Name : Dr. Deepak Pant

Professor in Chemistry and Environmental Science

Dean, School of Earth nad Environmental Science, Central University of Himanchal Pradesh, Dharamshala 176215

AWARD AND FELLOWSHIP

- ranked among the "World's Top 2% of Scientists" by Stanford University, USA (Elsevier Citation Report) 2024.
- The BIORESTEC 2023 **Impactful Review Award** from Bioresource Technology 2023.
- **8th National Award for Technology Innovation (2018)** conferred by Hon'ble Vice Precident of India, Ministry of Chemicals and Fertilizers, Government of India
- **Visitor Award 2017 for best innovation by Hon,ble President of India.**
- **SERB Young scientist award 2007.**
- **Summer Research fellowship 2010** by Indian National Science Academy (INSA)
- **SERB Department of Science Visiting Fallowship-2010**
- **Young scientist award** for the year 2009 by Uttarakhand State council of Science and Technology Government of Uttarakhand.
- Awarded by "**Silver Jubilee research scholarship**" for the year 2002 by Kumaon University.

Patents: 05

Research paper: 62; **Single author** = 17

Books: Authored: 15;

Book Chapter: 15

M.Phil. (submitted/ awarded): 02

Ph.D. (submitted/ awarded): 06

MSc dissertations: 69

Research Projects (total worth around 2 crores) : completed 05; ongoing 01

Editorial position: Journal of Environmental Science and Sustainability (JESS); Waste Bioremediation (Springer Nature); Journal of Toxicology (Special Issues: Monitoring Pollutants: Accumulation, Health Effects and Remediation Strategies)

Technique developed/ Under process

1. Selective conversion of waste plastic to fuel.
2. Green solvent from crude glycerol.

3. Acid free extraction of Gold (green technique).
4. Plastic to Paint.
5. Carbonic anhydrase as new probiotic

Administrative experience: 12 years as Head of the department/ Dean of the school.

Personal Details

Name	:	Dr. Deepak Pant
Father's Name	:	Shri G.B. Pant
Date of Birth	:	May, 1978
Place of Birth	:	Pithoragarh, Uttarakhand, India
Mailing Address	:	Professor Deepak Pant School of Earth and Environmetal Sciences Central University of Himanchal Pradesh Dharmshala (H P) 176215 Mail- deepakpant1@rediffmail.com dpant2003@gmail.com; dpant2003@yahoo.com Mobil No. 91-9412609032, 9816639032
Total Teaching Experience	:	20 years (UG and PG Classes)
Research Area	:	Solid waste management, Microbial remediation of pollutants (Hybrid methods), Management engineering, detoxification, green chemistry

Academic Contribution to University System including Administrative Experience

- Current Dean, School of Earth and Environmental Sciences, Central University of Himachal Pradesh
- Current Head, Environmental Science, Central University of Himachal Pradesh
- Former Dean, Chemical Science/ Basic Sciences, Central University of Haryana from August 2018 to April 2021
- Former, Coordinator, Institute Innovation Council and Chairman, Non-teaching grievance redressed committee , Central University of Haryana from August 2018 to 2021.
- Former Dean Student walfare (DSW), Central University of Haryana (2019-20) .
- Former Member academic council, Central University of Haryana
- Former Member of Executive Council Central University of Himachal Pradesh

- Current Member of Academic Council Central University of Himachal Pradesh
- Former In-Charge Dean and central Director School of Life Sciences,Center for Computational Biology and Bioinformatics Central University of Himachal Pradesh for many times
- Member of Board of Studies and School Board, Department of Environmental Sciences Central University of Himachal Pradesh from 2012 (the responsibility of Board of Studies and School Board is to design courses for UG/PG/ Ph D level, set academic calendar, credits etc)
- Chairman Innovation Council, Central University of Himachal Pradesh.
- Former, Chairman Innovation club Central University of Haryana.
- Board of studies Pharmaceutical Chemistry and Environmental Sciences, Himincal Pradesh Technical University
- 12 years as Head department of Chemistry, 03 years as Head, Department of Environmental Science .

Research Projects

1. **Completed Project: Utilization of glass waste for the degradation of waste plastic**: funded by Uttarakhand council of science and technology (Grant No. UCS&T/ R&D/ CHEM-07-08/ 1847/1).
2. Extraction of metals from waste lithium battery, Department of Biotechnology (DBT).
3. Green chemical recycling of polycarbonate plastic for the synthesis of valuable chemicals and epoxy compounds, SERB-DST New Delhi.
4. Chemical and Biological Extraction of metals from E waste, State Biotechnology Program Govt. of Uttarakhand **.**
5. Study on Natural Radiation Level in Lesser Himalayan Zone on the southern slopes of the Dhauladhar Range, Bhabha Atomic Research Centre, BRNS Mumbai
6. Development of value added products from waste plastics, **H P State Council for Science, Technology & Environment (SCSTE).**

Ongoing Research Project:

7. Utilization of biomass ash from Starwire India Vidyut Pvt. Ltd, Mahendragarh (Consultancy Project) Starwire India Vidyut Pvt. Ltd, Mahendragarh.

8. Rejuvenation of Used Lithium-ion Batteries by gel addition process: A novel recycling plan Grant no NMHS-2023/SC-XI/STAG-18/e3 from NMHS-MoEFCC

9. Quantifying earthquake hazard and enhancing resilience in India (Indo-UK) of Amount 1,18,13,620
10. Consultant on "Source Apportionment based Action Plans for Restoring Air Quality in Seven Non-attainment Cities in the State of Himachal Pradesh in respect of PM10, PM2.5 and other Notified Pollutants" by state Pollution Control Board H P
11. Monitoring & Investigation of lightning phenomena and its associated processes using lightning detection systems (LDS) at Dharamshala in collaboration with ISRO, Hyderabad.

List of Publications/Patents

Patent Process		
Name	Date of Filing	Reference Number
1. Novel Product Selective Degradation Reactor	09-06-10	Grant No 406644; Dated 14/09/2022
2. A process for production of Anti Fungal Solution from CD waste	16-06-10	127/DEL/2011 Published 30/08/2013 Patent Number :284026
3. Activation of Inorganic Oxide Containing Materials	19-09-12	2911/DEL/2012 Published 03/06/2016 Patent Number :293459
4. Column Reactor for the Synthesis of Cyclic Carbonate of Polyols *via* Carbamide Process	22- 12-2011	1499/DEL/2015 Patent Number :315898
5. Reactor to separate polycarbonate and thin film layer (aluminum layer) from waste optical disc	Filled	

Name of the Research Article	Type of Article	Journal (with reference number)	ISSN Number	Impact Factor (I. F.)
Single Author (Pant D)				
6. Waste Glass as a Material in Thin Layer chromatography	Original Research	Waste Management (Elsevier Science) 29, 2040, 2009 (International)	0956-053X	5.43
7. E waste Projection using Life Span and Population Statistics	Original research	Int J Life Cycle Assessment 18, 1465–1469 (2013	1614-7502	3.14
8. A new role of alumina in polyethylene degradation: A step towards commercial Polyethylene recycling	Original Research	J. Sc. Ind Res.(NISCAIR) 64, 967, 2005 (International)	0022-4456	0.508
9. Degradation of various low density polyethylene products on alumina surface with sulphuric acid—DTS technique	Original Research	J. Solid Waste TechManagement, Vol. 37 (1), 47, 2011 (International)	1088-1697	0.4
10. A Review of Electronic waste Management Microbial Participation: A Green Technology	Review	Int. J. Environment and Waste Management (IJEWM) Vol. 13, No. 1, 2014, 23-36	0734–242X	0.7
11. Use of Waste Glass in the Degradation of Waste Polyolefin	Original Research	Journal of Solid Waste Tech Management, 345 (9) 2009. (International)	1088-1697	0.4
12. Waste Management in Small Hospitals Trouble for	Original Research	Environmental Monitoring and Assessment (2012)	0197-5897	1.46

Environment		184, 4449–4453		
13. Sulphate pollution on ground water by sugar mill,	Original Research	Him. J. Env. Sc., 13,20, 2006.	0970-2903	
14. Mathematical Equation for Product Selection in Degradation of Plastic and Crude Oil	Original Research	International Journal of Innovation in Science and Mathematics (IJISM) 2347–9051	3(4), 2015, 195-96	
15. Polycarbonate Waste Management using Glycerol		Process Safety and Environmental Protection 100, 281–287 (2016)	doi:10.1016/j.psep.2015.12.012 ISSN 0957-5820	4.38
16. Green Recycling of waste Optical Disc to Urethane Products		J. Sc. Ind Res.(NISCAIR) 75, 322-327 (2016)		0.5
17. Environmental Issues in Biomedical Waste (BMW) Autoclave Industry		J. Sc. Ind Res.(NISCAIR) 77, 661-63 (2018)		0.5
Multiple Authors				
18. Some trivalent and tetravalent metal and non-metal compounds of 2-Hydroxy-1 Naphthoic Acid Pandey H, Joshi D, Pant D. and Chandra M	Original research	Chem. Environ. Res. 10, 227 (2001).	0972-0626	0.292
19. Trivalent and Tetravalent metal / Non -Metal Derivatives of N- (2-Methy1) Phenylglycine., Joshi D, Pant D. and Chandra M	Original research	Chinese journal of inoraganic Chemistry CHINA Vol. 20, No.42004.	1001-4861 (UGC 18441)	0.5

20. Degradation of Amoxicilline by Trichrospourm beidelii: A Green Chemistry Approach Pant D, Sharma A, Garg N and Pant S	Original Research	Univ. J.Phy-Chem & Ayurevedicn Heights 2,17, 2009	0973-3507	
21. Management of Waste Poly Vinyl Chloride (PVC) through Chemical Modification Pant D; Singh R	Review	J Sc Ind Res, Vol. 71, March 2012, pp. 181-186	0022-4456	0.508
22. Chemical and biological Extraction of Metals Present in E waste: A Hybrid Technology Pant D, Joshi D, Upreti M. K., Kotnala R K	Review	Waste Management 2012 (Elsevier Science) 32 (2012) 979–990	doi:10.1016/j.wasman.2011.12.002	5.43
23. Gaschromatography/mass spectrometry analysis of degradation of ethylacetoacetate achieved in shake flask culture using a previously characterized yeast strain *Tichosporon dermatis. Mohammad Asrar Izhari, A B Bhatt, Shailja Pant, Deepak Pant, Salahuddin Ansari*	Original research	Journal of Natural Sciences Research Vol.3, No.1, 27 - 34, 2013	ISSN 2224-3186 (Paper) ISSN 2225-0921 (Online	
24. Chemical modification of waste glass from cathode ray tubes (CRTs) as low cost adsorbent Pant D; Singh P	Original Research	Journal of Environmental Chemical Engineering	1 (2013) 226–232; ISSN 2213-3437	
25. Pollution due to hazardous glass waste Pant D; Singh P	Review	Environ Sci Pollut Res	21(4), 2014, 2414-2436 ISSN 1614-7499	2.7
26. Metal Leaching from	Original Research	Hydrometallurgy	146 (2014) 89–	2.68

Cathode Ray Tube Waste using Combination of Serratia plymuthica and EDTA Pant D; Singh P, Uprati M			95 ISSN 0304-386X	
27. Green Chemical Modification: An Ecofriendly Way To Material Management Pant D; Kumar S	Original Research	Ind. J. Sci. Res. and Tech (2321-9262)	2(2), 58-61, 2014	
28. Inquisitive Microbiological Analysis of Pharmaceutical Effluents and Screening for a Potential Strain Capable of Utilizing Acetaminophen and Ethylacetoacetate as Sole Carbon and Energy Source *Asrar Izhari, A B Bhatt, Shailja Pant, Deepak Pant,*	Original Research	Advanced Science, Engineering and Medicine	Volume 5, Number 10, October 2013 , pp. 1030-1034(5)	
29. WASTE-TO-WASTE MANAGEMENT AND RESOURCE CONSERVATION AND RECYCLING Singh P; Pant D	Original Research	Environmental engineering and management journal	May 2018, Vol.17, No. 5, 1103-1111	1.28
30. Involvement of Metal Complexes in Carbon Management Giri A; Pant D	Original Research	Journal of Agroecology and Natural Resource Management (2394-0786)	2(1), (2015) 18-21	
31. Management of Hazardous glass waste Singh P; Pant D	Original Research	J. Basic Applied Engineering research (2350-0077)	2(3), (2015) 224-26	
32. Metal Resources from Spent Lithium Ion Batteries Dohlker T, Pant D	Original Research	J. Basic Applied Engineering research (2350-0077)	2(3), (2015) 227-29	

33. Weed Plans for Heavy Metal Management Sharma V, Pant D	Original Research	Journal of Agroecology and Natural Resource Management (2394-0786)	2(1), (2015) 14-17	
34. Pb detoxification in Equisetum diffusum Pant D, Sharma V, Singh P	Original Research	Toxicology Reports (Elsevier) 2214-7500	2, 716–720 (2015)	1.02
35. Polyvinyl chloride degradation by hybrid (chemical and biological) modification Singh R, Pant D	Original Research	Polymer Degradation and Stability (Elsevier)	123, 80-87 (2016)	3.9
36. Biocompatibility of synthetic and bio-material fusion	Original Research	Current Science	112, 25, 2017	1.0
37. Perturbations and 3R in carbon management D Pant,V Sharma,P Singh, M Kumar, A Giri, M P Singh	Original Research	Environmental Science and Pollution Research February 2017, Volume 24, Issue 5, pp 4413–4432	doi:10.1007/s11356-016-8143-6	2.76
38. Green and Facile Method for the Recovery of Spent Lithium Nickel Manganese Cobalt Oxide (NMC) Based Lithium Ion Batteries	T Dolhker, Deepak Pant	Waste Management · Volume 60, February 2017, Pages 689-695 (Elsevier)	DOI: 10.1016/j.wasman.2016.09.039	5.43

39. Poly Vinyl Chloride Waste Projection using Life Expectancy of Products	Ritu Singh, Deepak Pant	Journal of Scientific & Industrial Research	Vol. 76, October 2017, pp. 666-669	0.7
40. Recovery of gold from electronic waste using chemical assisted microbial biosorption (hybrid) technique	A Sheel, Deepak Pant	Bioresource Technology (18732976) (Elsevier)	Volume 247, January 2018, Pages 1189-1192	5.807
41. Structural basis for expending the application of bioligand in metal bioremediation: A review	V Sharma, Deepak Pant	Bioresource Technology (Elsevier)	Volume 252, March 2018, Pages 188-197	5.807
42. Inhalation dose due to Rn-222, Rn-220 and their progeny in indoor environments	A Giri, Deepak Pant	Appl Radiat Isot. (Elsevier) 2018 ;132:116-121	2018 ;132:116-121	1.12
43. Biocompatible metal decontamination from soil using Ageratum conyzoides	V Sharma, Deepak Pant	Environmental Science and Pollution research	August 2018, Volume 25, Issue 22, pp 22294–22307	2.9
44. Bio-inspired Dechlorination of Poly vinyl chloride	Ritu Singh, Deepak Pant	Chemical Engineering Research and Design (Elsevier) https://doi.org/10.1016/j.cherd.2018.01.043	Volume 132, April 2018, Pages 505-517	3.07
45. Intracellular carbonic anhydrase from Citrobacter freundii and its role in bio-sequestration	Anand Giri，Uttam Chand Banerjee，Manoj Kumar，Deepak Pant	Bioresource Technology https://doi.org/10.1016/j.biortech.2018.07.089	Volume 267, November 2018, Pages 789-792	9.1

46. Chemical-biological hybrid systems for the metal recovery from waste lithium ion battery	Dohlker T, Pant D	Journal of Environmental Management	Volume 248, 15 October 2019, 109270	6.7
47. CO2 management using carbonic anhydrase producing microbes from western Indian Himalaya	Anand Giri , Deepak Pant	Bioresource Technology Reports	Volume 8, December 2019, 100320	3.88
48. Carbonic anhydrase modification for carbon management	Anand Giri , Deepak Pant	Environmental Science and Pollution Research	2020 Jan;27(2):1294-1318	4.01
49. Microbial lipolytic enzymes e promising energy-efficient biocatalysts in bioremediation	Ashok Kumar, , Renata Gudiukaite, Alisa Gricajeva , Mikas Sadauskas, Vilius Malunaviciu , Hesam Kamyab , Swati Sharma , Tanvi Sharma , Deepak Pant	Energy	192 (2020) 116674	4.1
50. Recent developments in pretreatment technologies on lignocellulosic biomass: effect of key parameters, technological improvements, and challenges	Shashi KantBhatia , Sujit Sadashiv Jagtap , Ashwini AshokBedekar, Ravi KantBhatia , Anil KumarPatel , DeepakPant	Bioresource Technology	Volume 300, March 2020, 122724	9.1
51. Human health and snails.	Dhiman V, Pant D.	Journal of Immunoassay and Immunochemistry.	2020 Nov 25:1-25.	0.873
52. Environmental Biomonitoring by Snails.	Dhiman V, Pant D.	Biomarkers	2021 Jan 7:1-59.	2.016
53. Thiourea Bacillus combination for gold leaching from waste	Sheel, A., & Pant, D.	Bioresource Technology Reports,	15, 100789 (2021).	3.886

lithium-ion batteries.				
54. Effects of piperazine and EDTA in garden snail towards electrolytic variation and antimicrobial activities	Kumar, A., Dhiman, V., Kumar, P., & Pant, D.	Environmental Science and Pollution Research	2021, 1-12	4.015
55. Genome-mining for stress-responsive genes, profiling of antioxidants and radical scavenging metabolism in hyperaccumulator medicinal and aromatic plants.	Mishra, Bhawana, Muktesh Chandra, and Deepak Pant.	Industrial Crops and Products	173 (2021): 114107.	5.6
56. A Review on the Antidiabetic and Anticancer Activities of Conus Venom Peptides.	Dhiman, Varun, Deepak Pant, Tejpal Dhewa, and Anita Padam.	Journal of Biologically Active Products from Nature	11, 5-6 (2021): 413-441.	1.23
57. A review on persisting threats to snail's diversity and its Conservation approaches.	Dhiman, Varun, Deepak Pant, S. D. Kumar, and Prem Prakash. "	Archives of agriculture and environmental science	5(2); (2020): 205-217.	
58. Epoxy paint from waste polycarbonate (PC).	Sheel A, Pant D.	International Journal of Environmental Science and Technology.	30 (2022) 1-10	3.5
59. Evaluating feasibility of biosorption technique for heavy metals removal: limitations and future perspective.	Pawan Kumara,, Kalp Bhushan Prajapati, Ambrish Kumar Mahajan, Deepak Pant, Narendra Kumar Meenad,, Anil Kumare and Praveen Kumar	International Journal of Environmental Analytical Chemistry	doi: 10.1080/03067319.2022.2145196 24 (2022) 1-25.	2.7
60. Chemical	Mishra Bhawana	Current Indian	1, (2024) 1-12	

Detoxification of Therapeutic Hybrid Complexes Prepared by the Compatible Combination of Ayurvedic Herb and Allopathic Drug	, Pant Deepak, , Gothwal Suraj, , Garhwal Akash , Yadav Sanjay Ramnaray and Nadda Kumar Ashok	Science, DOI: 10.2174/2210299X016662304050909 33,		
61. Understanding the role of key metabolic genes, transcription factors, and trichome-related genes in-terms of temperature-stress management techniques in the rose-scented Geranium using transcriptomic analysis (Pelargonium graveolens)	Mishra Bhawana, S P Prashant, Pant Deepak	Industrial Crops and Products	199 (1), (2023), 116673	5.6
62. Traditional ayurvedic treatment practices by Vaidyas of the Northern region of India	Mishra Bhawana and Pant Deepak	Current Indian Science,	2023, Volume 1 3	
Communicated				

1. Soil Environment and Heavy Metal Pollution from Biomedical Waste (BMW)
2. Chemical /Biological enzyme modification for carbon sequestration

Conference Proceedings

1. Molecular sieves from waste cathode-ray-tubes (2011) Pant D Proceedings of the International Conference on Solid Waste 2011- Moving Towards Sustainable Resource Management, Hong Kong SAR, P.R. China, 623-25.(ISBN 978-988-19988-1-1)

2. Chemical Recycling of Waste Compact Disc Towards Polyfunctional Compounds Utilizing as Polyester And Polyurethane Monomer (2011) proceeding of the papers of Young Scientist awardees 2009 UCOST 23-26 (Abstract published on the souvenir of the 4nd Uttarakhand State Science Congress , No 12, page 148)

Abstracts:

1. **Petrol from plastic**. Down to Earth, Page no 27, 15 December 2005.
2. **Effect of Chemical Oxygen Demand in ground water by Sugar Mill :** Abstract published on the souvenir of the National Seminar on Environmental Education: Nature & Nurture held at Vardhaman College, Bijnor India at 26-27 Feberarary, 2006 **.**
3. **Selective Degradation of various types of low density Polyethylene inti liquid fuel by using new Difference Temperature Scavenging (DTS) Technique:** Abstract published on the souvenir of the 2nd Uttarakhand State Science Congress Page No 86, 2007.
4. **Use of Waste glass as Absorbent Material for Chromatography** Abstract published on the souvenir of the 3nd Uttarakhand State Science Congress Page No 177, 2008
5. **Chemical Recycling of Waste Compact Disc Towards Polyfunctional Compounds Utilizing as Polyester And Polyurethane Monomer** Abstract published on the souvenir of the 4nd Uttarakhand State Science Congress , No 12, page 148, **2009**.
6. **Selective drug degradation in aquatic system** Abstract published on the souvenir of the 4nd Uttarakhand State Science Congress , No 36, page 80, **2009.**
7. **Novel modal for the product selective degradation of waste polyethylene into fuel products like gas, petrol or diesel in one pot** Abstract published on the souvenir of the 5th Uttarakhand State Science Congress , No 46, page 142**., 2010.**

Expert Talk

National conference on e-waste management using biological tools – An ecofriendly approach" on dated March 8th and 9th 2012 Centre for Environmental Research & Development, Loyola College, Chennai - 34

National Conference on Natural Products: Green Interface between Chemistry and Environment **Title of the talk "Green chemical recycling of Waste: A new era of Innovation for Environmental Management"** Dated 18- 19th June 2011. Maya Institute, Dehradun.

Invited Lecturer on workshop cum hands on training programme entitled "**HPLC and UV in Quality Control and Research"** as on dated 15-16 December 2010, DIBNS Dehradun.

Emerging Trends in E waste Management in National Conference on Recent Trends in Chemical and Environmental Science during 27-28 February, 2014 by Arni University.

Emerging solid waste: E waste and Pharmaceutical waste in National Conference on Environmental Issues, Concerns and Solutions (EICS-2014) being hosted by the Department of Environmental Sciences, University of Jammu, Jammu on 24th-25th March 2014.

Deliver a talk entitled "how to get patent from your research" as resource person in 10 days workshop on Research Methodology in Social Sciences (12- 21 November, 2013), ICSSR New Delhi sponsored and organized by School of Education, Central University of Himachal Pradesh.

Books:

1. **Household and applied chemistry**(For B.Sc H. Sc.). Star Publication Agra, 2005.

2. **Nooten ISC practical manual** (Two separate books). Nageen Publication Media (P) Ltd. Meerut. 2005 (ISBN 81-87309-86-5).
3. **West Bangol Chemistry manual**, Nageen Publication Media (P) Ltd. Meerut. 2006.
4. **Inorganic Chemistry Practical** (For PG Students) Book Rix Publication (International) 2010 www.bookrix.com
5. **Lab Manual Quantitative Analytical Method** (For PG Pharmaceutical Chemistry Students) Book Rix Publication (International) 2010 www.bookrix.com
6. **Chemistry Practical** for B. Sc. Part II Book Rix Publication (International) 2010 www.bookrix.com
7. **Electronic Waste Management** Lambart Academic Publishing 2010 (ISBN 978-3-8433-8336-3) .
8. **Pharmaceutical Waste Management** Lambart Academic Publishing 2011 (ISBN 978-3-8454-4089-7)
9. **HPLC and UV spectroscopy in Quality Control and Research** Lab manual for the training programme, 2010, Ahuja Publication, Dehradun.
10. **गृहोपयोगी रसायन** (grhopayogee rasaayan) Anamika Publshers and Distributers (P) Limited**,** New Delhi ISBN 978-81-7975-863-2)
11. **Recent Trends In Environmental Science And Carbon Management**, Edited Book ISBN : 978-93-83246-20-5 Academic Excellence, Delhi
12. **Waste Bioremiadation** (Springer Nature), 2017, ISBN 978-981-10-7412-7
13. **Advances in Carbon Capture and Utilization** (Springer Nature), 2021, ISBN 978-981-16-0638-0
14. **Bioremediation using weeds** (Springer Nature), 2021, ISBN 978-981-336-552-0

BOOK CHAPTER

1. **Chemical Recycling of Waste Compact Disc Towards Polyfunctional Compounds Utilizing as Polyester And Polyurethane Monomer** in the book Science and Technology in Uttarakhand (2012) Page 45-48 Mccmillan Publishers India LTD; ISBN 978-935-059-119-2

2. **Microbial participation in degradation pattern of chemically modified polyvinyl chloride (PVC)** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5

3. **Hybrid (chemical and biological) activation method of weed plants** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5

4. **Chemical Assisted Biodegradation Technique For Polycarbonate Waste** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5

5. **Study of heavy metal toxicity in land snail (Helix aspersa) Book chapter in Recent Trends In Environmental Science and Carbon Management**, Edited Book ISBN : 978-93-83246-20-5
6. **Sequestration of carbon dioxide using chemically modified carbonic anhydrase** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5
7. **Green technique for the removal of mercury from compact fluorescent lamps (CFLS)** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5
8. **Open dumping and carbon emissions problem in Dharamshala as smart city** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5
9. **Gold from Spent lithium ion battery** Book chapter in Recent Trends In Environmental Science And Carbon Management, Edited Book ISBN : 978-93-83246-20-5.
10. **Microbial Depolymerization,** Waste Bioremediation, (Springer Nature) ISBN 978-981-10-7412-7.
11. **Bioremediation Techniques for E-waste Management**, Waste Bioremediation, (Springer Nature) ISBN 978-981-10-7412-7.
12. **Bioremediation of Metals from Lithium-Ion Battery (LIB) Waste**, Waste Bioremediation, (Springer Nature) ISBN 978-981-10-7412-7.
13. **Landfill biodegradation process and leachate**, Waste Bioremediation, (Springer Nature) ISBN 978-981-10-7412-7.
14. **Chemical Depolymerization of Polyurethane Foams via Glycolysis and Hydrolysis,** Recycling of Polyurethane Foams (Elsvier) ISBN: 978-0-323-51133-9 (https://doi.org/10.1016/B978-0-323-51133-9.00006-1)
15. **Chemical Depolymerization of PET Bottles via Glycolysis**; Recycling of Polyethylene Terephthalate Bottles; Plastics Design Library, 2019, Pages 61-84 (https://doi.org/10.1016/B978-0-12-811361-5.00004-3)
16. Giri, A., & Pant, D. (2018). **Carbon Management and Greenhouse Gas Mitigation** Reference Module in Materials Science and Materials Engineering. doi:10.1016/b978-0-12-803581-8.11041-0
17. Kumara, V., Lakkaboyanaa, S. K., Sharmac, N., Abdelaald, A. S., Maitrae, S. S., & **Pant, D**. (2019). Engineered nanomaterials uptake, bioaccumulation and toxicity mechanisms in plants. Engineered Nanomaterials and Phytonanotechnology: Challenges for Plant Sustainability, 87, 111.
18. Kumar, A., Sharma, T., Mulla, S. I., Kamyab, H., **Pant, D**., & Sharma, S. **(2019).** Let's Protect Our Earth: environmental challenges and implications. In Microbes and Enzymes in Soil Health and Bioremediation (pp. 1-10). Springer, Singapore.

19. Giri, A., Chauhan, S., Sharma, T., Nadda, A., & **Pant, D**. (2021). Recent Advances in Enzymatic Conversion of Carbon Dioxide into Value-Added Product. Advances in Carbon Capture and Utilization, 313-326.
20. Sharma, T., Bhardwaj, R., Bhardwaj, R., Giri, A., **Pant, D**., & Nadda, A. K. (2021). Progresses in Bioenergy Generation from CO 2: Mitigating the Climate Change. In Advances in Carbon Capture and Utilization (pp. 297-312). Springer, Singapore.
21. Single-Use Plastics: An Escalating Global Environmental Problem (2022) Economics and Policy of Energy and Environmental Sustainability pp 215–243. Springer, Singapore.
22. Dhiman V, Pant D, Sharma SD. Era of Market Globalization: A Review of Energy Demand, Opportunities, and Challenges in India. Economics and Policy of Energy and Environmental Sustainability. 2022 Nov 24:63-77. Springer, Singapore.
23. Dhiman V, Pant D. π-π Interaction: Defining the Role and Relevance in Environmental Detoxification of Heavy Metals from Soil. InSoil Health and Environmental Sustainability: Application of Geospatial Technology 2022 Sep 28 (pp. 659-672). Cham: Springer International Publishing.
24. Dhiman V, Giri A, Pant D. Pollutants Bioremediation Using Biosurfactants: A Novel Approach for Improving Soil Health. InSoil Health and Environmental Sustainability: Application of Geospatial Technology 2022 Sep 28 (pp. 489-502). Cham: Springer International Publishing.
25. Microbiology Behind Biological Metal Extraction (2024) Management of Electronic Waste: Resource Recovery, Technology and Regulation. Elsevier.
26. Terrestrial Carbon Stock and Sink Potential of Indian Himalayan Forest Ecosystem: A Tool for Combating Climate Change (2023) pp 77-91. Springer Nature Singapore.

WORKSHOP/TRAINING (ORGANIZED)

Organizing secretary of workshop cum hands on training programme entitled "**HPLC and UV in Quality Control and Research"** as Organizing Secretary on dated 15-16 December 2010 Sponsored by DST and CSIR

Recent Trends In Environmental Science And Carbon Management, as Organizing Secretary on dated 19-20 November, 2015

National Seminar on Emerging Trends in Environmental Science and Technology, (PerkinElmer spounsered), 24th August, 2017

RAPID URBANISATION AND DISASTER RISK REDUCTION, NIDM Training at Central University of Himachal Pradesh, National, 27 to 29-03-23, National Institute of Disaster Management

SEMINAR/ WORKSHOP/TRAINING (PARTICIPATION)

International

1. Presented paper and poster entitled **Use of Waste Glass in the Degradation of Waste Polyolefin**; 24th International Conference on Solid Waste Technology and Management entitled Widener University, Philadelphia, USA, 15-18 March, 2009.
2. Presented a poster in the First international conference on nanoscience and nanotechnology, Kottyam, Karala.7-9 January, 2011.
3. Presented a Paper in the "International Conference on Mountain Biodiversity" Doon University Dehradun, on 13-15 March, 2010.
4. Presented a paper in **The International Conference of Solid Waste 2011 Moving Towards Sustainable Resource Management, Hong Kong Baptist University SAR, China; 3-7 May 2011**
5. Presented paper entitled "Hybrid methodology for the Management of E-waste", December 05, 2013, First International conference on contribution of science and technology on world development, by DESIDOC Government of India.
6. Presented paper entitaled "Chemical and Biological Leaching of Metals from E waste: Mononuclear to Multinuclear Complex Formation" on International conference on Solid waste 2015: Knowledge Transfer for sustainable Resource Management (ICHWSK2015) 19-23 May 2015; Hong Kong Baptist University SAR, China.
7. Biosurfactant from Serratia plymuthica as a green and effective solution for the recovery of metals from CRT waste CNF, Lebanon Sept, 2023 Biosurfactant from Serratia plymuthica as a green and effective solution for the recovery of metals from CRT waste CNF, Lebanon

National

8. Presented a paper entitled **"Chemical Recycling of Waste Compact Disc towards polyfunctional compounds"** in 4nd Uttarankhand State Science Congress on dated 10-12 November 2009, held at GBPUT, Pantnagar.
9. Presented a paper entitled **"Modification of Waste Glass Powder"** in 4nd Uttarankhand State Science Congress on dated 10-12 November 2009, held at GBPUT, Pantnagar.
10. Presented a paper entitled **"Use of Waste Glass as Absorbent Material in Chromatography**" in 3nd Uttarankhand State Science Congress on dated 10-11 November 2008, held at IIT Roorkee.
11. Participated in the **National Roving Seminar on traditional Knowledge** was organized by Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India and World Intellectual Property Organization (WIPO) on 13-14 August 2008 at Dehradun.
12. Presented a poster entitled **"Selective Degradation of various Low Density Polyethylenes into Liquid Fuels"** in 2nd Uttarankhand State Science Congress on dated 15-17 November 2007, held at Nainital.

13. Participated in the **Workshop on Biotechnology Education** organized by DIBNS, Forest Research Institute and Wildlife Institute of India Dehradun on 3-7 October, 2007
14. Paper presented entitled "**Effect on Chemical Oxygen Demand in Ground Water by Sugar Mill"** in National Seminar on Environmental Education: Nature & Nurture held at Vardhaman College, Bijnor India at 26-27 February, 2006.
15. **Attended National Seminar on "Research** Methodology" held at Kumaun University, Nainital, India at 16-20 December 1999.
16. Paper presented entitled **NOBEL MODAL FOR THE PRODUCT SELECTIVE DEGRADATION OF WASTE POLYETHYLENE INTO FUEL PRODUCTS LIKE GAS, PETROL OR DIESEL IN ONE POT** IN 5TH Uttarankhand State Science Congress on dated 10-12 November 2010, held at Doon University, Dehradun.

Training

1. Six months training programme based on polymerization technique and handling of some spectroscopic instruments like GC, GCMS, IR and TGA at Indian Institute of Petroleum, Dehradun, India. 16th April 2001-16th October 2001.
2. Attended a training programme on "Collection Handling and Disposal of Municipal solid waste" May 27-29, 2010, IIT Roorkee.
3. Nanoscience and Nanotechnology, Kottyam, Karala 02 November 10 to 20 Janurary 2011.
4. Biotechnological approach for genomic DNA isolation, sequencing, chloning and characterization, December 5-11, Department of Biotechnology, IIT Roorkee. 2011.
5. Radon Training Workshop 2014, 22-26 September, 2014 at BARC Mumbai

Invited Lectures and Chairmanships at National or International Conference/Seminars

S. No.	Title of Paper	Title Of Conference /Seminar	Date Of Event	Organized By	Whether International/National /State/ Regional/University or College Level
1.	Green chemical recycling of Waste: A new era of Innovation for Environmental Management (invited Speaker)	Green Interface between Chemistry and Environment Maya Institute, Dehradun	18- 19th June 2011	Maya Institute, Dehradun	State

2.	HPLC Techniques (Organizing Secretary)	HPLC and UV in Quality Control and Research	15-16 December 2010	Dolphin PG Institute Dehradun	State
3.	E-Waste management Using Biological Tools: An Eco Friendly Approach	E waste Management	08-09 March 2012	Centre of Environmental research and Development, Loyla College, Chennai 34	State
4.	Green and clean Initiative: Application of Green Chemistry in Waste Management	Refresher course in Chemistry at UGC Academic Staff College	03 December 2012	Kumaun University, Nainaital	State
5.	Chemical Toxicology Prevention and Management of Chemical Accident	Refresher course in Chemistry at UGC Academic Staff College	03 December 2012	Kumaun University, Nainaital	State
6.	Clean Initiative using Biotechnology	Implication of Climate Change on Himalayan Environment ICHE -14	20-21 March 2014	Central University of Himachal Pradesh	State
7.	Advancement In Waste Management	National Conference on Recent Trends in Chemical & Environmental Science s (RTCES 14)	27-28 February 2014	Arni University HP	State
8.	E Waste Management	Advances in Basic & Applied Sciences (ABAS 2014)	May 10, 2014	Career Point University, Hamirpur	State
9.	Green and Clean Initiatives	UGC- Academic Staff College	April 30, 2014	Himachal Pradesh University, Shimla H P	State

10.	Chemical Toxicology	UGC- Academic Staff College	April 30, 2014	Himachal Pradesh University, Shimla H P	State
11.	Session Chair	National Workshop on Status of Natural Hazardous in Himachal Pradesh	6-8 November 2014	Central University of Himachal Pradesh	State
12.	How to get Patens from your Research	Research Methodology in Social Science	December 02, 2013	Central University of Himachal Pradesh	State
13.	Session Chair	International conference on Solid waste 2015: Knowledge Transfer for sustainable Resource Management (ICHWSK2015)	19-23 May 2015	Hong Kong Baptist University SAR, China	International
14	Hybrid (Chemical and Biological) method for the management of E waste	International Conference on Current Trends in Biotechnology ICCB 2016	10 December 2016	VIT Vellore, Tamil Nadu, INDIA	International
15	Magic of π-π interaction for carbon capture	First International conference on Sustainable Energy and Environmental Challenges (SEEC - 2017)	Feb 26 — 28, 2017	Mohali, Chandigarh	International
16	Chemical Detoxification	UGC- Academic Staff College Himachal Pradesh	29 July 2017	Shimla	National

17	Carbon Management	UGC- Academic Staff College Himachal Pradesh	29 July 2017	Shimla	National
18	Phytoremediation and Green techniques for E Waste Management	National conference on Promoting Applied Research in Plant Sciences ".	10-11-2022	Central University of Jammu	National
19	Youth for Climate Change and Environmental Action	NIDM workshop	03-01-23	Central University of Himachal Pradesh	National
20	Waste Can be a Disaster Due to Increasing Urbanization	NIDM workshop	27-03-23	Central University of Himachal Pradesh	National
21	Chemistry of toxicity and detoxification	Shyam Lal College (University of Delhi)	Dec, 2023	Chemistry of toxicity and detoxification	Shyam Lal College (University of Delhi)

REFRESHER PROGRAMMES ATTENDED

Designing Learner-Centric MOOCs NPTEL, Jan-Mar, 2024

INDUSTRIAL EXPERIENCES (06 Mounths)

In the production of various polyacrylates, cationic, anionic and non-ionic types, various deforming, fertilizer anticaking chemicals and planing and handling of water treatment plant.

M. PHILL WORK (as SUPERVISOR)

1. **To study the various industrial wastes produced in Bijnor region; their toxic effects and the possible mode of their treatment** Swati Saluja, Maduri Kamraj University, 2007
2. **Variation in conductance on metal doping in various coordination polymers** Shivali Choudhary, 2007

Ph. D. WORK (as SUPERVISOR)

Green Chemical conversion of waste plastic to selective boiling range products Pooja Singh (**Uttarakhand Technical University) 2016.**

Greener Chemical Recycling of Waste Polyvinyl Chloride (PVC) Plastic Towards Useful Products Sunil Thakur, CMJ University 2013.

Retro polymerization of Poly Vinyl Chloride: Ritu Singh (**Uttarakhand Technical University) 2016.**

Consequences of metal management from e-waste by weed species: Virbala Sharma, Central University of Himanchal Pradesh, 2017.

Carbon dioxide management by modified carbonic anhydrase. Anaand Giri, Central University of Himanchal Pradesh, 2021.

"Effect of π Acceptor Ligands Towards Pollutant and its Biomonitoring Using Snail Varun Dhiman 2021 (Thesis Submitted) Central University of Himanchal Pradesh, 2021.

"**Green Chemical Recycling of waste Polycarbonate and PET plastics**" Anvita Sheel (Thesis Submitted) Central University of Himanchal Pradesh, 2021.

M. SC. DISSERTATIONS

1. **LDPE from Medical Waste and a Possible Way for its Management** by Har Sahai Johari, 2008
2. **Polypropylene from Medical Waste and a Possible Way for its Management by** Rahul Kansal, H.N.B. Garhwal University, Srinagar, Garhwal, 2008.
3. **Paracetamol Degradation by Microbes: A Possible Method for the Management of Pharmaceutical Waste by** Manmohan Singh Rawat H.N.B. Garhwal University, Srinagar, Garhwal, 2008.
4. **Microbial Biotransformation of Drugs by** Israr Ahmad H.N.B. Garhwal University, Srinagar, Garhwal, 2008.
5. **Omeprazole Degradation by Microbes: A Possible Method for the Management of Pharmaceutical Waste by** Sunil Pal H.N.B. Garhwal University, Srinagar, Garhwal, 2008.
6. **Pharmaceutical Waste Management: A Step Towards Management of Waste Antibacterial Drug by** Romit Kaur H.N.B. Garhwal University, Srinagar, Garhwal, 2009.
7. **Plastic Component in Bio-Medical Waste: Possible Way for its Management by** Neelam H.N.B. Garhwal University, Srinagar, Garhwal, 2009.
8. **Medical Application of Polycarbonate Plastic: Environmental Facts by** Jitender Kumar H.N.B. Garhwal University, Srinagar, Garhwal, 2009.
9. **Management of Non-Biodegradable Solid Organic Materials from Bio-medical Waste** by Pooja Singh H.N.B. Garhwal University, Srinagar, Garhwal, 2009.
10. **Disposable Items in Medical: A Growing Problem for Environment** by Vishal Mohan H.N.B. Garhwal University, Srinagar, Garhwal, 2009

11. **Phenol Degradation by Microbes : A Possible Method for the Management of Pharmaceutical Waste** by Niti, H.N.B. Garhwal University, Srinagar, Garhwal, 2009
12. **Biotransformation of Acetic Acid** by Gunjan Tyagi H.N.B. Garhwal University, Srinagar, Garhwal, 2009
13. **Analgesic Drug Degradation by Microbes : A step towards the Management of Pharmaceutical Waste** by Ritash H.N.B. Garhwal University, Srinagar, Garhwal, 2009.
14. **Green Chemical Recycling** by Kapil Dev H.N.B. Garhwal University, Srinagar, Garhwal, 2010.
15. **Green Chemical Recycling Of Waste Polycarbonate As Antimicrobial Solution** by Sapana Devi H.N.B. Garhwal University, Srinagar, Garhwal, 2010.
16. **Details of employment (Past & present)**

Name and address of the employer	**Designation**	**Period**	
		From	**To**
Krishna College, Bijnor	Assistant Professor	Feb 2003	May 2007
Dolphin PG Institute, Dehradun	Associate Professor	June 2007	Feb 2012
Central University of Himachal Pradesh	Associate Professor	March 2012	March 2015
Central University of Himachal Pradesh	Professor	March 2015	July 2018
Central University of Haryana	Professor	August 2018	July 2021
Central University of Himachal Pradesh	Professor	July 2021	Continue

EDUCATION QUALIFICATIONS :

Class	**Board/ University**	**Year**	**Subject**	
High School (Class X)	U.P. Board	1992	English, Hindi, Maths II, Science II, Social Science, Biology	
Intermediate (Class XII)	U.P. Board	1994	English, Hindi, Maths, Physics, Chemistry	
B. Sc.	Kumaun University Nainital	1997	Physics, Chemistry, Maths	
M. Sc.	Kumaun University Nainital	1999	Organic Chemistry	

Ph. D.	Kumaun University Nainital	2002	Coordination Polymers	

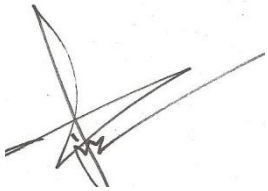
Ph.D Topic: Coordination Polymers of Schiff's Bases Derived From Substituted Aryl Thiosemicarbazides And Terephthalaldehyde

Membership of Professional Recognized Bodies – International

1. International society for energy environment and sustainability (Number 14092)
2. The Biotech research society India(BRSI) LM2050

EXPERIENCE

1. Three years of research experience in the field of analytical chemistry and polymer science and hand on experience on handling **GC, GCMS, IR and TGA**.
2. Attended six months training programme based on polymerization technique and handling of some spectroscopic instruments like GC, GCMS, IR and TGA at Indian Institute of Petroleum, Dehradun, India. 16th April 2001-16th October 2001
3. Field trip experience of various **waste management** sites.



(DEEPAK PANT)