## **Prof. Sunil Kumar Gupta**

#### **Professor**

Department of Environmental Science and Engg.

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#### **RESEARCH INTERESTS:**

- 1. Disinfection by-production formation and their control
- 2. Rapid organic waste stabilizer (ROWS)
- 3. Pollution exposure and human health risk assessment.
- 4. Fate and transportation of micro-plastics in water
- 5. Electrochemical treatment of dyes/Electro-chlorination
- 6. Natural Organic Matter (NOM) in drinking water.

#### **ACADEMIC BACKGROUND:**

- 1. Ph.D., Environmental Science & Engineering, IIT Bombay, India.
- 2. M. Tech, Environmental Engineering, RDVV, Jabalpur, MP, India.
- 3. B. Tech, Civil Engineering, APS University, Rewa, MP, India.

#### LIST OF PUBLICATION:

- 1. International Journal (SCI/SCIE Index): 88
- 2. Book Chapter: 10
- 3. Books and Monographs: 01+01
- 4. International & National Conference: 30

#### **RESEARCH GUIDANCE:**

- 1. Ph. D Guidance: **14** (**Awarded**) + 06 (Ongoing)
- 2. M. Tech Guidance: **30** (Awarded) + 02 (Ongoing)

#### **RESEARCH PROJECTS:**

- 1. Research Projects: **05** (Ongoing) + **04** (Completed)
- 2. Major Industrial consultancy Projects: **04** (Ongoing) + **43** (Completed)

#### **PATENTS:**

➤ "Apparatus for rapid treatment of solid organic waste" Indian Patent Application number: 202031046099, Patent Number: 373169. [Filed: 22<sup>nd</sup> October, 2020 and Granted: 29<sup>th</sup> July, 2021, Inventors: Prof. S. K. Gupta and Nitin Kumar]

#### **PROFESSIONAL APPOINTMENTS:**

❖ 2018 - 2021: HOD, Department of Environmental Sci. & Engg., IIT (ISM), Dhanbad (25/05 2018 - 24/05/2021)

- 2016- Till date: Professor, Department of Environmental Sci. & Engg., IIT (ISM), Dhanbad
- 2010 2016: Associate Professor, Department of Environmental Sci. & Engg., IIT (ISM),

#### Dhanbad

2007 - 2010: Assistant Professor, Department of Environmental Sci. & Engg., IIT (ISM),

#### Dhanbad

- 2005 2007: Sr. Lecturer, Department of Environmental Sci. & Engg., IIT (ISM), Dhanbad
- 2004 2005: Sr. Lecturer, Department of Civil Engg., RBIT, Bhutan

#### **MEMBERSHIP OF PROFESSIONAL BODIES:**

- ➤ Editorial Board Member of *Biostatistics Research Journal*, Universal Wiser Publisher, Singapore: From August, 2022.
- Editor of Pesticide Science and Pest Control Journal, Medires Publishing LLC, WY, USA: From August, 2022.
- ➤ Member Expert Appraisal Committee (EAC) of MoEF&CC, GoI, New Delhi for Coal mines and Thermal power projects (2018-2020).
- Fellow (F-1279366) of *Institution of Engineers (India)* (Since 05/07/2021)
- ➤ Life Member (Reg. No. 10153) Mining Geology and Metallurgical Institute of India: Since 25 Aug, 2012.
- ➤ Life member (LM-7264) *Indian Water Works Association (IWWA)*: Since 10 Aug, 2012.
- ➤ Life Member, Administrative Staff College of India (ASCI), Hyderabad: Since 10 Dec, 2005.
- ➤ Life Member, of Environmental Science & Engg. Society, *IIT*, *Powai*, *Mumbai*: Since 28 Dec, 1998.

#### **RECOGNITION/AWARDS:**

- Young Scientist Award for the best research in the Int. Conf. on Environmental Science and Technology held at Houston, Texas, USA on Aug. 6-9, 2007, organized by American Academy of Science.
- MHRD Fellowship during M.E. (Env. Engg.) through GATE, 1995.
- **First rank** in M.E. (Env. Engg.) in 1990 at Govt. Engg. College, Jabalpur.

#### **Details of Professional Qualification**

S.	Examinations/	Board /	Year	Grade / Division
N.	degrees	University/Institute		
1	B.E. (Civil Engg.)	APS University Rewa	1994	First class
2	M.E. (Env. Engg.)	Jabalpur University	1997	First class - 1 <sup>st</sup> rank
3	Ph. D. (Env. Sci. & Engg.)	IIT Bombay, Mumbai	2004	Awarded

#### **Details of Professional Experience**

S.N.	<b>Positions held</b>	Organization/Institute	Duration
1.	HOD/ESE	IIT (ISM), Dhanbad	25/05/2018 to 24/05/2021

2.	Professor	IIT (ISM), Dhanbad	Since 20/01/2016
3.	Associate Professor	IIT (ISM), Dhanbad	06/02/10 to 19/01/2016
4.	Assistant Professor	IIT (ISM), Dhanbad	06/02/07 to 05/02/10
5.	Sr. Lecturer	IIT (ISM), Dhanbad	18/08/05 to 05/02/07
6.	Lecturer	RBIT, Bhutan	24/04/04 to 15/08/05
7.	Project Engineer	IIT Bombay, Powai, Mumbai	01/01/04 to 20/04/04
8.	Research Associate (Part time)	IIT Bombay, Powai, Mumbai	28/12/98 to 27/12/99
9.	Senior Research Fellow	National Environmental Engineering Research Institute (NEERI), Nagpur	27-08-97 to 15-12-98

## Details of Research & Development (R&D) Project

S.N.	Project Title	Sponsoring Agency/Project No.	Duratio n	Total Amount (Rs. in lakh)	Status
1.	Potential and validation of sustainable nature and advanced technologies for water and wastewater treatment, monitoring and safe water reuse in India	DST and European Union/ DST (238)/2019- 2020/664/ESE	4 Years	76937.56 (Amt. in Euro)	Ongoing
2.	Evaluating the Impacts of Structural Interventions on to the Environment with reference to Water regime of the area	TataSteel/2020- 2021/735/ESE	1 year	7.08	Ongoing
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	Orisa Mining Corporation/ OMC/2021- 2022/806/ESE	1 year	27.00	Ongoing
4.	Study of Dust Suppression Chemical	Tata Steel/2020- 2021/738/ESE	1 Year	14.75	Ongoing
5.	Study to develop and improve nitrification in AIS (Advent integral system) at BOT plant.	Tata Steel/2017- 18/535/ESE	2 Years	20.00	Ongoing
6.	Control of disinfection by-products formation in drinking water supplies of India	Ministry of Drinking Water and Sanitation, (GOI), New Delhi/ MDWS/2015- 16/453/ESE	2 Years	25.20	Completed
7.	Remediation of Ground Water Contaminated with Hexavalent	Ministry of Environment Forest & Climate	3 Years	24.80	Completed

	Chromium in Sukhina Valley, Odihsa, using Nano Zero Valent Iron (nZVI) Technology	Change, MOEF&CC, (GOI) New Delhi/MoEF(1)/20 15-16/443/ESE			
8.	Influence of chlorine disinfectant and natural organic matter gradient on disinfection by-product formation in drinking water of some Indian cities"	SERB-DST, New Delhi/ DST (95)/2013- 2014/381/ESE	2 Years	23.20	Completed
9.	Disinfection By-products Formation and its Management in Drinking Water Supplies of India	Ministry of Drinking Water and Sanitation, (GOI), New Delhi./MRD (1)/2010- 2011/290/ESE	2 Years	7.80	Completed

## **Details on PhD. Thesis Supervised:** 14 Nos

Sl. No.	Student Name / Registration No.	Name of Guide/ co- guide	Title of Ph. D Thesis	Year of Award
1.	Mr. Jaydev Kumar Mahato	Prof. S.K. Gupta	Development of Novel Adsorbent for the Removal of Natural Organic Matter (NOM) from Drinking Water	2022
2.	Mr. Shahjad Ali	Prof. S.K. Gupta & Prof. Alok Sinha	Detailed Investigation of Fluoride and its Control in Agra Region	2020
3.	Awanindra Pratap Singh	Prof. S.K. Gupta	Appraisal of Coalbed Methane Produced Water and Aquifer Impact Modeling in Raniganj Coalfield, West Bengal	2020
4.	Rachit Ghosh	Prof. S.K. Gupta	Studies on Geopolymer Concrete using synergistically Fly ash and Bottom ash	2020
5.	Anand Govind More (2014DR0253)	Prof. S.K. Gupta	Investigation into Feasibility of Bio- Electrochemical reactor for recovery of metals from Electroplating wastewater	2019
6.	Jayeeta Saha (2014DR0034)	Prof. S.K. Gupta	Development of a cost effective Electrochlorination system, A sustainable approach towards drinking water disinfection	2018
7.	Brahmdeo Yadav (2010DR0106)	Prof. Sunil Kumar Gupta	Geotechnical Investigation and Design of Compacted Clay Liner (CCL) using Local Soil of Jaduguda Uranium Ore Mines	2017

8.	Minashree Kumari (2013DR0241)	Prof. Sunil Kumar Gupta	Risk Assessment, Modelling and Control of Trihalomethanes (THMs) from Drinking Water	2017
9.	Aliya Naz (2013DR0064)	Prof. Sunil Kumar Gupta & Prof. B.K. Mishra	Risk assessment of chromium in the chromite mine water and its Bio remediation	2017
10.	Debleena Bhattacharya (2011DR0038)	Prof. Sunil Kumar Gupta	"Biodegradation of Antibiotic residuals in the effluent of Pharmaceutical Industry"	2017
11.	Swati Tomar (2012DR0046)	Prof. Sunil Kr Gupta	"Performance Evaluation of Anammox Hybrid Reactors for the treatment of ammonical nitrogen rich waste water."	2016
12.	Brijesh Kumar Mishra	Prof. S. K. Gupta & Prof. Alok Sinha	Predetective Modelling Approach of Disinfection by Product in Drinking Water	2014
13.	Shibam Mitra	Prof. S K Gupta	Bio-degradation of chlorinated ethenes in anaerobic hybrid reactor	2012
14.	Richa Sharan	Prof. S K Gupta & Prof. Gurdeep Singh	Impact of Mining and Urbanization on Land use and Vegetation Diversity in Angul-Talcher Region, Orissa	2011

# Ongoing PhD. Thesis Supervision:

Sl. No.	Student Name / Registration No.	Name of Guide/co- guide	Title of Ph.D Thesis	Mode of Registration
1.	Lobzang Chorol (17DR000444)	Prof. S.K. Gupta	Impact of Urbanization on Groundwater Quality on Leh, Ladakh.	Full Time
2.	Nitin Kumar (17DR000512)	Prof. S.K. Gupta	A Novel technique for the rapid conversion of solid organic waste into nutrient rich soil conditioner.	Full Time
3.	Suyog Gupta (17DR000525)	Prof. S. K. Gupta	Water Quality Modelling of Damodar River using Statistical Concepts & Hybrid Soft Computing Techniques.	Full Time
4.	Diwakar Kumar (17DR000303)	Prof. S.K. Gupta	Removal of Direct Blue 86 Dye From Wastewater Using Electrochemical Method.	Full Time
5.	Aakansha Kumari (18DR000697)	Prof. S.K. Gupta	Assessment of and evaluation of microplastic in water resource -	Part Time
6.	Partha Pratim Pal (17DP000246)	Prof. S.K. Gupta & Dr. Sanchita	Chemical, mineralogical, and morphological characterization of Ladle Furnace (LD) Slag	Part Time

Chakravarty (CSIR-NML, Jamshedpur)	generated from Iron & steel Industry as a Potential Adsorbent for removal of heavy metals from	
	contaminated water	

# **Ongoing Consultancy Projects**

Sl. No.	Project No.	Title of the Consultancy Project	Consultant In- Charge	Sponsoring Organization	Value (in Rs.)
1.	CONS/7029 /2022-2023	Performance Evaluation and Wastewater management system at Bhilai Steel Plant	Prof. S. K. Gupta & Prof. Alok Sinha	SAIL, Bhilai	3422000
2.	CONS/6096 /2021-2022	Cumulative Impact Assessment Study, Carrying Capacity Study and Ecosystem Services Study of Nigahi Opencast Mining Project	Prof. S. K. Gupta & Prof. Anshumali	NCL, Singrauli, MP	11070000
3.	CONS/4099 /2018-2019	3rd Party Evaluation of DPR/Agency appointed for Water Supply Project under JMADA.	Prof. S. K. Gupta & Prof. Alok Sinha	JMADA	1996750
4.	TEST/4008/ 2018-2019	Validation of Data Quantitative for Coal Jal App with respect to CCL	Prof. S. K. Gupta & Prof. B. K. Mishra	CCL	1040000

# **Industrial Consultancy/Testing work completed**

Sl. No.	Project Numbe r	Title of the Consultancy Project	Consultant In- Charge	Sponsoring Organization
1.	CONS/ 1235	Monitoring of Environmental Parameters in respect of Air, noise, water and stocle unit 7&8 of CTPS Chandrapura	Prof. S. K. Gupta	DVC
2.	CONS/ 5005/20 18-2019	Treatability Study of Sewage/Effluent at different locations of ECL.	Prof. S. K. Gupta & Prof. Alok Sinha	ECL
3.	CONS/ 4096/20 18-2019	Assessment of heavy Metal Pollution Index (HPI) in Water Sediments and Aquatic Samples in and Around Manikpur Opencast Mine fly ash fill site	Prof. S. K. Gupta, Prof. Alok Sinha, & Prof. B. K Mishra	National Thermal Power Corporation Ltd.
4.	CONS/ 1080	Monitoring of environmental parameters in respect of ambient air, stack monitoring, noise level and effluent, BTPS'B' Bokaro Thermal, Bokaro	Prof. Gurdeep Singh, Prof. S. K. Gupta,	DVC,Bokaro
5.	CONS/ 1093	Preparation of Environmental Statement Report of DVC, Bermo Mines, Bermo, Bokaro	Prof. G. Singh, Prof. S. K. Gupta	DVC Bermo Mines, Bokaro
6.	CONS/ 1238	Rapid comprehensive environmental audit of 4X250 MW	Prof. Gurdeep Singh, Prof. S.K.Gupta,	Jindal Power Ltd. Raigarh

		OP Jindal Power Plant		
7.	CONS/ 1333/20 10-2011	Preparation of pre-feasibility from I Report for Coal washery of Kaphila Industries	Prof. Gurdeep Singh Prof. S. K. Gupta,	M/s Kaphila Industries Katras Dhanbad
8.	CONS/ 1515	Stack Monitoring of SRI Aurobindo Fuels Ltd	Prof. S. K. Gupta	SAFL
9.	CONS/ 1294	Regional Environmental Impact Assessment study of Goa region	Co-PI	MoEF & CC, New Delhi,
10.	CONS/ 1521	Design of Rainwater Harvesting Scheme	Prof. S K Gupta	KI
11.	CONS/ 1631	Rapid Env. Audit of 4 x 250 MW Power Plant of JPL	Prof. S. K. Gupta	JPL
12.	CONS/ 1691	Analysis of Bleaching Powder	Prof. S. K. Gupta	CCL
13.	CONS/ 1955/20 12-2013	Preparation of Environmental Management Report for DVC Mines.	Prof. S. K. Gupta	Mahuda Coal Washery, BCCL
14.	CONS/ 2367	Effluent Analysis as Per EP Act 1986	Prof. S. K. Gupta	TATA
15.	CONS/ 2371	Environmental Monitoring by Third Party	Prof. S. K, Gupta	NTPC.
16.	CONS/ 2412	Study of Leaching of Heavy Metals	Prof. S.K. Gupta	TATA
17.	CONS/ 2483	Water Table Study of Sarabh Automobile Plant	Prof. S. K. Gupta	SA
18.	CONS/ 2484	Water Table Study of Sarabh Automobile Plant	Prof. S. K. Gupta	SA
19.	CONS/ 2556	Testing of two Waste Water Samples for M/S ENC Ltd.	Prof. S. K. Gupta	ENCL
20.	CONS/ 2557	Testing of two Waste Water Samples for M/S ENC Ltd.	Prof. S. K. Gupta	ENCL
21.	CONS/ 2568	Design of Settling Pond at Ambuja Cement Plant	Prof. S. K. Gupta	ACL
22.	CONS/ 2674/20 14-2015	Impact of Mining Activities on Hydrology and Hydrogeology of Core Zone Covering all 5 underground Mines of Tata Steel.	Prof. S. K Gupta	TSL
23.	CONS/ 2927/20 15-2016	Geo-Enviro Study of Abandoned Mines for 2 x 525 MW Maithon Power Plant.	Prof. S. K Gupta	Maithon Power Ltd. Maiothon Dhanbad
24.	CONS/ 1096	Design of Particulate emission control system and preparation of environmental management plant for coke oven plants in Dhanbad	Prof. S. K. Gupta	M/s S. S. Coke Mfg. Industries P Ltd., Kolkata, and others
25.	CONS/ 2675/20 14-2015	Monitoring of Environmental Parameters in Respect of (i) Stack Emission test (ii) Effluent discharge test (iii) Ambient air quality test (iv) Noise level Measurement for unit 1,2,3,7 & 8 DVC CTPS Chandrapura	Prof. S. K. Gupta  Prof. Alok Sinha,	DVC
۷٠.	1ES1/4	Validation of Data quantitative for	1 101. AIUK SIIIIIa,	ECL

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	012/201	Coal Jal App with respect to ECL.	Prof. S. K. Gupta,	
	8-2019		& Prof. B. K Mishra	77.07
27.	TEST/4	Validation of Data Quantitative for	Prof. S. K. Gupta,	ECL
	010/201	Coal Jal App with respect to ECL	Prof. Alok Sinha, &	
	8-2019		Prof. B. K Mishra	
28.	TEST/4	Validation of Data Quantitative for	Prof. B. K Mishra,	BCCL
	009/201	Coal Jal App with respect to BCCL	Prof. S. K. Gupta, &	
	8-2019		Prof. Alok Sinha	
29.	TEST/4	Validation of Data Quantitative for	Prof. B. K Mishra,	CCL
	008/201	Coal Jal App with respect to CCL	Prof. S. K. Gupta, &	
	8-2019		Prof. Alok Sinha	
30.	TEST/4	Validation of Data Quantitative for	Prof. S. K. Gupta,	ECL
	010/201	Coal Jal App with respect to ECL	Prof. Alok Sinha, &	
	8-2019		Prof. B. K Mishra	
31.	CONS/	Assessment of ground and surface	Prof. B. K Mishra,	Hindalco
	3870/20	water at Muri	Prof. S. K. Gupta, &	Industries Ltd.
	18-2019		Prof. Alok Sinha	
32.	CONS/	Study of IRR in its Ecological	Prof. S. K. Maiti,	SECL
	3864/20	Dimension to Know the pollution	Prof. S. R.	
	18-2019	load bearing capacity of the	Samadder,	
		surrounding Ecosystem	Prof. S. K. Gupta	
33.	CONS/	Analysis of Water Quality (M/s	Prof. S. K. Gupta	CCL
	3627/20	CCL)		
	17-2018			
34.	CONS/	Assessment of Ground Water and	Prof. B. K Mishra,	Hindalco
	3519/20	Surface Water at Muri.	Prof. S. K. Gupta, &	Industries Ltd.
	17-2018		Prof. Alok Sinha	Muri, Ranchi
35.	CONS/	Techno Economic Study for	Prof. B. K Mishra,	Chhattisgarh
	3469/20	Transportation for Fly ash from	Prof. S. K. Gupta, &	State Power
	16-2017	CSPGCL Korba to Manikpur Open	Prof. Alok Sinha	Generation
		Cast Mines		Company Ltd.
36.	CONS/	Techno Economic Study for	Prof. S. K. Gupta,	NTPC
	3429/20	Transportation of Ash from NTPC	Prof. Alok Sinha, &	
	16-2017	Korba to Bishrampur & Manikpur	Prof. B. K Mishra	
		Open Cast Mines for its Utilization		
37.	CONS/	Environmental Audit of Matrix	Prof. B. K Mishra,	Matix
	3408/20	Fertilizer by Third Party.	Prof. Alok Sinha &	Fertilisers and
	16-2017		Prof. S. K. Gupta	Chemicals
			r	Ltd., Burdwan,
				W.B
38.	CONS/	Water Quality and Treatment Plant	Prof. B. K Mishra,	NCL
	3404/20	Operation.	Prof. Alok Sinha &	
	16-2017		Prof. S. K. Gupta	
39.	CONS/	Feasibility Study of STP at West	Prof. S. K. Gupta &	Tata Steel
- / •	3300/20	Bokaro Division (WBD).	Prof. Alok Sinha	
	16-2017	Bonaro Bivision (vv BB).	Tron mon Simu	
40.	CONS/	Suitability test water of Tata Steel,	Prof. S. K. Gupta	Tata Steel Ltd.
	3180/20	Jamadoba	_ 101. 2. 11. Supiu	Jamadoba
	16-2017			
41.	CONS/	Technical Consultancy for	Prof. Alok Sinha,	N.M.D.C
	3049/20	Wastewater Management and	Prof. S. K. Gupta,	
	15-2016	Control of Water Pollution from	& Prof. B. K Mishra	
	13.2010	Plant and Mines of BIOM Kirandul	& 1101. D. K WIISHIA	
		Complex.		
42.	CONS/	Suitability test of water.	Prof. B. K Mishra,	CCL
72.	3032/20	Saltability test of water.	Prof. Alok Sinha &	CCL
1	3034/40		1 IUI. AIUK SIIIIIa &	

	15-2016		Prof. S. K. Gupta	
43.	CONS/	Testing of Water Sample near	Prof. B. K Mishra, &	Hindalco
	3021/20	Rajrappa Area.	Prof. S. K. Gupta	Industries Ltd.
	15-2016		_	

#### Training Programme, Seminars, Symposia, Workshops, Conferences organized

Sl No	Topic/Field	Sponsoring Authority
1.	3-Days residential training programme on "Advances in water quality assessment and its management for rural water supply schemes" during 28 to 30 December, 2017.	MDWS, (GOI), New Delhi
2.	2 Days workshop on "Challenges and Opportunities for Management of Water Supplies in Rural Areas (COMWRA 2015)" during 23-24 Jan, 2015.	MDWS, New Delhi
3.	3-days residential training program on "Assessment of Water Quality and Low-Cost Treatment Methods for Rural Water Supply" proposed during October, 2013.	MDWS, (GoI), New Delhi
4.	3 Days residential training program on "Design and Implementation of Rainwater Harvesting System for Augmentation of Rural Water Supply"	MDWS, New Delhi
5.	3 Days training programme on Junior & Middle level Executives of DWSD Ranchi Water & Waste Water Treatment & Management during 7-9 Nov., 2012	DWSD, Ranchi
6.	Five-day training programme on "Recent Advances in Water Resources and Environmental Engineering Computation" was organised by Centre of Mining Environment & Department of Civil Engineering, ISM in association with Water Resources Centre, Texas Tech University, Lubbock, USA at ISM IIIF, Kolkata during 22-26 December, 2015.	EDP Course
7.	Three days Training programme on Water Quality and Management for Thermal Power Plants.	Thermal power Plant
8.	Sustainable Coal Mining Practices for the students of University of South Florida-St. Peterburg, USA	University of South Florida
9.	Three days Training Program on "Water Quality & Treatment".	KRC, MDWS, (GoI), New Delhi
10.	Recent Advances in Water Resources and Environmental Engineering Computation	KRC, MDWS, (GoI), New Delhi

#### RESEARCH PUBLICATIONS

- 1. Chorol, L., & **Gupta**, **S. K.** (2022). Evaluation of groundwater heavy metal pollution index through analytical hierarchy process and its health risk assessment via Monte Carlo simulation. Process Safety and Environmental Protection. (Q1, IF 7.926)
- 2. Gupta, S., & Gupta, S. K. (2022). Application of Monte Carlo simulation for carcinogenic and non-carcinogenic risks assessment through multi-exposure pathways of heavy metals of river water and sediment, India. Environmental Geochemistry and Health, 1-22. (Q2, IF 4.898)
- 3. Kumar, N., Gedam, P., & Gupta, S. K. (2022). Investigating the dynamics of ammonia volatilisation and the role of additives in thermal digestion of food waste. Journal of Environmental Management, 323, 116312. (Q1, IF 8.91)

- 4. Kumar, A., Kumari, M., & **Gupta, S. K.** (2022). Performance study of fly-ash-derived coagulant in removing natural organic matter from drinking water: synthesis, characterization, and modelling. Environmental Monitoring and Assessment, 194(11), 821. (**Q3, IF 3.42**)
- 5. Kumar, D., & **Gupta, S. K.** (2022). Electrochemical oxidation of direct blue 86 dye using MMO coated Ti anode: modelling, kinetics and degradation pathway. Chemical Engineering and Processing-Process Intensification, 109127. (Q2, IF 4.264)
- 6. Teja, D. R., Gupta, S., Yadav, B., & **Gupta, S. K.** (2022). Development of fuzzy leachate pollution index for treatability-based classification of solid waste landfills. Environmental Science and Pollution Research, 1-10. **(Q2, IF 5.19)**
- 7. Mahato, J. K., & **Gupta**, **S. K.** (2022). Relative assessment of activated carbon and Nano-Material based adsorbents used for obliteration of THMs precursors-regeneration and techno-economic feasibility analysis. Advanced Powder Technology, 33(8), 103700. (**O1**, **IF** 4.96)
- 8. Kumari, M., & **Gupta, S. K.** (2022). Cumulative human health risk analysis of trihalomethanes exposure in drinking water systems. Journal of Environmental Management, 321, 115949. **(Q1, IF 8.91)**
- 9. R N Thakur, Randhir Kumar Gupta, **Sunil Kumar Gupta** (2022). Performance of jute geotextile treated with bitumen emulsion for subgrade improvement: Arabian Journal of Geosciences 15(13):1187. (**Q3, IF 1.985**)
- 10. Kumari, M., & **Gupta, S. K.** (2022). Occurrence and Exposure to Trihalomethanes in Drinking Water: A Systematic Review and Meta-analysis. Exposure and Health, 1-25. (**Q1, IF 11.422**)
- 11. Kumar, N., & **Gupta, S. K.** (2022). Exploring drying kinetics and fate of nutrients in thermal digestion of solid organic waste. Science of The Total Environment, 155804. (**Q1, IF 7.9**)
- 12. Mahato, J. K., & **Gupta, S. K.** (2022). Advanced oxidation of Trihalomethane (THMs) precursors and season-wise multi-pathway human carcinogenic risk assessment in Indian drinking water supplies. Process Safety and Environmental Protection, 159, 996-1007. (**Q1, IF 7.926**)
- 13. Mahato, J. K., & **Gupta**, **S. K.** (2022). Exploring applicability of artificial intelligence and multivariate linear regression model for prediction of trihalomethanes in drinking water. International Journal of Environmental Science and Technology, 19(6), 5275-5288. (**Q2**, **I.F- 3.519**)
- 14. Khatri, V. N., Kumar, A., **Gupta, S. K.**, Dutta, R. K., & Gnananandarao, T. (2022). Numerical study on the uplift capacity of under-reamed piles in clay with linearly increasing cohesion. International Journal of Geotechnical Engineering, 16(4), 438-449. (**Q2, I.F-1.421**)
- 15. Kumar, A., Khatri, V. N., & Gupta, S. K. (2022). Numerical and analytical study on uplift capacity of under-reamed piles in sand. Marine Georesources & Geotechnology, 40(1), 104-124. (Q2, I.F-2.673)
- 16. Ali, S., **Gupta, S. K.**, Sinha, A., Khan, S. U., & Ali, H. (2022). Health risk assessment due to fluoride contamination in groundwater of Bichpuri, Agra, India: a case study. Modeling Earth Systems and Environment, 8(1), 299-307.

- 17. Kumar, N., & **Gupta, S. K.** (2021). Exploring the feasibility of thermal digestion process: A novel technique, for the rapid treatment and reuse of solid organic waste as organic fertilizer. Journal of Cleaner Production, 318, 128600. **(O1, IF 9.29)**
- 18. Mahato, J. K., & **Gupta, S. K.** (2021). Exceptional adsorption of different spectral indices of natural organic matter (NOM) by using cerium oxide nanoparticles (CONPs). Environmental Science and Pollution Research, 1-10. (**Q2, I.F- 5.19**)
- 19. Kumar, A., Khatri, V. N., & **Gupta, S. K.** (2021). Numerical and analytical study on uplift capacity of under-reamed piles in sand. Marine Georesources & Geotechnology, 1-38. (**Q2, IF 2.673**)
- 20. Ali, S., Khan, S. U., **Gupta, S. K.**, Sinha, A., Gupta, M. K., Abbasnia, A., & Mohammadi, A. A. (2021). Health risk assessment due to fluoride exposure from groundwater in rural areas of Agra, India: Monte Carlo simulation. International Journal of Environmental Science and Technology, 18(11), 3665-3676. (**Q2, I.F-2.86**)
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- Head, Department of Civil Engineering, IIT(ISM), Dhanbad
- Incharge of Wastewater Engineering Lab, Fluid Mechanics Lab, Instrumentation Lab
- Member of Departmental Research Committee
- Member of Departmental Purchase Appraisal Committee
- Organization of 9<sup>th</sup> Professor S. K. Bose Memorial Lecture
- Co-Coordinator for B.Tech (Env.Eng.)
- Member of DRC of Civil Engg Dept.

#### **Institute Level**

 Member of Expert Appraisal Committee (EAC) of MOEF&CC, GoI, New Delhi for Coal & Thermal Projects

- Nodal Officer, Key Resource Centre, MDWS, New Delhi
- Coordinator, ENVIS, of MOEF&CC, GoI, New Delhi
- Member of Selection Committee for recruitment of Assistant/EE Engineer of CMU, ISM Dhanbad
- Member of Selection Committee for recruitment of Junior Engineer of CMU, ISM Dhanbad
- Member of Selection Committee for recruitment of Project Assistant Level I and II Engineer Group –III (4) at CIMFR, Dhanbad on 13/02/2013
- Member of Selection Committee for recruitment of Assistant and Executive Engineer Group –III (4) at CIMFR, Dhanbad on 27/08/2012
- Member of Assessment Committee for assessment of Group –III (3) to Group (6) Technical Officer at CIMFR, Dhanbad on 26/04/2013
- Member of committee constituted for finalization of course structure for 5-year integrated M. Tech course in Civil Engg. at BIT, Sindri, Dhanbad 25/03/2013
- Member of Selection Committee for Recruitment of JRF of ESE Dept.
- Member of handing taking over of civil works at ISM Dhanbad
- Member of Tender Opening & Negotiation Committee for Civil & Electrical Works
- Member of Scrutiny Committee for Civil & Electrical Works
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