Dr. Vivek Sharma

AICTE Industry Fellow, R&D Lab, Allied Nippon Pvt. Ltd., Ghaziabad (U.P.)
Associate Professor, Department of Chemistry, Baba Farid College of Engineering & Technology, Bathinda (Punjab)
Head, IPR Cell | Founder & Director Harinarayan Recyclers Pvt. Ltd. | National Awardee, Ministry of Chemicals & Fertilizers

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PROFILE SUMMARY

Innovative academician and researcher with over 15 years of teaching and research experience in Organic and Polymer Chemistry, specializing in catalytic recycling of waste PET and textile waste valorisation. Nationally recognized for developing eco-friendly, cost-effective, and scalable chemical recycling processes. Founder & Director of Harinarayan Recyclers Pvt. Ltd., a women-led startup translating patented laboratory research into sustainable industrial technology.

EDUCATIONAL QUALIFICATIONS

- Ph.D. (Chemistry) – *Jiwaji University, Gwalior (2014)*
  Thesis: Iodination of Industrially Important Organic Compounds Using New Reagent Systems
- M.Phil (Chemistry) – *Jiwaji University, Gwalior (2007)*
  Thesis: Recycling of Polyethylene Terephthalate (PET) Waste
- M.Sc. (Chemistry) – *Bundelkhand University, Jhansi (2005)*
- B.Sc. (Science) – *Punjabi University, Patiala (2002)*

CURRENT POSITIONS

- AICTE Industry Fellow, R&D Lab, Allied Nippon Pvt. Ltd., Ghaziabad (U.P.)
- Head, IPR Cell , Baba Farid Group of Institutions (BFGI), Bathinda Since 2024.
- Associate Professor, Department of Chemistry, Baba Farid College of Engineering & Technology, Bathinda Since 2013.
- Founder, *Harinarayan Recyclers Pvt. Ltd.* (DIPP201241) – Incubated at *IIT Kanpur, AIC–IISER Pune,* and *PSCST*

RESEARCH INTERESTS

- Organic Synthesis & Polymer Chemistry
- Catalytic Recycling of PET & Polyester Textile Waste
- Green Chemical Processes & Sustainable Materials
- Waste-to-Value Technologies for Circular Economy

PATENTS

1. *Novel Process for Preparation of Pure PET from Waste PET* – Patent No. 486052, Dec 2023
2. *Recycling of Polyester Textile Waste Using Renewable Catalyst* – Patent No. 446431, Aug 2023

3. *Eco-Friendly Incense Stick Formulation* – Application No. 202411036561, May 2024
4. *Conversion of Waste Plastic into Fuel Oils Using Renewable Catalyst* – Filed, 2025

Technology Transfer : Technology Transfer to Pyrotech Energy, Mumbai, with the support of the DST Technology Enabling Centre, Panjab University, Chandigarh, enables sustainable, high-quality recycling with improved efficiency and cost-effectiveness.

FUNDED PROJECTS & GRANTS (₹34 Lakhs)

Project Title	**Funding Agency**	**Grant (₹)**	**Status**
Recycling Waste Plastic into DMT, TPA & EG	MoHUA – SIIC, IIT Kanpur	20,00,000	Ongoing
Recycling of Waste Plastics	Pi-RAHI Cluster	2,50,000	Ongoing
Recycling Waste PET into High-Grade PET	Startup Punjab -Incest Punjab	3,00000	Ongoing
Recycling Waste PET into High-Grade PET	AIC–IISER Pune	4,00,000	Completed
Recycling Waste PET into High-Grade PET	PSCST, Chandigarh	2,50,000	Completed
Eco-Friendly Method to Obtain MHT	Baba Farid Group	2,00,000	Completed

AWARDS & HONOURS

- National Award, 11th National Petrochemical Awards 2022, Ministry of Chemicals & Fertilizers, Government of India New Delhi.
- **Sustainability Excellence Award** – For providing sustainable solutions at the Sustainability Summit 2025 (March 26–27), organized by CICU, Ludhiana
- National Entrepreneur Award, Bharat Startup Awards 2024, New Delhi
- 1st Prize, National Hackathon on Waste Reduction, Chitkara University, 2023
- Runner-Up, Idea-Phied 2.0, PSCST & IISER Mohali, 2024
- Runner-Up, Business Idea Competition, GCET Jammu, 2024
- Best Paper Awards, Science Tech 2023 & GCET Jammu 2022
- Best Innovator/Researcher, BFGI (2017–2023, multiple years)
- Invited Speaker, Global Conference on Polymer & Composite Materials (PCM 2017), Guangzhou, China

BOOKS PUBLISHED

- *Organic Chemistry* – Kapila Publications, Jalandhar (ISBN: 978-81-925888-0-3)
- *Practical Chemistry (B.Sc.–III, Semester VI)* – Punjabi University, Patiala

SELECTED RESEARCH PUBLICATIONS

1. Rapid and Acid-Free Iodination Using $I_2/NaClO_3/CH_3OH$ – *Res. J. Chem. & Environment* (2022).

2. Iodination of Aromatics Using N-Iodosuccinimide by Grinding – *Green Processing & Synthesis* (2017).
3. Degradation of PET Bottles to MHT Using Hydrotalcite – *Journal of Polymer Research* (2015), IF 2.8
4. Recycling of PET Using DMSO & Hydrotalcite – *J. Applied Polymer Science* (2013).
5. Iodination Using Aqueous KI_3 – *Russian J. Organic Chemistry* (2016).
6. Rapid Synthesis of Hydrotalcite – *Materials Letters* (2012).
7. Selective Synthesis of Tetrabromobisphenol-A – *Organic Process Research & Development* (2010).
8. Bromination Using $CaBr_2$–Br_2 System – *Ind. Eng. Chem. Res.* (2011).
9. Chemical Degradation of PET Waste Using Catalysts – *J. Pharmacognosy & Phytochemistry* (2019).
10. RR-UHPLC Method for Azithromycin and Related Compounds – *J. Chemical & Pharmaceutical Research* (2016).

RESEARCH PRESENTATIONS (INTERNATIONAL & NATIONAL)

Presented 20+ research papers at reputed national and international conferences, including:

- *International Conference on Applied Chemical Sciences*, MANUU, Hyderabad (2024)
- *DBT National Conference on Emerging Trends in Science & Technology*, DAV College, Bathinda (2024)
- *Young Scientist Conference*, India International Science Festival, MNIT Bhopal (2023)
- *Industry-Focused Research Conference (ICIFR-TEC 2023)*, Panjab University, Chandigarh
- *International Conference on Food Security & Sustainable Agriculture*, BFGI Bathinda (2019)
- *Global Conference on Polymer & Composite Materials (PCM 2017)*, Guangzhou, China *(Invited Speaker)*

WORKSHOPS / FDPs / TRAININGS ATTENDED

Participated in 25+ Faculty Development Programs, Training Workshops, and National Seminars, including:

- *UGC Malaviya Mission Teacher Training Program (NEP 2020)*, Central University of Punjab (2025)
- *ATAL FDP on Applied Entrepreneurship & Design Thinking*, Jaypee Institute of Information Technology (2024)
- *AI in Scholarly Publications*, Baba Farid College (2023)
- *Innovations in Water Treatment & Sustainable Infrastructure*, CEC Mohali (2023)
- *Spectroscopic Techniques Using Sophisticated Instruments*, Central University of Punjab (2021)
- *AICTE FDP on Molecular Manufacturing*, CUP Bathinda (2020)

- *Entrepreneurship Development Programme (DST)*, MITS Gwalior (2010)

PROFESSIONAL ENGAGEMENTS

- Coordinator, Five DST-INSPIRE Science Camps (₹50 Lakh Total Grant) – Mentored 1000+ Students
- Convener, *International Conference on Biotechnology & Sustainable Chemistry (ETBSC-2022)*
- Member, Board of Studies (Chemistry), Punjabi University, Patiala (2021–22)
- Lifetime Member, *Society of Material Chemistry (SMC), India* – Membership No. 1177
- Reviewer, Green Chemistry & Polymer Recycling Journals

INSTRUMENTAL & TECHNICAL SKILLS

IR, UV-Vis, pH-metry, Gravimetric & Volumetric Analysis, Catalytic Studies, Research Proposal Writing
Proficient in MS Office, C, C++, and Internet Applications

PERSONAL DETAILS

Date of Birth: 16 February 1982
Languages Known: English, Hindi, Punjabi
Nationality: Indian
Marital Status: Married

REFERENCES

Prof. D.D. Agarwal
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I hereby affirm that the information given above are factual and correct to the best of myknowledge.

Date : 26-02-2026
Place : Ghaziabad (UP)

Vivek Sharma
(Dr. Vivek Sharma)