

Dr. Dheeraj Ahuja Assistant Professor, Department of Chemical Engineering Motilal Nehru National Institute of Technology, Allahabad Prayagraj-211004(India)

> Email: dheerajahuja@mnnit.ac.in , dheerajahuja84@gmail.com Mobile: +(91)-9467826650

Details of Publication in Science Citation Index (SCI)/Scopus Indexed Journals:

- "3D porous polyurethane (PU)/triethanolamine modified hydroxyapatite (TEA-HA)
 nanocomposite for enhanced bioactivity for biomedical applications" Lokesh Kumar,
 Dheeraj Ahuja in "Journal of Polymer Research" Volume 29, Issue 1, December 2021,
 Pages 1-14[Impact Factor-2.8]
- 2. "RSM-Based Optimization of the Parameters Affecting TiO2-Mediated UV Photocatalysis of Vehicular Emissions in Enclosed Parking Garages" Sandeep Singh, Parteek Thind, Manpreet Kaur Verma, Dapinder Deep Singh, Arjun Sareen, Dheeraj Ahuja, Jas Gurpreet Singh Chohan, Raman Kumar, Shubham Sharma, Nima Khalilpoor, Alibek Issakhov in "International Journal of Photoenergy" Volume 2021, July 2021 [Impact Factor-3.2]
- 3. "Superhydrophobic modification of Cellulose Sponge fabricated from discarded jute bags for oil water separation" Dheeraj Ahuja, Shiva Dhiman, Gaurav Rattan, Sheetal Monga, Sonal Singhal, and Anupama Kaushik in "Journal of Environmental Chemical Engineering", Volume 9, April 2021, Pages 105063 [Impact Factor-7.7]
- 4. "Thermal stability of starch bionanocomposites films: Exploring the role of esterified cellulose nanofibers isolated from crop residue" Dheeraj Ahuja, Lokesh Kumar, Anupama Kaushik in "Journal of Carbohydrate Polymers" Volume 255, March 2021, Pages 117466 [Impact Factor-11.2]
- 5. "Encapsulation of slow released NPK Fertilizer using Sodium Carboxymethyl Cellulose-G-Poly (AA-Co-AM-Co-AMPS)/Montmorillonite clay based nanocomposite hydrogels for sustainable agricultural applications" Dheeraj Ahuja, Ashish Singh Rainu, Mandeep Singh, Anupama Kaushik in "Trends in Carbohydrate Research" Volume 12, No.1, March 2020, Pages 15-23
- 6. "Isolation and characterization of micro fibrillated cellulose and nanofibrillated cellulose

- with "biomechanical hot spots" Mandeep Singh, Dheeraj Ahuja and Vikas Pahal" in *Journal of Carbohydrate Polymers* Volume 234, 15 April 2020 [Impact Factor-11.2]
- 7. "Preparation and characterization of aliphatic polyurethane and modified hydroxyapatite composites for bone tissue engineering" Lokesh Kumar, Dheeraj Ahuja in "Polymer Bulletin" (2019). 1-14. [Impact Factor-3.2]
- 8. "Simultaneous extraction of lignin and cellulose nanofibrils from waste jute bags using one pot pre-treatment" Dheeraj Ahuja, Anupama Kaushik and Mandeep Singh in "International Journal of Biological Macromolecules" Volume 107, Part-A, Pages. 1294-1301 [Impact Factor-8.2]
- 9. "Fractionation and physicochemical characterization of lignin from waste jute bags: Effect of process parameters on yield and thermal degradation" Dheeraj Ahuja, Anupama Kaushik and Ghanshyam S. Chauhan "International Journal of Biological Macromolecules" Volume 97, April 2017, Pages 403–410 [Impact Factor-8.2]
- 10. "Surface Functionalization of Nanofibrillated Cellulose Extracted from Wheat Straw: Effect of Process Parameters" Mandeep Singh, Anupama Kaushik and Dheeraj Ahuja in "Journal of Carbohydrate Polymers" Volume150, 5 October 2016, Pages 48-56 [Impact Factor-11.2]
- 11. "Castor Oil Based Polyurethanes Nanocomposites with Organically Modified Clay Using High Shear Mixing" Dheeraj Ahuja, Anupama Kaushik in "Journal of Elastomers and Plastics" Volume: 49 issue: 4, page(s): 315-331, June 17[Impact Factor-1.7]
- 12. "Synthesis and Characterization of Organically Modified Clay/Castor oil Based Chain Extended Polyurethane Nanocomposites". Anupama Kaushik, Dheeraj Ahuja and Vipin Salwani, "Composites Part A: Applied Science and Manufacturing" Volume 42, Issue 10, October 2011, Pages 1534- 1541[Impact Factor-8.7]

Details of Book chapters

- 1. "Polymeric Nano-Composite Scaffolds for Bone Tissue Engineering: Review" in Springer book "Biodegradable and Environmental Applications of Bionanocomposites" (2023)
- 2. "Polyurethanes: Biobased" in "Encyclopedia of Polymer Application" published by Taylor & Francis. (2018)

- 3. "Biodegradable Shape Memory Polyurethane and Its Nanocomposites for Biomedical Applications" in a book on theme "Advances in Polymers for Biomedical application" published by Nova Science Publishers, Inc. (2018)
- 4. "A review on biobased Hyperbranched Polyurethane Nanocomposite" in Tata McGraw Hill book "Nanotechnology- Novel Prospective and Prospects" (2015)

Papers Presented in Conferences/Seminars

Sr. No.	Conference /Seminar (Title & Year)	Title of the paper
1.	IASTSF-2022 (Web Seminar) "Integrated approach in Science & Technology for Sustainable Future"	Development of Polyurethane elastomers from lingo- polyol obtained from derivatization of lignin extracted from waste gunny bags
2.	ICRE-2022 "International conference on Renewable Energy"	Cellulose nanofibrils extraction from lignocellulosic biomass, its surface functionalization and Applications
3.	IOCSRT-2020 "International Online Conference on Sustainable Research Technology and Development"	Physicochemical and thermal characterization of lignopolyol synthesized via oxypropylation mechanism from soda lignin
4.	APA-2017 "Advances in Polymer Science & Technology"	Oxypropylation of Soda Lignin Extracted from Waste Jute Bags to Lignopolyol as a precursor for thermoplastic polyurethane synthesis
5.	Seminar on "Advancement in Science and Technology"	Extraction of Cellulose nanofibers from waste Jute and Its Modification for Super hydrophobic Sponge
6.	HETIS-2016 "Harnessing Engineering, Technology, and Innovation for sustainable Development"	Chemical Modification of Soda Lignin Extracted From Waste Jute Bags to Lignopolyol
7.	Nanoscitech-2016 "Improving Quality of Life using Nanotechnology: Potential Role of Polymers"	Extraction and Characterization of Cellulose Nanofibers from Jute Using Chemical and Mechanical Treatments
8.	ACPNe2015 "Technological Advances in Chemical, Petroleum & Natural Gas Engineering"	Vegetable Oil Based Polyurethane and Its Nanocomposite with Organically Modified Clay
9.	Seminar on "Environmental Management, Sustainable	Isolation of Lignin from Black Liquor of Jute Fibers Using Acid Precipitation Technique

	Development and Human Health" March 2015	
10.	Seminar on "Sustainable Renewable Energy Generation-Current Scenario" March 2015	Fractionation of Lignin From Black Liquor of Jute Fibers Using Acid Precipitation Technique
11.	HETIS-2014 "Harnessing Engineering, Technology, and Innovation for sustainable Development"	Biodegradable Polyurethane Nanocomposite from Castor Oil and Modified Clay- Synthesis and Characterization
12.	National seminar "Recent Trends in Chemical, Environmental and Material Sciences" (CEMS-2014) April 2014	Vegetable Oil Based Hyper branched Polyurethane Nanocomposites - A Review
13.	Nanoscitech2014 "Nanotechnology in the Service of Health, Environment & Society"	Equilibrium Adsorption of Methylene Blue (MB) Dye from Waste Water Using Grass Cellulose Nano Fibers
14.	Nanoscitech2014 "Nanotechnology in the Service of Health, Environment & Society"	A Review on Biobased hyper branched polyurethane Nanocomposite
15.	APA-2013 "Polymers on the Frontier of Science and Technology"	Castor Oil Based Polyurethane and their Nanocomposites with modified clay
16.	NCSP-2012 "Solar Power: The most promising solution to future energy crisis"	Solar Panels: New Techniques Coupled With Different Manufacturing Processes-A Review
17.	NanoSciTech-012 "Frontiers in Nanoscience, Nanotechnology and Applications"	Synthesis and Characterization of Organically Modified Montmorillonite/Castor Oil Based Biodegradable Polyurethane Nanocomposites
18.	PSE-2010 "Polymer Science and Engineering: Emerging Dimensions"	Castor Oil Based Chain Extended Polyurethane Nanocomposites From Organically Modified Clay Using High Shear Mixing
19.	"ANVESHAN: Research Convention – 2010"	Synthesis and Characterization of Organically Modified Montmorillonite/Castor Oil Based Chain Extended Polyurethane Nanocomposites
20.	CHASCON-2010 4 th Chandigarh Science Congress	Organically Modified Montmorillonite/Castor Oil Based Chain Extended Polyurethane Nanocomposites - Synthesis and Characterization