

# CHEMICAL ENGINEERING



**NEWSLETTER**  
*June – July 2019*

## Key events

Guest speakers  
International conference  
International expert visit  
Workshops  
Industrial visit

## **Inside this issue:**

**Awards/Honours**  
**Publications/Projects**  
**Conference/  
Workshops/  
Seminars**  
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activities**



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### **EDITORIAL TEAM**

***Dr. Lubhani Mishra (Coordinator)***  
***Dr. Abhishek Yadav (Co-coordinator)***



## From the Director's desk



**Prof. Sunil Khanna**  
Director, SOT, PDPU

Dear Colleagues and Students:

The advent of circular economy in Chemical systems is leading to the development of an economic system aimed at minimizing waste and making the most of resources. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models. The drivers of the circular economy would be the advances in computational modelling, data analytics, optimization tools, and next-generation and bio-based catalysts to produce fuels and chemicals at scale with lower emissions.

As we @ PDPU embark on this journey of circular economy in Chemical Engineering, I am Happy to Introduce the next issue of the Newsletter which not only share with all its readers the latest news and developments in the Department of Chemical Engineering but would also be sensitizing all of us on the latest trends and developments in the adoption of the circular economy.

The limitless power of technology to do good and the conviction of my faculty colleagues and students that the golden age is ahead of us - and not behind us – brings about the best in all of us which is reflected in their achievements.

Compliments to the editorial team for their passion for perfection and unbound creativity which makes me always look forward to the next edition of the Newsletter.

## From the mentor's desk



**Dr. Anurag A. Gupta**  
Chairman, IPR Apex Council  
& Senior Mentor, PDPU

As we prepare for the new academic session, there are so many things to be proud of. For example, this time we could attract record number of PG & PhD students. Our incoming UG classes also have the best intake so far ever – both in terms of quality & numbers.

Congratulations to our faculties and PhD students for publishing quality research papers and also for being invited to deliver technical talks. Kudos to our graduate students who continue to set the world on fire by their innovative research using ORSP grant and supported by able mentorship by our faculty members. So, in short, as the rains fall in Gandhinagar, our faculties and students continue to rise!!!

Looking forward to the upcoming academic year to see what else our CE family has in store.

Hearty Congratulations & best wishes to all.

## From the HOD's desk



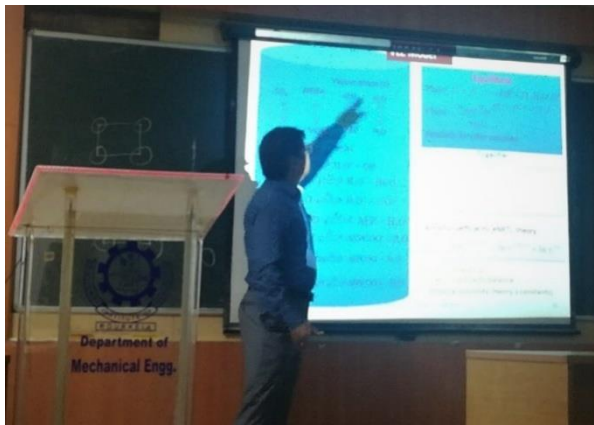
**Dr. Swapnil Dharaskar**  
HOD, Chemical Engineering, PDPU

It gives me immense pleasure to share newsletter of the Chemical Engineering Dept., June-July 2019. The Department of Chemical Engineering at PDPU, Gandhinagar is one of the premier departments that provides a unique educational and research environment. We have a major emphasis on interdisciplinary and industrial collaborations. Our primary missions are to educate undergraduate and graduate students, and to discover and disseminate knowledge through research. The Department is committed to achieving excellence in these activities, and evaluates the success and leadership of its programs using the highest standards of quality, innovation, & visibility, while at the same time providing a friendly and supportive atmosphere.

# FACULTY ZONE: AWARDS/ HONOURS



**Dr. Swapnil Dharaskar** chaired the technical session for 12<sup>th</sup> International Engineering Research Conference (EURECA 2019) at Taylor's University, Malaysia between 3<sup>rd</sup> and 4<sup>th</sup> July 2019.



**Dr. Sukanta K. Dash** was invited as a guest speaker by NIT Rourkela on 15<sup>th</sup> July 2019 to deliver two expert lectures on Post combustion CO<sub>2</sub> capture at one week short term programme on Carbon Capture and Storage at NIT Rourkela.



**Dr. Sukanta K. Dash** was invited as a guest speaker by IIT Kanpur on 17<sup>th</sup> July 2019 to deliver two expert lectures on Carbon Capture and Sequestration at two week GIAN Course by MHRD, New Delhi.

# FACULTY ZONE: AWARDS/ HONOURS



**Dr. Lubhani Mishra** chaired the technical session for 12<sup>th</sup> International Engineering Research Conference (EURECA) at Taylor's University, Malaysia between 3<sup>rd</sup> and 4<sup>th</sup> July 2019.



**Dr. Ashish Unnarkat** was invited for the expert talk on 'Nuts and Bolts of Student Connect' during Faculty Induction Program at PDPU, Gandhinagar on 18<sup>th</sup> July 2019.



**Dr. B. Rajasekhar Reddy** was awarded the "Institute Research Award - 2019" in recognition of the exemplary research work done during Ph.D. at IIT Madras.

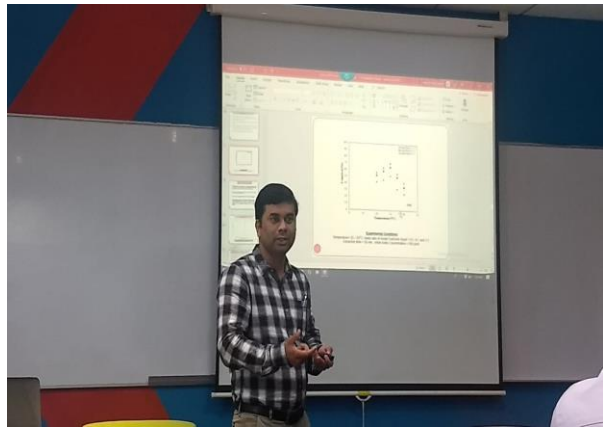
# FACULTY ZONE: PUBLICATIONS/PROJECTS

Authors	Paper Title	Journal	Publisher	SJR	Quartile	H index
Parwathi Pillai Yogesh Lakhatria Swapnil Dharaskar Mohammad Khalid	Synthesis, characterization, and application of iron oxyhydroxide coated with rice husk for fluoride removal from aqueous media	<i>Environmental Science and Pollution Research</i> July 2019	Springer	0.83	Q1	82
Parwathi Pillai Swapnil Dharaskar Surendra Sasikumar Mohammad Khalid	Zeolitic imidazolate framework-8 nanoparticle: a promising adsorbent for effective fluoride removal from aqueous solution	<i>Applied Water Science (Scopus)</i> July 2019	Springer		-	
Snigdha Khuntia Manish K. Sinha Pragya Singh	Theoretical and experimental investigation of the mechanism of the catalytic ozonation process by using a manganese-based catalyst	<i>Environmental Technology</i> July 2019	Taylor & Francis	0.515	Q2	65
Abul Kalam Apurba Mahapatra Deepak Verma Suverna Trivedi Manoj Pandey	Identification of defects and defect energy distribution in the perovskite layer of MAPbI <sub>3</sub> -xCl <sub>x</sub> perovskite solar cell	<i>Material Research Express</i> July 2019	IOP Science	0.35/ 1.449	Q2	21
Jaspalsinh B Dabhi Ajitkumar N Shukla Sukanta K. Dash	Compact adsorption cooling system: An Evaluation	<i>Int. Journal of Innovative Technology and Exploring Engg.</i> June 2019	ISSN: 2278-3075			
Jaspalsinh B. Dabhi Ajitkumar N. Shukla Sukanta K. Dash	Experimental and ANOVA analysis of adsorption cooling system,	<i>Int. Journal of Innovative Technology and Exploring Engg.</i> June 2019	ISSN: 2278-3075,			

## PROJECTS

**Dr. Suverna Trivedi** submitted a project proposal titled "A new route of reactive calcination for development of highly efficient oxygen deficient catalysts: An approach of development of catalytic converter device for CNG vehicular emission control" to SERB-CORE.

# FACULTY ZONE: CONFERENCES/WORKSHOPS/SEMINARS



**Dr. Swapnil Dharaskar** delivered an oral presentation on “Feasibility study of Phosphonium Ionic Liquids as Energy Efficient Solvents for Extractive Desulfurization of Liquid Fuels” at 12<sup>th</sup> International Engineering Research Conference (**EURECA 2019**) between 3<sup>rd</sup> and 4<sup>th</sup> July at **Taylor’s University, Malaysia**.



**Ms. Sweta C. Balchandani** attended a short course on “*Clean Energy Technologies*” conducted by Centre for Energy under the Technical Education Quality Improvement Programme (TEQIP) sponsored by the Ministry of Human Resource Development,, Government of India held during 10<sup>th</sup> to 14<sup>th</sup> June 2019 at **Indian Institute of Technology, Guwahati**.



**Dr. Swapnil Dharaskar** attended IOCL Seminar on “Servo Heat Transfer Fluids” with Mechanical Engineering Head and faculty members at Vadodara on 26<sup>th</sup> June 2019.

# FACULTY ZONE: CONFERENCES/WORKSHOPS/SEMINARS



**Dr. Lubhani Mishra** delivered an oral presentation on “*Steady flow of power-law fluids past a sphere in a tapered tube*” at 12<sup>th</sup> International Engineering Research Conference (**EURECA 2019**) between 3<sup>rd</sup> and 4<sup>th</sup> July at **Taylor’s University, Malaysia**.



**Dr. Dadi Suriapparao** and **Dr. Swapnil Dharaskar** attended Indo-US workshop on Strengthening Supply Chain Security in the Pharmaceutical and Contract Chemical Synthesis Industries on 10<sup>th</sup> and 11<sup>th</sup> July 2019 organized by Gujarat Forensic Sciences University, Gandhinagar, Gujarat.



**Dr. Abhishek Yadav, Dr. Suverna Trivedi, Dr. Suriapparao, Dr. Lubhani Mishra, Dr. Abhishek Gupta** and **Dr. Rajshekhar Reddy** attended the **Faculty Induction Program (FIP 2019)** during 15<sup>th</sup> to 20<sup>th</sup> July 2019 at **PDPU, Gandhinagar**.

# DEPARTMENTAL ACTIVITIES: EVENTS



**Dr. Abul Kalam, Associate Professor, King Khalid University, Saudi Arabia**

visited PDPU and interacted with faculties on 28<sup>th</sup> July 2019 organized by

**Dr. Suverna Trivedi.**

## **Faculty Interaction with new M.Tech. students: 2019-2020 batch**

To give overview of the department, students interacted with Dr. Swapnil Dharaskar (HOD, Chemical Engg.) about the department and research facilities. Individual faculties shared their professional careers with the students and various career opportunities.



**Mr. Abdul Raheman** from Egypt joined as an International Intern under AISEC programme to carried out research in Chemical Engineering Department, School of Technology, PDPU, Gandhinagar.

**Dr. Dadi Suriapparao** received two **research grade microwave reactors** having capacity of 700 W and 1500 W, respectively on 27<sup>th</sup> June 2019 installed in SFO lab. These reactors can be utilized for conducting research related to solid waste upgradation.

