BIODATA

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8.1 Professional career:

S. No.	Position & Organization	Nature of Job	Period
1.	Senior Scientist, CSIR-CIMFR, Dhanbad	Research and Development in theareas of novel separation process, process intensification wastewater treatment, chemical engineering process design and modelling	12/04/2020 topresent date
2.	Scientist C, CSIR-CIMFR, Dhanbad	Research and Development in theareas of novel separation process, process intensification wastewater treatment, chemical engineering process design and modelling	11/04/2016 to 11/04/2020

8.2 Academic Qualifications

S. No.	Degree	Institution	Specialization	Year	Division/Class
1.	Ph.D.	Indian Institute of Technology-Indian School of Mines (IIT-ISM)- Dhanbad	Chemical Engineering	2022	1st Division
2.	M.Tech	National Institute of Technology (NIT), Durgapur	Chemical Engineering	2015	1st (**M. techtopper Gold medallist**)

9.1Award/Prizes won

- Recipient of best oral presentation award under waste to wealth technologies in young scientist conclave of Indian International Science Festival, New Delhi 2016.
- Recipient of SERB-SIRE fellowship for research visit to University of Connecticut, USA (2023-2024)
- Recipient of PROWIS fellowship awarded by CEPIFRA for research visit to European Institute for membranes, France (2024-2025) : Secured 1st position
- Won second prize in poster presentation during Indo – French Workshop on Clean and Sustainable Energy Technologies, held in CSIR-NPL, New Delhi (21-24th February, 2023)

- ❖ Recipient of DST International Travel support for attending 36th European Membrane Summer School: "Membranes for a sustainable future" held in University of Edinburgh, UK in June, 2019
- ❖ Recipient of Institute GOLD MEDAL NIT Durgapur, for topping the M.tech Course in Chemical Engineering (2013-2015)
- ❖ Recipient of Dr. K. N. Sinha Award : second prize for Highest Impact factor of papers published in SCI Journals by scientific staff members in CSIR-CIMFR –2018-2019
- ❖ NABET accreditation in the field of Risk Hazard Analysis
- ❖ Guinness World Record coordinator for India International Science Festival 2020
- ❖ Selected as GET in Vishakhapatnam Steel Plant, 2016
- ❖ Recipient of government of India cash award for outstanding performance in ICSE (classX) results

9. Publications

10.1 Publication (SCI Journals)

Sl. No.	Title of paper	Author(s)	Name of the Journal	Vol. &Year	Pages
1.	Dynamic modelling of a forward osmosis-nanofiltration integrated process for treating hazardous wastewater	P.Pal, **P.Das,** S. Chakrabortty, R. Thakura	Journal Of Environmental Science and Pollution Research **Impact Factor : 5.190**	23 (210), 2016	21604–21618
2.	Applicability of Zeolite Based Systems for Ammonia Removal and Recovery from Wastewater	**P.Das,** B.Prasad, KKK Singh	Water Environment research **Impact Factor**: **3.306**	89(9): 2017	840-845
3.	Effluent treatment technologies in Iron and Steel industry - A state of the art review **Paper made cover issue**	**P. Das***,G.C. Mondal, S. Singh, A.K. Singh, B.Prasad,KKK Singh	Water Environment research **Impact Factor: 3.06**	90, 5, 2018	395-408
4.	Energy saving integrated membrane crystallization: A sustainable technology solution	**P.Das,** KKK Singh, S.Dutta	Separation and purification Technology **Impact Factor: 9.136**	228, 2019	115722
5.	Insight into emerging applications of forward osmosissystems	**P.Das*,** KKK Singh, S.Dutta	Journal of Industrial andEngineering Chemistry **Impact Factor: 6.064**	72, 2019	1-17
6.	Broad-spectrum contaminant removal from water using sustainable pressure assisted osmosis	**P.Das*,**KKK Singh	Journal of Environmental ChemicalEngineering **Impact Factor: 7.968**	9, 2021	1104594
7.	Insights into membrane crystallization: A sustainable tool for value added product	**P.Das*,** S.Dutta,KKK Singh,	Separation and purification Technology **Impact Factor: 9.136**	257, 2021	117666

	recovery from effluent streams				
8.	Waste to wealth: Recovery of value-added products from steelslag	**P.Das,** S Upadhyay, S Dubey, KKK Singh	Journal of Environmental ChemicalEngineering **Impact Factor: 7.968**	9 (4), 2021	105640
9.	MEUF for removal and recoveryof valuable organic components present in effluents: A process intensified technology	**P Das,** A Sharma, Y Singh, S Upadhyay, S Verma	Water Environmen tResearch **Impact Factor: 3.306**	94 (8), 2022	e10761
9.	Integrated MEUF, MENF and MERO for phenol remediation: A process intensified approach	**P Das,** R Rangari , B, Kumar	Chemical Papers **Impact Factor: 2.146**	78,2024	861–874,

10.1 Papers publication in National/ International Conferences:

Sl. No.	Title of paper	Author(s),	Name of the Conference	Date
1.	Waste to wealth: Cost effective ammonia recovery from coke oven wastewater. **Won best oral presentation awardunder waste to wealth category**	**P. Das**, B. Prasad, KKK Singh, K.B. Singh	2nd India International Science Festival (IISF), held in NewDelhi, National Physical Laboratory, New Delhi	7-11th December, 2016
2.	Scale-up of Acid Mine Drainage Treatment using Fly Ash Zeolite - A Techno-economic feasibility study.	**P.Das,** B. Prasad, KKK Singh, K.B. Singh	Next Generation Mining and FuelTechnologies, 2017. Vigyan Bhavan, New	15-17th February 2017
3.	Hydrogels as draw solutes: designaspects.	**P.Das,** KKK Singh	International conference in Exploration of oil, gas,coal, minerals, modern techniques and	7-9th February 2018
4.	Utilization of blast furnace slag inwastewater treatment.	**P.Das**, S. Bhattarjee, S.Saha, KKK Singh	International Conference and Exhibition on energy& Environment: Challenges & Opportunities (ENCO),2019. Vigyan Bhavan, New Delhi 576-580	20-22nd February 2019

5.	Energy Efficient forward osmosis for sustainable industrial wastewater treatment	**P.Das**, S. Kumar, R. Pramanik, AK Singh	**Indo – French Worksho**p on Clean and Sustainable Energy Technologies	2023

Poster Presentation

- Acid Mine Water Treatment and Resource Recovery, P.Das, R. Rangari, R. Pramanik, GC Mondal, AK Singh **2nd Industrial Workshop on Separations Technology at UConn Tech Park, University of Connecticut , USA (5th-6th October ,2023) (Poster)**

12. Book chapters:

Sl. No.	Name of Book chapters	Name of Co- author, if any	Year of Publication	Publisher
1.	Forward osmosis membranes for water purification	Pallabi Das, KKK Singh, Suman Dutta	2020	Elsevier B.V.
2.	Sustainable membranes with FNs: Current and emerging research trends	Pallabi Das, Suman Dutta	2022	Elsevier B.V.
3.	Wastewater Remediation: Emerging Technologies and Future Prospects	Pallabi Das, KKK Singh	2022	Springer International Publishing
4.	Sustainable Technologies for Value Added Product Recovery from Wastewater	Pallabi Das, KKK Singh, AK Singh	2022	Springer International Publishing

12. Projects

12. 1 Grant-in-aid Research Projects

	Title of Project	**Funding, Agency**	**Role**	**Status**	**Contribution**
1	Investigations towards mitigation of the problem of acid mine drainage in India **	Science and engineering Research Board (SERB), New Delhi	Principal Investigator	Ongoing	To remediate acid water and assess feasibility of Rare Earth extraction from acid mine water
2	Investigation on in situ gasification kinetics to assess the syngas quality, cavity growth and, it's possible impact on groundwater for varying geologic conditions *	Science and engineering Research Board (SERB), New Delhi	Co-Principal Investigator	Ongoing	To study the impact of UCG on groundwater

3	Integrated cost-effective technology for attaining zero liquid discharge in steel plants with emphasis on steel slag utilization	Ministry of Steel, Government of India	Principal Investigator	Completed	Process development, design, waste valorization, allied experimentation
4	Integrated forward osmosis for energy efficient and sustainable industrial wastewater treatment	Department of Science and Technology ,	Principal Investigator	Completed	System design, remediation, field studies
5	Technology development for the treatment of acid mine water for its reuse and safe disposal	Meghalaya State Pollution Control Board	Principal Investigator	Completed	Conversion of AMD water into potable water, plant design,process development
6	A broad-spectrum effluent treatment technology for treating Industrial effluent	InhouseR&D support, CSIR-CIMFR	Principal Investigator	Completed	Development of integrated FO-NF system, design, fabrication detailed experimentation. Infrastructure development
7	Role of Novel Separation process in remediation of heavy metals and organic pollutants.	Inhouse R&D, CSIR-CIMFR	Principal Investigator	Completed	Development of novel integrated HF-spiral wound assembly, remediation, and laboratory setup. Novel separation process laboratory setup
8	Broad spectrum sulfate removal from coal mine water with an emphasis on value added product recovery	Inhouse R&D, CSIR-CIMFR	Principal Investigator	Ongoing	Field Studies, broad-spectrum sulphate removal technique developed

12.2 Sponsored Projects (selected only)

Sl. No	Title of Project	Funding Agencies	Status	Role
1.	Study of feasibility of ash utilization in Dhirauli coal mine	Adani Power	Ongoing	Project Leader
2.	Environmental Impact Assessment of Ash Disposal in Lalmatia Coal Mine and advice on its Management, Godda District, Jharkhand	Adani Power	Ongoing	Project Leader

3.	Environmental Study, monitoring of land use pattern and preparation of environmental statement for Dumri Coal Mine, Hazaribag	Hindalco Industries Ltd	Ongoing	Team Member; Water quality analysis;
4.	Baseline Data Generation and Preparation of EIA/EMP of Surkha (N) Lignite Mine Village Surkha, Taluka Ghogha, Dist - Bhavnagar (Gujrat)	Gujarat Mineral Development Corporation Limited	Ongoing	Team Member: Water quality analysis, risk and hazard analysis
5.	Base line environmental study for wet ash slurry disposal through pipelime in Gare IV/1 Mine void, Jindal Power Ltd. Tamnar, Raigarh	Jindal Power limited	Ongoing	Leaching studies, water quality analysis
6.	Environmental Impact Assessment of Ash Disposal in Umrer and Gondegoan Coal Mine and Advice on its Management, Nagpur, Maharashtra	Adani Power Ltd	Ongoing	Leaching studies, water quality analysis Risk and hazard analysis
7.	EIA study and preparation of EMP of Jitpur colliery for grant of Environmental Clearance from MoEF&CC	SAIL (Steel Authority of India Limited)	Completed	Team Member: Water quality analysis, risk and hazard analysis
8.	EIA study and preparation of EMP of Chasnalla colliery for grant of Environmental	SAIL (Steel Authority of India Limited)	Completed	Team Member: Water quality analysis, risk and hazard analysis
9.	Water Quality data base generation, interpretation and analysis for exploratory wells to be drilled at various locations in Ghazipur district, UP (Phase -1)	WAPCOS Water and Power Consultancy Services (India) Limited	Completed	Team Member: Water qualityanalysis
10.	Generation of Baseline data and Preparation of EIA/EMP of Amod (G-19 Ext.) Lignite Mine Project, Taluka Jhagadia, Dist. Bharuch, Gujarat and advice thereof.	Gujarat Mineral Development Corporation Limited	Completed	Team Member: Water quality analysis, risk and hazard analysis

13. Patents/Design Copyrights

13.1 Patent

Sl No.	Inventors	Title	Country	Granted on (Date)
1.	**P. Das, S.K. Kashyap, G.C.Mondal, KKK Singh, PK Singh**	Novel portable device for providing hydration in remote areas **(GRANTED)**	**India**	**Grant number: 470557 Grant date : 20th November 2023**

13.2 Design Copyrights

Sl. No.	Inventors	Title of the Copyright	Status
1.	P.Das, KKK Singh, PK Singh	Mechanically powered self-sliding portable forward osmosis assembly	Application No.: **006**CR**.2019** **Registration No: L-82982/2019 (Granted)**
2.	P.Das, S. Dutta , KKK Singh, PK Singh	Integrated hollow fibre FO-UF with tubular assembly in across flow channel	Application No.: 035CR2019 **Registration Number: L-106280/2021 (Granted**)
3.	P.Das, KKK Singh, PK singh	Process Intensified Integrated chemical dosing filtration assembly	**Registration Number: L-106280/2021 (Granted**)
4.	P.Das, KKK Singh, PK Singh	Integrated water absorptionand dewatering assembly for preferential absorption and release	Application number : 009CR2018 Filed
5.	P.Das, R.Rangari, G.C. Mondal, KKK Singh, PK Singh	Process design for remediation technology for acid mine water treatment	Filed

14. Number of UG and PG students guided / Ongoing:

UG		PG	
Guided	Ongoing	Guided	Ongoing
B.Tech dissertation : 1 (Banasthali University, Rajas tan) Summer projects : :8 (IIT-ISM, BITS Pilani, BIT Sindri, BIT Mesra University) B.Sc summer project :1	B.tech summer projects :3(BIT Sindri)	• M.tech dissertation : 2 • (Central University of Jharkhand Ranchi) • Msc. Dissertation : 10 (IIT-BHU, BIT Mesra, BBMKU) • M.tech internship/project : 2 (IIT-ISM)	MSc Disseration :2 (BBMKU)

15. Professional Memberships

1) Life member Indian Science Congress Association (ISCA)
2) Member European Membrane Society (EMS)
3) Life Member Indian Institute of Chemical Engineers (IICHE)
4) Life Member Mining Engineers Association, India (MEAI)
5) Life member Vigyan Bharati

16. Invited Lectures

1) As a invited speaker at the Science Summit at the 78 United Nation General Assembly, 2023, Date: 22 and 28 September 2023; session held by Council of Scientific and Industrial Research (CSIR), on India An Innovation Hub for Global Sustainable Development in the thematic area Exploration and Sustainable Unearthing of Treasures (SDG 14 – Life Below Water and SDG 15 – Life on Land) : Highlighted the S&T interventions in our organization at the global level
2) Delivered an invited lecture at CSIR-CGCRI Kolkata titled "Technologies & Equipment for treatment & recycling of Industrial & Municipal Waste Water in India" in a seminar on "Innovative Technologies & Equipment for treatment & recycling of Industrial & Municipal Waste Water in India"
3) Delivered invited lecture on Valorization of Steel Slag : Waste to wealth, a seminar entitled "Promoting Awareness & Usage of Iron & Steel Slag Ushering a New Era" in New Delhi jointly organized by Federation of Indian Chambers of Commerce & Industry in association with Ministry of Steel, held on August 27,2019
4) Delivered invited lecture on "Role of science and technology in mitigating water wastage "on world water day program hosted by Institution of Engineers, Dhanbad Chapter

17. Review Activities for Journals

1) Journal of Environmental Science and Pollution Research
2) Waste and Biomass Valorization
3) Water Science and Technology
4) Journal of Building Engineering
5) Frontiers of Chemical Science and Engineering
6) Journal of Cleaner Production
7) Water Science and Technology

18. participation in Scientific Outreach Programs

Nodal Scientist of CSIR run nationwide Student -Scientist connect program called JIGYASA from CSIR-CIFMR from the inception in 2017. Holds laboratory visits, science popularization programs to school students, science quizzes, and active contribution in different student scientist connect programs

19. Administrative Responsibilities Undertaken

1. Internal Auditor for ISO: 9000 : Working towards more efficient and transparent functioning
2. Ethics committee, CSIR-CIMFR: Member
3. Grievance committee, CSIR-CIMFR : Member
4. Knowledge resource committee, CSIR-CIMFR: Member
5. Committee on biosafety, CSIR-CIMFR : Member
6. Academic committee, AcSIR
7. International Women's Day : Member organizing committee

18. Languages Known

1) English: Proficient
2) Bengali: Proficient (Mother tongue)
3) Hindi: Proficient
4) Spanish and French: A2 level knowledge