraon. (2021). 'Inorganic nanotubes for water treatment through adsorption and photocatalytic degradation'. *Contamination of Water*. Academic Press. Paperback ISBN: 9780128240588.

Conferences and workshops:

Amal Krishna Saha and Alok Sinha. 'Review on Production of Various Types of Modified Nano Zero Valent Iron in Remediation of Contaminated Soil and Ground water'. *Challenges and Opportunities for Management of Water Supplies in Rural Areas (COMWRA)*, 2015. organized by Department of Environmental science and Engineering, IIT(ISM), Dhanbad.

Amal Krishna Saha and Alok Sinha. Removal of Endosulfan with nano Zero Valent Iron: Kinetic Model. *Modelling of Environmental and Water Resources Systems (ICMEWRS 2017)*. March 24- 26th 2017 at HBTU Kanpur, India. ISBN 978-93-85926-53-2.

Amal Krishna Saha and Alok Sinha. Polyacrylic Acid modified zero valent iron (PNZVI) nanoparticles: synthesis, characterization and their electrochemical performance. *International Conference on Advances in Nanomaterials and Nanotechnology (ICANN-2016)*. 4th to 5th November 2016 New Delhi, Delhi, India. ISBN: 978-93-85000-94-2.



PATENT GRANTED

Amal krishna Saha, Alok Sinha, (2018)., Novel system for regenerating and reusing nano zero valent iron/zero valent iron (nZVI/ZVI) particles in wastewater treatment, Indian patent no. 360353. (**Patent granted**)



PERSONAL DETAILS

Date of Birth: 1st January 1987

Marital Status: Single

Nationality: Indian

Gender : Male



LANGUAGES SKILL

English, Bengali, Hindi



REFERENCE

❖ **Dr. Alok Sinha**

(Professor)

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❖ **Dr. Ramesh Oraon**

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Signature

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