

## Profile Page



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### Research Interests :

Polymer blends and composites  
Environment Engineering

### Other Profile Links :

#### Google Scholar Link :

Sangeeta Garg [Click Here](#)

#### Personal Web Link :

Researchgate [Click Here](#) Scopus [Click Here](#) Orcid [Click Here](#) Vidwan Profile [Click Here](#) PUBLONS [Click Here](#)

### Journal Publications :

Year	Journal	Publication
2019	Journal Toxicological & Environmental Chemistry (DOI-10.1080/02772248.2019.1621314)	Rajkamal Kushwaha, Sangeeta Garg & Shailendra Bajpai; Modeling and optimization of Nile blue sulphate mineralization by heterogeneous Fenton oxidation
2019	Iranian Polymer Journal, 28(5), 379-390	Aanchal Mittal, Sangeeta Garg, & Shailendra Bajpai; Lauric acid-grafted barley (Hordeum vulgare L.) husk for application in biocomposite films: optimization method in synthesis and characterization.
2019	Polymer Testing, 105937 (DOI - 10.1016/j.polymertesting.2019.105937)	Aanchal Mittal, Sangeeta Garg, & Shailendra Bajpai; The influence of fatty acid chain length on the chemical, physical and morphological properties of the grafted barley husk for application in biocomposites.
2018	Indian Chemical Engineer, 60(1), (1-21)	Sudha Minz, Sangeeta Garg & Renu Gupta; Catalytic Wet Peroxide Oxidation of 4-Nitrophenol Over Al-Fe, Al-Cu and Al-Cu-Fe Pillared Clays
2018	Asia-Pacific Journal of Chemical Engineering, (WILEY Publication), 13(3), 1-16	Rajkamal Kushwaha, Sangeeta Garg, Shailendra Bajpai & Ardhendu Sekhar Giri; Degradation of Nile blue sulphate dye onto iron oxide nanoparticles: Kinetic study, identification of reaction intermediates, and proposed mechanistic pathways

2018	Research on Chemical Intermediates, (Springer Publications), 39, 1-28	Rajkamal Kushwaha, Sangeeta Garg & Shailendra Bajpai; Modified generalized kinetic model and degradation mechanistic pathways for catalytic oxidation of NBS dye in Fenton like oxidation process
2018	Chemical Engineering Communications, (Taylor and Francis Publication), 205, 667-679	Sudha Minz, Sangeeta Garg & Renu Gupta; Catalytic wet peroxide oxidation of 4-Nitrophenol over Al-Fe PILC: Kinetic study using Fermi's equation and mechanistic pathways based on TOC reduction
2016	Carbohydrate polymers, 151, 926-938	Aanchal Mittal, Sangeeta Garg, Deepak Kohli, Mithu Maiti, Asim Kumar Jana, Shailendra Bajpai; Effect of cross linking of PVA/starch and reinforcement of modified barley husk on the properties of composite films
2016	Indian Chemical Engineer (Taylor and Francis), 59(2), 136-158	Deepak Kohli, Sangeeta Garg, A K Jana & Mithu Maiti; Synthesis of graft copolymers for green composite films and optimization of reaction parameters using Taguchi (L16) orthogonal array
2014	Chinese Journal of Polymer Science (Springer Publication), 32(3), 268-279	Sangeeta Garg & A K Jana; Preparation of LDPE-acetylated/butyrylated starch blend blow films and characterization
2014	Journal of Industrial Pollution Control, 30(1), 129-138	Deepak Kohli, Sangeeta Garg, A K Jana & Punya Chopra; Sorption of para-nitrophenol and para-chlorophenol using cross-linked starch based bio-adsorbent: thermodynamics, kinetics and column studies
2012	Indian Chemical Engineer (Taylor and Francis), 54, 1-13	Deepak Kohli, Sangeeta Garg & A K Jana; Synthesis of cross-linked starch based polymers for sorption of organic pollutants from aqueous solutions
2011	Carbohydrate Polymers, 83, 1623-1630	Sangeeta Garg, Asim Kumar Jana; Characterization and evaluation of acylated starch with different acyl groups and degrees of substitution
2011	Journal of Applied Polymer Science, 119, 3, 1383-1392	Sangeeta Garg, Asim Kumar Jana; Effect of propylation on the characteristics of corn starch and variation of properties with different degrees of substitution
2011	Journal of Applied Polymer Science, 122, 4, 2197-2208	Sangeeta Garg, Asim Kumar Jana; Effect of propylation of starch with different degrees of substitution on the properties and characteristics of starch/low density polyethylene blend films
2007	European polymer journal, 43, 9, 3976-3987	Sangeeta Garg, Asim Kumar Jana; Studies on the properties and characteristics of starch-LDPE blend films using cross-linked, glycerol modified, cross-linked and glycerol modified starch

### Conference Publications :

Year	Conference	Publication
2019	International conference on "Advancement in Engineering and Technology", 15-16 March, 2019	Sangeeta Garg, Manpreet Singh, Taruna Meena & Aanchal Mittal; Cross linking of the PVA matrix and evaluation of light transmittance and barrier properties
2019	International Conference on "New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2019)" 15- 16 Feb, 2019,	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai; Grafting of Barley husk an industrial waste for application in biocomposites: Statistical modelling and optimization
2019	International Conference on "New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2019)" 15- 16 Feb, 2019	Deepak Sahu, Jaspreet Chawla & Sangeeta Garg; Numerical Studies on Fire Behaviour inside the confined area
2019	World congress on "Disaster management", 29 Jan-01 Feb, 2019	Deepak Sahu, Jaspreet Chawla & Sangeeta Garg; Numerical studies on development of fuel inside the large size enclosure

2019	National conference on “Advances in Chemical and Environment Engineering”, April 23-24, 2019	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai; Studies on the mechanical, water resistance properties and biodegradability of PVA/starch based composite films
2019	National conference on “Advances in Chemical and Environment Engineering”, April 23-24, 2019	Sangeeta Garg, Manpreet Singh, Taruna Meena & Aanchal Mittal; A review on natural polymers based biodegradable films for packaging applications
2019	National conference on “Advances in Chemical and Environment Engineering”, April 23-24, 2019	Deepak Sahu, Jaspreet Chawla & Sangeeta Garg; Studies of Fire Dynamics in a Multi Room Facility
2019	National conference on “Advances in Chemical and Environment Engineering”, April 23-24, 2019	Pratibha, Sangeeta Garg, Jatinder Kr Ratan, Ardhendu S. Giri; Eco friendly development of Cuprous oxide nanoparticles using Tabernaemontanadivaricta and its photocatalytic activity against pharmaceutical compound
2019	National conference on “Advances in Chemical and Environment Engineering”, April 23-24, 2019	Robin R Marlar, Ravishankar Yadav, Sangeeta Garg & Shailendra Bajpai; Overview on modelling of arsenic removal with Nanofiltration membrane
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Rajkamal Kushwaha, Sangeeta Garg & Shailendra Bajpai; Application of Artificial neural network for the removal of toxic metal ions from aqueous solution
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Rajkamal Kushwaha, Sangeeta Garg & Shailendra Bajpai; One pot synthesis and use of silica coated iron oxide nanoparticles as selective adsorbents for heavy metal ions
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Robin R Marlar, Sanjeevani Hooda, Sangeeta Garg & Shailendra Bajpai; Hybrid Membrane Treatment for Arsenic removal from drinking water
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Robin R Marlar, Sanjeevani Hooda, Sangeeta Garg & Shailendra Bajpai; A review on Arsenic removal using pressure driven nanofiltration membrane process
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Jaspreet Chawla, Sangeeta Garg, Aanchal Mittal & Anshuman Premi; Evaluation of the physio-chemical properties of PVA/starch nanocomposite films reinforced with starch nanocrystals
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai; Chemical modification of cellulose with palmitic acid for application in composite films
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Abhishek & Sangeeta Garg; Murraya Koenigii leaf extract mediated synthesized iron oxide nanoparticles
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Abhishek & Sangeeta Garg; Decolorization of Victoria blue B dye using green synthesized iron oxide nanoparticles
2018	National conference on “Advances in Chemical Science & Technology”, April 27-28, 2018	Pratibha, Sangeeta Garg & Jatinder Kr Ratan; A recent technology used for the treatment of pharmaceutical wastewater
2018	International Conference on “Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering”, March 29-31, 2018	Sudha Minz, Renu Gupta & Sangeeta Garg; Degradation of 4-chlorophenol using homogenous Fenton’s oxidation process: kinetic study
2018	International Conference on “Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering”, March 29-31, 2018	Sudha Minz, Renu Gupta & Sangeeta Garg; AL-Fe and Al-Ti pillared saponite clay catalysts: Preparation and Characterization

2018	International Conference on "Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering", March 29-31, 2018	Sangeeta Garg, Aanchal Mittal & Anshuman Premi; Synthesis and characterization of graft copolymers of starch for the application of packaging films
2018	International Conference on "Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering", March 29-31, 2018	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai; Application of response surface methodology to optimize the reaction parameters for grafting of cellulosic
2016	International Conference CHEMCON-2016, December 27-30, 2016	Kushwaha, R. K., Garg, S., Bajpai, S.; Synthesis and characterization of mesoporous silica coated Iron oxide nanoparticles: Applications in adsorptive removal of Nile blue sulphate dye
2016	International Conference CHEMCON-2016, December 27-30, 2016,	Attri, P., Garg, S., Ratan, J. K., Giri, A. S.; A comparative study on oxidation of reactive model dyes mixture by advanced oxidation processes: Reaction kinetic and biodegradability assay
2016	International Conference on Redefining Textiles: Cutting Edge Technology of the Future, RTCT-2016, April 8-10, 2016	Mittal, A., Garg, S., Maiti, M., Bajpai, S., Giri, A. S.; Evaluation of the mechanical properties, water resistant and biodegradability of crosslinked PVA/starch composite films reinforced with fiber
2016	International Conference on Redefining Textiles: Cutting Edge Technology of the Future, RTCT-2016, April 8-10, 2016	Kushwaha, R. K., Garg, S., Bajpai, S.; Synthesis and characterization of iron oxide nanoparticles: application in removal of cadmium and lead metal ions from waste water
2016	International Conference CHEMCON-2016, Dec 27-30, 2016.	Robin R Marlar, Sangeeta Garg & S. Bajpai; Colored waste water treatment using spiral wound nano filtration membrane
2016	International Conference CHEMCON-2016, Dec 27-30, 2016.	Aanchal Mittal, Sangeeta Garg & S. Bajpai; Biocomposite Films Reinforced with Modified Cellulosic Fibre And Nanofibrils
2015	Chemcon 2015 "Chemical Engineering: From Laboratory to Industry" 27-30 December,	Mittal A., Garg S., & Maiti M.; Studies on the properties and biodegradability of PVA/starch composite films reinforced with barley husk fiber
2015	Chemcon 2015 "Chemical Engineering: From Laboratory to Industry" 27-30 December	Minz S., Gupta R., & Garg S.; Degradation of 4-nitrophenol using Fenton's reagent and its kinetic study
2015	International Conference Chemcon 2015 "Chemical Engineering: From Laboratory to Industry" 27-30 December, 2015	Rajkamal Kushwaha, Sangeeta Garg; Removal of cadmium and lead metal ions from synthetic wastewater using iron oxide nanoparticles (nano-Fe <sub>3</sub> O <sub>4</sub> )
2015	International Conference Chemcon 2015 "Chemical Engineering: From Laboratory to Industry" 27-30 December, 2015	Nidhi Aggrwal, Sangeeta Garg & Manjeet Kaur; Waste water treatment using green synthesized iron nanoparticles
2014	International Conference on Emerging Trends in Traditional and Technical Textiles, 11-12th April, 2014	Deepak Kohli, Sangeeta Garg, & A K. Jana; Preparation and studies on the mechanical properties of poly vinyl alcohol films reinforced with Barley husk
2013	International Conference CPIE-2013, March 29-31st, 2013	Punya Chopra, Sangeeta Garg & A K Jana; Optimization of swelling degree and gel mass of starch - PVA blend films after cross linking with Sodium Hexa meta Phosphate

2012	International Conference on "Sustainable Technologies for energy and Environment in Process Industries" (CHEMCON-2012)	Punya Chopra, Sangeeta Garg, A K Jana, Kuber N. Kushwah, Aviral Singh; Study of mechanical properties of PVA/starch blend modified with epichlorohydrine and MWCNT
2012	International Conference on "Sustainable Technologies for energy and Environment in Process Industries" (CHEMCON-12)	Deepak Kohli, Sangeeta Garg, & A K. Jana; Magnetic nano-adsorbents for waste water treatment: A Review
2012	International Conference on "Sustainable Technologies for energy and Environment in Process Industries" (CHEMCON-2012)	Mukesh Agarwal, Ruby Yadav, Sangeeta Garg & A K Jana; Different novel methods for the removal of dyes from waste water: A review
2010	2nd International Conference on Production and Industrial Engineering (CPIE), December 3-5, 2010	Sangeeta Garg,& A K Jana; Studies on the properties of butylated starch - LDPE blend films
2009	International Conference on Emerging Technologies in Environmental Science and Engineering, October 26-28, 2009	Sangeeta Garg,& A K Jana; Studies on the Properties and Characteristics of Starch-LDPE Blend Films using Acetylated Starches with Different DS
2007	2nd International Conference on Advances in Petrochemicals and Polymers, June 25-28, 2007 Bangkok, Thailand	Sangeeta Garg,& A K Jana; Starch Modification Effects on the Properties and Characteristics of Ldpe-Starch Blend Films

### Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book Chapter	Application of response surface methodology to optimize the reaction parameters for grafting of cellulosic fiber	Sustainable Engineering, Springer	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai	978-981-13-6717-5	2019
Book Chapter	Synthesis and characterization of the graft copolymers of starch for the application in packaging films	Sustainable Engineering, Springer	Sangeeta Garg, Aanchal Mittal & Anshuman Premi	978-981-13-6717-5	2019
Book Chapter	Al-Fe and Al-Ti Pillared Saponite Clay Catalysts: Preparation and Characterization	Sustainable Engineering, Springer	Sudha Minz, Renu Gupta & Sangeeta Garg	978-981-13-6717-5	2019
Book Chapter	Degradation of 4-Chlorophenol Using Homogeneous Fenton's Oxidation Process: Kinetic Study	Sustainable Engineering, Springer	Sudha Minz, Renu Gupta & Sangeeta Garg	978-981-13-6717-5	2019
BOOK	Bioplastics and Biocomposites: Packaging Applications"	LAP LAMBERT Academic Publishing, Germany	Aanchal Mittal, Sangeeta Garg & Shailendra Bajpai	978-613-9-93074-6	2018
BOOK	Application of Iron oxide nanoparticles for removal of heavy metals	LAP LAMBERT Academic Publishing, Germany	Rajkamal Kushwaha & Sangeeta Garg	978-613-9-91638-2	2018
BOOK	Starch-Plastic Partially Biodegradable Blend Films: A Review	LAP LAMBERT Academic Publishing, Germany,	Sangeeta Garg & A K Jana	ISBN-978-3-659-44968	2013
BOOK CHAPTER	Degradation of starch/cross linked modified starch-LDPE blend films by enzyme from Bacillus licheniforms (Advances in Polymer Science)	Stadium Press (India) Pvt. Limited, New Delhi,	Sangeeta Garg, Mithu Maiti & A K Jana	ISBN No. 978-93-80012-28-5,323-33 4	2011

## Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator	Sponsored	R&D project work on "Degradation study of Leather Dye by Fenton Like oxidation Process using Iron Oxide nano particles."	TEQIP II	29.12.2015	29.12.2016	50,000	Completed	Dr S Bajpai
Principal Investigator	Sponsored	R&D project work on "Studies on properties of cellulosic nanofibrils, starch nanocrystals and blend films for packaging applications"	TEQIP II	27.1.2017	27.1.2018	50,000	Completed	Dr S Bajpai
Principal Investigator	Sponsored	Industry oriented R&D project on " Removal of color and COD from Tannery Effluent by using Hybrid Process	TEQIP II	04.12.2015	04.12.2016	50,000	Completed	Dr MK Jha
Principal Investigator	Sponsored	Green synthesis of iron oxide nanoparticle and characterization using various techniques	TEQIP III	05.03.2018	05.05.2018	20,060	Completed	

## Events Organized :

Category	Type	Title	Venue	From	To	Designation
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Conference	National	Advances in Chemical Science & Technology (ACST-2018) organized in collaboration with Department of Chemistry, Government Women Engineering College, Ajmer, Rajasthan, India	Department of Chemical Engineering Dr B R Ambedkar National Institute of Technology, Jalandhar	27-Apr-2018	28-Apr-2018	ORGANIZER
Inter National Winter Term GIAN Course	International	Natural Smart Materials For Bio Medical Applications (NSMBA-2016)	Dr B R Ambedkar National Institute of Technology, Jalandhar	07-Nov-2016	11-Nov-2016	CO-ORGANIZER
International Summer Term GIAN Course	International	Industrial Catalytic Technology (ICT-2016)	Department of Chemical Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar	11-Jul-2016	15-Jul-2016	ORGANIZER
International Summer Term GIAN Course	International	Nanotechnology: Synthesis, Characterization, Fabrication and Applications	Dr B R Ambedkar National Institute of Technology, Jalandhar	06-Jun-2016	11-Jun-2016	CO-ORGANIZER
Summer Term Course	National	Water Quality and Management	Department of Chemical Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar	20-Jun-2016	24-Jun-2016	ORGANIZER
Summer Term Course	National	Recent Advances in Energy Technology	Dr B R Ambedkar National Institute of Technology, Jalandhar	02-Jun-2014	06-Jun-2014	ORGANIZER