Dr. PARMESH KUMAR CHAUDHARI

Associate Professor, Chemical Engineering Department
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Academic Profile:

1	PhD (Chemical Engineering) , IIT Roorkee
2	M.E. (Chemical Engineering), University of Roorkee
3	B.E. (Chemical Engineering), Govt. Engg. College, Raipur, C.G

Courses Taught

Inorganic chemical technology, Organic chemical technology, Mechanical operation, Computer programming in C++, Fluid flow operation, Fuel technology, Chemical Engineering Thermodynamics, Mechanical aspect design, Heat transfer equipment design, Mass transfer equipment design, Diffusion and absorption, Environmental Engineering, Process instrumentation and control, Process modeling and simulation, Advance wastewater treatment, Computer aided design, Fluidization Engineering , Reaction Engineering, Transport phenomena.

Research Interests/Specialization

Chemical Process Design, Fluidization Engineering, Industrial Wastewater Treatment, Process Modeling and Simulation, Reaction Engineering

Thesis Supervisions

No.	Name of student	Name of Supervisor	Topic	Status
1	Mr Abhinesh Prajapati	Dr P. K. Chaudhari	Treatment of rice grain based distillery wastewater	Awarded on July 28, 2014
2	Mr Bidyit Majumdar	Dr P. K. Chaudhari	Treatment of wastewater from maize based industry	Awarded on September 08, 2014
3	Mr. Ompralash Sahu	Dr P. K. Chaudhari	Treatment of sugar industry wastewater	Submitted on September 2014

4	Mr. R. K. Chaudhary	Dr P. K. Chaudhari	Treatment of coking wastewater	ongoing
5	Mr. Mukesh Thete	Dr P. K. Chaudhari	Treatment of parboiled mill wastewater of rice industry	ongoing
6	Ms Kruti Jethwa	Dr. Samir Bajpai Dr P. K. Chaudhari	Wet land water treatment	ongoing

Patent

No	Name of Investigators	Topic	National/International	Status
1	Parmesh Kumar Chaudhari and Abhinesh Kumar Prajapati	Electrochemical Followed by Coagulation process for Treatment of Biodigester Effluent of Rice Grain Based Alcohol Distillery	National	Applied on 12/01/2015

Research Publication in Journals **30**

SCI 18, SCIE 3, Referred 4 , International conference proceeding 3 , National Journal 3

No	Name of Author(s)	Topic	Journal's Name	Details
1	Abhinesh Kumar Prajapati, Parmesh Kumar Chaudhari	Physicochemical treatment of distillery wastewater- A Review	Chemical Engineering Communications(Taylor and Francis)	202 (2015) 1098-1117
2	O. P. Sahu, V. Gupta, P. K. Chaudhari, V. K. Srivastava,	Electrochemical treatment of actual sugar industry wastewater using aluminum electrode	International Journal of Environmental Science and Technology (Springer)	DOI 10.1007/s13762-015-0774-5 (2015)
3	O. P. Sahu, P. K. Chaudhari	Electrochemical treatment of sugar industry wastewater: COD and color removal	Journal of Electroanalytical Chemistry (Elsevier)	739 (2015)122-129
4	Abhinesh Kumar Prajapati, Parmesh Kumar Chaudhari, Bidyut Mazumdar, Rumi Choudhary	Catalytic thermal treatment (catalytic thermolysis) of a rice grain based biodigester effluent of an alcohol distillery plant	Environmental Technology (Taylor and Francis)	DOI:10.1080/09593330.2015.1036787
5	Bidyut Mazumdar , Parmesh Kumar Chaudhari	Electrochemical treatment of biodigester effluent of maize-based starch industry: COD and color removal	Desalination and Water Treatment (Taylor and Francis)	55 (7) (2015)1972-1980

6	Abhinesh Kumar Prajapati, Rumi Choudhary, Kumar Verma, Parmesh Kumar Chaudhari , Amit Dubey	Decolorization and removal of chemical oxygen demand (COD) of rice grain–based biodigester distillery effluent (BDE) using inorganic coagulants	Desalination and Water Treatment (Taylor and Francis)	53(2015)2204-2215
7	Bidyut Mazumdar , Parmesh Kumar Chaudhari	Electrochemical treatment of biodigester effluent of maize-based starch industry using iron electrode"	Indian Journal of Chemical Technology (NISCAIR)	Accepted (2014)
8	Abhinesh Kumar Prajapati, Parmesh Kumar Chaudhari	Electrochemical treatment of rice grain-based distillery effluent: chemical oxygen demand and colour removal	Environmental Technology (Taylor and Francis)	35, (2014) 242-249
9	Omprakash Sahu, Bidyut Mazumdar, Parmesh Kumar Chaudhari	Treatment of wastewater by electrocoagulation: A review	Environmental Science and Pollution Research (Springer)	21(2014) 2397-2413
10	Om Prakash Sahu, Parmesh Kumar Chaudhari	Removal of color and chemical oxygen demand from sugar industry wastewater using thermolysis processes	Desalination and Water Treatment (Taylor and Francis)	DOI: 10.1080/19443994.2014.956797
11	Abhinesh Kumar Prajapati and Parmesh Kumar Chaudhari	Electrochemical treatment of rice grain based distillery biodigester effluent	Chemical Engineering and Technology (Willey)	37 (2014) 1-9
12	Parmesh Kumar Chaudhari, Shri Chand, Indra Mani Mishra	Kinetics of catalytic Thermal Treatment (Catalytic Thermolysis) of Bio-digester Effluent of an alcohol distillery plant	Chemical Engineering Communication (Taylor and Francis)	199 (2012) 874–888
13	Parmesh Kumar Chaudhari, Anand Singh, Basheswar Prasad, Indra Mani Mishra and Shri Chand	Thermal oxidation kinetics of solid residues obtained from the catalytic thermolysis and coagulation of alcohol distillery	Energy Sourses, Part A (Taylor and Francis)	34(2012)336–346
14	Parmesh Kumar Chaudhari, Rajkumar Singh, Indra Mani Mishra and Shri Chand	Kinetics of Catalytic thermal pretreatment (Catalytic thermolysis) of distillewry wastewater and biodigester effluent of an alcohol production plant at atmospheric pressure	International Journal of Chemical Reactor Engineering	8(2010) 1-22
15	Parmesh Kumar Chaudhari Bidyut Majumdar, Rumi Choudhary, Deepak Kumar Yadav and Shri Chand.	Treatment of paper and pulp mill effluent by coagulation	Environmental Technology (Taylor and Francis)	31 (2010) 357-363
16	Parmesh Kumar Chaudhari, Indra Mani Mishra and Shri Chand	Effluent treatment for alcohol distillery: Catalytic thermal pretreatment (catalytic thermolysis) with energy recovery	Chemical Engineering Journal (Elsevier)	136 (2008) 14-24
17	Parmesh Kumar Parmesh Kumar	Decolourization and removal of chemical oxygen demand (COD)	Journal of Colloids and surfaces A :	296(2007) 238-247

	Chaudhari, Indra Mani Mishra and Shri Chand	with energy recovery: Treatment of biodigester effluent of a molasses-based alcohol distillery using inorganic coagulants	Physicochemical. Engineering Aspects (Elsevier)	
18	Parmesh Kumar Chaudhari, Indra Mani Mishra and Shri Chand.	Catalytic thermal treatment (catalytic thermolysis) of biodigester effluent of an alcohol distillery plant	Industrial and Engineering Chemistry Research (ACS)	44(2005) 2518-2524
19	Bidyut Mazumdar , Parmesh Kumar Chaudhari	Treatment of biodigester effluent of maize-based starch industry by coagulation	Research Journal of Chemistry and Environment	17(5) 2014
20	Anurag Garg, VVVSS Narayana, Parmesh Chaudhari and Shri Chand.	Treatment of pulp and paper mill effluent	Journal of Scientific and Industrial Research (NISCAIR)	63, 667-671 (2004)
21	Parmesh Kumar Chaudhari , Pradeep Sainee and Shri Chand.	Comparative performance of Ion-exchanged ZSM-5 and Y-Zeolite catalysts for Toluene Disproportionation Reaction	Journal of Scientific & Industrial Research (NISCAIR)	61, 810-818 (2002)

Research Publication in International Non SCI/ESCI Journals Referred Journals 4

No	Name of Authour(s)	Topic	Journal's Name	Details
1	Omprakash Sahu and Parmesh Kumar Chaudhari	The Characteristics, Effects, and Treatment of wastewater in Sugarcane Industry	Water Quality, Exposure and Health (Springer)	(ISSN 1876-1658) DOI 10.1007/s12403-015-0158-6,
2	Omprakash Sahu, Debashri Paul and Parmesh Kumar Chaudhari	A Comparatively Study on Thermal and Advance Oxidation Wastewater Treatment Process: Review	Journal of Chemical Engineering and Chemistry Research	1, 353-364, 2014
3	Om Prakash Sahu, Parmesh Kumar Chaudhari	Physicochemical Treatment of Sugar Industry Wastewater: Coagulation Processes	Environmental Quality Management (Willey)	23, 49-69, (2014)
4	Parmesh Kumar Chaudhari, Bidyut Majumdar, Rajkumar Singh and Shri Chand	Treatment of biodigester effluent: Catalytic thermal treatment (catalytic thermolysis) with energy recovery followed by wet oxidation	Journal of Environmental Research and Development	4(2) 506-505 (2009), ISSN 0367-827X

Research Publication in International Journals Conference Proceedings				03
No	**Name of Authour(s)**	**Topic**	**Journal's Name**	**Details**
1	Abhinesh Kumar Prajapati and Parmesh Kumar Chaudhari and Bidyut Mazumdar.	Electrochemical treatment of rice grain based distillery effluent using iron electrode, International conference on global scenario in environmental and energy, March 14-16, 2013	International Journal of Chemical Technology and Research (Sphinx Knowledge House)	5(2) 694-698, 2013
2	Bidyut Mazumdar , Abhinesh Kumar Prajapati and Parmesh Kumar Chaudhari.	Electrochemical process for removal of color from effluent of maize based starch processing unit, International conference on global scenario in environmental and energy International, March 14-16, 2013	Journal of Chemical Technology and Research (Sphinx Knowledge House)	5(2) 707-711, 2013
3	Parmesh Kumar Chaudhari	Removal of mercaptant from diesel, International conference on future environment and energy, February 26-28, 2012	International Proceedings of Chemical Biological and Environmental Engineering, ISSN 2010-4618	90-94(2012)

Paper Published in National Journals				02
No	**Name of Authour(s)**	**Topic**	**Journal's Name**	**Details**
1	Rumi Chaudhari, P. K. Chaudhari, Amit Keshav and R. K. Singh	Synthesis and characterization of some Cobalt Phthalocyanine Carboxylamide used in the Merox process	Research Journal of Engineering and Technology (ANV) , ISSN: 0976-2973	1 (1), Jan-Mar. 2010
2	Parmesh Kumar Chaudhari, Vijay Singh Sikarwar, Sandeepan Ray, Vijay Agrawa	Effect of various parameters on cell temperature for production of aluminum.	IUP Journal of Chemical Engineering (IUP), ISSN: 0975-6337	2012

Papers in Conferences	30

Sixteen papers have been presented/accepted in International conference/seminar and **Fourteen** in National conference/seminar

Papers Reviewed

1. Indian Chemical Engineers, Indian Institute of Chemical Engineers
2. CLEAN Soil Air Water, Willey-vch
3. International Journal of Environmental and Waste Management (IJEWM), Inderscience
4. Journal of Petrolium Technology and alternative Fuels, Academic, Australia
5. Energy Sources A:, Taylor and Francis
6. Chemical Engineering Journal, Elsevier
7. Environment Engineering and Management, Elsevier
8. Chemical Engineering Communication, Taylor and Francis
9. Journal of Environmental Management, Elsevier
10. Journal of Chemical and Environmental Engineering , Elsevier
11. Environmental Technology, Taylor and Francis
12. Desalination and Water Treatment, Taylor and Francis

Conference Organized

No	Post	Topic	Place and date
1	Organizing secretary	International Conference in Advances on Chemical Engineering-2013	National Institute of Technology Raipur, March 8-9, 2013.
2	Organizing secretary	National Symposium on Reaction Engineering-2010	National Institute of Technology Raipur, January 21-22, 2010

Short Term Course Organized

No	Post	Topic	Place and date	Sponsored by
1	Coordinator	Waste Treatment and Cleaner Technology	National Institute of Technology Raipur, May 28-June 1, 2012	NIT Raipur (partially)
2	Coordinator	Chemical Process Modeling and	National Institute of Technology Raipur, June	Self

		Simulation	23- 27, 2014	

Editor (Books, Proceeding of Conference/Workshop)

1. Editor of Proceeding of symposium "National Symposium on Reaction Engineering-2010", held at National Institute of Technology Raipur, January 21-22, 2010.
2. Editor of Processing of International Conference on Advances on Chemical Engineering-2013, ", held at National Institute of Technology Raipur, March 8-9, 2013.

Lab Manual Prepared

Inorganic chemical technology, Organic chemical technology, Computer programming in C++, Fluid flow operation, Computer aided design, Numerical methods.

Honors/Award/Fellowship

- Fellowship of Rural Talent Search Examination
- Represented Madhya Pradesh in National Talent Search Examination and received fellowship for the same.

Projects

No	Topic	Funding agency	Amount	Status
1	Treatment of biodigester effluent of rice grain based industry	CG-COST	1.05 lakhs Feb. 2011-March 2013	Completed
2	Scientific study on impact of immersion of idols on water quality	CG-COST	5.344 lakhs	Applied
3	Electro Chemical Treatment of Sugar Industry Wastewater and Water Management in Sugar Industry	DST	24.07 lakhs	Applied
4	Electrochemical treatment of rice straw	CSIR	22.0 lakhs	Applied

	based pulp and paper mill effluent			
5	COD and color removal of dye bearing wastewater	CG-COST	5.0 lakhs	Presented

M Tech Thesis

1. Miss Debashri Paul, Roll No. 13245007. "Simulation of riser catalyst cracking reactor" 2015
2. Miss Vandana Gupta, Roll No. 12245015, "Reduction in COD and color of sugar industry effluent", Date of Award: 11/06/2014
3. Miss Neela Acharya, Roll No. 12245008, "Catalytic treatment of dye wastewater", Date of Award: 11/06/2014
4. Miss Pankhuri Shrivastava, Roll No. 09245007 " Saponification studies of ethyl acetate", Date of Award: 03/02/2012
5. Shikha Daharwal, Roll No. 10245007, " Removal of fluoride from wastewater" Date of Award: 05/08/2012.
6. Mr. Deepak Sharma, Roll No. 09245002, "Treatment of dairy wastewater" , Date of Award: 03/02/2012
7. Mr.. Abhinesh Prajapati , " Treatment of distillery wastewater", Date of Award: 15/04/2010.
8. Mrs. Rumy Chaudhary ," Synthesis of catalyst and desulphurization of thio-compound", 2010. Co-guide Dr. Rajkumar Singh, Scientist B, IIP Dehradun, Date of Award: 15/04/2010.
9. Miss Pooja Uddappa , "Software approach for development of heat exchanger using pinch analysis" October 2007.

B. Tech Thesis

Fifteen B. Tech thesis supervised on different topics.

1. Distillation studies of benzene –toluene in sieve plate column
2. Concentration of NaCl in triple effect evaporator
3. Modeling and simulation of triple effect evaporator
4. Adsorption studies of CO_2 in packed column using NaOH
5. Treatment of distillery wastewater by catalytic thermolysis
6. Design of equipment for thermolysis
7. Process design of production of glycol
8. Treatment of wastewater of maize industry by coagulation
9. Modeling and simulation of multi component fractional distillation column

10. Removing of sulfur from petroleum
11. Catalytic wet oxidation of Phenolic effluent
12. Synthetic of nano particle and its application

Practicals included in B. Tech/M.tech Labs

(i) Catalytic thermal treatment of organic effluents

(ii) Electrochemical treatment of organic wastewater

(iii) Simulation of double effect evaporator

(iv) Simulation of sieve plate distillation column for binary system

Administrative Posts Hold

- Head of Department since September 2011- September 2013
- Chairman DRC, 2011-12
- Chairman board of studies, 2011-12
- Assistant Superintendent of Examinations in 2007 and 2008
- Hostel Warden, since November 2006
- NSS Program officer 2000

Member of Professional Bodies

Life Member of Indian Institute of Chemical Engineers (IIChE), Kolkata, India (LM -14249)

Life Member of Institution of Engineers (IE), Kolkata, India

Life Member of Indian Society of Technical Education (ISTE), Newdelhi, India (LM-81774)

Life Member of Indian Association for Environmental Management, Nagpur (LM-1725)

April 20, 2015 **P. K. Chaudhari**