**Dr. Prem Prakash Srivastav**
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## 1. Educational qualifications:

| | | |
|---|---|---|
| Ph.D. | IIT Kharagpur | 1990 |
| M.Sc. (Food Technology), Minor – Process Engg | GBPUA&Tech., Pantnagar | 1983 |
| B.Sc. | Gorakhpur University, Gorakhpur | 1979 |

## 2. Experience:

| University / Organization | Designation | From | To | Total Period | Nature of Experience |
|---|---|---|---|---|---|
| IIT Kharagpur | **Emeritus Professor** | 01 July 2026 | Till date | | Teaching and Research |
| IIT Kharagpur | **Visiting Professor** | 13 August 2025 | 30 June 2026 | 11 months | Teaching and Research |
| IIT Kharagpur | **Professor** | 18 Jun 2021 | 30 Jun 2025 | 04 year | Teaching and Research |
| IIT Kharagpur | **Associate Professor** | 29 Oct 2014 | 18 Jun 2021 | 06 years 07 months | Teaching and Research |
| IIT Kharagpur | **Assistant Professor** | 30 Mar 2007 (AN) | 28 Oct 2014 | 07 years 06 months | Teaching and Research |
| IIT Kharagpur | **Senior Scientific Officer** | 01 Apr 2004 | 30 Mar 2007 (AN) | 03 Years 01 Months | Research and Teaching |
| IIT Kharagpur | **Scientific Officer Gr – I** | 22 Jan 2004 | 31 Mar 2004 | 02 Months | Research and Extension |
| IIT Kharagpur | **JRO (Food Microbiology)** | 08 Dec 1989 | 21 Jan 2004 | 14 years | Research and Extension |

## 4. TEACHING INTEREST (Subjects taught / teaching)

**At the undergraduate level:** Food Handling, Packaging and Storage, Food Science and Technology, Fat and Oil Technology

**At the postgraduate level:** Food Chemistry and Microbiology (Theory & Lab), Food Handling and Packaging, Food Process Modeling, Properties of Bio-materials Lab, Processing of horticultural & plantation crop products, Fat and Oil Technology

## 5. Academic or professional awards / Honours

- Recipient of IFT (USA) – 2024 2nd place in the Education, Extension & Outreach Graduate Writing Competition (My Ph. D student)
- Recipient of IFT (USA) – 2015 3rd place in the Education, Extension & Outreach Graduate Writing Competition (My Ph. D student)
- Recipient of IFT (USA) – 2014 Best Poster Paper Award
- Recipient of FOQSAT – 2011 Best Poster Paper Award
- Recipient of ICTF – 2010 Best Poster Paper Award
- Recipient of ISAE – 2009 Best Poster Paper Award

| 6. Research guidance | Number completed | Number in progress |
|---|---|---|
| **(a)** Guidance at doctoral level | 27 | 2 |
| **(b)** Guidance at masters level | 75 | 3 |
| **(c)** Guidance at bachelors level | 8 | - |

**Publications**

**e-Book (01)**

1. Active packaging - An approach to minimise post harvest loss of banana – by Chandani Sen, **P. P. Srivastav**, H. N. Mishra (2014). Lambert Academic Publishing. ISBN – 978-3-659-51074-8.

**Books (08)**

1. **"Advanced Starch Modification: Emerging Technologies and Industrial Applications"** Editors: **Prem Prakash Srivastav,** Rakesh Kumar Gupta & Sangeetha Karunanithi (2025). CRC Press
2. "**Emerging Methods for Oil Extraction from Food Processing Waste**" Editor Prakash Srivastav, P., & Karunanithi, S. (2025). CRC Press
3. "**Structured Foods**". Editors Moorthy Eswaran, G. U., Prakash Srivastav, P., & Srivastava, B. (2025). CRC Press
4. "**Microbiology for Food and Health; Technological Developments and Advances**" Editors: Kumar Verma, D., Patel, A. R., Prakash Srivastav, P., Mohapatra, B., & Kareem Niamah, A. (2020). ; Edition 1. https://doi.org/10.4324/9780429276170
5. **"Emerging Thermal and Nonthermal Technologies in Food Processing"** Editors: **Prem Prakash Srivastav**, Deepak Kumar Verma, Ami R. Patel and Asaad Rehman Al-Hilphy (2020). Apple Academic Press, USA. URL: https://www.appleacademicpress.com/emerging-thermal-and-nonthermal-technologies-in-food-processing-/9781771888318
6. "**BIOPROCESSING TECHNOLOGY IN FOOD AND HEALTH Potential Applications and Emerging Scope**" Editors: Deepak Kumar Verma, Ami R. Patel and Prem Prakash Srivastav (2019) Apple Academic Press, USA.
7. **"Agronomic Rice Practices and Postharvest Processing: Production and Quality Improvement"** by Editors: Deepak Kumar Verma**, Prem Prakash Srivastav** and Altafhusain B Nadaf (2019). Apple Academic Press, USA. URL: http://www.appleacademicpress.com/agronomic-rice-practices-and-postharvest-processing-production-and-quality-improvement/9781771887120#bios
8. **"*SCIENCE and TECHNOLOGY of* Aroma, Flavour and Fragrance *in Rice*"** Editors: Deepak Kumar Verma, and **Prem Prakash Srivastav** (2018). Apple Academic Press, USA. URL: http://www.appleacademicpress.com/science-and-technology-of-aroma-flavor-and-fragrance-in-rice-/567
9. **"Microorganisms in Sustainable Agriculture, Food and the Environment"** Editors: Deepak Kumar Verma and **Prem Prakash Srivastav** (2017). Volume-1, as part of book series on *Innovation in Agricultural Microbiology*, Apple Academic Press, USA. URL: http://www.appleacademicpress.com/microorganisms-in-sustainable-agriculture-food-and-the-environment-/9781771884792

**Book Chapters (20)**

1. Barua, S., & Srivastav, P. P. (2018). *Cold Plasma Technology in Food Processing*.
2. Behera, S. M., & Srivastav, P. P. (2018). Recent Advances in Development of Multi Grain Bakery Products: A Review. *International Journal of Current Microbiology and Applied Sciences*, *7*(05), 1604–1618. https://doi.org/10.20546/ijcmas.2018.705.190
3. Bhushan, B., Kumar Mahato, D., Kumar Verma, D., Kapri, M., & Prakash Srivastav, P. (2017). *Potential Health Benefits Of Tea Polyphenols-A Review*.
4. Gull, A., Nayik, G. A., & Brennan, C. (2024). Development of Gluten-Free Pasta. In *Development of Gluten-Free Pasta*. Elsevier. https://doi.org/10.1016/C2022-0-01922-X
5. Kapri, M., Kumar Verma, D., Kumar, A., Billoria, S., Kumar Mahato, D., Singh Yadav, B., & Prakash Srivastav, P. (2017). *Modified Pearl Millet Starch: A Review On Chemical Modification, Characterization And Functional Properties*. http://www.fao.org/
6. Kumar Verma, D., Billoria, S., Kumar Mahato, D., Kumar Swarnakar, A., & Prakash Srivastav, P. (2017). *Effects Of Thermal Processing On Nutritional Composition Of Green Leafy Vegetables: A Review*.
7. Kumar Verma, D., Dhakane, J. P., Kumar Mahato, D., Billoria, S., Bhattacharjee, P., & Srivastav, P. P. (2018). *Supercritical Fluid Extraction (Scfe) For Rice Aroma Chemicals: Recent And Advanced Extraction Method*.
8. Kumar Verma, D., Kumar Mahato, D., & Srivastav, P. P. (2018a). *Extraction Methods For Chemical Constitutes Associated With Rice Aroma, Flavor, And Fragrance: A Short Overview*.
9. Kumar Verma, D., Kumar Mahato, D., & Srivastav, P. P. (2018b). *Simultaneous Distillation Extraction (Sde): A Traditional Method For Extraction Of Aroma Chemicals In Rice*.
10. Kumar Verma, D., Mahanti, N. K., Thakur, M., Kumar Chakraborty, S., & Srivastav, P. P. (2020). *Microwave Heating: Alternative Thermal Process Technology for Food Application*.
11. Kumar Verma, D., Mahato, D. K., Billoria, S., & Srivastav, P. P. (2018). *Solid Phase Micro Extraction (Spme): A Modern Extraction Method For Rice Aroma Chemicals*.
12. Kumar Verma, D., Mohapatra, B., Kumar, C., Bajwa, N., Shanti Kiran, K., Kimmy, G., Baldi, A., Patel, A. R., Singhal, B., Kareem Niamah, A., & Prakash Srivastav, P. (2019). *Molecular Techniques for Detection of Foodborne Pathogens: Salmonella and Bacillus cereus CHAPTER 7*. www.who.int/mediacentre/factsheets/fs237/en/
13. Kumar Verma, D., Patel, A. R., Prajapati, J. B., Thakur, M., Jabbar, A., Al-Manhel, A., & Srivastav, P. P. (2019). *Starter Culture and Probiotic Bacteria in Dairy Food Products CHAPTER 1*.
14. Kumar Verma, D., Prakash Srivastav, P., & Nadaf, A. (2018). *Aromatic Rice From Different Countries: An Overview*.
15. Kumar Verma, D., Singhal, P., Vij, R., Kumar Mahato, D., Patel, A., Prakash Srivastav, P., & Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya, C. (2018). *Genetically Modified Organisms Produced Enzymes: Multifarious Applications In Food Manufacturing Industries Chapter 3*.
16. Kumar Verma, D., & Srivastav, P. P. (2018a). *Introduction To Rice Aroma, Flavor, And Fragrance*.
17. Kumar Verma, D., & Srivastav, P. P. (2018b). *Prospective Future Of Aroma, Flavor And Fragrance In The Rice Industry*.
18. Kumar Verma, D., Srivastava, S., Kumar, V., Asthir, B., Mohan, M., & Prakash Srivastav, P. (2017). *Nano-Particle Based Delivery Systems: Applications In Agriculture*.
19. Singh, V., Kumar Verma, D., & Prakash Srivastav, P. (2017). *Food Grain Storage Structures: Introduction And Applications*.
20. Verma, D. K., Thakur, M., Tripathy, S., Mohapatra, B., Singh, S., Patel, A. R., Gupta, A. K., Chávez-González, M. L., Srivastav, P. P., Sandoval-Cortes, J., & Aguilar, C. N. (2022). Emerging biosensor technology and its potential application in food. In *Innovations in Fermentation and Phytopharmaceutical Technologies* (pp. 127–163). Elsevier. https://doi.org/10.1016/B978-0-12-821877-8.00017-8

**Patents**

1. Design and development of small scale potato chips cutter – submitted on 16-06-2014
2. Design and development of chironji nut decorticator – Patent No 519209
3. Single screw extruder for third generation snacks – No. 696/KOL/2013
4. A machine for jackfruit seed extraction from the bulb – Patent No. 535366
5. Guava pomace protein-based oleogel as an alternate fat in cookie development thereof - Patent application No. 202431058256 dated 31-07-2024
6. Vacuum-assisted ohmic heating oven for bread baking (22050) - Filed

**Research papers (164 = 135 + 18 + 02 + 9)**

**International Journals (135)**

1. Ali, E. A., Mohammed, D. M., el Gawad, F. A., Orabi, M. A., Gupta, R. K., & **Srivastav, P. P.** (2025). Valorization of food processing waste byproducts for essential oil production and their application in food system. In *Waste Management Bulletin* 3(3). Elsevier B.V. https://doi.org/10.1016/j.wmb.2025.100200

2. Gupta, R. K., Gnana Moorthy Eswaran, U., Kumar, S., Pipliya, S., Kaur, B., & **Srivastav, P. P.** (2025). Synergistic Modification of Starch Polysaccharide via Sequential Treatments With Ultrasonic and Cold Plasma Technology. In *Journal of Food Processing and Preservation* 2025(1). John Wiley and Sons Inc. https://doi.org/10.1155/jfpp/9063007

3. Gupta, R. K., Pipliya, S., Patel, J., **Srivastav, P. P**., Castro-Muñoz, R., Wang, C.-K., & Nemțanu, M. R. (2025). Essential oil-embedded starch based films for active packaging: Insights into migration, stability, and preservation efficiency. *Trends in Food Science & Technology*, *163*, 105149. https://doi.org/10.1016/j.tifs.2025.105149

4. Nakra, S., Tripathy, S., & **Srivastav, P. P.** (2025). Drying as a preservation strategy for medicinal plants: Physicochemical and functional outcomes for food and human health. In *Phytomedicine Plus*, 5(2). Elsevier B.V. https://doi.org/10.1016/j.phyplu.2025.100762

5. Tripathy, S., & **Srivastav, P. P.** (2025). Sustainable liposomal delivery of Centella asiatica polyphenols: β-sitosterol stabilization, LC-MS/MS profiling, and simulated release study. *Sustainable Food Technology*. https://doi.org/10.1039/d5fb00127g

6. Pipliya, S., Kumar, S., Gupta, R. K., Das, R. S., Meena, D., **Srivastav, P. P.**, Tiwari, B. K., & Garcia-Vaquero, M. (2025). The future of algal proteins: Innovations in extraction and modifications, functional properties, and sustainable food applications. In *Future Foods* 11. Elsevier B.V. https://doi.org/10.1016/j.fufo.2025.100549

7. Prabhakar, P., Tripathy, S., Verma, D. K., Singh, S., Thakur, M., Singh, A. K., **Srivastav, P. P.**, Banerjee, M., Patel, A. R., Chávez González, M. L., Utama, G. L., Sandoval-Cortés, J., & Aguilar, C. N. (2025). Trends and advances in liposome formulation technology with an emphasis on ensuring safety and quality in food and drug applications. In *Food Bioscience* 69. Elsevier Ltd. https://doi.org/10.1016/j.fbio.2025.106913

8. Rout, S., Gupta, R. K., Sharma, S., & **Srivastav, P. P.** (2025). Recent trends in the modification of plant proteins by non-thermal techniques: impact on functional properties and their application in food systems. In *European Food Research and Technology*. Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/s00217-025-04734-w

9. Rout, S., Panda, P. K., Dash, P., **Srivastav, P. P.**, & Hsieh, C. te. (2025). Cold Plasma-Induced Modulation of Protein and Lipid Macromolecules: A Review. In *International Journal of Molecular Sciences* 26(4). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/ijms26041564

10. Rout, S., & **Srivastav, P. P.** (2025). Impact of cold-plasma on the nutritional, textural and structural properties of soy and pea protein isolate for the development of plant-based noodles. *Journal of Food Science and Technology*. https://doi.org/10.1007/s13197-025-06233-y

11. Rout, S., Tripathy, S., & **Srivastav, P. P.** (2025). Valorization of Mango Peels Toward Sustainability and Circular Economy by Combining Pretreatment and Drying With Ultrasound Assisted Extraction: Mathematical Modeling, Functional Properties, and Identification of Mangiferin by HPLC. *Journal of Food Process Engineering*, *48*(3). https://doi.org/10.1111/jfpe.70079

12. Rout, S., Tripathy, S., Ranjan, S., & **Srivastav, P. P.** (2025). Synergistic effect of pre-treatment and microwave drying on the physicochemical and functional properties of Chausa mango peel: Process optimization and HPLC analysis to identify mangiferin. *Sustainable Chemistry for the Environment*, *10*. https://doi.org/10.1016/j.scenv.2025.100235

13. Gnana Moorthy Eswaran, U., & **Srivastav, P. P.** (2024). Microwave and dielectric barrier discharge atmospheric plasma interaction on guava industrial biomass for biomaterial production. *JAOCS, Journal of the American Oil Chemists' Society*, *101*(2), 237–249. https://doi.org/10.1002/aocs.12742

14. Barua, S., **Srivastav, P. P.**, & Vilgis, T. A. (2024). Enhancing resistant starch fraction in modified elephant foot yam starch: optimizing preparation conditions and exploring tribological properties. *Frontiers in Food Science and Technology*, *4*. https://doi.org/10.3389/frfst.2024.1466604

15. Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2024a). Dielectric barrier discharge plasma: A green and novel method to change the structure of taro peel starch and improve the physicochemical properties of taro peel starch films. *Plasma Processes and Polymers*, *21*(9). https://doi.org/10.1002/ppap.202400047

16. Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2024b). Insights into the physicochemical, crystalline, multistructural, thermal and digestibility behavior of taro starch (Colocasia esculenta) modified by cold plasma treatment with high voltage dielectric barrier discharge (HVDBD): An alternative technique for chemical modification of starch and environmental sustainability. *Journal of Cleaner Production*, *461*. https://doi.org/10.1016/j.jclepro.2024.142710

17. Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2024c). Investigating the toxicological effects of nanomaterials in food packaging associated with human health and the environment. *Journal of Hazardous Materials Letters*, *5*. https://doi.org/10.1016/j.hazl.2024.100125

18. Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2024d). Physical action of nonthermal cold plasma technology for starch modification. In *Food Physics* 1. KeAi Publishing Communications Ltd. https://doi.org/10.1016/j.foodp.2024.100011

19. Gupta, R. K., Pipliya, S., Karunanithi, S., Eswaran U, G. M., Kumar, S., Mandliya, S., **Srivastav, P. P.**, Suthar, T., Shaikh, A. M., Harsányi, E., & Kovács, B. (2024). Migration of Chemical Compounds from Packaging Materials into Packaged Foods: Interaction, Mechanism, Assessment, and Regulations. In *Foods* 13(19). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/foods13193125

20. Karunanithi, S., Guha, P., & **Srivastav, P. P.** (2024). Impact of non-thermal plasma on betel leaf powder for essential oil extraction and its quality characteristics. *Journal of the Science of Food and Agriculture*, *104*(3), 1282–1297. https://doi.org/10.1002/jsfa.13010

21. Karunanithi, S., Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2024). Exploring the effects of diverse extraction methods on nanoemulsion formulation using betel leaf essential oil: Assessing antibacterial efficacy against pathogenic microorganisms. *Food and Humanity*, *2*. https://doi.org/10.1016/j.foohum.2024.100267

22. Kaur, G., Tripathy, S., Rout, S., Mishra, G., Panda, B. K., & **Srivastav, P. P.** (2024). Formalin adulteration in fish: A state-of-the-art review on its prevalence, detection advancements, and affordable device innovations. In *Trends in Food Science and Technology* 153. Elsevier Ltd. https://doi.org/10.1016/j.tifs.2024.104708

23. Kumar Gupta, R., AE Ali, E., Abd El Gawad, F., Mecheal Daood, V., Sabry, H., Karunanithi, S., & **Srivastav, P. P.** (2024). Valorization of fruits and vegetables waste byproducts for development of sustainable food packaging applications. In *Waste Management Bulletin* 2(4) 21–40. Elsevier B.V. https://doi.org/10.1016/j.wmb.2024.08.005

24. Rout, S., Dash, P., Panda, P. K., Yang, P. C., & **Srivastav, P. P.** (2024). Interaction of dairy and plant proteins for improving the emulsifying and gelation properties in food matrices: a review. In *Food Science and Biotechnology* 33(14): 3199–3212. The Korean Society of Food Science and Technology. https://doi.org/10.1007/s10068-024-01671-4

25. Kumar, S., Pipliya, S., **Srivastav, P. P.**., & Srivastava, B. (2024). Shelf life and storage stability of cold plasma treated kiwifruit juice: kinetic models. *International Journal of Food Properties*, *27*(1), 1–23. https://doi.org/10.1080/10942912.2024.2409904

26. Kumar, S., Pipliya, S., **Srivastav, P. P.**, Srivastava, B., Battula, S. R., & Sen, R. (2024). Cold plasma processing of kiwifruit juice: Effect on physicochemical, nutritional, microstructure, rheological properties and sensory attributes. *Journal of Food Science*, *89*(10), 6127–6141. https://doi.org/10.1111/1750-3841.17284

27. Niamah, A. K., Gddoa Al-Sahlany, S. T., Abdul-Sada, H. K., Prabhakar, P., Tripathy, S., Dadrwal, B. K., Singh, S., Verma, D. K., Gupta, A. K., Shukla, R. M., Thakur, M., Patel, A. R., Utama, G. L., Chávez González, M. L., **Srivastav, P. P.**, Hassan Alhilfi, W. A., Sandoval-Cortés, J., & Aguilar, C. N. (2024). Phytophagous probiotic foods: Exploring the intersection of characteristics, quality implications, health benefits, and market dynamics. In *Trends in Food Science and Technology*, 154. Elsevier Ltd. https://doi.org/10.1016/j.tifs.2024.104795

28. Palle, A. A., Rakshit, M., & **Srivastav, P. P.** (2024). Effect of harvest-to-cooling delay and precooling on Kufri Jyoti (Solanum tuberosum) potato quality. *Food Chemistry*, *452*. https://doi.org/10.1016/j.foodchem.2024.139528

29. Pipliya, S., Kumar, S., & **Srivastav, P. P.** (2024a). Effect of Thermal and Non-thermal Plasma Treatment on Particle Size Distribution, Protein Secondary Structure, Fuzzy Logic Sensory Evaluation, Rheological, and Selected Quality Attributes of Pineapple Juice: A Comparative Analysis. *Food and Bioprocess Technology*, *17*(11), 3615–3636. https://doi.org/10.1007/s11947-024-03328-w

30. Pipliya, S., Kumar, S., & **Srivastav, P. P.** (2024b). Impact of cold plasma and thermal treatment on the storage stability and shelf-life of pineapple juice: A comprehensive postharvest quality assessment. *Food Physics*, *1*. https://doi.org/10.1016/j.foodp.2024.100025

31. Rout, S., Tripathy, S., & **Srivastav, P. P.** (2024). Effect of cold plasma for modulating macromolecules and bioactive composition of food: Unveiling mechanisms and synergies with other emerging techniques. In *Food Bioscience* 61. Elsevier Ltd. https://doi.org/10.1016/j.fbio.2024.104545

32. Shrivastava, A., Gupta, R. K., & **Srivastav, P. P.** (2024). Exploring novel frontiers of advancements in purple yam (Dioscorea alata L.) starch extraction, modification, characterization, applications in food and other industries. In *Measurement: Food* 15. Elsevier Ltd. https://doi.org/10.1016/j.meafoo.2024.100196

33. Rout, S., Sowmya R, S., & **Srivastav, P. P.** (2024). A review on development of plant-based meat analogues as future sustainable food. In *International Journal of Food Science and Technology* 59(1):481–487. John Wiley and Sons Inc. https://doi.org/10.1111/ijfs.16627

34. Ajesh Kumar, V., Pravitha, M., Yadav, A., Pandiselvam, R., & **Srivastav, P. P.** (2023). Influence of ultrasonic application on soybean aqueous extract based composite edible film: Characterization and their food application. *Food Hydrocolloids*, *135*. https://doi.org/10.1016/j.foodhyd.2022.108210

35. Eswaran U, G. M., & **Srivastav, P. P.** (2023). Morphological and biochemical modification of guava processing industrial bio-mass by dielectric barrier discharge atmospheric plasma and effect on yield of bio-materials. *Journal of Agriculture and Food Research*, *14*. https://doi.org/10.1016/j.jafr.2023.100679

36. Gnana Moorthy Eswaran, U., Karunanithi, S., Gupta, R. K., Rout, S., & **Srivastav, P. P.** (2023). Edible insects as emerging food products–processing and product development perspective. In *Journal of Food Science and Technology*, 60, (8):2105–2120. Springer. https://doi.org/10.1007/s13197-022-05489-y

37. Gupta, R. K., Guha, P., & **Srivastav, P. P.** (2023). Effect of high voltage dielectric barrier discharge (DBD) atmospheric cold plasma treatment on physicochemical and functional properties of taro (*Colocasia esculenta*) starch. *International Journal of Biological Macromolecules*, *253*. https://doi.org/10.1016/j.ijbiomac.2023.126772

38. Kapri, M., Singh, U., **Srivastav, P. P.**, & Sharma, S. (2023). Enhancement of bioactives, functional and nutraceutical attributes of banana peels and de-oiled groundnut cake through submerged fermentation employing Calocybe indica. *Food Bioscience*, *53*. https://doi.org/10.1016/j.fbio.2023.102530

39. Karunanithi, S., Guha, P., & **Srivastav, P. P.** (2023). Cold Plasma-Assisted Microwave Pretreatment on Essential Oil Extraction from Betel Leaves: Process Optimization and Its Quality. *Food and Bioprocess Technology*, *16*(3), 603–626. https://doi.org/10.1007/s11947-022-02957-3

40. Kumar, S., Pipliya, S., & **Srivastav, P. P.** (2023a). Effect of cold plasma on different polyphenol compounds: A review. In *Journal of Food Process Engineering* 46(1). John Wiley and Sons Inc. https://doi.org/10.1111/jfpe.14203

41. Kumar, S., Pipliya, S., & **Srivastav, P. P.** (2023b). Effect of cold plasma processing on physicochemical and nutritional quality attributes of kiwifruit juice. *Journal of Food Science*, *88*(4), 1533–1552. https://doi.org/10.1111/1750-3841.16494

42. Pipliya, S., Kumar, S., Babar, N., & **Srivastav, P. P.** (2023). Recent trends in non-thermal plasma and plasma activated water: Effect on quality attributes, mechanism of interaction and potential application in food & agriculture. In *Food Chemistry Advances* (Vol. 2). Elsevier Ltd. https://doi.org/10.1016/j.focha.2023.100249

43. Pipliya, S., Kumar, S., & **Srivastav, P. P.** (2023a). Effect of dielectric barrier discharge nonthermal plasma treatment on physicochemical, nutritional, and phytochemical quality attributes of pineapple [Ananas comosus (L.)] juice. *Journal of Food Science*, *88*(11), 4403–4423. https://doi.org/10.1111/1750-3841.16767

44. Pipliya, S., Kumar, S., & **Srivastav, P. P.** (2023b). Modeling of the inactivation kinetics of aerobic mesophiles and yeasts and molds natural microbiota in nonthermal plasma-treated pineapple (Ananas comosus) juice. *Journal of Food Science*, *88*(9), 3905–3919. https://doi.org/10.1111/1750-3841.16721

45. Shahane, K., Kshirsagar, M., Tambe, S., Jain, D., Rout, S., Ferreira, M. K. M., Mali, S., Amin, P., **Srivastav, P. P.**, Cruz, J., & Lima, R. R. (2023). An Updated Review on the Multifaceted Therapeutic Potential of Calendula officinalis L. In *Pharmaceuticals* (Vol. 16, Issue 4). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/ph16040611

46. Singh, S. M., Tripathy, S., & **Srivastav, P. P.** (2025). Bioactive compound extraction from giloy leaves and steam using ultrasound: bioactivity, antimicrobial, and LC–MS/MS study. *Food Science and Biotechnology*, *34*(9), 1835–1847. https://doi.org/10.1007/s10068-024-01810-x

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15. Jain, R. K.; **Srivastav, P. P.** 1993. Low Cost Traditional and Improved Devices for Roasting and Puffing of Grains. *Indian Food Industry*, 12(2): 33-37.

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11(3): 42 - 45.

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**International Proceedings (02)**

1. Nath, S.; Bhattacharya, M.; **Srivastav, P. P.** 2013. Advocating the 'Culture of Mushroom Consumption' within the Pre-dominant Discourse of Cancer Treatment and the Politico-Economic Challenges to its Adoption. Proceedings of the 2013 ASABE Annual International Meeting Sponsored by ASABE at Kansas City, Missouri during July 21 – 24. Paper Number: 131619462.
2. Bhattacharya, M.; **Srivastav, P.P.**; Mishra H.N. 2013. Effect of Microwave-Convective Drying on Antioxidant Activity and Color of Oyster Mushroom (Pleurotus ostreatus). Proceedings of the 2013 ASABE Annual International Meeting Sponsored by ASABE at Kansas City, Missouri during July 21 – 24. Paper Number: 131619707.

**National Proceedings (09)**

1. Prabuthas, P.; **Srivastav, P. P.**; Mishra, H. N. 2011. In-vitro protein digestibility and anti-oxidant properties of spirulina extracts. Proceedings of National Seminar on 'Agricultural Engineering – The Way to Improve Rural Economy' held at IGKV, Raipur, Chhattisgarh during 03- 04 January 2011 compiled in the form of technical publication 'Engineering Interventions in Agriculture', pp. 516 – 520.
2. Prabuthas, P.; Majumdar, S.; **Srivastav, P. P.**; Mishra, H. N. 2009. Standardization of rapid and economical method for neutraceuticals extraction from algae. Proceedings of National conference on Engineering for food and bio-processing, College of Technology, GBPUA&T, Pantnagar, 148-151 during 27 February – 01 March 2009, pp. 148 - 151.
3. **Srivastav, P. P.**; Jaybhaye, R. V.; Vengaiah, P. C. 2009. Entrepreneurship development through processing and preservation of grain. Proceedings of National Seminar on 'Advanced Technologies in Food Processing for Entrepreneuship Development', held at Allahabad Agricultural Institute – Deemed University, Allahabad, during 26 – 27 February 2009, pp. 1 – 5.
4. Kumar, J.; **Srivastav, P. P.**; Bhowmick, P. K. 2007. Traditional processing and some properties of chironji nut (*Buchanania lazan*) and kernels. Proceedings of National workshop on 'Identification of appropriate primary processing technologies for value addition of minor forest produce in tribal areas : A step in rural development held at Central Institute of Post Harvest Engineering and Technology, Ludhiana during 5 - 6 October 2007, pp 20 - 26.
5. Prabuthas, P.; **Srivastav, P. P.**; Mishra, H. N.; Prasad, S. 2008. Spirulina : The health and the wealth. Proceecidings of the All India Seminar on 'Advances in Agro-Processing and Rural Empowerment', held at Agricultural Engineering Division, The Institution of Engineers (India), West Bengal State Centre, 8, Gokhale Road, Kolkata – 700020 during 17 – 18 February 2006, pp. 45 – 51.
6. Chauhan, N. S.; Drona, A. K.; **Srivastav, P. P.** 2002. Oil recovery from graded rice bran by enzymatic hydrolysis. Proceedings of the 7$^{th}$ Regional Workshop on "Oilseeds and Oils – Balancing Strategy (2001 – 02)" held at Indian Institute of Chemical Engineers, Juadavpur University Campus, Kolkata – 700032 on March 09, 2002, pp 48 – 50.
7. Kar, Nandita; **Srivastav, P. P.**; Chattopadhyay, P. K. 2001. Resurgence of minor millets – A profitable option. Proceedings of the Seminar on 'Rural Development for a Healthy Rural-Urban

Interface' organized at 16th Indian Engineering Congress by The Institution of Engineers (India) Kharagpur Local Chapter, Kharagpur – 721302 during December 1 – 4, pp. 137 - 145.

8. **Srivastav, P. P.**; Chattopadhyay, P. K.; Jain, R. K.; Das, H. 2001. Processing of fruits and vegetables for the development of rural economy. Proceedings of the Seminar on 'Rural Development for a Healthy Rural-Urban Interface' organized at 16th Indian Engineering Congress by The Institution of Engineers (India) Kharagpur Local Chapter, Kharagpur – 721302 during December 1 – 4, pp. 129 – 136.
9. **Srivastav, P. P.**; Jain, R. K. 1994. Aerobic Biological Treatment of Paddy Parboiling Effluent. Proceedings of the National Seminar on 'Clean Environment - Strategies, Planning and Management' held at Institute of Engineering and Technology, Sitapur Road, Lucknow (India) during February 26-27, pp. 97-103.

**Other Publications**

1. **Technology for Production of Popped and Puffed *Kodo* Millet,** A Technical Bulletin.
2. **Indian Traditional Foods Based on Sand Roasting and Puffing,** A Technical Bulletin. Publication No. IIT-KGP/AgFE/PHTC/HPHTS/2001/1.
3. **Development of Air Recirculatory Tray Dryer for Fruits and Vegetables,** A Technical Bulletin. Publication No. IIT-KGP/AgFE/PHTC/HPHTS/2000/1.
4. **Effluent Treatment of Food Industries with Special Reference to Parboiling Wastewater**, RPF-III.
5. **Research Digest (1982-1991)** on All India Coordinated Project on Harvest and Post Harvest Technology (ICAR) Scheme. Publication No. IIT/KGP/HPHT/ICAR/93/9.

**Leaflets**

1. Biological Treatment of Paddy Parboiling Wastewater

**Sponsored Research and Consultancy Undertaken**

**Sponsored Research**

1. 'All India Coordinated Research Project on Post Harvest Engineering and Technology' sponsored by ICAR, New Delhi – **Principal Investigator – Rs 90,69,000/- (FY 2024-25)**
2. 'Nutrition Innovation Hub (NIH) for LSFF Scale Up - IIT Kharagpur Center' sponsored by Bill and Melinda Gates Foundation (BMGF) – **Co Principal Investigator – Rs 2,92,19,618/-**
3. 'Electric Field Based Novel Technologies for Pilot Scale Processing of Juice and Pulp from Potential Fruits of NE Region' - **Consortium Principal Investigator, Total Budget- Rs 2,64,42,047/- along with Tezpur University**
4. 'A Value Chain on Aloe Vera Processing' sponsored by World Bank through ICAR, New Delhi under NAIP – **Consortium Principal Investigator**, Total Budget – Rs. 2.88 crore.
5. 'Development of process technology for the extraction and purification of ergothioneine from dried oyster mushroom (Pleurotus ostreatus)' sponsored by DBT, GOI, New Delhi – **Principal Investigator**, Total Budget – Rs. 771000/-.
6. 'Processing and value addition of fruits and vegetables available in tribal areas' sponsored by CIPHET, Ludhiana – **Principal Investigator**, Total Budget – Rs. 250000/-.
7. 'Assessment of harvest and post harvest losses of major crops and commodities in India' sponsored by MoFPI, New Delhi – **Co Principal Investigator**, Total Budget – Rs. 640000/-.
8. 'Study on Determining Storage Losses of Grains in FCI & CWC Warehouses and to Recommend Norms for Storage losses in Efficient Warehouse Management' sponsored by CIPHET, Ludhiana – **Co Principal Investigator**, Total Budget – Rs. 1236650/-.
9. 'Development of process technology for manufacture of cereal-fruit based extruded snack foods' sponsored by SRIC, IIT, Kharagpur – **Principal Investigator**, Total Budget – Rs. 300000/-.

**Consultancy**

1. Trial Milling of Paddy for Rice Out-turn Ratio in West Bengal, Bihar & Assam worth 7.0 lakhs – Report submitted on 14 July 2005.
2. Testing of Rice Husk Gassifier manufactured by M/s Grain Processing Industries, Calcutta.
3. Determination of Milling Recovery of Rice in States of West Bengal, Bihar and Orissa.
4. Recirculatory tray dryer technology transferred to M/s SSP Ltd., Faridabad.

**Completed (under AICRP on PHT, ICAR)**

1. Survey of Traditional cereal based fermented foods of eastern region
2. Survey of cashewnut industry with a view to mechanise the processing.
3. Effluent treatment from paddy parboiling plant.
4. Production of osmo-dehydrated apple and banana slices using rising film vacuum concentrator and recirculatory tray dryer.
5. Development of puffed/popped product from *Kodo* (*Paspalum scrobiculatum* L.).
6. Dehydration of cauliflower, cabbage, green chilli, green mango slices, grapes and spinach coriander, fenugreek and curry leaves using recirculatory hot air dryer.
7. Development of technology and pilot plant for processing of bael (*Aegale marmelos*) into value added products.
8. Development of starch based products from *Curcuma leucorrhiza* (*Palo)*

**Laboratory development**

- Food Science and Technology Laboratory for product development
- Integrated Rural Food Processing and Training Centre

**Design and Development works**

**I. Technology Development**

a. **Dehydration of Cauliflower –** The technology has been demonstrated to farmers in "Krishi Mela-95" and to various dignitaries who visited the department at different times. The technology is widely acclaimed.

b. **A Low-cost Food Formulation –** A food formulation comprising of maize (727g) and soybean (73g), is specially designed for the hard working people of Bihar and UP, fulfils the minimum daily dietary intake.

c. **Ripe mango pulp powder –** Foam mat dried ripe mango pulp powder was developed by using 2.21% GMS and 1.59% MC as foaming agent and foam stabilizer.

**II. Machine Design**

**a. A device for sand roasting and puffing of grains –** The sand does not come out of the device and heat of the sand is preserved in successive operation of roasting and puffing, which in turn, results in ease of operation, minimises the cost of operation and improves capacity.

**b. Recirculatory hot air tray dryer –** A dryer was developed in which part of air is re-circulated for the drying of fruits and vegetables at higher humidity. This enhances the product quality as well as saves energy. The design, drawing and technical know-how was sold to M/s SSP Ltd., Faridabad through O.O. No. IIT/SRIC/AgFE/98-99/53 dated September 21, 1998.

**III. Software Development**

Software was developed to find out;

a. First and second order regression equation
b. Optimum combination of independent variables for maximum/minimum response
c. Nature of the point of optimum response

d. Fixation of the level of independent variables if optimum is not obtained.

**IV. Other distinctions**

- Summer/Winter School organized – 3 (as Convenor/Co-convenor)
- Software development – 1
- Technology development – 2 (Cauliflower drying + Low cost food formulation)
- Machine design – 3 (Sand roaster + Recirculatory hot air tray dryer + Aloe juice extractor) + 3 in progress (Chironji nut decorticator, whirling bed air puffer, grain flaker)

**Other information**

Most of my academic achievements have been mentioned above. But a few remain without which my application for candidature will remain unfulfilled. Starting from the department, I would like to mention that I had been

1. Served as Coordinating Warden (Maintenance) at HMC
2. Served as Warden, LBS Hall of Residence
3. Served as Assistant Warden, Azad Hall and Assistant Warden, LBS Hall
4. Member of different committees viz. Administrative, Purchase, Building and Maintenance, Examination, Training and Placement and Departmental Academic (PG & R)
5. Selection committee member for recruitment of faculty positions of NIFTEM
6. Member of Board of Studies of different universities
7. Served as NSS officer since 2004
8. Served as external examiner for various universities and reviewed project proposals for DBT
9. Visited Dublin in Ireland, Chicago, Kansas City, South Dakota in USA, New Zealand and Germany to either attend workshop or present a paper in conference or deliver lecture to students
10. Held positions of responsibility in AFST (I) Kharagpur chapter.
11. Member of several professional bodies
12. Served as Chairman, Technology Co-operative Society
13. Served as National Level Monitor for projects implemented under MORD, GOI

(P. P. Srivastav)