CV of Dr. S. R. Samadder (Updated on 20.07.2023)

Email ID: samadder@iitism.ac.in
Contact No. Mobile: (+91) (9471191823)
Nationality: Indian

CONTACT ADDRESS:
Dr. Sukha Ranjan Samadder
Associate Professor, Department of Environmental Science & Engineering
Indian Institute of Technology (Indian School of Mines), Dhanbad
Pin-826004

CURRENT POSITION:
Head of Centre, Centre for Water Resource Management (CWRM)
Indian Institute of Technology (Indian School of Mines), Dhanbad

EDUCATIONAL QUALIFICATIONS:

Degree / Examination	University / Institution	From and To	Specialization
Ph. D	IIT Kharagpur	July, 2001 to June, 2005	Environmental Engineering
M. Tech.	IIT Roorkee	July, 1999 to Feb, 2001	Environmental Engineering
B. Tech	NIT Surat	July, 1995 to June, 1999	Civil Engineering

EXPERIENCE

University / Organization	Designation	From	To	Nature of Experience
IIT (ISM), Dhanbad	Associate Professor	26th July, 2017	Till Date	Teaching & Research
IIT (ISM), Dhanbad	Assistant Professor	6th January, 2012	25th July, 2017	Teaching & Research
NIT Bhopal, MP	Assistant Professor	19th January, 2010	3rd January, 2012	Teaching & Research
University College Dublin, Ireland	**Marie Curie Experienced Postdoctoral Fellow**	14th January, 2008	11th January, 2010	Research (on Cryptosporidium Network in Ireland), Mentoring UG & PG Students, Teaching
NIT Bhopal, MP	Assistant Professor	1st January, 2006	30th November, 2007	Teaching & Research
NIT Bhopal, MP	Lecturer	10th August, 2005	31st December, 2005	Teaching & Research

Awards:

- Top 2% scientist in world ranking by Stanford University and Elsevier BV; Awarding Agency: Stanford University, IIT (ISM) Dhanbad **(2021).**
- Top 2% scientist in world ranking by Stanford University and Elsevier BV; Awarding Agency: Stanford University, IIT (ISM) Dhanbad **(2022).**

Teaching Experience:

Subjects Taught:

- Water Supply and Treatment (M. Tech level)
- Life Cycle Assessment (M. Tech level)
- Environmental Remote Sensing and GIS (M. Tech level)
- EIA (B. Tech level)
- Environmental Hydraulics (B. Tech level)
- Drinking Water Supply and Treatment (B. Tech level)
- Solid Waste Management (B. Tech Level)
- Hazardous and Biomedical Waste Management (B. Tech Level)

Details of Ph. D students Guided/Ongoing: 12 Students (7 Awarded, 5 Ongoing)

S. No	Name of Student	Year	Title of the Dissertation
1.	DEBISHREE KHAN	Awarded (2015)	Evaluating the Scenario and Options of Solid Waste Management Using Geographical Information Systems (GIS): A Case Study of Dhanbad City, in Jharkhand, India.
2.	ASHVANI KUMAR	Awarded (2017)	Analysis of Contaminant Leaching from Coal Combustion Residues into Surface Water, Soil, and Groundwater.
3.	SNEH LATA	Awarded (2018)	Assessment of Iron Impregnated Banana Pith Biochar Adsorbent for As (V) Removal from Drinking Water.
4.	POOJA YADAV	Awarded (2018)	Evaluation of Environmental Impacts of Different Municipal Solid Waste Management Scenarios Using Life Cycle Assessment Approach.
5.	SHIVESH KISHORE KARAN	Awarded (2019)	Development of a Spatially Explicit Framework for Vulnerability Assessment of Water Resources Due to Coal Mining in India.
6.	ROSHAN PRABHAKAR	Awarded (2021)	Assessment of the Performance of Nano Alumina and Its Composite Based Adsorbents for Arsenic Removal from Groundwater.
7.	ATUL KUMAR	Awarded (2022)	Evaluating the Energy Recovery Potential for Better Management of Municipal Solid Waste.
8.	VIVEK SINGH	2017-Ongoing	Assessment of Water Quality Parameters and Identification of Sources of Pollutants of A River Watershed Using Remote Sensing & GIS.
9.	PURNENDU SARDAR	2017-Ongoing	Assessment of the Impact of Climate Change on Mangrove Ecosystem in Sundarban Area Using Remote Sensing and GIS.

10.	RIMA KUMARI	2019-Ongoing	Integration of life cycle perspective in the development of resource recovery method from e-wastes: A sustainable approach.
11.	PRATIMA KUMARI	2020-Ongoing	Assessment of the potential for preparation of graphene from organic municipal solid wastes and its application for industrial waste water treatment
12.	RUPESH RAJWAR	2022-Ongoing	Title not decided yet

Details of M. Tech students guided/Continuing: Total 38 (36 Completed, 02 Ongoing)

S. No	Name of Student	Year of Passing	Title of the Dissertation
1.	NARESH THAKRE	2006	Ambient Air Pollution Status and Health Risk of Bhopal City.
2.	RAVI KANT SHARMA	2007	Analysis of Solid Wastes and Design of Sanitary Landfill for Bhopal City.
3.	RAJEEV SINGH PARIHAR	2007	Route Analysis for Solid Waste Collection in Bhopal City Using GIS.
4.	RAM LAKHAN RAJPUT	2007	Performance Evaluation of UASB Reactor Installed at Bhopal.
5.	ABHIJEET DIJGAVNE	2012	Landfill site selection using GIS.
6.	ANIL AMRAWANSHI	2012	Effect of Municipal Solid Waste (MSW) Dumping on Physical and Chemical Properties of Soil and Water.
7.	PRAMOD KUMAR SINGH	2013	Study on Locally Available Adsorbents for Removal of Arsenic from Groundwater.
8.	NEERAJ KUMAR SAURABH	2013	Status of Groundwater Arsenic Pollution and its Impact in Sahibganj District, Jharkhand.
9.	SHIVESH KISHORE KARAN	2014	Impact of Coal Mining on Surface Water Using Remote Sensing and GIS: A Case Study.
10.	RAVI KUMAR	2014	Removal of Arsenic from Groundwater Using Rice Husk.
11.	RASHDA KHANAM	2014	Spatio-temporal Change Analysis of Vegetation Cover in Jharia Coalfield.
12.	ADARSH KUMAR	2015	Reduction of Groundwater Contamination Using Alternative Overburden Dump Management.
13.	SHRUTI	2015	Assessment of Accuracy of the Landuse Classification in Coal Mining Areas Using Remote Sensing and GIS.
14.	ATUL KUMAR	2015	Impact of Socioeconomic Parameters on Generation and Characteristics of Municipal Solid Waste.
15.	GAURAV VILAS KAPSE	2016	Performance of *Moringa Oleifera* Seed as a Coagulant for Removal of Fine Particles from Coal Washery Effluent.

17.	GAURAV MOHANTY	2016	Impact of land use pattern on soil erosion into Panchet Reservoir, Jharkhand, India.
18.	VIVEK SINGH	2016	Assessment of the Groundwater Pollution Potential due to Coal Mining in Jharia Coal Field.
19.	RAJESH BARANWAL	2017	Assessment of Physico-Chemical Properties of OB Soil for Reclamation and Monitoring Phenological Changes through Remote Sensing.
20.	NITIN KUMAR	2017	Identification of Recycling and Recovery Routes of Plastic Waste for its Better Management: A case Study of Dhanbad City.
21.	JYOTSANA	2017	Synthesis of Iron Nanoparticles from Plant Wastes for Possible Use in Environmental Remediation.
22.	SOMAPARNA GHOSH	2018	Performance of Metal Oxide Nanoparticles for Arsenic Removal from Groundwater.
23.	CHANDRAKANT SINGH	2018	Estimation of Biomass Using Remote Sensing and GIS for Tropical Forest.
24.	YASH ARYAN	2018	A Life Cycle Assessment Approach for Better Management of Plastic Wastes: A Case Study.
25.	ALI	2019	Synthesis of MgO based nano-composite adsorbent for removal of As (III) from groundwater.
26.	ABHISHEK MANDAL	2019	Assessment of Environmental Impacts due to Production of Different Types of Cement Using Life Cycle Assessment Approach.
27.	SWATI VAISH	2019	Visible light induced photosynthesis of titanium nanoparticles for environmental applications.
28.	RUPAL PANDE	2019	Assessment of the Spatio-temporal Variation of Aerosol Concentration and Its Relationship with Land Surface Temperature Using Remote Sensing and GIS.
29.	APARNA SRIVASTAVA	2020	A GIS based Selection of Suitable Locations for Establishment of Rain Water Harvesting Sites in Dhanbad.
30.	SHUBHAM	2020	Evaluation of Waste Treatment Technologies for Effective Management of Municipal Solid Waste.
31.	VISHAL SAGAR	2020	Identification of Suitable Areas for Protection of Environmental Regime in Dhanbad Using Remote Sensing and GIS.
32.	RAHUL BHANDARI	2021	Assessment of Various Arsenic Removal Techniques and Their Effectiveness Using Life Cycle Assessment.
33.	KUMAR PRATIK	2021	A Remote Sensing Based Analysis of Indian Ocean Sea Surface Salinity and Its Consequences on nearby mangrove forests

34.	DEEPAK KUMAR	2022	Estimation of generation rate and recycling potential of household solid waste in academic campus: A case study.
35.	BHAVIK RAJGOR	2023	GIS-based modelling and forecasting of future urban sprawl of Dhanbad city.
36.	ANKIT TIRTHANI	2023	To compare the environmental impact due to grid connected solar park and coal based thermal power plant in India using LCA
37.	RAHUL KUMAR	2024 (Ongoing)	Unlocking the Potential of Agro-Wastes: Comparative Analysis and Characterization of Graphene Oxide Synthesized from Different Agro-Waste
38.	CHANDAN KUMAR	2024 (Ongoing)	Valorization of non-metallic fraction of e- waste using super critical fluid treatment

Details of Short-Term Courses Conducted

S. No	Period	Organization	Nature of Work	Status	Amount (Lakh)	Role	No of Co-CI if any
1.	25-27, May, 2016	Different Govt. and PSU Organizations	Short Term Course on "Water Quality and Management"	Completed	2.059	CI	01
2.	27-29, July, 2016	Different Govt. and PSU Organizations	Short Term Course on Monitoring of ecological restoration success and carbon sequestration using remote sensing and GIS	Completed	2.35	CI	01
3.	21-23, September, 2016	Different Govt. and PSU Organizations	Short Term Course on "Water Quality and Management for Thermal Power Plants"	Completed	1.902	CI	NIL
4.	20-22 July, 2022	Different Govt. and PSU Organizations	Short Term Course on "Ecosystem Restoration, Ecosystem Goods & Services, Application of RS & GIS and Modelling"	Completed	3.3	CI	01

Details of Invited Lectures

S. No	Name of the Course	Date	Lectures	Place
1.	3-day training program on Water and Waste water Treatment and Management for the Executives of Drinking Water & sanitation Department (DWSD), Ranchi	8.11.2012	Operation and Maintenance of Wastewater Treatment Plants	IIT (ISM) Dhanbad
2.	A Two-Week EDP Course on "GEOTECHNICAL ENGINEERING AND SOIL MECHANICS"	7.6.2013	1. Types of Foundation 2. Selection of Foundation Types	IIT (ISM) Dhanbad
3.	Three Days Programme on "Environmental Impact Assessment & Auditing"	27.06.2013 to 29.06.2013	EIA Methods for Coal Mining	Sambalpur, Orissa
4.	Two-Weeks Training Programme on Mining Environment & Sustainable Development (16.08.2014 TO 01.09.2014)	23.08.2014	Solid and Hazardous Waste Management Issues in Mining Industries	IIT (ISM) Dhanbad
5.	3-Day Residential Training Program on "Assessment of Water Quality and Low-Cost Treatment Methods for Rural Water Supply"	15.10.2014 and 16.10.2014	1. Low-cost treatment method for removal of arsenic and fluoride from water 2. Laboratory Visit and Hands-on Experience for Measurement of Water Quality Parameters	IIT (ISM) Dhanbad
6.	Two-Week Training Programme on Environmental Impact Assessment of Mining Projects for Officials of Ministry of Mines, Government of Afghanistan (6th December 2014- 22nd December 2014)	09.12.2014	Model Terms of Reference For Mining Projects	IIT (ISM) Dhanbad

R & D Project: List of R & D projects

S. No.	Name of the Project	Funding agency	Amount (Lakh)	Status	Role
1.	Investigation and analysis of the status of arsenic pollution in groundwater of Sahibganj district, Jharkhand.	IIT (ISM) Dhanbad	0.985	completed	PI
2.	Arsenic Removal from Groundwater Using Nano-adsorbents.	SERB	5.50	Completed	PI
3.	Preparation of Nalla Diversion with Surface Run-off Management Study Pertaining to Guali Iron Ore Mines of M/S. OMC Ltd., In Keonjhar District of Odisha.	Odisha Mining Corporation Ltd.	27	Completed	PI
4.	Separation and Recovery of Fine	Coal India Ltd.	54.86	Ongoing	PI

	Particles from Coal Washery Effluents Using Bio-Coagulant.				
5.	Rejuvenation of existing waterbodies and identification of suitable locations for storing surface water for sustainable water supply in Dhanbad Municipal Corporation Area.	IIT (ISM) Dhanbad	8.20	Ongoing	PI
6.	Continuous monitoring in the change of ecology of Ananta OCP, MCL.	Coal India Ltd.	25	Ongoing	Co-PI
7.	Development of a low-cost technology based on biochar supported green zerovalent iron for arsenic and fluoride removal from water.	DST	32.5	Ongoing	Co-PI
8.	Development of dynamic geospatial framework and land suitability database for best alternative livelihood options in Indian Sundarban region.	SERB	17.09	Ongoing	PI

Major Consultancy Projects

S. No	Period	Organization	Nature of Work	Status
1	August 2021 to March 2022	Central Pollution Control Board	Random Verification of Annual Inventory on Hazardous Waste Management	Completed
2	December 2013 to July 2017	NMDC, Kirandul, CG	Setting up suitable Municipal Solid Waste Management Technique for BIOM, Kirandul Complex, Dist. South Bastar Dantewada (C. G).	Completed
3	June 2011 to December	Municipal Corporation, Bhopal, MP	Geo-environmental Investigation of Solid Waste Dumping Site, Bhopal, MP.	Completed
4	June 2011 to December	Municipal Corporation, Jabalpur, MP	Geo-environmental Investigation of Solid Waste Dumping Site, Jabalpur, MP.	Completed

LANGUAGE PROFICIENCY: Bengali, English, Hindi

Membership of Professional Bodies:

1. Life Member of Mining, Geological and Metallurgical Institute of India (MGMI).
2. Life Member of Indian Society of Remote Sensing

PATENTS:

Samadder, S. R. & Kapse, G. V. (2018). A Process for the Preparation of Bio-Coagulant Using Moringa Oleifera Seed-Defatted Cake for the Removal of Fine Particles from Coal Washery Effluent (**Granted in 2021**).

PUBLICATIONS:

Publications in SCI/SCIE Journals

Google Scholar:
https://scholar.google.com/citations?user=OUZKzWEAAAAJ&hl=en&oi=ao

ORCID ID: https://orcid.org/0000-0002-0037-7030

Total citations up to **20.07.2023**	**3827**
Cumulative Impact Factor	**331.1**
Average Impact Factor Per Paper	**5.9**
Total Publication in Q1 Journal	29
Total Publication in Q2 Journal	17
Total Publication in Q3 Journal	8
Total Publication in Q4 Journal	2
h-index (Google Scholar, Scopus, Web of Science)	25; 23; 22
Total No. of SCI/SCIE Publications	**56**

1. Kumari, R., & **Samadder, S. R.** (2023). Evaluation of the recycling potential of obsolete mobile phones through secondary material resources identification: A comprehensive characterization study. *Journal of Environmental Management*, *345*, 118550. https://doi.org/10.1016/j.jenvman.2023.118550. 115887 (Impact Factor: 8.7) [SJR: Q1] SCIE.

2. Sardar, P., & **Samadder, S. R**. (2023). Long-term ecological vulnerability assessment of Indian Sundarban region under present and future climatic conditions under CMIP6 model. *Ecological Informatics*, *76*, 102140. https://doi.org/10.1016/j.ecoinf.2023.102140 (Impact Factor: 5.1) [SJR: Q1] SCIE.

3. Kumar, A., & **Samadder, S. R.** (2023). Development of lower heating value prediction models and estimation of energy recovery potential of municipal solid waste and RDF incineration. *Energy*, *274*, 127273. https://doi.org/10.1016/j.energy.2023.127273 (Impact Factor: 9) [SJR: Q1] SCIE.

4. Aryan, Y., Kumar, A., & **Samadder, S. R**. (2023). Environmental and economic assessment of waste collection and transportation using LCA: A case study. *Environmental Research,* 231, 116108. (Impact Factor: 8.3) [SJR: Q1] SCIE.

5. Singh, V., Karan, S. K., Singh, C., & **Samadder, S. R.** (2023). Assessment of the capability of SWAT model to predict surface runoff in open cast coal mining areas. *Environmental Science and Pollution Research*, *30*(14), 40073-40083. https://doi.org/10.1007/s11356-022-25032-y (Impact Factor: 5.8) [SJR: Q1] SCIE.

6. Kumar, A., Bhardwaj, S., & **Samadder, S. R.** (2023). Evaluation of methane generation rate and energy recovery potential of municipal solid waste using anaerobic digestion and landfilling: A case study of Dhanbad, India. *Waste Management & Research*, *41*(2), 407-417. https://doi.org/10.1177/0734242X221122494 (Impact Factor: 3.9) [SJR: Q2] SCIE

7. Kumari, P., & **Samadder, S. R.** (2022). Valorization of carbonaceous waste into graphene materials and their potential application in water & wastewater treatment: a review. *Materials Today Chemistry*, 26,101192. Doi: https://doi.org/10.1016/j.mtchem.2022.101192. (Impact Factor: 7.3) [SJR: Q1] SCIE.

8. Kumari, R., & **Samadder, S. R**. (2022). A critical review of the pre-processing and metals recovery methods from e-wastes. *Journal of Environmental Management*, 320, 115887. Doi: https://doi.org/10.1016/j.jenvman.2022.115887 (Impact Factor: 8.7) [SJR: Q1] SCIE.

9. Kumar, A., Bharadwaj, S., & **Samadder, S. R.** (2022). Evaluation of methane generation rate and energy recovery potential of municipal solid waste using anaerobic digestion and landfilling: a case study of Dhanbad, India. *Waste Management & Research*. (Impact Factor: 3.9) [SJR: Q2] SCIE

10. Kumar, A., & **Samadder, S. R.** (2022). Assessment of energy recovery potential and analysis of environmental impacts of waste to energy options using life cycle assessment. *Journal of Cleaner Production*. (Impact Factor: 11.1) [SJR: Q1] SCIE.

11. Singh, C., Karan, S. K., Sardar, P., & **Samadder, S. R.** (2022). Remote sensing-based biomass estimation of dry deciduous tropical forest using machine learning and ensemble analysis. *Journal of Environmental Management*, 308, 114639. Doi: https://doi.org/10.1016/j.jenvman.2022.114639 (Impact Factor: 8.7) [SJR: Q1] SCIE.

12. Prabhakar, R., Ghosh,S., Malik, A., & **Samadder, S.R**. (2021). Efficient loading of nano Mn particles on calcined laterite soil (Lt-nMn) for higher removal of As-(III) ions from groundwater: Adsorption and eco-scale analysis. *Environmental Science and Pollution Research*. Doi: https://doi.org/10.1007/s11356-021-18136-4 (Impact Factor: 5.8) [SJR: Q1] SCIE.

13. Kapse, G., & **Samadder, S. R.** (2021). Moringa oleifera seed defatted press cake based biocoagulant for the treatment of coal beneficiation plant effluent. *Journal of Environmental Management.* Doi: https://doi.org/10.1016/j.jenvman.2021.113202 (Impact Factor: 8.7) [SJR: Q1] SCI.

14. Sardar, P., & **Samadder, S. R.** (2021). Understanding the dynamics of landscape of greater Sundarban area using multi-layer perceptron Markov chain and landscape statistics approach. *Ecological Indicators*, *121*, 106914. Doi: https://doi.org/10.1016/j.ecolind.2020.106914 (Impact Factor: 6.9) (SJR: Q1] SCIE

15. Prabhakar, R., & **Samadder, S. R.** (2020). Effective immobilization and reduction in bioavailability of Cd in a L. succinea growing in contaminated sediment by the application of alkali synthesized fly ash-based zeolite (FABZ). *Microporous and Mesoporous Materials*, 110416. Doi: https://doi.org/10.1016/j.micromeso.2020.110416. (Impact Factor: 5.2) [SJR: Q2] SCIE.

16. Prabhakar, R., & **Samadder, S. R.** (2020). Use of adsorption-influencing parameters for designing the batch adsorber and neural network–based prediction modelling for the aqueous arsenate removal using combustion synthesised nano-alumina. *Environmental Science and Pollution Research*, 1-18. Doi: https://doi.org/10.1007/s11356-020-08975-y. (Impact Factor: 5.8) [SJR: Q1] SCIE

17. Kumar, A., & **Samadder, S. R.** (2020). Performance evaluation of anaerobic digestion technology for energy recovery from organic fraction of municipal solid waste: A review. *Energy*, 117253. Doi: https://doi.org/10.1016/j.energy.2020.117253 (Impact Factor: 9) [SJR: Q1] SCIE.

18. Karan, S. K., Ghosh, S., & **Samadder, S. R.** (2019). Identification of spatially distributed hotspots for soil loss and erosion potential in mining areas of Upper Damodar Basin–India. *CATENA*, *182*, 104144. Doi: https://doi.org/10.1016/j.catena.2019.104144. (Impact Factor: 6.2) [SJR: Q1] SCIE.

19. Lata, S., Prabhakar, R., Adak, A., & **Samadder, S. R.** (2019). As (V) removal using biochar produced from an agricultural waste and prediction of removal efficiency using multiple regression analysis. *Environmental Science and Pollution Research*, 1-14. Doi: https://doi.org/10.1007/s11356-019-06300-w. (Impact Factor: 5.8) [SJR: Q2] SCIE.

20. Aryan, Y., Yadav, P., & **Samadder, S. R.** (2019). Life Cycle Assessment of the existing and proposed plastic waste management options in India: A case study. *Journal of Cleaner Production*. 211, 1268-1283. Doi: https://doi.org/10.1016/j.jclepro.2018.11.236. (Impact Factor: 11.1) [SJR: Q1] SCIE.

21. Ghosh, S., Prabhakar, R., and **Samadder, S. R.** (2019). Performance of γ-aluminium oxide nanoparticles for arsenic removal from groundwater. *Clean Technologies and Environmental Policy.*1-18. Doi: https://doi.org/10.1007/s10098-018-1622-3 (Impact Factor: 4.3) [SJR: Q2] SCIE.

22. Kumar, A., **Samadder, S. R.**, & Kumar, V. (2019). Assessment of groundwater contamination risk due to fly ash leaching using column study. *Environmental Earth Sciences*, 78(1), 18. Doi: https://doi.org/10.1007/s12665-018-8009-y. (Impact Factor: 2.8) [SJR: Q2] SCI.

23. Khan, D., Kumar, A., and **Samadder, S. R**. (2018). Public acceptance study of the environmentally suitable landfill sites: A case study. *Current Science*. *115*(11), 2122. Doi: 10.18520/cs/v115/i11/2122-2129. (Impact Factor: 1) [SJR: Q4] SCIE.

24. Karan, S. K., and **Samadder, S. R.** (2018). "Dual-Tree Complex Wavelet Transform based image enhancement for accurate long-term change assessment in coal mining areas". *Geocarto International.* 33, pp. 1084-1094. http://dx.doi.org/10.1080/10106049.2017.1333534. (Impact Factor: 3.8) [SJR: Q2] SCIE.

25. Karan, S. K. and **Samadder, S. R.** (2018). A comparison of different land-use classification techniques for accurate monitoring of degraded coal mining areas. *Environmental Earth Sciences.* 77:713. Doi: https://doi.org/10.1007/s12665-018-7893-5 (Impact Factor: 2.8) [SJR: Q2] SCI.

26. Kumar, A., **Samadder, S. R.**, Kumar, N. and Singh, C. (2018). Estimation of the generation rate of different types of plastic wastes and possible revenue recovery from informal recycling. *Waste Management, 79,* pp.781-790. Doi: https://doi.org/10.1016/j.wasman.2018.08.045 (Impact Factor: 8.1) [SJR: Q1] SCIE.

27. Karan, S.K, **Samadder, S. R.** and Singh, V (2018). Groundwater vulnerability assessment in degraded coal mining areas using AHP-Modified Drastic model. *Land Degradation & Development. 29(8), 2351-2365.* Doi: https://doi.org/10.1002/ldr.2990 (Impact Factor: 4.7) [SJR: Q2] SCI.

28. Yadav, P. and **Samadder, S. R.** (2018). "Assessment of Applicability Index for Better Management of Municipal Solid Waste: A Case Study of Dhanbad, India". *Environmental Technology.* 39, 1481-1496 doi: https://doi.org/10.1080/09593330.2017.1332104 (Impact Factor: 2.8) [SJR: Q2] SCI.

29. Yadav, P., & **Samadder, S. R.** (2018). A critical review of the life cycle assessment studies on solid waste management in Asian countries. *Journal of Cleaner Production.* 185, 492-515 doi: https://doi.org/10.1016/j.jclepro.2018.02.298 (Impact Factor: 11.1) [SJR: Q1] SCIE.

30. Prabhakar, R., & **Samadder, S. R.** (2018). Low cost and easy synthesis of aluminium oxide nanoparticles for arsenite removal from groundwater: A complete batch study. *Journal of Molecular Liquids*. 205, 192-201 doi: https://doi.org/10.1016/j.molliq.2017.11.173 Impact Factor: 6) [SJR: Q2] SCI.

31. Karan, S. K., & **Samadder, S. R.** (2018). Improving accuracy of long-term land-use change in coal mining areas using wavelets and Support Vector Machines. *International Journal of Remote Sensing*, *39*(1), 84-100. Doi: https://doi.org/10.1080/01431161.2017.1381355 (Impact Factor: 3.4) [SJR: Q2] SCI.

32. Yadav, P. and **Samadder, S. R.** (2018). Environmental impact assessment of municipal solid waste management options using life cycle assessment: a case study. *Environmental Science and Pollution Research*, 25, 838-854. Doi: https://doi.org/10.1007/s11356-017-0439-7 (Impact Factor: 5.8) [SJIR: Q1] SCIE.

33. Prabhakar, R., **Samadder, S. R.** & Jyotsana (2017). Aquatic and terrestrial weed mediated synthesis of iron nanoparticles for possible application in wastewater remediation. *Journal of Cleaner Production*. 168, 1201 – 1210. Doi: https://doi.org/10.1016/j.jclepro.2017.09.063 Impact Factor: 11.1) [SJR: Q1] SCIE.

34. Karan, S. K., Kumar, A., & **Samadder, S. R.** (2017). Evaluation of geotechnical properties of overburden dump for better reclamation success in mining areas.

Environmental Earth Sciences, 76(22), 770. Doi: https://doi.org/10.1007/s12665-017-7116-5 (Impact Factor: 2.8) [SJR: Q2] SCI.

35. Kumar, A., & **Samadder, S. R.** (2017). An empirical model for prediction of household solid waste generation rate–A case study of Dhanbad, India. *Waste Management*. 68, 3-15. Doi: https://doi.org/10.1016/j.wasman.2017.08.046 (Impact Factor: 8.1) [SJR: Q1] SCIE.

36. Kumar, A., & **Samadder, S. R.** (2017). A review on technological options of waste to energy for effective management of municipal solid waste. *Waste Management*, 69, 407-422. Doi: https://doi.org/10.1016/j.wasman.2017.07.034 (Impact Factor: 8.1) [SJR: Q1] SCIE.

37. Yadav, P. and **Samadder, S. R.** (2017). "A Global Prospective of Income Distribution and Its Effect on Life Cycle Assessment of Municipal Solid Waste Management: A Review". *Environmental Science and Pollution Research*, 24, 9123-9141. Doi: https://doi.org/10.1007/s11356-017-8441-7 (Impact Factor: 5.8) [SJIR: Q1] SCIE.

38. Kapse, G., Patolia, P., & **Samadder, S. R.** (2017). "Characterisation of coal washery effluent and optimization of coagulation behavior of Moringa oleifera seed as a coagulant". *Environmental Monitoring and Assessment*. 189 (3), 133. Doi: https://doi.org/10.1007/s10661-017-5844-3 (Impact Factor: 3) [SJR: Q3] SCIE.

39. **Samadder, S. R.**, Prabhakar, R., Khan, D., Kishan, D., & Chauhan, M. S. (2016). Analysis of the contaminants released from municipal solid waste landfill site: A case study. *Science of the Total Environment*. 580, 593 – 601. Doi: http://dx.doi.org/10.1016/j.scitotenv.2016.12.003 (Impact Factor: 9.8) [SJR: Q1] SCI.

40. Karan, S. K., **Samadder, S. R.**, Maiti, S. K. (2016). "Assessment of the Capability of Remote Sensing and GIS Techniques for Monitoring Reclamation Success in Coal Mine Degraded Lands". *Journal of Environmental Management*, 182, pp. 272 – 283. Doi: https://doi.org/10.1016/j.jenvman.2016.07.070 (Impact Factor: 8.7) [SJR: Q1] SCI.

41. Karan, S. K., and **Samadder, S. R.** (2016). "Accuracy of Land use Change Detection using Support Vector Machine and Maximum Likelihood Techniques for Open Cast Coal Mining Areas". *Environmental Monitoring and Assessment*, 188:486. Doi: https://doi.org/10.1007/s10661-016-5494-x (Impact Factor: 3) [SJR: Q3] SCIE.

42. Kumar, A., **Samadder, S. R.** and Elumalai, S.P., (2016). "Recovery of trace and heavy metals from coal combustion residues for reuse and safe disposal: A Review." *JOM*, 68, 2413-2417. DOI: https://doi.org/10.1007/s11837-016-1981-3 (Impact Factor: 2.6) [SJR: Q2] SCI.

43. Karan, S. K., and **Samadder, S. R.** (2016). "Reduction of spatial distribution of risk factors for transportation of contaminants released by coal mining activities." *Journal*

of Environmental Management, 180, 280-290. Doi: https://doi.org/10.1016/j.jenvman.2016.05.042 (Impact Factor: 8.7) [SJR: Q1] SCI.

44. Khan, D., and **Samadder, S. R.** (2016). "Allocation of solid waste collection bins and route optimisation using geographical information system: A case study of Dhanbad City, India." *Waste Management & Research*, 34, 666-676. doi: https://doi.org/10.1177/0734242X16649679 (Impact Factor: 3.9) [SJR: Q2] SCIE.

45. Khan, D., Kumar, A., and **Samadder, S. R.** (2016). "Impact of socioeconomic status on municipal solid waste generation rate." *Waste Management*, 49, 15-25. Doi: https://doi.org/10.1016/j.wasman.2016.01.019 (Impact Factor: 8.1) [SJR: Q1] SCI.

46. Lata, S., and **Samadder, S. R.** (2016). "Removal of arsenic from water using nano adsorbents and challenges: a review." *Journal of Environmental Management*, 166, 387-406. Doi: https://doi.org/10.1016/j.jenvman.2015.10.039 (Impact Factor: 8.7) [SJR: Q1] SCI.

47. Khan, D., and **Samadder, S. R.** (2015). "A simplified multi-criteria evaluation model for landfill site ranking and selection based on AHP and GIS." *Journal of Environmental Engineering and Landscape Management*, 23(4), 267-278. Doi: https://doi.org/10.3846/16486897.2015.1056741 (Impact Factor: 1.3) [SJR: Q4] SCIE

48. Kumar, A., and **Samadder, S. R.** (2015). "Analysis of the leaching behavior of elements from coal combustion residues for better management." *Environmental Monitoring and Assessment*, 187(6), 1-12. Doi: https://doi.org/10.1007/s10661-015-4605-4 (Impact Factor: 3) [SJR: Q3] SCIE.

49. Lata, S., Singh, P. K., and **Samadder, S. R.** (2015). "Regeneration of adsorbents and recovery of heavy metals: a review." *International Journal of Environmental Science and Technology*, 12(4), 1461-1478. Doi: https://doi.org/10.1007/s13762-014-0714-9 (Impact Factor: 3.1) [SJR: Q3] SCIE.

50. **Samadder, S. R.**, Nagesh Kumar, D., and Holden, N. M. (2014). "An Empirical Model to Predict Arsenic Pollution Affected Life Expectancy." *Population and Environment*, 36(2), 219-233. Doi: https://doi.org/10.1007/s11111-014-0212-5 (Impact Factor: 3.3) [SJR: Q2] SSCI.

51. Khan, D. and **Samadder, S. R.** (2014). "Municipal solid waste management using Geographical Information System aided methods: A mini review." *Waste Management and Research*, 32(11), 1049-1062. Doi: https://doi.org/10.1177/0734242X14554644 (Impact Factor: 3.9) [SJR: Q2] SCIE.

52. Tang, J., Macdonald, S., Peng, X., **Samadder, S. R.**, Murphy, T. M., and Holden, N. M (2011). "Application of SWAT model to better understand Cryptosporidium oocysts transport in small ungauged agricultural catchments". *Water Research*, Elsevier, Vol. 45, pp. 3665-3680. Doi: https://doi.org/10.1016/j.watres.2011.04.013 (Impact Factor: 12.8) [SJR: Q1] SCI.

53. **Samadder, S. R.** (2011). "Impact of Arsenic Pollution on Spatial Distribution of Human Development Index (HDI)". *KSCE Journal of Civil Engineering*, Vol. 15, No. 6, pp. 975-982. Doi: https://doi.org/10.1007/s12205-011-1046-7 (Impact Factor: 2.2) [SJR: Q3] SCIE.

54. **Samadder, S. R.**, Ziegler, P., Murphy, T. M., and Holden, N. M (2010). "Spatial Distribution of Risk Factors for Cryptosporidium spp. Transport in an Irish Catchment". *Water Environment Research*, Vol. 82, No. 8, pp. 750-758. Doi: https://doi.org/10.2175/106143010X12609736966649 Impact Factor: 3.1) [SJR: Q3] SCI.

55. **Samadder, S. R.** (2010). "Impact of Arsenic Pollution in Drinking Water on Life Expectancy: A GIS Approach". *KSCE Journal of Civil Engineering* (Springer Publication), Vol. 14, No. 5, pp. 681-691. Doi: https://doi.org/10.1007/s12205-010-0892-z (Impact Factor: 2.2) [SJR: Q3] SCIE.

56. **Samadder, S. R.**, and Subbarao, C. (2007) "A GIS Approach of Delineation and Risk Assessment of Areas Affected by Arsenic Pollution in Drinking Water." *Journal of Environmental Engineering*, ASCE, Vol. 133, No. 7, pp. 742-749. Doi: https://doi.org/10.1061/(ASCE)0733-9372(2007)133:7(742) (Impact Factor: 2.2) [SJR: Q3] SCI.

International Conference

1. Sardar, P., & **Samadder, S. R.** (2022). Projecting the change in niche width of an oligo and mesohaline mangrove species from Indian Sundarban under climate change and different salinity regime. Linnaeus Eco-Tech. Växjö, Sweden.

2. Sardar, P., and **Samadder, S. R**. (2022). "Assessment of Vulnerability of Mangrove Ecosystems of Indian Sundarban Region using Remote Sensing Derived Time Series Variables and Analytical Hierarchy process". American Geophysical Union, 2022, Chicago, USA.

3. Sardar, P., and **Samadder, S. R.** (2020). "Assessment of Current Threats of Mangrove Forests of India from Multi-Temporal Landsat Data Using Google Earth Engine". January 13- 15, 2020. International Conference on Water, Energy, and Environmental Sustainability 2020 (WEES 2020) in association with RMIT University, Australia. National Institute of Technology, Durgapur, India.

4. Singh, V., and **Samadder, S. R**. (2020). "Land Surface Temperature trend analysis in Mining Area: A Case Study of Jharia Coalfield, Dhanbad Region". January 13-15, 2020. International Conference on Water, Energy, and Environmental Sustainability 2020 (WEES 2020) in association with RMIT University, Australia. National Institute of Technology, Durgapur, India.

5. **Samadder, S. R**., and Prabhakar, R. (2019). "Co-occurrence of oxidation and adsorption for As (III) removal from groundwater using nano-MnO2 loaded Laterite

composite material" February 25-28, 2019. 9th International Conference on Chemistry and Chemical processes (ICCCP 2019). National University of Singapore, Singapore.

6. Kumar, A., and **Samadder, S. R**. (2019). "Effect of Cow Dung Inoculum in Biogas Generation from Anaerobic Digestion of Organic Fraction of Municipal Solid Waste- A Case Study" 26-29 June, 2019. 7th International Conference on Sustainable Solid Waste Management. Heraklion, Crete Island, Greece.

7. Ghosh, S., Prabhakar, R., and **Samadder, S. R.** (2018). "Assessment of aluminium oxide nanoparticles for arsenic removal" February 12 to 14, 2018. 4th International Conference on Environment and Ecology (ICEE 2018). Gauhati University, Guwahati, Assam, India.

8. Aryan, Y., and **Samadder, S. R.** (2018). "Assessment of environmental impacts using LCA for recycling of polyethylene and polyethylene terephthalate" February 12-14, 2018. 4th International Conference on Environment and Ecology (ICEE 2018). Gauhati University, Guwahati, Assam, India.

9. Prabhakar, R., **Samadder, S.R.** and Jyotsana (2018). "Efficiency of *Eichhornia crassipes* synthesized iron nanoparticles for nitrate and phosphate removal" February 12-14, 2018. 4th International Conference on Environment and Ecology (ICEE 2018). Gauhati University, Guwahati, Assam, India.

10. Prabhakar, R., **Samadder, S.R.,** and Jyotsana (2018). "Efficiency of *Lantana camara* synthesized iron nanoparticles for nitrate and phosphate removal" January 11-13, 2018. International Conference on Mother Earth: Environmental Crisis & Sustainable Strategies. Department of Environmental Science, University of Burdwan.

11. Prabhakar, R., **Samadder, S.R.,** and Jyotsana (2017). "Nitrate and phosphate removal efficiency of *Azadirachta indica* Synthesized Iron Nanoparticles" June 28-30, 2017. National Conference on Sustainable Advanced Technologies for Environment Management (SATEM-2017). Indian Institute of Engineering Science and Technology, Shibpur, Howrah.

12. Prabhakar, R., **Samadder, S.R.,** and Jyotsana (2016). "Nitrate and phosphate removal efficiency of phytogenic iron nanoparticles from water and wastewater" December 17-18, 2016. National Seminar on Environment and Development in Eastern India (Status, Issues and Challenges). Ranchi University, Ranchi.

13. S. Lata and **S. R. Samadder (2014)** "A Comparative Study of Arsenic Removal Techniques for Rural Areas." **Dec. 18-20, 2014**, 19th Conference on Hydraulics, Water Resources & Environmental Engineering.), Maulana Azad National Institute of Technology, Bhopal, India.

14. D. Khan and **Samadder, S.R. (2014).** "How Geospatial Technology Helps in Landfill Site Selection." **December 16-18, 2014.** 4th International Conference, World Science Congress. Gandhi Bhaban of Jadavpur University, Kolkata.

15. Sneh Lata and **S Samadder, S.R. (2014)** "Removal of Heavy Metals from Drinking Water Using Coconut Husk". **September 15-16, 2014**, Vol. 5 (4) ISSN: 2157-7587, Proceedings of 3rd International Conference on Hydrology and Meterology, HICC Hyderabad, India.

16. Ashvani Kumar and **Samadder, S.R. (2014).** "Groundwater Contamination by Trace Metals from Coal-Based Thermal Power Plants". **January 23-24, 2014.** International Conference on Emerging Challenges and Issues in Environmental Protection. Raipur Institute of Technology Raipur, Chhattisgarh, India.

17. Yadav, P., **Samadder, S. R. (2014).** "Life Cycle Assessment of Solid Waste Management Options: A Review". **January 23-24, 2014.** International Conference on Emerging Challenges and Issues in Environmental Protection. Raipur Institute of Technology Raipur, Chhattisgarh, India.

18. Sneh Lata and **Samadder, S.R. (2014).** "Removal of Heavy Metals Using Rice Husk: A Review". **January 4-5, 2014.** 2nd International Conference of Krishi Sanskriti on Sustainable Innovative techniques in Civil and Environmental Engineering (SITCEE-2014), Jawaharlal Nehru University, New Delhi, India.

19. A. Kumar and **Samadder, S. R. (2013).** "Trace and Heavy Metals in Fly Ash and Bottom Ash: A Review". **November 11-13, 2013.** International Conference: Harmony 2013 of National Environmentalist Association, Ranchi, Jharkhand, India on Harmony with Nature in Context of Ecotechnological Investigation and Climate Change. D. D. U. Gorakhpur University, Gorakhpur, Uttar Pradesh, India.

20. Khan, D. and **Samadder, S. R. (2013).** "The Status of Municipal Solid Waste Management in Dhanbad, India and a GIS Approach for Landfill Sitting." **August 16-18, 2013.** International Conference on Conserving Biodiversity for Sustainable Development (INCCBSD 2013). National Institute of Technology, Rourkela, Odisha, India.

21. Sneh Lata and **Samadder, S. R. (2013).** "Arsenic Detection Techniques and Their Drawbacks" August 16-18, 2013. **August 16-18, 2013.** International Conference on Conserving Biodiversity for Sustainable Development (INCCBSD-2013). National Institute of Technology, Rourkela, Odisha, India.

22. Khan, D., Vinod, B. V., and **Samadder, S. R. (2012)**. "Impact of Municipal Solid Waste Leachates on Groundwater and Investigate the Effectiveness of Various Geoliner to Control the Leachate Flow Behaviour." **November 2-4, 2012.** 4th International Conference of National Environmentalists Association on Anthropogenic Impact on Environment and Conservation Strategy, Ranchi, India.

23. McDonald, S., Berzano, M.,Ziegler, P., Peng, X., **Samadder, S. R**., Murphy, T., and Holden, N. M. (**2009**). How sensitive is qualitative risk assessment at the small agricultural catchment scale? November 27, 2009. Joint meeting of the Irish Society of Parasitology and British Association of Veterinary Parasitologists. Central Veterinary Research Laboratory, Backweston Campus, Celbridge, Co. Kildare, Ireland.

24. **Samadder, S. R**, Peng, X, McDonald, S, Murphy, T. M, Berzano, M, Ziegler, P.E, Holden, N. M (**2009**). Relative Risk of Cryptosporidium Spp. Transport in an Irish Catchment. October 11-15, 2009. 3rd International Giardia and Cryptosporidium Conference. Orvieto, Italy.

25. X. Peng., S. McDonald., T. Murphy., M. Berzano., P. Ziegler., **S. R. Samadder**., and N. M. Holden (**2009**). The transport and attachment of Cryptosporidium parvum oocysts in main Irish soils. June 15-19, 2009. 18th International Soil Tillage Research Organization. Izmir, Turkey.

26. ***Samadder, S*. R**., and Holden, N. M. (**2009**) "A GIS Approach of Cryptosporidium Risk Assessment of Irish Catchment." Conference, Environmental Sciences Association of Ireland, 19th Irish Environmental Researchers' Colloquium; February 18-20, 2009, Waterford Institute of Technology, Waterford, Ireland.

27. ***Samadder, S. R***., and *Subbarao, C.* (**2007**) "Capabilities of GIS in Risk Assessment due to Arsenic Pollution in Drinking Water." Conference on "Current Trends in Remote Sensing and GIS Applications, February 15-17, 2007, IIT Kharagpur, India.

Paper published in national conference:

28. Singh, V., and **Samadder, S. R**., (2020) "Spatial Distribution of AHP Modified Heavy Metal Pollution Index in Coal Mining Area". February 6 to 7, 2020. National Conference on Recent Trends in Environmental Pollution and Disaster Risk Reduction. IIT (ISM) Dhanbad, India.

29. Yadav, P., and **Samadder, S. R. (2014).** "A Comparative Study of Composting and Land filling of Municipal Solid Wastes Using Life Cycle Assessment Technique: A Review". January 30 to February 1, 2014. National Conference on Environmental pollution and protection. National Institute of Technology, Durgapur, India.

30. **Samadder, S. R.**, and Subbarao, C. (2014). "Effect of Arsenic Pollution in Groundwater on Life Expectancy: A GIS Approach". March 28-29, 2014. National Conference on "Water and its Sustainability in Mining and Other Environment: Vision 2050 (WASME 2014)", ISBN 978-93-5156-850-6. Indian School of Mines Dhanbad, India.

31. Pooja Yadav and **S. R. Samadder (2014).** "Life cycle assessment of solid waste management options: A Review". Recent Research in Science and Technology, 6(1), 113-116. ISSN: 2076-5061.

32. Sneh Lata and **S. R. Samadder (2014)**. “Removal of Heavy Metals Using Rice Husk: A Review". International Journal of Environmental Research and Development. ISSN 2249-3131, 4(2), 165-170.

33. Debishree Khan and **S. R. Samadder (2014)**. “Application of GIS in Landfill Siting for Municipal Solid Waste.” International Journal of Environmental Research and Development. ISSN 2249-3131, 4(1), 37-40.