Dr. Bineeta Singh

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Google Scholar Page:

https://scholar.google.com/citations?user=S2UqTxoAAAAJ&hl=en

Current Position: Assistant Professor, HBTU, Nawabganj Kanpur, India

EDUCATION

- **Doctor of Philosophy (Ph.D.)** from Indian Institute of Technology (Banaras Hindu University), Varanasi, India in 2020
  Ph.D. Title: "Treatment of wastewater and Physico-chemical characterization of Sludge collected from Petroleum refinery"
  Discipline: Chemical Engineering
  Research Area: Wastewater treatment, Physico-chemical characterisation, solvent extraction by Soxhlet apparatus, Wet air oxidation, Pyrolysis

- **Master of Technology** from Indian Institute of Technology (Banaras Hindu University), Varanasi, India in 2015.
  Discipline: Chemical Engineering
  Research Area: Heat transfer enhancement in pulsating heat pipe by using self-rewetting fluid

- **Bachelor of Technology** from Bundelkhand Institute of Engineering & Technology, Jhansi, Uttar Pradesh, India in 2013**.**
  Discipline: Chemical Engineering

- **XIIth** from Delhi Public School, Mathura, Uttar Pradesh, India. [*GCE A Level & Equivalent] in* 2008

- **Xth** from Delhi Public School, Mathura, Uttar Pradesh, India. [*GCE O Level & Equivalent* in 2006

PUBLICATIONS

JOURNALS

[1] **B. Singh**, P. Kumar, Physicochemical characteristics of hazardous sludge from effluent treatment plant of petroleum refinery as feedstock for thermochemical processes, Journal of Environmental Chemical Engineering, 8(2020) 103817, https://doi.org/10.1016/j.jece.2020.103817.

[2] **B. Singh**, P. Kumar, Pre-treatment of petroleum refinery wastewater by coagulation and flocculation using mixed coagulant: Optimization of process parameters using response surface methodology (RSM), Journal of Water Process Engineering, 36 (2020) 101317, https://doi.org/10.1016/j.jwpe.2020.101317.

[3] **B. Singh**, S. Singh, P. Kumar, In-depth analyses of kinetics, thermodynamics and solid reaction mechanism for pyrolysis of hazardous petroleum sludge based on isoconversional models for its energy potential, Process Safety and Environmental Protection, 146 (2021) 85-94, https://doi.org/10.1016/j.psep.2020.08.038.

[4] **B. Singh**, A. K. Verma, P. Kumar, Catalytic thermolysis treatment of petroleum refinery wastewater collected from effluent treatment plant, International Journal of Chemical Reactor Engineering, 18 (2020) 20190210, https://doi.org/10.1515/ijcre-2019-0210.

[5] **B. Singh**, P. Kumar, Heat transfer enhancement in pulsating heat pipe by alcohol-water based self-rewetting fluid, Thermal Science and Engineering Progress, 22 (2021) 100809, https://doi.org/10.1016/j.tsep.2020.100809.

[6] A. Nawaz, **B. Singh**, & P. Kumar, H_3PO_4-modified *Lagerstroemia speciosa* seed hull biochar for toxic Cr(VI) removal: isotherm, kinetics, and thermodynamic study. *Biomass Conv. Bioref.* (2021). https://doi.org/10.1007/s13399-021-01780-8.

[7] A. Nawaz, **B. Singh**, & P. Kumar, Efficient removal of Cr (VI) using raw and phosphoric acid modified Sterculia Alata nutshell, **I**ndian Journal of Chemical Technology (IJCT) 28 (6), 684-692.

WORKSHOPS AND CONFERENCES ATTENDED

- **Chemcon 2015,** 68th Annual Session of India Institute of Chemical Engineers, **Paper Presentation**, IIT Guwahati during Dec 27th to 30th 2015.
- On "**Emerging concepts in Municipal Wastewater Treatment"**, MHRD sponsored GIAN course, 17 –21 December 2018, NIT Patna.
- 73rd Annual Convention & International Conference of The OTAI on **"value Addition in Oilseeds, Oil, and Derivatives through Innovative Technologies",** participated as a delegate during 22 -23 December 2018, at IIT BHU Varanasi.
- A workshop on "**Inclusive in smart city Planning of India of Renewable energy and Energy efficiency (Inspire)**" in INSPIRE- 2017, on 25th March 2017, IIT BHU, Varanasi

INDUSTRIAL EXPERIENCE/ CONSULTANCY WORK

- Expert in water quality parameters testing like COD, BOD. Turbidity, color, pH, and metals and experience of measuring these parameters in the consultancy's work for the Department of Chemical Engineering, Indian Institute of Technology, Varanasi (2016-18, As a part-time consultant).
- Operating knowledge and data analysis of ICP-OES, GC, GCMS, pressure reactor, and SEM-EDAX instrument.
- Participated as a research scholar in the project of Central Pollution Control Board in 2016, 2017, and 2020-21:

  Inspected and collected the data related to water and hazardous pollution from more than 200 companies (textile, carpet, tannery and canvas waxing) for the Ganga nirikshan abhiyan project of Central Pollution Control Board, India.

SKILLS

- Sound knowledge of characterization techniques such as SEM-EDX, DTA/DTG, XPS, XRD, FTIR, ion chromatography, GCMS, LC-MS-MS and ICP-MS.
- Basic knowledge of C, and C++ programming languages.
- Working knowledge of software like RSM.
- Detailed knowledge of primary and biological treatment of waste generated in the industry.
- Finely tuned analytical and research skills with a dedication to clear communication and presentations. Adapt at maintaining an exceptional rate of productivity, accuracy, and efficiency; well organized and proficient with details.
- Adapt at determining requirements, project scheduling, and production planning along with excellent team managing capabilities.
- Focused and diligent with impeccable work habits and strong analytical and problem solving skills. Cogent written and verbal communication skills.

AREAS OF INTEREST

- Wastewater Treatment
- Solid Waste Management
- Non-Renewable Energy Resources
- Chemical Process Industries
- Heat Transfer