

Curriculum Vitae of Dr. Susmita Dey Sadhu

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Summary Profile

Working as Associate Professor in the Department of Polymer Science of Bhaskaracharya College of Applied Sciences (University of Delhi)

Research expertise and Field of interest:

- Designing and synthesis of blends and composites
- Synthesis, Characterization & Testing of Nanocomposites
- Thermosetting blends- Synthesis & Characterization
- Polymers in packaging
- Bio Polymer

Work Experience:

(I) At Department of Polymer Science, Bhaskaracharya College of Appl. Sciences, Univ. of Delhi:

- Present experience includes working as an Asst. Professor at Department of Polymer Science, Bhaskaracharya College of Applied Sciences (Univ. Of Delhi), Dwarka since July 2005.
- Worked as teacher-in-charge in the Dept. of Polymer Science from 2009-2011, 2014-15 and 2016-17.

(II) At Indian Institute of Technology (I.I.T., Kharagpur):

- Thesis entitled “*Preparation, Structure & Properties of Rubber Based Nanocomposites*” was submitted and the *Ph.D.* degree has been awarded in March 2005 at *Indian Institute of Technology (I.I.T.), Kharagpur*, West Bengal, India. During my *Ph.D.* tenure at I.I.T., I worked as *S.R.F. (Senior Research Fellow)* in a project entitled “*Development of Rubber Based Nanocomposite & Study of Reinforcement Mechanism*” sponsored by *DRDO, New Delhi*. The work started in September 2001 & was executed successfully. Rubber based nanocomposites had been developed using styrene butadiene rubber, butadiene rubber & nitrile rubber as the base material & clay as a filler. The focus of the study was on understanding & correlating the structure-property relationship. Studies on mechanical properties as well as their morphology, thermal, rheology & dynamic mechanical properties had been carried out.

(III) At GE Advanced Materials, J.F.W.T.C., Bangalore:

- Also underwent an *Internship at GE Advanced Materials, John F Welch Technology Center, Bangalore* during April to July 2004, where Project entitled “*Study of the Effect of Various Fillers & their Surface Treatments on the CTE & Impact Energy in PPO®/Polyester Blend*” was undertaken & successfully executed. The efficiency of various fillers starting from carbon nanofiber, nanoclays to mica before and after various surface treatment in reducing the CTE was studied in this project.

Educational Qualifications:

EXAMS PASSED	UNIVERSITY/BOARD	SUBJECTS/SPECIALISATION	% OF MARKS	DIV. OBTAINED	YR. OF PASSING
Ph.D.	Indian Institute of Technology, (I.I.T.), Kharagpur, India	Nanocomposite Rubber	N.A.	N.A.	Mar.2005
M.Sc.	University of Burdwan, West Bengal, India.	Organic Chemistry.	73.16	1st Cls.	2001
B.Sc.	University of Burdwan, West Bengal, India.	Chemistry (Hons.), Physics & Maths (Ancillaries).	62.5	1st Cls.	1999

Std. XII	West Bengal Council of Higher Secondary Education, India.	Maths, Physics, Chemistry & Biology.	69.4	1st Div.	1996
Std. X	West Bengal Board of Secondary Education, India.	All Subjects	75.77	1st Div.	1994

Significant Achievements/Awards:

1. Received **Best Paper Award Honorable Mention** for Original Contribution for the paper entitled “Acrylonitrile Butadiene Rubber Based Nanocomposites: Preparation & Mechanical Properties” from American Chemical Society, Rubber Division, U.S.A., in 2003
2. **Best Display Award** in the business category for the project BCAS 205 during the ANTERDWANI in 2015.
3. **Won 2nd prize** in poster presentation in Polymerization of Used Cooking Oil”; Omair Malick and Susmita Dey Sadhu; One day seminar on “Polymer Modification, Processing and Characterization” on 25th January 2016 at Bhaskaracharya College of Applied Sciences.
4. **Received best poster award** on “Carbon Nanotubes” in Green Chemistry Conference 26th-27th September 2019.
5. Qualified in National level GATE (Graduate Aptitude Test in Engineering), 2001.
6. Qualified in NET (National Eligibility Test), December 2000.

Membership of Professional Bodies:

1. Life Member of Asian Polymer Association (APA) (L438)
2. Member of ACS for 2015-16.
3. Life Member of **Royal Society of Chemistry**
4. Member ACS-Polymer Division 2021-22
5. Appointed as ERC (European Research Council) REMOTE REFEREES in the peer review evaluation of frontier research proposals.
6. Life Member of PPA
7. Member of FIPS as associates

Orientation and Refresher Course:

1. Successfully completed Orientation Course from JNU In 2008.
2. Successfully Completed Refresher Course from JNU in Environmental Sciences in 2011.
3. Successfully Completed Refresher Course from JNU in Environmental Sciences in 2016
4. Successfully Completed Faculty Development Program from 23rd-26th September 2018 in SPM College.
5. Successfully completed One Week Online Faculty Development Programme On “Development And Implementation Of MOOCS”
6. Successfully completed One Week Online Faculty Development Programme on “ADVANCED PEDAGOGICAL TECHNIQUES”
7. Successfully completed Two weeks faculty development program on “Emerging research trends in computer science and IT”
8. Successfully completed One week FDP on “Effective teaching and learning practices”
9. Successfully completed One week Workshop on “Systematic Literature Review and Meta – Analysis” from 07-14th December 2020
10. Successfully completed One week FDP on “Higher Education: Road Ahead Developing Next Generation Academic Leaders” from 25th Nov 2020 to 1st Dec 2020.
11. Successfully completed 5 day Faculty Development Program in Shyama Prasad Mukherjee College (University of Delhi) from 22nd -26th September 2018
12. Successfully Completed one week FDP on “National Education Policy-2020 Challenges & Opportunities” from 25th June 2023 to 1st July 2023.

Publications and Other Contributions (Authored & Co-Authored):

Journals:

1. S.Sadhu and A. K. Bhowmick: Unique rheological behavior of rubber based nanocomposites.- J.Polym.Sci. Phys., 43, 2005, 1854
2. S.Sadhu and A.K.Bhowmick: Preparation and Characterization of Styrene Butadiene Rubber Based Nanocomposites and Study of their Mechanical Properties, Advanced Engineering Materials 6, 9, 2004, 738

3. S.Sadhu and A.K.Bhowmick , Preparation and properties of nanocomposites based on acrylonitrile-butadiene rubber, styrene-butadiene rubber and polybutadiene rubber, Journal of Polymer Science Part B: Polymer Physics, 42, 9, 2004, 1573
4. S.Sadhu and A.K.Bhowmick , Preparation and properties of styrene-butadiene rubber based nanocomposites: The influence of the structural and processing parameters, Journal of Applied Polymer Science, 92, 2, 2003, 698
5. S.Sadhu and A.K.Bhowmick , Effect of Chain Length of Amine & Nature & Loading of Clay on Styrene Butadiene Rubber-Clay Nanocomposites; Rubber Chemistry & Technology, 76,2003, 0860
6. S.Sadhu and A.K.Bhowmick Morphology Study of Rubber Based Nanocomposite by Transmission Electron Microscopy & Atomic Force Microscopy; J. Materials Science,40, 7, 2005,1633.
7. S.Sadhu and A.K.Bhowmick, Effect of Nanoclay on the Dynamic Mechanical Properties of Styrene Butadiene & Acrylonitrile Butadiene Rubber Vulcanizates, Rubber Chemistry & Technology, 78, 2005, 321.
8. M. Maiti, S. Sadhu and A. K. Bhowmick , Brominated Polyisobutylene-co-paramethylstyrene (BIMS) - Clay Nanocomposites: Synthesis & Characterization, J. Polymer Science, Part B: Polymer Physics, 42, 24, 2004, 4489.
9. M. Maiti, S. Sadhu and A. K. Bhowmick , Effect of carbon black on properties of rubber nanocomposites, Journal of Applied Polymer Science, 96, 2, 2005, 443
10. M. Maiti, S. Sadhu and A. K. Bhowmick, Ethylene-Octene Copolymer (Engage \square) – Clay Nanocomposite: Preparation & Characterization, Journal of Applied Polymer Science, 603, 2006, 101.
11. S.Sadhu, R.S. Rajiv and A. K. Bhowmick, Thermal degradation of elastomer based nanocomposites, Polymers & Polymer Composites, 16, 5, 2008, 283.
12. R. Sharma , P. Jain , S. Dey Sadhu and B. Kaur, Mechanical and thermal properties of impact modified PBT blends and impact modified PBT Nanocomposites, , J. Polym. Eng., 33, 6, 2013, 489 (JN 19295,ISSN 03346447,EISSN 2191-0340)
13. S. Dey Sadhu, A. Soni, S. G. Varmani and M. Garg; “Preparation of starch- polyvinyl Alcohol (PVA) Blend Using Potato and study of Its Mechanical Properties”; International Journal of Pharmaceutical Science Invention; Vol.3, 2014, Page 33-37, (SI 4096, JN 44583 ,E ISSN 231967I8, ISSN 2319670X)
14. S. Dey Sadhu, S. Chakraborty, S. G. Varmani and M. Garg; Review: Polymers In Energy Harvesting; *International Journal of Engineering and Science Invention; Volume 3; Issue 4; 2014, page 01-05.(SI: 3821 JN:43302, EIISN 23196734, ISSN 23166726)*
15. Garg M, Sharma S, Varmani S, S. Sadhu; Drying kinetics of thin layer pea pods using tray drying. International Journal of Food and Nutrition Sciences. 2014 Apr-Jun. Vol 3 (3): p 61-66, (si 4278, jn 45543, EISSN 2320-7876).
16. Varmani S, Mehta K, Garg M, S. Sadhu; Diabetes mellitus in beta thalassemia major- pathogenesis and management strategies. International Journal of Food and Nutrition Sciences. 2014 Apr-Jun. Vol 3 (3): p 127-131, (si 4278, jn 45543, EISSN 2320-7876)
17. M. Garg, P. K. Sabharwal P, S. Sharma, S. G. Varmani and S. D. Sadhu; Evaluation of Mathematical models to describe thin layer drying and to determine drying rate of potato peels using tray drying; International Journal of Scientific Engineering and Applied Science (IJSEAS); 2015. 1, 7, 1-15.(ISSN 2395-3470)
18. S. Dey Sadhu and M. Garg; Preparation and Thermal and Morphological Characterization of Nanocomposite Based on Phenol Formaldehyde – Nylon Thermoset IPN, International Journal of Advanced Research, 2015, Volume 3, Issue 10, 505 - 510.(JN 47231, ISSN 2320-5407)
19. Susmita Dey Sadhu, Anshuman Soni and Meenakshi Garg; Thermal Studies of the Starch and Polyvinyl Alcohol based Film and its Nano Composites; Journal of Nanomedicine and Nanotechnology 2015.(JN.24754, E ISSN 2157-7439)
20. Prabhjot K. Sabharwal, Meenakshi Garg, Aditi and Susmita Dey Sadhu, Advancement in conventional packaging – edible packaging; World Journal of Pharmaceutical and Life Sciences; 2016, Vol. 2, Issue 3, Pg:160-170. (ISSN 2454-2229).
21. Sharma, R., Jain, P. & S. Dey Sadhu, Morphology and Mechanical Studies of PBT/PTT Blends and its Nanocomposites, Arab J Sci Eng (2018), Pg 1-14.
22. P.L. Meena, S. Choudhary, Juhi and S. Dey Sadhu, Importance of Packaging in Pharmaceutical Industries, International Journal of Research and Analytical Reviews, Vol 7, Issue 2, June 2020
23. S. Dey Sadhu, Meenakshi Garg and P. L. Meena, Cellulose Acetate/gelatin/Polyethylene Glycol Blend: Its Preparation, Characterization and Biodegradation, International Journal of Research and Analytical Reviews, Vol 7, Issue 3, July 2020
24. Dey Sadhu S, Meena PL, Kumar J, Gupta J, Choudhary S, Gupta A. Preparation and characterization of polyaniline and polythiophene-based copolymer and its nanocomposite suitable for electro-optical devices. Polymer Composites. 41, 11, 2020; Pg.4619-4630. <https://doi.org/10.1002/pc.25738>
25. Bhasha Sharma, Avinash Sandilya, Sachin Sharma, Meenakshi Garg and Susmita Dey Sadhu; Thermo-mechanical investigation of PEG-PVA biohybrid active film grafted with copper nanoparticles for packaging applications, Bulletin of Materials Science (2021), 44:80, <https://doi.org/10.1007/s12034-021-02363-z>.

26. Bhasha Sharma, Avinash Sandilya, Urvee Patel, Anurag Shukla and Susmita Dey Sadhu, A bio-inspired exploration of eco-friendly bael gum and guar gum based bioadhesive as tackifiers for packaging applications, *International Journal of Adhesion and Adhesives*, Vol. 110, October 2021, 102946, <https://doi.org/10.1016/j.ijadhadh.2021.102946>
27. Rishi Raj and Susmita Dey Sadhu, Effect of varying ratio of starch in Melamine-Formaldehyde/Starch Based Adhesive and Its Properties, *Bulletin of Materials Science*, 2021, <https://doi.org/10.1007/s12034-021-02459-6>
28. Meenakshi Garg, Ankita Balodi, Rishabh Trivedi, Eram S. Rao, Susmita Dey Sadhu, Priyanka Singh and Rajni Chopra, "An overview of recent innovations in food packaging and their role in food safety and quality", *Science, Technology and Development*, June 2021, ISSN : 0950-0707.
29. Meenakshi Garg, Surbhi Wason, Prem Lata Meena, Rajni Chopra, Susmita Dey Sadhu and Akriti Dhyani; "Effect of frying on physicochemical properties of sesame and soybean oil blend" *Journal of Applied and Natural Sciences*, 13 (3), 820-829, Sep 2021.
30. Prem Lata Meena, Meenakshi Garg, Susmita Dey Sadhu, Avinash; *Applications of Polymers in Horticulture Food Packaging*; *J Horticulture*, Vol.8, Iss.5, p-333, Dec 2021.
31. Shreya Sharma, Bhasha Sharma, Susmitadey Sadhu, "Microplastic profusion in food and drinking water: Are microplastics becoming a macroproblem?", *Environmental Science: Processes and Impact*, 2022(online published 31st May 2022), <https://doi.org/10.1039/D1EM00553G>.
32. Bhasha Sharma, Shantanu Pandey, Nidhi Bijalwan, Neema Khushwaha, Siddanth Saxena, Susmita Dey Sadhu, "Tuning Mechanical Properties of Poly(vinyl alcohol) and It's influence on different concentrations of epoxidized vegetable oils", *International Journal of Polymer Analysis and Characterization*" (2nd Sep 2022), <https://doi.org/10.1080/1023666X.2022.2118860>.
33. VijayChaudhary ParthaPratim Das RohitSahu SusmitaDey Sadhu PallavGupta SumitGupta^a; "*Engineered Nanomaterials for Environmental Sustainability: A Lab-to-Market Perspective*" in *Materials Today: Proceedings*, Published on 10th Nov 2022, <https://doi.org/10.1016/j.matpr.2022.10.211>
34. Bodhisatwa Seal, Susmita Dey Sadhu and Vijay Chaudhary; "Experimental study of mechanical behaviour of linen/epoxy and linen/hemp/epoxy hybrid polymer composite" in *Materials Today: Proceedings* (accepted).
35. Bodhisatwa Seal, Vijay Chaudhary and Susmita Dey Sadhu, *Development of Natural fiber Reinforced Nanocomposites: Future Scope, challenges, and applications*, in *Materials Today: Proceedings*; <https://doi.org/10.1016/j.matpr.2022.11.479>.
36. Meenakshi Garg, Manjoor Ali, Vandana Batra, Susmita Dey Sadhu, Sadhana Sharma, Suradeep Basak, Vandana Sablania "Quality Evaluation of nutria-premix prepared by using millets and seeds of fruits and vegetables", *J Food Sci Technol.*, Aug 2023, <https://doi.org/10.1007/s13197-023-05796-y>. **(Impact Factor:4.11)**
37. "A biogenic approach to develop guava derived edible copper and zinc oxide nanocoating to extend shelf life and efficiency for food preservation" Bhasha Sharma, Shubhanshu Nigam, Avneesh Mittal, Meenakshi Garg and Susmita Dey Sadhu; *Journal of Polymers and the Environment*, DOI: 10.1007/s10924-023-02972-1., **2023 (Impact Factor:6.7)**
38. "Studies on water uptake behavior and mechanical performance of bio-wastage reinforced bio composites for improved sustainability", Vijay Chaudhary, Sidharth Radhakrishnan, Ranjana Mishra, Vedit Dhyani, Shashi Prakash Dwivedi, Susmita Dey Sadhu, Pallav Gupta; *Biomass Conversion and Biorefinery*, Feb 2024.
39. "Studies on Evaluation of Mechanical, Thermal and Chemical Properties of Aloe vera, Corn, Eucalyptus and Soybean Fiber Reinforced Epoxy Biocomposites", Vijay Chaudhary, Anas Khan, Shashi Prakash Dwivedi and Susmita Dey Sadhu; *Biomass Conversion and Biorefinery*; 2024, <https://doi.org/10.1007/s13399-024-05861-2>.
40. Studies on mechanical and water absorption behavior of bio fibers reinforced epoxy bio composites added with seashell, eggshell, and coconut bio fillers, Bodhisatwa Seal, Susmita Dey Sadhu and Vijay Chaudhary; *Biomass Conversion and Biorefinery*, 2024.
41. Studies on fatigue, creep and tribological performance, of coconut shell, seashell and eggshell filler-based bio-fiber reinforced epoxy hybrid composites, Bodhisatwa Seal, Susmita Dey Sadhu and Vijay Chaudhary; *Biomass Conversion and Biorefinery*, 2024 (October)

42. Development and optimization of sustainable packaging system for Indian cottage cheese (Paneer), Priyanka Prajapati, Meenakshi Garg, Saamir Akhtar, Tehrir H. Ansari, Rajni Chopra, Purnima Anand, Susmita Dey Sadhu, Vandana Sablania, Tanweer Alam, Asian Journal of Dairy and Food Research, 2024 (November)
43. *An Overview of Bioactive Components and Phytopharmaceutical Potentials of Hygrophila auriculata- A Herbaceous Medicinal Plant*, Megha Malpotra, Meenakshi Garg, Neha Singh, Susmita Dey Sadhu, Rajni Chopra, Bhupesh Sharma; *Phytomedicine Plus*, Volume 5, Issue 1, February 2025.
44. *Transforming lemon Peel into a sustainable reservoir of bioactives: A green osmotic dehydration strategy*, Food Chemistry-X, Priyanka Prajapati, Chhavi Porwal, Meenakshi Garg, Neha Singh, Susmita Dey Sadhu, Rajni Chopra, Eram S. Rao, Aparna Agarwal, Mohd Saeed, Safia Obaidur Rab, Dipendra Kumar Mahato, Pradeep Kumar, Madhu Kamle, Abhishek Dutt Tripathi, Volume 25, January 2025, 102172; <https://doi.org/10.1016/j.fochx.2025.102172>.
45. "Evaluate the Efficacy of Guava-Derived CuO, and ZnO Nanocomposite Coating on Shelf life of Grapes" Vegetoes, May 2025.
46. Self-synthesized acetylated nanocellulose and Syzygium cumini (L.) Skeels (Fadel) fruit extract incorporated hydrophobic and intelligent film for chicken meat freshness monitoring, G.C., Rajendra Bahadur; Awasthi, Ganesh; Shin, Miyeon; Bohara, Khagendra Prasad; Neupane, Bhanu; Dey Sadhu, Susmita; Kalauni, Surya ; Tiwari, Arjun ; Yu, Changho; Joshi, Mahesh Kumar, ACS Food Science & Technology, Volume 6, Issue 1, January 16, 2026
47. Starch Mediated in situ bioreduction for transforming cellulose paper to an anti-microbial packaging mat, International Journal of Biological Macromolecules, Rajendra Bahadur G.C., Ganesh Prasad Awasthi, Miyeon Shin, Seung-Muk Bae, Navin Ray, Susmita Dey Sadhu, Changho Yu, Mahesh Kumar Joshi, Bhanu Bhakta Neupane, Feb 2026 (accepted).
48. Molecular and Functional Characterization of an Iron Fortified plant based meat (IFPBM) for enhanced nutritional efficacy and cellular iron uptake; Priyanka Prajapati, Rajni Chopra, Avneesh Mittal, Susmita Dey Sadhu and Meenakshi Garg, Applied Food Research, 2026 (accepted)
49. "Millets as Phytochemical-Rich Functional Foods: Gut Microbiota Modulation and Multi-Omics Insights for Chronic Disease Prevention" Ayushi Jha, Meenakshi Garg, Tanweer Alam, Susmita Dey Sadhu; Nutrire 2026 (March)

Conference Proceedings:

1. S. Umair, M. Garg, S.G. Varmani and S. Dey Sadhu, Development of Multi-Cereal Protein Bar with jaggery. in the proceedings of the ICBPN 2012 international conference held in Kerala in on 21-23 September 2012.
2. S. Dey Sadhu, Rishi Raj, Meenakshi Garg and S. G. Varmani, ICPAM International Conference in Patna, Bihar on 30-31st May 2014 entitled Biopolymers: A solution to Environmental Hazard (**full paper in proceedings**)
3. S. Dey Sadhu, Kushagra Malik, Meenakshi Garg and S. G. Varmani, ICPAM International Conference in Patna, Bihar on 30-31st May 2014 entitled ATOMIC FORCE MICROSCOPY FOR CHARACTERISATION OF POLYMERS (**full paper in proceedings**)
4. *Soy-Oat Yogurt: Preparation and its quality evaluation*, Meenakshi Garg, Surabhi Wason, Manjoor, Ankansha, Susmita Dey Sadhu; Proceedings of the first national conference advances in food science and technology (NCAFST2016) 2016, March 16-17, pg 35-39, ISBN 978-93-81156-43-8. (**Full Paper in Conference Proceeding**)
5. Development of a Paper From Fruits and Vegetable Peels and Biodegradable Polymer for Food Packaging; Susmita Dey Sadhu, Rishi Raj, Meenakshi Garg and Vandana Batra; National Conference on "Clean & Green Energy: The Chemical and Environmental Aspects", Feb 16-17,2017, Bhaskaracharya College of Applied Sciences, DU, Dwarka, **Full Paper in Proceedings of NCGE 2017**, ISBN : 978-1-63535-362-4.
6. Study of pH Values, Mechanical and Thermal Properties of Packaging Material Developed From Food Waste, Vandana Batra, Akash, Tanay, Rajnandan, Diksha, Akansha, Susmita Dey Sadhu and Meenakshi

Conferences (Oral Presentation):

1. Preparation & Characterization of Styrene Butadiene Rubber Based Nanocomposites & Study of their Mechanical Properties; S. Sadhu & Bhowmick A. K, Paper No# 55, 1-5th September 2003, Euromat 2003. Lausanne, Switzerland.
2. Influence of Structural Parameters on the Properties of Styrene Butadiene Rubber Based Nano composites; S. Sadhu & Bhowmick A. K, July 7-14th, 2003, PPS19, Australia.
3. Effect of Carbon Black on Rubber Nanocomposites; Maiti M., Sadhu S. & Bhowmick A. K. 165th Spring Meeting of Rubber Division, ACS, May 17-19th 2004.
4. Acrylonitrile Butadiene Rubber Based Nanocomposites: Preparation & Mechanical Properties; S. Sadhu & Bhowmick A. K, ACS 2003, USA.
5. Brominated Polyisobutylene-co-paramethylstyrene (BIMS) - Clay Nanocomposites: Synthesis & Characterization, Maiti M., S. Sadhu & Bhowmick A. K., International Rubber Conference, IRC 2004, Beijing, China, September 22-24th, 2004.
6. Preparation and Characterization of Nanocomposite Based on Phenol Formaldehyde – Nylon Thermoset IPN; Anandi S., Rawat N., Kumar U., Kaur Bikramjit and Dey Sadhu S., International Conference on Nanomaterials and Nanotechnology:ICNANO 2011”, New Delhi, India, **December 18-21st, 2011**.
7. **H. Chauhan**, M. Garg, S.G. Varmani and S. Dey Sadhu, To Study the Preparation and Nutritional Quality of Multi-Cereal Bar in the proceedings of the ICBPN 2012 international conference held in Kerala on 21-23, September 2012.
8. T. Negi, M. Garg, S.G. Varmani and S. Dey Sadhu, Making of Papaya Papada in the proceedings of 1st international conference on Innovations in Food Processing, Value Chain Management and Food Safety at NIFTEM ,Kundali,Sonepat,Haryana on 10-11 Jan.2013.
9. S. Jain, A. Dutta, S.G. Varmani, M. Garg and S. Dey Sadhu, Low Cost Multicereal Nutritive Bar in the 1st international conference on Innovations in Food Processing, Value Chain Management and Food Safety at NIFTEM Kundali, Sonepat,Haryana on 10-11 Jan.2013.
10. S. Dey Sadhu, A. Soni, M. Garg and S. G. Varmani, APA International Conference in India Habitat Centre, New Delhi on 20-21st February 2014 entitled “Study of Mechanical Properties of Starch-Poly Vinyl Alcohol Blend Based Nanocomposites for Food Packaging”.
11. *S. Dey Sadhu, S. Chakraborty, M. Garg and S. G. Varmani; APM International Conference in Bhubaneswar, Orissa on 14th-16th Feb 2014 entitled “ A closer look towards the development of energy harvesting sources through polymers”.*
12. *Development of Nutritious Snack from Fruits and Vegetable Seed/Peel Waste; Meenakshi Garg, Manjoor, Rahul, Susmita Dey Sadhu and Vandana Batra, National Conference on "Clean & Green Energy: The Chemical and Environmental Aspects", Feb 16-17,2017, Bhaskaracharya College of Applied Sciences, DU, Dwarka.*
13. Preparation and Comparative Study of Mechanical and Physical Properties of Novolac and resorcinol Based Adhesive; Susmita Dey Sadhu, Kushagra Malik and Omair Malik, 10th National Conference on Solid State Chemistry and Allied Areas (ISCAS 2017) on July 1-3, 2017 at Delhi Technological University (Formerly DCE), New Delhi.
14. Preparation and Characterization of film of PVA (Polyvinyl Alcohol), PEG (Polyethylene glycol) and CA (Citric Acid) based cured film; Susmita Dey Sadhu*, Avinash Sandilya and Sachin Sharma; in UGC sponsored 9th National Conference on Recent Advances in Chemical, Environmental and Material Sciences (RTCEMS 2018) at DAV College, Abohar on 24th Jan 2018.
15. Preparation and Properties of active nanofilm based on Polyvinyl Alcohol (PVA) and Polyethylene Glycol (PEG) using Citric Acid as curing agent, Susmita Dey Sadhu, Avinash Sandilya, Sachin Sharma, Prem Lata Meena and Meenakshi Garg, National Conference on Recent Trends and Advances in Chemical Sciences, 29-31st March 2019, Univ. of Delhi.
16. “Preparation and Characterization of Polyaniline and Polythiophene based Copolymer and it’s Nano composite” APA-Stermi 2019 GOA, 16th-18th October 2019.
17. “Development And Properties Of Guava Based Nano-Edible Coating For Fresh Fruit Application” APA 2021, ONLINE MODE, 27TH -28TH August 2021.
18. “Preparation and characterization of NBR based composite of Polythiophene and Modified Carbon Black”, PPS 23, Kovalam, Kerala, 29th Nov-2nd Dec 2023.
19. Invited Lecture in international conference ICRTMD 2023 on “Preparation and characterization of NBR based composite of Polythiophene and Modified Carbon Black” on 31st Dec 2023 in online mode, 29th Dec-31st Dec 2023.
20. Delivered a lecture as distinguished speaker in Virtual Event - 7th Edition of Advanced Materials Science World Congress held during March 24-26, 2025 on “A Biogenic

Approach to Develop Guava Derived Edible Copper and Zinc Oxide Nanocoating to Extend Shelf Life and Efficiency for Food Preservation”

Conference (Poster Presentation):

1. **Received best poster award** on “Carbon Nanotubes” in Green Chemistry Conference 30th August 2019.
2. Poster Presentation on “Development and Physico-Chemical & Thermal analysis of copper nanofilm using Polyvinyl Alcohol (PVA) and Polyethylene Glycol”; Susmita Dey Sadhu, Avinash Sandilya, Sachin Sharma, Prem Lata Meena and Meenakshi Garg, National Conference on “Innovative Food Packaging Techniques and Its Safety Aspects” at Le Meridian, New Delhi on 10th May 2019.
3. Susmita Dey Sadhu, Meenakshi Garg, National Conference on “Innovative Food Packaging Techniques and Its Safety Aspects” at Le Meridian, New Delhi on 10th May 2019.
4. Poster Presentation on Preparation of Copolymer based on Aniline and Thiophene and It’s Characterization”, Susmita Dey Sadhu, Juhi, Sunil, Arun, Prem Lata Meena and Meenakshi Garg, National Conference on Recent Trends and Advances in Chemical Sciences, 29-31st March 2019, Univ. of Delhi.
5. Poster Presentation on “Preparation and mechanical properties of Vegetable oil based polymer and PVA blend”, Susmita Dey Sadhu, Neema Khushwa, Nidhi Bijwan, Premlata Meena and Meenakshi Garg, National Conference on New Trends in Nanotechnology and Application” September 27-28, 2018; ARSD College, New Delhi (**Received Best Paper Award**).
6. Poster Presented on “Preparation and study of thermal Properties of film based on PVA (Polyvinyl Alcohol)-Gelatin and comparison of its physical properties with cling film for food packaging application” Research Conclave Committee of the INTERNATIONAL SUMMIT FOR PACKAGING INDUSTRY 2017 on 27-28th October 2017 at new Delhi.
7. Poster Presented on “Effect of Packaging Material on the shelf life of Banana pseudo stem powder at room temperature during storage” Research Conclave Committee of the INTERNATIONAL SUMMIT FOR PACKAGING INDUSTRY 2017 on 27-28th October 2017 at new Delhi.
8. Poster Presented on “Preparation and characterization of cellulose Acetate/Gelatin/Polyethylene Glycol Blend for Biodegradable Food Packaging” Research Conclave Committee of the INTERNATIONAL SUMMIT FOR PACKAGING INDUSTRY 2017 on 27-28th October 2017 at new Delhi.
9. Preparation of bisphenol-A based Polymer Using Click Reaction and Characterisation of the Polymer by IR and NMR, **Susmita Dey Sadhu**, Rishabh Verma and Pradeep Kumar Muwal, 10th National Conference on Solid State Chemistry and Allied Areas (ISCAS 2017) on July 1-3, 2017 at Delhi Technological University (Formerly DCE), New Delhi.
10. **Susmita Dey Sadhu**, Meenakshi Garg and Vandana Batra; To Develop Paper From Fruits and Vegetable Peels and Study of The Effect of Polyvinyl Alcohol on it’s Properties; APM 2017 in Bangalore, India, February 10th-12th 2017.
11. Preparation Of Biodiesel From Used Vegetable Oil; Meenakshi Garg And **Susmita Dey Sadhu**, Indo-UK Scoping Workshop on Development of Rural Biorefineries in India: From Waste to Wealth on 20th Feb 2017, Univ. of Delhi.
12. “Polymerization of Used Cooking Oil”; Omair Malick and Susmita Dey Sadhu; One day seminar on “Polymer Modification, Processing and Characterization“ on 25th January 2016 at Bhaskaracharya College of Applied Sciences.
13. **Susmita Dey Sadhu and** Meenakshi Garg; Thermal Studies of The Polyvinyl Alcohol-Starch Nanocomposite, APA 2015 in Rajkot, India, October 29th-31st.
14. **Susmita Dey Sadhu**, Shivani Chaudhary, Meenakshi Garg and Shivani G. Varmani, Gelatin-Wax Based emulsion for coating of Processed Food Product, APA 2014 on Polymeric Biomaterials, Bioengineering and Biodiagnostics at New Delhi, India, October 27th-30th 2014.
15. A. Dutta, A. Jain, S.G. Varmani, M. Garg and S. Dey Sadhu, Preparation of low cost multi cereal nutritive bar J Food Process Technol open access Nov. 2012 vol 3 issue p10.

Books/Chapters:

1. Contributed a chapter in “Current Topics in Elastomer Research” by A.K. Bhowmick, Taylor and Francis Group, CRC Press; 2008.
2. Contributed a chapter entitled “NANO-SEPARATION TECHNIQUES FOR WATER RESOURCES” Susmita Dey Sadhu, Premlata Meena and Meenakshi Garg; in the Book “Nanotechnology for Sustainable Water Resources” by Scrivener Publishing, First published: 6 February 2018, Print ISBN: 9781119323594
3. Contributed a chapter entitled “Major Environmental Issues & New Materials” Susmita Dey Sadhu, Amit Kumar and Meenakshi Garg, in the book entitled “New Polymer Nanocomposites for Environmental Remediation” by Elsevier, 2018.

4. Contributed a chapter entitled “Nanotechnology: Key for Sustainable Future”; Amit Kumar, Susmita Dey Sadhu and Rajeev Singh; in the Book “Nanotechnology in Environmental Sciences” by Scrivener Publishing, , First published:1 March 2018, Print ISBN:9783527342945
5. Contributed a chapter entitled “Advances in Food Packaging” In the Book “Food Frontier” by New Delhi Publisher, ISBN No. 978-93-86453-84-6.; 2019
6. Contributed a chapter entitled “**Sanitation and Hygiene Process in Storage**” in the book “**Packaging and Storage of Fruits and Vegetables Emerging Trends**” published by CRC Press Taylor and Francis Group (Edited by Tanweer Alam); *Meenakshi Garg, Sadhana Sharma, Rajni Chopra, and Susmita Dey Sadhu*; **ISBN: 9781771889872**, hardcopy production, 2021
7. Contributed a chapter entitled “**Edible Coating for Improvement of Horticulture Crops**” in the book “**Packaging and Storage of Fruits and Vegetables Emerging Trends**” published by CRC Press Taylor and Francis Group (Edited by Tanweer Alam); *Meenakshi Garg, Prabhjot Kaur, and Susmita Dey Sadhu*, **ISBN: 9781771889872**, hardcopy production, 2021
8. Co-author of the book entitled “Practical Handbook of Food Engineering” published the 1st Edition in October 2020, AARYUSH EDUCATION, ISBN NO. 978-81-930437-5-2.
9. Co-authored the book entitled “Food Packaging: A Practical Guide” by Meenakshi Garg, Prem Lata Meena, Susmita Dey Sadhu and Tanweer Alam, The Computype Media (Publishing Division), ISBN No. 819027914-9 in 2020 Dec.
- 10.Co-authored a book entitled “ Food Packaging-Materials, Techniques and Environmental Issues” by N. C. Saha, Meenakshi Garg, Susmita Dey Sadhu, Anup K. Ghosh published by Springer, May 2022, ISBN: 9789811642326.
- 11.Contributed a chapter entitled “Role of Packaging in Food Processing” in the book “Food Chemistry: The Role of Additives, Preservatives and Adulteration’ published by Scrivener Publishing (Edited by Mousumi Sen),Bhasha Sharma, Rajni Chopra, Susmita Dey Sadhu and Meenakshi Garg **ISBN: 9781119791614** hardcopy production, Dec 2021
- 12.Contributed a chapter entitled “Edible Packaging of Liquid Foods” In book: Edible Food Packaging, Bhasha Sharma, Meenakshi Garg, Rajni Chopra, Susmita Dey Sadhu, January 2022, DOI: 10.1007/978-981-16-2383-7_24, ISBN: 978-981-16-2383-7, Published by SPRINGER.
- 13.Contributed a chapter entitled “Fermented Functional Food” in the book Functional Food-Processing and Packaging”; Akriti Dhyani, "Rajni Chopra, Susmita Dey Sadhu and Meenakshi Garg; NEW INDIA PUBLISHING AGENCY; ISBN: 978-93-89571-76-9, August 2022.
- 14.Twinkle Kesharwani, Meenakshi Garg and Susmita Dey Sadhu Contributed a chapter entitled “Extraction, structural properties, and applications of okra gum” in the Book entitled “Natural Gums-Extraction, Properties and Applications” – Chapter 9, Pages 277-303, 2023.
15. The Protocol Series: Volume 06, Packaging Techniques; Tenweer Alam, Meenakshi Garg, Susmita Dey Sadhu, Prem Lata Meena, Nipa, Genx Electronic Resources and Solutions Pvt. Ltd. ISBN No. 978-93-5887-400-6, March 2025.
- 16.Chapter entitled” Packaging Design and Food Packaging Material” Priyanka Prajapati, Meenakshi Garg, Rajni Chopra and Susmita Dey Sadhu, in the Book entitled “Food Packaging and Safety Regulations” Edited by Tanweer Alam, ISBN No. 978-93-58877-18-2, March 2025.
- 17.Chapter entitled” A review on Biopolymers and It’s Application in Food and Allied Industry” Twinkle Kesharwani, Meenakshi Garg and Susmita Dey Sadhu, in the Book entitled “Food Packaging and Safety Regulations” Edited by Tanweer Alam, ISBN No. 978-93-58877-18-2, March 2025.
18. Chapter entitled “Studies on thermal and chemical behaviour of polymer composites reinforced with pineapple, sisal and Kenaf fiber” by Bohisattwa Seal, Vijay Chaudhary and Susmita Dey Sadhu, in the book “Recent Advances in Mechanical Engineering Select Proceedings” by Springer. of FLAME 2024 edited by Kumar Shukla, Dinesh Singh, G. Thakur and Ahmad Arabkoohsar

Patents:

Granted

1. INDIA – Patent Application No. 473/DEL/2013, Dated – February 19, 2013 entitled “COATING COMPOSITIONS AND METHODS FOR PREPARATION THEREOF”, Patent No. 397240, Valid till 19th Feb 2033.
2. INDIA – Patent Application No. 471/DEL/2013, Dated – February 19, 2013 entitled ““NUTRITIONAL COMPOSITIONS AND METHODS FOR MANUFACTURING THE SAME”.Patent no. 419168.

3. INDIA-Patent Application No 202411016889, Patent No. 564448, entitled A HEALTH PROMOTING INSTANT FOOD MIX granted on 8th day of March 2024 for 20 years.

Research Projects:

1. *Innovative project sponsored by University of Delhi from 15th May 2012 to 14th May 2013 on "Development of Cost-Effective Nutritious Multi-Cereal Bar and its Sustainable Packaging Using Nano-Biopolymer"* (BCAS 103)
2. *Innovative Project sponsored by University of Delhi from 15th November 2013 to 14 November 2015 on "To Prepare Edible Packaged, Low Cost Healthy Snack from Fruit and Vegetable Waste And Study Its Effect In Healthy Respondents"* (BCAS 205).
3. Innovation Project sponsored by University of Delhi from November 2015 to 31st October 2016 on "Development of an intelligent eco-friendly multilayer package and nutritious snack from fruit and vegetable seeds and peels"-Project No. BCAS 302.
4. Supervised and guided 9 students in 5 projects for completing B.Tech Projects of 6 months in 2016-17.
5. Four undergraduate students worked on Two 6 months project in 2017-18 (1. Entitled "Preparation and Characterization of Active film based on PVA (Polyvinyl Alcohol), PEG (Polyethylene glycol) and copper nanoparticles using CA (CITRIC ACID) as curing agent; 2. Entitled "Preparation of Bio-adhesive based on PVA/GELATIN with Bael gum and Guar Gum as tackifier").
6. 3 students worked on 1 year project in 2018-19 on "Preparation and Characterization of Polyaniline and Polythiophene Based Copolymer and its Nano composite Suitable for Electro-Optical Devices".
7. "Establishment of Herbal Garden and utilization of herbal plants for value added food products" Project sponsored by Ministry of Ayush of Rs 45000/- granted on 13th June 2019, Project Number HG/DL-01/2020-NMPB VIII.
8. "Development, Characterization and Testing of Novel Fruit-Based Nanocoating for Minimal Processed Fruit to Increase its Shelf Life" under the aegis of DBT Star college Scheme from 1st March 2021 for two months with a budget of Rs 11500/-.
9. Guided M.Sc Thesis of Ms. Aparna Sharma (from Meerut University) entitled "Preparation and characterization of Natural rubber-Polystyrene IPN as impact modifier in NR based modified carbon black nanocomposite" in 2023.
10. Host supervisor for the INSA-ISRF Fellow with a grant amount of **Rs. 3,65,000.00/-** (Rupees Three lakhs and Sixty-Five Thousand only) to **Bhaskaracharya College of Applied Sciences, New Delhi** for **Mr. Rajendra Bahadur G.C. of Nepal** towards fellowship for the period from **28.7.2025 to 28.1.2026** under DST-India Science Research Fellowship Programme.

Ph.D. Supervisor

1. Completed:

Appointed as External Co-Guide to Mr. Bodhisatwa Seal, Part-Time Ph.D. scholar of Jan 2021 Batch in ASET. (enrolment no. A2366621001) in Amity University, Noida, India. Completed PhD degree in 2025.

2. Ongoing:

a. Appointed as PhD co-supervisor of Ms Megha, DU. Registration no.

b. Appointed as a PhD co-supervisor of Mr Khem, Tribhuvan University, Nepal in 2025.

Journal Reviewer:

3. Reviewer of Journal of Packaging Technology and Research, Springer.
4. Reviewer of Polymer and Polymer Composite, SAGE Journal.
5. Reviewer of the "JAPS", Elsevier Journal.
6. Reviewer of "Chemistry Select" Elsevier Journal.

Project Evaluator:

1. APPOINTED AS ERC (European Research Council) REMOTE REFEREES in the peer review evaluation of frontier research proposals.

Conferences Attended:

1. *EUROMAT 2003 in Switzerland, Lussane from 1-5th September 2003.*
2. *“Indian Rubber Conference” on 12th Jan 2002 to 13th Jan 2002 at IIT Kharagpur, Rubber Technology Center.*
3. All India Young Scientists' Seminar, Essay & Quiz Competition in Polymer Science and Technology (Polymer Quest - 2003), on 1st November 2003 to 2nd November 2003 at IIT Kharagpur, Rubber Technology Center.
4. Attended “INDO-US S&T FORUM TRAINING WORKSHOP ON GREEN CHEMISTRY” during 7-9th Jan 2008 in New Delhi.
5. Attended the “Workshop on green Chemistry in Real World Practice” on 9th May 2009 at Dept. of Chemistry, Univ. of Delhi.
6. National seminar on “Footwear Technology and the present scenario of Natural Rubber in India” arranged by IRAIA, New Delhi 2009.
7. Attended ICNANO 2011”, New Delhi, India, December 18-21st, 2011.
8. Attended ICPAM, Patna, May 2014.
9. Attended and visited with students to Conference on “Plastics Packaging- The sustainable choice” by FICCI on 19th January 2016.
10. Attended and visited with students to Conference on “Sustainable Infrastructure with Plastics” by FICCI on 23 February 2017
11. Attended the CSIR-NISCAIR-DST National Workshop on "Science, Technology and Innovation Policy: Optimizing Communication & Information Research" to be held at NASC Complex, Pusa, New Delhi during 23-25 January 2018.
12. Attended the National Conference on “Nano....” In ARSD College, DU on 27th-28th September 2018.
13. Attended International Conference on “Polymer Waste Management” on 28th September 2018 at India Habitat Centre.
14. Attended APA Stermi Goa in 2018
15. participated in the three days online faculty development programme on “Online Transaction of Courses with Moodle-LMS” held during May 8-10, 2020 through Google Meet
16. participated in the one days online faculty development programme on “Intercollege Faculty Development Programme on Understanding GOOGLE Classroom” held during May 13-14, 2020 through Google Meet
17. Participated In The Two Days Online Faculty Development Programme On “PREVALENT CRISIS TRIGGERED BY THE COVID19 PANDEMIC AND ITS APPRAISAL” Held On 18-19th May 2020 Through Google Meet.
18. Participated In The one week **BCAS Silver Jubilee International Webinar Series** on “Technological Trends for the next Generation” held during June 1- 5, 2020 through Google Meet.
19. Participated In the online **Webinar on the “Optical Sources and their Applications” held on 28th May 2020.**
20. Participated In the online **Webinar on the “How Huge is Nano?” held on 29th May 2020.**
21. Participated In the online **Webinar on the “Ecological Revival during Pendemic” held on 21st May 2020**
22. Participated in The two week FDP programme organized by BVICAM New Delhi during 8th-19th June 2020.
23. Attended three day International Conference on “**Proficiency Improvement on Polymer Processing and Advanced Characterization Techniques**” from 1st July-3rd July 2020 organised by Pillai College of Engineering.
24. Attended one day Seminar on “Cyber Security Awareness” on 23rd June 2020 organised by Bhaskaracharya College of Applied Sciences, University of Delhi.
25. Attended one day Seminar on “Cyber Security Awareness II” on 3rd July 2020 organised by Bhaskaracharya College of Applied Sciences, University of Delhi.
26. Attended one day Seminar on “Cyber Security Awareness III” on 14th June 2020 organised by Bhaskaracharya College of Applied Sciences, University of Delhi.
27. Attended one Day National Webinar on “So Let us Reflect on Striving for Excellence, Social Equity, and Environmental Security” on 27th July 2020 organised by Lady Irwin College, DU.
28. Attended one day Seminar on “Cyber Security Awareness IV” on 29th July 2020 organised by Bhaskaracharya College of Applied Sciences, University of Delhi.
29. PPA 2020
30. Attended 1st Webinar of the Webinar series “Indian Polymer Industry - Opportunities, Challenges & The Way Forward” held on 10th October, 2020

Invited Lectures/Resource Person:

1. Invited speaker in the Two Weeks International Residential Training Programme on Packaging Technology under ITEC scheme of Ministry of External Affairs, Govt. of India during 30/12/2024 to 09/01/2025 at IIP Delhi on “Plastics- Raw Materials & Types of Plastics”.

2. "Preparation and characterization of NBR based composite of Polythiophene and Modified Carbon Black", PPS 23, Kovalam, Kerala, 29th Nov-2nd Dec 2023.
3. Invited Lecture in international conference ICRTMD 2023 on "Preparation and characterization of NBR based composite of Polythiophene and Modified Carbon Black" on 31st Dec 2023 in online mode, 29th Dec-31st Dec 2023.
4. Delivered Lecture of "Innovative and Sustainable packaging of Fruits and Vegetables" in the one week program on "Hands on Training on Increasing the self life.....Food Preservation and Packaging Tehnologies." Held on 3rd July-11th July 2023 at BCAS.
5. Delivered invited lecture for FIPS on "*Characteristics of different Barrier Materials to enhance Shelf llfe of FMCG.*" on 20th May 2023 in online mode.
6. Delivered Lecture in the AIPMA-AMTEC EDP lecture on May20th. 2023 through Zoom Platform.
7. Convener of the webinar series 2021-22.
8. Coordinator of the 40 hrs online short term certificate course on "Innovative Packaging and Sustainability" in collaboration with FIPS from 26th July 2021 to 28th Aug 2021.
9. Member of the FIPS- a non profit NGO.
10. Convenor of the Webinar on "3D PRINTING:MATERIALS AND APPLICATION" on 12th May 2020 through Webex.
11. Organizer of Webinar series of Dept of Polymer Science in Oct 2020-Jan 2021.
12. Coordinator for the online web series organized by IPI "Bridging the Gap" for Department of Polymer Science, BCAS.
13. Webinars 2 of the departmental webinar series on 10th and 17th October 2020.
14. Webinar of placement cell on "Growth and Opportunities in IPR"
15. Coordinator of CROSSLINK 2020 and Alumni Meet.
16. Coordinator, Editorial Team of the Departmental magazine Bahulak of the vol 1, 2019-20.
17. Coordinator, Editorial Team of the Departmental magazine Bahulak of the vol 1, 2017-18.
18. Coordinator of the workshop on "Waste Management and making of compost" on 28th Nov. 2018.
19. Resource Person in the 10th National Conference on Solid State Chemistry and allied Areas on 1-3rd July 2017 in Delhi Technological University, Delhi.
20. Resource person in the National Conference on Clean & Green Energy: The Chemical and Environmental Aspects; Bhakaracharya College of Applied Sciences, FEBRUARY 16-17, 2017
21. Resource person in the one day workshop on edible packaging on 28th Jan 2015 conducted by Dept. of Food Technology, Bhaskaracharya College of Applied Sciences, under star college scheme.
22. Resource person in ICPAM International Conference in Patna, Bihar on 30-31st May 2014.

Popular Article:

1. Food Packaging and Safety, Meenakshi Garg, Kriti Sharma, Susmita Sadhu and Tanweer Alam, Processed Food Industry, December 2017.
2. "Review of Current Issues on Plastic Banning-An approach towards the solvation for post consumer plastic food packaging and waste management model"; Meenakshi Garg, Pushkar Gupta, Susmita Dey Sadhu and Tanweer Alam, Processed Food Industry, September 201
3. "Relevance in coating and laquour in food for value addition and marketability" Meenakshi Garg, Saji, Susmita Sadhu and Tanweer Alam, Processed Food Industry, September 2021.

Syllabus Revision:

1. Designed and restructured the syllabus of B. Sc(H) Polymer Science in three year CBCS semester mode in 2014-15.
2. Designed and restructured the syllabus of B. Tech Polymer Science in four year semester mode in 2013.
3. Designed and restructured the syllabus of B. Sc(H) Polymer Science for the semester mode in 2010-11.
4. Designed and restructured the syllabus of B. Sc(H) Polymer Science in three year CBCS-LOCF mode in 2018-19.
5. Designed and restructured the syllabus of B. Sc(H) Polymer Science in Four year UGCF mode in 2022-23.
6. Designed the PhD program in Packaging Technology at IP University 2024-25
7. Member of Research Board at Indian Institute of Packaging 2025.

Outreach Program

1. Organizing one day workshop on "Making of Compost" 28th Nov 2018.
2. Organised a one day training on "Handling of Biomedical Waste" on 19th July 2018.
3. 3 year project on "Development of herbal garden" funded by Ministry of Ayush
4. Working with FIPS as associates
5. Working with Indian Plastic Institute (IPI) as an active member in developing a strong industry academia relationship.

Special Contribution:

1. **Member of the organizing team of the Conference “RESPACK 2023” held at Mumbai on 8&9th May 2023.**
2. **Coordinator of Alumni Meet 2021 held on 3rd March 2021 through Microsoft Teams.**
3. **Coordinator of CROSSLINK 21 held on 4th March 2021 through Microsoft Teams.**
4. **Organised a one day Webinar on 3D Printing: Materials and Applications on 12th May 2020 through Cisco Webex.**
5. **Coordinator of the one day Webinar of placement cell on “Growth and Opportunities in IPR”**
6. **Coordinator of the CROSSLINK 2020 and Alumni meet 2020.**
7. **Member of the organizing committee of the National Conference on “Advances in Chemical sciences” in March 2019 in University of Delhi.**
8. **Member of Research Conclave Committee of the INTERNATIONAL SUMMIT FOR PACKAGING INDUSTRY 2017 on 27-28th October 2017 at New Delhi.**
9. **Co-ordinated the talk on the “Career counselling by IRMRA” on 30th May 2017 at BCAS.**
10. **Member of Advisory committee of the National seminar on “Green Energy” on 16-17th Feb 2017 in BCAS.**
11. **Coordinated Alumni Meet on 1st April 2017 at Bhaskaracharya College of Applied Sciences.**
12. **Organized a one day workshop on “Software Training Workshop” on 29th July 2016 at Bhaskaracharya College of Applied Sciences.**
13. **Member of the Organizing Committee for the National Seminar on “IPR : Culmination of Research” on 22nd-23rd September 2016 in BCAS.**
14. **Coordinator of One day seminar on “Polymer Modification, Processing and Characterization“ on 25th January 2016.**
15. **Coordinator of the National Conference on Food Packaging: Social Impact in 2014**
16. **Member of the Scientific Committee of the International Conference ICPAM Patna, in May 2014.**
17. **Co-ordinator and organizer of the National Seminar on “Advancements in Packaging, Food and Social Impact” to be held at Bhaskaracharya College of Applied Sciences, (DU), New Delhi on 31st October 2014.**
18. **Co-ordinator and organizer of the National Seminar on” Innovation in Polymers Towards Sustainability and Growth” to be held at Bhaskaracharya College of Applied Sciences, (DU), New Delhi on 2nd-3rd March 2012.**
19. **Member of the organizing committee of the National seminar on “Recycling of the Electronic Wastes” on 29th January 2010 at Bhaskaracharya College of Applied Sciences (DU), New Delhi.**
20. **Co-ordinator and organizer of the National Seminar on “Recent Developments in Polymers” held at Bhaskaracharya College of Applied Sciences (DU), New Delhi on 29th October 2009.**

Students Visit:

1. **Organised Visit of the students to the recycling Unit of U-Flex India on 21st March 2023**
2. **Organised Visit of the students to the recycling Unit of ALP Overseas inSep 2022**
3. **Organised Visit of the students to the recycling Unit of U-Flex India on 10th March 2022**
4. **Organised a visit to the Department of Textile Technology, IIT Delhi on March 2022**
5. **Visited Recycling Industry on 18th Feb 2020 to Nidhi Enterprises, Bawana**
6. **Visited Department of Textile Technology, IIT Delhi on 6th March 2020.**
7. **Attended International Conference on “Polymer Waste Management” on 28th September 2018 at India Habitat Centre.**
8. **Visited Recycling Industry on 21st Feb 2019 to Nidhi Enterprises, Bawana**
9. **Visited Recycling Industry on 28th Feb 2018 to Nidhi Enterprises, Bawana**
10. **Visited with students to Conference on ”Sustainable Infrastructure with Plastics” by FICCI on 23 February 2017**
11. **IPI launch meet 2017**
12. **Visited Recycling Industry on 11th Jan 2017 to Nidhi Enterprises, Bawana**
13. **Visited with students to Conference on “Plastics Packaging-The sustainable choice” by FICCI on 19th January 2016.**
14. **Visited Nahata Plastic Visit on 13th April 2016**
15. **Students visit to U-Flex Industries on 7th October 2015**
16. **Visited to exhibition and conference PU-Tech 2011 on 11th March 2011**

Project Experience:

(I) Position : Research Scholar, Rubber Technology Center,
Indian Institute of Technology (I.I.T.), Kharagpur, India.

Duration : 3 yrs.

Research Topic : Development of Nanocomposite Rubber & Study of Reinforcement

Mechanism.
Supervisor/Guide : Prof. Anil K. Bhowmick,
Rubber Technology Center, I.I.T., Kharagpur, West Bengal.

(II) Position : Intern
Research Facility : GE Advanced Materials (Formerly GE Plastics)
John F Welch Technology Center, GE Center of R&D
Whitefield, Bangalore
Duration : 3 months (April-June 2004)
Project Topic : Study of the Effect of Various Nano-Fillers & their Surface
Treatments on the CTE & Impact Energy in PPO[®]/Polyester Blend.

Supervisor/Guide : Dr. Manatesh Chakraborty
Polymer & Synthetic Materials Lab, GE Advanced Materials,
Whitefield, Bangalore.

Work Done : The objective of the work was to reduce the CTE of the PPO[®]/Polyester blend with retention of the impact energy to its maximum. For this study various nanofillers & mica were added at various loadings using different methods to optimize the properties. The fillers were also treated with different coupling agents, compatibilizers. The nanocarbon was treated with oxidizing acids & plasma to improve the adhesion between the filler & the polymer. The mixing was done in a twin-screw extruder & molded in an injection-molding machine. The morphology was studied. The mechanical properties, CTEs & the HDTs were also measured.

Status : The project was completed successfully.

Part A: Academic Experience

- Working as Asst. Prof. at Department of Polymer Sciences Bhaskaracharya College of Applied Sciences, (University of Delhi), Dwarka, New Delhi since July 2005.
- Worked as deputy superintendent of examination during 2014-15 and 2017-18.
- Worked as Teacher-in-charge from 2009-2011 and in 2014-15, 2016-17 in the Dept. of Polymer Science, Bhaskaracharya College of Applied Sciences, University of Delhi, Dwarka, New Delhi.
- Experience includes delivering 18 hours of lectures per week (Theoretical, tutorial & Practical) to students pursuing bachelors' degree in Technology and Sciences
- Experience includes Question paper setting, answer sheet evaluation, Project evaluation and viva
- Experience also includes design of motivational channels to peers & students e.g. presentations on upcoming technology advances in research and development in India & abroad, arranging seminars to be delivered by eminent lecturers from institute of repute, suggestion of possible innovation techniques in practical experiments and theoretical study & suggestions of possible career advancements in a students' career capacity.
- Interaction with Industry in order to improve the academia-industry relationship
- Carrying out research Project funded by funding agencies
- Placement of students both for training and job prospects
- Arranging platforms for better student-industry interaction through seminars, visits and trainings
- The purchase for the department typically includes vendor interaction (quotes, comparison of different available sources w.r.to technicality, price, time to availability, quality, accessibility & past service records), availability of raw materials at the shortest time, blend & grade available at the time of use, vendor advance, request for samples etc.

Part B: Extra-Curricular Activity

- Active member of ECA in the academic year 2014-16.
- ECA Convener in 2011-12
- Resource person for "INSPIRE" held in Bhaskaracharya College of Applied Sciences, New Delhi for several years till 2012.
- Active member of ECA from 2006-2010
- In-charge of Music Club from 2007-08
- Organised "Songs of India" in association with Cultural Council, DU in 2011.
- Organiser of SPIC MACAY program as a part of VIRASSAT 08 and 09
- Organiser of Intercollege Annual Fest "SRIJAN" in 2007, 2008, 2009 and 2010.
- As music club in-charge and ECA member Motivating Students to take part in various intra-college and Inter-college activity
- Preparing and training students for various performances in cultural programs

Other Skills Acquired:

1. Languages Known: Bengali, Hindi, English
2. Computers: Working knowledge in MS Office, Origin (graphical tool), etc.

Other Activities & Interests:

1. Active Participation in Stage Performances consisting of Acting, Singing & Dancing at School, College & University.
2. Won Accolades in painting Competition at School level.
3. Successfully completed up to 4th year exam in SINGING (Rabindra Sangeet) from Allahabad Sangeet Kendra.
4. Successfully completed 3rd year exam in PAINTING from Chandigarh Prachin Kala Kendra.
5. A fantastic cook trying Traditional Indian innovative recipes.
6. Hobbies include reading, fine arts, watching television.

Personal Information:

Address for Communication: A 604, Nayantara C.G.H.S. Apt.
Plot 8B, Sector 7, Dwarka
New Delhi 110075

Phone No. :+91 1125074654
Permanent Address :C/o M.M. Dey
AB-144 Salt Lake CitySector-1, Kolkata-700064
Date Of Birth : 7Th July 1978
Sex : Female
Nationality : Indian
Marital Status : Married
Languages Known : Bengali, Hindi & English.

References:

1) Prof. Anil K. Bhowmick.
Rubber Technology Center,
Indian Institute of Technology (I.I.T.)
Kharagpur - 721 302, West Bengal, India.
Phone : 91-3222-283180 (Office)
91-3222-283181/774461 (Res.)
Fax : (0091-3222)-220312.
E-mail: anilkb@rtc.iitkgp.ernet.in

2) Prof. A.K. Ghosh
Centre of Polymer Engg. and Science
Indian Institute of Technology, Delhi
Houz Khas, New Delhi
Phone: 91-11-26591424

The information stated above is in the best of my knowledge.

Date:

Signature