Issue – 09

UPL UNIVERSITY OF SUSTAINABLE TECHNOLOGY

CHEMICAL ENGINEERING DEPARTMENT

Chemezine

Jan 2022 – Jun 2022

CHEMICAL ENGINEERING MAGAZINE

Group photograph of Semester-VI students and faculty members during One day workshop on process simulation

NBA accredited Chemical Engineering Department

NAAC accredited Shroff S. R. Rotary Institute of Chemical Technology

Creating Competent Chemical Engineers for the world of tomorrow

DEPARTMENT OF CHEMICAL ENGINEERING, SRICT

To achieve excellence in Chemical Engineering and allied fields by providing excellent teaching learning experience enabling students to become competent professionals to tackle global issues.

MISSION

- To provide excellent technical education to students with basics of chemical engineering.
- To provide theoretical and practical education so that students vigorously apply knowledge in solving chemical engineering problems for sustained development.
- To inculcate professional ethics among students by exposing them to state of the art technologies in the field.
- To inspire students for lifelong learning and to develop leadership qualities in their career.

Program Educational Outcomes (PEOs) of Department

- To impart the fundamentals of chemical engineering and enable them to have a successful career in wide range of core industries.
- To deliver quality technical education thereby developing sustainable technology in addressing global issues.
- To prepare graduates who are capable of solving complex chemical engineering problems.
- To provide practical aspects of chemical engineering to the students by ways of industrial visits, expert lectures and increased industry-institute interaction thereby making students industry ready.
- To prepare graduates who can effectively communicate, demonstrate leadership qualities with creative thinking and professional ethics.

Message from our leader..

Dear Students,

The Chemical Engineering Department is now considered an established and worthy department in our institute as well as outside. Gradually, its affiliation with GTU is getting leaner and leaner. From 2024 onwards, it will be the UPL University department.

Although we talk about the Department, every student matters a lot. In fact, during the four years stay in the department and participating in several activities under the banner of Chemical Engineering Department you have imbibed certain unique traits of the department. That's why we call it as discipline. These qualities in life make a person special and give good strength to face challenges and new situations. The final year project work teaches you how to correlate theory with practice; the announcement of results teach you to sustain surprizes – good or bad; the NBA activity participation taught you team work to produce quality with formidable documentation; the 100 point activity definitely taught you compilation and record keeping, and many others to extend this list. Overall, I, however, believe that these four years have given you an insight into living the life more appreciatively and wholly.

I extend my best wishes to you all for your successful and happy life ahead.

Prof. Dr. Shrikant J. Wagh
Provost I/c, UPL University of sustainable technology

INDUSTRIAL VISITS

Adm. Batch	Sem	Date	Name of Industry
2019	VI	24.02.2022	Jayshree Aromatics
		24.03.2022	ETL, Ankleshwar
		04.04.2022	UPL-5, Jaghadia
2020	IV	20.05.2022	Bhavya Pharma
		24.05.2022	Heubach Colour
2021	I	25.5.2022	BEIL, Ankleshwar

Semester-VI students visit at UPL, Unit-5, Jaghadia

Semester-IV students visit at Bhavya Pharma Chem., Ankleshwar

EXPERT LECTURES

Date	Expert	Designation	Topic
21-03-22	Dr. Maulin Shah	Dy. GM, ETL	Waste water treatment
12-03-22	Mr. Rahul Chaudhari	Chemical Engineer, Aarti Ind. Dahej	Pumps and Vacuum Systems
07-03-22	Mr. Pinkal Shah	Mechanical engineer, Shree Polymers, Ank.	Why engineering is Important?
19-02-22	Dr. G H Thanki	Principal Consultant Corrosion Control & monitoring consultancy	Overview of corrosion and it's importance
21-12-21	Mr S I Thakar	Retired officer from GNFC	Chemical Engineering a versatile profession
17-02-22	Mr. Joy M. Shah	Consultant for sustainable manufacturing	Overview of process safety and management
12-02-22	Mr. Niraj Dubey	Design and development div., Lanza Tech Pvt Ltd	Hazop analysis and risk assessment
12-01-22	Mr. Dharmendra	Fireman, BEIL	Fire prevention and protection
07-12-21	Mr. Snehal Tralsawala	CEO, Prism Consultant	Safety- An Attitude

PEER LEARNING INITIATIVE

Name of student	Sem	Course Name	PLI Delivered in semester
Shubham Gupta	8	MTO-2	6
Harish Verma	8	MTO-2	6
Shubham Gupta	8	CRE-I	6
Smith Shah	6	PHT	6
Kaushik V.	6	PHT	4
Biswari Harsh	6	PHT	4
Patel Kinjal	6	PHT	4
Shubham Gupta	8	WWE	4

Name of student	Sem	Course Name	PLI in Semester
Masud Bilal Shaikh	6	UPCT	4
Om Patel	6	UPCT	4
Pushpak Patil	PG-4	WWE	6
Sanjog Deore	PG-4	ASP	6
Pushpak Patil	PG-4	ASP	6
Vaijapurkar Kaushik	6	CET-2	4
Daivik	6	CET-2	4
Meet Patel	8	CET-2	4

Name of student	Sem	Course Name	PLI Delivered in Semester
Rahul Patel	6	NMCE	4
Kaushik V.	6	UPCT	4
Smith Shah	6	UPCT	4
Rutvij Patel	8	CRR-I	6
Sanjog Deora	PG-4	ASP	6
Pushpak Patil	PG-4	ASP	6

Under Peer learning initiative (PLI), senior student delivers technical content to peers making it comfortable and easy students. It also improves communications skills, and professional development.

UNIVERSITY EXAM RESULTS B.E. Semester-I, III, V & VII Winter-2021

CHEMICAL ENGINEERING BRANCH				
Semester	PASS	Result	Branch Rank in GTU	No. of students in Top-10 in GTU (Branch wise)
BE-III	68/77	88.31%	1	02
BE-V	77/82	80.68%	3	05
BE-VII	67/70	95.71%	3	03
ME-III	08/09	99.91%	2	05

B.E Chemical Engineering Toppers Semester-VII, Winter -2021				
Name	SPI	CPI	CGPA	Rank (as per CPI)
THAKER YASHKUMAR	9.25	9.46	9.54	3rd Rank in GTU - Branch wise
GUPTA SHUBHAM	9.33	9.45	9.66	5th Rank in GTU - Branch wise
SAJJAN SNEHA	9.25	9.43	9.51	6th Rank in GTU - Branch wise

B.E. Chemical Engineering Toppers Semester-V, Winter -2021			
Name	CPI	SPI	Rank (as per CPI)
SHAH DEEP YOGESH	9.80	9.48	1st Rank in GTU - Branch wise
VAIJAPURKAR KAUSHIK	9.63	9.17	4th Rank in GTU - Branch wise
PATEL DHARA	9.53	9.39	6th Rank in GTU - Branch wise
PATEL ABHAY	9.51	9.74	7th Rank in GTU - Branch wise
HAJARIWALA KRISIL	9.51	9.30	8th Rank in GTU - Branch wise

B.E. Chemical Engineering Toppers Semester-III, Winter-2021			
Name	CPI	SPI	Rank (BRANCH WISE as per CPI)
RAJ ADITYASINH	9.73	9.43	2nd Rank in GTU (Branch wise)
CHANDEGRA MEET	9.63	9.57	4th Rank in GTU (Branch wise)

B.E. Chemical Engineering Toppers Semester-I, Winter-2021	
Name	SPI
GOHIL VANSH	9.62
PATEL DIPALI	9.52

Chemical Engineering Students Participation in Annual Cultural and Sports Day Celebration

Shubham Gupta (Chemical Engineering, Semester-VIII), receiving Best Students – runners up award in Final year Best student category during Annual Cultural Festival – REVA FEST 2022

Winstint-2022 Annual Sports Day Celebration

CHAMPIONS

B.E. Chemical Engineering Semester-VIII

EVENTS

CHEMICAL CARNIVAL

The ability to work together towards a common goal is essential, as well as an important life skill. With an aim to inculcate these life skills, a quiz and team building games were organized by the department of chemical engineering on 05th February 2022. Students had fun while understanding the importance of teamwork.

Under the banner of IIChE, B.E and Diploma, Semester-2 student organized Quiz competition with a theme ‘Aazadi Ka Amrut Mahotsav’ on 14th May 2022.

The Chemical Engineering Department organized a meeting with parents of first-year B.E. and D.E. students on 30th April 2022. Parents were made aware of various policies, and academic and co-curricular activities. The overall performances of students were discussed.

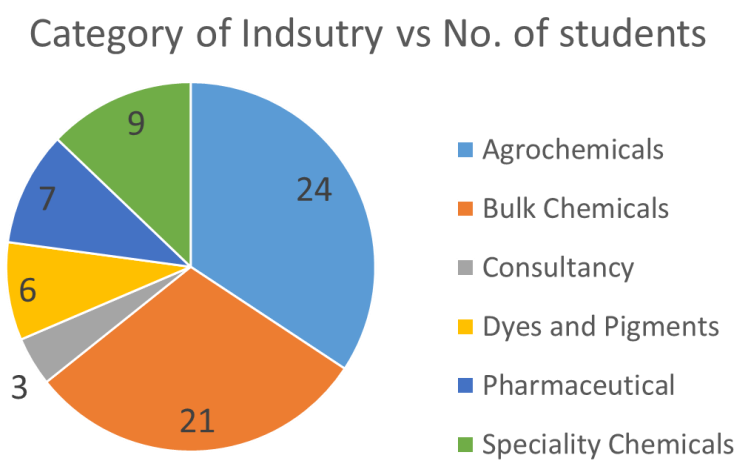
One Day Workshop on Hands on Training on Process Simulation was organized for Semester-VI students on 08th April 2022. Various modules including selection of fluid package, Simulation of reactors, piping system and separation columns were covered.

Industrial Training

Admission batch 2019-23

100 % Students have undergone minimum 2 weeks of Industrial Training

Sr. No.	Name of the Industry	No. of students
1	Aarti Industries Limited, Ankleshwar	2
2	Archroma India Pvt. Ltd., Ankleshwar	2
3	BASF India Limited, Dahej	2
4	Bharat Rasayan Ltd., Dahej	1
5	Deepak Nitrite Ltd., Nandesari	1
6	Extreme Engineering Technology Consultant LLP, Bharuch	3
7	FMC Cheminova India Ltd., Ankleshwar	2
8	Godarej Industries Ltd., Valia	13
9	Gujarat Alkalies And Chemicals Limited., Dahej	2
10	Gujarat Fluorochemicals Limited (GFL), Dahej	1
11	Hemani Industries Ltd., Dahej	1
12	J B Chemicals And Pharmaceuticals Ltd., Panoli	2
13	Meghmani Finechem Ltd., Dahej	2
14	Niranjan Chemicals, Ankleshwar	2
15	Prerana Chemical Industries, Ankleshwar	2
16	Rachana Dye Chem Pvt. Ltd., Panoli	5
17	Ronson Pigments, Ankleshwar	1
18	RPG Life Science Ltd. Ankleshwar	1
19	Solvay Specialities India Pvt. Ltd., Panoli	5
20	United Phosphorous Limited(UPL),Unit-1, Ankleshwar	8
21	United Phosphorus Limited Unit 2, Ankleshwar	7
22	United Phosphorus Limited,Unit-3, Ankleshwar	2
23	Zydus Cadila Healthcare Limited (Unit-1), Ankleshwar	3



PLACEMENT OF BATCH 2018-22

STUDENT NAME	PLACED INDUSTRY NAME
Jill Bhadania	Reliance
Harshrajsinh H Bharthania	Asian paints
Pranay Kaushikkumar Bhatia	Nocil
Chauhan Akshar	Nocil
Shubham Chauhan	UPL
Dhimant Dave	Fermenich
Desai Nilesh Govindbhai	UPL
Abhishek Ashokkumar Gandhi	UPL
Jaivil Gandhi	Nocil
Vanrajsinh Narendrasinh Gohil	Asian paints
Shubham Gupta	TCS
Prashant Jadhav	Asian paints
Sakshee Jain	UPL
Kanara Shubham M.	Nocil
Jayrajsinh Kher	UPL
Shashank Jayeshbhai Khetani	UPL
Vibhuti Kishore	Nocil
Tushar Rameshbhai Mistry	UPL
Modi Harsh Sanjaykumar	Star oxochem
Kishan Rajeshbhai Panchal	UPL
Patel Devang Vinodbhai	Reliance
Jyot Patel	Convergence

STUDENT NAME	PLACED INDUSTRY NAME
Patel Kirtankumar	Shree Parshwnath
Patel Meet Vijayakumar	Reliance
Nikunj Patel	TCS
Patel Parajkumar Vishvasbhai	Reliance
Vasu Patel	Nocil
Vismaykumar Patel	UPL
Patel Yashkumar Maheshbhai	Nocil
Jayesh Prajapati	UPL
Jyoti Rakholiya	UPL
Hardeepsinh Rana	UPL
Rana Rajdipsinh Pradipsinh	Shree Parshwnath
Sneha Sajjan	UPL
Bhargavsinh Solanki	Lanxess
Mayur S Suryavanshi	UPL
Yash Jayantilal Suvagiya	Nocil
Yashkumar Thaker	Shree Parshwnath
Vaghasiya Harsh	Nocil
Harish Verma	Reliance
Pratik Prakash Thakre	Star oxochem
Patel Dhruv Vindochandra	Reliance
Patel Hetkumar Jigneshbhai	Lanxess

Student Speaks

A Journey Worth Cherishing..

To describe 4 years at SRICT on paper is one of the most difficult tasks, personally I have seen myself getting transformed into an individual with skills that keep me at par. I had ample opportunities to develop and grow myself into a learned professional along with a good human being.

I am even grateful that I am getting the chance to work with the prestigious organization **UPL Ltd** because of **SRICT**. It's been 2 weeks since I joined the organization, and I can proudly say that, if you are willing to contribute to the organization or society as a whole, this place is the best. I am working with the best of mentors, teams and colleagues, and even looking forward that some of you may join in along! One of the best things I found is that here you get a chance to make your own goal and everyone contributes their part towards the same.

To sum up SRICT is the place that I found myself indeed lucky to be a part of, and also for transforming me into a better individual and to UPL I can say I have whatever I have learned I will contribute my best for the best!

Sakshee Jain

Student Speaks

Contemporary One!

Hello there!

My name is Monika Sajjansingh Jadiya, pursuing B.E. in Chemical Engineering 7th semester . I am very much happy to share my experience of this college till date. Things are good ,starting with orientation, industrial visits,1-2-1 meeting with Panjwani Sir, expert talks and many more which not only provide information but also keep me in touch with college.

Beside these, opportunities were given to us for conducting many events out of which one was chemical carnival (fully overloaded with fun and joy). Where students and faculties played many games and ended event with refreshments and exciting gifts . Luckily I was part of Reva Team , working with classmates was best time to know each other's strengths and weaknesses plus could figure out how to break up the work in the most efficient way and successfully took event to the end.

Talking about technical part my **summer internship** is at **Lupin Ltd** Ankleshwar ,which consist of 10 plants. This company attracted me because it holds an international leadership position in anti-TB and cephalosporin sector. I was very much excited to see all plants and started with TA plant ,where i saw different type of heat exchangers, pipeline color coding ,safety measures etc. Applying theoretical knowledge into real world is comical. Though collecting data from different floors is the hectic part in hot climate and bad odour but working with great people turned all down and encouraged me to do more. Working ambience of Lupin is quite good and supportive. It’s incredible to be a part of such company who is substantial player in treatment area of non-steroidal anti-inflammatory drugs, cardiovascular, asthma, gynaecology and anti-infective drug. By internship I found my area of interest. One last message to whosoever is reading this or is still studying like me “it’s not about having time, it’s about making time”

Have a nice day !

Thank you

Monika Sajjansingh Jadiya

Student Speaks

PUTTING SUSTAINABILITY INTO PRACTICE

Undoubtedly India has become the home of pollution in the last decades. According to 2021, world air quality reports India ranked 63rd out of 100 countries, with New Delhi named as the capital with the worst air quality. Vehicular emissions, industrial waste, construction sector, power generation plants, and smoke from cooking are the biggest sources of Air pollution in India.

Besides this, during the period of lockdown in 2020-21, the Indian Air quality index was quite controlled due to the shutdown of industries & vehicular activities. Unfortunately, the things didn't last long. In 2021, India was on top among the most polluted countries. India has experienced unprecedented urban expansion and economic growth in recent years. This, however, comes with huge environmental costs. Besides its air, the country's waterways have become extremely polluted, with around 70% of surface water estimated to be unfit for consumption. Illegal dumping of raw sewage, silt, and garbage into rivers and lakes severely contaminated India's waters. Besides affecting humans, nearly 40 million Indians suffer from waterborne diseases like typhoid, cholera, and hepatitis. It also damages the crop as infectious bacteria & diseases in water used for irrigation. Fortunately, India has started to take up steps to improve the quality of water sources with the help of NGOs & local organizations. The government is also looking at ways to promote water conservation & industrial water reuse by opening several treatment plants. These are some current environmental issues in India that we are facing right now. As a student of Chemical Engineering, I can say that it should be a big disaster for the Indian future if it isn't prevented.

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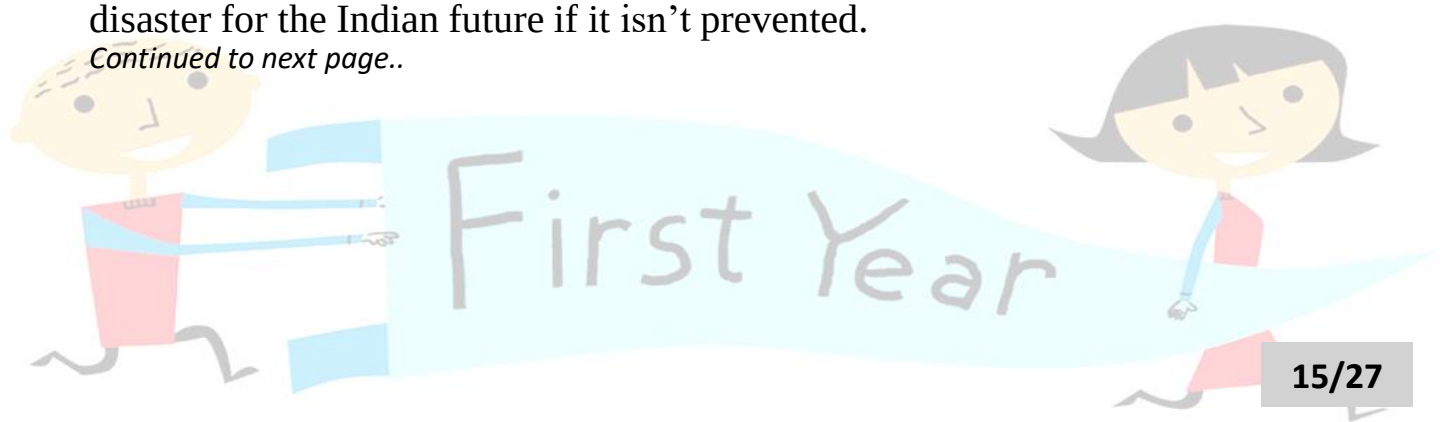

Student Speaks

PUTTING SUSTAINABILITY INTO PRACTICE

We must spread awareness about the importance & benefits of protection of nature/environment.
In my opinion, the following preventions that we must follow:

Opinion	What are we doing at UPL University
Conserve energy - at home, at work, everywhere. Look for the ENERGY STAR label when buying a home or office equipment.	Under 5S and during regular classes, we ensure the optimum use of energy. We have sufficient ventilation, allowing us to switch off the lights during the daytime. Our in-house energy cell, keep a close eye on energy consumption.
Carpool, use public transportation, bike, or walk whenever possible.	Our university provides bus transportation at a subsidized rate promoting mass transportation.
Avoid burning leaves, trash, and other materials. Avoid using gas-powered lawn and garden equipment.	Our seniors, faculty members, research scholar are working on Govt. projects including pyrolysis and CO_2 capturing, etc.
Cleaning up waterways and beaches. Avoid the usage of non-biodegradable materials like plastic.	We have well-equipped water harvesting system within campus.
Being more involved in various measures pertaining to preventing water pollution.	Under various clubs at our college, i.e. Rotaract, Nature's club, etc. we students learn and educate others regarding proper waste segregation.
Buy more environmentally safe cleaning liquids for use at home and other public places. They are less dangerous to the environment.	Lot of our research scholars and students are focusing their work on Green Solvent keeping in mind the principles of green chemistry/engineering.

- VANSH GOHIL
SEMESTER-2, B.E. Chemical Engineering

CHEMICAL ENGINEERING MAGAZINE ARTICLES

CO_2 removal by the blend N-ethyl diethanolamine + Promotors in aqueous solutions

By Dr. Ravindra Kanawade, Asso. Professor, Chemical Engineering

Carbon dioxide (CO_2) capture is a crucial step in natural gas processing, in ammonia and hydrogen manufacturing and in flue gas cleaning in thermal power stations. Modern plants use aqueous alkanolamine technology, which is an efficient CO_2 capturing method. In such operations, N-methyl diethanolamine (or MDEA) is extensively applied for absorption, due to its high CO_2 loading capacity and low solvent regeneration cost.

This tertiary amine contains no hydrogen atom attached to the nitrogen atom, as in the case of monoethanolamine (MEA) and diethanolamine (DEA). In MDEA, a methyl group replaces the hydrogen atom associated to the amino group in DEA. It would be interesting to compare chemical kinetics of MDEA with that of tertiary amines linked to other alkyl groups (e.g., ethyl, n-propyl and n-butyl).

Thus, EDEA (N-ethyldiethanolamine) is especially promising absorbent, as it can be prepared from renewable resources. Low reactivity of tertiary amines with CO_2 can be improved by adding promoters resulting in an enhanced CO_2 capture

The aqueous blends EDEA + promoter are attractive for the enhancement of CO_2 capture, due to high CO_2 loading capacity of EDEA and high reactivity of the promoter. It was found that PZ (piperazine) is more effective than other promoters, such as MEA and DEA. The cyclic diamine PZ was a more efficient promoter in aqueous EDEA solutions than MEA and DEA.

Promoter	EDEA + Promoter (M)	P_{CO_2} (kPa)	$R_{CO_2} \times 10^6$ kmol/(m^2 s)
None	2.5 + 0	6.1	0.45
MEA	2.5 + 0.1	5.3	2.79
DEA	2.5 + 0.1	4.7	2.12
PZ	2.5 + 0.1	5.8	6.87

Table: Comparison of promoters (T = 303 K)

Further the equilibrium characteristics of EDEA and the blend EDEA+PZ were studied at T=303 K for equilibrium CO_2 partial pressures up to 3.5 kPa. The results of this study will be able to facilitate design and operation of gas treating plants with EDEA as the CO2 capturing component.

For further details and methodology, refer:
https://doi.org/10.1021/acs.iecr.5b02496

CHEMICAL ENGINEERING MAGAZINE ARTICLES

Process design for removal of heavy metals contaminants from water sources

- Sunil Badgujar, Asst. Professor, Chemical Engineering Department

Nowadays, Water pollution by heavy metal ions is the major concern. Recently researchers had target towards removal process of various unwanted pollutants in which biodegradable waste, phosphates, heavy metals, heat, dyes, toxic chemical, fluoride, sediment, radioactive pollutants, and hazardous chemical and personal products. When these pollutants are directly released into the nearby water sources causes lots of diseases to human health and create serious problem to aquatic lifecycle.

This makes it important to remove those pollutants and heavy metals from contaminated water to make it clean and pollution free. Several methods such as Ion exchange, precipitation, evaporation, membrane filtration and adsorption are used for heavy metals removal, adsorption process has created attention of many researchers because of feasibility, low cost, flexibility of design, and high efficiency.

The experimental work performed in this project focus on reduction in time for removal of heavy metal contaminants. In the present study, solution containing chromate was treated using iron wool as a sorbent in batch mode. It was observed that chromium reduction was enhanced with the decrease of pH.

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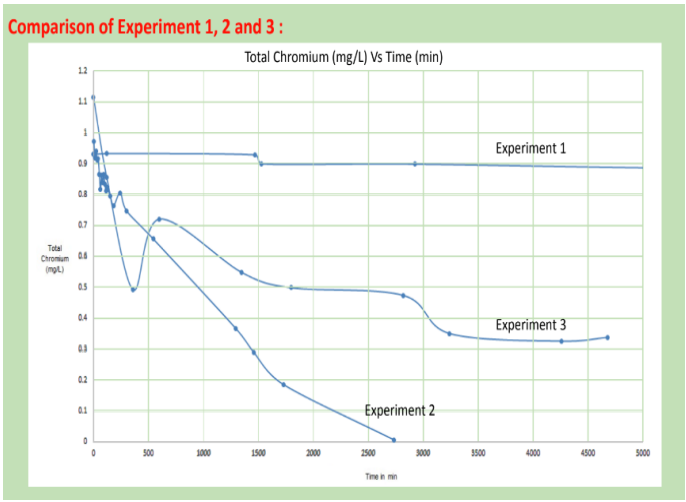
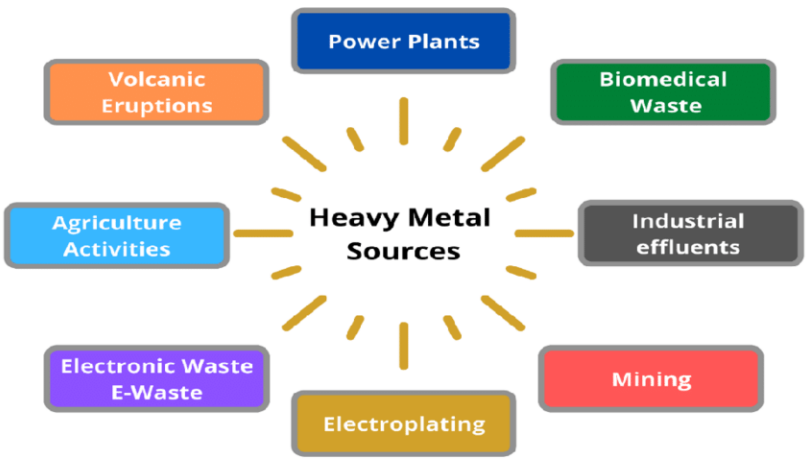
CHEMICAL ENGINEERING MAGAZINE ARTICLES

Process design for removal of heavy metals contaminants from water sources

Several experiments were performed for removal of chromium in presence of iron wool, and it was found that when the sample containing low levels of total chromium was mixed with iron wool at a pH of 4 to 7, 50- 90% of the total chromium was reduced in 4 h, it takes 24h to reduce to discharge limit.



During the study various modifications were done in the existing experimental setup and chromium in the sample after treatment shown the concentration to below detection level. It was found that time required for further experiments was decreased as compared to earlier experiments. The objective of this study was to come up with the design of a laboratory scale setup to run the process in a continuous mode and equipment's needed to treat larger quantities of contaminated water.



Reference for figure:
Water Contamination by Heavy Metals and their Toxic Effect on Aquaculture and Human Health through Food Chain by Sonone et al.

ALUMNI Column

I am Chetna Verma from Chemical Engineering, 2017 admission batch. I was placed with BechtoChem and I worked there for almost ten months. While I served there for a short tenure, I learned a lot of things. Infect, I could figure out my area of interest and I understood my forte. Recently, I joined E value serve at Gurgaon as a Business Analyst. Looking forward to staying connected to my alma mater.

Chetna Verma
Business Analyst,
Evalue Serve, Gurgaon

Congratulations ! Chintan Acharya

Congratulation to Chintan Acharya (Chemical Engineering, Admission batch 2021) for starting new journey of pursuing MBA at **IIM** Nagpur.

Congratulations ! Sanket Yadav

Sanket Yadav (Chemical Engineering admission batch 2012) started new job as Assistant Manager – Process, Aarti Industries Ltd, Dahej

Deepraj Patil
Chemical Engineering
Marks: 38/100
AIR: 498
Batch 2017-21

Neel Patel
Chemical Engineering
Marks: 37.67/100
AIR: 507
Batch 2016-20

Vidya Jadhav
Chemical Engineering
Marks: 30.67/100
AIR: 1063
Batch 2017-21

Chemical Engineering Shining Stars in GATE Result - 2022

Know Our Staff - Chemical Engineering

Dr. Shrikant J. Wagh

Dr. Alok Gautam

Dr. Shina Gautam

Dr. Ravindra Kanawade

Dr. Swapna Rekha Panda

Mr. Sunil Badgujar

Mr. Hemant Balsora

Dr. Krunal J. Suthar

Mr. Chintan K. Modi

Mr. Sudeep Wadia

Dr. Mriganka Mondal

Ms. Dhara Rojivadiya

Technical Support Staff

Mr. Praful Mokadam

Mr. Aniruddhsinh Raj

Mr. Darshan Patel

Achievements

Congratulations!!

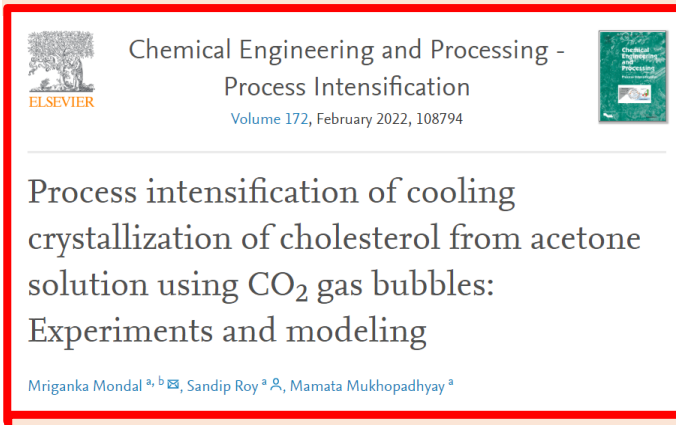
Dr. Swapna Panda for filing a patent titles "Design and develop Neon materials for COVID 19"

Patent application No.: 202221016226 A

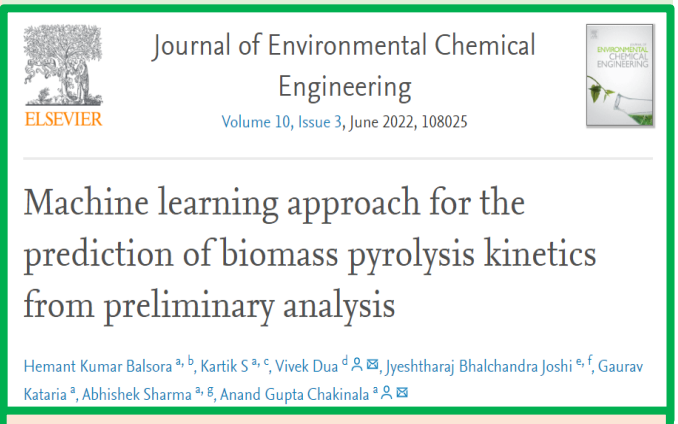
Published in Patent official Journal No. 15/2022 Dated 15/04/2022

Dr. Swapna Panda received invitation for as member in Technical Programme committee for International Conference held at Paris on Nov 2022

- 7th International Conference on Renewable Energy and Conservation (ICREC 2022



Dr. Mriganka Mondal published technical article on cooling crystallization



Mr. Hemant Balsora published technical article on prediction of biomass pyrolysis kinetics

Dr. Alok Gautam and Dr. Shina Gautam published technical article on drying of corn kernels in FBD.

Achievements

Achievements

Congratulations!!

Dr. Alok Gautam and Dr. Shina Gautam for filing a patent titles "PROCESS FOR CONVERSION OF SILVER CHLORIDE FROM CHEMICAL OXYGEN DEMAND TEST WASTEWATER INTO SILVER SULPHATE"

Patent application No.: 202221028542 A

Published Date: 26/06/2022

Dr. Swapna Panda received invitation for as member in Technical Programme committee for PCEE 2022, International Conference on Power, Control and Energy Engineering, scheduled on 25-27 Nov, 2022

Bulgarian Chemical Communications, Volume 53, Issue D (pp. 51-61) 2021 *DOI: 10.34049/bcc.53.D.32*

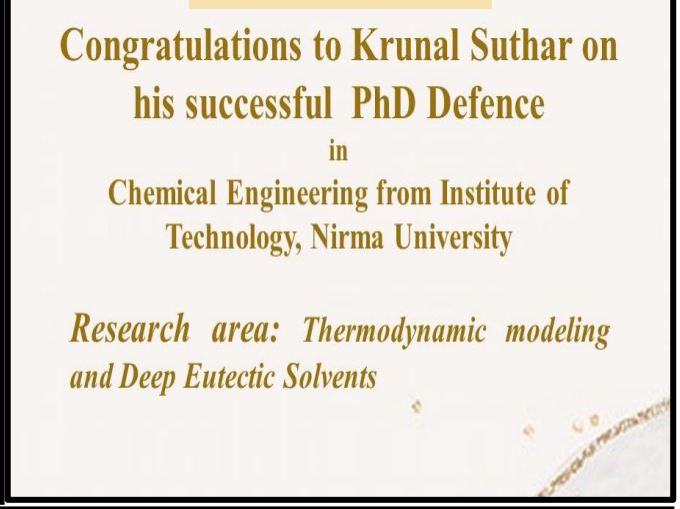
A statistical analysis and optimization of Indian coal grinding in a laboratory ball mill: dry & wet method

S. Gautam*, A. Gautam, M. Patel, H. Parmar, K. Patel

Department of Chemical Engineering, Shroff S. R. Rotary Institute of Chemical Technology, Vataria, Ankleshwar, 393135, Gujarat, India

Received: October 19, 2021; Revised: January 02, 2022

Dr. Alok Gautam and Dr. Shina Gautam recently published a paper titles 'A statistical analysis and optimization of Indian coal grinding in a laboratory ball' in Bulgarian Chemical Communications,



PUSHPAK PATIL

SANJOG DEORE

Two of our Post Graduate (M.E.) Chemical Engineering students at placed with Gexcon India Pvt. Ltd. as Trainee Engineer

Achievements

Achievements

B.E. Semester-2 Chemical Engineering students participated in technical festival organized by Government Engineering College.


Chem conflux

International Conference on

TECHNOLOGICAL INTERVENTIONS FOR SUSTAINABILITY

Jointly Organized By

Department of Chemical Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj -211004 (India) & School of Chemical Engineering, Universiti Sains Malaysia, Engineering Campus Nibong Tebal Pulau, Pinang - 14300 (Malaysia)

Certificate

This is to certify that Nisarg Modi has presented a paper entitled Green Hydrogen : As a Source Of Renewable Energy coauthored with Harshpalsinh Thakore and Deep Modi in the International Conference on "Technological Interventions for Sustainability (Chem-Conflux[22])" held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14th - 16th, 2022.

(Dr. Dipesh S. Patle) CONVENER | (Dr. Norazwan) CONVENER | (Prof. Zainal Ahmad) CHAIRPERSON | (Dr. Sushil Kumar) CHAIRPERSON

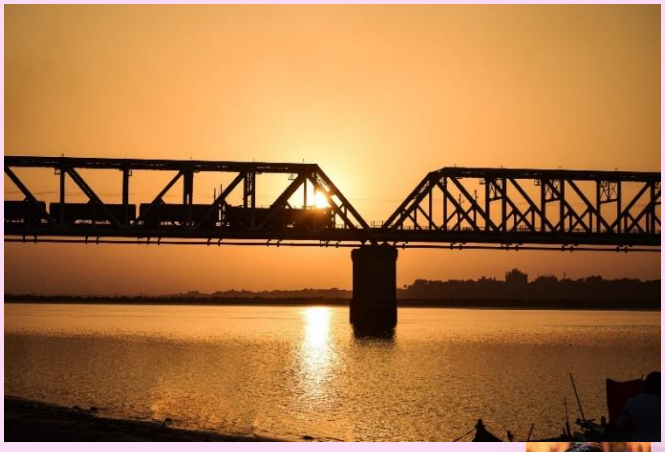
Nisarg modi , Harshpalsinh Thakore, and Deep Modi (Chemical Engineering, Semester-4) have taken part in the international conference held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14th - 16th, 2022. Topic presented: ***Green hydrogen as a source of renewable energy***

Mr. Bhavesh Padhiya, Post Graduate, Semester-IV student published research work titles “SYNTHESIS AND APPLICATIONS OF NON-WOVEN POLYESTER FABRIC-RECLAIM BUTYL RUBBER COMPOSITE" in "International Journal of Innovative Research in Technology under the guidance of **Prof. Dr. Shrikant J. Wagh**.

Winners of First Prize in Chemocar technical event

Runners-up of Box Cricket organized at GEC Bharuch

Student's Corner



Captured by: ***Rohan Gohil,***
Semester-2, Chemical Engineering

Captured by: ***Kishan Patel,***
Semester-2, Chemical Engineering

You can find me everywhere
From the time you wake up
Till the day you die.

In every screw of your cabinet
In every lace of your shoes

In each spoon you eat with
In each components of your car

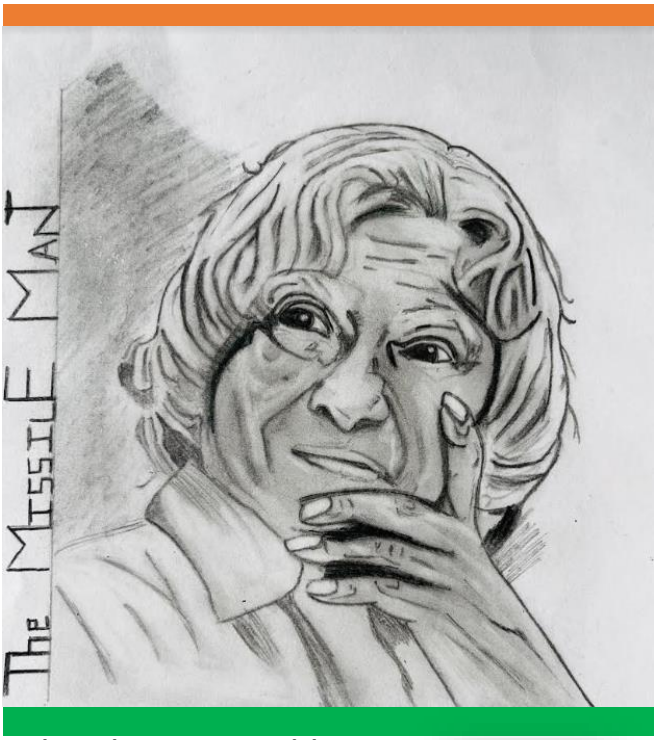
In each step you take
In each bird you see fly

In every brush you use
In every bulb you switch on

I will be with you forever
until you die, I will be there
In the coffin you rest in.

I AM ENGINEERING

Written by: ***Darshan Desai,***
Semester-2,
B.E. Chemical Engineering



Sketch prepared by:
Maulik Patel
Semester-2, B.E. Chemical Engineering

Correct Answer of Crossword challenge of 8th Bulletin

Winners name

1. RAJKUMAR PATEL (B.E. CE-VIII)

2. MANISH NASIT (Masters of Engineering, semester-II)

ACROSS

2 substance that alters the rate of a reaction

4 Author of one of the mass transfer book

6 Name of physical chemistry equation used for the temperature dependence of reaction rates.

7 Diatomic gas currently constitutes 20.95% of the Earth's atmosphere

DOWN

1 Device that measures the volumetric flow rate of fluid

2 Software available in our Process Simulation Lab

3 Father of chemical engineering

5 _____- Robinson is an equation of state.

★Across:

2- CATALYST

4- TREYBAL

6- ARRHENIUS

7- OXYGEN

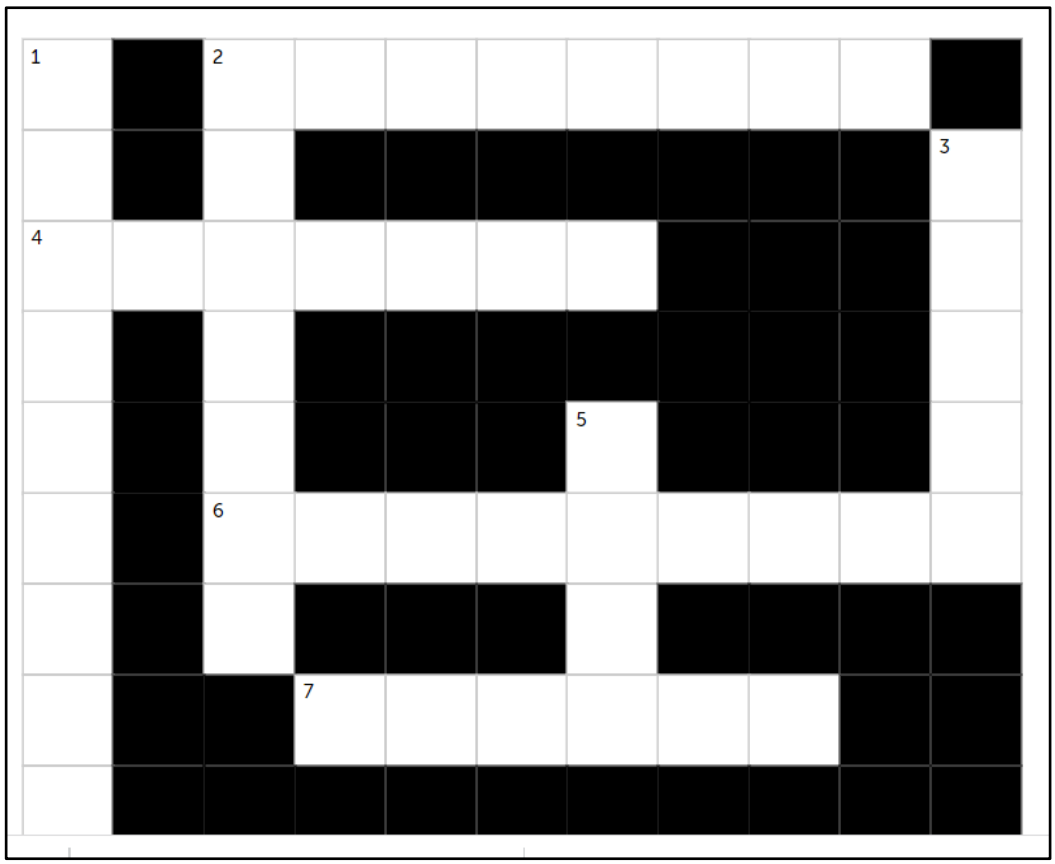
★Down:

1- ROTAMETER

2- CHEMCAD

3- DAVIS

5- PENG



FROM THE DESK OF EDITOR..

The 9th issue of CHEMEZINE (Chemical Engineering e-Magazine) presents the activities conducted throughout the semester. Recently, the peer NBA committee visited our institute for verifying the records and compliance report for re-accreditation. We still await for the result. Students performance and active participation in around activities makes editors happy to compile the consolidated reports in form of newsletter. We invite more participation from stake holders of our department. We invite unpublished interesting articles from students and staff members of chemical engineering department.

We extend thanks to our reader for providing valuable feedback.

HAPPY READING AND DO WRITE US BACK.

- Editors

Upcoming Events:

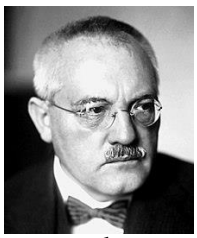
Convocation of June-22 Graduates: 16th July 22

IIChE event: Jan22

Workshop on Simulation: August 2022

REMEMBERING THE LEGEND

Carl Bosch



The Haber-Bosch process was developed by industrial chemist Fritz Haber, and scaled up by chemical engineer Carl Bosch. This work made it possible to produce synthetic fertilizers and thus produce enough food for the Earth's growing population.

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