

Bio-Data



Name: Dr. Durgesh Kumar Soni
Designation: Assistant Professor- Paint Technology Department
HBTU Kanpur
Date of Birth: 05/07/1995
E-mail ID: durgesh.soni@hbtu.ac.in
Contact No.: 8808300783
Permanent Address: Tikhampur, Ballia (Uttar Pradesh)-277 001
Temporary Address: D-42, Type-IV, West Campus, HBTU Kanpur- 208002

EDUCATIONAL QUALIFICATION

Degree	Board/University	School/Institute	Awarded in	Percentage
Doctor of Philosophy	Harcourt Butler Technical University, Kanpur	Department of Paint Technology School of Chemical Technology	2023	NA
B.Tech. (Paint Technology)	Uttar Pradesh Technical University, Lucknow	Harcourt Butler Technological Institute, Kanpur	2017	75.72
Intermediate	CBSE	Kendriya Vidyalaya, Ballia (U.P.)	2012	80.60
Highschool	CBSE	Kendriya Vidyalaya, Ballia (U.P.)	2010	87.40

RESEARCH/WEB PROFILES

Google Scholar: <https://scholar.google.com/citations?user=BR0dc7IAAAAJ&hl=en>

Research Gate: <https://www.researchgate.net/profile/Durgesh-Soni>

Linked In: <https://www.linkedin.com/in/durgeshksoni/>

WORK EXPERIENCE

Harcourt Butler Technical University, Kanpur

- Assistant Professor- Paint Technology Department: 20th September 2023 till Present

Horizon Performance Polyurethane Pvt. Ltd. (RYMBAL), Ghaziabad

- Scientist-R&D: 02nd May 2023 to 19th September 2023

Maruti Suzuki India Ltd.

- Worked in Maruti Suzuki India Ltd. Manesar as Assistant Manager in Paint Shop (Production Business Vertical) for two years from July 03, 2017 to July 12, 2019
- Responsibilities: Shift In-Charge, Paint Shop-A Manesar, (PT-ED, Sealer, Dry Sanding, Topcoat, Inspection, Repair, Quality Maintenance, Quality, Safety)

Teacher Fellow during Ph.D. at HBTU Kanpur (2nd Aug'2019 to 1st Aug 2022)

- Taught theory and practical papers to B.Tech. students
 - Industrial and Automotive Painting (Final year) [2019-20]
 - Architectural & Eco-friendly Coatings(Final year) [2019-20]
 - Surface Preparation and Coating Application (Final year) [2021-22, 2022-23]
 - Formulation and Manufacture of Coatings (3rd year) [2020-21, 2021-22]
- Testing and Characterization of paint/polymers, Hands on experience with
 - Synthesis of Polymers, Resins and Formulation, Preparation of Emulsions, Paints
 - FTIR, TGA, DSC

- Software: Origin, Delta, Canva, Turnitin
- Coordinated in: National webinars organized by the department, NAAC and NBA Audits, Centenary Year Celebration, and Convocation ceremony

PHDs GUIDED

Under Progress- 1

INTERNSHIPS

Summer Internship (June 01,2016 to July 15,2016) at KANSAI NEROLAC PAINTS LTD. Hosur, Tamil Nadu

- Project 1: **Lumps reduction in 2K Conductive Primer**
 - Results: •Weight of lumps formed is reduced after increasing the percentage of wetting agent. • Increase in weight of lumps for the sample kept in incubator is very less implying the sample is stable.
- Project 2: **Gloss reduction in Matt Black**
 - Results: • Gloss level is reduced by increasing the percentage of dispersing agent. This means that instability of dispersion was the reason for excess gloss value. • Reduction in gloss again is due the unstable dispersion of black pigment which in due time adsorbs binder and give a reduced gloss value.
- **General Plant Induction:**OEM (Automotive paints) Block, Powder Coating Block, Resins Block, Water Based Paints Block, Decorative Solvent Based Block, General Industrial and High Performance Coatings Block, STP and ETP, WareHouse

PROJECTS

1. Ph.D. Thesis Title: **Synthesis and Characterization of Non Isocyanate Polyurethane Dispersions for High Performance Coatings** [Time Period: Aug'2019- Oct'2022]; Supervisors: Dr. P. K. Kamani and Dr. ArunMaithani

- The Non-Isocyanate polyurethane was prepared by reacting the reactive polyamide resin and ethylene diamine as a curing agent with the cyclic carbonate groups synthesized by the simultaneous carbonation and copolymerization of Glycidyl Methacrylate, Butyl Acrylate, and Methyl Methacrylate. Synthesis of NIPU using carbonation of the conventional liquid Epoxy resin.
- Carbon dioxide was utilized to get the desired hydroxyurethane linkage, which is not only elimination of the usage of hazardous and toxic isocyanates, phosgene, but also a sustainable utilization of CO₂ which is a greenhouse gas and causes global warming.
- Completed Courseworks on Advance Emulsion Technology, Analytical Tools of Chemistry, Research Methodology, Soaps Fats & Oils, Optimization of Chemical Processes
- **Worked on other projects like: Cowdung based Emulsion Paints, Synthesis of Methyl Esters, Preparation of Alkyd Emulsion, Preparation of zinc stearate emulsion**

2. B.Tech. Project Manufacturing of Gelcoat: Gelcoats used in fibre reinforced composite structures and effect of including nano fillers in it. Duration: August 2016 to May 2017

3. B.Tech. Project Collaborative Industrial Project: Manufacturing of synthetic yellow oxide pigment.Duration: January 2017- May 2017

AWARDS AND ACHIEVEMENTS

- Best Performance Award during the 'On Job Training' of Graduate Engineering Trainee Batch 2017, at Maruti Suzuki India Ltd.
- Won 2nd prize in "Design is in my DNA!" Innovation Contest organized by Asian Paints Ltd. For the topic 'Recent Developments in Crystalline Waterproofing Technology' in 2017.

- Won 1st prize in Quiz Competition and 2nd prize in Group Discussion in 13th International Symposium on “Surface Engineering & Paint Coatings” organized by The Society of Surface Protective Coatings India during February 15-18, 2017 held at Hotel Sheraton Grand, Pune.

PUBLICATIONS

Research Papers

1. Soni, Durgesh&Maithani, Arun&Kamani, Pramod. (2022). Synthesis and Characterization of Non-Isocyanate Polyurethanes using Diglycidyl Ether of Bisphenol Acetone (DGEBA) Epoxy Resin. Asian Journal of Chemistry. 34. 2155-2160. <https://doi.org/10.14233/ajchem.2022.23855>
2. Soni, Durgesh&Maithani, Arun&Kamani, Pramod. (2022). Synthesis of Non-Isocyanate Polyurethane using Glycidyl Methacrylate and other acrylic monomers. Paint India Vol. LXXII-No.7July 2022, 56-61
3. Soni, Durgesh&Maithani, Arun&Kamani, Pramod. (2022). Formation of urethane linkage using copolymers of glycidyl methacrylate, methyl methacrylate, and butyl acrylate. Materials Today: Proceedings. <https://doi.org/10.1016/j.matpr.2022.05.309>.
4. Soni, Durgesh&Maithani, Arun&Kamani, Pramod. (2022). Utilization of Carbon Dioxide for preparation of Polyurethane coatings without using the toxic Isocyanates. Materials Today: Proceedings, October 2022 <https://doi.org/10.1016/j.matpr.2022.09.465>
5. Soni, Durgesh&Maithani, Arun&Kamani, Pramod. (2021). Synthesis and Characterization of Glycidyl Esters of Acrylic and Methacrylic Acids for NIPU Coatings. International Journal of Advanced Research in Science, Communication and Technology. 336-342. <https://doi.org/10.48175/IJARST-2195>.

Book Chapters

1. Chapter ‘**Emulsion Paint based on Cowdung of Desi Cow**’ in e-Book on ‘Engineers for Aatmnirbhar Bharat’ published by State Project Implementation Unit- Uttar Pradesh & Institute of Engineering and Technology, Dr. Bhimrao Ambedkar University Agra
2. Chapter ‘**Environment and the Paint Industry**’ in Book on ‘Environment and Unsustainable Human Life, Volume-V (Environmental issues: Climate Change, Ozone, Desertification, Deforestation and other issues) Edited by Dr. M. Z. A. Khan and Dr. Sunil Kumar Verma published by V L Media Solutions, New Delhi

Review Papers/Articles

1. Soni, Durgesh & Maithani, Arun & Dighe, Ashok. (2023). Concept of NVM, VOC and NVVT in coatings formulation and application. Paint India Vol. LXXIII-No.12, 63-71
2. Soni, Durgesh & Maithani, Arun & Dighe, Ashok. (2023). Stoving Enamels. Paint India Vol. LXXIII-No.11
3. Soni, Durgesh & Maithani, Arun & Kamani, Pramod. (2021). Non Isocyanate Polyurethanes using Glycidyl Acrylate Monomers. Paint India Vol. LXXI-No.2, 56-61
4. Katiyar, Mohit & Soni, Durgesh & Maithani, Arun. (2021). A review of different smart coatings. PaintIndia Vol. LXXI-No.8, 70-80.
5. Soni, Durgesh & Kamani, Pramod. (2018). CORROSION IN NON- FERROUS METALS (Part-2) (Corrosion and protection of Aluminium). Paint India Vol. LXVIII.No-2, 117-120.
6. Soni, Durgesh & Kamani, Pramod. (2017). Corrosion in Non Ferrous Metals Part-1 (Corrosion in Titanium, Silver and Lead). Paint India Vol. LXVII.No-8, 142-146.
7. Soni, Durgesh & Kamani, Pramod. (2017). Corrosion in Food Processing Industry. Paint India Vol. LXVII.No-6, 104-114.
8. Soni, Durgesh & Pataskar, Vinay. (2017). Corrosion due to microorganisms. Paint India Vol. LXVII.No-5, 116-121.
9. Roy, Nayan Jyoti, Soni, Durgesh & Kamani, Pramod. (2017). Corrosion and its control in Petroleum Industry. Paint India Vol. LXVII.No-3, 123-131.
10. Singh, Abhijit, Soni, Durgesh(2017). Gelcoat Used in FibreReinforced Composite Structure and Effect of including Nanofillers in it. Paint India Vol. LXVII.No-3, 53-60.

11. Pratap, Raghavendra, Soni, Durgesh & Kamani, Pramod. (2017). Corrosion and its Control in Sugar Industry. Paint India Vol. LXVII.No-1, 89-95.
12. Singh, Abhijit, Soni, Durgesh & Kamani, Pramod. (2016). Corrosion Protection of Underground Pipelines and other Structures. Paint India Vol. LXVI. 99-108.
13. Arora, Nikhil, Soni, Durgesh & Kamani, Pramod. (2016). Corrosion of Non-Metallic Materials (Part-3) (Corrosion of Carbon, Graphite, Leather, papers etc.). Paint India Vol. LXVI. 99-106.
14. Arora, Nikhil, Soni, Durgesh & Kamani, Pramod. (2016). Corrosion of Non-Metallic Materials (Part-2) Corrosion of Glass and Ceramics. Paint India Vol. LXVI. 95-102.
15. Arora, Nikhil, Soni, Durgesh & Kamani, Pramod. (2016). Corrosion of Non Metals- Part 1. Paint India Vol. LXVI. 102-110.
16. Soni, Durgesh & Kamani, Pramod. (2016). Adhesion: A Key Property of Paints and Coatings. Paint India Vol. LXVI. 57-63.

POSITION OF RESPONSIBILITIES

- Co-Convenor of 9th PACT Vision Seminar held during 18-19 March 2023, at HBTU Kanpur
- President of Paint & Coating Technologists' Association (PACT) India- Student Council in 2016-17
- Training & Placement Representative of Paint Technology batch 2017.
- Student In-Charge of the Departmental library of Paint Technology batch 2017.
- Successfully completed the six session certificate course on "DISCOVER YOURSELF" organized under VOICE during 2013-14 with first division.
- Won **Tritiya Sopan** Certificate in **Bharat Scouts and Guides** held at Kendriya Vidyalaya DLW, Varanasi from September 23-25, 2008.
- Got Regional level certificate in JawaharLal Nehru Reigonal Level Science Exhibition' 2010, held at Kendriya Vidyalaya Khagoul, Bihar.

CONFERENCE/POSTER PRESENTATIONS

S.No.	Name of the Conference	Organized by	Topic of Presentation	Date of Conference	Venue
1	13 th International Symposium on Surface Engineering and Paint Coatings with EXPO 2017	Society of Surface Protective Coatings (SSPC) India	Self Cleaning Coatings	February 15-17, 2017	Hotel Sheraton Grand, Pune (View Document)
2	PAINTINDIA Congress 2018 (An international conference)	Exponova, Vincentz Network, Color Publications	Multifunctional Self Healing Paints for Corrosion Protection	March 09, 2018	Bombay Exhibition Center Mumbai (View Document)
3	8 th VISION PACT Seminar	PACT India and Department of Paint Technology	'Ovens used in Paint Shops' in 'Expanding Horizon in Surface Coatings	17-18 April, 2018	HBTU Kanpur (View Document)
4	2 nd International Conference on 'Protective Coatings and surface Treatment	SSPC India and Matcorr	Self-healing Coatings for Corrosion Protection	18-19 November 2019	Hotel Holiday Inn, MayurVihar, New Delhi (View Document)
5	Online Conference on 'Pipeline Design and Construction Technology'	Institute of Asset Integrity and Reliability Management	100% Solid Rigid Polyurethane for Corrosion Protection of Steel Pipelines	26 th February 2021	Online (View Document)

6	International Conference on Advances in Chemistry and Chemical Engineering 2021	Department of Chemical Engineering, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat	Synthesis of Glycidyl acrylate and glycidyl methacrylate for Isocyanate free Polyurethanes	April 16 – 17, 2021	Virtual (View Document)
7	3 rd International Conference on Recent Advances in Fundamental and Applied Sciences 2021	School of Chemical Engineering and Physical Sciences, Lovely Professional University	Cowdung Based Architectural Paints modified with acrylic emulsion	25-26 June 2021	Online (View Document)
8	International Conference on ‘Advances in Sustainable Research for Energy and Environmental Management	Department of Chemical Engineering, SVNIT, Surat	Utilization of Carbon dioxide for synthesis of Cyclic Carbonate groups: A Review	6-8 th August 2021	Online (View Document)
9	2 nd International Conference on Industrial Corrosion Control & Management	Matcorr	Coating Systems based on Polyurethanes for Corrosion Protection	August 12 – 13, 2021	Online (View Document)
10	SURCON 2021-Coatings for a brighter future	Oil & Color Chemists’ Association (OCCA), United Kingdom	Some Important Steps in Isocyanate Free Route for Synthesis of Polyurethanes	3-4 November 2021	Online (View Document)
11	National Conference on “Recent Advances in Chemical Engineering towards Sustainable Future	Department of Chemical Engineering, SVNIT, Surat in In association with ICT-IOC Bhubaneswar, Odisha	Preparation of Acrylic Polymers with Cyclic Carbonate groups for Non isocyanate Polyurethane Coatings	17th – 18th February 2022	Online (View Document)
12	3 rd International Conference on “Protective Coatings & Surface Treatment”	Matcorr	Eco-Friendly Approach for the Synthesis of Polyurethanes Using Cyclic Carbonate and Amine Chemistry	17th – 18th February 2022.	Online (View Document)
13	Indo-US International Conferences on Materials & Sustainable Engineering in Chemical and Allied Industry	Chandigarh University	Formation of Urethane linkage using copolymers of GMA, MMA and BA	11-12 March 2022	Online (View Document)
14	International Conference on Technological Interventions for Sustainability, Chem-Conflux 2022	MNNIT Allahabad and School of Chemical Engineering, USM Malaysia	Utilization of Carbon Dioxide for preparation of Polyurethanes without using the toxic Isocyanates	14-16 April 2022	Hybrid (View Document)
15	International Conference	Indian Institute of	Synthesis and	14-16 April	Hybrid

	on Advances in Chemical and Materials Sciences (ACMS)-2022	Chemical Engineers, Kolkata	Characterization of Non Isocyanate Polyurethane using DGEBA Epoxy resin	2022	(View Document)
16	PAINTINDIA 2022, International Exhibition and Conference	Exponova, Vincentz Network, Color Publications	Synthesis of NIPU using glycidyl methacrylate and other acrylic monomers	26-28 May 2022	Jio World Exhibition Center, BKC, Mumbai (View Document)

FDPS/WORKSHOPS/STTPS ATTENDED

S. No.	Type of Program	Title of FDP/STTP/Workshop	Organized By	Duration	Venue
1	National workshop	Opportunities and Challenges in Bio-Fuels & Bio-Lubricants	Department of Oil & Paint Technology	November 21-22, 2015	HBTI Kanpur
2	National Workshop	Testing and Evaluation of Eco-Friendly Coatings	Department of Oil & Paint Technology	March 14-15, 2015	HBTI Kanpur
3	National Seminar	Ancient Indian Science and Technology	Department of Aerospace Engg. And Dept. of Material Science	October 14-15, 2015	IIT Kanpur
4	One week Short term training program	Data analysis and SPSS Software	Department of Mathematics, HBTU Kanpur	October 21-25 2019	HBTU Kanpur
5	Webinar	Microsoft EduCloud and Digital Transformation with 21st Century Tools	Department of CSE and ET, HBTU, Kanpur in collaboration with Cloud Education Learning Pvt. Ltd	May 12, 2020.	Online
6	Webinar	MATLAB for AI, Machine Learning and Deep Learning	Department of CSE and ET, HBTU, Kanpur in collaboration with DesignTech Systems Ltd.	April 30, 2020	Online
7	Six Days Online Faculty Development Programme	Applications of DFT (Density Functional Theory) in Teaching & Learning Chemistry, Physics and Material Science- with software for Chemistry and Materials (SCM-AMS)	Department of Chemistry in association with the Teaching Learning Centre, NIT Warangal	19-24 March, 2021	Online
8	International Virtual Faculty Development Programme	Ethics in Research and Teaching	Govt. College for Women, Parade Ground, Jammu, India, Govt. College Dhama, HP, Cape Comorin Trust, India	21-27 April 2021	Online
9	one week online workshop	Synthesis, Characterization and Performance of Advanced Materials	Department of Chemical Engineering, Maulana Azad National Institute of Technology Bhopal	10-14 th May, 2021	Online
10	AICTE Training And Learning (ATAL) Academy Online Elementary FDP	Recent Trends in Chemical and allied Industries	Government Polytechnic Daman	21-25 th June 2021	Online
11	Indo-Australia	Nano & Bio-materials:	National Institute of	21-25 June	Online

	Workshop	Synthesis & Applications	Technology, Tiruchirappalli and University of Melbourne, Australia	2021	
12	Two Day National Webinar	Higher Education in India: NEP 2020 and After	Government College of Teacher Education, Kozhikode, Kerala	July 30-31, 2021	Online
13	Three Day International Conference	Conventional and Digital Methods in Chemical Education	Department of Chemistry, National Institute of Technology, Warangal	29-31 July, 2021	Online
14	One week online Faculty Development Program	Modern Innovations in Chemical Engineering & Technology	Department of Chemical Engineering and Department of Food Technology, HBTU, Kanpur	August 9-13, 2021	Online
15	Two-day e-symposium	Materials for Energy and Energy Storage	Department of Humanities and Sciences, VNRVJIET	03 – 04 Sep 2021	Online
16	One week online Faculty Development Program	National Education Policy-Institutional Development Plan for Academic Excellence	Sharda University	20 th to 27 th August 2021	Online
17	National Level Faculty Development Program	NAAC New Guidelines and Importance of IQAC in Post Covid Time for Affiliated Colleges	Internal Quality Assurance Cell [IQAC], K.M.G. College of Arts & Science, Gudiyattam, Vellore	29-31 July 2021	Online
18	Five Days Virtual Short Term Training Program	Chemistry from Computational Tools for Beginners (CCTB-2022)	Department of Chemistry, SVNIT Surat	1-5 March, 2022	Online
19	KARYASHALA: Accelerate Vigyan Workshop	SERB Sponsored Advanced Technology for Materials Physics and Engineering	Department of Physics, Indian Institute of Technology Indore	20-26 January 2022	Online
20	International Short Trem Training Programme-2	Impact and Panacea of Environmental Pollution: The Past, Present and Future	Raj Rishi Govt. Autonomous College	20-26 th April, 2022	Online
21	one week online short term training programme	Journey of Analytical Techniques in Chemical and Biological Sciences (JATCBS–2022)	Department of Chemistry, SardarVallabhbhai National Institute of Technology, Surat	18 th – 22 nd April, 2022	Online
22	One Month Common Yoga Protocol Training Course	One Month Common Yoga Protocol Training Course	Department of Yoga, Degree College of Physical Education, Shri Hanuman VyayamPrasarak Mandal, Amravati, Maharashtra	May 21 st to June 21 st , 2022	Online
23	MHRD-SPARC, Government of India., sponsored Certificate Course	Sustainable Materials in Engineering	Department of Fashion Technology and Biotechnology, Kumaraguru College of Technology, Coimbatore	28 th to 29 th June 2022	Online

EVENTS ORGANIZED

S. No.	Program Organized/ Attended	Title of Program	Organized By	Duration	Venue
1	Co-ordinated the program	LOW COST PAINTS BASED UPON INDIGENOUS RAW MATERIALS	Center of Excellence, Department of Oil & Paint Technology	July 27 to August 01, 2016	HBTU Kanpur
2	One Day National Webinar	Pedagogy	Department of Paint Technology, HBTU Kanpur	July 28, 2021.	Online
3	One Day National Webinar	National Education Policy 2020: A Major Milestone for New India	Department of Paint Technology, HBTU Kanpur	13th of August, 2021	Online
4	One Day National Webinar	'HIGH PERFORMANE POLYMERS FOR PAINTS AND PLASTICS	Department of Paint Technology and Department of Plastic Technology	August 21, 2021	Online
5	One Day National Webinar	'ONLINE EDUCATION IN TECHNICAL INSTITUTIONS: A NEW NORMAL	Department of Paint Technology, HBTU Kanpur	August 27, 2021	Online
6	One Day National Webinar	'THEORETICAL AND PRACTICAL ASPECTS OF POWDER COATINGS	Department of Paint Technology and Paint and Coating Technologists' Association (PACT)	September 18, 2021	Online
7	One Day National Webinar	'PAINTS AND COATINGS	Paint and Coating Technologists' Association (PACT) and Department of Paint Technology	November 20, 2021	Online
8	Expert Lecture on Paint Application	CATHODIC ELECTRODEPOSITION OF PAINTS	Department of Paint Technology, HBTU Kanpur	November 23, 2021	HBTU Kanpur
9	Co-Convenor of 9 th PACT Vision Seminar	Advances in Frontiers of Paint & Printing Ink Technology	PACT, Paint Tech. Deptt, and PITA	18-19 March 2023	HBTU Kanpur

DECLARATION

I hereby declare that the above written particulars are true and correct to the best of my knowledge and belief.

Place: Kanpur

Date: 23 January, 2024

Dr. Durgesh Kumar Soni