



Chemical Engineering Department



SCHOOL OF TECHNOLOGY
PANDIT DEENDAYAL PETROLEUM UNIVERSITY



NEWSLETTER

Quarter 1 (March-May)
Quarter 2 (June– August)

CONTENTS

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- ⇒ Conference Papers
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STUDENT BOARD

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- ⇒ Conference Paper
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FEATURE NEWS

PDPU Fighting Back COVID

VISION

To impart quality education in an industry research driven modules to motivate the young chemical engineers for creating knowledge wealth to help generate employability following professional ethics and focus towards a sustainable environment and benefits to the society.

MISSION

- ◆ To facilitate the chemical engineering students with the state-of-the-art facilities with focus on skill development, creativity, innovation and enhancing leadership qualities.
- ◆ To nurture creative minds through mentoring, quality teaching & research for building a value based sustainable society.
- ◆ To work in unison with the national and international level academic and industrial partners by venturing into collaborations to tackle problems of bigger interest to society.
- ◆ To build an encouraging environment for the young faculties and staff by providing safe work culture, transparency, professional ethics and accountability that will empower them to lead the department in right spirit.
- ◆ To inculcate the culture of continuous learning among the faculties by encouraging them to participate in a professional development programs and envisage to address the social, economic and environmental problems.

EDITORIAL TEAM

Dr. Rajat Saxena (Faculty Co-ordinator)
Dr. Abhishek Yadav (Faculty Co-ordinator)
Mr. Manish Shewaramani (Staff Co-ordinator)

Mr. Vandan Dudhat (Student Co-ordinator)
Mr. Poojan Chaklasiya (Student Co-ordinator)

MESSAGE

From the Director's desk....

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 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.



Prof. Sunil Khanna
Director, SOT, PDPU

From the HOD's desk....

It gives me immense pleasure to share newsletter of the Chemical Engineering Dept., Mar - Aug 2020. 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.



Dr. Swapnil Dharaskar
Head, Chemical Engineering

PUBLICATIONS

Journal Publications

[Quarter I - March to May]

- ◆ **Swapnil Dharaskar**, Hitesh Panchal, Mohammad Khalid, "Productivity enhancement of solar still with thermoelectric modules from groundwater to produce potable water: A review" *Groundwater for Sustainable Development*, 11, 100429, 2020.
- ◆ Parwathi Pillai, **Swapnil Dharaskar**, **Manan Shah**, "Determination of fluoride removal using silica nano adsorbent modified by rice husk from water" *Groundwater for Sustainable Development*, Vol. 11, 100423, 2020.
- ◆ **Bharti Saini** and **Manish Kumar Sinha**, "A novel stimuli-responsive and fouling resistant PVDF ultrafiltration membrane prepared by using amphiphilic copolymer of poly(vinylidene fluoride) and Poly(2-N-morpholino)ethyl methacrylate", *Journal of Membrane Science*, March 2020
- ◆ A. Shah and **Manan Shah**, "Characterization and bioremediation of wastewater: A Review exploring bioremediation as a sustainable technique for pharmaceutical wastewater". *Groundwater for Sustainable Development*, March 2020
- ◆ Dinesh Mevada, Hitesh Panchal, **Swapnil Dharaskar** "Effect of fin configuration parameters on performance of solar still: A review" *Groundwater for Sustainable Development*, Vol10, 100289, April 2020.
- ◆ Parwathi Pillai, **Swapnil Dharaskar**, "Removal of arsenic using iron oxide amended with rice husk nanoparticles from aqueous solution", *Materials Today: Proceedings*, 1-6, 2020.
- ◆ Komal Desai, **Swapnil Dharaskar**, **S. Sasikumar**, **A. Unnarkat** "Butyl triphenyl phosphonium bromide as an effective catalyst for ultrasound assisted oxidative desulfurization process", *Materials Today: Proceedings*, 1-7, 2020.
- ◆ D. Bhatti, S. Parikh and **Manan Shah**, "Potential of Ag- Fe co-doped TiO₂ nanocomposite for solar photocatalysis of high COD pharmaceutical effluent and influencing factors". *Energy Ecology and Environment*, Springer. April, 2020.
- ◆ A. Patel, D. Prajapato, D. Mahida and **Manan Shah**, "Transforming petroleum downstream sector through big data: a holistic review". *Journal of Petroleum Exploration and Production*, Springer, April, 2020 (Accepted)
- ◆ **Anirban Dey** and **Sukanta Dash** et al., "Analysis of Equilibrium CO₂ solubility in aqueous APDA and its potential blends with AMP/MDEA for Post- combustion CO₂ capture", *International Journal of Energy Research*, April 2020.
- ◆ **R. Saxena**, D. Rakshit, S. C. Kaushik, Experimental assessment of Phase Change Material (PCM) embedded bricks for passive conditioning of buildings, *Elsevier Renewable Energy* 149 587-599, April 2020.
- ◆ Parwathi Pillai, **Swapnil Dharaskar**, "Removal Of Fluoride From Aqueous Solution Using calcium Peroxide As A Low Cost Adsorbent" *Journal of Water Chemical Technology*, June 2020.
- ◆ R. Saputra, R. Walvekar, M. Khalid, **Swapnil Dharaskar**, Devulcanisation of ground rubber tyre by novel ternary deep eutectic solvents, *Journal of Molecular Liquids*, Vol 306, 112913, May 2020.
- ◆ Shinghala, V. Shah, K. Dhudhat and **Manan Shah**, "Evolution of nanomaterials in petroleum industries: application and the challenges". *Journal of Petroleum Exploration and Production*, Springer, May, 2020.

PUBLICATIONS

Journal Publications

[Quarter I - March to May]

- ◆ Kartik kumar Thakkar, Keyur Shah, **Pravin Kodgire**, Surendra Singh Kachhwaha, "Experimental Investigation of In-situ Biodiesel Production from Castor Seeds (*Ricinus communis*) Using Combination of Microwave and Ultrasound Intensification", *Advances in Energy Research*, Vol. 2, 435-446, May 2020.
- ◆ **Anirban Dey** and **Sukanta Dash** "Elucidating the performance of (N-(3-aminopropyl)-1, 3-propanediamine) activated (1-dimethylamino-2-propanol) as a novel amine formulation for post combustion carbon dioxide capture" *Fuel*, Vol. 277, 118209, May 2020.
- ◆ **Sukanta Dash** et al., "Energy reduction and improved product recovery with enhanced safety of industrial scale propane-propylene separation process", *International Journal of Energy Research*, May 2020.
- ◆ **R. Saxena**, C. Dwivedi, V. Dutta, S. C. Kaushik, D. Rakshit, "Nano-Enhanced PCMs for low temperature thermal energy storage systems and passive conditioning applications", *Clean Technologies Environmental Policy*, 1-8, May 2020.

[Quarter II - June to August]

- ◆ A Sheela, M Suresh, Hitesh Panchal, **Swapnil Dharaskar** "FEA based analysis and design of pMSM for Electric Vehicle applications using Magnet software" *International Journal of Ambient Energy*, 1-7, June 2020.
- ◆ **Manish Kumar Sinha**, "Stimuli responsive mixed matrix polysulfone ultrafiltration membrane for humic acid and photocatalytic dye removal applications" *Separation and Purification technology*, June 2020
- ◆ Parwathi Pillai, **Swapnil Dharaskar**, Rice husk derived silica nano doped on calcium peroxide for fluoride: Performance, characterization, kinetic, isotherm, and groundwater treatment" *Environmental Technology and Innovation*, Vol 19, August 2020.
- ◆ Parwathi Pillai, **Swapnil Dharaskar**, **Manish k. Sinha**, Mika Sillanpaa, Mohammad Khalid "Iron oxide nanoparticles modified with ionic liquid as an efficient adsorbent for fluoride removal from ground water" *Environmental Technology and Innovation*, Vol 19, August 2020.
- ◆ **Surendra Sasi Kumar Jampa**, **Ashish Prabhudas Unnarkat**, **Rajesh Vanshpati**, Sivakumar Pandian, **Manish K. Sinha**, **Swapnil Dharaskar** "Adsorption and recyclability aspects of humic acid using nano-ZIF-8 adsorbent" *Environmental Technology and Innovation*, Vol 19, August 2020.

Book Chapter

- ◆ **Bharti Saini** and **Manish Kumar Sinha**, "Humic Acid Removal from Water Using Hydrophilic Polysulfone Membrane", *Springer Nature Switzerland*, June 2020.
- ◆ Rashi Sultania, Parwathi Pillai, **Swapnil Dharaskar**, Jayesh Ruparelia, "Synthesis of silver nanoparticles by using soluble starch and its application in detection of Hg²⁺ ions from wastewater" *Technologies for Sustainable Development*, July 2020 (Taylors and Francis).

Book Proposal

- ◆ **Dr. Swapnil Dharaskar** is working as Editor for Book on "Emerging Carbon Capture Technologies: Towards a Sustainable Future" by Science and Technology, Elsevier.

FACULTY BOARD

PROJECT PROPOSALS SUMMITTED & PA-

PROJECT PROPOSALS (SUBMITTED)

- ◆ **Dr. Abhishek Gupta** submitted project entitled “Molecular Simulations Studies of Bulk and Interfacial Properties of Hydrophobically Modified Polyacrylamide (HMPAM) and Hydrolyzed Hydrophobically Modified Polyacrylamide (HMHPAM) for Enhanced Oil Recovery (EOR) Application” as PI to SERB-DST, March 2020.
- ◆ **Dr. Rajat Saxena** submitted a project titled on “Building Energy Conservation Using Phase Change Materials for Hot and Dry Climatic Conditions in India” under Start-up Research Grant, Science and Engineering Research Board, Government of India, March 2020.
- ◆ **Dr. Ashish Unnarkat**, Dr Rajesh Gujar and **Dr Swapnil Dharaskar** submitted a project titled "Waste Material Derived Nano-Materials for Improved Rheological Properties of Bitumen“ under scheme Core Research Grant, SERB-DST, March 2020.
- ◆ **Dr. Manish K Sinha** and **Dr. Abhishek Yadav** submitted a project titled “Development of an integrated NOx removal process from flue gas, Submitted to DST, Technology Mission Division, Under Integrated Technology Interventions for Sustainable Environment (ITISE) Scheme], Partner Institute: Ahmedabad University and Thermax Limited.
- ◆ **Dr. Rajat Saxena (PI)** & Dr. Brijesh Tripathi (Co-PI) submitted a project titled on “Battery Thermal Management: A Solution for Eco-friendly Transport in Indian Scenarios” under SUPRA - Science and Engineering Research Board, Government of India, April 2020.
- ◆ **Dr. Abhishek Gupta** with PIG Members (**Dr. Kodgire, Dr. Sinha, Dr. Dharaskar, Dr. Unnarkat, Dr. Surendra**) submitted a project under "FIST (Level-1) Program", Department of Science and Technology, New Delhi. **[Rs. 4.03 Cr]**

PATENTS

Patent No	Title of Invention	Inventor
202021004406	Process For Preparation Of Biodiesel	A Sharma, P Kodgire, S. S. Kachhwaha
202021035518	Heat shield	Dr. Dadi Suriapparao
202021006776	An Improved Composition And Process For Preparation Of Biodiesel	A Sharma, P Kodgire, S. S. Kachhwaha
202021018720	An Improved Process For Preparation Of Biodiesel	K Thakkar, P Kodgire, S S Kachhwaha
Awaiting for the filing number	A Novel Methanol Based Oil Extraction Technique Intensified By Hybrid Irradiation	K Thakkar, P Kodgire, S S Kachhwaha

FACULTY BOARD



CONFERENCES/WORKSHOP/SEMINAR/

CONFERENCES / SYMPOSIUMS

- ◆ **Dr. Abhishek Gupta, Dr. Ashish Unnarkat and Dr. Swapnil Dharaskar**, attended the Virtual Conference on Materials for Energy Harvesting and Catalysis organized by TIFR and IISER Kolkata during 1-3 May 2020.
- ◆ **Dr. Swapnil Dharaskar** attended the 4th National Symposium SEFCO 2020, organized by CSIR-Indian Institute of Petroleum, Dehradun during June 5th 2020.
- ◆ **Dr. Ashish Unnarkat** attended a International Virtual Conference on Advanced Nanomaterials and Applications (VCAN 2020) organized by VIT University, Vellore during 17-19 June 2020.

WORKSHOPS / FDP'S / TRAININGS

- ◆ **Dr. Abhishek Gupta and Dr. Sukanta Dash** successfully completed 03 days workshop on QASPIR-Online Learning workshop for Faculty, 1-3 April, 2020
- ◆ **Dr. Anirban Dey, Dr. Bharti Saini, Dr. Rajat Saxena and Dr. Swapnil Dharaskar** successfully completed 03 days workshop on QASPIR-Online Learning workshop for Faculty, 15-17 April, 2020
- ◆ **Dr. Bharti Saini and Dr. Swapnil Dharaskar** participated in workshops on *Ethics in research, Writing research paper and Reviewing literature* organized by PDPU Gandhinagar, 5-7 May, 2020.
- ◆ **Dr. Bharti Saini** successfully completed 02 Days Training program on Journal Citation Reports (JCR) Certification during 2-3 June, 2020.
- ◆ **Dr. Rajat Saxena** attended Five days online Faculty Development Programme (FDP) on "Advancements in Phase Change Material Based Thermal and Renewable Energy Techniques", conducted at Lakireddy Bali Reddy College of Engineering, Mylavaram, from 1-5 June, 2020
- ◆ **Dr. Swapnil Dharaskar** participated in Five Days training programme on "Rainwater harvesting" conducted by International Clean Water Centre, Indian Institute of Technology, Madras during 1-5 June 2020.
- ◆ **Dr. Rajat Saxena** Attended Six days online training program on "Experiences in Solar Energy: Challenges & Opportunities", organized by Pimpri Chinchwad College of Engineering (PCCOE), Pune in association with School of Energy Studies, Savitribai Phule Pune University dated 8th-13 June, 2020.
- ◆ **Dr. Swapnil Dharaskar** participated in Faculty Development Programme (FDP) on "Chemical Engineering towards Sustainability and Process Intensification" conducted by the department of Chemical Engineering, Gharda Institute of Technology, Lavel dated on 15-17 June, 2020.
- ◆ **Dr. Rajat Saxena** attended Five days online Faculty Development Programme (FDP) on "Contemporary Issues Of Bio-fuels And Applications (CIBFA-2020)" conducted at Lakireddy Bali Reddy College of Engineering, Mylavaram from 6-10 July, 2020.
- ◆ **Dr. Sukanta Dash** attended "AIChE Centre for Chemical Process Safety faculty workshop", Virtual BASF Sponsored, AIChE, July 22 -23, 2020.

FACULTY BOARD



WEBINARS ATTENDED

WEBINARS ATTENDED

- ◆ **Dr. Swapnil Dharaskar** participated in Panel discussion on “*Research, innovation and entrepreneurship opportunities in Covid-19 scenario*” conducted on 15th May 2020 organized by PDPU.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar “*Nanotechnology for transforming the future: Challenges and opportunities*” organized by PDPU, dated on 23rd May 2020.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar on “*Digital transformation through data science & cyber security*” organized by PDPU, dated on 3rd June 2020.
- ◆ **Dr. Rajat Saxena** attended Webinar on “*Solar Thermal Energy Utilization Technologies for Sustainable Development*” dated 9th June 2020, organized by the School of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar “*Science: Pathways to future technologies*” organized by PDPU, dated on 13th June 2020.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar on “*Sustainability: A Myth or Reality?*” organized by PDPU, dated on 20th June 2020.
- ◆ **Dr. Swapnil Dharaskar** attended webinar on “*Motivation-It’s Right inside you*” held on organized by SITRC-Nashik dated 21st June 2020.
- ◆ **Dr. Swapnil Dharaskar** has participated in webinar on “*Building Innovation & Startup Ecosystem in South Gujarat*” organized by iHub SSIP, Gujarat dated on June 23rd 2020.
- ◆ **Dr. Swapnil Dharaskar** attended the international webinar “*Covid-19 Pandemic : Impact on Health, Environment and Society*” organized by Priyadarshini Institute of Engineering & Technology , Nagpur, during 1st to 4th July 2020.
- ◆ **Dr. Rajat Saxena** attended webinar on “*Factory automation and Manufacturing automation*”, dated 9th July 2020, organized by Dassault Systemes.
- ◆ **Dr. Swapnil Dharaskar** attended the international webinar “*Green Fuels: Novel Catalytic Synthesis*” organized by Raja Balwant Singh Engineering Technical Campus, Agra dated on 18th July 2020.
- ◆ **Dr. Pravin Kodgire** delivered technical talk during workshop Presented talk on ‘*Cavitation Technologies: A breakthrough in Bio-fuel production*’ on the day of World Biofuel Day, 10th Aug 2020 in coordination with Prof Surendra S Kachhwaha.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar on the topic “*Modeling and simulations of Materials and process in Chemical Engineering*” organized by Department of Chemical Engineering, PDPU in association with IICHE Student Chapter, PDPU. Dated on 14th August 2020.
- ◆ **Dr. Swapnil Dharaskar** attended Indo-UK joint international webinar on “*Current trends in Chemical process technology and materials development*” organized by Indian institute of technology, Assam and University of Aberdeen, Scotland , UK dated on on 19th and 20th August 2020.
- ◆ **Dr. Rajat Saxena**, Participated in Online Expert talk on “*Water Efficiency in Green Buildings*”, at Axis Colleges Kanpur, organized under NISHCHAY – I, Axis ASSOCHAM GEM Student Chapter Initiative dated 21st August 2020.
- ◆ **Dr. Swapnil Dharaskar** has attended a webinar on “*Selection of Dryers in process industries and troubleshooting*” organized by B V Raju institute of technology, Karnataka dated on 23rd August, 2020.
- ◆ **Dr. Ashish Unnarkat** attended a Webinar Series on “*Assessment and Accreditation Process of NAAC*” by Gujarat Vidya-peeth In Association with National Assessment and Accreditation Council (NAAC), 27th – 29th August 2020.
- ◆ **Dr. Swapnil Dharaskar** participated in webinar of “*Climate change and Covid-19*” on organized by Climate Change Department, Gandhinagar dated on August 28th, 2020.

FACULTY BOARD



WEBINARS ORGANIZED

WEBINARS ORGANIZED

Webinar

PDPU PANDIT DEENDAYAL PETROLEUM UNIVERSITY

SOT SCHOOL OF TECHNOLOGY

Innovation Based Case Studies On Industrial Process Development

30th May 2020, Saturday

12:00 pm Onwards

Dr. Anurag Gupta
Former Executive Director IOCL (R&D)
Senior Mentor (PDPU, Gandhinagar)

Organised by
Chemical Department & IICHE student chapter PDPU

HI-BOLT Industries Pvt. Ltd.

WEBINAR

DR MAHESH GOUR
(MEMORY GURU & MOTIVATIONAL SPEAKER, MUMBAI)
CA, M.COM., MBA, CCA, CFM, ADPA, DBA

WEBINAR PORTAL: ZOOM (PRE-REGISTRATION REQUIRED)
REGISTRATION PERIOD: 8:15 TO 12:00 PM ON SATURDAY APRIL 11, 2020

TOPIC: SKILL DEVELOPMENT & TIME MANAGEMENT
DATE & TIME: SUNDAY, APRIL 12, 2020 AT 04.00 PM

FOR REGISTRATION:
KINDLY LOGIN ON www.hibolt.in or
EMAIL US: swapnil.dharaskar@dot.pdupu.ac.in | info@hibolt.in

ORGANISED BY: HI-BOLT INDUSTRIES PVT LTD (AN ISO 9001:2015 COMPANY) MANUFACTURER & EXPORTER OF BOLTS & FASTENERS, AHMEDABAD, GUJARAT, INDIA

IN ASSOCIATION WITH: DEPARTMENT OF CHEMICAL ENGINEERING SCHOOL OF TECHNOLOGY, PANDIT DEENDAYAL PETROLEUM UNIVERSITY GANDHINAGAR, GUJARAT, INDIA

DIGITAL ASSOCIATION: **YUG**

SOT SCHOOL OF TECHNOLOGY

PDPU PANDIT DEENDAYAL PETROLEUM UNIVERSITY

WEBINAR

ENERGY FOR SUSTAINABLE ENVIRONMENT TRANSFORMING THE FUTURE

6th June, 2020, Saturday | 11am onwards

SPEAKERS

DR. S. S. MANOHARAN Director General, PDPU

DR. ASHISH UNNARKAT Department of Chemical Engineering, PDPU

DR. ANURAG KANDYA Department of Civil Engineering, PDPU

NAAC ACCREDITED

PDPU PANDIT DEENDAYAL PETROLEUM UNIVERSITY

SOT SCHOOL OF TECHNOLOGY

Chemical Engineering Department

WEBINAR

Counselling Session for M.Tech
(Chemical Engineering, Energy & Environmental Management)

13th JULY, 2020 MONDAY | 11:30 am to 12:30 pm

SOT SCHOOL OF TECHNOLOGY

PDPU PANDIT DEENDAYAL PETROLEUM UNIVERSITY

WEBINAR BY DEPARTMENT OF CHEMICAL ENGINEERING

Ph.D (Chemical Engineering) Admission Counselling

SPEAKERS

Dr. Swapnil A. Dharaskar HOD, Department of Chemical Engineering

Dr. Pravin Kodgire Associate Professor, Department of Chemical Engineering

Dr. Sukanta Kumar Dash Assistant Professor, Department of Chemical Engineering

Dr. Manish Kumar Sinha Assistant Professor, Department of Chemical Engineering

Dr. Ashish P. Unnarkat Assistant Professor, Department of Chemical Engineering

Dr. Surendra Saras Kumar Jaisa Assistant Professor, Department of Chemical Engineering

12th AUGUST 2020, WEDNESDAY | 11:30 AM to 12:30 PM

SOT SCHOOL OF TECHNOLOGY

PDPU PANDIT DEENDAYAL PETROLEUM UNIVERSITY

WEBINAR

Modeling and Simulations of Materials and Processes in Chemical Engineering

SPEAKERS

Dr. Abhishek Kumar Gupta Assistant Professor, Department of Chemical Engineering

Mr. Md. Aurangzeb Assistant Professor, Department of Chemical Engineering

14th AUGUST 2020, FRIDAY | 11:30 AM to 12:30 PM

FACULTY BOARD



WEBINARS ORGANIZED

WEBINARS ORGANIZED

Date	Title of Webinar	Speakers Name	No. of Participants
12 th April 2020	Skill Development & Time Management	Dr. Mahesh Gour	80
30 th May 2020	Innovation Based case studies on Industrial Process Development	Dr. Anurag Gupta	150
06 th June 2020	Energy for Sustainable Environment transforming the future	Prof. S. S. Manoharan Dr. A. Unnarkat Dr. A. Kandya	> 350
15 th July 2020	Counseling Session for M.Tech	Dr. S. Dharaskar Dr. A. Unnarkat	50
12 th August 2020	PhD Admission Counseling Session	Dr. Dharaskar/Dr. Kodgire/ Dr. Unnarkat/Dr. Sinha/Dr. Dash/ Dr. Sasikumar	25
14 th August 2020	Modeling and Simulations of Materials and processes in Chemical Engineering	Dr. Abhishek Gupta Mr. Md Aurangzeb	75
6 th September	Environmental Impact Assessment (EIA) for Chemical Industry	Dr. Vidyadhar Gedam NITIE, Mumbai	120

RECOGNITIONS

- ◆ **Dr. Ashish Unnarkat** was appreciated for providing statement and 2 of his statement were selected to be part of the "Lets's Hack COVID-19 Edition", organized by IIC, PDPU.
- ◆ **Dr. Bharti Saini** received *Letter of Appreciation for contribution as a Faculty mentor for Let's Hack COVID-19 Edition conducted by PDPU over a period of 2 months, 20 July 2020.*
- ◆ **Dr. Swapnil Dharaskar** received token of Appreciation from IIC Director for his contribution as Faculty mentor for Lets Hack Covid-19 Edition, conducted by PDPU in association with IIC over a period of two months.
- ◆ **Dr. Swapnil Dharaskar** received token of Appreciation from IIC Director for giving problem statement in domain of Energy and Environment, Social welfare, transportation, education medical and healthcare for Lets Hack Covid-19 Edition, conducted by PDPU in association with IIC over a period of two months.

FACULTY BOARD

AWARDS AND OTHER ACHIEVE-



THE NEW INDIAN EXPRESS

NATION WORLD STATES CITIES BUSINESS SPORT GOOD NEWS MOVIES GALLERIES

STOCK MARKET BSE 38854.55 ▲ 14.23(0.04%) NSE 11464.45

Home > Good News

IIT-Madras researchers produce bio-oil from agricultural waste

Researchers at the IIT-M have developed a simple microwave process to produce high-energy bio-fuel oils from agricultural waste.

Published: 16th June 2020 07:11 AM | Last Updated: 16th June 2020 11:

Dr. Dadi Suriapparao collaborative work with IIT Madras has published in Indian express on the topic of 'IIT Madras researchers produce bio-oil from agriculture waste'

Dr. Swapnil Dharaskar was Recognized as Top 50 International Distinguished Young Researchers and received Green ThinkerZ Award 2020.

CERTIFICATE OF RECOGNITION

presented to

DR. SWAPNIL DHARASKAR

for entering into the elite category of

Top 50 International Distinguished Young Researcher 2020

Er. Tanvir Singh
President
Green ThinkerZ

Dr. Sapna Mehta
Head Research
Green ThinkerZ

SOT SCHOOL OF TECHNOLOGY ASME SETTING THE STANDARD PANDIT DEENDAYAL PETROLEUM UNIVERSITY

WEBINAR BY DEPARTMENT OF MECHANICAL ENGINEERING

PHASE CHANGE MATERIAL UTILIZATION FOR DIFFERENT COOLING APPLICATIONS

30TH JULY 2020, THURSDAY
5:30PM - 6:30PM

SPEAKER
DR. RAJAT SAXENA
Assistant Professor, School of Technology,
Department of Mechanical Engineering, PDPU

Free Registration

Register Now!

Dr. Rajat Saxena deliver the session as **Expert Speaker** in webinar on "Phase Change Material Utilization for Different Cooling Applications" organized by ASME student chapter, Department of Mechanical Engineering, Pandit Deendayal Petroleum University (PDPU) on **30th July, 2020**

FACULTY BOARD

AWARDS AND OTHER ACHIEVE-

HEARTIEST CONGRATULATIONS

Dr. Anirban Dey successfully defended his PhD thesis titled “**Experimental and modeling study on the absorption of CO₂ in aqueous single and blended amines**”. A part of this work was done in IIT Guwahati under guidance of **Prof. B.P. Mandal** and rest was completed in PDPU under the guidance of **Dr. S.K. Dash**. The degree has been awarded on Mar 16, 2020, by **Chemical Engineering, IIT Guwahati**.



Dr. Bharti Saini for successfully defended her PhD thesis titled “**Synthesis and Characterization of Anti Fouling Ultra-filtration Membranes and its Application in Wastewater Treatment**” on Jun 09, 2020. This work was done in PDPU under the guidance of **Dr. Manish K. Sinha**. The thesis was defended in presence of **Prof. Gopal Pugazhenth**i, by **Chemical Engineering , IIT Guwahati**.



WELCOME TO NEW FACULTY



Mr. Ravi Tejasvi (PhD thesis Submitted, IIT Delhi) has joined the department in Jul 2020.

Research Area: Photo-electrochemical Engineering, Frugal and Innovative Technological Solutions (FITS), Environmental detoxification through sunlight assisted nanotechnological solutions.



Mr. Md. Aurangzeb (PhD thesis Submitted, IIT Kharagpur) has joined the department in 20th Jul 2020.

Research Area: Process Intensification, Process Optimization and Control



Mr. Subhankar Roy (PhD thesis submitted, IIT Bombay) has joined the department in 10th Aug 2020.

Research Area: Experimental and Computational fluid dynamics, electro-hydrodynamics, soft matter.



RESEARCH AND OTHER ACTIVITIES

PUBLICATIONS

- ◆ **Ms. Parwathi Pillai (PhD Scholar)**, Swapnil Dharaskar (Supervisor) published **5 Journal papers** in the last two quarters.
- ◆ **Ms. Komal Desai (PhD Scholar)**, Swapnil Dharaskar (Supervisor) published **1 Journal papers** in the last two quarters.

CONFERENCES

- ◆ **Ms. Parwathi Pillai (PhD Scholar)**, Swapnil Dharaskar (PhD Supervisor) Presented paper on “Rice husk derived silica nano doped on calcium peroxide” for fluoride removal from ground water” in 2nd International Nano-symposium organised by Dr Tapas Sen, **University of Central Lancashire (Uclan) UK** during 14 to 15th July 2020.

PROJECT PROPOSALS (SUBMITTED)

- ◆ **Mr. Hamzah Abdul Menem (M.Tech Scholar)** submitted project proposal titled, “Utilization of phase change materials for energy efficient water heating system”, faculty guide Dr. Rajat Saxena and Dr. Swapnil Dharaskar, under **ISHRAE Student Project Grant – ISPG Post Graduate 2020-21 Scheme**, August 2020.

EVENT PARTICIPATION

- ◆ Dr. Abhishek Gupta guided 4 teams for “Lets’s Hack COVID-19 Edition”, organized by IIC, PDP. Among these two teams led by **Ms. Srushti (B.Tech 4th year)** and **Mr. Parth (M.Tech 2nd year)** entered the final 30 teams and presented their ideas.
- ◆ Dr. Dadi Suriapparao guided 4 teams for “Lets’s Hack COVID-19 Edition”, organized by IIC, PDP. Among these one team led by **Vinod Suthar** on “Electromagnetic irradiation of hospital biomedical waste” was selected in the top 30 teams.
- ◆ **Yashvi Seth** and **Aishwarya Mathur** guided by Dr. Swapnil Dharaskar on “To Create a roadmap towards building a happier and safer world” during the LET’S HACK COVID-19 selected in the top 30 teams.

STUDENT BOARD



AWARDS

STUDENT ACHIEVEMENTS /AWARDS

Team T-203 - Chemical Engineering Students, won 1st Runner Up Prize of INR 8,500 for Let's Hack COVID-19 Hackathon organized by IIC PDPU.

Problem Statement: Portable/ Efficient/Affordable Sanitizing Device for the Application of Car Interior



Jugal Darshan Acharya



Dhaval Mistry



Harsh Jitalkumar



Jay Dharmendrabhai



Aakash Shailesh Oza
(Team Leader)

Solution in brief: The proposed device efficiently uses the misting technology for car interior sanitization. The misting device efficiently spreads sanitizing mist all around the car interior, which effectively sanitizes car interiors in less time, using less sanitization liquid. The device as a whole is portable, easy-to-operate and cost effective.



Dr. Sasi Kumar Jampa
(Faculty Mentor)

Team Details

ALUMNI CORNER

PDPU PANDIT DEENDRAJI PETROLIUM UNIVERSITY **SOT** SCHOOL OF TECHNOLOGY

PROJECT SCALE-UP: LABORATORY TO INDUSTRIAL IMPLEMENTATION

Organised by Chemical Department
& IICHE student chapter PDPU

Ms. Monideepa Karmakar
Gold Medalist (2011 batch)
Design Engineer (Design-Process)
Gujarat State Fertilizers & Chemicals Ltd. (2015-Present)

Free Webinar
10th May 2020, Sunday 4 P.M. Onwards

PDPU PANDIT DEENDRAJI PETROLIUM UNIVERSITY **SOT** SCHOOL OF TECHNOLOGY

The Techno-Commercial Approach : Sustainability and Start-up

Vardan Rathi
PDPU (2013-17)
Dept. of Chemical Engineering

Sustainable Livelihood Initiative India Pvt. Ltd.
Co-Founder & Director
Sixth Sense Solution and Services Director

2nd June, 2020 Tuesday
4:00 - 5:00 PM

Organised by Chemical Engineering Department
In association with IICHE student chapter PDPU

WEBINAR

Dr. Anirban Dey and Dr. Swapnil Dharaskar organized **two** alumni webinars first on “**Project Scale up : Laboratory to Industrial Implementation**” by **Ms. Monideepa Karmakar** (Design Engineer: Process Design, GSFC Vadodara (Gold Medalist 2011 Batch), on **10th May 2020** and second on “**The Techno-Commercial Approach: Sustainability and Start-up**” by **Mr. Vardan Rathi** (Director and Co-Founder, Sustainable Livelihood Initiatives India Pvt. Ltd.) on **2nd June 2020**.

FEATURE NEWS



PDPU Fighting Back COVID

COMMITTED MANAGEMENT



CLEAN AND SANITIZED CAMPUS



- ✓ Mask Mandatory for All
- ✓ Periodic Cleaning Fumigation and Sanitization
- ✓ Temperature Monitoring and Full Body Sanitization at Entry
- ✓ Medical Checkups

UNINTERRUPTED EDUCATION @ PDPU

