

# Report

## ***State Level Five Day Webinar Series on “Emerging Trends in Chemical Engineering” Date: 28-09-20 to 03-10-20, Time: 4.00 to 5.30 PM***

Chemical Engineering Department, L. D. College of Engineering, Ahmedabad - Gujarat has organized a five days webinar series on "Emerging Trends in Chemical Engineering" from 28.09.20 to 03.10.20 daily at 4.00 to 5.30 PM. Inauguration of the event was on 28-09-20 at 3.30 pm to 4.00 PM. Webinars were conducted via Google Meet, online Platform. The event was chiefly organized by Dr. Anjali Bishnoi, and nicely coordinated by Prof. Pratik Patel, Prof. Vandana Gojiya, Prof. Sandip Bhatt, Prof. Hiral Pandya, Prof Rupal Ruperi, Prof. T. S. Rajaraman under the guidance of Prof. (Dr.) Paresh H. Rana (convener). More than 500 participants were registered which includes Students, Academicians and Industry Professionals.

Inauguration was on 28-09-20 at 3.30 pm to 4.00 PM through the digital platform Google Meet. The convener Prof. (Dr.) Paresh H. Rana gave brief introduction about the five days webinar series. He also gave overview of department to the speakers and the participants. Principal, LDCE, Prof. (Dr.) Rajul K. Gajjar addressed the gathering and gave a motivation speech. Chief Guest of the inaugural function was Mr Ashish N. Soparkar, MD, Meghmani Organics Ltd. He appreciated the efforts of department of chemical engineering and also offered few schemes for industry institute collaboration. Following day wise schedule was executed during the course of event:

### Day 1

Topic: Design of Batch Reactor

Speaker: Prof. S. B. Thakore

Designation of Speaker: Associate Professor Chemical Engineering Department, Vishvakarma Government Engineering College, Chandkheda

Faculty Coordinator: Prof. V.V. Gojiya

Date and time: 28/09/20 at 4:00 pm – 5:30 pm.

Platform: Google meet (<https://meet.google.com/mha-yxxd-rpk>)

A webinar on “Design of Batch Reactor” was held on 28<sup>th</sup> September 2020. The webinar was started with a brief introduction of Expert. Webinar has been organized to provide participants the knowledge and importance of the Design and importance of Batch reactor and the different parts of reactor in the industries. Sir also explained in detailed the design of the reactor in which he also explained about the design of various agitators, Turbines, Ampeller, Jackets and propellers which will help participants to understand the design of the reactor with basic details. The knowledge shared by Professor was very helpful to participants not only for their curricular purpose but also for their future.

## Day 2

Topic: Importance of Optimization and Simulation in Chemical Process Industries

Speaker: **Dr. N. M. Patel**

Designation of Speaker: Prof. & Head Chemical Engineering Department, GEC Valsad

Faculty Coordinator: Prof. S.H. Bhatt

Date and time: 29/09/20 at 4:00 pm – 5:30 pm.

Platform: Google meet (<https://meet.google.com/wga-iwoo-oia>)

A webinar on “Importance of Optimization and Simulation in Chemical Process Industries” was held on 29<sup>th</sup> September 2020. The webinar provided participants the knowledge and importance of the Optimization of the process and usage of simulations in chemical Industries. He also explained different optimization and simulators that are used in chemical industries. Problems arising at industries are very much difficult to solve manually so by using simulators one can solve a complex problems. He also gave some of the industrial examples of optimizing and simulation in chemical engineering. The knowledge shared by Professor was versatile.

## Day 3

Topic: Sustainability in solar power and energy infrastructure

Speaker: **Mr.Siddharth Bishnoi**

Designation of Speaker: CEO – Real Time Renewables

Faculty Coordinator: Prof. H. N. Pandaya

Date and time: 30/09/20 at 4:00 pm – 5:30 pm.

Platform: Google meet (<https://meet.google.com/gsk-qaiu-mnv>)

A webinar on “Sustainability in solar power and energy infrastructure” was held on 30<sup>th</sup> September 2020. The webinar has provided participants the knowledge and importance of the renewable and nonrenewable energy sources. Mr. Siddharth explained about different key components of solar energy that can be utilized to have a sustainable environment. He also explained about solar panels and batteries. He also showed videos regarding solar batteries, Building integrated photo-voltaic and electric vehicles. He explained about the sustainable development and what are the reasons to have sustainable development. Sir also inspired the participants to take their academic Projects in the direction of solar energy and gave some idea to students.

## Day 4

Topic: Hydrogels, grafting and it's applications

Speaker: **Dr. P. N. Dave**

Designation of Speaker: Professor Department of Chemistry, S. P. University

Faculty Coordinator: Prof. R. S. Ruperi

Date and time: 01/10/20 at 2:30 pm – 4:00 pm.

Platform: Google meet (<https://meet.google.com/owx-wodh-owp>)

A webinar on “Hydrogels, grafting and it's applications” was held on 1<sup>st</sup> October 2020. Dr. Dave explained about hydrogel that is a network of crosslinked polymer chains. Dr. Dave explained about the diagram of hydrogels and its network. Professor explained about the physical and chemical corss linking. He explained about xerogels, chitosan and how they are used in drug delivery. He explained about the applications of hydrogels in pharmaceuticals and drug delivery. Mentioned the functions of a biological hydrogel and how a polymer is formed by crosslinking. He explained about polyelectrolyte hydrogels which are used for biomaterials. He gave different examples of hydrogels and their synthesis.

Day 5

Topic: Bubble column reactor for cumene oxidation

Speaker: **Mr. Vedant M. Danak**



Designation of Speaker: Senior Executive, Deepak Phenolics Limited

Faculty Coordinator: Prof. T.S. Rajaraman





Date and time: 03/10/20 at 4:00 pm – 5:30 pm.

Platform: Google meet (<https://meet.google.com/hyj-uspb-oup>)

A webinar on “Bubble column reactor for cumene oxidation” was held on 3<sup>rd</sup> October 2020. The webinar has been organized to provide participants the knowledge and working principle of Bubble column reactor and different spargers used in bubble column reactor. He also explained about advantages and disadvantages of bubble column reactor. He explained about the selection criteria and design parameters of reactor. He explained the gas flow regimes and indirect heat removal and safety aspects in bubble column reactor. He gave comparison between cumene oxidation and phenol production and the application of bubble column in cumene oxidation. The speaker also offered students to visit his industry for deeper understanding of the topic covered during webinar.



  
 Chemical Engineering Department  
 LDCE, Ahmedabad  
 Welcomes you for  
 5 days webinar series  
 on  
 "Emerging Trends in Chemical  
 Engineering"

Mitul Dudhat joined





 97 others

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Safety aspect for operation of BCR for cumene oxidation

- In public column reactor for cumene oxidation, thermal decomposition of DMP can be the result of any of these mechanisms:
  - Excessive heating of the process fluid
  - Failure to control the operating conditions
  - Localised over-heating due to stagnant flow conditions
- These thermal decomposition mechanisms could be caused by the following inhibiting factors:
  - Loss of feed LVRT
  - Loss of feed control system
  - Excessive heat addition (striping)
  - Loss of thermal cooling water circulation

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DAMOR VANRAJKUMAR

Er Harin Patoliya

Jadeja Gajendrasinh NEW

Jain Aswar

Jainam Joshi

16:23

(No title)

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Year's Course Bulletin

Siddharth Bishnoi

