

Profile Page



Name : Anjireddy Bhavanam

Designation : Assistant Professor Grade-i

Department : Chemical Engineering

Qualification : Post-Doc Chemical Engineering, DST-SERB NPDF (IIT Guwahati)
Ph.D Chemical Engineering (NIT Warangal)
M.Tech Metallurgical & Materials Engineering (NIT Warangal)
B.Tech Chemical Engineering (Bapatla Engineering College)

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Research Interests :

Lignin valorisation, Biofuels and Bioproducts, Waste to energy, Solid waste Management, Thermochemical conversion Processes, Reaction Kinetics, Composite Materials and Corrosion.

Other Profile Links :

Google Scholar Link :

Dr. Anjireddy Bhavanam [Click Here](#) [Research Gate](#) [Click Here](#) [Vidwan](#) [Click Here](#) [Publons](#) [Click Here](#) [ORCID](#) [Click Here](#) [Scopus](#) [Click Here](#) [Microsoft Academic](#) [Click Here](#)

Personal Web Link :

Bioenergy & Bioproducts Lab [Click Here](#)

Journal Publications :

Year	Journal	Publication
2022	Journal of Environmental Science & Engineering	Scenic review on virtues and shortcomings in liquefaction of lignin towards amassment of valuable chemicals and fuel. (Accepted)
2022	Bioresource Technology Reports	Subhrajeet Dash, Shalini Thakur, Anjireddy Bhavanam, Poonam Gera, Catalytic pyrolysis of alkaline lignin: A systematic kinetic study
2021	Fuel 285(2021):119188	Mahboob Alam, Draksharapu Rammohan, Anjireddy Bhavanam and Nageswara Rao Peela. "Wet torrefaction of bamboo saw dust and its co-pyrolysis with plastic". Fuel, 285(2021), 119188. https://doi.org/10.1016/j.fuel.2020.119188 .

2020	Renewable Energy 149 (2020): 1133-1145.	Alam, Mahboob, Anjireddy Bhavanam, Ashirbad Jana, and Nageswara Rao Peela. "Co-pyrolysis of bamboo sawdust and plastic: Synergistic effects and kinetics
2018	Journal of Material Cycles and Waste Management, Volume 20, Issue 4, pp 1923–1933, 2018	Satish Pruthviraj Bhagat, Poonam Gera, Anjireddy Bhavanam, "Catalytic Co-Pyrolysis of Pterospermum Acerifolium and Waste Plastic".
2018	Polymer Composites, Volume 39, Issue 9, 2018 pp 3102-3109	M. Om Prakash, G. Raghavendra, Manoj Panchal, S. Ojha, Bhavanam Anjireddy. "Effects of environmental exposure on tribological properties of Arhar particulate/epoxy composites".
2015	Bioresource Technology, Vol. 178, 2015, pp-126-131	Anjireddy Bhavanam and R.C.Sastry, "Kinetic study of solid waste pyrolysis using distributed activation energy model".
2013	Journal of Scientific & Industrial Research, Vol. 72(09-10), 2013, pp-611-616	Anjireddy Bhavanam and R.C.Sastry, "Modeling of solid waste gasification process for Synthesis gas production".
2011	International Journal of Chemical Engineering and Applications, Vol. 2, No. 6	Anjireddy Bhavanam and R. C. Sastry, "Biomass Gasification Processes in Downdraft Fixed bed Reactor: A Review

Conference Publications :

Year	Conference	Publication
2021	National conference on Sustainable Research in Energy and Environment (SREE-2021), January 15-16, NIT Jalandhar	Ankit Sharma and Anjireddy Bhavanam, "Comparative study of acid and alkaline pretreatment of Bayur tree fruit (Pterospermum acerifolium) using UV-visible spectroscopy".
2021	National conference on Sustainable Research in Energy and Environment (SREE-2021), January 15-16, NIT Jalandhar	Jatinderpal Singh and Anjireddy Bhavanam, "Lignin to Hydrogel: Production Techniques and Applications"
2021	National conference on Sustainable Research in Energy and Environment (SREE-2021), January 15-16, NIT Jalandhar	Akshay Kumar Mehta and Anjireddy Bhavanam, "Extractive Distillation and Pressure-Swing Distillation for THF-Ethanol Separation"
2021	National conference on Sustainable Research in Energy and Environment (SREE-2021), January 15-16, NIT Jalandhar	Shalini Thakur and Anjireddy Bhavanam, "Lignin: Various pre-treatment and characterization techniques"
2021	National conference on Sustainable Research in Energy and Environment (SREE-2021), January 15-16, NIT Jalandhar	Subhrajeet Dash, Anjireddy Bhavanam and Poonam Gera, "Periodical Development of Lignocellulosic Fractionation Techniques to Collect Consummate Lignin",
2021	National conference on Emerging Science and Technologies for Energy and Environment Management (ESTEEM - 2021), January 21-22, MANIT Bhopal.	Subhrajeet Dash, Anjireddy Bhavanam and Poonam Gera, "Scenic Review on virtues and Shortcomings in Liquefaction of Lignin towards amassment of Valuable Chemicals and Fuel",
2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	V. Pranay, S. Ojha, G. Raghavendra, Sumithra, Divya and Anjireddy Bhavanam, "Evaluation of Abrasive wear of Biowaste based silica/carbon particulate epoxy composites",.
2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	Rakesh Kankanam ,P. Subhash Chandra Bose, G. Raghavendra, S. Ojha, Anjireddy Bhavanam, "Overview of gel casted fused silica ceramics",.
2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	Jatinderpal Singh and Anjireddy Bhavanam, "Lignin based hydrogel production and their applications", .

2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	Subhrajeet Dash, Anjireddy Bhavanam, Poonam Gera' "Kinetic Investigation of Pyrolysis and Catalytic Pyrolysis of Alkaline Lignin",
2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	Shubham Madhukar Deshmukh, Poonam Gera, Anjireddy Bhavanam, "Adsorption studies on removal of methylene red using Activated Carbon derived from Bayur (Pterospermum acerifolium) fruit shell",.
2021	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021) 20-22 August, 2021, NIT Jalandhar.	Subhrajeet Dash, Anjireddy Bhavanam, Poonam Gera, "Sodium Hydroxide assisted Biomass Depolymerization of Variable Media Concentration and Loading of Biomass", .
2020	International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2020)February 13-14, 2020, NIT Jalandhar.	Subhrajeet Dash, Anjireddy Bhavanam and Poonam Gera, "Kinetic Study of Catalytic Pyrolysis of Lignin".
2019	2nd International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE - 2019)	Shubham Deshmukh Anjireddy Bhavanam and Poonam Gera," Production and characterization of activated carbon from pterospermum acerifolium".
2018	71st annual session of the Indian institute of Chemical Engineers IICHE, CHEMCON-2018 held at NIT Jalandhar	Shubham Deshmukh, Poonam Gera, and Anjireddy Bhavanam ,"Review on removal of pollutants from air and water by activated carbon derived from various solid waste biomasses.
2018	National Conference on Advances in Chemical Science & Technology, 27-28 April, 2018, NIT Jalandhar	Anjireddy Bhavanam and Anuj, "Thermal Analysis and Co-Combustion characteristics of Municipal Solid Waste and Agricultural Residues".
2018	71st annual session of the Indian institute of Chemical Engineers IICHE, CHEMCON-2018 held at NIT Jalandhar	Subhrajeet Dash, Anjireddy Bhavanam and Poonam Gera," Catalytic copyrolysis-A potential process for converting of solid waste biomass into gasoline range bio-fuel".
2015	International Conference on New Frontiers in Chemical, Energy and Environmental Engineering, March 20-21,2015 ,Warangal, India	Anjireddy Bhavanam and R.C.Sastry," Effect of temperature on solid waste pyrolysis process in a tubular fixed bed reactor"
2013	ASME 2013 International Mechanical Engineering Congress & Exposition, November 15-21, 2013, San Diego, California, USA.	Anjireddy Bhavanam and R.C.Sastry, "Thermogravimetric analysis and characterisation of Yard waste as a feedstock to gasification process
2013	International Conference on Advances in Biotechnology & Bioinformatics & X Convention of the Biotech Research Society, November 25-26, 2013, Pune, India	Anjireddy Bhavanam and R.C.Sastry, "Thermal degradation kinetics of municipal solid waste, agricultural residues and their blends in inert and oxidative atmospheres,"
2013	7th International Symposium on Feedstock Recycling of Polymeric Materials (7th ISFR), October 23-26, 2013, New Delhi, India.	Anjireddy Bhavanam and R.C.Sastry, "Energy recovery potential and characterization studies of sawdust and rice husk."
2011	National Conference on 'Recent Advances in Bio-energy Research' Organized by Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala (Punjab) during November 25-26, 2011	Anjireddy Bhavanam and R.C.Sastry, "Modeling of Biomass Gasification Processes in Downdraft Gasifier-A Review"
2011	India- UK Summer School on Efficient Fossil Fuel Technologies was organized during 4-10 July 2011 jointly by Centre for energy, IIT Guwahati and University of Nottingham, UK	Anjireddy Bhavanam and R.C.Sastry, "State-of-the art of Biomass gasification in India

2011	A National Level Student Workshop held at National Institute of technology, Warangal during 26-27 March 2011.	Anjireddy Bhavanam and M.K.Mohan, “Stress Corrosion Studies on Nickel based Superalloy Superni C276”, at SANKHARAN 2011 (Environmental Degradation of Materials Analysis and Control)
2011	49th NMD - 65th ATM held at Hyderabad 13- 16, November 2011	Anjireddy Bhavanam and M.K.Mohan, “Electrochemical corrosion studies on a nickel based super alloy, Superni C276 in different environments
		Subhrajeet Dash, Anjireddy Bhavanam and Poonam Gera, “Kinetic Study of Catalytic Pyrolysis of Lignin”, International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2020), February 13-14, 2020, NIT Jalandhar.

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book chapter	Catalysts for conversion of lignocellulosic biomass into platform chemicals and bioaromatics in Handbook of Biomass Valorization for Industrial Applications (In-Press)	Scrivener Publishing LLC, Beverly, USA	Anjireddy Bhavanam, Nitin Naresh Pandhare, Poonam Gera, Subhrajeet dash,		2021
Book chapter	Valorisation of Lignin towards production of novel functional materials”, Handbook of Biomass Valorization for Industrial Applications,(In-Press)	Scrivener Publishing LLC, Beverly, USA	Anjireddy Bhavanam, Raghavendra Gujjala, G. Srinivasu, Shakuntala Ojha,		2021
Book chapter	Process Engineering Principles and Technological aspects of Synthesis gas Production from Biomass	Studium Press LLC, USA.	Anjireddy Bhavanam, Rama Raju Baadhe and R.C.Sastry	978162699 0272	2014
Book chapter	Modeling of Biomass Gasification Processes in Downdraft Gasifier-A Review	SSS-NIRE, Kapurthala, India	Anjireddy Bhavanam and R.C.Sastry	978819270 9703	2011

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator	Seed grant	Catalytic Co-pyrolysis studies of biomass and plastics in producing bio-fuels and value added products	TEQIP-III	2019	2020	200000	Ongoing	Dr. Deepak Sahu

Co-Investigator	M.Tech Project	Preparation of activated carbon from biomass and its adsorption studies for water and air pollutants removal	TEQIP-III	2018	2019	44000	Completed	Dr.Poonam Gera
Principal Investigator	Sponsored project (granted for National Post Doctoral Fellow-2017), IIT Guwahati	Potential reaction pathways and kinetics of catalytic co-pyrolysis of lignocellulosic biomass and waste plastics in producing value added products	DST-Science & Engineering Research Board (SERB)	2017	2019	19,20,000	Completed	Dr. Nageswara Rao Peela (Mentor)
Co-Investigator	Sponsored project	Sponsored project on Establishment of Science Technology and Innovation (STI) Hub for Empowerment of SC/ST	DST-SEED	2019	2022	2.49 Crores	Ongoing	Prof. L K Awasthi, Dr. S K Misra, Dr. Sumer Singh Meena, Dr. Aneel Mohanty, Dr. Nikhil GN, Dr. Nita

Events Organized :

Category	Type	Title	Venue	From	To	Designation
STC	National	One Week Short Term Course (Under TEQIP-III) on Emerging Technologies for Next-generation Bio-fuels and Bio-products	NIT Jalandhar	21-02-20	25-02-20	Coordinator
Conference	International	International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2020)	NIT Jalandhar	13-02-20	14-02-20	Joint Organizing Secretary

Online Short Term Course	National	Valorization of lignocellulosic biomass towards sustainable fuels, chemicals and materials	NIT Jalandhar under the aegis of TEQIP-III	18-09-2020	22-09-2020	Coordinator
Conference	National	2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021)	NIT Jalandhar	20-08-2021	22-08-2021	Organizing Secretary
STC	National	Online STC on Advanced Techniques of Material Characterization for Research”	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-21	29-10-21	Coordinator

Professional Affiliations :

Designation	Organization
Life Member	Biotech Research Society of India

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Diksha	Composite Biofilms from lignocellulosic biomass	Ongoing	2022	Dr Giri Babu
Subhrajeet Dash	Experimental Investigations on Hydrothermal liquefaction of Lignin for the production of Bio-based Chemicals and Bio-fuels	Ongoing	2018	Dr.Poonam Gera

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
(PG) Shalini Thakur	KINETIC STUDY ON CATALYTIC PYROLYSIS OF ALKALI LIGNIN	Completed	2021	
(PG Project)Shubham Madhukar Deshmukh	Preparation of Activated Carbon from Pterospermum Acerifolium and Its Adsorption Studies on Textile Industry Effluent	Completed	2019	Dr.Poonam Gera
(UG Project) Nalin Mishra and Ankit Kumar	Adsorption studies on removal of pollutants from waste water using activated charcoal prepared from waste biomass.	Completed	2018-2019	
(UG Project) Prerit Kataria and Surbhi Sharma	Comparative study of double pipe and plate and frame heat exchanger using Aspen.	Completed	2018-2019	Dr.Poonam Gera
(UG Project) Maitri Gupta and Shradha Bhalla	co-pyrolysis kinetics of biomass and LDPE using modified Red Mud catalyst.	Completed	2018-2019	

Admin. Responsibilities :

Position Held	Organization	From	To
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Warden, Mega Boys Hostels F and B	NIT Jalandhar	2018	2019
Coordinator, Institute Instrumentation Centre (IIC)	NIT Jalandhar	May 2021	Present

Award and Honours :

Title	Activity	Given by	Year
Young Researcher Award, 2020	Research	Institute of Scholars (InSc)	2020
National Post Doctoral Fellow	Research	DST-SERB	2017
Travel grant from the TEQIP, NIT Warangal	Attending International Mechanical Engineering Congress & Exposition, 2013, San Diego, California, USA,	TEQIP, NIT Warangal	2013