DR. BISWADEEP PAL

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15/C Chatra Kumar Para Lane, Serampore, Hooghly, West Bengal-712204, India

EXPERIENCE

Assistant Professor — Nov, 2025- Present
Faculty of Engineering and Technology, CVM University
Environment Auditor

Assistant Professor — June, 2023- Oct, 2025
Department of Chemical Engineering — Vadodara, India
Parul University
Handling Administrative works like NAAC, NBA related data
Guiding Two Post graduates and Twelve Under Graduates students in their thesis work
Currently, research work focused on Bio-adsorbent in waste water treatment

Project Fellow — September, 2017-2020
Indian Institute of Technology (Indian School of Mines), Dhanbad

- In-Hand experience in Handling the FTIR, Rheometer, DLS and Tensiometer, Universal testing machine, Cross Polarized Microscope and Gas Chromatography
- Knowledge in Polymer and Biopolymer synthesis
- Knowledge in ASTM/ ISO standard for complex fluids
- Awareness about viscosity, viscoelastic properties like complex, viscous and loss modelus
- Collaborative in Nature
- Experience in synthesizing Naturally derived polymers from Vegetable Oil, Fruit extract and Fatty Alcohol
- Experience in synthesizing bio-composite
- Proficiency in Handling Analytical instruments like Design Expert, Advanced Excel etc.
- We found excellent result by reducing more than 70% viscosity reduction.

EDUCATIONAL QUALIFICATIONS

- Doctor of Philosophy, Department of Petroleum Engineering — Oct, 2017- Nov, 2022
- Flow assurance in Crude Oil, Indian Institute of Technology, CGPA: NA — Dhanbad, India

- MTech, Department of Chemical Engineering — July, 2015- July, 2017
- Bio-glass ceramics, University of Calcutta, CGPA: 8.16 — Kolkata, India

- Advanced diploma in Fire management — Aug, 2013- Aug, 2014
- IISWBM, Percentage:78% — Kolkata, India

- BTech, Department of Chemical Engineering — July, 2009 – July, 2013
- Adsorption in Activated charcoal, CIT (WBUT), CGPA: 7.23 — Howrah, India

PUBLICATIONS

- Pal, B., & Naiya, T. (2022). Application of Novel Fruit Extract for Flow Assurance of Indian Field Waxy Crude Oil. SPE Journal, 27(05), 3178-3195. I.F 3.602
- Pal, B., & Naiya, T. K. (2022). Application of Synthesized Novel Biodegradable Pour-Point Depressant from Natural Source on Flow Assurance of Indian Waxy Crude Oil and Comparative Studies with Commercial PourPoint Depressant. SPE Journal, 27(01), 864-876. I.F 3.602
- Pal, B., Kumar, R., & Naiya, T. K. (2021). Demulsification of crude oil-water emulsion using naturally formulated demulsifier. Petroleum Science and Technology, 39(21-22), 1027-1042. I.F 1.695

- Azeem, A., Kumar, R., Pal, B., & Naiya, T. K. (2020). Use of novel pour point depressant synthesized from vegetable oil for waxy crude oil. Petroleum Science and Technology, 38(3), 185-193. I.F 1.695
- Pal, B., Naiya, T. K., & Sarkhel, G. (2023). Effect of Amla Fruit (Phyllanthus emblica) Extract in Flow Assurance of Indian Waxy Crude Oil. SPE Journal, 28(02), 628-642. I.F 3.602
- Guin, S., Pal, B., & Naiya, T. K. (2024). Application of Bio Additive for Flow Assurance of Indian Waxy Crude Oil. Journal of Chemistry & its applications, 3(2), 1-5. I.F 0.35
- Andriambahiny, R.N.A., Das, J., Roy, B. & Pal, B. (2025). A review on the recent advancement of acid modified bio-adsorbents for the removal of methyl orange dye from wastewater treatment. Discov. Chem. 2, 92.
- Pal, B., Naiya, T.K. "Evaluation of Modified EVA-MA Copolymer as A Flow Improver in Waxy Crude Oil", Research Journal of Chemistry and Environment (Accepted)
- Pal, B., Ghosh, T.K., Das, S.K. "Synthesis & characterization of bio-active glass ceramics with the effect of MgO in the P2O5-Na2O-nano SiO2- CaO system", Research Journal of Chemistry and Environment (Accepted)
- Andriambahiny, R. N. A., Das, J., Roy, B., Lodh, B., & Pal, B. (2025). A review on the recent advancement of acid modified bio-adsorbents for the removal of methyl orange dye from wastewater treatment. *Discover Chemistry*, *2*(1), 92.
- Aina, A. R. N., Patel, H., Aich, S., Roy, B., Samanta, N. S., & Pal, B. (2025). Recent advances in ZnO based photocatalysts for industrial dye degradation. *Discover Applied Sciences*, *7*(9), 977.
- Raval, A., Patel, H., Mahadwad, O. K., & Pal, B. (2025). Novel Zinc Orthotitanate photocatalyst: Synthesis, characterization and photocatalytic degradation of Methylene Blue dye. *Journal of the Indian Chemical Society*, 102155.
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BOOK CHAPTERS and CONFERENCE

- Pal, B., Guin, S., & Naiya, T. K. (2023). Application of Epoxidized Vegetable Oil for Improving Rheological Properties of Crude Oil. In Sustainable Chemical, Mineral and Material Processing (pp. 109-119). Springer, Singapore.
- Pal, B., Guin, S., & Naiya, T. K. (2025). The Chemistry of Wax Formation, Agglomeration, and Deposition in Crude Oils. In *Environmental Friendly Green Technologies for Improvement of Heavy Crude Oil Flow Assurance* (pp. 1-17). Springer, Cham.
- Pal, B., & Naiya, T. K. (2025). Challenges During Production, Storage, and Transportation of Waxy and Heavy Crude Oils Due to Organic Deposition. *Environmental Friendly Green Technologies for Improvement of Heavy Crude Oil Flow Assurance*, 19-37.
- Patel, H., Patel, R., Aina, A. R., & Pal, B. (2025, May). Current reviews of various AI techniques used for dye adsorption. In IET Conference Proceedings CP920 (Vol. 2025, No. 7, pp. 968-975). Stevenage, UK: The Institution of Engineering and Technology.
- Aina, A. R., Patel, H., & Pal, B. (2025, May). A review on the removal of anionic dyes from wastewater. In *IET Conference Proceedings CP920* (Vol. 2025, No. 7, pp. 788-795). Stevenage, UK: The Institution of Engineering and Technology.
- Patel, N., Thakor, S., Patel, H., Vadnagra, K., Katariya, H., Patel, P., & Pal, B. (2025, May). Sustainable energy generation through solid waste-to-energy conversion. In *IET Conference Proceedings CP920* (Vol. 2025, No. 7, pp. 725-731). Stevenage, UK: The Institution of Engineering and Technology.
- Jadeja, J., Mendpara, A., Makwana, P., Patel, H., Chauhan, P. R., & Pal, B. (2025, May). Improvement of the flow behaviour of paraffin oil with the help of natural derived polymer. In IET Conference Proceedings CP920 (Vol. 2025, No. 7, pp. 888-894). Stevenage, UK: The Institution of Engineering and Technology.
- Pal, B. (2025, Aug). Used oil disposal. *Lubricant Technology Fundamentals and Applications* (pp. 231-253). CRC Press, Boca Raton, USA.
- Patel, H., Pal, B., & Sandhwar, V. K. (2025, September). A mini-review on photo-catalysis for sustainable dye degradation and water treatment. In *AIP Conference Proceedings* (Vol. 3288, No. 1, p. 060005). AIP Publishing LLC.

CONFERENCE PRESENTED

- Pal,B., Naiya, T.K., Effect of natural resources in Heavy crude oil, 5th National Conference on Recent Trends in Applied Sciences and Humanities,10-12th April,2018 in Durgapur Institute of Advanced Technology and Management

- Pal,B., Naiya, T.K., Effect of Natural extract in crude oil transportation, National Conference on Engineering &technology for Rebuilding India Organized by Vivekananda Institute of Environment & Management, Kolkata , 5-6th June,2018 in CSIR- Central Glass & Ceramic Research Institute, Kolkata
- Pal,B., Naiya, T.K., Effect of Natural Extract as a Viscosity Reducer in Crude Oil Transportation, Indian Oil field Chemistry Conference-2018, 27-28th September,2018 in Hotel Hyatt Ahmadabad
- Pal,B., Naiya, T.K., Improvement of Transportability of Heavy crude oil using Natural Extract, International Seminar on Recent Advances in Molecules & Materials (RA2M-2018), 2-3rd August Organized by Haldia Institute of Technology & Indian Chemical Society
- Pal,B., Kumar, R., Azeem, A., Naiya, T.K., Vegetable oil Used as a Pour point Depressant in Crude oil, 6th National Conference on Recent Trends in Applied Sciences and Humanities,16-17th March,2019 in Durgapur Institute of Advanced Technology and Management
- Pal,B., Naiya, T.K., Application of Bio-additives Synthesised from Edible Oil as PPD for Indian Crude Oil, SPE South Asia RSPC Presentation-2019, 09-11th April,2019 in Mumbai (Selected for Research Scholar oral presentation)
- Pal,B., Naiya, T.K., Effect of green additive in cold finger apparatus to measure the performance in wax deposition studies, Schemcon-2020, October 9-10, 2020, Indian Institute of Chemical Engineers Dr. H. L. Roy Building, Jadavpur University Campus, Kolkata - 700032 (3rd Best Oral presentation)
- Pal,B., Naiya, T.K., Application of green additives to lower the pour point of Indian crude oil Chemcon -2020, 27-29 December, 2020 organized by Indian Institute of Chemical Engineers (IIChE) Headquarters & IIChE - Hyderabad Regional Centre
- Pal,B., Naiya, T.K., Effect of Naturally derived Bio-additives on Indian crude oil, Industry Institute Interaction (III)-2020, 18th January, 2020, organized by Indian institute of Technology (Indian school of mines), Dhanbad
- Pal,B., Naiya, T.K., Effect of Bio-additives as viscosity reducers for Indian waxy crude oil T Recent Advances In Chemistry & Material Sciences (RACMS)-2020, August 2020, Organized by Indian chemical society, Kolkata with American chemical society, India International Chapter
- Pal,B., Naiya, T.K., Effect of oleic acid-based polymer as a pour point depressant for Indian waxy crude oil, Innovative Technology & Management Dedicated to Sustainable Humanistic Face (ITMDSHF) -2020, 20-22 November 2020, Organized by Faculty of Engineering & Technology, Jadavpur University, Kolkata and Vivekananda Institute of Environment & Management, Kolkata
- Pal,B., Naiya, T.K., Improving Flow Assurance of Waxy Crude Oil with the help of Fruit Extract, Schemcon2021, 24-25th September 2021 in Chemical Engineering Students Association (ChESA), MANIT Bhopal IIChE Students Chapter, MANIT Bhopal &IIChE Headquarter, Kolkata (Best oral presentation)
- Pal,B., Guin, S., Naiya, T.K., Application of Epoxidized vegetable oil for improving rheological properties of crude oil, Chemcon-2021, December 27-30, 2021, Bhubaneswar, India Indian Institute of Chemical Engineers, Bhubaneswar Regional Centre & CSIR- Institute of Minerals and Materials Technology, Bhubaneswar with association with Institute of Chemical Technology -Indian Oil Odisha Campus, Bhubaneswar
- Pal.B., Naiya.T.K., Evaluation of Modified EVA-MA Copolymer as A Flow Improver In Waxy Crude Oil, Advances in Chemical and Material Sciences (ACMS)-2022, 14th-16th April, 2022 organized by IICHE, Kolkata

WORKSHOP ATTENDED

- One-week Hands-on Training Workshop on "Advanced Analytical and Simulation Techniques in Chemical Engineering Applications" 21st to 27th November 2022 organized by the Department of Chemical Engineering, Birla Institute of Technology Mesra (BIT Mesra), Ranchi under the banner of DST-STUTI Programme of Indian Institute of Technology (ISM) Dhanbad - 826004 funded by Department of Science and Technology (DST), Government of India.

AWARDS AND HONORS

- Best Oral Presentation in "Schemcon" Conference- 2021
- 3rd Best Oral Presentation in "Schemcon" Conference- 2020
- 3rd best young researcher award in "National conference on Engineering and technology for rebuilding India" 2018
- Ambuja Young Researcher Award -2022

GRANTS AND FELLOWSHIPS

- GATE -2015 fellowship
- DST(SERB)/EEQ/000650 Project Fellowship

LANGUAGES AND SKILLS

- Languages known: Hindi, English, Bengali
- Software: Design expert, Minitab, Chemdraw, Mesto nova, Photoshop

REFERENCE

- **Dr. Keka Ojha,** Professor, IIT(ISM), kekaojha@iitism.ac.in, +91 94311 25577
- **Dr. Tarun Kumar Naiya,** Professor, IIT(ISM), tarunnaiya@iitism.ac.in, +91 97411 91367
- **Dr. Ajay Mandal,** Professor, IIT(ISM), ajaymandal@iitism.ac.in, +91 94317 11017