

## Dr. Ipsita Dipamitra Behera

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### Educational Qualification

Ph. D (IIT Kharagpur)  
M.Tech (NIT, Rourkela)  
B Tech (IGIT Sarang)

### Area of Research

Biodegradation, Petroleum Hydrocarbon, Hazardous Solid Waste Management, Microfiber, Iron ore Beneficiation

### Research Summary

Number of Journal paper Published	14
Number of Book Published as Editor	Published: 03, Under progress: 03
Number of Invited Talks	04
Number of Research projects handled with Total Financial Involvement	03 Projects with approximate cost 0.5 core (As Project Investigator and Co-PI)
Number of PhD Student guidance	02 (Continuing)
Number of Masters Student guidance	M.Tech :02 (Awarded)
Number of countries Visited	01 Brazil
Total Google scholar citation till date	373, H-index-10, I-index-10

## Publications

### 2024

B Pradhan, **ID Behera**, S Mohanta, BC Meikap, 2024. “Modelling of size recovery curves for minerals in teeter bed separator for processing iron ore fines” *South African Journal of Chemical Engineering*,50,182-188

AK Das, B Nayak, **ID Behera**, 2024 “Applications of Microorganisms in Advanced Geomicrobiological and Biotechnological Exploration” *Geomicrobiology Journal*,41,4, 309-311

### 2023

AP Das, K Dutta, R Khatun, **ID Behera**, S Singh, S Mishra; 2023. “Microfiber pollution and its microbial mitigation: A review on current trends and future prospects” *Journal of the Taiwan Institute of Chemical Engineers*, 105104.

J Kanungo, T Sahoo, M Bal, **ID Behera**, “Performance of Bioremediation Strategy in Waste Lubricating Oil Pollutants: A Review” *Geomicrobiology Journal*, 1-14

S Mohanta, B Pradhan, **ID Behera**. 2023“Impact and Remediation of Petroleum Hydrocarbon Pollutants on Agricultural Land” *A Review Geomicrobiology Journal*, 1-15

B Pradhan, **ID Behera**, K Sahoo, S Mohanta, 2023. “Applicability of the Teetered Bed Separator for Beneficiating Indian Iron Ore Fines: An Experimental Study”. *Journal of Mines, Metals & Fuels*, 2023, Vol 71, Issue 11, p1817

### 2022

H Siddiqi, A Mishra, P Maiti, **ID Behera**, BC Meikap. “In-situ and ex-situ co-pyrolysis studies of waste biomass with spent motor oil: Elucidating the role of physical inhibition and mixing ratio to enhance fuel quality” *Bioresource Technology* 358, 127364

**ID Behera**, M Nayak, A Mishra, BC Meikap, R Sen. “Strategic implementation of integrated bioaugmentation and bio stimulation for efficient mitigation of petroleum hydrocarbon pollutants from terrestrial and aquatic environment” *Marine Pollution Bulletin* 177, 113492

### 2021

A Mishra, H Siddiqi, U Kumari, **ID Behera**, S Mukherjee, BC Meikap. “Pyrolysis of waste lubricating oil/waste motor oil to generate high-grade fuel oil: A comprehensive review” *Renewable and Sustainable Energy Reviews* 150, 111446

**ID Behera**, M Nayak, S Biswas, BC Meikap, R Sen. “Enhanced biodegradation of total petroleum hydrocarbons by implementing a novel two-step bioaugmentation strategy using indigenous bacterial consortium” *Journal of Environmental Management* 292, 112746

## 2020

**ID Behera**, G Basak, RR Kumar, R Sen, BC Meikap. “Treatment of petroleum refinery sludge by petroleum degrading bacterium *Stenotrophomonas pavanii* IRB19 as an efficient novel technology” *Journal of Environmental Science and Health, Part A* 56 (2), 226-239

M Bal, **ID Behera**, U Kumari, S Biswas, BC Meikap. “Hydrodynamic study and particulate matter removal in a self-priming venturi scrubber” *Environmental Technology & Innovation* 20, 101167

S Biswas, RK Diwakar, **ID Behera**, BC Meikap, TK Sen. “Aqueous phase phenol removal from synthetic and real steel plant effluents through a batch and Semi fluidized bed column operation: experimental and model analysis” *Journal of Environmental Chemical Engineering* 8 (5), 104441

## 2016

S Mohanta, B Sahoo, **ID Behera**, S Pradhan, “Effect of crushing on near-gravity material distribution in different size fractions of an Indian non-coking coal” *Journal of the Southern African Institute of Mining and Metallurgy* 116

## Book Chapter

Kanungo, J.; Sahoo, T.; Swain, L.P.; Behera, I.D. Toxicity of Persistent Hydrocarbon Pollutants, Sources and Sustainable Remediation Process. In *Impact of Petroleum Waste on Environmental Pollution and Its Sustainable Management Through Circular Economy*; Behera, I.D., Das, A.P., Eds.; Environmental Science and Engineering; Springer Nature: Cham, Switzerland, 2023; pp. 39–65. ISBN 978-3-031-48220-5.

## Editorial Board

### Journal

1. Guest Editor for the special Issue **Geomicrobiology Journal, Taylor and Francis, Impact Factor 2.4**

### Book

2. Editor of the **Springer Nature Book** entitled “Impact of Petroleum Waste on Environmental Pollution and its Sustainable Management Through Circular Economy - Sustainable Management of Petroleum Waste”.
3. Editor of the **Springer Nature Book** entitled “Renewable Energy Generation and Value Addition from Environmental Microfiber Pollution Through Advanced Greener Solution”.
4. Editor of the **Springer Nature Book** entitled “Sustainable Microbial Technology for Synthetic and Cellulosic Microfiber Bioremediation”.

5. Editor of the **Springer Nature Book** entitled “Environmental Hydrocarbon Pollution and Zero Waste Approach Towards a Sustainable Waste Management”. (In progress)
6. Editor of the **Taylor and Francis CRC Press Book** entitled “Biological Treatment Technologies for Petroleum Hydrocarbon”. (In progress)
7. Editor of the **Springer Nature Book** entitled “Emerging Micropollutants – Status in the Environment and Management through Bioremediation” (In progress)

## Projects

- Development of a Sustainable Bioremediation Technology for Degradation of Petroleum Hydrocarbon Pollutants of Paradip Refinery, OURIIP, Govt. of Odisha (**on going**)
- Development of Bioremediation Strategy for Enhanced Degradation of Petroleum Hydrocarbon Contaminated Soil in Paradip Refinery Industrial Area. DST, Govt. of Odisha (**on going**)
- In plant evaluation and comparison of the separation efficiencies for different coal washing devices, India- DST and Brazil-NCPq (**Completed**)

## Research Group

### Project Staff

1. Name: Miss Aiswariya Sahu (Project Fellow)  
Period of Working Aug 2023- July 2024
2. Name: Miss Laxmi Priya swain (Project Assistant)  
Period of Working May 2023- Oct 2024
3. Miss Rajlaxmi Badra (Project Fellow)  
Period of working (Dec 2024- Till date)

### PhD Students

1. Name Mr. Biswakanta Pradhan. (Continuing)
2. Name Mr. Ramesh Kumar Ekka. (Continuing)

### M. Tech Students

1. Name: Mr. Nikhil Mohapatra.
2. Name: Mr. Sumanta Mohanta.