

## CURRICULAM VITAE

**Dr. DAN BAHADUR PAL**

Assistant Professor, Department of Chemical Engineering,  
Harcourt Butler Technical University, Nawabganj  
Kanpur-208002, Uttar Pradesh India



**Google citation:** [https://scholar.google.co.in/citations?user=VWAf\\_2MAAAAJ&hl=en](https://scholar.google.co.in/citations?user=VWAf_2MAAAAJ&hl=en)

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**Orcid ID:** <https://orcid.org/my-orcid?orcid=0000-0002-5738-2228>

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**E-Mail** [:danbahadur.chem@gmail.com](mailto:danbahadur.chem@gmail.com)

**Phone:** 9336709751

### Career Objective:

Seeking a challenging career where I can utilize my academic, technical and analytical knowledge and significantly contribute to the growth of the organization with hard work and dedication.

### Professional Experience:

- **Assistant Professor** in Department of Chemical Engineering, Harcourt Butler Technical University, Nawabganj Kanpur-208002, Uttar Pradesh India from 10/06/2022.
- **Assistant Professor** in Department of Chemical Engineering, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India from 04/01/2018 to 09-06-2022.
- **Teaching Assistantship:** During Ph. D in IIT (BHU) Varanasi, India from 24/09/2012 to 10/08/2017: Chemical Engineering Laboratory such as Heat transfer, fluid flow and Mechanical operation lab.
- **Assistant Professor** in Department of Chemical Engineering, Moradabad Institute of Technology, Moradabad, Uttar Pradesh India, from 08/08/2011 to 31/08/2012.
- **Lecturer** in Department of Chemical Engineering, Bundelkhand Institute of Engineering & Technology, Jhansi, Uttar Pradesh India, from 07/08/2008-05/06/2009.

### Professional Qualification:

**Doctor of Philosophy**, Chemical Engineering, Indian Institute of Technology (BHU), Varanasi, Uttar Pradesh, India 2012-2017.

- **Studies on Ceria Nanofiber Catalysts in Water Gas Shift Reaction**, under the supervision of **Prof. P. K. Mishra** IIT (BHU), Varanasi, Uttar Pradesh.

- Comprehensive fields: Nanotechnology and Chemical Reaction Engineering.

**M.Tech**, Chemical Engineering, Indian Institute of Technology (BHU), Varanasi, Uttar Pradesh, India 2009-2011

- **Study of Water Gas Shift Reaction in Medium Temperature Range**, under the supervision of **Prof. R. Prasad** IIT (BHU), Varanasi Uttar Pradesh India.

- Comprehensive fields: Chemical Reaction Engineering

### **Academic Qualification:**

- **Ph.D.** completed (September, 2012 to August, 2017) Chemical Engineering (86.7%), Indian Institute of Technology (BHU) Varanasi, Uttar Pradesh India.
- **M. Tech. Chemical Engineering** (81.2%), Indian Institute of Technology (BHU) Varanasi, Uttar Pradesh India.
- **B. Tech. Chemical Engineering** (65.1%), M.I.E.T Meerut, Uttar Pradesh Technical University, Lucknow, India.

### **Research & Development Project:**

1. **Topic:** Synthesis and Characterization of Biomaterials & Nanomaterials and Its Application in Heavy Metals Removal, **Funding Agency:** MHRD, New Delhi, **TEQIP** Collaborative Research Scheme, Amount in **Rs (Lakh): 16.24.**
2. **Topic:** synthesis of nanomaterials and its application in energy & environment, **Funding Agency:** SEED Money Scheme 2018 (financial support by NPIU TEQIP-III), **Amount in Rs (Lakh): 02**

### **Administrative Responsibilities:**

- **Honorary Treasurer**, of Indian Institute of Chemical Engineers (IChE) Kanpur Regional Centre from 2022-23.
- **Honorary Joint Secretary**, of Indian Institute of Chemical Engineers (IChE) Kanpur Regional Centre from 2023-25.
- **Warden of Vishwesaraya Hostel**, Harcourt Butler Technical University, Kanpur, Uttar Pradesh India from 2022.
- **Time table coordinator** Department of Chemical Engineering, Harcourt Butler Technical University, Kanpur, Uttar Pradesh India from 2023.
- **ERP coordinator** Department of Chemical Engineering, Harcourt Butler Technical University, Kanpur, Uttar Pradesh India from 2023.

### **Memberships:**

- Life time associate membership: Indian Institute of Chemical Engineers (IICHE), LAM-61807
- 2022-Life time membership: Indian Desalination Association (InDA), LM - 572
- World Research Council (WRC), 2019- Life time membership WRC-RRF-IND-1092.

### **Extracurricular Activities:**

#### **Awards and Fellowships:**

- **Research Ratna Award, 2019** for outstanding research in the field of Performance of catalytic water gas shift reaction given by International Journal for research under Literal Access.
- **First Prize** in Poster Presentation on the occasion of **Institution Day** at IIT (BHU), on 3, April-2016, Varanasi, India
- **First Prize** in Poster Presentation on the occasion of **Institution Day** at IIT (BHU), on 26 Feb-2015, Varanasi, India
- GATE -2009 qualified with GATE score 366 in Chemical Engineering

**Research Interests/Research Profile:** I have completed my doctorate degree entitled “**Studies on ceria nanofiber catalysts in water gas shift reaction**”. These nanofibers have very promising potential to provide benefits to nanotechnologies, energy, environment, catalysts, sensors etc. While pursuing research I got the total number of **78** publications in the reputed **SCI/Scopus/referred** journals and six book, thirty book chapters. From all the publication I got **2003 citations** with **18 h-index** and **36i-10-indexes**. In the near future, I would like to pursue my research in similar area.

My Research work is mainly focused on synthesis and characterization of nanofiber and its application in water gas shift reaction. I have synthesized nanofiber and use it as catalyst samples using of preparation as; sol-gel solution for synthesis of nanofiber by electrospinning method etc. and performed catalyst activity test using Gas Chromatograph and characterize these samples with BET surface area technique, EDS, FTIR, SEM, XPS, XRD, TGA etc, isothermal kinetics study is also performed over the best screened catalyst.

### **Invited Talk:**

1. Invited Talk on “**Synthesis of Cu/CeO<sub>2</sub> Nanofiber using Electrospinning Method**” in One week **Workshop on Industrial Process Simulation** organized by TEQIP-III sponsored, BIT Mesra, Ranchi, Jharkhand from 16<sup>st</sup> to 20<sup>th</sup>, May 2018.
2. Invited Talk on “**Synthesis and Characterization of Cu/CeO<sub>2</sub> Nanofiber Catalyst**” in Online workshop on “Synthesis, Characterization and Performance of Advanced Materials (SCPAM-2021)” during 10-14th May, 2021 in MANIT Bhopal MP India.
3. Invited lecture on "**Manufacturing Process of Synthetic Monomers and its application**" in ‘Executive Training program: Polymer Engineering" to be held in Department of Plastic Technology, HBTU Kanpur from 12th-24th June 2023.
4. Invited lecture on "**Manufacturing Process of Natural Monomers and its application**" in ‘Executive Training program: Polymer Engineering" to be held in Department of Plastic Technology, HBTU Kanpur from 12th-24th June 2023.
5. **Invited Talk** on the topic entitled "**Synthesis and Characterization of Copper Ceria Oxide Nanofibers for Catalyst & Wastewater Treatment**" at 2nd Int. Conference on Recent Trends in Materials Science & Devices 2023 (ICRTMD-2023) held in Online Mode from **29-31 December 2023** organized by Research Plateau Publishers in association with Sat Kabir Institute of Technology & Management, Bahadurgarh, Haryana, India.

### **Coordinators/Session Chairs in Conference\Workshops:**

1. **Worked as Coordinator: Two-day** International Workshop on Advances in water Purification and wastewater treatment, Jointly Indian Desalination Association & HBTU, Kanpur on **18th & 19th Nov. 2022**.
2. **Worked as Coordinator in** International Chemical Engineering Congress: **CHEMCON 2022 & 75th Annual Session (Platinum Jubilee)** of Indian Institute of Chemical Engineers on **27 to 30 December, 2022** at Harcourt Butler Technical University, Kanpur, India
3. **Session Chair for Technical Session Under “Wastewater Treatment” Theme:** International Chemical Engineering Congress: **CHEMCON 2022 & 75th Annual Session (Platinum Jubilee)** of Indian Institute of Chemical Engineers on **27 to 30 December, 2022** at Harcourt Butler Technical University, Kanpur, India

4. **Session Chair for Technical Session Under “Nano Technology and Nano Science” Theme:** International Chemical Engineering Congress: **CHEMCON 2022** & 75th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers on **27 to 30 December, 2022** at Harcourt Butler Technical University, Kanpur, India
5. **Session Chair for Technical Session Under “Biomass Utilization and Bioenergy” Theme:** International Chemical Engineering Congress: **CHEMCON 2022** & 75th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers on **27 to 30 December, 2022** at Harcourt Butler Technical University, Kanpur, India
6. **Session Chair for Poster presentation in** International Chemical Engineering Congress: **CHEMCON 2022** & 75th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers on **27 to 30 December, 2022** at Harcourt Butler Technical University, Kanpur, India.
7. **Chaired a Technical Session** at 2nd International Conference on Recent Trends in Materials Science & Devices 2023 (ICRTMD-2023) held in Online Mode from 29-31 December 2023 organized by Research Plateau Publishers in association with Sat Kabir Institute of Technology & Management, Bahadurgarh, Haryana, India.

**Paper Published in Research Journal: (Total Impact Factors 432.70(58))**

1. **D. B. Pal**, R. Chand, S. N. Upadhyay, P. K. Mishra, Performance of Water Gas Shift Reaction Catalysts: A Review, Renew & Sustainable Energy Reviews 93 (2018) 549-565. (ISSN: **13640321**) (IF: **16.8**)
2. Singh, T., Sehgal, A., Singh, R., Sharma, S., **Pal, D.B.**, Tashkandi, H.M., Raddadi, R., Harakeh, S., Haque, S., Srivastava, M. and Hassan, A.A., 2023. Algal biohydrogen production: Impact of biodiversity and nanomaterials induction. Renewable and Sustainable Energy Reviews, 183, p.113389. (ISSN: **13640321**) (IF: **16.8**)
3. P. Singh, **D. B. Pal**, R. Singh, S. Madhav, P. srivastava, D. Tiwary & P. K. Mishra, Current and emerging trends in bioremediation of petrochemical waste: A review. Critical Reviews in Environ. Sc. and Tech., 47:3, 155-201, **2017**. (ISSN: **1064-3389**) (IF: **12.56**). (T&F)
4. **D.B. Pal**, A. Singh, J. Jha, N. Srivastava, A. Hashem, M. A. Alakeel, E. F. Abd\_Allah, V. K. Gupta., Low-Cost Biochar Adsorbents Prepared from Date and Delonix Regia Seeds for Heavy Metal Sorption, Bioresource Technology, 339, 2021, 125606. (ISSN: **0960-8524**) (IF: **11.89**).
5. **D B Pal**, N Srivastava, A Mohammad, M Srivastava, A Syed, A M. Elgorban, P.K. Mishra, T Yoon, V K Gupta., Biogenic enabled in-vitro synthesis of nickel cobaltite nanoparticle and its

- application in single stage hybrid biohydrogen production. *Bioresource Technology* 342 (2021) 126006. (ISSN: 0960-8524) (IF: 11.89).
6. N Srivastava, A Mohammad, R Singh, M Srivastava, A Syed, **D B Pal**, A M. Elgorban, P.K. Mishra, V K Gupta., Evaluation of enhanced production of cellulose deconstructing enzyme using natural and alkali pretreated sugar cane bagasse under the influence of graphene oxide. *Bioresource Technology* 342 (2021) 126015. (ISSN: 0960-8524) (IF: 11.89).
  7. **D B Pal**, A Singh, S Kumar, N Srivastava, A Syed, A M. Elgorban, R Singh, V K Gupta., Studies on Zero-cost Algae based Phytoremediation of Dye and Heavy Metal from Simulated Wastewater. *Bioresource Technology*, 342 (2021) 125971. (ISSN: 0960-8524) (IF: 11.89).
  8. **D B Pal**, N Srivastava, S L Pal, M Kumar, A Syed, A M. Elgorban, R Singh, V K Gupta., Lignocellulosic Composition Based Thermal Kinetic Study of *Mangifera indica* Lam, *Artocarpus Heterophyllus* Lam and *Syzygium Jambolana* Seeds. *Bioresource Technology* 341 (2021) 125891. (ISSN: 0960-8524) (IF: 11.89).
  9. **D B Pal**, A Singh, A Mohammad, A Alhazmi, S Haque, T Yoon, N Srivastava, V K Gupta., Biological Remediation Technologies for Dyes and Heavy Metals in Wastewater Treatment: New Insight. *Bioresource Technology*, 343 (2022) 126154. (ISSN: 0960-8524) (IF: 11.89).
  10. **D B Pal**, A K Tiwari, N Prasad, N Srivastava, AH Almalki, S Haque, V K G., Thermo-chemical Potential of Solid Waste Seed Biomass obtained from Plant *Phoenix Dactylifera* and *Aegle Marmelos* L. Fruit Core Cell. *Bioresource Technology*, 345 (2022) 126441 (ISSN: 0960-8524) (IF: 11.89).
  11. N Srivastava, R Singh, M Srivastava, A Syed, **D B Pal**, A H Bahkali, P.K. Mishra, V K Gupta., Impact of mixed lignocellulosic substrate and fungal consortia to enhance cellulase production and its application in NiFe<sub>2</sub>O<sub>4</sub> nanoparticles mediated enzymatic hydrolysis of wheat straw. *Bioresource Technology*, 345 (2022) 126560 (ISSN: 0960-8524) (IF: 11.89).
  12. **D. B. Pal**, Saini, R., Srivastava, N., Ahmad, I., Alshahrani, M. Y., & Gupta, V. K. Waste Biomass Based Potential Bioadsorbent for Lead Removal from Simulated Wastewater. *Bioresource Technology*, 349 (2022) 126843. (ISSN: 0960-8524) (IF: 11.89).
  13. N Srivastava, M Srivastava, R Singh, A Syed, **D B Pal**, A M. Elgorban, D Kushwaha, P.K. Mishra, V K Gupta., Co-fermentation of residual algal biomass and glucose under the influence of Fe<sub>3</sub>O<sub>4</sub> nanoparticles to enhance biohydrogen production under dark mode. *Bioresource Technology* 342 (2021) 126034. (ISSN: 0960-8524) (IF: 11.89).

14. **D B Pal**, DD Giri, H Dwivedi, AKD Alsukaibi, AA Otaibi, M Y Areeshi, S Haque, V K Gupta. Sustainable Production of Algae-Bacteria Granular Consortia Based Biological Hydrogen: New insights. *Bioresource Technology* 352 (2022) 127036. (ISSN: 0960-8524) (IF: 11.89).
15. **D B Pal**, A K Tiwari, A Mohammad, N Prasad, N Srivastava, K. R. Srivastava, R Singh, T Yoon, A Syed, A H. Bahkali and V K Gupta. Enhanced Biogas Production Potential Analysis of Rice Straw: Biomass characterization, Kinetics and Anaerobic Co-Digestion investigations. *Bioresource Technology* 352 (2022) 127036. (ISSN: 0960-8524) (IF: 11.89).
16. N Srivastav, R Singh, R Srivastava, M Srivastava, **DB Pal**, VK Gupta; Enhanced Production of Biogas and Fabrication of CuO/Cu<sub>2</sub>O based nanocatalyst using Application of Pressmud waste. *Bioresource Technology* 362, 2022, 127814. (ISSN: 0960-8524) (IF: 11.89).
17. Srivastava, N., Singh, R., Srivastava, M., Mohammad, A., Harakeh, S., Singh, R.P., Pal, D.B., Haque, S., Tayeb, H.H., Moulay, M. and Gupta, V.K., 2022. Impact of nanomaterials on sustainable pretreatment of lignocellulosic biomass for biofuels production: An advanced approach. *Bioresource Technology*, 128471. (ISSN: 0960-8524) (IF: 11.89).
18. D. D. Giri, J. Jha, A K Tiwari, N. Srivastava, A Hashem, A. A. Alqarawi, Elsayed F and **D. B. Pal**. Java plum and Amaltash Seed Biomass Based Bio-adsorbents for Synthetic Wastewater Treatment. *Environmental Pollution* (2021): 280, 116890. (ISSN: 0269-7491) (IF: 9.99).
19. **D B Pal**, S Haque, N Srivastava, M F Alkhanani, A H Almalki, M Y Areeshi, R Naidu, V K Gupta. Functional microbiome strategies for the bioremediation of petroleum-hydrocarbon and heavy metal contaminated soils: A review. *Science of the Total Environment* 833 (2022) 155222 (ISSN: 1879-1026) (IF: 10.75).
20. **D B Pal**, S Haque, M F Alkhanani, A H Almalki, M Y Areeshi, R Naidu, V K Gupta N Srivastava. Prospects of soil microbiome application for lignocellulosic biomass degradation: An overview. *Science of the Total Environment* (2022) 155966 (ISSN: 1879-1026) (IF: 10.75).
21. Giri D D, N Srivastava, A Alhazmi, A Mohammad, S Haquee, V K Thakur, V K Gupta, **D B Pal**. Lead Removal from Synthetic Wastewater by Biosorbents Prepared from Seeds of *Artocarpus Heterophyllus* and *Syzygium Cumini*. *L. Chemosphere* 287 (2022) 132016 (ISSN: 0045-6535) (IF: 8.94).
22. D D Giri, N Srivastava, A Alhazmi, A Mohammad, S Haquee, V K Thakur, V K Gupta, **D B Pal**., Sustainable Removal of Arsenic from Simulated Wastewater using Solid Waste Seed Pods

- Biosorbents of Cassia Fistula L. Chemosphere 287 (2022) 132308 (ISSN: 0045-6535) (IF: 8.94).
23. **D B Pal**, S Haque, R Singh, H Faidah, S S. Ashgar, M Y. Areeshi, A H. Almalki, N Srivastava and VK Gupta; Thermophilic Biohydrogen Production from Agro industrial waste: Current Update, Challenges, and Sustainable solutions. Chemosphere 307, 2022, 136120 (ISSN: 0045-6535) (IF: 8.94).
24. T Singh, Srivastava, N., Teklemariam, A.D., Mishra, P.K., Almuhayawi, M.S., Haque, S., Harakeh, S., **Pal, D.B.** and Gupta, V.K. Kinetics investigation of phenolic pollutant degradation via *Serratia marcescens* ABHI 001 and its application in wastewater treatment. Chemosphere, 309, 2022, 136532 (ISSN: 0045-6535) (IF: 8.94).
25. **Pal, D.B.**, Tiwari, A.K., Prasad, N., Syed, A., Bahkali, A.H., Srivastava, N., Singh, R.P. and Gupta, V.K. Sustainable valorization of water hyacinth waste pollutant via pyrolysis for advance microbial fuel investigation. Chemosphere, 2023, 137602. (ISSN: 0045-6535) (IF: 8.94).
26. **D. B. Pal**, N. Srivastava; R. Singh; A. Mohammad; A. Syed; A. M. Elgorban; P.K. Mishra; T. Yoon; M. Srivastava; V. K. Gupta., Graphene oxide mediated enhanced cellulase production using pomegranate waste following co-cultured condition with improved pH and thermal stability. Fuel, 312, 2021, 122807. (ISSN: 0016-2361) (IF: 8.03).
27. **D. B. Pal**, P. Srivastava, A. Mishra, D. D. Giri, K. R. Srivastava, P. Singh, S. Awashthi, L. Kumari, P. K. Mishra. Synthesis and characterization of bio-composite nanofiber for controlled drug release. J. of Env. Chemical Engg. 5 (2017) 5843-5849. (ISSN: 2213-3437) (IF: 7.97)
28. **D. B. Pal**, R. Lavania, P. Srivastava, P. Singh, S. Madhav, P. K. Mishra. Photo-catalytic degradation of methyl tertiary butyl ether from wastewater using CuO/CeO<sub>2</sub> composite nanofiber catalyst. J. of Env. Chemical Engg. 6 (2018) 2577-2587. (ISSN: 2213-3437) (IF: 7.97)
29. Tiwari, A. K., Prasad, N., Jana, S. K., Srivastava, N., Alshahrani, M. Y., Ahmad, I., **Pal, D. B.** (2022). Waste biomass valorisation of *Bambusa vulgaris* dust and *Delonix regia* pods: Characterization and kinetic study. Sustainable Energy Technologies and Assessments, 53, 102590. (ISSN: 2213-1388) (IF: 7.63).
30. **D B Pal**, AK Rathore, A Singh, Investigation of surface interaction in rGO-CdS photocatalyst for hydrogen production: An insight from XPS studies. Int. J. of Hydrogen Energy, 46 (2021) 26757-26769. (ISSN: 0360-3199) (IF: 7.14)



31. Srivastava, N., Alhazmi, A., Mohammad, A., Haque, S., Srivastava, M., Pal, D.B., Singh, R., Mishra, P.K., Dai Viet, N.V., Yoon, T. and Gupta, V.K., 2022. Biohydrogen production via integrated sequential fermentation using magnetite nanoparticles treated crude enzyme to hydrolyze sugarcane bagasse. *International Journal of Hydrogen Energy*, 47(72), pp.30861-30871. (ISSN: 0360-3199) (IF: 7.14)
32. D. B. Pal, A. Singh, A. Bhatnagar. A Review on Biomass Based Hydrogen Production Technologies. *Int. J. of Hydrogen Energy*, 47 (2022) 1461-1480. (ISSN: 0360-3199) (IF: 7.14)
33. A. K Arya, R Katiyar, P S Kumar, A Kapoor, D. B. Pal, G Rangasamy. A multi-objective model for optimizing hydrogen injected-high pressure natural gas pipeline networks. *Int. J. of Hydrogen Energy*, x (2023) xxx. (ISSN: 0360-3199) (IF: 7.14)
34. D D Giri, Mn Shah, N Srivastava, A Hashem, E F Abd\_Allah, D B Pal. Sustainable Recovery of Chromium as a Value-Added Product from Wastewater Using Mango, and Jackfruit Seeds Kernel Bioadsorbent. *Front. Microbiol.* 12 (2021)717848. (ISSN: 1664-302X) (IF: 6.06).
35. Sharma, M., Agarwal, S., Agarwal Malik, R., Kumar, G., Pal, D.B., Mandal, M., Sarkar, A., Bantun, F., Haque, S., Singh, P. and Srivastava, N., 2023. Recent advances in microbial engineering approaches for wastewater treatment: a review. *Bioengineered*, 14(1), p.2184518. (ISSN: 21655987) (IF: 6.47).
36. D B Pal, A K Tiwari, N Srivastava, I Ahmad, M Abohashrh and V K Gupta, Biomass Valorization of Eichhornia Crassipes Root using Thermogravimetric Analysis. *Env Research* 214 (2022) 114046. (ISSN: 1096-0953) (IF: 6.5).
37. D B Pal, S Haque; R Singh, S Harakeh, M A, A D Teklemariam, T S. Abujamel, N Srivastava, Recent Update on Anaerobic Digestion of Paddy Straw for Biogas Production: Advancement, Limitation and Recommendations. *Env Research* 215, 2022, 114292. (ISSN: 1096-0953) (IF: 6.5).
38. D. B. Pal, P. Singh, P. K. Mishra. Composite ceria nanofiber with different copper loading using electrospinning method. *J. of Alloys and Comp.* 694 (2017) 10-16. (ISSN: 0925-8388) (IF: 6.37)
39. Pardeep Singh, Vishnu M.C, Karan K Sharma, D B Pal, Dhanesh Tiwary, Pradeep K Mishra. Photocatalytic degradation of acid red dye in the presence of activated carbon-TiO<sub>2</sub> composite and its kinetic enumeration. *J. of Water Process Engineering* 12 (2016) 20-31. (ISSN: 2214-7144). (IF: 7.34).

40. Srivastava, K. R., S. Dixit, **D. B. Pal**, P. K. Mishra, P. K. Srivastava, N Srivastava, A Hashem, A A. Alqarawi, and E F Abd\_Allah. Effect of nanocellulose on mechanical and barrier properties of PVA-banana pseudostem fiber composite films. *Environmental Technology & Innovation* (2020): 101312. (ISBN: 2352-1864) (IF: 7.76).
41. Kapoor, L., Mohammad, A., Jha, J.M., Srivastava, N., Jana, S.K., Alshahrani, M.Y., Ahmad, I., **Pal, D.B.** and Gupta, V.K., 2022. Biofuel production using fast pyrolysis of various plant waste biomasses in fixed bed and twin-screw reactors. *International Journal of Energy Research*, 46(13), pp.19278-19286. (ISBN: 1099-114X) (IF: 4.67). Wiley
42. Srivastava, N., Singh, R., Mohammad, A., Pal, D.B., Ahmad, I., Alam, M.M., Mishra, P.K. and Gupta, V.K., 2022. Acid tolerant multicomponent bacterial enzymes production enhancement under the influence of corn cob waste substrate. *International Journal of Food Microbiology*, 373, p.109698. (ISBN: 18793460) (IF: 5.90).
43. N Srivastava, M Srivastava, A Alhazmi, A Mohammad, S Khan, **D B Pal**, S Haque, R Singh, P.K. Mishra, V K Gupta., Sustainable green approach to synthesize Fe<sub>3</sub>O<sub>4</sub>/α-Fe<sub>2</sub>O<sub>3</sub> nanocomposite using waste pulp of Syzygium cumini and its application in functional stability of microbial celluloses. *Scientific Reports*, 2021, 11:24371. (ISBN: 2045-2322) (IF: 4.99).
44. A Singh, N Srivastava, M Shah, A Hashem, E F Abd\_Allah, **D B Pal.**, Investigation on Chromium Removal from Simulated Wastewater Using a Low-Cost Royal Poinciana-Derived Bio-adsorbent. *Biomass Conversion and Biorefinery* 2021. (ISSN:2190-6815) (IF: 4.05).
45. **DB Pal**, B Lal, AK Rathore, A Singh, Studies on acidity and activity of kaolin-supported Ag-doped HZSM-5 in methanol to olefins process. *Biomass Conversion and Biorefinery* 2021, 1-15. (ISSN:2190-6815) (IF: 4.05).
46. **D B Pal**, R Selvasembian, P Singh, Cadmium removal by composite copper oxide/ceria adsorbent from synthetic wastewater. *Biomass Conversion and Biorefinery*, 2021, 1-10. (ISSN:2190-6815) (IF: 4.05).
47. **D. B. Pal**, A. K. Tiwari, N. Srivastava, A. Hashem, F. A Elsayed. Thermal studies of biomass obtained from the seeds of Syzygium cumini and Cassia fistula L. and peel of Cassia fistula L. fruit, *Biomass Conversion and Biorefinery* 2021, 1-12. (ISSN:2190-6815) (IF: 4.05).
48. D. D. Giri, J Jha, N. Srivastava, M. Shah, A. Hashem, **D. B. Pal.**, Waste Seeds of Mangifera Indica, Artocarpus Heterophyllus and Schizizium Commune as Biochar for Heavy Metal

Removal from Simulated Wastewater. Biomass Conversion and Biorefinery 2022. (ISSN:2190-6815) (IF: 4.05).

49. Khan, M., Singh, T., Pal, D.B., S. Khan., Saheem A., Suresh B. J., Shafiul H., Rajeev S., Srivastava N., Enhanced production of bacterial hydrolytic endoglucanase enzyme using waste leaves of water hyacinth and its thermal stability under the influence of TiO<sub>2</sub> nanoparticles. Biomass Conv. Bioref. (2022). (ISSN: 2190-6815) (IF: 4.05).
50. A K Tiwari, S L Pal, N Srivastava, M Shah, I Ahmad, M Y Alshahrani, **D B Pal**, Bioadsorbent and Adsorbent Based Heavy Metals Removal Technologies from Wastewater: New Insight. Biomass Conversion and Biorefinery 2022, 1-15. (ISSN:2190-6815) (IF: 4.05).
51. D D Giri, N Srivastava, B C Ruidas, M Y Areeshi, S Haque, **D B Pal**, Bioremediation of Organoarsenic Pollutants from Wastewater: A Critical Review. Biomass Conversion and Biorefinery 2022, 1-11. (ISSN:2190-6815) (IF: 4.05).
52. **D B Pal**, P Singh, A Mohammad, M Y Alshahrani, I Ahmad, P.K. Mishra, T Yoon, N Srivastava; Improved production of thermo-alkali tolerant fungal cellulolytic cocktail following Co-fermentation of sugarcane bagasse and secondary sewage sludge. Biomass Conversion and Biorefinery 2022. (ISSN:2190-6815) (IF: 4.05).
53. M. Subhas, S. K. Jana, **D. B. Pal**, Synthesis of Different Heteropoly Acid Catalysts for Transesterification of Bio-derived glycerol to produce oxygenated fuel additive for Energy Utilization. Biomass Conversion and Biorefinery 2022, 1-11. (ISSN:2190-6815) (IF: 4.05).
54. Srivastava, N., Mohammad, A., **Pal, D. B.**, Srivastava, M., Alshahrani, M. Y., Ahmad, I., Gupta, V. K. (2022). Enhancement of fungal cellulase production using pretreated orange peel waste and its application in improved bioconversion of rice husk under the influence of nickel cobaltite nanoparticles. Biomass Conversion and Biorefinery, 1-10. (ISSN:2190-6815) (IF: 4.05).
55. Subhash B. M, A Kapoor, SK Jana, C V. Rode, **D B Pal**; Etherification of Biomass Derived Glycerol to Oxygenated Fuel Additives Using Dodecatungstophosphoric-silica Supported Catalyst: Characterization and kinetic studies. Biomass Conversion and Biorefinery, 1-11, 2023. (ISSN:2190-6815) (IF: 4.05).
56. A K Tiwari, N Prasad, A Kapoor, A K Arya, D B Pal; Sustainable Valorization of *Cascabela thevetia* Fruit Peel and Seed Waste Biomass: Characterization and Thermo-kinetic Analysis. Biomass Conversion and Biorefinery, 2023. (ISSN:2190-6815) (IF: 4.05).

57. **D B Pal**, A Kapoor, A K Arya, R K Arya, A K Tiwari; Characterization and Sustainable Utilization of Punica granatum and Citrus limetta Peels: Insights for Biomass Valorization. **Accepted** in Biomass Conversion and Biorefinery, 2023. (ISSN:2190-6815) (IF: 4.05).
58. T. Singh, **D. B. Pal**, A.K. Bhatiya, P.K. Mishra, N. Srivastava, A. A. Alqarawi, A. Hashem, F. A. Elsayed, V.K. Gupta. Integrated process approach for degradation of p-cresol pollutant under photocatalytic reactor using activated carbon/TiO<sub>2</sub> nanocomposite: application in wastewater treatment, Environ Sci Pollut Res (2021) 1-10. (ISSN: 0944-1344) (IF: 5.2).
59. **Pal, D.B.**, Singh, A., Saini, R., Srivastava, N., Muzammil, K., Ahmad, I. and Gupta, V.K., 2023. Studies on adsorption behavior of electrospun nanofibers for pollutant remediation from simulated wastewater. Applied Nanoscience, 13(6), pp.3721-3733. (ISSN: 2190-5517) (IF: 3.67).
60. **D B Pal**, T Singh, A H Almalki, Y S Althobaiti, M F. Alkhanani, S Haque, S Sharma, N Srivastava. Green Synthesis of TiO<sub>2</sub> bionanocomposite using Waste Leaves of Water Hyacinth: Application in Antibacterial Activity of Toilet bacteria Serratia marcescens, Materials Letters 316 (2022) 132012. (ISSN: 0167-577X) (IF: 3.57)
61. H. Kumar, P. N. Tengli, V. K. Mishra, P. Tripathi, **D. B. Pal**, P. K. Mishra. Synthesis and Catalytic Activity of Cu-Cr-O-TiO<sub>2</sub> Composites on Thermal Decomposition of Ammonium Perchlorate: Enhanced Decomposition Rate of Fuel for Solid Rocket Motors" RSC Adv., 2017, 7, 12486. (ISSN: 2046-2069) (IF: 4.03)
62. Khan, S., Khan, M., Ahmad, S., Sherwani, S., Haque, S., Bhagwath, S.S., Kushwaha, D., **Pal, D.B.**, Mishra, P.K., Srivastava, N. and Gupta, V.K., 2022. Towards enhancement of fungal hydrolytic enzyme cocktail using waste algal biomass of Oscillatoria obscura and enzyme stability investigation under the influence of iron oxide nanoparticles. Journal of Biotechnology. (ISSN: 0168-1656) (IF: 3.35)
63. Pardeep Singh, Rishikesh Singh, **D. B. Pal**, Deen Dayal Giri, Nand Lal Singh, Dhanesh Tiwary, Pradeep Kumar Mishra. "Assessment of ground and surface water quality along the river Varuna, Varanasi, India" **Environ Monit Assess** (2015) 187:170. (ISSN: 1573-2959) (IF: 3.31)
64. T Singh, S Sharma, **D B Pal**, I Ahmad, M M Alam, N L Singh, N Srivastava; Sustainable approaches towards green synthesis of TiO<sub>2</sub> nanomaterials and their applications in photocatalysis mediated sensing to monitor environmental pollutions. Luminescence: The J of Biological and Chemical Luminescence 2022, 1-12. (ISSN: 1522-7243) (IF: 2.6).

65. Subhash, M., **Pal, D.B.** and Jana, S.K., 2022. Biofuels additives derived via clay supported heteropoly acid catalyzed etherification of glycerol with t-butanol-biomass to liquid oxygenates. *Chemical Papers*, pp.1-10. (ISSN: 2585-7290) (IF: 2.14).
66. Nirupama, Pranav Thakur, **D. B. Pal**; Cadmium removal from aqueous solution by jackfruit seed bio-adsorbent, *Springer Nature Applied Sciences* (2020), 2(6):1-10. (ISSN: 2523-3963) (IF:2.9)
67. Ruidas, B.C., **Pal, D.B.** and Jana, S.K., 2023. Enhanced Recovery of Light Oil by using Combustion Tube: An Experimental Analysis. *Combustion Science and Technology*, 195(10), pp.2442-2455. (ISSN: 0010-2202) (IF: 2.13). (T&F)
68. **D. B. Pal**, D. D. Giri, P. Singh, S. Pal, P. K. Mishra. Arsenic removal from synthetic wastewater by CuO nano-flakes synthesized by aqueous precipitation method. *Desalination & water treatment* 62 (2017) 355-359. (ISSN: 1944-3994) (IF: 1.25)
69. Lal, B., **Pal, D.B.**, Nayak, C., Gupta, A.K. and Singh, A., 2022. A New Perspective on the Green Strategy of Close Cycle Dissociation of H<sub>2</sub>S. *Journal of The Institution of Engineers (India): Series E*, 103(2), pp.357-363. (ISBN: 2250-2491) (IF:0.00)
70. S K Jana, S Pattanayak, M S Bhausheb, B C Ruidas, **D B Pal**. pyrolysis of waste plastic to fuel conversion for utilization in internal combustion engine. *Chem. Chem. Technol.*, 2023, 17, 438–449. (ISBN: 1996-4196) (IF:0.304)
71. D. B. Pal, A K Tiwari, D D Giri, Jackfruit, Jamun and Amaltash for their Morphology, Mineral and Nutritional Properties, *Fourrages*, 202, 244-253 (ISBN: 0429-2766) (IF:0.20)
72. Singh, P., **Pal, D.B.**, Srivastava, P., Tiwary, D. and Mishra, P.K., 2017. Utilization of temple floral waste for extraction of valuable products: A close loop approach towards environmental sustainability and waste management. *Pollution*, 3(1), 39-45. (ISSN: 2383-4501)
73. S.K. Srikar, D.D. Giri, **D.B. Pal**, P.K. Mishra, S.N. Upadhyay. (2016) Light Induced Green Synthesis of Silver Nanoparticles Using Aqueous Extract of *Prunus amygdalus*. *Green and Sustainable Chemistry*, 6, 26-33. (ISSN: 2160-6951)
74. S.K. Srikar, D.D. Giri, **D.B. Pal**, P.K. Mishra, S.N. Upadhyay. (2016) Green Synthesis of Silver Nanoparticles- A review. *Green and Sustainable Chemistry*, 6, 34-56. (ISSN: 2160-6951)
75. **D.B. Pal**, Harish Kumar, D. D. Giri, P. Singh, P. K. Mishra “Synthesis and Characterization of Cu/CeO<sub>2</sub> Composite Nanofibers by Electrospinning Method” *Adv. Sci. Lett.* 20, 1582-1584 (2014). (ISSN: 1936-7317) (IF: 1.25)

76. **D.B. Pal**, Harish Kumar, D. D. Giri, P. Singh, P. K. Mishra “Enhanced H<sub>2</sub> and reduced CO level by use of Electrospun CuO/CeO<sub>2</sub> nanofibers catalyst for water gas shift reaction” **Adv. Sci. Lett.** **22**, 967-970 (2016). (ISSN: 1936-7317) (IF: 1.25)
77. **D.B. Pal**, R. Chand, P. K. Mishra. “Fabrication of copper-ceria nanofiber by electrospinning technique for application in water gas shift reaction. Int. J. of advanced Technology in Engineering Science, Vol. (4) 90-96, (2016) (ISSN: 2348-7550).
78. **D.B. Pal**, R. Chand, P. K. Mishra. “Application of Pure Ceria and Copper-Ceria Electrospun Nanofiber in the Water Gas Shift Reaction. Int. J. of advanced Technology in Engineering Science, (4) 48-54, (2016) (ISSN: 2348-7550)
79. **D B Pal**, S Sinha, N Prasad, Effect of Ammonium Phosphate on the Thermal and Flammability Behaviour of Sisal/Epoxy Composite, Intl. J. Engg. Sci. Adv. Research 2020; 6(2): 21-23 (ISSN NO: 2395-0730).
80. A Kumar, Niupama Prasad, A K Tiwari, **D B Pal**, Thermal Kinetics and Its Behaviour of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis, Intl. J. Engg. Sci. Adv. Research 2020; 6(1): 15-22 (ISSN NO: 2395-0730)

**Book editing:**

1. D.B. Pal, R. Prasad. 2014 “Study of Water Gas Shift Reaction”. Lambert Academic Publisher, Germany, 2014 (**Editors:** Dr. Dan Bahadur Pal and Dr R Prasad) (ISBN- 978-3-659-57547-1)
2. Utilization of Waste Biomass in Energy, Environment and Catalysis (**Editors:** Dr. Dan Bahadur Pal and Dr Pardeep Singh) published 25 March 2022 Taylor & Francis/CRC Press page 360 (ISBN: 9781003196358) (DOI: <https://doi.org/10.1201/9781003196358>)
3. Sustainable and Clean Energy Production Technologies (**Editors:** Dr. Dan Bahadur Pal and Dr Jay Mant Jha) published in Springer Nature press, **2022** (ISBN: 978-981-16-9135-5) (DOI: <https://doi.org/10.1007/978-981-16-9135-5>)
4. Agricultural and Kitchen Waste: Energy and Environmental Aspects (**Editors:** Dr. Dan Bahadur Pal and Dr Amit Kumar Tiwari) book to be published in Taylor & Francis/CRC Press, 2023. (ISBN: 9781000810998)
5. Recent Technologies for Waste to Clean Energy and its Utilization (**Editors:** Dr. Dan Bahadur Pal) book to be published from Springer Nature press in, **2023**. (DOI: <https://doi.org/10.1007/978-981-19-3784-2>) (ISBN: 978-981-19-3786-6)

6. Sustainable Valorization of Agriculture & Food Waste Biomass (**Editors:** Dr. Dan Bahadur Pal and Dr Amit Kumar Tiwari) published in Springer Nature press, **2023**. (**ISBN:978-981-99-0525-6**) (**DOI:** <https://doi.org/10.1007/978-981-99-0526-3> )

**Book Chapters:**

1. DD Giri, P. Singh, **D.B. Pal**, K.D. Pandey, P K Mishra. **2015** “Methylotropic bacteria in relation to soil and plant health. In: Microbes in the soil and their agricultural prospects”. (Editors: K.Kishore Chaudhary and D.Wattal Dhar ) Nova science publishers USA. (**ISBN-** 978-1-63482-824-6)
2. Singh, P, V K Singh, R Singh, A Borthakur, S Madhav, A Ahamad, A Kumar, **D. B. Pal**, D Tiwary, and P. K. Mishra. "Bioremediation: a sustainable approach for management of environmental contaminants." In Abatement of Environmental Pollutants, pp. 1-23. (Editors: Pardeep Singh, Ajay Kumar and Anwasha Borthakur) Elsevier, 2020. (**ISBN:** 978-0-12-818095-2)
3. **D. B. Pal**, D. D. Giri, (2020). Green Synthesis of Nanofiber and Its Affecting Parameters. In Nanofibers- Synthesis, Properties and Applications. Intech Open. DOI: 10.5772/ intechopen.94539 (Edited by Brajesh Kumar) (ISBN: 978-1-83968-426-5)
4. J. Khan, A. Kumar, A. Giri, **D. B. Pal**, A. Tripathi, D.D. Giri, Impact of Electronic Waste Pollutants on Underground Water. Groundwater Geochemistry: Pollution and Remediation Methods, 265-281, 2021. John Wiley & Sons Ltd (Book Editor(s): Sughosh Madhav, Pardeep Singh) (**ISBN:** 9781119709695).
5. **D B Pal**, AK Tiwari, DD Giri, Various Purification Techniques of Groundwater; Ground water Geochemistry: Pollution and Remediation Methods, 310-325, 2021 John Wiley & Sons Ltd (Book Editor(s): Sughosh Madhav, Pardeep Singh) (**ISBN:** 9781119709695).
6. AK Tiwari, **D B Pal**, Recent Trends in Groundwater Conservation and Management. Groundwater Geochemistry: Pollution and Remediation Methods, 379-391, 2021. John Wiley & Sons Ltd (Book Editor(s): Sughosh Madhav, Pardeep Singh) (**ISBN:** 9781119709695).
7. AK Tiwari, **D B Pal**, Beneficial bacterial microbes and their role in green remediation. Sustainable Environmental Clean-up, 315-332, 2021. (Edited by: Virendra Kumar Mishra and Ajay Kumar) **Elsevier** (**ISBN:** 978-0-12-823828-8).



8. **D B Pal**, DD Giri, Remediation of industrial organic waste pollutants. Sustainable Environmental Clean-up, 295-314, 2021. (Edited by: Virendra Kumar Mishra and Ajay Kumar) **Elsevier (ISBN: 978-0-12-823828-8)**.
9. Kapoor, L., Jha, J.M., **Pal, D.B.**, Pandey, D.K., Kumar, A. (2022). Pyrolysis of Waste Biomass Using Solar Energy for Clean Energy Production. In: Pal, D.B., Jha, J.M. (eds) Sustainable and Clean Energy Production Technologies. Clean Energy Production Technologies. Springer, Singapore pp 133–150. [https://doi.org/10.1007/978-981-16-9135-5\\_6](https://doi.org/10.1007/978-981-16-9135-5_6) (ISBN: 978-981-16-9135-5)
10. AK Tiwari, **D B Pal**, Bio-Processing: Biomass to Commercial Alcohol. Bioenergy Research: Biomass Waste to Energy, 149-168, 2021 **Springer**. (editors: Srivastava, M., Srivastava, N., Singh, R) (ISBN: 978-981-16-1861-1).
11. **D B Pal**, AK Tiwari, Hydrogen Production by Utilizing Bio-Processing Techniques. Bioenergy Research: Biomass Waste to Energy, 169-193, 2021 **Springer**. (editors: Srivastava, M., Srivastava, N., Singh, R). (ISBN: 978-981-16-1861-1)
12. P Srivastava, R Singh, R Bhadouria, **D B Pal**, P Singh, and S Tripathi, book title: Plant-Microbes-Engineered Nano-particles (PM-ENPs) Nexus in Agro-Ecosystems, Chapter title: Engineered Nanoparticles in Smart 4 Agricultural Revolution: An Enticing Domain 5 to Move Carefully, Springer Nature Switzerland AG, 3-18, 2021 (Editors: Pardeep Singh, Rishikesh Singh, Pramit Verma, Rahul Bhadouria, Ajay Kumar, Mahima Kaushik) (ISBN: 978-3-030-66955-3).
13. A K Tiwari, J Jha: **D. B. Pal**, Biosorption of Precious Metals from Wastewater, Book title- biosorption for wastewater contaminants, 185, 2022 John Wiley & Sons Ltd. (Book Editor(s): Rangabhashiyam Selvasembian, Pardeep Singh). (ISBN: 9781119727599).
14. B C Ruidas, **D. B. Pal**, Biosorption of Arsenic from Wastewater, Book title- biosorption for wastewater contaminants, 269, 2022 John Wiley & Sons Ltd. (Book Editor(s): Rangabhashiyam Selvasembian, Pardeep Singh).. (ISBN: 9781119727599).
15. **Tiwari AK, Mishra AN, Pal SL, Pal DB. Biomass Based Materials for Green Route Production of Energy. In Green Nano Solution for Bioenergy Production Enhancement 2022 (pp. 1-17). Springer, Singapore. (Editors: Srivastava, M., Malik, M.A., Mishra, P.) (ISBN: 978-981-16-9355-7). ([https://doi.org/10.1007/978-981-16-9356-4\\_1](https://doi.org/10.1007/978-981-16-9356-4_1))**



16. Tiwari, A.K. and Pal, D.B., 2022. Nutrients contamination and eutrophication in the river ecosystem. In Ecological Significance of River Ecosystems (pp. 203-216). (Editors: S Madhav, S Kanhaiya, A Srivastav, V Singh, P Singh) Elsevier. (ISBN: 978-0-323-85045-2) (<https://doi.org/10.1016/B978-0-323-85045-2.00001-7>)
17. Prasad, N., **Pal, D.B.** and Tiwari, A.K., 2022. Utilization of Biomass from Refineries as Additional Source of Energy. In Agricultural and Kitchen Waste (pp. 205-218). CRC Press. (Editors: Pal DB, Tiwari AK) (ISBN: 978-1-003-24577-3).
18. Tiwari, A. K., Pal, D. B., & Prasad, N. Agricultural Waste Biomass Utilization in Waste Water Treatment. Utilization of Waste Biomass in Energy, Environment and Catalysis (pp. 19-41). CRC Press. (Editors: Pal DB, Singh P) (ISBN: 9781003196358).
19. **Pal, D. B.**, & Tiwari, A. K. Biomass (Agricultural Waste) as Sustainable Reinforcement in Polymer Composite. In Utilization of Waste Biomass in Energy, Environment and Catalysis (pp. 77-96). CRC Press. (Editors: Pal DB, Singh P) (ISBN: 9781003196358).
20. Tiwari, A. K., Prasad, N., & **Pal, D. B.** Use of Waste Biomass as Remediator for Environmental Pollution. In Utilization of Waste Biomass in Energy, Environment and Catalysis (pp. 199-216). CRC Press. (Editors: Pal DB, Singh P) (ISBN: 9781003196358).
21. Srivastava, K. R., Pal, D. B., Mishra, P. K., & Srivastava, P. K. Revalorization of Waste Biomass for Preparing Biodegradable Composite Materials. Utilization of Waste Biomass in Energy, Environment and Catalysis, 233-260. CRC Press. (Editors: Pal DB, Singh P) (ISBN: 9781003196358).
22. Giri, D. D., Khan, J., Giri, A., **Pal, D. B.**, & Tiwari, A. K. Biomass of Microalgae as Potential Biodiesel Source for Future Energy Needs. In Utilization of Waste Biomass in Energy, Environment and Catalysis (pp. 261-277). CRC Press. (Editors: Pal DB, Singh P) (ISBN: 9781003196358).
23. Tiwari, A.K., **Pal, D.B.**, Shende, V., Raj, V., Prasad, A. and Pal, S.L., 2022. Various Value-Added Products from Agricultural and Bio-Waste. In Agricultural and Kitchen Waste (pp. 269-286). CRC Press. (Editors: Pal DB, Tiwari AK) (ISBN: 978-1-003-24577-3)
24. **Pal, D.B.**, Tiwari, A.K., Awasthi, S., Jana, S.K., Prasad, N. (2023). Low-Cost Biomass Adsorbents for Arsenic Removal from Wastewater. In: Pal, D.B. (eds) Recent Technologies for Waste to Clean Energy and its Utilization. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-19-3784-2\\_8](https://doi.org/10.1007/978-981-19-3784-2_8) (ISBN:978-981-19-3783-5)

25. Magar, S.B., Tiwari, A.K., **Pal, D.B.**, Jana, S.K. (2023). Biomass Conversion: Production of Oxygenated Fuel Additives. In: Pal, D.B. (eds) Recent Technologies for Waste to Clean Energy and its Utilization. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-19-3784-2\\_11](https://doi.org/10.1007/978-981-19-3784-2_11) (ISBN:978-981-19-3783-5).
26. Tiwari, A.K., Chauhan, P.R., **Pal, D.B.**, Jana, S.K. (2023). Biomass Valorization as Energy Production Using Waste Biomass. In: Pal, D.B., Tiwari, A.K. (eds) Sustainable Valorization of Agriculture & Food Waste Biomass. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-99-0526-3\\_2](https://doi.org/10.1007/978-981-99-0526-3_2) (ISBN:978-981-19-3783-5).
27. Rahul, Saxena, R., Kumar, S., Pal, D.B. (2023). Volatile Organic Compounds Impacts on Environment: Biofiltration as an Effective Control Method. In: Pal, D.B., Tiwari, A.K. (eds) Sustainable Valorization of Agriculture & Food Waste Biomass. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-99-0526-3\\_3](https://doi.org/10.1007/978-981-99-0526-3_3) (ISBN:978-981-99-0525-6)
28. Singh, H., Pandey, S., Prasad, N., **Pal, D.B.**, Jana, S.K. (2023). Utilization of Waste Biomass for Producing Useful Chemicals. In: Pal, D.B., Tiwari, A.K. (eds) Sustainable Valorization of Agriculture & Food Waste Biomass. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-99-0526-3\\_4](https://doi.org/10.1007/978-981-99-0526-3_4) (ISBN: 978-981-99-0525-6)
29. Kumar, A., Tiwari, A.K., Jana, S.K., **Pal, D.B.** (2023). Biomass (Algae) Valorization as an Energy Perspective: Review of Process Options and Utilization. In: Pal, D.B., Tiwari, A.K. (eds) Sustainable Valorization of Agriculture & Food Waste Biomass. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-99-0526-3\\_6](https://doi.org/10.1007/978-981-99-0526-3_6) (ISBN: 978-981-99-0525-6)
30. Awasthi, S., Mishra, A., Singh, R., **Pal, D.B.** (2023). Food Waste Materials for Bioenergy Production. In: Pal, D.B., Tiwari, A.K. (eds) Sustainable Valorization of Agriculture & Food Waste Biomass. Clean Energy Production Technologies. Springer, Singapore. [https://doi.org/10.1007/978-981-99-0526-3\\_9](https://doi.org/10.1007/978-981-99-0526-3_9) (ISBN: 978-981-99-0525-6)

**Paper Presented in Conferences/Proceeding:**

1. **D B Pal**, G L Devnani, A. Verma, “**Removal of Dye from Wastewater using Sustainable based Technology: A Review**” Paper presentation in **CHEMCON 2023** organized by Indian Institute of Chemical Engineers Headquarters, Kolkata in association with RGPIT, Jais, Jadavpur University and Heritage Institute of Technology from December 27 to 30, 2023.

2. K Saxena, A Srivastav, S Arun, **D B Pal**. Waste Biomass Valorisation and Characterisation of Citrus Limetta; International Chemical Engineering Congress: **CHEMCON 2022** Indian Institute of Chemical Engineers on 27 to 30 December, 2022 at HBTU, Kanpur, India
3. S M Dixit, A Kumar, DB Pal. Waste biomass valorisation of Punica Grantum Peel:Characterisation Study; International Chemical Engineering Congress: **CHEMCON 2022** Indian Institute of Chemical Engineers on 27 to 30 December, 2022 at HBTU, Kanpur, India
4. Nirupama, Pranav Thakur, **D. B. Pal**; Prepared bio-adsorbent (jackfruit seed) for Cadmium removal from wastewater, paper presented in International Conference on Advanced Nanomaterials (ICAN2020)", 27th -29th February 2020.
5. Atul Kumar, Niupama, A K Tiwari, **D. B. Pal**; Thermal Kinetics and Its Behavior of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis, paper presented in International Conference on Advanced Nanomaterials (ICAN2020)", 27th -29th February 2020.
6. **D. B. Pal**; P. K. Mishra, Ram Prasad; Composite Copper Ceria Catalyst prepared by Different Methods for Water Gas Shift Reaction, paper presented in International Conference on Advanced Nanomaterials (ICAN2020)", 27th -29th February 2020.
7. **D. B. Pal**, Shreya Sinha, Nirupama Prasad, Effect of Ammonium Phosphate on the Thermal and Flammability Behavior of Sisal/Epoxy Composite, paper presented in International Conference on Advanced Nanomaterials (ICAN2020)", 27th -29th February 2020.
8. **D. B. Pal**, Sushant Kumar, Nirupma, P. K. Mishra, Synthesis of PDMS membrane for recovery of Aromas from aqueous solutions. Paper presented in 2nd Int. Conference on Engg Science & Advance Research in Rama University; Utter Pradesh Kanpur UP dated on 13th-15th March, 2019. (**Proceedings**)
9. Nirupama and **D. B. Pal**. Water absorption and kinetics of treated woven jute fiber-LDPE composites. Paper presented in 2nd Int. Conference on Engg Science & Advance Research in Rama University; Utter Pradesh Kanpur UP dated on 13th-15th March, 2019. (**Proceedings**)
10. **D.B. Pal**, Srikar, D. D. Giri, P. K. Mishra, "Eletrospinning synthesis of Cu/CeO<sub>2</sub> composite nanofibers and their characterization" Paper presented in **International Conference,"CHEMCON 2014"**, Chandigarh University, Punjab, **Dec 27-30, 2014**.
11. **D.B. Pal**, Zeenat Arif, Pardeep Singh, P. K. Mishra. Synthesis and characterization of ceria nanofiber with variable copper loading by electrospinning method. Paper presented in Int conference (CHEMCON16) in IIT Chennai & Anna University **Dec 27-30, 2016**.

12. **D.B. Pal**, R. Chand, P. K. Mishra. “Fabrication of copper-ceria nanofiber by electrospinning technique for application in water gas shift reaction. 2nd International Conference on Recent Trends in Engineering Science and Management, YMCA, Connaught Place, New Delhi, Date: 20 February, 2016. (**Proceedings: P-** 565-571) (**ISBN-978-81-932074-3-7**)
13. **D.B. Pal**, R. Chand, P. Singh, P. K. Mishra. “Application of pure ceria and copper-ceria electrospun nanofiber in the water gas shift reaction. 3rd International Conference on Recent Innovations in Science, Engineering and Management, Sri Venkateswara College of Engineering & Technology, NH-5, Etcherla, Srikakulam, A. P., 27 February 2016. (**Proceedings: P:** 1361-67) (**ISBN-978-81-932074-1-3**)
14. **D. B. Pal**, R. Prasad. “Hydrogen Production by Medium Temperature Shift Reaction copper-ceria catalyst prepared by sol-gel method” in **International** Conference on Recent Advances in Chemical Engineering and Technology held at (**IICHE**) Indian Institute of Chemical Engineers Kochi, Kerla. Dated on **10-12 March, 2011.**(**Proceedings**)
15. **D. B. Pal**, R. Prasad. “Hydrogen Production by Water Gas Shift Reaction in Medium Temperature Range copper-ceria catalyst prepared by Urea nitrate method” in **International** Conference on Recent Trends in Engineering, Technology and Management, held at BIET, Jhansi U. P. dated on **26-27 Feb. 2011. (Proceedings) (ISBN: 978-93-80697-69-7)**
16. P. Singh, A. Borthakur, R. Singh, **D.B. Pal**, D. Tiwary, P.K. Mishra, Reduced graphene -TiO<sub>2</sub> nanocomposites as photocatalyst for degradation of BTEX compound in petrochemical waste water, International Conference on Solid Wastes 2015: Knowledge Transfer for Sustainable Resource Management, Hong Kong SAR, P.R. **China, 19-23 May 2015** Proceedings (**ISBN: 978-988-19988-9-7**)
17. **D.B. Pal**, Harish Kumar, D. D. Giri, Pardeep Singh, P. K. Mishra. “Cu/CeO<sub>2</sub> nanofibers prepared by electrospinning and their application in water gas shift reactions. 2nd International Conference on Nanotechnology, **IChE**, HIT Haldia, West Bengal, India, dated on **19-22nd** February, 2015 (**Proceeding: ISBN: 978-81-927756-2-3**)
18. **D.B. Pal**, D. D. Giri, Manda Bhargav, Pardeep Singh, P. K. Mishra. “Synthesis and characterization of CuO nanoparticles by aqueous precipitation method”. 2nd International Conference, **IChE**, and HIT Haldia, West Bengal, India, dated on **19-22nd** February, 2015 (**Proceeding: ISBN: 978-81-927756-2-3**)

19. Shraddha Awasthi, D. D. Giri, **D. B. Pal**, Lata Kumari, Manda bhargava, Dhanesh Tiwary, P. K. Mishra. “Synthesis and characterization of Ceria nanofibers by solution Combustion method”. 2nd International Conference on Nanotechnology, IChE, and HIT Haldia, West Bengal, India, dated on **19-22nd** February, 2015 (**Proceeding: ISBN: 978-81-927756-2-3**)
20. **D. B. Pal**, Harish Kumar, Pardeep Singh, P. K. Mishra, “Enhanced H<sub>2</sub> and reduced CO level by use of Electrospun CuO/CeO<sub>2</sub> nanofibers catalyst for water gas shift reaction” Paper presented in the 3<sup>rd</sup> in **international** conference NANOCON014, in the Bharati Vidyapeeth Deemed University, Pune 14-15 Oct-**2014**, India
21. **D.B. Pal**, Harish Kumar, D.D. Giri, P. Singh, P.K. Mishra; “Synthesis and Characterization of Cu/CeO<sub>2</sub> Composite Nanofibers by Electrospinning Method”. **On April 28-29, 2014. National** Conference on Nanotechnology and Renewable Energy Department of Applied Sciences & Humanities Faculty of Engineering & Technology Jamia Millia Islamia New Delhi-110025. (**Proceedings**) (**ISBN-978-93-81212-65-3**)
22. **D. B. Pal**, R. Prasad. “Hydrogen Production by Water Gas Shift Reaction in Medium Temperature Range copper-ceria catalyst prepared by co-precipitation method” in **National** Conference on Recent Development in Material Science, held at Department of Chemistry Feroze Gandhi College, Rae Bareli, U. P. dated on **11-12 Feb. 2011. (Proceedings)** (**ISBN : 9788189131517**)
23. **D.B. Pal**, D.D. Giri, H. Kumar, P. Singh, P.K. Mishra, Comparison of electrospun CeO<sub>2</sub> and CuO/CeO<sub>2</sub> Nanofibers. National Conference on Advances in Materials & Materials, Department of Metallurgical & Materials Engineering, NIT Srinagar on 22-23 May, 2015. (Proc: p: 67-72)

**Paper/Poster Presented in Conferences:**

1. **D B Pal**, A. Kapoor, A. Verma, “Biomass Valorization as Bioadsorbent for the removal of cadmium from wastewater” Paper presentation in CHEMCON 2023 organized by Indian Institute of Chemical Engineers Headquarters, Kolkata in association with RGPIT, Jadavpur University and HIT from December 27 to 30, 2023.
2. **D B Pal**, A. Kapoor, A. Verma, “Dye removal from wastewater using agriwaste based adsorptive approach” Poster presentation in CHEMCON 2023 organized by Indian Institute of Chemical Engineers Headquarters, Kolkata in association with RGPIT, Jadavpur University and HIT from December 27 to 30, 2023.

3. **D. B. Pal**, P. K. Mishra, “Application of Cu/CeO<sub>2</sub> nanofiber in water gas shift reaction” **Poster** presented in the **Institute Day 2-3April, 2016**, IIT (BHU), Varanasi (U.P.) - 221005 INDIA.
4. **D. B. Pal** Actively Participated in “RDOAC-2020”, a Virtual Meeting held at Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, Bhubaneswar, Odisha, India during 6th and 7th July, 2020
5. **D. B. Pal**, P. K. Mishra “Hydrogen Production by Water Gas Shift Reaction using Cu/CeO<sub>2</sub> catalyst” organized by IIT (BHU) & Department of Chemistry, BHU in collaboration with IIM Ahmadabad and IBA, **Paper** presented in **InSPIRE Conclave**, held at IIT(BHU), Varanasi during 29 -30 January, 2016
6. **D. B. Pal**, P. K. Mishra, “Application of ceria nanofiber in water gas shift reaction” **Poster** presented in the **Institute Day Feb 26, 2015**, IIT (BHU), Varanasi (U.P.) - 221005 INDIA
7. Harish Kumar, **D. B. Pal**, Pardeep Singh, P. Tripathi, N. L. Singh, P. N. Tengli, J. Rammohan, P. K. Mishra, “Study on catalytic thermal decomposition of ammonium perchlorate in presence of nanocomposite of Cu-Cr-Ti-O catalyst for solid composite propellant, presented as **Invited Talk** in the 2<sup>nd</sup> in **International** (ICNM 2014), in the Mahatma Gandhi University, Kottayam, Kerala 19-21 Dec-**2014**, India
8. **D. B. Pal**, R. Prasad. “Hydrogen Production by Water Gas Shift Reaction: A short review” **Paper** presented in **National** Conference on Current Concept and Frontier Advances in Science and Educational Research, held at Department of Chemistry T.D.P.G. College, Jaunpur, U.P. dated on **5-6 March 2011**.
9. **D. B. Pal**, Harish Kumar, Pardeep Singh, P. K. Mishra, “Synthesis of CeO<sub>2</sub> nanofibers by electrospinning method and its application in water gas shift reaction” **Poster** presented in the 2<sup>nd</sup> in **International** (ICNM 2014), in the Mahatma Gandhi University, Kottayam, Kerala 19-21 Dec-**2014**, India
10. **D. B. Pal**, Harish Kumar, Lata Kumari, P. Singh, P. K. Mishra, “Synthesis of Cu/CeO<sub>2</sub> nanofibers by electrospinning technique” **Poster** presented in the **international** conference RASS on **March 27-29, 2014**, Department of Chemistry, IIT (BHU), Varanasi (U.P.) - 221005 INDIA
11. Harish Kumar, L. Kumari, **D.B. Pal**, P. Singh, S. Gupta, A. Sharma, P. K. Mishra, P.N. Tiwary, “Catalytic ammoxidation of o-Xylene to phthalonitrile in vapor phase” **Poster**

presented in the **international** conference RASS on **March 27-29, 2014**, Department of Chemistry, IIT (BHU), Varanasi (U.P.)-221005 INDIA

12. **D.B. Pal**, D. D. Giri, Ashis Mishra, P. K. Mishra. “Composite polyvinylalcohol/polyvinyl acetate nanofibrous mats for controlled drug release” **Poster** presented in **International Conference ICETB 2014**, JNU, Delhi, India, **6-9 Nov. 2014**.
13. **D.B. Pal**, D. D. Giri, Pardeep Singh, P. K. Mishra. “Removal of Arsenic from water by CuO nanoparticle” **Poster** presented in **International Conference, ICETB 2014**, Jawaharlal Nehru University, Delhi, India, **6-9 Nov. 2014**
14. Participated in International Conference on **Separation Processes 2010** held at Department of Chemical Engineering & Technology, Institute of Technology, Banaras Hindu University, Varanasi U. P. dated on **20-22 Oct. 2010**.

#### **Organizing Committee in Conference\Training Courses\Workshops:**

1. One week **Workshop on Industrial Process Simulation** organized by TEQIP-III sponsored, BIT Mesra, Ranchi, Jharkhand from 16<sup>st</sup> to 20<sup>th</sup>, May 2018.
2. One month **Entrepreneurship Development programme (EDP)** on Herbal Extraction/ Agribusiness /Engineering/ Food processing, organized by MCIIE, IIT (BHU) Varanasi from April 18 - May 20, 2016
3. Two weeks **Summer School-cum-Workshop** on Water and Wastewater Treatment, jointly organized by MCIIE and Department of Civil Engg, IIT (BHU) Varanasi on **May 21-June 5, 2015**.
4. **InSPIRE Conclave** organized by IIT (BHU) & Department of Chemistry, BHU in collaboration with IIM Ahmadabad and IBA, held at IIT(BHU), Varanasi during 29 -30 January, 2016
5. International conference on **Kashi in 21<sup>st</sup> century** organized by Kashi katha and MCIIE, IIT (BHU) Varanasi from **6-7 Feb, 2016**

#### **Training courses/FDP and Workshops:**

1. one-week **Online FDP** course on **Challenges and Recent Trends in Mathematical Modelling and Scientific Computing**, dated on **18 to 22 Dec, 2023,** organized by Department of Mathematics, HBTU Kanpur Uttar Pradesh India.

2. one-week short-term course on **Sustainable Solutions to Solid Waste Management (S3WM)**, Dated on **04.09.2023 to 08.09.2023**, ' organized by Civil Engineering Department, National Institute of Technology Patna Bihar India.
3. One Week Online FDP on "**Pedagogical Innovations and Strategies in Higher Education**". Dated on **31.7.2023 to 07.8.2023**, ' organized by FDP Division of ACT Academy Tamil Nadu India.
4. One week **FDP on “Universal Human Values”** organized by Government of India, All India Council for Technical Education (AICTE) New Delhi from June 12-16, 2023.
5. One week **Workshop on Process Modeling, Simulation, Control, and Optimization (PMSCO-2023)**’ Jointly organized by Department of Chemical Engineering, Department of Instrumentation and Control Engineering and Department of Electrical Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab from March 23-27, 2023.
6. One week **Faculty Development programme on “Microbes Potential to Bail Out the Energy Crisis”** organized by Department of Biochemical Engineering, School of Chemical Technology, HBTU Kanpur during December 15-20, 2022.
7. **Two-day** International Workshop on Advances in water Purification and wastewater treatment, Jointly Indian Desalination Association & HBTU, Kanpur on 18th & 19th Nov. 2022.
8. One Day Workshop on Powder Rheology and surface area characterization sponsored, BIT Mesra, Ranchi, Jharkhand from February 25, 2020.
9. Two weeks online **faculty development program** on delivering online course using canvas LMS organized by TEQIP-III BIT Mesra, Ranchi, Jharkhand from 27 July to 5 August, 2020.
10. One Day Webinar on “Contemporary Environmental Issues: Concepts, Tools and Practices” held on July 24, 2020 organized by Department of Environmental Sciences, Central University of Jharkhand, Ranchi India.
11. One day webinar on “Selection of Dryers in Process Industries and Troubleshooting” held on 23rd August 2020 organized by Department of Chemical Engineering B V Raju Institute of Technology, Vishnupur, Narsapur, and Medak 502313.
12. One week **Workshop on Advanced Pedagogies** organized by **IIT Hyderabad** sponsored, TEQIP-III, 10th-14th June 2019.



13. One day **Orientation Workshop** for Collaborative Research Scheme (CRS) project for **PI** organized by AICTE Delhi, sponsored, TEQIP-III, 16th July, 2019.
14. One week **Workshop on Industrial Process Simulation** organized by TEQIP-III sponsored, BIT Mesra, Ranchi, Jharkhand from 16<sup>st</sup> to 20<sup>th</sup>, May 2018.
15. One week **Faculty Development Programme** organized and conducted by Teaching Learning Centre, IIT Madras from January, 31<sup>st</sup> to February, 4<sup>th</sup> 2018.
16. One month **Entrepreneurship Development programme (EDP)** on Herbal Extraction/ Agribusiness /Engineering/ Food processing, organized by MCIIE, IIT (BHU) Varanasi from April 18 - May 20, 2016
17. Two weeks **Summer Intensive** course on “Advances in Preparation and Characterization of Heterogeneous Catalysts”, Organized by Department of Chemical Engineering & Technology, IIT (BHU) during 8-20 June, 2015.
18. Two weeks **Summer School-cum-Workshop** on Water and Wastewater Treatment, jointly organized by MCIIE and Department of Civil Engg, IIT (BHU) Varanasi **on May 21-June 5, 2015.**
19. Two weeks **Faculty Development Programme** in Entrepreneurship sponsored by NSTED Department of Science & Technology Government of India, New Delhi Organized at IIT (BHU) Varanasi **on 4-15 March, 2014.**
20. One-week short Term Course on “Hazardous Waste, Batteries Waste and E-Waste Management” to be held during **June 11-15, 2012** at QIP Centre IIT Roorkee, Uttarakhand, India
21. One day Author workshop jointly organized by **Springer & IIT (BHU) Varanasi**, on 10 Feb. **2014**
22. One day Symposium on **Research Methodology for Future Researchers (RMFR-2015)** Members of the Teaching Learning Cell, IIT (BHU) Varanasi, **on March 22, 2015**

**Under Graduate/ Post Graduate Project Supervised:**

**Under graduate projects: 14**

1. Mr Ansh, Swatantra, Ayush, Kritika; Preparation and characterization of biochar using biomass of Pomegranate and sweet lemon peels, 2023
2. Mr. Aayush Kumar, Waste Biomass Valorization in Useful Chemicals: A Review, 2022
3. Mr. Aman Chotia, Waste Biomass Valorization in Useful biofuels: A Review, 2022

4. Mr. Manish Kumar, Study of thermal degradation of Amaltash Seeds biomass, 2020
5. Mr. Atul Kumar & Sonu, Thermal kinetics of Amaltash fruit Peels using Thermo Gravimetric Analysis, 2020
6. Mr. Pranav Kumar, Thermal degradation kinetics of mango seeds waste biomass, 2020
7. Mr. Mihir & Pritam, Study of thermal degradation of jackfruit seeds biomass, 2020
8. Mr. Anunay Kumar, Thermal kinetics of Jamun seeds Using Thermo Gravimetric Analysis, 2020
9. Mr. Shounak & Ayush (co-guide), Photo-catalytic Reduction of dyes from wastewater, 2020
10. Ms. Kiran, arsenic removal from waste water by using copper oxide catalyst, 2019
11. Mr. Kislay & Gourav Malik, chromium removal from waste water by using copper oxide catalyst, 2019
12. Mr. Amit Kumar, synthesis and characterization of ceria nanofibers, 2018
13. Mr. Ankur Gupta, production of acetone from isopropyl alcohol, 2012
14. Mr. Ankur srivastava, heat exchanger design, 2009

**Post Graduate: 04**

1. Mr. Farhan, Nutritional Evaluation of Kigelia Africana (Balam Kheera) Fruit, 2020
2. Ms. Surabhi, Standard and instrumental techniques of detection of milk adulteration, 2019
3. Mr. Nazim, comparative microbial analysis of raw, pasteurized and market milk, 2019
4. Mr. Nishant, Heavy metal removal in Subarnarekha River Ranchi region, 2019

**Courses Taught in Graduate and Post Graduate Level: 08**

1. Heat Transfer Operation
2. Chemical Reaction Engineering
3. Fluid Mechanics
4. Transport Phenomenon
5. Energy Engineering
6. Pollution Control & Technology
7. Chemical Engineering Thermodynamics
8. Process Instrumentation

**Paper Review in Different Reputed Journals:23**

1. Journal of Hazardous Materials
2. Journal of Fuel

3. Journal of Water
4. Environmental Science and Pollution Research
5. Springer Nature Applied Sciences
6. Environmental chemistry Letters
7. Case Studies in Chemical and Environmental Engineering
8. Journal of Sustainability
9. Applied Sciences
10. BMC Chemistry (springer nature)
11. Biotechnology and Genetic Engineering Reviews
12. Resources, Environment and Sustainability
13. Biomass Conversion and Biorefinery
14. Journal of separation
15. International Journal of Environmental Research and Public Health
16. Journal of atmosphere
17. Journal of Toxics
18. Journal of Catalysis Surveys from Asia
19. Bioresource Technology Reports
20. Catalysis Surveys from Asia
21. ChemCatChem - Chemistry Europe - Wiley Online Library
22. Biotechnology and Genetic Engineering Reviews
23. Journal of Polymer Research

**Personal Details:**

Father's Name: Vinda Pal

Language known: Hindi, English

Permanent Address: Dan Bahadur Pal S/o Shri Vinda Pal,  
Besar, Prithaviganj, Fattupur, Mahrajganj, Jaunpur (U.P.) India-222145.

**References:**

**1. Prof. P.K. Mishra** (Ph.D. Supervisor)

Department of Chemical Engineering & Technology, IIT (BHU) Varanasi,

Uttar Pradesh, India-221005, Contact No. +919415301462, Email Id. [pkmishra.che@itbhu.ac.in](mailto:pkmishra.che@itbhu.ac.in)

**2. Prof. (Mrs) V. L Yadav**

Department of Chemical Engineering & Technology, IIT (BHU) Varanasi,  
Uttar Pradesh, India-221005, Contact No. +919935048388, Email Id. [vlyadav.che@itbhu.ac.in](mailto:vlyadav.che@itbhu.ac.in)

**Dr. Sunder Lal Pal**

Associate Professor, Department of Chemical Engineering, Maulana Azad National Institute of  
Technology (*MANIT*), *Bhopal, M.P. India; Pin. 462003* Contact No.: +91 9479961203

Email: [sunderlalin@gmail.com](mailto:sunderlalin@gmail.com), [sunderp@manit.ac.in](mailto:sunderp@manit.ac.in)

**Declaration:**

I hereby declare that the information furnished above is true to the best of my  
Knowledge.

**Place:**

**(Dan Bahadur Pal)**

**Date:**